

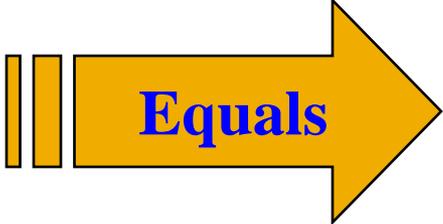
# Overviews of the 2011 FVM Process and the PDC Process

# Contents of Presentation

- Overview of the Full Value Measurement (FVM) Process
  - RAR determination
- Overview of the Market Analysis Process
  - Development of trends
  - CAMA and Sales Ratios
- Overview of the Pre-decisional Collaboration (PDC) Process
  - Confirmation of the local LOA

# Overview of the Full Value Measurement (FVM) Process

# State Equalization Rate

State Equalization Rate  
$$\frac{\text{Sum of Assessed Value}}{\text{Sum of Full Value}}$$

- Locally Assessed, taxable portion of Roll
- Represents the overall ratio

# Equalization is a two step process:

- Step 1: Local Assessment
  - Assessments are equitable within municipality, within classes, between classes.
- Step 2: State Equalization
  - Apportionment among cities and towns in joint taxing jurisdictions is fair.

# STATE

# LOCAL

- Aggregate parcels
- Assessing unit to assessing unit
- Between assessing units

- Individual parcels
- Parcel to parcel
- Within assessing units



# Local Role

- RPTL requires assessors to:
  - Keep assessments uniform as of the valuation date (§301, §305);
  - Sign an oath that the assessments are uniform (§ 505); and
  - State the Level of Assessment (LOA) on the tentative roll (§ 502)
  - Report and make available for review Inventory and Valuation (sales) information (§500,§501)
  - Transmit sale information and corrections (§574)

# State Role

- ORPTS is obligated to:
  - Verify independently the level of assessment stated by a locality; or
  - Make an estimate based on sound, generally accepted standards

# Historical Perspective

- Equalization Rates based on sample survey
- Equalization Rates lagged current value by years
- Equalization Rates based on dated (old) Market Value Surveys
- Equalization Rates compared dated finding of market value to current total assessed value
- Equalization Rates could exceed 100% (but assessed values may not)

# ORPTS' Use of Local LOA

- Starting with the 2002 equalization rates, ORPTS has been “verifying” the locally stated LOA
- When they are confirmed – within prescribed limits – the local LOA becomes the equalization rate

# Full Value Determination

- ORPTS determines municipal full value using one or more of the following approaches
  - Verification of local reassessment results
  - Development of market adjustment factors (trends); applied to prior year full value estimates
  - Determination of CAMA and/or Sales Ratios for residential property (IAAO Standards)
  - Appraisal of sample parcels in localities where there has not been a recent reassessment and/or for property types lacking sufficient sales or data for reliable ratio studies

# Property Types

- Assessment rolls are analyzed by broad property types
  - Major Type A – residential
  - Major Type B – commercial/industrial
  - Major Type C – vacant, farm and forest
  - Major Type D – utility property
- Separate full value estimates and ratios are determined for each major type

# Valuation Date

- Valuation date: the point in time at which market values or levels are determined for assessment cycle
  - Preceding July 1 for most towns
- July 1, 2010 for 2011 FVM

# Overview of RAR Process

- 2008 legislation changed how residential assessment ratios (RARs) are determined
- The RAR must now be the market value ratio for Major Type A that is used to make the equalization rate for the roll
- No more administrative review

# New RAR Process

- Issues:
  - RAR must be determined by March 1 for most municipalities
    - Shorter timeframe for market analysis
    - Before the LOA and the equalization rate are established
  - Not unusual for ORPTS to have more than one ratio for Major Type A

# RAR – Shorter Timeframe

- Market analysis for Major Type A MUST be completed prior to March 1
  - Sometimes assessors would submit sales corrections after receiving preliminary ratios
    - Sometimes resulted in analysis having to be re-run
- Solution: require assessors to submit all sales corrections by a set deadline
  - Subsequent corrections not used for FVM or RAR

# RAR – Sales Review

- June-early July
  - Assessors encouraged to review sales and transmit corrections by August 15
- September
  - Assessors sent list of sales to be used for market analysis for a final review and given deadline for submitting corrections
- October
  - Corrections processed and analysis begins

# RAR – Multiple Ratios

- Possible ratios
  - CAMA and/or Sales ratios
  - Occasionally appraisal ratio available
  - Sometimes consider the prior year ratio adjusted to the current year
    - Factored by trend and change-in-level
- Solution: average ratios to yield a single ratio to be used for the RAR and rate

# RAR – Averaging Ratios

- Ratios are calculated by:
  - 2 ratios:  $2 / (1/\text{ratio \#1} + 1/\text{ratio \#2})$
  - 3 ratios:  $3 / (1/\text{ratio \#1} + 1/\text{ratio \#2} + 1/\text{ratio \#3})$
- The ratios are divided into 1 to yield the same relative proportions as the full values they represent, and will result in the same average ratio as if the actual full values were averaged.

# RAR – Administrative Review

- The pre-decisional collaboration (PDC) process will be used
  - All ratios (and supporting data) making up the single ratio will be shared
  - Assessors can share unique market information that may affect the ratios
    - But not sales corrections or new sales

# Overview of the Market Analysis Process

# Market Analysis Process

- Determine market value ratios of 2010 final rolls by major type
  - Sources of data
    - ORPTS Data Warehouse
    - Local RPS V<sub>4</sub> files
  - Assessment rolls measured
    - 2010 assessed values for PDC process
    - 2011 tentative rolls for reassessments
      - “PDC” ratios based on 2010 assessment rolls

# Market Analysis Process

- Market Areas must be delineated
- Composed of municipalities with common economic influences, that would be expected to demonstrate similar movement in aggregate value over time.
- Need sufficient sales to yield statistically reliable results

# County Market Areas

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# Major Type A: Residential

- Components of Process:
  - Trend Development
  - Model Development
  - Model Application
  - Sale Ratio Study
  - SPDAV Analysis
  - CAMA Ratio Study

# Residential – Sales Used

- Time frame of sales used:
  - 7/1/2007 – 6/30/2010
  - For time trends and CAMA modeling:
    - Typically, only the most recent 3 years are used (but can use up to 5 years if needed).
  - For municipality's Sales Ratio study:
    - 1, 2 and 3 year sales ratio studies are completed (but can use up to 5 years if needed).
    - The results from the statistically significant study with the fewest years of sales are used.

# Residential Trend Development

- Determine Sales trend by market area
- Use Arms-length, COD & RAR usable sales
- Property Classes:  
210,215,220,230,240,241,242,250 & 260

# Residential Trend Development

- Run regression on Sales Ratios (sale price/assessed value)
- Run full regression model – time is one of many variables for which a coefficient is developed
- May verify by looking at changes in Sales Ratio over time using Standard V4 “Sales COD and Analysis” report from local files
- Talk to CRMs and assessors before finalizing
- Use trend to Time Adjust Sales Prices

# Residential – Sales Ratios

- Calculate Sales Ratio – at municipal level
  - Don't need inventory
  - Valid, arm's length, ratio-useable sales
  - AV/Time-adjusted SP = ratio
  - From 1 – 5 years of sales depending on number of available sales in municipality – at least 25
  - Trim using Interquartile Range Method
  - Use weighted mean ratio
  - Do confidence level testing to assure ratio is reliable
  - Perform tests for Sale-Price Dependent Assessed Values (SPDAV)

# Why Weighted Mean?

Town of Smallville – made up of 3 parcels – all sold on valuation date			
Parcel Number	Total Assessed Value	Time-Adjusted Sale Price	Parcel AV/MV Ratio
1	\$100,000	\$100,000	1.00
2	\$120,000	\$150,000	0.80
3	\$150,000	\$200,000	0.75
Town Totals	\$370,000	<b>\$450,000</b>	
	Mean	Median	Weighted Mean
Ratio Measures	0.8500	0.8000	0.8222
Full Value Est.	\$435,294	\$462,500	<b>\$450,000</b>

# Residential – SPDAV

- **Sale Price Dependent Assessed Values**
- SPDAV testing
  - Sales compared to non-sold properties
    - Number of assessment changes
    - Degree of assessment changes
  - Statistical tests to determine if assessment changes for sold properties reflect assessment changes for unsold properties

# Residential

- SPDAV testing
  - Preponderance of evidence considered
  - Negative connotation to “failure”, but
    - All it really means is that the sales ratio may not represent the unsold parcels, but this may be appropriate if the changes are due to changes in the market place
  - Market analysts can perform procedures to eliminate SPDAV effects and produce a useable sales ratio

# Residential – CAMA Modeling

- Develop Regression Model (CAMA) – for each market area
  - Valid, arm's length sales
  - Use inventory – edit for critical information
  - Some sales will be dropped for missing or invalid inventory
  - 3 years of sales – need approx. 300 sales for best result
  - Develop a statistically sound model to re-predict time-adjusted selling price
  - Model is used to determine aggregate value of residential properties not individual values

# Residential – CAMA Modeling

- Apply Regression Model to Subject Properties – at municipal level
  - Exclude properties not included in Sales model
  - Apply equation (model) to Subject inventories
  - Trim outliers
- Calculate Subject Ratios
  - Use Assessed values from measured roll
  - $AV/Predicted\ Market\ Value = Ratio$
  - Trim using Interquartile Range Method
  - Calculate weighted mean

# Commercial & Vacant/Farm Trend Development

- Similar to residential analysis: use regression to measure changes in ratios over time
- Completed by Valuation Services Bureau staff in Albany
- Trends by property class groups

# Commercial Groups

- Commercial:
- Apartment: 411
- Lodging : 414, 415, 417 & 418
- Eating/Drinking: 420, 421, 422, 423, 424, 425 & 426
- Retail (large): 450, 451, 452, 453, 454 & 455
- Retail (small): 480, 481, 482, 483, 484, 485 & 486
- Bank/Office: 460, 461, 462, 463, 464 & 465
- Warehouse: 440, 441, 442, 443, 444, 445, 446, 447, 448 & 449
- Car Sales/Service: 431, 432 & 433
- General Commercial Use: 400, 410, 416, 430, 434, 435, 436, 437, 438, 439, 470, 471, 472, 473, 474, 475, 500's, 600's, & 700's

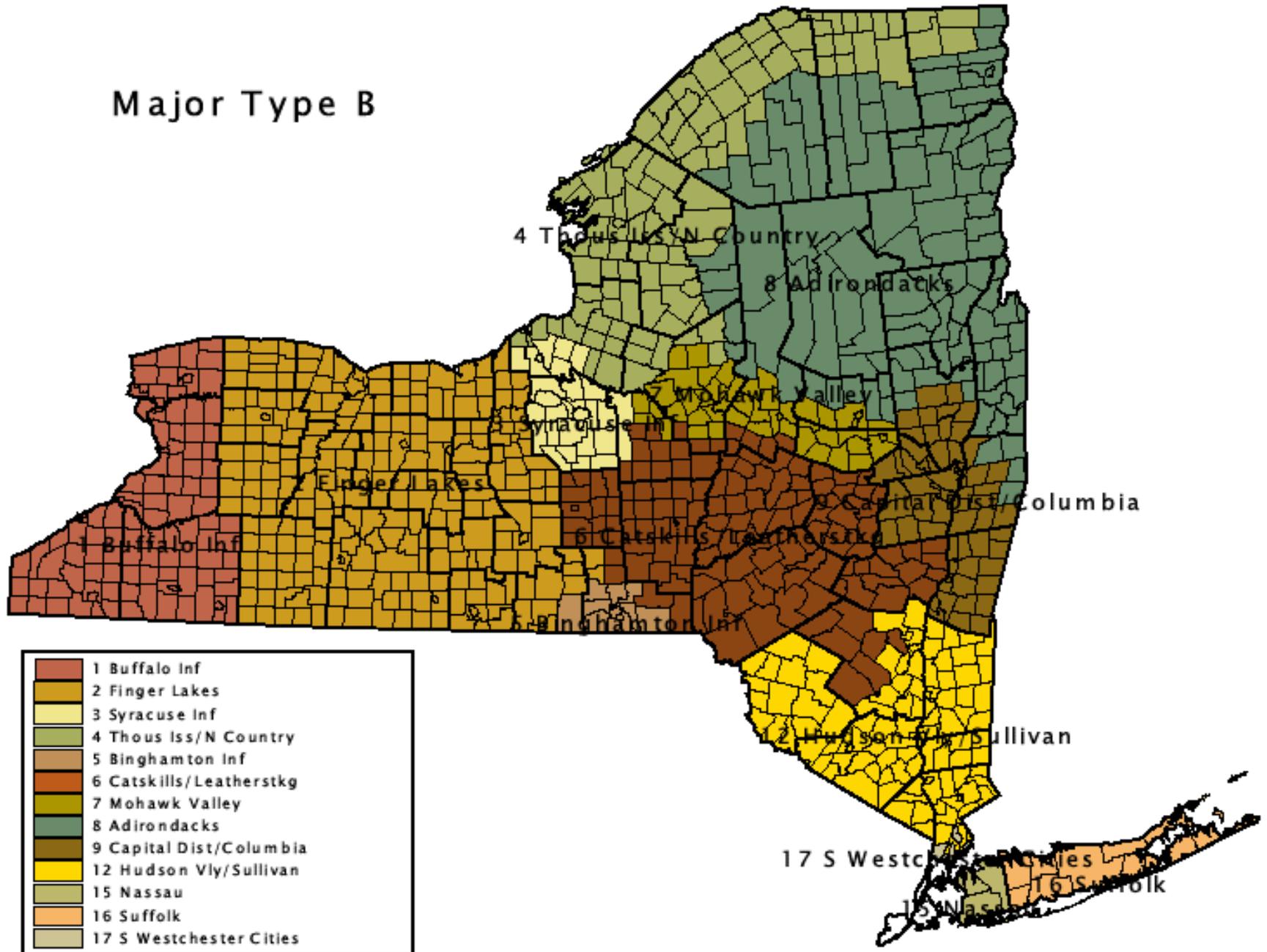
# Vacant/Farm Groups

- Vacant/Farm:
- Farm Land: 100's
- Small Lots: 310, 311, 312 & 314
- Waterfront Lots: 313 & 316 or Owner Code=W
- Commercial/Industrial Land: 330, 331, 340, 341, 350 & 380
- Large Tracts (General Vacant Use): 300, 315, 320, 321, 322 & 323
- Forest Land: 900, 910, 911, 912, 920, 940, 942, 960, 962, 963, 970, 971 & 972

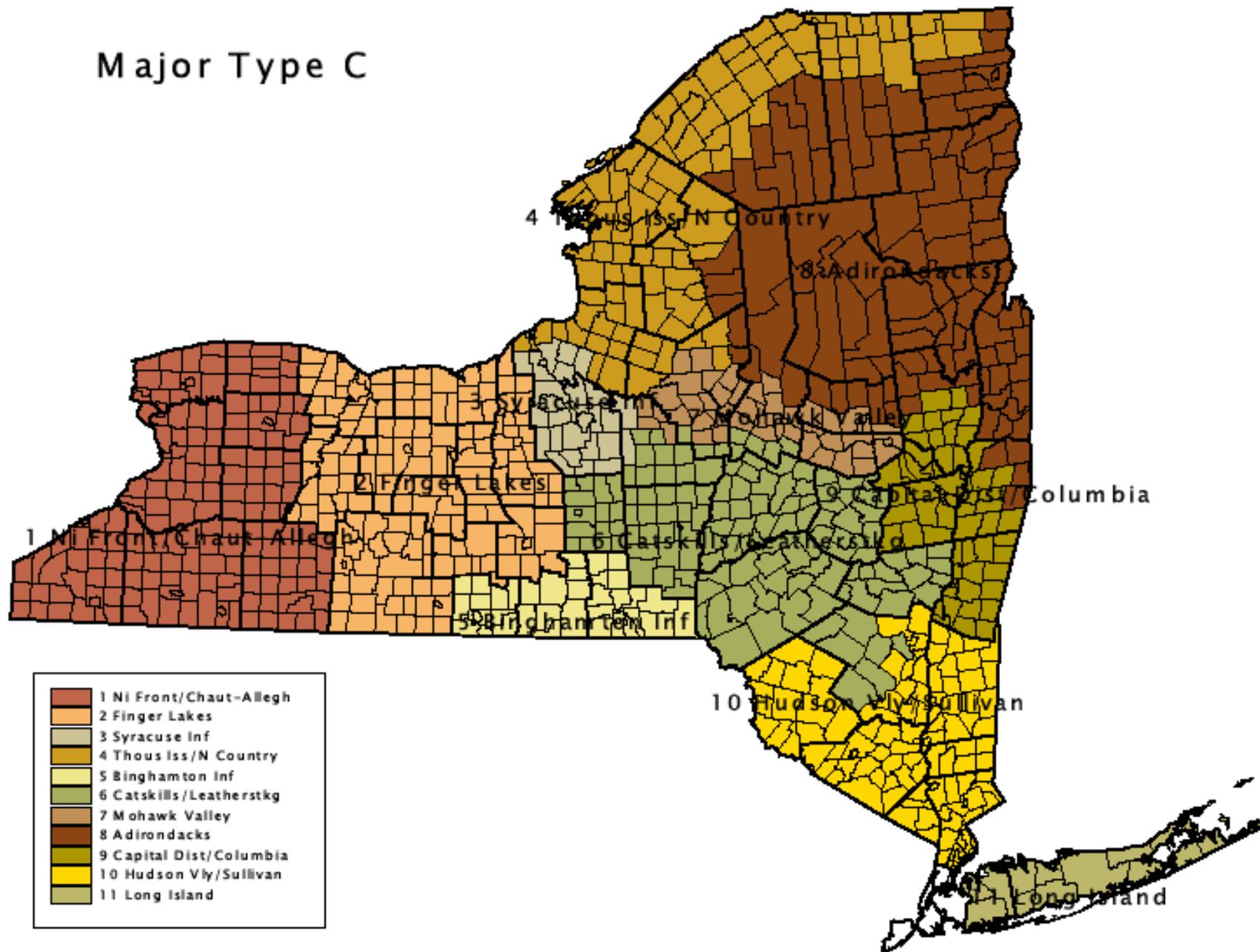
# Commercial & Vacant/Farm Trend Development

- Similar to residential analysis: Counties/towns are grouped into Market Areas of similar market influences
- Some Market Areas are large due to lack of sales

# Major Type B



# Major Type C



# Commercial & Vacant/Farm Trend Development

- Three years of sales from 7/1/2007 – 6/30/2010 are used in trend analyses
- If more sales are needed, can go back five years
- Regression model for each Commercial and Vacant/Farm Market Area
- Trends by property class groups

# Commercial & Vacant/Farm Trend Development

- Two regression techniques
  - Direct Method – develop trend from a regression model
  - Differential Method – regression model measures the difference between vacant, commercial, and residential trends
  - Market Analyst will determine which approach to use

# Commercial & Vacant/Farm

- Direct approach is used to compute trends for Major Type B (Commercial) and Major Type C (Vacant & Farm)
- Trends are developed and applied by property class group
- Commercial and Vacant trends are weighted by the proportion of a municipality's Major Type assessed value within each group.

# Applying Commercial Trends

## Direct Approach

Commercial Group	Trend	% of Roll	
Apartments	8%	31%	2.5
Lodging	5%	7%	.04
Eating/Drinking	5%	11%	.06
Large Retail	5%	1%	0.5
Small Retail	5%	24%	1.2
Bank/Office	5%	9%	.45
Warehouse	1%	12%	.12
Car Sales/Service	5%	1%	.05
General	5%	2%	.01
Total			4.93%

# Applying Vacant Trends

## Direct Approach

Vacant Group	Trend	% of Roll	
Farm land	5%	36%	1.8%
Small Lots	0%	19%	0%
Waterfront Lots	10%	8%	.8%
Comml/Industrial	0%	9%	0
Large Tracts	0%	11%	0
Forest	0%	17%	0
Total			2.6%

# Commercial & Vacant/Farm

- Differential Method is used to compute trends for Major Type B (Commercial) and Major Type C (Vacant & Farm).
- Regression model measures the difference between vacant, commercial, and residential trends
- Same sales set used
- Example:
  - Residential trend = 2%
  - Commercial trend one point less than residential: 1%
  - Vacant trend two points less than residential: 0%
- All vacants get the same trend. All commercials get the same trend.

# Major Type D: Utility

- Trend developed by ORPTS' Valuation Services
- Establish cost estimates for utility property at 2010 levels
- Compare to 2009 cost estimates
- Difference is trend
- If reassessments adopt utility advisories, ratio for D class is 100%

# Overview of the Pre-decisional Collaboration (PDC) Process

# Equalization Rate Timeline

- Fall 2010 – Apr 2011 – Assessor determines LOA  
– PDC process is vital to this process
- May - Assessor publishes LOA on the tentative roll
- May - Tentative roll is sent to ORPTS
- June - ORPTS establishes Tentative Equalization Rates
- June/July - Assessing Unit reviews tentative rate and supporting data
- June/July - Assessing Unit may file Complaint
- August or earlier - Equalization Rate is finalized

# Purpose of PDC

- To work collaboratively with local officials to analyze the market place and condition of assessments, for the subsequent use in the equalization rate and assessment equity functions
- What this means...
  - Confirmation of local LOA
  - Improve equity of assessment rolls

# Improving the PDC Process

- Improvement of the PDC process is an ongoing process
  - Assessors, County Directors and ORPTS involved
  - Agreement that only minor improvements in timeliness are now possible
  - Concern that assessors still do not understand their role in the PDC process
  - Need for greater emphasis in inventory quality and sales verification

# The “Guidelines for Pre-Decisional Collaboration”

- Non-technical guide to the PDC process
  - Development was a joint process
  - Available on ORPTS’ website
- Major themes:
  - Municipality’s role
  - On-going process – not just a meeting
  - Importance of local data
  - Sharing of analysis and results
  - Use of LOA in equalization process
  - Importance of stating accurate LOA

# Goal is to make PDC a more collaborative process

- Four steps in PDC process:
  - Share the results of State and local systematic analysis of the assessment roll
  - Come to an agreement on the municipality's level of assessment (LOA)
  - Confirm the stated LOA as the equalization rate
  - Local officials use the results to ensure that properties are equitably assessed at the stated LOA

# General PDC Timeframe

- On-going – September 1
  - Review local data status & market areas
    - Status of inventory data (e.g., edits)
    - Status of sales corrections and transmittals
    - Review market areas
      - Discuss unique market influences
  - Changes must be completed prior to start of market analysis

# General PDC Timeframe

- By October 30
  - County-wide or Regional information meetings (if needed)
    - Overview of equalization rate process
    - Overview of market analysis process
    - Overview of PDC process
      - General PDC Timeframe (analysis schedule)

# General PDC Timeframe

- September thru December
  - Share ORPTS and local analysis
    - Trends
    - CAMA and Sales ratios
    - Appraisals
    - Most utility values/trends
    - SOL/forest trends/values
  - Come to agreement as much as possible

# General PDC Timeframe

- January thru February
  - Provide ORPTS final ratios
    - Final “residential ratios” (RARs)
    - Final appraisal values
    - Final utility values/trends
    - Overall ratios provided on “Simulator” PDC reports

# Potential ORPTS' PDC Reports

- SPSS PDC reports (ratio analysis)
  - CAMA (subject) ratio analysis
  - Sales ratio analysis and sales used
  - SPDAV results
- County-wide summaries (spreadsheets)
  - Trends for Major Types A, B and C
  - Ratio analysis results for Major Type A

# Potential ORPTS' PDC Reports

- Appraisal selection reports
  - PIVRs
  - Table 4
- Simulator PDC report
  - Compares 2010 assessments to ORPTS' estimate of full value as of July 1, 2010 for each Major Type
  - Should represent final preliminary estimate(s)

# PDC – Data Review

- The PDC process should be an opportunity to evaluate the condition of sale and inventory data
- Look at the status of sales reporting and condition codes, the filing of assessment rolls, and the condition of inventory

# Guidelines for Reviewing Inventory Quality

- Edit the subject and sale inventory
- We have general guidelines for edits
- Encourage corrective action prior to final roll, if possible

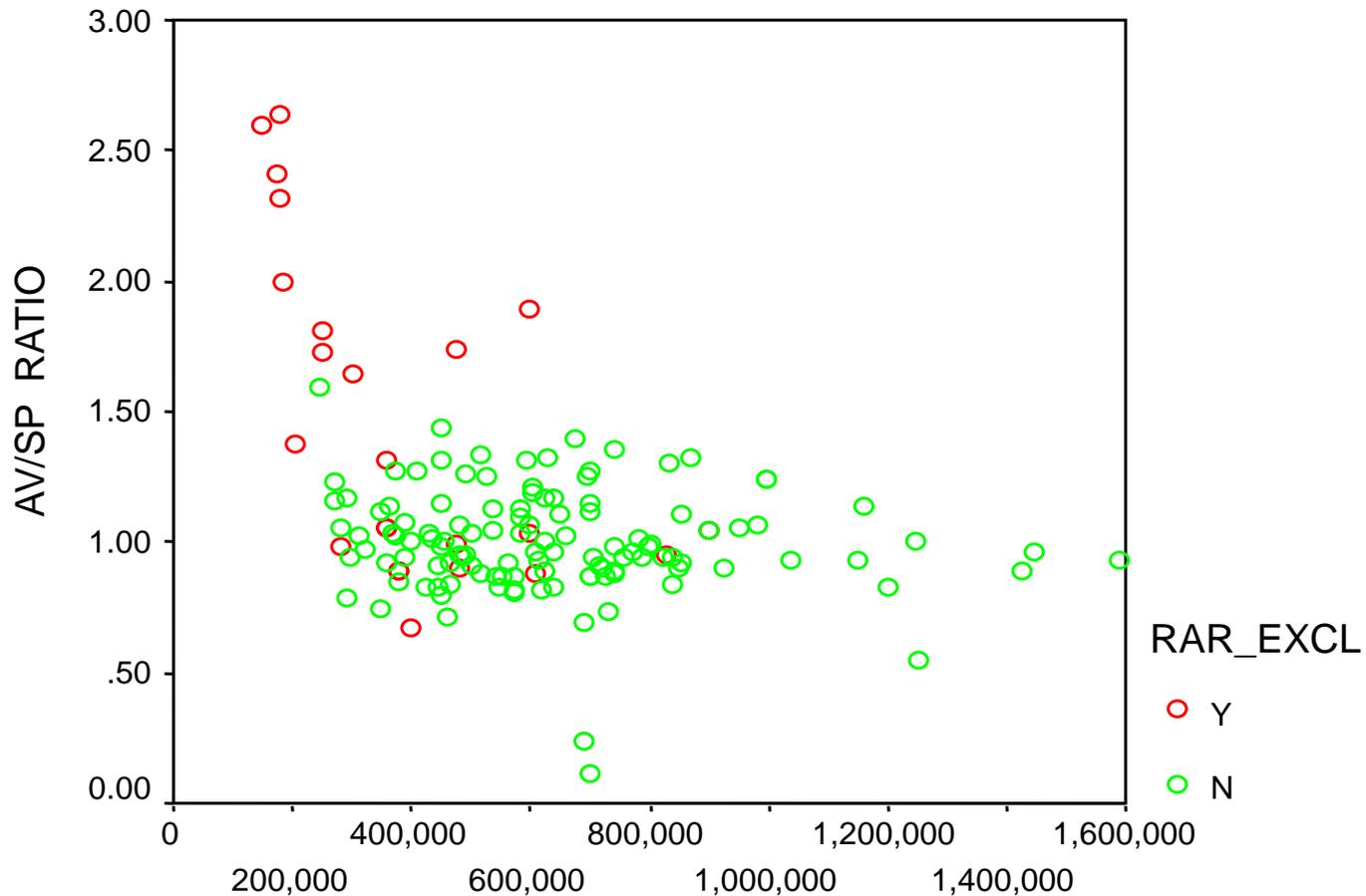
# Guidelines for Reviewing Sales Condition Codes

- ORPTS sets thresholds for reviewing sales condition codes
- These are guidelines only
- Common sense and what we know about the community or history of the use of condition codes in the municipality also considered
- The purpose is to produce a reliable, unbiased sale set

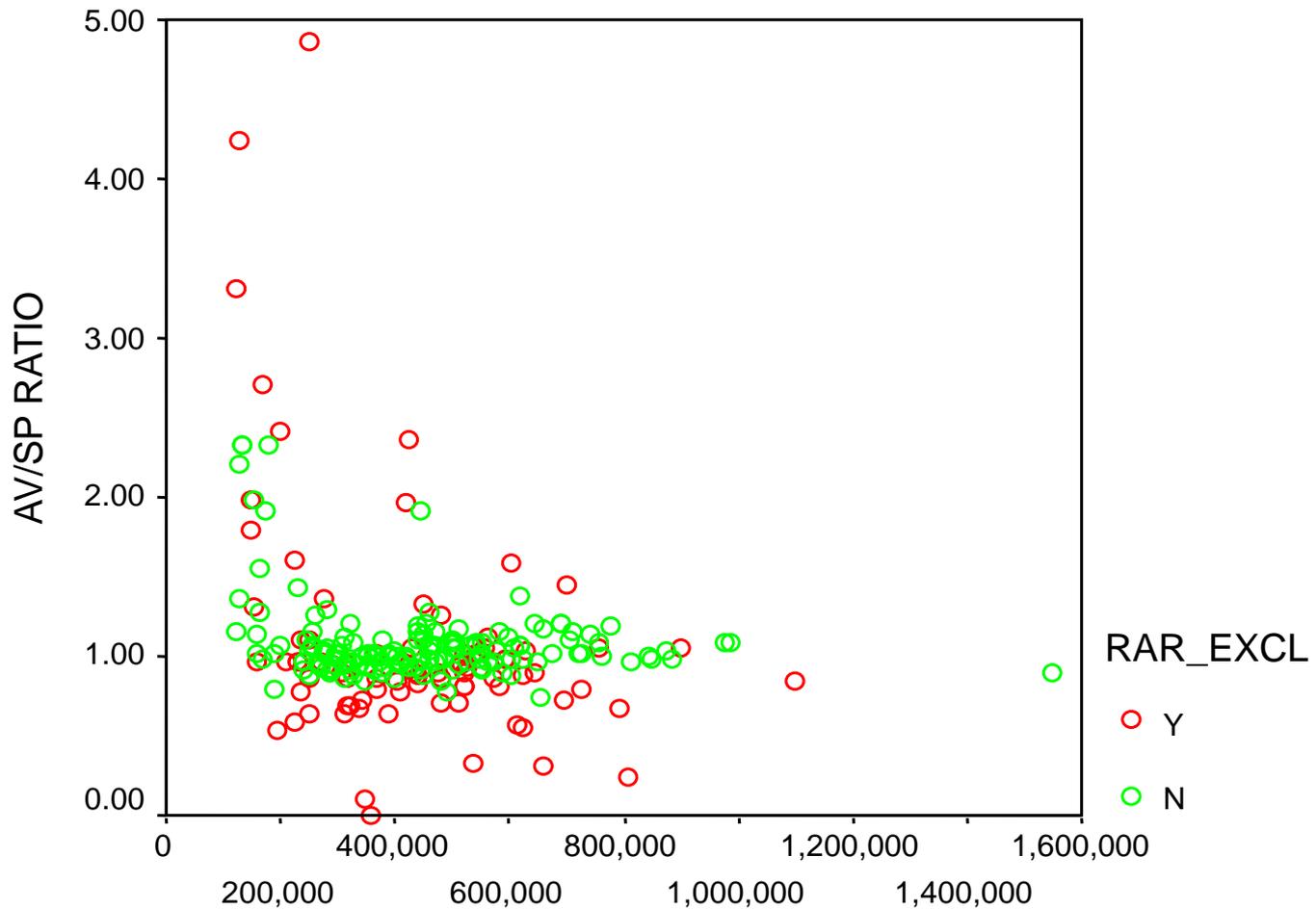
# Guidelines for Reviewing Sales Condition Codes

- Review of sales patterns scatter charts
- Charts display which sales were retained as valid and which were removed as invalid
- CRM should look for unusual patterns and point these out to assessors

# Example of Normal Sales Validation Pattern



# Example of Abnormal Sales Validation Pattern



# PDC Process – Important Points

- Market analysis is data driven!
- Assessors have a responsibility to:
  - Provide reliable data
  - Accurately report sales
- The purpose of PDC is not to tell the local officials the results of our analysis

# PDC Process – Important Points

- Assessors are encouraged to be a part of the process by submitting their own analysis or by participating with us on analysis preparation – especially in advising us on local market conditions
- **The PDC process is the first step in stating an accurate LOA**

# The Importance of Stating an Accurate LOA

- Taxpayer Disclosure: An accurate LOA allows the tax payer to know the relationship between AV's and estimated Market Values (MV). The LOA is also used to compute the MV on the tax bills. If the LOA is inaccurate, then the MV on the tax bill will be inaccurate.
- Accurate Equalization rates and full value tax apportionment: surrounding muni's could be disadvantaged by the actions of one muni that effectively understates its full value compared to other muni's.
- Mitigate unexplainable and unfavorable full value shifts in subsequent years
- Each of these reasons may be particularly important if a reassessment occurs after the use of an inflated LOA and corresponding underestimated full value.

# The Process of Confirming the LOA

- In Early April:
  - CRMs attempt to obtain LOA intended to be stated by the assessors
  - If provided, CRMs compare intended LOA with Final PDC ratio(s) using tolerances allowed in procedures
  - If stated LOA is not within the tolerance the CRM should contact the assessor and/or County Director to allow for a revised LOA prior to tentative roll production
- Late April/Early May:
  - Tentative Rolls submitted
  - ESS staff verifies the previously stated LOA

# The Process of Confirming the LOA

- For Non-Reassessment Muni's:
  - Staff compares assessment roll totals to the prior year final roll
  - If the difference is  $< 5\%$ , all change is physical and ORPTS FVM estimate is adjusted
  - If the difference is  $> 5\%$ , staff attempts to identify how much is equalization
- Tentative Rolls for reassessment muni's are analyzed as part of the overall verification process
- Muni's expecting a significant change-in-level should contact their CRM and file form RP-6110 with their Tentative roll or sooner

# Information on ORPTS website

- <http://www.tax.ny.gov>
- Click on: Valuing & Assessing Real Property
- Click on: Pre-decisional Collaboration
  - 2011 FVM & PDC Process
  - Guidelines for Pre-Decisional Collaboration
  - Attachment for Project Verification Documentation
  - Level of Assessment Determination: An Owner's Manual