Grand List Issues Study

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Prepared in accordance with
Act 68. Sec. 72.
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I. Statutory Charge

2003 Act 68. Sec. 72. GRAND LIST ISSUES STUDY

The Legislative Council and Joint Fiscal Office, in consultation with the department of taxes, the Vermont League of Cities and Towns, and the Vermont Assessors and Listers Association, shall study the issues affecting grand list valuation and their impact on property tax equity, including the following:

(1) factors contributing to fluctuations in common levels of appraisal and variations in coefficients of dispersion;
(2) local capacity for appraisal of utility, commercial, and industrial property;
(3) the fiscal impact of the homestead property tax income sensitivity adjustment, as it may be affected by adjusting the allowable acreage surrounding an eligible homestead from two acres to 25 or 27 acres, or other appropriate acreage; and shall report to the General Assembly by January 15, 2004 on legislative options to address these issues.

II. Overview

The property tax is a system in which all property is valued uniformly and taxed at a uniform rate in each taxing jurisdiction. Although most state constitutions have a uniformity rule pertaining to property taxation, in practice, no two states have identical property tax systems. Equity is defined as just, impartial and fair. But when it comes to defining tax equity, what is fair and just frequently is debatable.

While the debate over property taxation is usually less divisive universal agreement does not exist. There are difficulties with assessing value and keeping assessments current. This is a particular challenge in Vermont where there are many small jurisdictions which rely on non-professional local volunteers with limited training and resources to value a physically and economically diverse property base.

Once taxable property is defined and identified, it must be valued for tax purposes. It is the value of the property that constitutes the wealth on which to base tax liability. Market-value based systems assert that the current "market" value of property should provide the basis of taxation. In mass appraisal systems the market value is the estimated price the property would sell for assuming that both the buyer and seller are unrelated, well-informed, and under no pressure to buy or sell the property. Most states including Vermont use a market-value based system. Market-value based systems that update appraisals infrequently can allow inequities into the property tax system.

Acquisition-value based systems set taxable value at the time the property is acquired. In subsequent periods, the taxable value is determined by the application of a specified inflation factor and may deviate substantially from current market value. California and Oregon are examples of states that have acquisition-value based systems. Acquisition–value based systems allow inequities by favoring long term residents over frequent movers where economically identical properties can have significantly different taxable values.

In Vermont the grand list is the result of the work of local listers, and the state division of Property Valuation and Review (PVR). The equity of the grand list depends on both the local listers and PVR.

The listers responsibility is to annually assess or 'list' the property within their jurisdiction. This entails identifying and collecting information on the physical and economic attributes of the property and estimating the market value of the property based on those attributes. When listers value property for taxation purposes they rely on accepted mass appraisal techniques. Most towns in Vermont rely on third party contractors to periodically re-appraisal all the property in the town. The listers then maintain the grand list by consistently applying the same re-appraisal criteria to subsequent new construction. One component of equity is the quality of the original re-appraisal and the consistency of the listers in applying the same standards from year to year in maintaining the grand list. Even with a good base and consistent maintenance, market conditions inevitably change and re-appraisals are required to maintain equity.

In addition to the provision of training and support to local communities, PVR annually conducts value accuracy tests to examine the equity in the system. When these tests result in outcomes that fall outside acceptable ranges for a community, the need for re-appraisal is indicated to maintain equity. The common level of appraisal (CLA) is the measure that is used to provide equity across towns, by equalizing the grand list so that the statewide property tax is applied on an equitable basis. This is a sales ratio that compares the listed value and the sales price of recently sold properties. Each year PVR analyzes three years of sales information to establish the CLA for each community. Concerns arise when the CLA fluctuates significantly from one year to the next. The validity of the sales used in the analysis is a primary factor in the accuracy of the end result. The sales verification process requires clear, consistent communication between the local listers and PVR.

Another test for market equity includes the amount of difference between all the sales ratios and the median sales ratio. A COD, or coefficient of dispersion, is used for this. It basically is a percentage of the average difference (absolute deviation) of all ratios with the median sales ratio. This is a measure of equity among the properties in the town. Even if the CLA ratio is within an acceptable range for a community, if the COD is high then the CLA is being applied to a local grand list that is inherently inequitable.

III. Grand List Issues

In response to the specific issues in the statutory charge, the Legislative Council and Joint Fiscal Office developed a questionnaire designed to obtain information on various grand list issues. This survey was distributed to the Vermont League of Cities and Towns, Vermont Association of Listers and Assessors, and the Division of Property Valuation and Review. In addition to these groups, many individual town listers responded with numerous suggestions.

The questionnaire was designed to gather information and spur discussion on the following grand list issues:

Local Listing And Valuation Capacity
- Commercial, Industrial And Special Use Property
- Lister Training
- Turnover Of Local Listers
- Application Of Best Practices – Identify Barriers

Reappraisals
- Frequency Of Reappraisals
- Quality Of Reappraisals
- Ability Of Listers To Evaluate Vendors, Manage Process And Evaluate Results

PVR
- The Aggregate Fair Market Value Study And Methodology (CLA And COD)
- Sales Verification
- Sample Size – Number Of Sales
- Level Of Oversight And Support Provided To Local Listers

Market Behavior

Defending The Grand List – Appeals Process

IV. Recommendations

After reviewing the responses, a small group of representatives met and identified consensus legislative proposals. The following is a summary of the proposals agreed upon at that meeting. The questionnaire and submitted responses are in Appendix A and a copy of report prepared by PVR examining the fluctuations in CLA is contained in Appendix B.

Summary

1) Amend Definition of Market Value
2) State-Level Valuation of Utility Property
3) State Certification of Reappraisals
4) Annual Certification of Grand Lists
5) Enhance Lister Training Opportunities
6) Amend "Inventory" (income and expense) Provisions
7) Improve Property Transfer Tax Returns and Ensure the Return of Completed Forms

Proposal #1 – Amend Definition of Market Value

Addresses the ability to defend the grand list and barriers to best practice application.

Vermont has a precise definition of fair market value in 32 V.S.A. §3481. "The estimated fair market value of a property is the price which the property will bring in the market..." The Courts have applied this so that the price resulting from a sale is the presumptive market value. This is a difficult concept to attain in mass appraisal where market value is derived through averages of sales values. The International Association of Assessing Officers[1] organization (I.A.A.O.) and other states use the "most probable price" a property will bring on the open market as a slightly more flexible definition of market value.

An arm's length market sale price should always be a strong indication of value but too much emphasis on individual sales prices can lead to inequities across properties in a municipality. This may also legitimize what is called "sales chasing." Sales chasing is the non-systematic process of changing the appraisal value of a property based solely on the price paid for that property. This is a poor appraisal practice that results in inequities across assessments within a community and therefore inequities in the resulting tax bills. Sales chasing can distort the results of an equalization study. When sales chasing is detected, adjustments to the study should be made to eliminate its effects.

[1] The I.A.A.O. is generally accepted as the primary authority on mass appraisal issues.

Participants at the meeting felt that "most probable price" is used in most jurisdictions now for determining fair market value, especially for purposes of both fee and mass appraisal, and recommend that Vermont also adopt this definition.

The new definition would help to eliminate, at least in part, extreme ratios which arise from anomalous sales, since the market value would be determined in part by other sales, and not by anomalous sales alone. It may also alleviate the pressure to sales chase by giving listers the tools necessary to defend their listings even in the face of below-market sales. Currently, a buyer who buys below the listed value is virtually assured a reduction in his assessment upon appeal, regardless of whether similar properties are selling at higher values. Yet when a property sells for more than its listed value, listers cannot increase the listed value to the sale price – even if similar properties are selling for high values – without violating the Proportional Contribution clause of the Vermont Constitution. The purpose of the CLA is to address the effects of market trends in a consistent way statewide. Changing individual listed values can skew the results of the CLA analysis. Thus, the current definition exacerbates inequities in the grand list and encourages some listers to sales chase in a misconceived effort to maintain some semblance of equity between sold properties. Changing individual listed values can skew the results of the CLA analysis.

If the market value definition is changed to "most probable price", listers will have a greater ability to defend their listings using comparable sales data. Hopefully this will lead to market value based outcomes in taxpayer appeals versus individual sales price outcomes involving properties that sell below market.

One potentially negative aspect of the new definition is that it could make equalization extremely difficult by requiring the State to engage in fact-intensive analysis of each sale used in the equalization studies, even bona fide arms-length sales. Approximately forty thousand sales are used in equalization each year. It was suggested that along with the definitional change, language be added to 32 V.S.A. § 5405 to clarify that a bona fide arms-length sale is presumed to be a reliable estimator of value absent a showing that the price is an extreme or is inconsistent with the "most probable" price at which the property would sell.

Proposal #2 – Conduct State-Level Valuation of Utility Property

Addresses capacity to value special purpose properties and the ability to defend the grand list.

Utility property is considered a specialized area of appraisal. These properties generally offer limited comparable sales and/or have complicated financial practices specific to a particular business. This limits the availability of data needed for appraisals or makes the interpretation of the data difficult unless the appraiser is knowledgeable about the financial practices of that business.

State-level utility appraisal would create statewide uniformity in utility valuation, and would remove the burden of a highly-specialized and technical job from local listers and appraisers.

The State would have the discretion to hire or contract with a utility appraiser, and would defend any utility valuation appeals. The Department of Property Valuation and Review would need to estimate the cost for appraisal services and potential valuation cases.

The survey asked if the state should assume responsibility for the valuation of commercial, industrial and special use property, such as utilities. Most respondents felt that utility properties were the most difficult for local assessors and that this was the area that required the most expertise. This proposal was endorsed by all participants and most others who responded to the survey.

Proposal #3 – State Certification Of Reappraisals

Addresses reappraisal quality issues and local listers ability to manage and evaluate reappraisals.

Mass reappraisals are conducted in a variety of ways in towns. Many hire outside mass appraisal firms as consultants, while others conduct the work internally, sometimes on a "rolling" reappraisal basis. Two areas of concern arise from mass reappraisals, what constitutes a mass reappraisal, and how can towns and the state ensure that the process is held to a reliable standard? Certification of the re-appraisal process and results is considered particularly important since the re-appraisal sets a base that will likely be in effect for several years.

One method proposed, but not unanimously supported, is whether PVR should have the ability to decertify mass appraisal firms that contract with towns. The discourse led the group to the conclusion that there would be no need to create a cumbersome decertification process if instead, PVR were to certify the mass appraisal results for the towns.

With ongoing review by PVR during a mass reappraisal, as well as review of the final results, using both statistical and field review, towns would be able to evaluate the mass appraisal service received, and in future avoid firms which do not produce high quality results. Firms with poor performance would not need to be decertified, as they would soon cease to be hired. While this proposal was initially targeted at the quality of services provided by contractors, all towns that reappraise, regardless of how the work was conducted, would have feedback on the results of the mass reappraisal.

A certification panel or board comprised of PVR staff and local listers could evaluate the results of the mass appraisals conducted annually. Issues that would need to be determined include a definition of what constitutes a reappraisal, a process for certification, and what aspects of the reappraisal would be certified as well as an estimation of the resource needs at PVR to conduct these certifications.

Proposal #4 – Annual State Certification Of Grand Lists

Addresses best practice issues and oversight issues.

The discussion of certification of re-appraisals led to the discussion of certifying grand lists each year. This proposal may help in solving a number of issues which seemed unsolvable: how to require and increase lister training, whether to certify listers, how to accomplish certification when many listers are volunteers and some towns are unable to recruit listers.

State certification of the grand list could be an efficient way to address all of these concerns. With PVR review of grand list maintenance, listers would receive ongoing information about their performance and ongoing suggestions about lister practices. Listers who do not need more training would not be required to attend training sessions; while listers who are identified as needing help would receive it. Both timing and content of lister training would be tailored to needs identified.

Issues that would need to be determined include a definitions of what is being certified, all changes from previous years grand list, a process for annual certification, and the aspects of grand list maintenance activities that would need to be certified as well an estimation of the resource needs at PVR to conduct these certifications.

Proposal #5 – Enhance Lister Training Opportunities

Addresses local capacity, training, turnover and best practice issues.

The value of long-serving, well-trained listers is an undeniable benefit to the state. Local listers provide an important service by creating a reliable education grand list in addition to their municipal responsibilities. In 2003, the property tax generated $685.9 million in revenue for education, making it the largest single source of revenue in the state and the only statewide tax base that is administered at the local level. The state has a vested interest in ensuring that listers are educated about quality appraisal practices.

At the present time, the state organizes training sessions at annual meetings organized for local officials. Either the town or the lister must pay the cost of attending the meeting. In most towns, listers are provided very small remuneration for their work. Having to pay for their own training is a disincentive to attend the training sessions. While most respondents felt that these sessions were very helpful, many felt that this training opportunities should be offered at no cost or with reimbursement of their expenses from state funds.

The group unanimously agreed that the Vermont local assessment system is most effective in towns with experienced and knowledgeable officials that have adequate resources to support their work.

Proposal #6 – Amend 'Inventory' (Income and Expense) Provisions

Addresses commercial and industrial property valuation issues.

In proposal number two, the recommendation is for state assessment of utility properties. In regard to commercial and industrial properties that are typically valued based on the income approach the primary recommendation is to increase the ability of listers to obtain the pertinent information needed to estimate fair market value.

Currently businesses and owners of properties are required to fill out "inventories" (refer to 32 V.S.A. §4009). These forms request financial information on commercial properties. Typically rental income and property operation expenditures in the case of property that can be leased or enterprise income and expenses in the case of special use properties. Participants felt that these inventories should be updated and broadened to include more information for the listers, thus resulting in better data from which accurate appraisals can be generated. To better insure the confidentiality of this information the existing penalty should also be increased for disclosure of financial information submitted in income and expense inventories authorized under this provision.

Proposal #7 – Improve Property Transfer Tax Returns and Ensure the Return of Completed Forms

Addresses sales verification issues.

Property Transfer Tax Returns are required at the time of sale of property and payment of the property transfer tax. While collection of the tax is the main purpose of PTTRs, PVR and local listers use the information on the form for the equalization study and local assessment purposes. Properly completed forms are essential for evaluating sales and are the basis of the annual equalization study.

A two-part approach is recommended. First the forms should be improved so they include only the information required in the most clear and precise way possible Second, the forms should be easily available online etc. In order to ensure the return of completed forms, a penalty could be imposed, which would be paid to listers as reimbursement for their time in tracking down complete information.

The rationalization for the penalty is that penalizing the closing attorney for incomplete information would not be productive without someone to track down the correct information. Prohibition against recording the deed if the PTTR was incomplete would prove useless, since the parties could fill in anything in order to achieve recording – unless someone were available to check the information on the form. The participants came up with a possible solution: impose a fine on the person responsible for the PTTR, and let the lister keep the fine as payment for time spent tracking down the correct information.

V. Homestead size

This Grand List Issues study is also required to include a review of the two acre limit on the size of the homestead for purposes of the income sensitivity tax relief program, and a discussion of the fiscal impacts of expanding the homestead beyond two acres up to 25 or 27 maximum.

The Vermont "homestead" definition was created in 1969 with the original property tax rebate program and is now applied to the statewide education and municipal property tax adjustment programs as well as the use value appraisal program. The definition of a homestead has historically limited homestead property to two acres of land.

A homestead is an integral part of the formula for calculating income sensitivity benefits. For many homeowners, the two acre limit translates into a limit on the value of the homestead and therefore the amount of property tax relief. There has been considerable discussion in the legislature over the past several years about expanding the definition of a homestead to include more land.

In Act 68 of the 2003 Legislative Session, the homestead for the purposes of "splitting" the Grand List between residential and non-residential property was expanded to include unlimited acreage. The homestead school tax rate determined by the level of local spending will apply to the entire homestead parcel. Nonetheless, the value of the homestead which is used to calculate income sensitivity benefits remains limited to the house and surrounding two acres, now called a "housesite."[2]

An alternative program was introduced to reimburse households applying for income sensitivity with additional acreage. An additional $10 in benefits will be paid per acre for each additional acre up to a maximum of five additional acres.[3] This program is very limited and does not correlate the benefit amount to local education spending, the homeowner's level of income, or the value of the additional land.

Current law income sensitivity benefits are estimated reduce residential education property taxes by $77.6 million in FY 2003 and $87.1 million in FY 2004 under the current two-acre definition of homestead. The additional cost of expanding the acreage beyond the two acre limit are estimated in Table 1. These estimates are based on historical tax rates (i.e. Act 60 rates) it is anticipated that Act 68 would have resulted in a

[2] Act 68. Sec. 7. 32 V.S.A. § 6061 (11) "Housesite" means that portion of a homestead, as defined under subdivision 6061(2) of this title, which includes the principal dwelling and as much of the land surrounding the dwelling as is reasonably necessary for use of the dwelling as a home, but in no event more than two acres per dwelling unit; and in the case of multiple dwelling units, no more than two acres per dwelling unit up to a maximum of 10 acres per parcel.

[3] Act 68. Sec. 10 (a)(1)(D) A claimant whose household income does not exceed $75,000.00 shall also be entitled to an additional adjustment amount under this section of $10.00 per acre, up to a maximum of five acres, for each additional acre of homestead property in excess of the two-acre housesite. The adjustment amount under this section shall be shown separately on the notice of property tax adjustment to the claimant.

$1.32 average residential school tax rate if it had been in effect for FY03, down significantly from the $1.72 then in effect under Act 60. This estimates should be re-analyzed when data from Act 68 is available. All of these estimates assume the current law cap of $160,000 of homestead value.

Table 1. Options and Estimates for Expanding Homestead Acreage

Additional Acreage Options	Total Homestead Acreage	Estimated Additional Cost
3 acres	5 acres	$6.8 million
7 acres	10 acres	$9.9 million
13 acres	15 acres	$10.9 million
25 acres	27 acres	$12.9 million
No limit on acreage	0 to Unlimited	$18.5 million

Notes: Estimates are based on 2002 data; Act 60 Current Law (not Act 68 changes)

Advantages from increasing the acreage include:

- Would reduce the taxes paid by Vermont residents eligible for income sensitivity benefits.
- Increasing acreage beyond the current two-acre limit as part of the homestead will allow households under the $75,000 threshold the full benefit of the value of the additional land.
- The current two-acre maximum benefits mainly those in high value urban areas
- The current two-acre limit now favors those homeowners in high value residential buildings, rather than those whose property value lies more in the land.

Disadvantages of increasing the acreage include:

- Expanding the definition of a homestead to include additional acreage will increase the cost of income sensitivity benefits.
- Households above the $75,000 threshold will realize the value of the additional acreage, until the homestead reaches the $160,000 homestead value cap.
- The benefits of expanding the acreage definition of a homestead will largely be to suburban and rural areas of the state where larger parcels are more common
- The most significant fiscal benefit will be to homestead property owners in communities with high land values.

The data currently available for this analysis is very limited. At the present time it is uncertain how many additional acres could potentially be enrolled in the program, the value of those additional acres, and the income levels of the households claiming the larger homesteads. After homestead declarations are filed this year, there will be much better data available to analyze the effect of expanding homestead acreage for income sensitivity purposes.

Consideration of expansion of the homestead acreage should include examination of the alignment of this policy with other state policies including the current use program and planning objectives or other land use policies.

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Appendix A – Questionnaire and Responses

Appendix A - Questionnaire and Responses

Statewide Valuation Overall

The accuracy and fairness of the equalized grand list is result of the combined efforts of local listers and the state. The end result of these efforts is the equalized value for each town. Fluctuations in common level of appraisal (CLA) and coefficients of dispersion (COD) and the impacts these have on particular towns from one year to the next have generated concerns about property tax equity. We have identified the following issues that potentially contribute to these fluctuations:

- Local Listing and Valuation Capacity - esp. commercial, industrial and special use property
- Lister Training
- Frequency of Reappraisals
- The Aggregate Fair Market Value Study and Methodology
- Market Behavior

1) Do you feel that any of the above issues do not contribute to the concerns in the accuracy of the grand list or regarding CLA and COD?

   - **No, all these items contribute to the accuracy of grand lists or the results of the equalization study.**
   - **NO, they all contribute to different degrees of importance**
   - **All of the above contribute to the accuracy of the Grand List in one way or another: A- Depending on the town and the sales or lack of sales B-Lister Training: Training should be available to all listers in a more economical way as some towns do not have the resources to put money in their budget to help their listers pay for courses. We should have a state-wide data base for sales information that would be available on-line for research from individual towns.**
   - **Another issue is the fact that the PTTRs are still being sent in to the town clerks for recording when they are incorrectly made out.**
   - **Competency of re-appraisal firms is not being questioned. Follow-up the year after the re-appraisal is to be desired.**
   - **Lack of consistency within towns in the state regarding the categories.**
   - **Lack of information coming from the state to individual towns.**
   - **Different areas of the state respond to the market differently. Some areas such as ski area towns and lake-front properties sell with more frequency and at higher prices.**
   - ***They all contribute***

2) Are there additional factors you think contribute to these concerns? Please list and discuss.

   - **Definition of market value. Vermont has a precise definition of market value in 32 V.S.A. §3481. "The estimated fair market value of a property is the price which the property will bring in the market..." The Courts have tended to apply this so that the price resulting from a sale is the presumptive market value. This is a difficult**

concept to attain in mass appraisal where market value is derived through averages of sales values. The International Association of Assessing Officers organization (I.A.A.O. is generally accepted as the primary authority on mass appraisal issues) as well as other states has a somewhat more flexible definition of market value in that it is defined in terms of the most probable price a property will bring on the open market. An arm's length market sale price should always be a strong indication of value but too much emphasis on individual sales prices can lead to inequities across properties in a municipality. It also tends to legitimize sales chasing in the minds of some assessing officials.

- **Sales chasing. The non-systematic process of changing the appraisal value of a property based solely on the price paid for that property. This is a poor appraisal practice that results in inequities across assessments within a community and therefore inequities in the resulting tax bills. Sales chasing can distort the results of an equalization study. When sales chasing is detected, adjustments to the study should be made to eliminate its effects.**
- **Property transfer tax returns- basis of sales info for towns and state for study are not being filled out completely, improperly filled out, and/or in some towns, not recorded and turned over to listers in a timely fashion. The quality of work done by reappraisal firms is often lacking, also reappraisal firms are not giving the boards of listers adequate back-up material, and in the case of implementing a new computerized appraisal system, are not training the listers in its use.**
- **PTRS NOT FILLED OUT CORRECTLY OR COMPLETELY**
- **PROMISED STATE DATA BASE WOULD BE HELPFUL WHEN THERE ARE LACK OF SALES IN CERTAIN CATEGORIES [COMM. & INDUST]**
- **METHOD OF APPRAISAL OF UTILITIES**
- ***Property transfer tax forms not filled out fully or correctly.***
- ***SPAN number should (perhaps) be included on PTR.***
- ***Lack of a functioning and useful state database of sales.***
- ***Limited resources of listers***
- ***Impact of sales to out-of-staters***
- ***Impact of small number of sales and of sales in particular property classifications being applied to whole grand list***
- ***Quality of the mass appraisal firms' work***

Local Listing and Valuation Capacity

3) Do you feel there is significant uniformity and effectiveness from town to town in the ability of local listers to equitably list and value property to meet current professional mass-appraisal standards?

- **Yes, by and large there is a reasonable level of uniformity in most Vermont towns. At the same time, there are notable exceptions to this (i.e., towns with high CODs) and the recent surge in market activity and prices has strained the level of uniformity particularly in those towns that have not reappraised in the last few years. While effectiveness varies markedly, the system is most effective in towns with experienced and knowledgeable local assessment officials that have adequate resources to support their work.**
- **I do not have firsthand experience in the quality of work of all towns in VT. My guess: probably not. The answer: consistency in methodology should be promoted and encouraged by PVR. This is also true for reappraisal firms where this is an even more critical area since the entire town is done. If they are keeping to old appraisal methods and not using the 3 approaches to value, in some cases**

as required by statute (affordable housing) then that alone will create a lack of uniformity and effectiveness. Even if the listers have the ability to maintain the values established after reappraisal, the subsequent values are only as good as the base.

- **There is some uniformity; however, more is needed. We need to keep in mind that each town is unique and has different properties – ski areas, condos, farms, utilities, etc. – and some towns are clearly residential with very few different properties.**
- **NO. STATE [PVR] NEEDS TO HAVE CONSISTENT STANDARDS FROM TOWN TO TOWN. THERE IS NOT CONSISTENCY IN WHAT DISTRICT ADVISORS TELL TOWNS IN THEIR DISTRICT.**
- ***No***

4) If yes -please provide your thoughts on what aspects of the current system provide for this uniformity and effectiveness.

- **Where the system works the best it is partly because:**
  1. **Low turnover in experienced assessment officials.**
  2. **Local listers have a good understanding of their town's market.**
  3. **Average Vermont municipality has relatively few "special" property types.**
- **While we answered generally yes, the exceptions are sufficient to answer #5 as well.**
- **SEE ABOVE**
- **More educational opportunities should be available and encouraged. The State should help with the costs as small towns do not have the budget to cover expensive classes.**
- **All of these are important causes as well as those listed under 3 above.**

5) If no – please provide your thoughts on the causes of these differences, for example, town size and resources, longevity of the elected listers, lister training, lack of state help and oversight.

- **Lack of training due to limited in-state course offerings and also due to the reluctance of some assessment officials to avail themselves of present opportunities.**
- **Lack of resources at the municipal level in terms of remuneration of assessment officials, funding for training and availability of tools such as computers.**
- **Relatively high turnover in elected listers.**
- **Prevailing practice of conducting infrequent reappraisals.**
- **The state should provide more education to the listers – educate each of its State Advisors in a specialty – utilities, hydro projects, ski areas, industrial properties so that the advisor could consult with the local board when it runs up against these property owners. Small towns do not have the resources to come up against the high-powered attorneys. Once the word gets out that a town will back down and make an agreement with the attorney, it is in a bad position.**
- **SOME TOWNS DO NOT PAY WELL AND DO NOT PAY FOR EDUCATION AND TRAINING FOR LISTERS. MANY LISTERS ARE PART TIME AND CAN'T AFFORD OR PERHAPS ARE NOT ALLOWED TO TAKE TIME OFF FROM THEIR REGULAR JOBS TO GO TO MEETINGS. TOWNS ARE NOT GOING TO KEEP LISTERS IF**

THEY DON'T PAY A DECENT WAGE OR PROVIDE SOME BENEFITS OR COMPENSATE FOR TRAINING.

- ***All of these factors listed***

6) Defending the Grand List – what roles should the state have in defending the grand list? At what level should there be state involvement if any?

- **Under the current system the towns have the critical role of determining assessments. Under this system the State's role should be advisory and aimed at assisting communities in the development of defensible grand lists. The State should intervene legally only in those instances where there is a statewide interest involved. Given the complexities of valuing a limited number of "special" properties, it would be worth exploring expanding the State's role in the area of these special properties.**
- **Since the majority of tax is the education portion, I believe the state would be best served if they were involved in cases that go past the State level. When properties go to court, the Selectboards are often unwilling to spend the $$ necessary to defend the values since they have to increase the municipal budget and thus municipal tax to do so. Once the taxpayers become aware of the weakness in the system they can take advantage of it, resulting in a tax loss to the education fund. I have been fortunate to have a Selectboard who value the work I do and recognize the importance of defending the town in appeals. Also, we seldom lose). Boards of Civil Authority can make political decisions, which can negatively affect value ratios and thus taxes.**
- **Defending the Grand List ? How can the state defend a grand list to itself? The state should be helpful with the specialized properties (ski areas, utilities, Hydro projects, etc.) beyond the local level. (See above - #5)**
- **THE STATE SHOULD NOT BE INVOLVED AT THE LOCAL LEVEL. IT SHOULD BE INVOLVED ONLY AT COURT LEVEL AS COURT COSTS ARE USUALLY HIGHER THAN TOWNS CAN AFFORD, AND THEY, THE STATE, ARE THE ONES WHO ARE GETTING THE BENEFIT.**
- ***Respondents were mixed on this, though support grew for this idea the larger and more complex the property and the higher the venue for the appeal (i.e., at the court level). There is significant concern as the current capabilities of PVR to perform such a role and confusion as to what the local role would be and the coordination necessary for there to be a successful hand off to the state.***
- ***Most support was for state role at the court level.***

7) Difficulty finding listers – Do you have any specific recommendations for towns where it is hard to find people to serve as listers? Should towns have the option to hire an assessor if there is difficulty in finding listers to serve? Are there other options that should be open to towns regarding maintenance of the grand list?

- **Towns currently have the authority to supplement the capacity of elected listers with contracted appraisal services in those cases where both the selectboard and board of listers concur that this is appropriate. For most towns this is sufficient flexibility and it maintains a separation of power between the development of the grand list and the establishment of budgets and tax rates. At the same time, it does appear to be true that a growing number of towns are having difficulty in retaining a stable board of listers. It is only with time, experience and training that a board of listers develops the know-how to effectively**

maintain the grand list. Given this, some additional options would be appropriate such as regional assessment districts.

- **PAY THEM!!!! TREAT THEM WITH A BIT OF RESPECT AS YOU WOULD ANYONE DOING A JOB OF THIS TYPE IN THE REAL WORLD. DO NOT ASSUME ACROSS THE BOARD THAT AN ASSESSOR THAT IS HIRED IS BETTER QUALIFIED OR WOULD DO A BETTER JOB. QUALITY DEPENDS ON THE PERSON AND ANYONE WHO IS WILLING TO SPEND THEIR OWN $$ ON TRAINING, TRAVEL, ETC TO SERVE THE TAXPAYERS WHO ELECT THEM SHOULD NOT BE SUBJECTED TO THE KIND OF VERBAL ABUSE I AM HEARING ABOUT FROM OTHER LISTERS. IF CLERKS, TREASURERS, ZONING ADMIN. ETC WERE PAID $6.00/HR WITH NO BENEFITS HOW LONG DO YOU THINK THEY WOULD LAST? AND WHAT QUALITY OF WORK COULD YOU EXPECT FROM THEM?**
- **The difficulty in finding listers would be eased if and when towns realized that they should pay the listers a decent wage and offer benefits. Historically, the lister was a part time worker. That is no longer the case and a person cannot work as a lister for the pittance being offered today (from $6 to $11 is the average). The lister has no benefits and no health insurance. The only insurance coverage is that part of the town's liability policy if a lister falls or receives a dog bite on a site visit, etc.**
- **A general job description of a lister is attached. With the Selectmen holding the purse strings, the listers can do the work but if the Selectmen don't see the job as important, they have the right to withhold payment. People are not too enthusiastic about putting in the amount of time necessary to do a good listing job if the job is not going to be recognized as important and they aren't going to be paid a decent wage. Perhaps Boards of Selectmen should also be education as to the importance of a "good" Grand List, fairly done.**
- **RECOMMENDATIONS—OFFER A COMPETITIVE WAGE, BENEFITS AND TRAINING. OPTION OF HIRING AN ASSESSOR: YES, BUT IF LISTERS WERE PAID AS ASSESSORS, THERE WOULD BE LESS DIFFICULTY IN FINDING LISTERS TO SERVE.**
- ***Most respondents pointed to low pay and benefits as the major obstacle, though low esteem and level of appreciation for job also mentioned several times. A small minority thought that local listers should be replaced with regional or countywide appraisers.***
- ***Almost all agreed that towns should have the option, though they believe that citizen listers do really serve their community better***

Commercial, Industrial and Special Use Property

8) Is the valuation of commercial, industrial and special use property a particular challenge for towns?

- **Generally yes. The more unique property types are a challenge to all appraisers (whether local or state) regardless of experience and credentials. These properties generally offer limited comparable sales and/or have complicated financial practices specific to a particular business. This limits the availability of data needed for appraisals or makes the interpretation of the data difficult unless the appraiser is knowledgeable about the financial practices of that business.**
- **That depends on the town, the expertise of the assessor or lister, the quality of the consultant if one is hired ie reappraisal firm or MAI or equivalents. Even in large**

jurisdictions outside of VT, with hired assessors, an expert is usually hired in the case of unique properties.

- **Yes, because of the lack of data and information regarding sales. Again, perhaps one state advisor should be trained to handle "special" use properties. It would be helpful to have a state-maintained data base that could help in the research of sales of special use properties.**
- **DEFINITELY YES.**
- ***Almost unanimous agreement that it is.***

9) Should the state assume responsibility for the valuation of commercial, industrial and special use property?

- **Yes, over time the State should increase its involvement in the valuation of these property types and perhaps assume assessment authority for some unique property types. The appraisal of unique property types such as electric utility properties would be a good starting place. Valuation of pipelines, cable lines and fixtures and communication towers should also be considered.**
- **Only if they have the proven expertise to handle this. How many qualified, certified (IAAO or Appraisal Foundation standards) appraisers are currently on staff at the state level? It will not be cheap to retain good, qualified appraisers in these areas. Under qualified = not good values.**
- **No, impractical and very likely to be at the bottom of the priority list given that PVR is very underfunded – its budget should be more realistic.**
- **NO. BUT THE STATE SHOULD PROVIDE THE PREVIOUSLY PROMISED STATE DATA BASE OF COMMERICAL AND INDUSTRIAL SALES IN A USER FRIENDLY FORMAT.**
- ***A small number supported this but not at PVR's current level of manpower and expertise. Most believe this is not an improvement.***

10) Should the state enhance the expertise at PVR for commercial, industrial and special use properties and provide more direct help to communities?

- **Yes, PVR needs access to more expertise in this area. Hiring qualified commercial/industrial personnel within the State's pay scale is a challenge. An alternative would be to contract for these services.**
- **YES**
- **Yes, as outlined above: a state maintained data base plus educated state advisors.**
- **YES, AT THE DISTRICT ADVISOR LEVEL TO DIRECTLY HELP TOWNS.**
- ***Almost unanimous support for this proposal, though given recent attempts, they are doubtful of PVR's ability to be able to hire such expertise.***

11) How should this be financed?

- **Appropriations out of the Education, General and Transportation Funds based on the overall split in the property tax between school and municipal revenues.**
- **Well, it is a state-wide property tax----------**
- **Included in PVR's budget – from the General Fund?**
- **GENERAL FUND**

- *All agreed that it should be paid for by the state, a majority supporting some source other than the state property tax. Several believed that these properties should pay more in state property taxes to pay for such extra work, possibly as an additional property transfer tax.*
-

12) Other solutions for commercial and industrial property?

- **For property types where there is limited data (sales or income) to use in an appraisal, we should consider establishing assessment values outside the current definition of fair market value. Assessed values would be based on readily available data. This would result in much greater uniformity in valuations across the State and the resulting tax burden would be more predictable for both the property owners and assessing authority. Electric utility property is an example of property where this would apply**
- **Broaden the inventory provisions in statute (refer to 32 V.S.A. §4009) to require owners of income producing properties to provide income and expense information. To insure the confidentiality of this information, increase existing penalty for disclosure of information from inventories authorized under this new provision**
- **For example: Perhaps a ski area appraiser- there are none in VT by the way who are known experts in this field with the data base and contacts to do this professionally- could be hired to do all ski areas so they are on the same level.**
- **A specialist for unique types of properties – educate an advisor for each type, and maintain a data base.**
- **STATE MAINTAINED USER FRIENDLY DATA BASE OF COMMERCIAL AND INDUSTRIAL SALES**
- **TOWNS COULD HIRE QUALIFIED PROFESSIONAL APPRAISERS, WITH STATE SHARING COST.**
- ***Apparently PVR is supposed to be maintaining and providing a state data base of sales of these types of properties, which, if it contained the right information on a timely, useable and accessible basis would be helpful to listers in doing a better job. If it is available it is deemed worthless by respondents. More help for the listers in support from PVR is needed.***

Lister Training

13) How important do you feel it is to change the current system of lister training?

- It is important to continue our efforts to improve the current system. Over the last several years, PVR has expanded course offerings and generally they have been well attended. This includes both valuation theory and practice as well as the use of CAMA systems. There is room and very likely the demand to expand on current offerings.
- **It is very important. PVR has been improving each year and needs to continue in this vein and needs to train the state advisors.**
- NOT CHANGE, BUT CONTINUE WITH EDUCATION AND COURSES OFFERED. NEEDS TO BE CONSISTENCY IN TRAINING ON ALL LEVELS.
- *Most respondents believed that PVR has made great strides in this area though more needs to be done to expand the training available, make it more affordable (including perhaps providing a stipend for time attending), making it more accessible through multiple locations and times.*

14) Should training and certification be mandatory? – i.e., newly elected listers be required a basic level of course work and long term listers required to update training at given intervals?

- **While more training would be desirable, listers are elected officials and mandatory training for the entire board of listers would result in unnecessary conflicts and create inefficiencies. An alternative would be to require a minimum level of training across the entire board. Another alternative to mandatory training would be to set performance measures for maintenance of the grand list and to annually evaluate their performance. If the measures are met, then there would be no training requirement. This alternative would be time-consuming and require significant new resources.**
- I think PVR has made some real headway in this area.
- **(& 15.) It wouldn't need to be mandatory if training could be received at a cost that could be reimbursed if the class or course was passed. The State should absorb some of the cost. If an adequate salary and benefits were offered. Money for maintaining the Grand List should be paid into a special account controlled by the listers, not the selectmen, as is the case right now. Some towns put it in the General fund and pay the listers expenses out of it or use it in another way.**
- **Inexpensive ways of training should be utilized – interactive TV, VCR tapes made and maintained in a training library that could be borrowed by town boards when they had new listers to train. Perhaps a reimbursement for the class fees when a lister took and passed a class. Better booklets and information that is kept up-to-date.**
- **New Lister Training should be for more than one day. State advisors should be consistent in the training process so that all new listers receive training the same way.**
- **NO, NOT MANDATORY, BUT STRONGLY ENCOURAGED. NEWLY ELECTED LISTERS NEED MORE THAN A ONE DAY TRAINING SESSION---WAY TOO MUCH INFORMATION FOR A ONE DAY CLASS.**
- **LONG TERM LISTERS SHOULD ALSO BE STRONGLY ENCOURAGED, BUT NOT MANDATED TO KEEP UP TO DATE IN THEIR TRAINING. INTERACTIVE TV OR VIDEOS COULD BE USED FOR TRAINING/EDUCATION. DISTRICT ADVISORS COULD TEACH CLASSES FOR LISTERS IN THEIR DISTRICT.**
- ***A slight majority of respondents supported mandatory training, though a survey conducted by a Woodstock lister this year found that only 22 of 69 listers responding to a questionnaire she circulated earlier this year supported mandatory training. That questionnaire response had optional training guidelines being supported on a 51-14 margin. (please find results of this questionnaire attached.***

15) If mandatory – who should pay for it? Local – state – shared?

- **As is currently the case, shared.**
- **Yes, but it should be done carefully, implemented over time to retain some very hardworking listers who have vast amounts of knowledge about their towns. I have some info from other states about how they have done this and can get more from IAAO if anyone is interested.**
- shared

- **PVR SHOULD BE REALISTICALLY FUNDED, SO THAT ADVISORS AND LISTERS COULD RECEIVE TRAINING/EDUCATION FUNDED BY THE STATE. THE STATE ULTIMATELY BENEFITS.**
- ***A majority of respondents answered that the state should pay for mandated costs. A minority would agree to shared.***

16)What "carrots or sticks" could or should be used to keep trained listers from leaving for private employment?

- **Increase lister remuneration.**
- **Make benefits available to Listers working above a minimum number of hours.**
- **Educate listers to work as appraisers and data collectors for mass appraisal firm thus supplementing other forms of income.**
- **Encourage the development of a voluntary lister certification program.**
- **See 3 above stop downgrading them because of some - often listers have done a great deal of the work and certainly have contributed in knowledge during reappraisals but the so called "professionals are the given the money and the credit".**
- **"Carrots or sticks" shouldn't be necessary if some of the above mentioned items were put in place.**
- **CARROTS: COMPETITIVE WAGES, BENEFITS, COMPENSATION FOR TRAINING, WORKSHOPS, ETC., & LOST TIME, MERIT/COST OF LIVING INCREASES.**
- **STICKS?????? WHAT A NONSENSICAL THOUGHT!! YOU DON'T BEAT SOMEONE INTO STAYING AND DOING WHAT IN MOST TOWNS AMOUNTS TO COMMUNITIY SERVICE.**
- ***Higher pay was a universal answer.***
- ***Benefits as for other part- or full-time town employees was also a common response.***
- ***Reimbursement for the training and the time to attend was mentioned often.***
- ***Appreciation by the public and other municipal officials would help.***

17)Should the state be aware of the tenure of the listers and offer more oversight and help to those communities? How to fund?

- **We currently offer New Lister Training each spring after Town Meeting Day to help new listers adapt to their job. Beyond this, additional assistance is available but is on a voluntary basis. Additional support mechanisms could be made available but would likely require additional resources.**
- **If the listers did not work there would be no grand list issues because there would be no grand list, nor would there be any $$ for the Selectboards, managers, clerks etc to spend. Most states do not punish the people who do the work. In Warren we are given the $$ that the state pays the town for work on the equalization study. We use that toward our regular budget. We capital budget for reappraisals and expenditures, (including the $6.00 per parcel from the state), as would any other department. I know this is not true I many towns.**
- **Don't know just what you are asking. Most of the listers who have been on for a while are interested in doing a good job. This question just doesn't make sense.**
- **DON'T UNDERSTAND THE QUESTION**

- *Yes, though there was a lot of confusion as to the meaning of this question. It is not the tenure but the capabilities of the local listers that should engender more oversight and help. The state should pay for this.*

18)Do you have other solutions on how to increase lister knowledge and uniformity?

- **Expand education program by developing new methods for course delivery such as home study, Internet courses, more flexible scheduling of training.**
- **Initiate a system of peer review among local assessment officials.**
- **Better training of state personnel so when the listers turn to them for guidance the information is consistent and offered in a timely fashion. Give PVR the necessary tools (i.e> $$) to do this.**
- **See items above.**
- **ALREADY ANSWERED IN PREVIOUS QUESTIONS; BUT CONTINUE WITH WORKSHOPS, CLASSES, MOMS AND TOEC MEETINGS.**
- ***PVR needs to be providing more consistent information to listers, provide a better useable database, encourage more exchange of information among listers (e.g., Comp 60 list serve).***

Frequency of Reappraisal

19)Do you feel the frequency of reappraisals has an impact on the accuracy of the town grand list and/or the statewide equalization study?

- **Yes. Several factors influence the durability of a reappraisal including: the quality of the reappraisal; the presence or lack of an ongoing grand list maintenance plan in the interim between reappraisals; and market activity. Low quality reappraisals deteriorate quickly under any set of market conditions. An ongoing maintenance plan requires continuous monitoring of grand list performance which in turn points to weak areas within the grand list that should be addressed between reappraisals. Market activity is critical. In a market with relatively little change, a good grand list has more durability. A rapidly changing market (up or down) can result in poor grand list performance and the need for more frequent reappraisals. The uncertainty of the equalization study (defined as measurement error) is directly related to the quality of a grand list. All other things held constant, it takes fewer sales to derive a statistically reliable estimate of market value for a good grand list than a grand list with a high COD.**
- **Yes. Reappraisals should be done when there is a real lack of uniformity within the town.**
- **(#19 – 22) Equalization study and sales analysis, the size of the town; the current market all are involved when determining when a town needs a re-appraisal. If the listers have been well educated, they certainly will know when their town is out of balance.**
- **(#19 – 21) EVERY TOWN IS UNIQUE, BUT MARKET IS THE MAIN DRIVER BEHIND ACCURATE APPRAISALS; SOME TOWNS COULD CONSIDER ROLLING REAPPRAISALS OR INDEXING, DEPENDING ON ASSESSED VALUES/SALES PRICE RATIO**
- ***By about a 3 to 1 margin, respondents believed that frequent reappraisals did have an impact on the local grand list and the equalization study. Others said it depended on the quality of the mass appraisal firm doing the reappraisal. The question did cause some confusion, because some respondents believed that they did have an impact on them, but believed that they were a poor measure of actual fair market value and should not be used to the extent they are.***

20)How often should reappraisals be required? i.e., many states are on fixed schedules for example every three years.

- ***In theory, it is not appropriate to mandate reappraisal within a prescribed schedule and it could lead to inefficiencies in the expenditure of public funds. On the other hand, the old adage that a reappraisal should last for 10 or more years is equally inappropriate. Under optimum conditions, reappraisal frequency should be a function of evaluation of grand list performance relative to market activity. To require reappraisals on a fixed schedule during a period of market stagnation would result in a poor use of public funds. In theory, the only circumstance under which a fixed schedule for reappraisal is necessary would be if frequent grand list reappraisals were used in place of an equalization study to maintain equity across communities for school funding purposes. This is a more costly alternative when compared to an equalization study and its implementation is problematic as there are limited reappraisal resources within the State.***
- **How is their level of appraisal and uniformity measured? How do they rate?? Once a level of accuracy and uniformity is established through reappraisal, towns should be able to maintain values yearly. A reappraisal should still be done occasionally to be sure all changes to properties have been picked up. Even with permits, things have a way of "appearing" such as finished basements, garages in backyards, that can be easily missed. This is especially true in larger areas where work is often done by "drive-by" inspections.**
- ***There was no consensus on this question. Answers ranged from three to ten years. Others felt that the current process of CLA and COD was the way to do it. Still others supported ongoing rolling reappraisals. Still others believed it should be a purely local decision.***
- ***Many respondents did not believe that reappraisals were that effective a tool for achieving equity and accuracy for individual town grand lists or the state's equalization process. They believed that statistical adjustments and individual appraisals were more effective.***

21)What criteria should determine the frequency? How should the criteria take account of steep market increases or declines?

- **Standards based on appraisal performance would have to be established. There are generally accepted measures and tolerances for the evaluation of grand list performance (refer to I.A.A.O. Direct Equalization Standards). The measures are essentially the same as those used by PVR in conducting the equalization study as they evaluate appraisal uniformity by looking at sales data. When pre-established levels of deviation are observed this would signal the need to reappraise. In a more volatile market the measures will generally show over time a more rapid deviation from these uniformity standards.**
- **Look at uniform standards for determining appraisal levels of uniformity and accuracy**
- ***Market factors. Individual neighborhoods or classes of property should be able to be reappraised rather than the whole town.***
- **Perhaps an adjustment to the statute re; market value could be used during periods of high or low property values.**

22)Who should determine when a reappraisal should be done local community or the state (PVR)?

- **Under the current system it is a shared responsibility. Many communities choose to reappraise based on their own evaluation of grand list performance. Vermont statutes (refer to 32 V.S.A. §4041a) direct the State through PVR to order reappraisal under specific conditions.**
- **jointly**
- **THE TOWN IN CONJUCTION WITH PVR**
- ***Once again there was little consensus. Perhaps a plurality thought that the current system was the best, followed by the town making the decision with the assistance of the state.***

23)Is the availability of mass appraisal firms to meet Vermont's projected reappraisal needs a barrier to having reappraisals done?

- **Yes. There are a little more than a half dozen reappraisal firms actively working in the state and given 30 or more reappraisals each year, the demand for outside reappraisal assistance has outstripped the supply of firms. Increasingly, new firms and out-of-state firms are offsetting the demand but several firms are booked to their capacity for several years out. Given this, if reappraisals were required on a more frequent basis, it would take a number of years to build the capacity to handle the increased demand.**
- **The availability and quality of the mass appraisal firms seems to be presenting a barrier. There are, however, some extremely qualified firms outside of Vt. If the local listers work with, supervise and review their work it should not make as much difference if they are from VT or not. What does matter is their level of expertise, understanding of local laws and ordinances at both the state and local level, the quality of their work staff, their adherence to accepted appraisal methods. Same as any professional- which these firms should be.**
- **It shouldn't be. Appraisal firms that are qualified, certified, licensed and meet consistent standards are the most important. The ideal is for the local listers to have the expertise for their town. The town is only black and white on a level piece of paper for the outside appraiser. The local listers have to make it live for them to do a good job.**
- **YES. THERE ARE NOT ENOUGH FIRMS THAT DO REAPPRAISALS SO TOWNS ARE USUALLY ON A WAITING LIST. THE NEED IS FOR QUALIFIED EDUCATED MASS APPRAISERS WHO UNDERSTAND THE 3 APPROACHES TO VALUE—COST, MARKET, AND INCOME.**
- ***A resounding "yes" to this question among respondents. Even when the total number of firms was not an issue, the quality of the firms available was consistently mentioned.***

24)Is the present system of certification for firms and individuals performing mass appraisals sufficient?

- **No. The current system was established many years ago and it should be re-examined. Issues for examination include qualifications, extent of continuing education, and the role of PVR. Currently PVR certifies individuals and firms and supplies towns with certification lists and sample reappraisal contracts. (There is no authority to decertify firms or individuals for poor performance. PVR should have this authority but with this additional responsibility, the Division would need new resources.) Also, PVR district advisors assist**

towns and listers with reappraisals and the Division supports the CAPTAP appraisal software. An issue worth discussion is whether there should be performance measures for reappraisals conducted by reappraisal firms. (One approach would be for PVR to send evaluation forms to all reappraisal municipalities and make these available to other towns upon request.) Most reappraisals appear to result in reasonable values but a few are questionable. This affects the equalization study because a poor reappraisal can result in an over or under-estimation in value.

- There is no oversight – perhaps if we are going to have a statewide property tax there should be pilot studies done by the state to check on the quality of work being done. Also perhaps the state should certify the reappraisal after doing ratio studies etc per IAAO and Appraisal Institute recommendations.
- No. The state should monitor these firms in towns a year after they performed the re-appraisal.
- DON'T KNOW, BUT IF THESE FIRMS AND THE DATA COLLECTORS THEY HIRE ARE NOT WELL TRAINED, THE TOWNS CAN LOSE EQUITY. THE SINGLE MOST IMPORTANT THING THAT DRIVES VALUE IS QUALITY. APPRAISAL FIRMS MUST TRAIN ALL THEIR DATA COLLECTORS TO VIEW QUALITY CONSISTENTLY, OTHERWISE, THERE IS INEQUITY IN THE REAPPRAISAL PROCESS. THERE CAN ALSO BE A LOSS OF EQUITY IF THERE IS A TURNOVER IN LISTERS. TRAINING TAKES TIME, AND IF A TOWN CANNOT KEEP LISTERS LONGER THAN THE 3 YEARS FOR WHICH THEY ARE INITIALLY ELECTED, MAINTAINING EQUITY WILL BE DIFFICULT.
- *Most had no idea that there was a state certification process for firms. Those that did know felt that it was totally inadequate and that many firms out there were not well qualified.*
-

25)Should the state (PVR) formally certify reappraisal results?

- The State needs to do more to adapt its equalization study to apply different standards to municipalities where questionable reappraisal practices (e.g., sales chasing) have influenced the results or be given the authority to certify (or deny certification for) reappraisals. We have begun the process of developing alternative standards. For the 2003 equalization study we are applying an alternative definition of statistically extreme ratios in cases where a reappraisal results in values that are materially the same as sales price. More changes will be incorporated in future studies to insure that the results of the study produce uniform results statewide.
- See above
- Yes
- NO.
- *A slight majority of respondents said "yes".*

26)Should the state (PVR) develop the capacity to do mass appraisals and be a potential vendor to towns for this service?

- No. The State's role should remain advisory (refer to question #9 for exception). While there is some unanswered demand for reappraisal services at this time, it is likely that the demand will drop off as the real estate market slows over the next couple of years. If the State was to become a reappraisal vendor, it would have to gear up capacity that: 1.) could be excessive within a few years; 2.) would be competing with private vendors for fewer reappraisal jobs.

- **Please, Please , Please do not do this!!!!! PVR has been given enough of a burden, seemingly without additional revenues to do the things they need to do now. This could be tremendously expensive in the long run and does not guarantee any better results.**
- **No**
- **NO!!!!!!!!!!!!!! THEY TRIED THAT ALREADY AND IT DIDN'T WORK. THE PROGRAM WAS UNDERFUNDED, WHICH SEEMS TO BE TYPICAL.**
- ***By a 2-1 margin, respondents opposed this idea. Even those supporting it, felt that PVR would have to get outside firms or significantly better qualified staff if they were to do it.***

27)How well equipped are local listers and selectmen to oversee re-appraisal contractors?

- **Ability varies depending on the municipality. Reasons for lack of appropriate oversight include:**
  1. **Insufficient knowledge of mass appraisal practices**
  2. **Poorly structured contracts that do not require local participation**
  3. **Limited time, resources and, in a few instances, desire to participate more actively in reappraisal activities**
  4. **Unwillingness of some mass appraisal firms to actively involve local participation.**
- **Better reappraisals require lister participation in important phases of a reappraisal. A key example is use of the CAMA software system. Listers must understand the system so they can value new construction in a manner that is uniform with the reappraisal standards. Lister participation can also reduce the cost of a reappraisal and is essential to ongoing maintenance of the grand list.**
- **It is not within the jurisdiction of selectmen to oversee a reappraisal nor should it be. Most selectmen do not have an idea, nor should they be expected to, about what makes a good appraisal. I would not hire a firm , nor would I approve payment to a firm that was not willing to meet the terms of an RFP representing the requirements of the town. My selectboard would, and should, hold me responsible for the actions of that firm as they would any other department head.**
- **Not Very. Selectmen don't have a clue as to the necessary specifics for a good re-appraisal. It's not their job. Their only interest is in the money spent so they are likely to want to choose the cheapest firm regardless of the type of job done. Written guidelines should be given to towns on how to have a good re-appraisal. Specific criteria should be developed for re-appraisal firms.**
- **WITH MOST SELECTMEN, THEIR PRIMARY FOCUS IS ON THE COST. THEY DON'T USUALLY HAVE THE TRAINING OR THE TIME TO GET INVOLVED IN A REAPPRAISAL. WITH LISTERS, IT WOULD DEPEND ON THEIR LEVEL OF EDUCATION AND TRAINING, HOW OFTEN THEY TALK WITH OTHER LISTERS, ETC.**
- ***Answers were almost equally divided among "depends", "listers okay, selectboard not", "adequate", and "poor". No consensus.***

28)What should the state do to aid towns with this oversight?

- **Improve training opportunities including educating listers in ways that they can participate in their reappraisals**

- **Add classes to educate listers to serve in a reappraisal capacity such as appraisers and data collectors**
- **Publish more information explaining how to decide when a reappraisal is appropriate and how to structure reappraisal contracts**
- **Provide towns with additional tools to measure and evaluate reappraisal results.**
- **Answered in various places above.**
- **Provide consultation and help in writing up a proposal for a re-val.**
- **STRONGLY ENCOURAGE SELECTMEN TO GET INVOLVED IN THE REAPPRAISAL PROCESS**
- **PROVIDE A LISTING OF APPROVED, QUALIFIED APPRAISAL CONTRACTORS**
- ***Provide both boards more training; provide a checklist of things to do when hiring an appraisal firm; provide model for a "request for proposals" and a contract; share lister evaluations of recent firms used.***

29) Should communities be allowed to pool resources to save costs and increase accuracy? I.e. if two or more bordering towns are within a year of two of projected reappraisal dates could they enter into a combined contract with a firm? Should the state (PVR) seek to match up potential reappraisal partners?

- **Voluntary regional assessment agreements should be encouraged. While there may be opportunities for PVR to assist with this process, those opportunities are limited.**
- **What is there in the statutes to prevent them from doing this now??? PVR should maintain and offer to the towns a list of professional firms along with the qualifications of each as a guideline to the towns. If the towns request it, I would guess that the state advisors would already know which towns are doing a reappraisal and what firm they are using. It should only offer resources ie a basic RFP format to save the towns time. The "croni-ism" (is there such a word Steve?) needs to stop. Towns notoriously do not always work well together. Leave this up to the towns to decide.**
- **Yes**
- **THEY SHOULD BE ALLOWED, BUT I CAN'T SEE WHERE IT WOULD INCREASE ACCURACY OR SAVE COSTS. THE STATE COULD SUGGEST BUT NOT MANDATE MATCH UPS BETWEEN TOWNS**
- ***Sure, but doubtful of commonality of interest, opportunity for savings, comparable properties.***

Aggregate Fair Market Value Study (Equalization) Methodology

30) What do you feel are the most significant issues in the methodology of the equalization study?

- **There are a small number of very small towns with limited sales samples. Particularly when these towns have high CODs, it is a challenge to achieve desired reliability standards. More appraisals to supplement sales could help this situation.**
- **While it is methodologically sound, there are limits to the validity of inferring study results to a relatively small number of very high value, unique properties (e.g., large commercial, industrial and resort properties).**

- **Given the limits on available resources, the study relies heavily on local input for sales evaluation. Consistent with Almy Study findings, PVR should continue to develop methods and tools to reduce this dependence (e.g., increase sale verification process which now focuses on outlier ratios).**
- **The use of three years of sales data has mixed effects. It increases sample sizes but results in the study under-valuing towns' market value. Could consider reducing the numbers of years of data in study but trade-off would be that most equalization ratios would be determined at a higher level of sales data aggregation.**
- **Need to continue to promote consistency in the application of study standards (both by PVR staff and by towns) throughout the State.**
- **Look at the "Almy" report and continue to make changes per their recommendations. Make the categories match highest and best use- not something that has nothing to do with value ie who owns the property. Use the statute as a guideline**
- **Using valid sales. Developing criteria and sticking to it; not adjusting to fit a prior "bottom line" for a town.**
- **SALES CHASING, WHICH IS WHAT THE STATE IS DOING WHEN IT USES RECENT SALES IN THE EQUALIZATION STUDY THAT ARE WAY ABOVE LISTED VALUES, THEREBY LOWERING OUR CLA. LISTERS, BY THE WAY, ARE NOT ALLOWED TO CHASE SALES.**
- ***This area engendered the most vocal responses. Not one respondent was happy with the state's efforts in this area. All complained of the impact of small number of sales, application of sales to other property classes and to whole grand lists, the impact of three-year-old data, the impact of "sales chasing" inflating local grand lists, to a litany of the findings of the Almy Report and the Cohen Killington decision.***
- ***Not one respondent felt that the current methodology for equalization bore any relationship to the real value of property.***

31) Sales - Are there enough sales in the State to determine the CLA accurately in each town? What are the best solutions for addressing this – the state currently uses appraisals of individual properties to provide additional data when sales data are sparse.

- **Yes. Except for a small number of instances (refer to question #30), there are more than enough sales. PVR relies on appraisals to supplement sales for a few towns but as appraisals rely on the same sales it creates a double counting effect. The argument that there must be adequate stratum (i.e., categories such as R1, R2, etc.) samples for high statistical precision is incorrect since the legal requirement is to simply derive a single reliable market value estimate for the entire town.**
- **Depends on the town. We use sales in neighboring or similar towns to augment ours if we have a unique property or not enough sales. This could be done between the state advisor and local listers. Again, the state's own expert (see Gloudemans=Mass Appraisal of Real Property) offers advise about doing this and cautions of which anyone making decisions about this methodology should be aware.**
- **Don't know. A state-wide sales data base for research by towns would be helpful.**

- **NO, ESPECIALLY IN SMALL TOWNS, BUT SALES IN NEIGHBORING TOWNS CAN BE HELPFUL, ALSO, A STATE MAINTAINED DATA BASE**
- **No**
- ***Consider changing to cost less depreciation, use far more individual appraisals, develop a useable state data base of sales.***

32) Market Knowledge and Communication - Is there adequate communication between the local communities and the state to ensure that knowledge and understanding of the local markets is appropriately applied in the study? The example of extreme sales, i.e. one or two lakefront sales that skew the study results, is often raised. How does the current system account for these types of issues? Are towns providing enough data about the sales? Does PVR have continuity and market expertise when analyzing the data? Do PVR and towns make adjustments and inform each other if the analysis indicates issues that might be neighborhood or property class specific vs. a town wide valuation concern? What changes would you make to this local-state-local chain of communication and analysis?

- **While communications can always be improved, there are ample opportunities for input within the current system. Currently PVR discusses the validity of sales with all towns as part of the data verification process, there is an informal process for appealing towns to state their objections (in most cases, formal appeal hearings are avoided through this process) and there is the opportunity for dissatisfied towns to partake of the formal appeals process. In addition, PVR uses many diagnostics to weed out distorting sales. These practices use state-of-the-art statistical techniques. These techniques generally are sufficient to detect "the one or two high-valued lakefront sales that distort the entire study". In cases where these types of sales are identified, they are eliminated from the study. The "big property" argument is premised on the assumption that PVR routinely overvalues towns. However when town reappraisals are compared to previous year's study estimates, the reappraised grand lists are almost always higher than PVR's estimated values.**
- **Share resources. For instance: State sends out verification letters to "outlier" properties. These should be included with the equalization study when it is sent to the towns for review. They probably offer insight to the local lister about the sale. Also, the state should send with the equalization study a list of all sales that have been removed and the reason for doing so, sales that they have arbitrarily moved from one category to another etc. This would save time, resources and thus money on both the state and local level. State should offer the sales study for review by category, on disk to the towns. Again, time and $$$. Towns should send verification letters, do their own research of sales as much as possible and there should be a JOINT EFFORT to create as much accurate information as possible with the least duplication of effort. State should document and report any changes it makes after the sales study is submitted after review between state advisors and town listers/assessors.**
- **This should be asked of the PVR. Each town should be responsible for following the market within their town, which would give them the market trend. Then reviewing it with the State Advisor sale by sale would give a more accurate picture.**
- **WE HAVE GOOD COMMUNICATION BETWEEN OUR TOWN AND OUR DISTRICT ADVISOR. THERE IS GOOD INFORMATION ON THE LIST SERVE..WHEN ONE TOWN HAS A QUESTION OR PROBLEM AND IT IS PUT OUT ON THE LIST SERVE, THERE ARE ALMOST ALWAYS ANSWERS FROM OTHER TOWNS WHO HAVE**

HAD SIMILAR SITUATIONS. THE LISTERS SEND OUT QUESTIONNAIRES TO BOTH BUYER AND SELLER ASKING FOR INFORMATION REGARDING THEIR VIEW OF THE SALE. THIS INFORMATION IS USED WHEN COMPLETING THE SALES STUDY.

- ***Respondents felt that the quality of the advice given by district advisors had significantly improved, though the issue of "outliers" was raised a number of times. The state should provide the listers with a list of all sales accepted and rejected and the reasons why to the listers for their consideration.***

33) Are there other components of the equalization study you would change? How would you change them?

- **Reappraisal towns are considered to be at 100 percent fair market value (this would likely require a certification process for reappraisals).**
- **Only apply equalization adjustments to grand lists in instances where the actual grand list value does not fall into a prescribed confidence interval (if the confidence interval is too large the market value will "jump" in the year when the grand list falls outside the confidence interval).**
- **The most effective way to improve the equalization study would be to improve the towns' grand list and reappraisal results. It is relatively easy to accurately equalize a good grand list and much harder to insure reliability when the grand list is inaccurate due to sales chasing or lack of maintenance (i.e., has a high COD).**
- **I would like one study done for common level of appraisal and one for COD. CLA is probably more important to the state for tax purposes but COD is critical to the towns to guarantee uniformity between properties.**
- **Accuracy is the name of the game here. If sales are invalid for one reason or another, they should not be included in the study; not adjusted, etc.**
- **Apparently not from the perspective of the respondents. Sales included that shouldn't have been (e.g., several commercial properties changing hands in a single transaction); sales that were categorized in the wrong property classification (e.g., miscellaneous vs. woodland).**

State Level System

34) In Maryland the state is responsible for the valuation statewide, one third of the state is reappraised every three years and the change in valuation is phased in over the three year period. What benefits and problems do you see with moving to a state level system?

- **Theoretically, this should result in greater uniformity within towns and across the state. This assumes adequate resources and an adequate transition period. At the same time, given that there probably would be considerable resistance due to Vermont's deep tradition of keeping government as close to its citizens as possible, there are other alternatives that could result in the same level of uniformity without this potentially unpalatable change. Where appraisal works best in Vermont it is largely due to the intimate knowledge that trained and experienced listers have of their communities.**
- **Is Maryland the only state in the US other than VT? What are our differences? More important, what are our similarities? How well does Microsolve, THEIR STATEWIDE SYSTEM work there? Is it run by private appraisal firms or state personnel? How do they check for accuracies of appraisal work? Who does the**

reappraisal work and what standard do they maintain? Do they do remeasure and lists every three years or "drive-by" inspections? Have you looked at NY, NH, MA since they are neighboring states? NH and Maine, although Maine is not an adjoining state are probably more similar to Vt in many ways than is Maryland to VT.

- **"IN Maryland" should not be a comparison for Vermont. Maryland operates on a county government basis, not town basis. "Drive-bys" do not give accurate information for a reappraisal. (Baltimore alone has more parcels than Vermont.) Listers, who are town residents, know more about a town's property make-up than outsiders and sitting behind a computer and doing an analysis from the PTTRs is a very unfair way of doing a reappraisal. Local control is extremely important for towns in Vermont. If local listers were supported with adequate pay and education (that didn't cost them a mint) you would have listers staying with the job long term. Also, PVR should be supported with a realistic budget so that they could be of more help to the town listers, especially in the specialty fields. If we were on a state-wide basis, how could grievances be handled. They would take years as they do in Maryland.**
- **TERRIBLE OPTION TO EVEN CONSIDER!! WOULD RESULT IN EVEN GREATER LOSS OF LOCAL CONTROL. VERMONT IS NOT MARYLAND...ONE STATE CAN NOT EFFECTIVELY BE USED AS A MODEL FOR THE OTHER 49. COULD DECREASE EQUITY AND ACCURACY. DRIVE BY APPARAISALS WOULD BE THE NORM...VERY FEW COMPLETE INSIDE INSPECTIONS WHICH WOULD RESULT IN INEQUITIES AMONG NEIGHBORS. AND, WHO WOULD DEFEND THE VALUES/GRAND LIST? WOULD LISTERS BE JUST RUBBERSTAMPING SOMEONES ELSES WORK? WOULD LISTERS BE REQUIRED TO SIGN A GRAND LIST THAT SOMEONE ELSE COMPILED?**
- ***About 4-1 opposed. Respondents didn't believe that the state could do any better. Very worried about "drive-by" appraisals taking the place of knowledgeable local listers.***

35) Would this reduce or substantially eliminate many of the accuracy and uniformity concerns in property valuation?

- **Theoretically, it could substantially reduce these problems. Refer to question #34.**
- **If you can give me some statistics from Maryland perhaps I could answer this better. I do not see how you can possibly implement this in a fair, cost effective, professional manner without a huge expense. The taxpayers are going to LOVE that. How are you going to handle appeals alone- seems this has not been well thought out. I can almost guarantee that the state of Maryland pays for training. I believe we can implement measures at both the state and local level, that will ensure more accuracy and uniformity than moving to a state wide system.**
- **A state-wide system would not improve the accuracy or eliminate the uniformity concerns that we have now, only make them worse.**
- **IT WOULD RESULT IN <u>UNIFORM INACCURACIES AND</u> <u>INEQUITIES</u> AS OPPOSED TO LISTERS DOING INSPECTIONS OF EACH HOUSE. HOUSES VARY IN VALUE DEPENDING ON LOCATION, LOCATION, LOCATION.**
- ***Accuracy unchanged or perhaps reduced a little, uniformity probably improved.***

36) How would we fund a state level system? Is one potential source of funding the $7 per parcel paid to the towns for grand list maintenance? This totals approximately

$2.2 million per year. Would this level of funding be adequate for the state to provide this service?

- **No, it would cost substantially more. The State would have to hire at least 70 additional appraisers to equal the appraiser to parcel ratio that the State of Maryland operates at. At $40,000/appraiser for salaries and benefits (if anything a low number) this would require $2.8 million. In addition, there would be substantial support costs (e.g., district offices, administrative support and computer equipment and software). The Maryland staffing level, while impressive by some measures, does not allow for internal inspections of houses which are important in insuring uniformity of appraisal. If anything, the Maryland model is underfunded.**
- **I would need information and would need to do some real long term projections based on something other than opinion to answer this. Then, I would want to base my answer on something other than political opinion. Given the problems we already have here at the state level I think I would take a very, very hard look at this before I was arrogant enough to change the environment of government within a state like Vt.**
- **No, probably not. It would necessitate more personnel and that would add to the costs.**
- **60 COULD FUND IT. HOWEVER, $7.00 PER PARCEL IS A JOKE. NO WAY WOULD THAT AMOUNT BE ADEQUATE.**
- ***Have to be from a state source, possibly from property transfer tax as that is what forces changes in values.***
- ***Overwhelmingly doubtful that this is anywhere near enough.***

37) Would there be savings at the local level if grand list maintenance was a state function? Should towns pay the state for grand list maintenance?

- **Yes, there would be savings at the municipal level.**
- **State is not qualified nor does it have the staff to do this .**
- **No and No. Support listers efforts with a decent pay and education and they can do the best job themselves.**
- **NO**
- ***Depends on what function locals would be left to perform. If state did the whole thing, no local would be necessary. Given cost of state bureaucracy, probably would cost more.***

38) Do you have any other ideas to change the state and local roles and responsibilities regarding the grand list that would result in more accuracy and fairness system wide?

- **In Vermont, more so than most states, there is a tension inherent in the state/local relationship. Part of the tension is associated with the Act 60 funding mechanism but much of it results from the long term struggle of producing enough revenues to cover school spending decisions. Reduction in the associated conflicts would lead to a greater level of cooperation in many instances. This would free-up resources to address our shared concerns for an accurate and equitable grand list and equalization study.**
- **Encourage towns with like properties to work together. Do a re-val in Town A this year with the combined manpower and resources with Town A's board leading the**

workforce; then do Town B the next year, reversing the leadership. You'd have better data collectors (knowledge of the town, etc.) and the money spent would deliver a better product.

- **YES. IF THE LEGISLATURE WOULD DO A THOROUGH STUDY WHICH WOULD INVOLVE GETTING INPUT FROM LISTERS AND OTHER TOWN OFFICIALS, AND NOT PASS A LAW THAT HAS ONLY BEEN INTRODUCED A FEW MONTHS BEFORE PASSAGE JUST BECAUSE THEY WANTED TO HAVE "SOMETHING" TO SHOW BEFORE ADJOURNMENT, THERE MIGHT BE HOPE OF A MORE EQUITABLE TAXATION SYSTEM. WITH THE ADVENT OF ACT 60, THE TAX LAWS HAVE GOTTEN INCREASINGLY COMPLICATED AND ACT 68 HAS DONE NOTHING BUT MADE A BAD SITUATION WORSE. BECAUSE OF ONGOING CHANGES TO ACT 60 AND NOW ACT 68, THE WORKLOAD OF THE LISTER HAS INCREASED DRAMATICALLY, WHICH RESULTS IN HIGHER TAXES TO THE LOCAL PROPERTY OWNER. IF THE LEGISLATURE WOULD BE TRUTHFUL AND ADMIT THAT THE BOTTOM LINE IS THE DOLLAR AND NOT EDUCATION, PERHAPS THERE WOULD NOT HAVE TO BE SO MUCH DOUBLE TALK AND CONFUSING LANGUAGE SO THAT EVEN THE INTERPRETATION OF THE WORDING DIFFERS FROM THE LEGISLATURE TO THE TAX DEPARTMENT TO PVR TO ADVISORS AND OTHERS IN BETWEEN. THAT IS WHY THIS LAW SHOULD HAVE BEEN CAREFULLY THOUGHT OUT BEFORE IT WAS PASSED, SO THAT IT IS NOT JUST ANOTHER 'WORK IN PROGRESS.' ACT 60 WAS DESCRIBED AS AN AIRPLANE THAT WAS BUILT WITH JUST ENOUGH PARTS TO GET IT OFF THE GROUND. THE REST OF THE CONSTRUCTION WOULD BE DONE TO KEEP IT IN THE AIR. SADLY, HISTORY HAS REPEATED ITSELF IN ACT 68.**

Housesite Size

There has been considerable discussion in the legislature over the past several years about expanding the definition of a housesite to include more land.

39) What additional information would be required at the local level if there were a change in the housesite size? What additional information will towns be required to report on the Grand List if the housesite size is increased to 3, 7, 13, 25, or unlimited acres in addition to the current two acre limit? Are there any other impacts you think such a change would create?

- **If the 3, 7, 13, etc. value was in addition to the housesite 2 acre value, this would require a new grand list field. In turn, CAMA (computer assisted mass appraisal) software would have to be reprogrammed to accommodate the change. Also, assuming that the new value would encompass improvement values within the expanded acreage, it would require a judgement on the part of listers for affected parcels as to whether or not any improvements fell within the defined area. As a consequence of the change, it would likely require municipalities to notify all affected property owners of this new value to insure due process rights.**
- **Regardless of the size of the change, the two acreage valuation would still likely pertain to exclusions for current use.**
- **This would create a lot of work for whomever is maintaining the Grand Lists. The values are not created in NEMRC. I am not sure people discussing this are aware of that fact. NEMRC, or a similar reporting program merely pulls information from**

the assessing software which actually calculates the values. Most towns use the 2 acre value as that which is necessary to create a "site". Ironically, it seems that we are getting farther away from true value of a homesite on our land schedules as this is driven by the tax. For instance, if a town has 10 acre zoning, the 2 acre site does not make much sense for valuation since 10 acres would be the minimum lot size not 2. This does not mean the change could not be done but there will be some programming at the ASSESSMENT level .

- **Don't understand the idea behind these different numbers. If any change is made, some adjustment should be made to recognize the town's zoning regulations, if any. For example, if 2 acres is used and the town has 10-acre zoning, the taxpayer can't do anything with the remaining 8. Why are we penalizing these folks?**
- **VERY CONFUSING QUESTION. HOUSESITE SHOULD AGREE WITH LOCAL ZONING REGULATIONS.**
- ***Most said no, but this series of questions engendered a tremendous outpouring of distain for our policy makers and the decision to separate homestead and housesite. I believe that respondents would like to keep the two acre housesite definition. They believe there would be significant additional work if this was changed. There is substantial confusion about the purpose and actual impact of this change.***
- ***Depends on the software used. More work for listers.***

40)Would a change in the size of the housesite in anyway affect the valuation of the property?

- **For the average property, no. For unusual properties and specific conditions such as a parcel of land that has been legally subdivided, this would not change the overall valuation of the parcel but would present complications in allocation of land and/or improvement values within that parcel.**
- **No, it shouldn't**
- **NO**

41)What problems might arise in the use value appraisal program if the homestead size is increased? Would there be a duplication of benefits?

- **We feel that there are relatively few problems for current use with creation of the new homestead concept. These problems are largely educational. This would not necessarily be the case with the expanding the housesite concept. Even with the new income sensitivity benefit of $10/acre as found in Act 68, there can be unintended consequences. For example, if a parcel of 27 acres in enrolled in the current use forest program, the income sensitivity benefit is by definition calculated on acreage that is enrolled in the program and the owner receives a $50 additional benefit. By virtue of being enrolled in current use the land is assessed at $112/acre (for tax year 2003) or $560 for the additional 5 acres. At a $1.40 education tax rate, the owner is paying $1.57 in tax for each acre but receiving a $10 benefit.**
- **The state already sets the values of the CU properties; this would create a duplication of lower value.**
- **DEFINITELY A DUPLICATION OF BENEFITS**

42)What other concerns or recommendations do you have regarding the housesite size?

- **Keep it small.**
- **It is not practical until the state's program has been revamped.**
- **39-42: WE FEEL THIS SHOULD ALL BE REVISITED, TOO MANY VARIABLES. LANGUAGE TOO CONFUSING; HOUSESITE SHOULD AGREE WITH LOCAL ZONING REGULATIONS. CURRENT USE SHOULD BE OVERHAULED WITH MORE RESTRICTIONS AS TO WHO QUALIFIES....BETTER DEFINITION OF "FARMER", THE ORIGINAL INTENT OF CURRENT USE HAS BEEN LOST. THERE ARE MANY WHO ARE TAKING ADVANTAGE OF THIS PROGRAM AT THE EXPENSE OF THE REST OF THE TAXPAYERS.**

Appendix B – PVR Equalized Grand List Fluctuations Analysis

Summary

As part of education funding reform recently enacted by the Vermont Legislature and signed into law by Governor Douglas, an analysis of "factors contributing to fluctuations in common levels of appraisal and variations in coefficients of dispersion" was requested. This study is offered as a basis for such analysis. It develops a measure of fluctuation in CLA normalized for reported grand list growth, and uses multiple regression analysis (MRA) to find predictors of that fluctuation.

The analysis finds four major predictors of variation in CLA. The most influential is the difference in sales aggregate ratio between the year dropped and the year added, a side effect of the three-year study period. Next most influential is the difference in sales aggregate ratio between the first year and the final year, usually indicating a substantial drop in the final year. Next comes having a two-year-old reappraisal - i.e. two years of ratios from market sales and one year of ratios from a sample restatement after reappraisal (really a special case of the first to last year differential). Finally, towns in Chittenden County tend to be above average and towns in Essex and Caledonia counties below average in appreciation.

The use of a three year study period virtually guarantees sufficient sales to produce a reliable estimator of fair market value in even the smallest of towns. It is apparent, however, that this practice has the unintended effect of increasing the size of equalized grand list changes under rapidly appreciating market conditions. The associated practice of restating the sales sample after a reappraisal further amplifies this effect.

Study Methodology

Readers not familiar with the way the annual equalization study is conducted are referred to the appendix to this report. A working knowledge of the study methodology as currently practiced is essential to understanding this analysis.

Selection of Fluctuation Measure

The first task was to find a measure of CLA fluctuation. In itself the published CLA is just a mathematical relationship between the reported grand list and the equalized grand list. A published grand list generally changes from one year to the next as new properties and existing property improvements are added. So not all of the change in CLA is due to the results of the equalization study. A better method is to adjust the change in equalized education grand list (EEGL) to account for reported grand list

adjustments. For this study the EEGL change was broken into two parts. The first part is the reported grand list change adjusted by the equalization ratio from the previous year. In effect this step treats the grand list additions as if they had been present the previous year. The second part is then just the remaining difference. This second part, divided by the EEGL from the previous year, is the percent change in EEGL measuring fair market value adjustment.

For towns reappraising in the current year, and for electric utilities (fair market value not estimated from a sales sample), the indicator is calculated differently. It would be inappropriate to adjust the reported grand list change by the previous year CLA, since the measurement base has changed. It can be assumed that a reappraised town is assessed at 100% of fair market value. In this case the equalized value and reported value are the same. Grand list growth is then the difference between the current year grand list and the EEGL of the previous year. Market adjustment is simply the EEGL difference less this grand list growth. In most cases the market adjustment is a negative number, as is the percent change in EEGL.

To illustrate the above computations, the results statewide are shown below.

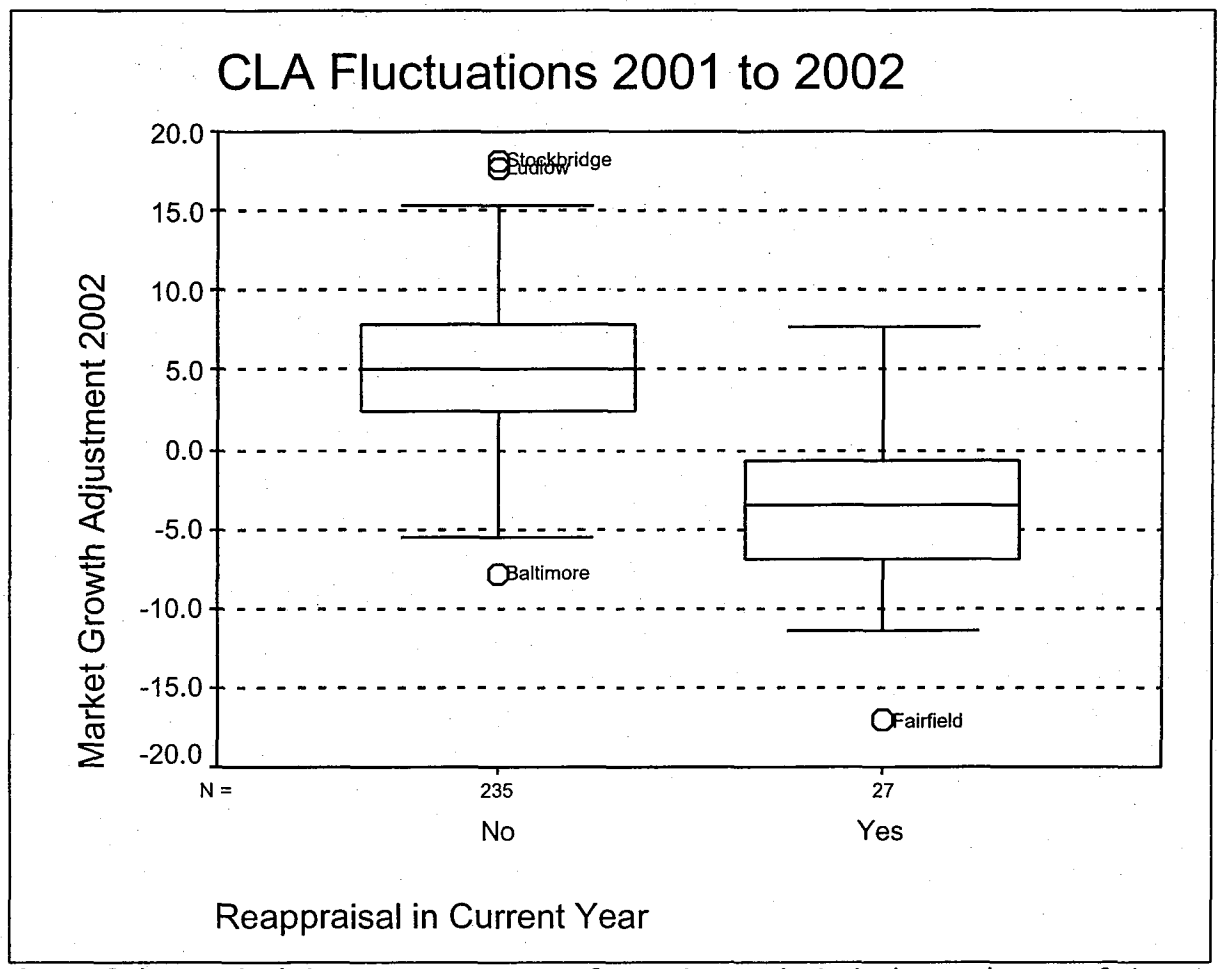
Comparison of 2001 and 2002 EEGL			
	Reappraisal in Current Year		
	No	Yes	Total
Number of Towns	235	27	262
EEGL 2001	37,368,904,626	3,851,138,679	41,220,043,305
EEGL 2002	40,507,627,788	4,026,492,839	44,534,120,627
Grand List 2001	34,051,343,479	3,372,916,403	37,424,259,882
Grand List 2002	34,847,547,055	4,157,262,858	39,004,809,913
Nominal Grand List Growth	796,203,576		
Grand List Growth 2002 (*)	815,515,684		
Adjusted EEGL Growth 2002	2,323,207,478		
Actual EEGL Growth	3,138,723,162	175,354,160	3,314,077,322
Real Growth (**)	815,515,684	306,124,179	1,121,639,863
Market Appreciation	2,323,207,478	-130,770,019	2,192,437,459
Year to Year EEGL Growth	8.40%	4.55%	**8.04%**
Portion Real Growth	2.18%	7.95%	2.72%
Portion Market Appreciation	**6.22%**	-3.40%	5.32%
(*) Grand list changes equalized with 2001 CLA			
(**) Difference between 2002 grand list and 2001 EEGL for reappraisal towns			

Growth in EEGL from 2001 to 2002 can be seen to be the familiar value of around eight percent. After separate treatment of reappraisal versus non-reappraisal towns, the growth is seen to split approximately into about three

percent real growth and five percent market appreciation. For towns not reappraising in 2002, estimated market appreciation exceeded six percent.

Reappraisal Towns Not Considered

The population of twenty-seven reappraisal towns is not analyzed further. Note the negative market appreciation. This effect comes from restatement of the three-year sales sample. Listed values are those newly assigned as of the grand list lodging date. There is no time adjustment of sale prices to that date. The further back in time a sale has occurred, the more likely it is to have a ratio on average greater than 100%. Aggregate ratios formed from such restated samples will then be greater than 100%, leading to a negative market adjustment as if depreciation had occurred.



One of the underlying assumptions of a ratio study is independence of the elements of the ratios. The selling price and listed value should be independent estimates of the same theoretical fair market value. Assessment precedes sale, so sale price cannot affect assessment. These

assumptions are not supported for reappraisal town restatements, so analysis of external factors affecting fluctuations cannot be done.

The restated ratios are included in the sample for two subsequent study years. The effect is to retard the reaction of the sample to new market information. When the restated sample is abnormally tightly clustered, the effect is magnified. Because the sales from the period preceding the reappraisal continue to be used, there is an incentive to have new assessed values as close as possible to sale prices even if sales are from previous years.

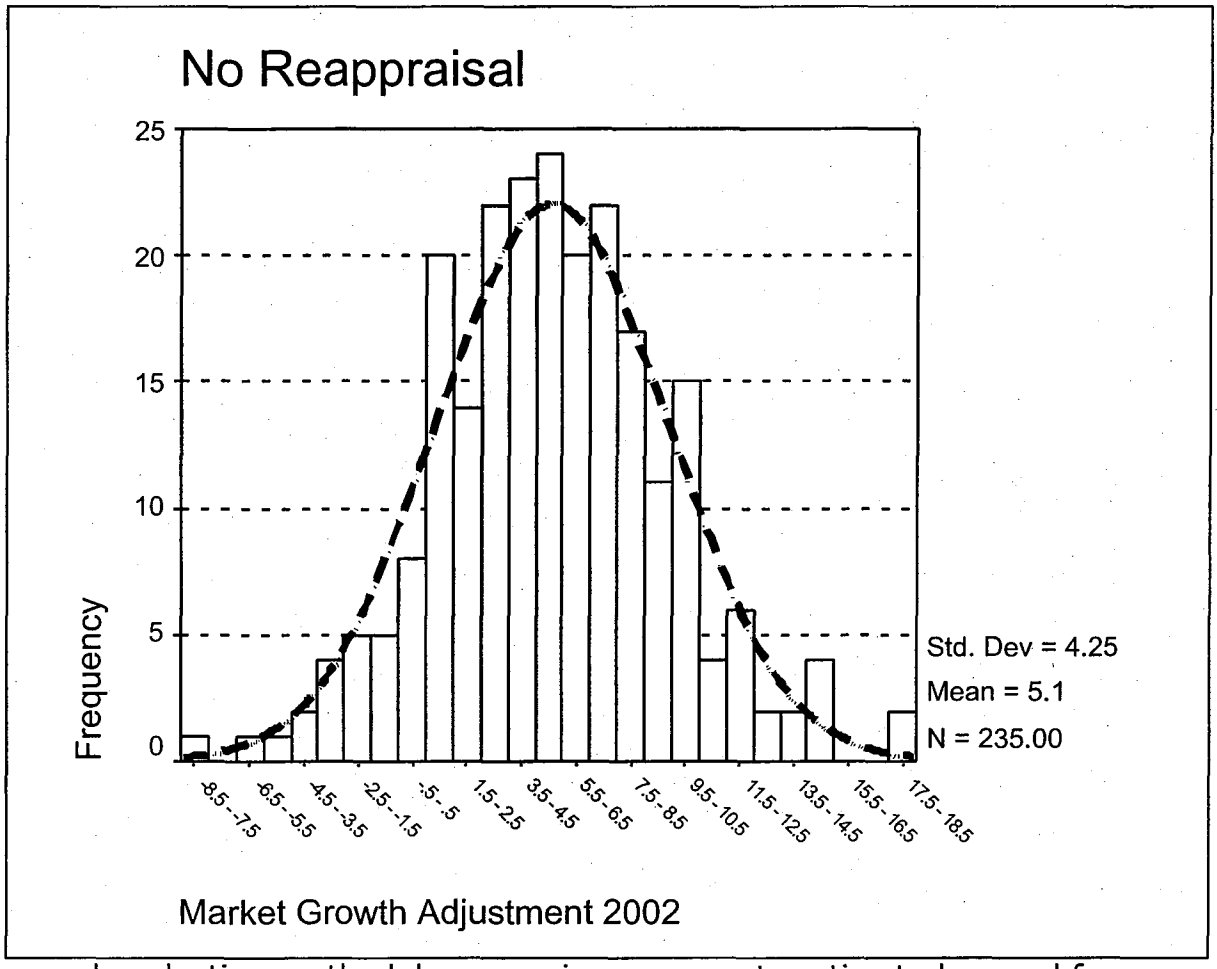
Towns Not Reappraising Form Study Population

Market appreciation for the 235 towns not reappraising in 2002 provided the dependent or response variable for this analysis. The market growth adjustment component of CLA change for the towns studied has the following characteristics:

Market Growth Adjustment 2002		Reappraisal in Current Year	
		No	Yes
Mean		5.10	-3.92
95% Confidence Interval for Mean	Lower Bound	4.55	-5.96
	Upper Bound	5.64	-1.88
5% Trimmed Mean		5.07	-3.86
Median		4.99	-3.49
Variance		18.07	26.55
Std. Deviation		4.25	5.15
Minimum		-7.80 Baltimore	-17.11 Fairfield
Maximum		18.15 Stockbridge	7.72 Wardsboro
Range		25.95	24.83
Interquartile Range		5.44	7.57
5th Percentile		-2.11	-14.84
10th Percentile		0.07	-10.23
90th Percentile		10.22	2.92
95th Percentile		12.05	6.23

It may be helpful to put the variation of this measure in context. The natural variability of listed value to sales price ratios (the so-called level of assessment) is about fifty percentage points around the median for any sample taken. That is, it is not unusual to find assessment levels of 50% to 150% of fair market value even when the median or average for the class of property being measured is 100%. It can be shown that such ranges are a natural outcome of permitting coefficients of dispersion (COD) up to 20%. Margins of uncertainty calculations for sampling variability consider this underlying variation as well as the sample size. Statistical theory shows that

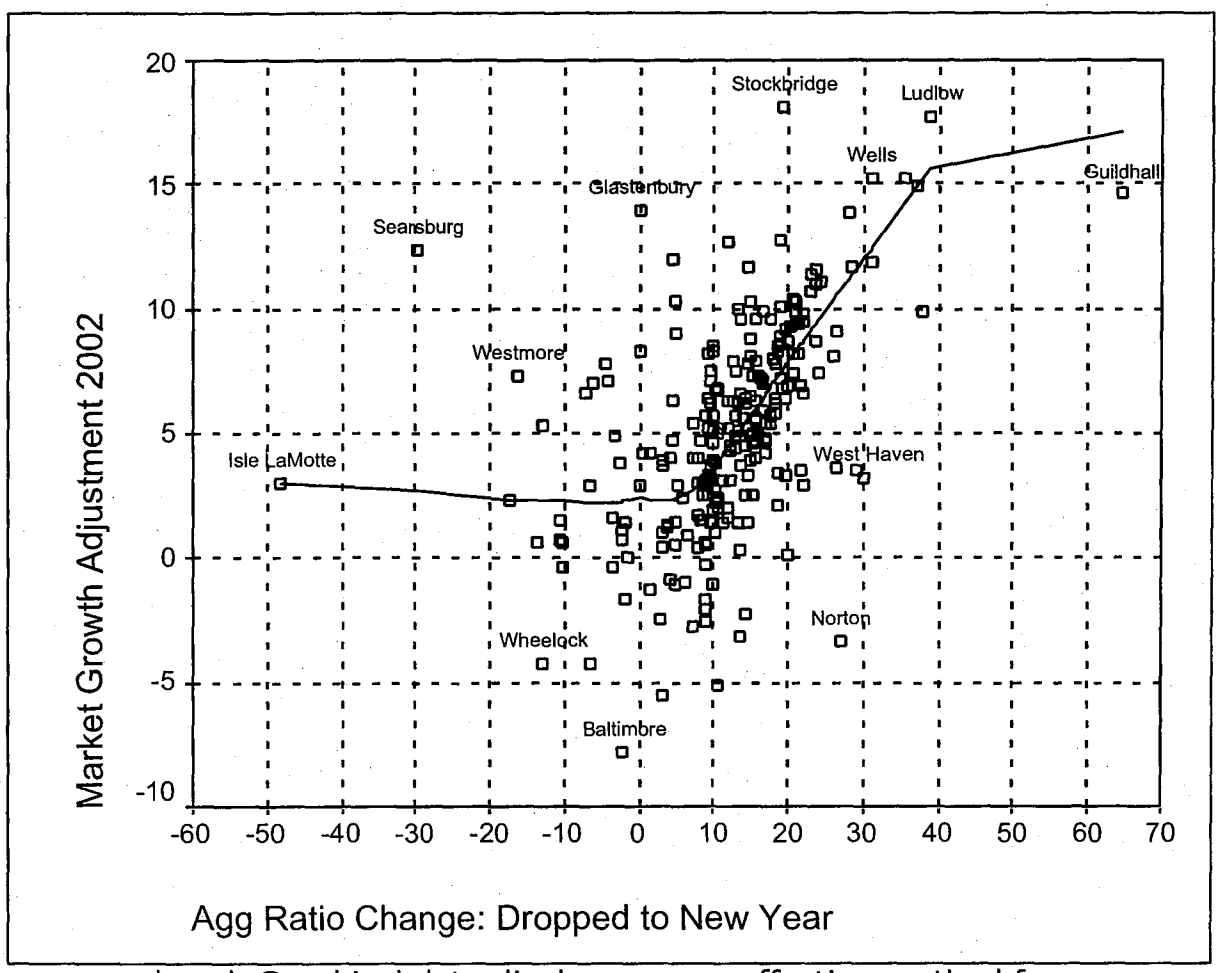
the sampling uncertainty is related to the square root of the sample size. In a simple situation of 100 sales and a ratio range of 100 points, sampling uncertainty of ten points or plus/minus five points is to be expected. The



sample selection methodology requires aggregate ratios to be used for equalization to have sampling uncertainty of at most 10% at 90% confidence. This study design tends to constrain the final uncertainty to a maximum of ten percent, and in practice is well under this level.

The 235 towns in the studied population could be considered to be individual experiments conducted using the study methodology. Variability of the results would then be expected to be in the order of magnitude of the underlying population characteristics. In fact this is the case. The market growth adjustment variability is normally distributed with a mean of 5.1% and a standard deviation of 4.25%. The 95% confidence interval would be plus/minus 8.5%, in close agreement with expected values as discussed above.

The analysis objective was to find independent variables (factors) that will predict, on average, the market appreciation. Multiple regression analysis (MRA) using stepwise selection of variables was used. All potential explanatory variables are identified to the regression program, which selects in turn those most highly correlated with the response variable until no further reduction in variance can be achieved. This approach removes subjectivity from the selection process, often leading to surprising results. After selection of the best regression model, the characteristics of the variables chosen (and some not chosen) relative to the response variable



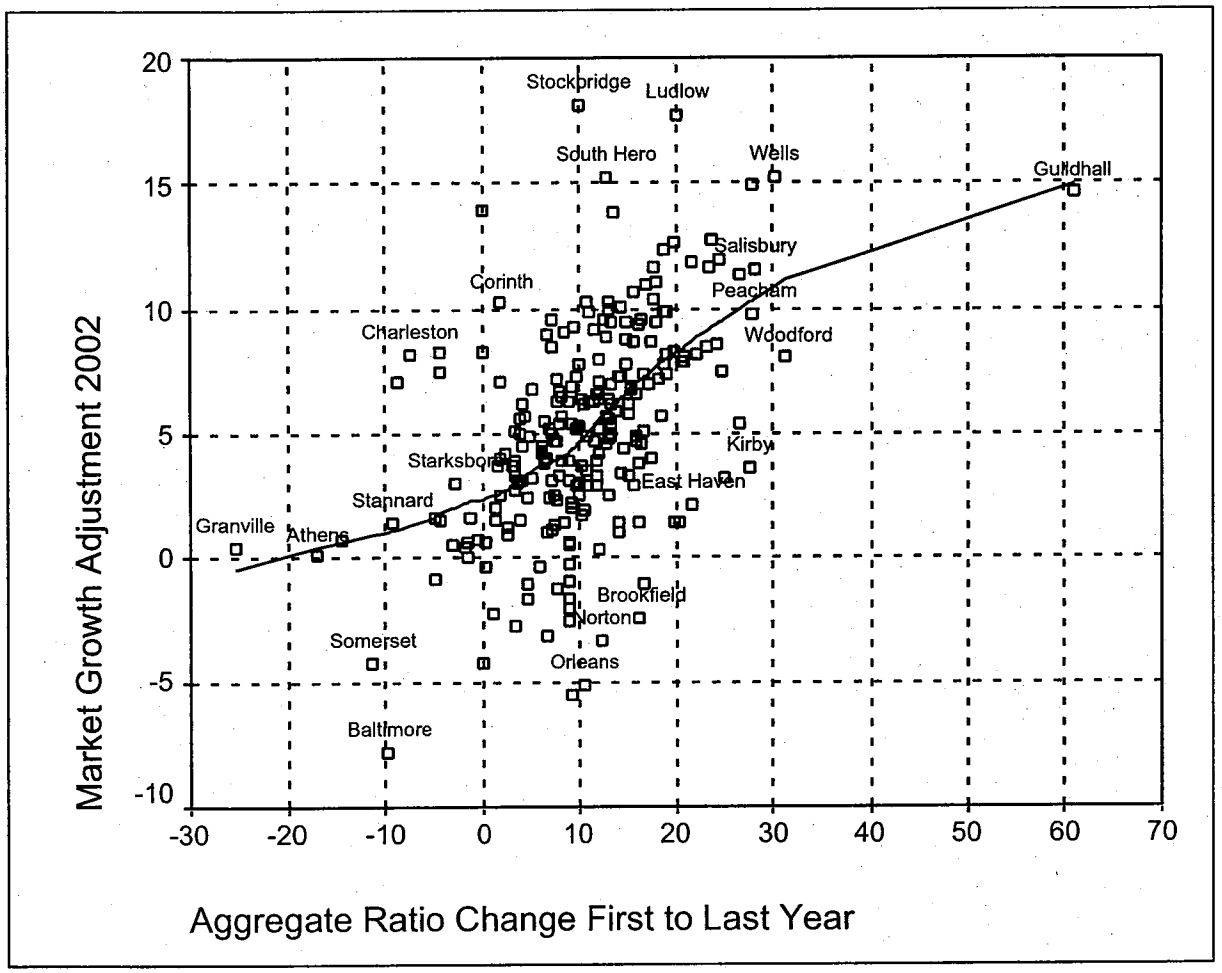
were analyzed. Graphical data displays are an effective method for conveying analysis results to constituents for whom the details of MRA may be foreign.

Potential explanatory factors were identified from anecdotes, known market mechanisms, equalization study conventions and personal experience with the data.

- The equalization study is intended to measure the effect of market appreciation, so an independent measure was developed. The property

transfer tax has a reduced rate on a portion of sale price for residences. Median sales price for residential sales in the twelve-month periods from April through March for towns and counties were computed for several annual periods. This measure includes all sales including new construction – data points not included in the equalization study. The classification scheme is also quite reliable. Percent increase from 2001 to 2002 provided a possible predictor.

- It is well known that regional differences exist in the Vermont real estate market. Indicator variables were defined for each county to test for this regional effect.
- It is frequently mentioned that a small number of high value sales could distort the weighted mean used in the equalization study (the so-called "flatlander" effect). To test this hypothesis, the weighted mean of the three highest value sales was compared to the weighted mean of the remaining sales. The difference between these two numbers would be large for potentially highly distorted samples, and was used to test for the flatlander effect. The Price Related Differential (PRD), a measure of disparate treatment of properties by value, was also considered as another possible predictor.
- As mentioned above, the three-year sales sample for a reappraisal town is restated in the year of reappraisal. The effect persists for several following years, as first one and then two market sales years are merged with the restated ratios. Indicator variables were defined to test for the effect of reappraisals one, two and three years old.
- Each year, the sales sample is defined by dropping one year and adding a new one. The weighted mean difference between the dropped year and the added year is a logical predictor of change, especially when market conditions are appreciating as has been the case recently. Differences in aggregate ratio across two and one years also were considered.
- Another effect frequently mentioned is a small number of sales in the sample. Sales sample size was defined as a potential predictor.



Analysis Results

Significant Predictors

The objective of MRA is to build a mathematical model that predicts the average value of the 2002 market growth adjustment from values of independent or predictor variables. After taking the model into account, any remaining variation should have a distribution centered on zero. These so-called residuals can be interpreted as reflecting the natural variability to be expected from the equalization study.

The stepwise model building process selected as the most significant predictor the aggregate ratio change over five points between 1999 (the year dropped) and 2002 (the year added). The naming convention for the year of the sales sample is the final year, i.e. 2002 means sales from April 2001 through March 2002. This variable explained 32% of the variance in the market adjustment. Changes under five points were not associated with a change in market adjustment. For every ten-point increase in ratio change, market adjustment increased about 2.4 points. The three-year ratio

change can be considered an indicator of market appreciation. Average value of the ratio change was 11.6. Compare this to the statewide change in EEGL from $37.09B in 1999 to $44.53B in 2002, an increase of $7.44B or about 20 percent. During this same period the reported (unequalized) grand list value from reappraisals and other additions increased $3.54B. The market adjustment change in EEGL is thus closer to $3.91B or about ten percent. It is not surprising that the best predictor of market adjustment change is a measure of actual market activity.

The next best predictor was being a town in Essex County. On average they were about five points lower in appreciation than the average of all towns. An additional eight percent of variance was explained. Although they entered the stepwise selection in fifth and sixth place, towns in Caledonia and Chittenden counties also were significant predictors. Caledonia County towns on average were about two points lower in appreciation and explained an additional 1.7% of variance. Chittenden County towns on average were about two points higher in appreciation and explained an additional 1.4% of variance.

Entering the selection process in third place was a change in aggregate ratio between the first and third years of the sample (2000 to 2002). Each ten-point increase in this measure resulted on average in a one-point increase in market adjustment, explaining an additional four percent of variance. Differences in the aggregate ratio for the component years of the three-year sample indicate significant market appreciation and the potential weighting effect of the final year.

In fourth place for selection, and the last to be discussed, were towns with a two-year old reappraisal. The sales sample for these towns was made up of one year of restated ratios from 2000 and two years of market sales from 2001 and 2002. These towns on average increased their market adjustment by 2.5 points, explaining almost four percent of variance. Recall that reappraisal towns have a restated sample that persists for two years. This restatement tends to be biased high and to have relatively low variance. For the 2001 study these towns would have had a sample consisting of two years restated and one year from the market. In 2002 the smoothing effect of the two restated years would be gone, logically leading to the jump in market adjustment. In effect this additional adjustment is added for 2000 reappraisal towns to the "first to last year change" effect discussed above.

The six estimators together explained about 48% of variance. This statistic is called R-Squared and also the Coefficient of Multiple Determination, and is a measure of goodness of fit for the model. If the model explained all of the variance, i.e. the predicted values from the model were equal to the values

observed, then R-Squared would be 100%. In the social and political sciences, it is often said that finding a 20% relationship leads to a tenured faculty position. Models explaining 50% of variance are considered good.

Model Coefficients and Examples

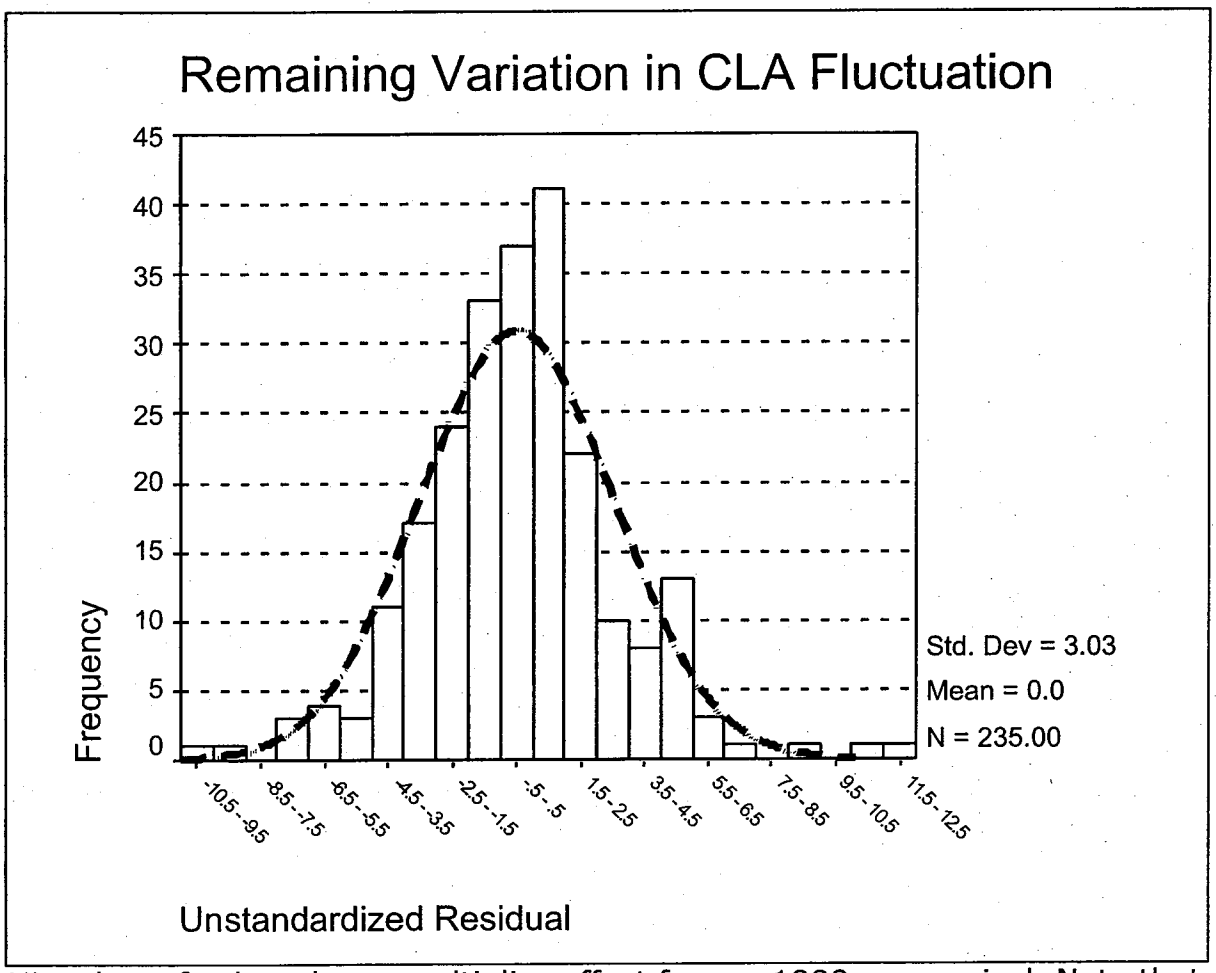
The following table shows the output from the regression model building process. "B" is the value for the factor coefficient. "Std. Error" is the uncertainty associated with the parameter estimate.

Model Parameters: Prediction of Average Value for Market Growth Adjustment 2002	Unstandardized Coefficients	
	B	Std. Error
(Constant)	2.2271	0.3408
Agg Ratio Change Over 5	0.2372	0.0330
Aggregate Ratio Change First to Last Year	0.0984	0.0284
Two Year Old Reappraisal	2.4864	0.8127
Chittenden	1.7821	0.7214
Essex	-4.9301	0.7916
Caledonia	-2.1791	0.8574

A few examples follow to illustrate application of the model. The first line is the measured fluctuation value. The next six lines contain the values of the independent variables for the town used in the model to predict average fluctuation, which is shown on the line labeled "Predicted Value". The Residual is the remaining fluctuation not explained by the model. Mathematically the predicted value is (Constant) + (Value1 * Coefficient1) + (Value2 * Coefficient2) + ... Where the predictor value is "true/false" a value of one indicates presence of the characteristic.

Example	Wells	Hinesburg	Guildhall
Market Growth Adjustment 2002	15.277	11.067	14.595
Agg Ratio Change Over 5	25.982	19.332	59.527
Aggregate Ratio Change First to Last Year	30.079	17.994	60.946
Two Year Old Reappraisal	1	0	0
Chittenden	0	1	0
Essex	0	0	1
Caledonia	0	0	0
Predicted Value	13.837	10.366	17.415
Residual	1.440	0.701	-2.820
		Reapp 99	

Wells illustrates a town with an effect of a two year old reappraisal. Hinesburg and Guildhall are examples of towns with a county effect.



Hinesburg further shows multiplier effect from a 1999 reappraisal. Note that a large apparent fluctuation is explained quite well by the model. After consideration of the predicted value, the remaining variation is relatively small.

Residuals

After analysis using MRA, the remaining variability had been reduced to the following characteristics.

Mean		.000
95% Confidence Interval for Mean	Lower Bound	-.390
	Upper Bound	.390
5% Trimmed Mean		-.010
Median		-.052
Variance		9.191
Std. Deviation		3.032

Minimum	-9.730
Maximum	11.586
Range	21.315
Interquartile Range	3.365
5^{th} Percentile	-4.934
10^{th} Percentile	-3.482
90^{th} Percentile	3.842
95^{th} Percentile	4.892

The mechanics of regression calculations dictate that the mean will be zero. Variation as measured by standard deviation has been reduced to 3.03 (from 4.25 in the initial fluctuation measure). The maximum deviation was reduced to 11.6 (from 18.2), still for Stockbridge.

Conclusion

The discussion above referred to the natural variability of a process with certain acceptable parameters. Residuals from this MRA show variability for 90% of observations at less than plus / minus five percent. Again, this inherent variability is reflected in the computed confidence intervals for the weighted CLAs. The current PVR equalization process is internally consistent and quite accurate.

Most individual town CLA fluctuations beyond the five percent limit are readily explained by a combination of true market appreciation with regional adjustments and several study artifacts associated with a three-year study period and sample restatement for reappraisal towns.

Appendix - Equalization Study Statistical Methodology

Overview

The equalization study is done once per year, with initial publication in January and final determination after appeals in June. It is intended to provide an estimate of fair market value for the real property grand list of each Vermont town as of the previous April. If all properties in a town had sold on the same day, the common level of appraisal (CLA) would be the total assessed value (grand list) divided by the total amount paid. If the two figures were equal, the grand list would have been assessed (on average) at 100% of fair market value. It is traditional to presume that a sale on the open marketplace is the most likely estimate of fair market value. Thus the most likely fair market value of all properties is the total sale price[1].

Of course all properties do not sell. We estimate the total fair market value of the town's grand list from a sample of sales. The aggregate ratio from these sales (total listed value divided by total sale price[2]) is the percent of fair market value for sales. This ratio is then applied to the whole grand list, in effect applying the equalization correction to properties that did not sell. It should be noted that in all cases the figure we are examining is the relationship between listed value and selling price. Once this ratio is formed, there is no information left about the type of property or its value. 90% assessment level could be $9,000 versus $10,000 for a parcel of open land, $90,000 versus $100,000 for a single family home, or $900,000 versus $1,000,000 for a commercial property. It is for this reason that such equalization studies are called "ratio studies" in the assessment profession.

The second measure from the equalization study is the coefficient of dispersion or COD. COD is a measure of equity. Even if the CLA is close to 100%, the ratios for individual parcels could vary widely. Vermont statutes require a reappraisal when the COD exceeds 20. A town not exceeding this limit could have individual levels of assessment varying from 50% to 150% (or more) of fair market value.

It is important to note that statistical measures of central tendency (CLA) and variability (COD) are independent of each other. Equalization is a procedure to adjust the central tendency, i.e. to move the center of the distribution closer to the statutorily required level. Equalization cannot

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[1] Strictly speaking only so-called "arms length" sales represent fair market value, but for simplicity of argument I will assume this to have been the case.

[2] Assessments and market sales are two independent methods of estimating the most likely value of the (theoretically unknowable) fair market value of a property. Both are estimates with statistical properties. Neither is conceptually more accurate than the other.

change the variability measure and thus is not a public policy instrument to address individual equity discrepancies.

Statistical Models and Inferences

Statistical inference is the process of estimating the parameters of an unknown population distribution from the statistics of a sample drawn from that population. In the case of a ratio study, the unknown parameters are the CLA and COD of all parcels in the town if they were to sell on the same day. The unknown population distribution is assumed to be uniformly assessed as required by Vermont statutes, with no class of properties treated differently from any other on average.

For a sufficiently large random sample from a normal distribution, the mean of the sample is the most likely value for the mean of the population[3]. Other random samples of the same size from the same population (i.e. a different set of parcels selling) would result in a different average but they are likely to be clustered around a single value, according to the Central Limit Theorem. All statistics have associated uncertainty. In fact one of the strengths of statistics as a mathematical science is the ability to quantify that uncertainty to assist in decision making. Statistical theory allows us to estimate how widely dispersed the sample means from repeated sampling would be, using a so-called confidence interval. The amount of uncertainty, measured by the width of the confidence interval around the estimate, is influenced by the size of the sample and the inherent variability in the population.

Almost all samples in the Vermont equalization study are sufficiently large as to minimize sample size as a great influence on uncertainty. The variability measure used in construction of confidence intervals is closely related to the COD for the sample[4]. The larger the COD, the wider the confidence interval. The COD measure is used to measure the consistency of assessment levels in the grand list. A high COD, measuring inconsistent assessment practices and inequity, will lead to a wide confidence interval.

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[3] Sufficiently large generally means 30 or more, but this restriction is relaxed if drawing from a normal distribution and using the appropriate confidence interval multipliers from the Student's-t distribution. Standard statistical tests for normality on hundreds of Vermont sales samples have shown that they are close enough to normal to support this assumption. Randomness of the sample is a function of the real estate market choosing which properties sell. The validity of the assertion that the sample mean is an unbiased estimator of the population mean comes from Maximum Likelihood Theory.

[4] Computation of the variance estimator for the weighted mean, necessary for building confidence intervals, is a highly technical subject beyond the scope of this discussion. Consensus does not exist on the best technique. PVR uses a method consistent with the definition "ratio weighted by sale price".

Practical Considerations – Assessment Uniformity

The actual equalization study diverges somewhat from the theory outlined above. Experience has shown that in some towns differing categories of property are not assessed uniformly. In other words the sales sample indicates that the population consists of a merge of several distributions, each potentially with a different CLA and COD. The statistical term for this is horizontal bias. Property Valuation and Review (PVR) has established categories of property and required all grand lists to be subdivided using these. The sales sample is thus classified or stratified ahead of time.

Each stratum sample is examined for reliability, defined as no more than a ten percent uncertainty at a ninety-percent confidence level (the 90/10 rule). If the sample is a reliable estimator it is used to equalize the grand list value in that category. Categories are grouped into classes based on similarity of property type: residential, commercial / industrial, open land. If the category estimator is not reliable and a reliable class estimator exists, then the class estimator is used to equalize the category. If neither category or class estimator is reliable, the town sample is used. In the relatively unlikely case of an unreliable town sample, the sample is supplemented by appraisals[5]. Implementation of this adaptive estimator choice algorithm is done automatically using software in the PVR equalization system.

This process results in what statisticians call a "minimum variance unbiased estimate" (MVUE). It is unbiased because it uses information at the lowest level possible (summing the results) and minimum variance because the final uncertainty of the weighted result is almost always less than the uncertainty of the town-wide sample considered by itself. The precision of the final CLA for the overwhelming majority of Vermont towns has been shown to be under five percent at ninety-five percent confidence. MVUE is the gold standard for evaluating the best statistical measure to use in a particular circumstance.

While the process would not always have been necessary (in the case of no statistical evidence of horizontal bias) it is administratively efficient. We don't know ahead of time which towns may have horizontal bias, so we apply the same procedure to all towns as if they all did. Mathematically in most cases the results are essentially the same as if the town-wide sample had been used for all categories[6].

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[5] Appraisals are a questionable method for supplementing sample size. Unless appraisals are done without knowledge of the listed value, they violate the implicit assumption in a ratio study of independence of listed value and sale price. An appraisal is required to consider market sales and thus cannot contribute to a reliable indicator of assessment level.

[6] For the 2002 study, 171 towns had stratified weighted CLAs within the 95% confidence interval of the town-wide sample aggregate ratio. Another six towns had the 95%

The process for selecting reliable estimators allows for samples as small as two sales to suffice, provided the ratios are relatively uniform. As the make-up of the sample shifts from year to year, the level of equalization could also shift depending on the characteristics of the new sample. Arguably the MVUE estimator is preferable, but at the expense of somewhat more volatility at the individual property category level.

There is a long tradition at PVR to favor accuracy. Earlier methods predating the current system (although not using the sophistication of confidence intervals, tests for reliability, rule based trimming and testing for influential sales) chose estimators based on minimum sample sizes. With few exceptions these estimators were weighted means. There is adequate empirical evidence (see discussion below on comparing equalized value estimates to town reappraisals) that these equalized value estimates were quite accurate.

Practical Considerations – Sample Distortion

Validity of the estimators depends on not varying significantly from the model assumption of normality. For a sample, normality usually means a mound-shaped symmetric distribution. The observations should be interchangeable – i.e. no single observation should significantly affect the computed mean whether it is present or not.

All samples are automatically subjected to a procedure to identify outliers and extremes. Outliers are ratios beyond 1.5 interquartile ranges (IQR) from the 25^{th} and 75^{th} percentiles. Extremes are outliers beyond 3 IQR's. This identification process is relatively common in exploratory data analysis. Extremes are deleted from the sample before computation of the statistics. Outliers are subjected to a more extensive review process to confirm validity of the sale, but not deleted. The trimming process is done only once. Note that this analysis is done on the unweighted sample, which is used to compute the COD estimate.

The aggregate ratio is from the sample ratios weighted by sale price. Higher value sales have more influence on the result than lower value ones. To assure that a single high value sale does not significantly influence the result, the town-wide sample is subjected to a further diagnostic to identify

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confidence interval of the stratified CLA containing 100% although the town-wide ratio was significantly not 100%. Once insignificant samples, reappraisals (see discussion below), and these 177 towns where the town-wide ratio could have been used are eliminated, only fifteen towns remain where the stratified sampling led to a result significantly different from what would have resulted from using the town-wide sample. In all but one town, the resulting CLA was higher (lower equalized value) than the town-wide sample.

influential sales. The principle of the diagnostic is that ratios should be independent of selling price. A scatterplot of ratios versus sale price would show no slope. Mathematically this is done by doing a linear regression of ratios on sale price. Regression diagnostics identify influential data points as those that change the regression slope by a large amount by their presence. The data point with the largest influence is temporarily deleted from the sample. We then compute the weighted mean and confidence interval of the reduced sample. If the previous weighted mean (with the suspect data point present) lies outside the reduced sample confidence interval, the suspect sale is flagged for review and possible deletion. Note that this test is a statistical one, not a "rule of thumb" with some subjective definition of "influential". If the initial weighted mean is within the reduced sample confidence interval, it could have occurred by chance and is thus not statistically significantly different.

Potential Distortions – Sample Size and Period

Since the equalization takes place on the April lodged grand list, ideally we would use a sample of sales on the day before. Of course this is not practical, so the sales sample is drawn from a wider period. Almost all states use one year of sales. Vermont used two years of sales through 1998, changing to three years starting in 1999 based on the Almy Report recommendation[7]. While this latest change had the effect of almost guaranteeing a sufficiently large sample for reliable estimators even in the smallest towns, it also introduced distortions.

In order to use a single sales sample to produce an estimated assessment level, it must be assumed that the sample is homogeneous. By statute the listers are required to assess all properties at 100% of fair market value, so an assumption of uniformity across property categories is justified until questioned by the data. However, it is not appropriate to assume that the changing market valuation of property is the same in all towns. Where relatively high appreciation in values is occurring, the ratios at the beginning of the period would tend to be higher than at the end of the period. In other words there may be a time component.

Such a mixed sample will tend to overestimate the CLA and underestimate the equalized value. In an appreciating real estate market, subsequent equalization studies will drop off a set of sales with comparatively higher ratios and add a set with lower ratios. While the effect is to dampen the increase in equalized value, large jumps can occur if the year dropped is

[7] Only a handful of towns presently have low enough sales activity to require beyond two years of sales to build a reliable estimator of CLA (given an acceptable COD level). An overwhelming majority of towns would have reliable estimators with one year of sales.

substantially different in CLA from the year added. This artifact is exaggerated when one of the years dropped was a restatement of the sample after a reappraisal. See discussion below.

There is independent confirmation of the underestimation bias. Comparison of equalized values the year before reappraisal to the grand list for towns reappraising during the past few years, during a period of accelerated appreciation, show the equalized values on average tend to be under by about the same percent as one year's appreciation. During the early 1990s, when market appreciation was more modest, there was no statistically measurable bias.

Time adjustment of sale prices to a fixed date has been discussed as the solution to this problem. While conceptually attractive, statistically this is a questionable practice. It would violate the assumption of random draws from the market and independence of observations. Information needed to estimate market appreciation to do the time adjustment would come from the same sales sample, a circular argument.

The bias is an artifact of an unnecessarily large sample period. As noted, a single year of sales would be sufficient in most towns. In New Hampshire, like Vermont a state with small jurisdictions, one year is used. If the sample is too small, additional periods are added. While the three-year period treats all towns consistently and in general works in favor of the towns by reducing the equalized value estimate, it will be a problem when the market starts to soften. The damping effect will then be a hindrance. The new year of sales may have a higher CLA than the past two years – this will obviously keep the average CLA lower and equalized values higher than appropriate.

Potential Distortions – Abnormally Clustered Samples

In some towns the sales sample exhibits a remarkable degree of clustering around 100%. A histogram of ratios shows a large spike between 98% and 102%, and a much smaller number of ratios outside this range. Ramifications of this phenomenon under PVR's current methodology include automatic trimming of many sales as extremes and computation of an unreasonably low COD[8]. With a clustered sample the IQR is low in value. Values of extreme fences (beyond which extremes are identified and trimmed) are tight.

[8] Effective with the 2003 equalization study, a revised trimming algorithm will be implemented. Trimming fences will not be permitted to be closer than 40 points from the median ratio.

The mechanism at the root of this behavior cannot be identified by statistical means. However, the IAAO standard uses non-standard clustering as an indicator of so-called "sales chasing", defined as manipulating the assessed value of a sold property to closely or exactly match the sale price. The thought is that in the world of real estate appraisal a very low measure of dispersion, whether measured by COD or some other method, is unachievable without manipulation of the data. Assessed values of properties are set using mass appraisal systems. These systems work by assigning value based on common characteristics of similar properties in similar circumstances, with equity as the goal. When properties sell, it is expected that the price negotiated between buyer and seller will vary somewhat from even the best assessment. It is extremely rare for the buyer and seller to agree on a price exactly equal to the assessed value on the tax rolls. Ratios between 98% and 102% equate to assessments within $2,000 of the selling price on a $100,000 home.

Examination of distributions of Vermont sales ratios suggests that more than about 12% of sales with ratios between 98% and 102% should be considered abnormal. A suspect sample may not satisfy the intent of the ratio study: drawing a random sample from the market, forming the ratio of assessed value at time of sale to selling price, and drawing inferences about CLA and COD from a number of such sales. A key assumption is that the assessed values and sale prices are arrived at through independent processes, and knowing one provides no information about the other. Assessment precedes sale, so sale price cannot affect assessment. Inferences drawn from an invalid sample are invalid. In particular, it may be improper to infer that the assessment level and dispersion for unsold properties is appropriately estimated from the characteristics of sold properties if it is apparent that assessments have been manipulated.

Abnormally clustered samples seem to occur more frequently associated with town-wide reappraisals. Since reappraisals use market sales history, reassessed values are no longer independent estimates of value from sales. See discussion below on how reappraisals are handled in the ratio study.

Potential Distortions – Changes to Listed Value After Sale

One major exception to the rule that assessed value precedes sale price is a reappraisal. The sales sample is still required to be three years. But the result of a reappraisal is a new grand list at full fair market value. It would be inappropriate to use the old sales sample CLA to adjust this grand list. So the listed values for the three years of sales are changed to the new values. In a stable market this sample would be homogenous and centered on 100%. "Equalizing" the new grand list would yield no change.

In practice a town recently lodging a reappraised grand list gets a bonus. Due to the appreciation effect described above, the "CLA" from the adjusted sample tends to be above 100%. Applying this correction to the new grand list yields a reduced value. Absent evidence that the reappraisal was incorrectly done, it is questionable statistical practice to apply an estimator from a manipulated sample to a reappraised grand list. The elements of the ratios are no longer independent estimates of the same theoretical fair market value.

It has been the practice of PVR for some time to do this restatement of the sample, even when the sample period was two years. The restated ratios are now included in the sample for two subsequent years. The effect, as noted above, is to retard the reaction of the sample to new market information. When the restated sample is abnormally tightly clustered, the effect is magnified. Because the sales from the period preceding the reappraisal continue to be used, there is an incentive to have new assessed values as close as possible to sale prices even if sales are from previous years.

There are also situations where the listed value used in the ratio study differs from the value recorded on the Property Transfer Tax Return. Some of these are corrections of typographical errors or filling in of missing values. However others are apparently after the fact restatements of what the listed value "should have been." Whatever the rationale, any restatement of the two values making up the ratio (other than obvious data entry corrections) is a violation of the assumption of random draws from the market. As soon as the observation is touched manipulation must be suspected.