Recommendations for Improvements to Real Property Assessments

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Prepared for

City of Philadelphia

Office of Property Assessments

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by

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The City of Philadelphia, Office of Property Assessments (OPA) asked the author to prepare recommendations for improvements for its real property assessment process based on his over 40 years of experience in the industry and hands-on work with department staff over the past ten years. As background, in recent years OPA has made huge improvements to its valuation process used to value both residential and commercial properties. Perhaps unique in Pennsylvania, OPA has evolved from an archaic, cost-based system of outdated values to a highly automated process of annual valuation based on current market data.

At the same time, the recent Ryan Report highlighted a number of continuing deficiencies and opportunities for improvement. While I believe that the Ryan report fails to recognize (or even adequately comprehend) some of the advanced valuation techniques OPA has put in place, for the most part the report is realistic in its forthright description of the current situation and remaining deficiencies. In fact, further improvements in the valuation area are dependent on supporting improvements in the data collection and staffing areas. The purpose of this high-level report is to set forth my independent recommendations for improvements to make OPA the efficient, highly professional agency it is striving for.

To this goal, the following are recommended:

1. Sales Validation Team

The majority of the Ryan report consisted of a sales ratio study in which assessments were compared with current sales prices. Such a ratio report is the most common method for evaluating the accuracy and uniformity of property assessments. Ideally assessments should be centered on sales prices and assessment-to-sales ratios should be relatively uniform. With the exception of condominiums, the Ryan report found that existing assessments do not achieve professional standards. In addition, the study found evidence of "sales chasing" in which values for individual sold properties are set at or near their sale price rather than on the basis of valuation algorithms and rates used for other, similar properties.

While the author does not dispute Ryan results, it is critical to recognize that a sales ratio study is only what it is: a comparison of assessments against sales prices with the assumption being that sales have been adequately screened so that those represented as "valid" do in fact represent valid, open market arm's-length transfers and that those marked "invalid" reflect conditions that render a sale unrepresentative of market values (examples include sales between related parties, forces sales, and sales inclusive of other than land and building). In my opinion, sales are all too often not adequately screened and actual appraisal performance is better than the Ryan report indicates.

In any case, sales ratio studies will continue to provide unreliable performance measures until sales are adequately screened. Even more important, the accuracy of valuation models depends critically on the accuracy of the sales on which they are based. For residential properties in particular, values are based wholly on sales (as they should be). I have observed first hand modelers struggling to separate atypical, likely non-market sales from true market sales prior to finalizing valuation models. While some such filtering is standard practice, it is more of a problem in Philadelphia than I have observed elsewhere.

I recommend that OPA appoint a dedicated, professional sales validation team responsible for the timely screening and validation of all real estate transfers in the City. Two members should be assigned to residential properties and two to non-residential properties. These positions should be responsible solely for sales validation and research and should not wear dual hats as valuers, which would eliminate possibilities of sales chasing. These positions must be appraisal (not clerical) positions, although it would be highly desirable to have a fifth junior or clerical position to assist and potentially achieve appraisal status to provide additional backup and support and compensate for inevitable vacancies and transitions.

Further progress in property valuations, as well as the ability to gauge accurately appraisal performance, is in good part dependent on recognizing the need for and adequately staffing a sales validation team. I cannot overemphasize its importance.

2. Construction Quality and Condition

It has been said that in assessment it all begins with data. Data drives values and the better the data, the better the values - and vice versa. To lend perspective, there are two types of assessment data: market data, of which sales data is the most obvious element and income data is equally important for commercial properties. The other is property characteristics data, which include all the relevant descriptors of property: type, lot and building size, location, construction quality, building condition, garages/parking, etc.

Along with size and location, the most important drivers of market values are construction grade and condition. Both building and lot size can be objectively measured and are usually reliable. Location will be addressed separately below. In any case, the greatest opportunities for data improvement in Philadelphia lie in the coding of construction grade and condition.

Take first single-family residential property. Philadelphia is the only jurisdiction in the 50 or so in which I have worked in North America that does not have a variable for construction quality or grade. To be sure, construction grade is a subjective variable, dependent on design, materials, and workmanship, and comparatively difficult to determine in a complex market of various building styles, ages, and renovations. Still, who would deny its importance? I have never seen a single-family residential model in which it does not contribute to value.

Condition is equally important. Two once identical homes in the same neighborhood built at the same time can today have very different values dependent on upkeep, replacements, and

renovations. While the City already has a variable for building condition for both residential and commercial properties, it is not coded consistently and does not contribute to models they way it could (particularly in the absence of the grade variable).

Commercial properties are usually classified by exterior wall type (frame, masonry, structural steel) or related building grades (e.g., A+, A, B, C, D). Philadelphia follows the latter approach and, where available, the variable is usually an important driver of commercial values. Condition is also important but more problematic.

I recommend that the City undertake a project focused on the assignment of construction grades and condition codes for all residential properties. For condominiums the project can focus primarily on buildings, although some variations are appropriate for renovated or derelict units in a given building. To begin, OPA should appoint a small task force of 3-5 appraisers with experience working with residential properties. Desirably some members of the team should also have experience with other assessment jurisdictions and appraisal systems so that they are aware of how others tackle the topic.

Of particular relevance is the pending implementation of a new Computer-Assisted Mass Appraisal (CAMA) system, which includes variables for both building grade and condition. Should OPA adopt its standard grades, continue with what it has, or take some intermediate course. The task force should recommend an appropriate strategy to include how many grades should be created, what they will be termed, and specific criteria with pictures and illustrations for determining the appropriate grade for properties. The task force should also determine whether to adopt the new CAMA system's CDU (condition/ desirability/utility) codes, stay with its current condition codes, or some other approach.

Once the task force has completed its work, which should not exceed a six-month period (three months should be sufficient), OPA should appoint a team to assign the chosen sets of codes consistently across all residential properties in the City. Given other work demands on staff, the task could also be contracted to a private company as Washington, DC did some years ago. If this later strategy is adopted, as six-month completion time would seem reasonable.

In the case of commercial properties, managers should similarly decide what strategy to adopt going forward, again considering the pending implementation of the new system. As a minimum each commercial section should critically examine the reliability and consistency of its building grade and condition codes, which are critically important in both the assignment and defense of values.

3. Additional Modeling Staff

While valuation methods are first rate, the responsible staff is extraordinarily thin with essentially a manager and two modelers, complemented from time to time by subject matter experts in different property types. This small team is responsible for the development of models for all of the City's various residential market areas, multi-family properties, commercial and industrial properties, and both vacant and improved land. This has been an amazing accomplishment but is not sustainable.

The departure of any one member would be devastating. Add to this the pending transition to a new CAMA system and other demands, and the staff is all the more stretched.

I recommend that OPA hire two additional modelers with expertise in data analysis, property appraisal, statistical methods, GIS, and computer systems. Likely OPA will have to search outside its current ranks for persons with these skills. One or even both could be university graduates with the requisite analytical skills who could complement more experienced staff familiar with appraisal methods and the local market. The modeling team is the driver of the City's valuation models that produce the property assessments on which the City depends for its property tax revenues. The team must be strong and viable.

4. Assessment Calendar

While annual full revaluations are the theoretical ideal, I suggest that the City would benefit on multiple fronts from postponing the next full revaluation for one year, that is, until TY 2022 instead of TY 2021. Property tax assessors are always faced with the multiple challenges of updating data for new construction and other activity, producing the next roll, answering inquiries, defending appeals, and implementing change. Today in Philadelphia, with its rapidly changing markets and pending new CAMA system, these challenges are particularly daunting. How is OPA to properly implement needed improvements and the new CAMA system on top of its everyday work commitments? Some breathing time is needed to address these legitimate concerns. Although it may require a legal change, I believe that a temporary suspension of full revaluations for one year could greatly help implement needed improvements without seriously compromising valuation accuracy and uniformity. In the interim period, the modeling team could adjust (trend) values by property type and geographic area rather than fully recalibrate mass appraisal models subject to, say, a 7% or 10% cap on increases. Importantly in terms of freeing up needed resources, if at all possible, appeals should also be suspended for the interim year (only). Full revaluations would then be reinstated after the hiatus period.

5. Valuation Methods

The City has made outstanding progress in its valuation methods, adopting state-of-the art, market-based methods that, when paired with proper data, yield accurate values with amazing efficiency. A particularly desirable feature of the system is its flexibility. Unlike most CAMA systems, analysts can specify whatever model will yield the best results and introduce improvements or refinements that afford additional accuracy. This proven methodology and flexibility, with which staff have become proficient, should be maintained in transition to the new system (rather than adopt the out-of-the box modeling method that comes standard with that system).

6. Income Data

Along with sales data, income data constitutes the other pillar of market data used for income-producing properties. In fact, many of the commercial models are income models which estimate market rents that are capitalized into estimates of market value. Over the last several years OPA has made substantial strides in assembling previously unavailable income data. Much of the data comes from subscription services and products available from third party vendors. While welcome, the collection and assembly of such data is disorganized and scattered among the various commercial departments. The data typically reside in spreadsheets of various formats.

OPA should designate a particular unit or persons responsible for income data collection and screening. It is essential that the data be screened for usability for valuation purposes. Further income data should be maintained in a standard format (or formats) in a central repository rather than scattered about. The new CAMA system will offer such a repository. One suggestion would be to assign the person or persons to the modeling team, where income data is used for valuation. Alternatively the responsibility could be placed in the commercial department. In any case it is critical that income data, which is so critical for multi-family and commercial properties, be routinely collected and screened by a single unit and retained in a standard format in a central repository.

7. Location Variables

The importance of location data, particularly in a large and diverse city like Philadelphia, cannot be overstated. Location has various levels or aspects. For residential properties location consists, first, of the broad market area or "zone" (such as Center City or South Philly) in which a property resides. OPA has defined 14 such zones for residential properties and develops a separate valuation model for each using only sales from that zone. Second, a residence is located in a specific neighborhood (GMA is OPA's term). Each zone has many (e.g., 30-40) such GMAs, which form variables in the models, providing upward or downward adjustments relative to the "base" GMA. Finally, at the individual parcel level location attributes include such amenities or nuisances as traffic, view, and proximity to public transportation.

Commercial properties, on the other hand, are divided first by type (e.g., apartment, office, or industrial) and then by neighborhood (GMA) supplemented by parcel-specific amenities such as street type provide also important.

OPA appears to have a solid foundation of zone and GMA designations for both residential and commercial properties, with the caveat that some smaller GMAs should be combined to afford adequate market data for modeling. In addition, in recent years OPA has introduced "spatial" variables that measure distance from key amenities such as Center City, rail service, or hydro (rivers). The missing element that has yet to be adequately addressed is abutting amenities, nuisances, and view. Some jurisdictions have defined two levels of abutting: adjacent to and across from. Others define simple binaries (1=yes, 0=no) for each such amenity or nuisance.

While improvements in location variable are happily not as pressing as the other areas described above, OPA should continue its work to refine spatial and proximity variables, which can help explain why some properties in the same GMA command more or less value than others. This is properly a function of the modeling team as the process is facilitated by GIS capabilities. Again, additional in-house expertise in this area can be leveraged into more accurate, supportable values.

8. Quality Control

It is essential that an assessment agency have a standardized set of quality control analyses that it can rely on to determine how well (or poorly) it is doing. As mentioned, a standard tool in this regard is the sales ratio study. The modeling team does a commendable job of completing a thorough quality control analysis, including ratio studies, before finalizing any of its valuation models. What is lacking, as pointed out in the Ryan report, is the routine production of standardized ratio reports at the agency level at critical points in the valuation cycle, e.g., when modeling is completed, when appraisal review is completed and notices mailed, and at the completion of the protest period. A standard set of such reports would help management gauge valuation quality and to what extent it is impacted at the completion of each key phase of the valuation cycle.

Standardized ratio reporting is properly a function of a designated quality control team or unit that, with input from the various units, could also be responsible for documenting the agencies valuation methods and procedures. In any case, some such documentation should reside on the agency's web-site. Other, such as appraisal handbooks or manuals, is more suited to internal use, including staff training. The documentation should be clearly written and illustrated and updated each year as appropriate.

9. Valuation Support

Besides developing values, OPA staff must review and defend them during the protest and appeals process. An essential element in this regard is comparable sales. While OPA has its own procedures, the new CAMA system has a sophisticated comparable sales algorithm that staff could optionally utilize. OPA will want to evaluate the system and decide if and how it should be integrated into current processes.

In addition, the valuation process should be documented and staff should be able to explain, at least in general terms, how values were determined. For commercial properties they should be able to specify, what rent, vacancy, expense, and capitalization rates were used in application of the income approach to value a subject property. As described previously, much of this should be described in appraisal manuals and materials that are updated each valuation year.

10. Action Plan

To implement recommended changes, OPA should develop a plan and accompanying timetable. The next two years are critical and OPA should target making necessary changes to its organization structure, staffing new positions, and implementing critical changes over the next two years in concert with implementation of the new CAMA system. Again, I believe some hiatus period on annual work demands would help immensely in effectively doing so.

Finally, aside from the modeling team, the new positions recommended above could be consolidated into a single unit that would report directly to the Chief Assessment Officer. The unit, which might aptly be named Standards, Manuals, and Guidelines would be responsible for collecting and maintaining both sales and income data, performing ratio studies, and developing and maintaining the agency's guidelines, manuals, and web site. The unit could consist of a manager and a staff of eight or nine, of which five or six would be devoted to sales and income data assembly and screening. Several additional persons with writing and technical skills would be needed to perform ratio studies, develop and update guidelines and manuals, and maintain information on the City's web site.

About the Author

Robert J. Gloudemans is a mass appraisal consultant and partner in Almy, Gloudemans, Jacobs & Denne. He has a master's degree in Economics from the University of Iowa. After serving in the military, he began his career with the International Association of Assessing Officers (IAAO), where he worked as a Research Associate. In 1978 he took a position with the Arizona Department of Revenue, where he worked initially as Head of the Computer Assisted Appraisal Unit and later as Administrator of the Research and Equalization Section. In 1989 he began consulting and in 1991 formed the partnership, Almy, Gloudemans & Jacobs (now Almy, Gloudemans, Jacobs & Denne).

Mr. Gloudemans provides consulting services in mass appraisal and ratio studies and has served, either independently or through his partnership, over 100 clients in the U.S., Canada, and internationally. He has served three appointments on the IAAO Standards Committee, instructed in over 40 states, provinces, or countries, and contributed extensively to IAAO standards and the mass appraisal literature. He is the author of *Mass Appraisal of Real Property* (IAAO, 1999) and with his partner, Richard Almy, co-author of the current IAAO textbook, *Fundamentals of Mass Appraisal (*IAAO, 2011). In 2018 he completed development of a series of four new mass appraisal courses for IAAO, all of which are currently being taught. Also in 2018 he received the IAAO Most Valuable Member award.