The Valuation Process: Step-by-Step

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Updated December 2019

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About APV

    

APV provides specialist valuation, asset management and asset accounting services for a wide range of organisations and sectors. We enjoy close partnerships with our clients including hundreds of local councils, state government agencies, manufacturing and transportation businesses, universities and not-for-profit organisations as well as the governments of countries implementing accrual accounting.

Our services include:

- Fair Value valuations: land, buildings, plant, equipment, roads, water, sewerage
- Asset accounting: valuation and depreciation methodologies, compliance reviews
- Asset management: asset management frameworks, plans and systems
- Customised training and professional development: asset accounting and asset management
- Development of strategies and frameworks for the implementation of accrual accounting and other PFM reforms.
- Assisting entities build their own capability via the implementation of specialised financial reporting valuation software (Asset Valuer Pro).

As leaders in our field, we are proud of our unblemished record of audit approval. However, uncompromising quality is simply our starting point: *we deliver more than just figures*. We tailor our services to meet client needs, helping them get the most from their assets and plan effectively for the future.

And while valuation and depreciation can be complex, we keep it simple. We’re constantly evolving to offer customers more flexibility and control. We use leading methodologies and custom-built valuation tools that are compliant, comprehensive, logical and truly relevant.

Introduction

This paper aims to shed some light on the full process of delivering a valuation and to assist entities in making informed decisions about how best to complete each part of the process. Like most processes there are lots of options. The trick to any successful project is choosing the right options and the right people to provide their expertise at the right time.

Most entities who are required to value their assets at Fair Value have a reasonable understanding of the requirements of the accounting standards and associated calculation options. However, from feedback we receive from our clients, many have only limited understanding of the entire valuation process, what's involved and the outputs required to satisfy the audit process.

Some unfortunately make the fatal mistake of assuming they only need to update the unit rates and other assumptions within their asset register or asset management system. The reality is that there is more involved in the process and it takes considerable effort. If the process is not followed correctly there is a very high risk of significant audit comment and potentially qualification.

Just as designing and building a house takes much more than simply nailing a few timber boards together the process of producing a compliant valuation is much more involved and requires expertise and experience. To put it simply, successfully delivering a valuation involves a lot more than simply running a few calculations in a spreadsheet or updating the unit rate in an asset register. Without the necessary framework, methodology and outputs a simple calculation of values is unlikely to pass audit.

Before starting the valuation process we recommend –

- entities consider the various steps as described in this paper
- assess their own as well as the capability of external resources to successfully and efficiently deliver each step
- consider whether they will be best served by use of spreadsheets, existing systems or financial reporting valuation specific software
- based on that undertake a brief risk assessment to determine the best strategy to ensure their valuations will be delivered on a timely basis in full compliance with the prescribed requirements and with sufficient documentation to satisfy audit while ensure costs are minimised.

The valuation process appears to be quite simple. However, it is only simple if all the steps described later in this paper are properly undertaken and completed to a high quality.

High Level Overview of Valuation Process

Before any work commences regarding valuations it is first necessary to analyse the asset portfolio and develop an appropriate 'Asset Accounting Policy'. This needs to be consistent with the Accounting Standards and other prescribed requirements and should include details about –

- The various Asset Classes
- Whether they are to be recorded at Historical Cost or Fair Value
- Capitalisation and Revaluation thresholds
- Maximum periods between Comprehensive Revaluations
- Whether or not to apply annual revaluation by way of indexation.

Guidance on these can be sourced from CPA Australia's Guide to the Valuation and Depreciation of Public and NFP Sector Assets (2016). This can be freely downloaded from CPA Australia's or APV's websites.

Once an Asset Class is selected for revaluation the process then involves –

- Developing the Valuation Framework
- Data cleansing and validation to create an Asset Listing
- Determination of appropriate valuation techniques and strategies
- Data capture and validation
- Applying appropriate calculations and professional judgements that take into account asset condition, obsolescence and restrictions
- Analysis and review of initial results and completion of validation checks
- Management review of draft results and assumptions
- Production of valuation report including full details of methodology, approach, assumptions, evidence for audit, etc
- Preparation of data upload file for the Asset Register and subsequent upload
- Audit review and sign-off

Further details of these steps are detailed in the following section.

Process Steps

Developing the Valuation Framework

Like any complex process the success of the project is often directly correlated to the quality and thoroughness of the design. This is especially true for the valuation of large portfolios. The development of the Valuation Framework can easily account for more than 50% of the total project time.

The importance of getting this part right cannot be overstated. If not developed and designed well any weakness, error or omission will flow through the entire valuation and will result in either costly and time consuming adjustments and redesign or complete failure resulting in need to start again.

Because of this it is imperative that the design been facilitated by experienced experts who are able to lead the entity through the entire process ensuring the Valuation Framework will be able to fully comply with all prescribed and entity specific requirements.

There are many steps to the development of the Valuation Framework. These include –

- Development of an Asset Hierarchy that fits both Asset Accounting and Asset Management needs. Some hierarchies with Asset Management system are not appropriate for valuation and depreciation needs. Care needs to be taken to ensure the assets can be appropriately classified by asset and component attributes to enable application of the various assumptions as well as facilitate asset management modelling.
- Identifying the key attributes for each asset type that will be pertinent to the determination of the value and associated depreciation calculations.
- Developing the Financial Reporting Hierarchy so that the various reports can be aligned to the different reporting requirements of AASB116 and AASB13
- Determining the range of asset level and component level assumptions based on the actual asset management expectations of the entity and also satisfy the various accounting standard requirements. This includes determination of unit rates, apportionments, splits between short-life and long-life parts, range of useful life assumptions for depreciation, creation of an appropriate scoring and assessment methodology that takes into account both condition and obsolescence to determine the remaining level of service potential.

Data cleansing and validation to create an Asset Listing

This step can also be extremely time consuming. Entities often believe that they have good Asset Registers. However, our experience is that often there are a range of issues which create difficulties in creating a single, clean, complete, accurate and useable asset listing that will facilitate the production of a valid and compliant valuation. Some of these common issues include –

- Multiple copies or different versions of asset listings which are supposed to be the same but include inconsistencies
- Asset listings which have either not been or only partly updated to reflect additions, disposals and changes in condition, etc
- Multiple asset listings which in total cannot be reconciled back to the asset classes currently disclosed in the financial statements
- Details of changes recorded in separate spreadsheets, PDFs or other files rather than having been updated to the asset listing
- Significant errors, inconsistencies or missing data
- Key inputs being recorded as a text field such as "unknown'
- Lack of key information such as condition scores or key attributes relevant to the determination of Fair Value or Depreciation Expense
- Asset listings where the asset or component numbers are not unique
- Asset listings where the components are tied back to a master asset but the component Id is not consistent with other similar components
- Asset listings provided in complex spreadsheets (including macros and sub-totals) along with multiple tabs and data out to the side. As result they take time to understand and create complexity in trying to extract the data into a clean flat file for input to the valuation system.

Even after extensive effort is directed to cleaning, sorting and validating the asset listings it is not uncommon for entities to provide updated data after this process is first completed. This obviously creates significant inefficiencies and increases the risk of error. It is vitally important that the asset listings be cleaned, validated, sorted, reconciled and presented as flat files prior to starting inspections and data collection.

Determination of appropriate valuation techniques and strategies

AASB13 provides that the valuation can be determined using either **or a combination of** three approaches. These include the market, income and cost approaches. The upfront development of the appropriate methodology for the various asset types is critical to the efficiency and success of the valuation project. Unfortunately, some entities, due to lack of appropriate expertise and experience, make major mistakes with this critical aspect of the process. This results in final figures which do not make sense, do not reflect the asset management reality, are non-compliant and produce significant additional costs and inefficiencies.

Please note than due the change in definition and concept of Fair Value following the adoption of AASB13 in 2013 that the old 'Depreciated Replacement Cost' approach commonly adopted by many practitioners is no longer consistent or compliant with the Accounting Standards.

Most importantly – the determination of Fair Value is not linked in any way to Depreciation Expense. If your system changes your 'Carrying Amount' if you change a Useful Life assumption this would indicate that Fair Value and Depreciation Expense are linked.

For most public sector specialised assets the valuation is calculated using the 'cost approach'. However, this can be done in a number of different ways. For some assets the overall Replacement Cost needs to be determined at a whole of asset level and then 'apportioned' over the components. Each component is then valued independently based on condition or other key factors. For other assets the Replacement Cost needs to be determined specifically for each component. This might be done easily or may involve determining costs at a detailed sub-component level and summing to arrive at a component cost. As a result, the formulas and approaches will vary depending on the nature and type of assets.

The nature of the assets also impacts the over-riding strategy. For example – buildings are very complex and are usually relatively unique. As such the valuation would normally require physical inspection of each building. This is also typical for water and sewerage treatment plants. In contrast, where you have large portfolios of essentially homogenous assets it is appropriate to undertake a sampling approach and to extrapolate the findings across the sub-populations.

The data collection strategy also needs to take into account the geographical location and environmental factors as well as timing and resource requirements. When all these factors are taken into account it is clear that the valuation process needs to planned well in advance and appropriate time allocated.

Ultimately the methodology will need to be documented for scrutiny and review by the External Auditor. This will include assessment against the accounting standards for compliance as well as comparison to approaches and methodologies used by other entities. Even a minor flaw in the overall methodology can have major implications at audit time.

Data capture and validation

Not surprisingly this step is often where inexperienced entities tend to focus their attention. Many think the best place to start is to capture data and update registers and once collected work out the methodology. However, while the data collection and validation process is essential, it will be a highly wasteful use of resources if the data collected is irrelevant or critical data is not collected.

Due the cost of travel and accommodation and engagement of specialised plant and machinery this aspect of the valuation process can also quickly become one of the most expensive parts of the process. This is especially so if the staff involved do not really know what to do, what to capture or are not properly managed against a time budget.

Where possible the field data should be captured electronically using an appropriate mobile data collection device specifically designed for your information needs. This will improve efficiencies and reduce the risk of data transcription errors.

Once the data is collected it is also necessary to check it for obvious errors and ensure the data is consistent with the inspector's experiences and understanding of the portfolio.

Applying appropriate calculations and professional judgements

At the end of the day the valuation process by necessity involves the application of professional judgement. This includes allocation of a condition or consumption score, design of valuation profiles, assessment of the impact of obsolescence, development of critical assumptions, etc. It also includes design of the methodology and algorithms to enable the correct calculation of Fair Value.

Without having first designed the Valuation Framework and methodology this step becomes impossible to complete in a timely and cost effective manner. Likewise, if each asset is valued independently without an over-riding methodology and consistent application of approach it creates extreme challenges with the year-end process. This includes trying to explain methodology and approach to auditors and enabling audit to properly review the valuation and obtain the necessary evidence to enable sign off. Effectively audit may need to review each and every asset's valuation.

The algorithms used also need to be fully compliant with the requirements of the accounting standards and consistent with the documented methodology. Due the different nature of assets and different strategies and techniques required the algorithms also need to vary depending on the appropriate scenario. For example - the formulas for residential properties where there is a market are different to residential properties where there is no market or the house is on restricted land. Likewise, the algorithms and approach for different road infrastructure assets will vary depending on the nature of the asset.

As previously noted – care needs to be taken to ensure the algorithms are compliant with the new definition and concept for Fair Value. For depreciation purposes they also need to be consistent with the AASB's May 2015 Residual Value decision.

Analysis and review of initial results and completion of validation checks

Having produced some initial figures, it is important to review the results for obvious errors, missing data, application of incorrect formulas, etc.

Most organisations (including valuers) have traditionally relied on spreadsheets to undertake the calculations. This has been driven by the complex nature of the calculations and size of the asset portfolios. However, experience has shown that unless appropriate checks are built into the spreadsheets there is a high chance of error. This typically includes copying incorrect data into cells, over-writing formulas, sum formulas missing rows, loss of linkage to updated tables, etc.

Ideally the calculations should be performed by a proper database specifically designed to apply the valuation methodology with built in validations to ensure only valid data can be entered and able to highlight erroneous or missing data.

Management review of results and assumptions

A manual review of the results, including comparison to previous valuation, should be undertaken by both the valuation team as well as by entity management. In recent years External Audit have tended to be much more interested in ensuring the entity has reviewed the results, can explain the methodology and inputs and can clearly articulate the reasons for movements in the valuations from year to year.

The review should include not only the results but review of all key inputs to ensure consistency with the entity's experiences and expectations.

Ideally such reviews should be documented and show an audit trail of issues identified, changes made and agreement regarding the final results.

Production of valuation reports

The valuation process requires much more than simply printing a report of the final figures. It must be remembered that the valuation needs to be reviewed by External Audit and because of the high value of the assets (materiality) and high level of professional judgement required combined with potential for error (risk) that audit needs to able review and validate a range of information. They will also want to scrutinise the data, re-perform calculations and sight sufficient and appropriate evidence to support the key inputs.

This type of information and reports that audit is likely to need includes –

- Summary of valuations at Asset Class level
- Summary of valuations at Asset level
- Summary valuations at Component level
- Summary of valuations at Financial Reporting Asset Class level (AASB116)
- Summary of valuations at Fair Value Measurement Asset Class level (AASB13)
- Details of how Replacement Cost was determined for each asset or component
- Details of the inputs used to derive the valuations and depreciation estimates for each asset and its components
- Evidence of validation and other reviews undertaken to assess the completeness, accuracy and reasonableness of the results. This might also include analytical analysis of the results. For example – stratification of the portfolio by condition, etc.
- A formal Valuation Report setting out the experience, expertise and capability of the people undertaking the valuation as well as the scope of work, strategy and approach, high level methodology, algorithms, analysis of results, limitations, etc
- A detailed Audit Package setting out the range of key inputs actually used, evidence to support the inputs, example calculations, etc.

Preparation of data upload file for the Asset Register and subsequent upload

Having produced the valuation, it will then be necessary to upload the results and associated inputs to the Asset Register. Because of the need to perform depreciation assumptions at the component level the relevant data will need to be uploaded at the component level.

Depending on whether the short-life and long-life parts are recorded as separate components some data may need to be uploaded as a weighted average. The minimal data to upload will include –

- Replacement Cost
- Fair Value
- Residual Value
- Useful Life / RUL

Depending on the design of the Asset Register the upload file may also include –

- Condition/Consumption Score
- Obsolescence Score
- Various attributes

To make this process simple the valuation system should be able to produce the various files as a flat file (such as CSV) to facilitate easy upload.

Great caution needs to be taken with Asset Registers that try to recalculate the Fair Value. As previously noted the AASB have confirmed that the determination of Fair Value is not linked in any way to the calculation of Depreciation Expense. Each is determined independently of each other and may be based on completely different assumptions. A system that recalculates Fair Value based on a change in depreciation assumption (such as Useful Life or RUL is likely to produce a Fair Value figure that is different to the properly calculated Fair Value with the recalculated amount representing a non-compliant valuation.

Audit review and sign-off

The final process involves the review by External Audit. This will include review of the –

- Capability, qualifications, expertise and experience of those involved in the valuation
- Valuation Framework
- Valuation Methodology
- Inputs and their associated supporting evidence
- Algorithms and identification of over-riding of default assumptions
- Outputs including a range of reports, valuation report and auditors package
- Reviews and analysis undertaken by management
- Associated financial statement disclosures and reconciliations

If the valuation is not supported by the appropriate documentation the audit process will be more challenging, time consuming, frustrating and costly. Additionally, it significantly increases the risk of not passing audit or receiving significant audit comments.

What are your options?

In-House v External

While the valuation process entails a range of different steps, with each requiring specific expertise and experience, this does not mean that entities are caught with no option but to engage a professional firm (such as APV). Nor does it mean that you will necessarily be able to produce a quality valuation without some external assistance.

The reality is that there are many options available. The optimal option for a specific entity will depend on many things. These include –

- Previous valuation and audit results
- Nature of the assets within the portfolio
- Accounting/valuation/engineering expertise on in-house staff
- Ability of in-house staff to properly document and develop the Valuation Framework and satisfy audit's questions
- Quality of data systems and data held within those systems (includes completeness, accuracy and consistency)
- Workload and availability of internal staff given the timing constraints
- Risk of impact on future revaluations as a result of staff movements and turn-over

Traditionally entities have relied on External Valuers to undertake the inspections and provide valuations based on the prescribed requirements. This has been driven by a lack of internal expertise, expectations by audit and lack of appropriate resources.

In more recent years, for some assets, entities have tried doing it themselves using spreadsheets and existing databases. While some have done a relatively good job they are in the minority. With the ever changing accounting standards and lack of appropriate expertise, experience and systems the end results are often non-compliant, do not reflect reality, result in increased audit attention and typically are not supported the necessary documentation and audit evidence.

However, since the launch of Asset Valuer Pro, entities are now in a position where they can increase the use of internal resources without compromising the quality and completeness of the valuation. Just as MYOB revolutionised the way non-accountants could do their book-keeping Asset Valuer Pro provides the opportunity for non-valuers to professionally undertake their own valuations.

This is because Asset Valuer Pro has been set up with the complete Valuation Framework, flexibility for entities to tailor their needs and assumptions and a suite of different reports that provide a complete package for both the entity and their auditor.

About Asset Valuer Pro

Asset Valuer Pro (www.assetvaluer.net) is the world's only specialised valuation solution specifically designed to value assets at Fair Value for the purposes of financial reporting. It is a cloud based solution supported by a tablet version for mobile data collection.

It is fully flexible meaning that the entity can tailor every aspect of the process (or use defaults) and can value virtually any asset in full compliance with the full suite of accounting standards. This includes the ability for the entity to tailor specific data fields to be captured.

It has also been designed to provide for multiple users and the capability to provide different users with different roles and levels of access. For example – assigning a 'view only' role to external audit and limiting the ability of some users to be able to capture key data but not edit key assumptions.

Because of the financial reporting framework, it has been designed with full consideration of the external audit requirements. As such it has a range of validation reports, detailed reporting on all key aspects, analytical analysis of the results for audit scrutiny and appropriate fields and facilities to capture all the necessary sufficient and appropriate audit evidence.

Entities with minimal capability

For entities that do not have the appropriate expertise and resources in-house the traditional approach has relied upon the use of external valuers such as APV. Often because of the limitations of their internal resources it is also common to find issues with quality, completeness, accuracy and consistency of their data. This turn can result in increased levels of valuation fees.

However, now that Asset Valuer Pro is being rolled out, there is potential for these types of entities to significantly reduce the reliance (and therefore cost) on external valuers in future years.

For example – The entity could have their valuation completed by APV as per normal. However, because APV is now delivering the valuations (including the entire framework, data, assumptions and methodology documentation) using Asset Valuer Pro the entity is now in a position to undertake part or all of the valuation process themselves. The increased use of internal resources results in an overall cost saving.

Working with APV the entity could for example choose to –

- Update Asset Valuer Pro with additions and deletions
- Upload updated Condition/Consumption Scores
- Review and update the Depreciation assumptions
- Undertake some inspections and record new photos.

This would save APV time resulting in a reduced valuation fee. It would also enable the entity to build increased capability and potentially enable the entity to take over the complete valuation.

Entities with moderate capability

Some entities (whether small or large) may have available some staff with high levels of expertise but lack sufficient support from other staff. Alternatively, the entity may have a good asset management system but due to loss of staff or insufficient resources do not have the capability to properly undertake the full valuation process.

APV is able to assist these types on entities in different ways depending on the scenario. For example - this may include:

- Assisting with data collection and validation
- Workshops to facilitate the development of different aspects of the Valuation Framework
- Third-party review and validation of the methodology or key inputs to the valuation
- Training on or assisting with the implementation of Asset Valuer Pro
- Undertaking an initial valuation using Asset Valuer Pro and then 'handing over control' of the Asset Valuer Pro file via a facilitated process
- Production of detailed methodology reports and other documentation to assist the entity through the audit process
- Provision of technical advice across a range of accounting, valuation and depreciation issues.

Entities with high capability

Some entities may have at their disposal a range of different staff with appropriate skills and systems to enable them to implement Asset Valuer Pro in their own right.

While not necessary, APV can provide additional support through –

- Initial training and implementation
- Guidance and assistance with the development of all or specific aspects of the Valuation Framework
- Peer Reviews
- Provision or review and validation of specific inputs
- Provision of technical advice across a range of accounting, valuation and depreciation issues.
- Assistance with the audit process

Future Year Efficiencies

Perhaps one of the greatest benefits from the use of Asset Valuer Pro is the potential for future year efficiencies. This is because, rather than start each valuation from scratch, the system is designed to roll-over the data from previous audited valuations into a new file with all existing data and inputs brought forward.

The user simply needs to update for additions and deletions, changes in condition and upload indices to produce a new valuation. The system can then generate all the necessary documentation, disclosures and reports for the new valuation. For audit trail purposes the system can produce a list of the additions, etc.

This roll-over process ensures all valuations are stored in one central location and eliminates the lost effort wasted on trying to find the old valuations, work out what happened last time, re-create the whole process again and develop new spreadsheets and formulas (which are prone to error).

The system also incorporates a range of project management reports enabling the users to log actual progress of inspections and the valuation status for specific assets.

The algorithms are also designed to calculate new Fair Values depending on whether the asset has been impacted by in-year capitalisation or impairment or whether additional depreciation needs to be deducted.

Summary and Conclusions

The brief detail provided above highlights that the valuation process is a highly technical and complex process that by definition involves significant professional judgement.

Most entities have a reasonable understanding of the key accounting requirements. However, they may lack the experience and expert knowledge to be able efficiently develop a high quality Valuation Framework. Without the framework the valuation process can quickly develop into a long painful and expensive exercise with an associated high risk of attracting major audit attention and comment.

Despite what some software vendors will claim, it is much more complex than simply updating a few assumptions in an Asset Register. It involves significant work in relation to the development and documentation of an appropriate Valuation Framework and Methodology, design and support of key inputs, development of strategy, data capture and production and review of various detailed outputs.

However, this does not mean that all these steps need to be outsourced to firms like APV. Ideally the best and most cost-effective solution involves using a mix of internal and external resources combined with specialised financial reporting software (Asset Valuer Pro). This approach minimises the cost of external consultants while developing the in-house capability and creating a process to enable entities to become entirely self-reliant (even if key staff later move).

Before starting the valuation process we recommend –

- entities consider the various steps as described in this paper
- assess their own as well as the capability of external resources to successfully and efficiently deliver each step in a timely and cost effective manner
- consider whether they will be best served by use of spreadsheets, existing systems or financial reporting valuation specific software
- based on that undertake a brief risk assessment to determine the best strategy to ensure their valuations will be delivered on a timely basis in full compliance with the prescribed requirements and with sufficient documentation to satisfy audit while ensure costs are minimised.

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11 December 2019

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