Valuation of Intangibles and Purchase Price Allocation – IFRS 3

Conference on “Valuation” – An Art or Science???

27 August 2011

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Agenda

- Intangibles – an overview
- Objectives of PPA
- What is PPA?
- PPA – an overview
- Valuation Approach
- Types of Intangibles
- Remaining Useful Life
- TAB
- Required rate of return
- Reconciliation
- Key issues
- Common Mistakes
- Best Practices
Intangible Assets – Last to appear first to disappear

- Overall, intangible assets are defined as all the elements of a business enterprise that exist in addition to monetary and tangible assets.

- According to the Financial Accounting Standards Board (FASB), SFAS No. 141R (Now ASC 805), and No. 142, June 2001 ("SFAS 141" and "SFAS 142"), intangible assets are assets (not including financial assets) that lack physical substance.

- An intangible asset is a non-monetary asset that manifests itself by its economic properties. It does not have physical substance but grants rights and privileges to its owner that usually generate income.

**Common Attributes**
- No physical substance
- Dependence upon excess earnings
- Last to appear first to disappear

**Elements of Intangible Assets**
- Intellectual Property
- Intellectual Assets
- Intellectual Capital
Elements of Intangibles

- Includes, but not limited to, patents, trademarks and trade names, copyrights and trade secrets;
- Encompasses a wide range of creations – mechanical inventions, processes, machines, product names, chemical formulas, software, designs, fiction, poetry, songs, artwork, and advertisement;
- Generate additional value from the ability of its owner to exercise exclusive rights of ownership.
Elements of Intangibles

- Represents the codified tangible or physical descriptions of specific knowledge to which a company can assert ownership rights
- Includes, but is not limited to, know-hows, contracts, permits and licenses, and non-competes
- May not be protected by law
Elements of Intangibles

- Represents the cumulative knowledge of a business which allows for knowledge transfer and leverage.
- Represents a combination of human capital, Intellectual Property and Intellectual Assets
Types of Intangible Assets

Customer Related
Customer lists, Order backlog, Customer contracts and related customer relationships, Non-contractual customer relationships

Technology Based
Patented technology, Computer software, Unpatented technologies, Databases, including title plants, Trade secrets, such as secret formulas, processes, recipes

Contractual Based
Licensing, royalty, Advertising, service, supply contracts, Lease agreements, Construction permits, Franchise agreements, mortgage servicing contracts, Employment contracts

Artistic Based
Plays, operas, ballets, musical compositions, song lyrics, advertising jingles, Books, magazines, newspapers, photographs, video, motion pictures, music videos, television programs

Market Based
Trademarks, trade-names, Service marks, collective marks, certification marks, Trade dress, Newspaper mastheads, Internet domain names, Non-competition agreements
Objectives of PPA
Objectives of purchase price allocation

- Shareholders' Interest
- Compliance with Financial Reporting Standards

Regulators perspective

Management intentions
### Evolution of PPA

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<th>The predecessor</th>
<th>IFRS 3 – Business Combinations</th>
<th>IFRS 3 R – Business Combinations</th>
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<tr>
<td><strong>IAS 22 – Accounting for Business Combinations</strong></td>
<td><strong>Effective date – 01 January 1985</strong></td>
<td><strong>Effective date – 01 April 2004</strong></td>
</tr>
<tr>
<td>- Effective date - 01 January 1985</td>
<td>- Requires the purchase method to be applied, pooling of interest no longer allowed</td>
<td>- Effective date – 01 July 2009</td>
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<tr>
<td>- All business combinations are presumed to be acquisitions, and accounted for using the purchase method</td>
<td>- Provided clearer guidelines for identification and valuation of intangible assets</td>
<td>- Scope extended to include business combinations involving mutual entities only and achieved by contract alone</td>
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<tr>
<td>- Uniting of interests is an unusual business combination in which an acquirer cannot be identified. Such combinations must be accounted for by the pooling of interests method</td>
<td>- Requires recognition of contingent liabilities and liabilities for activities to be discontinued</td>
<td>- A business can include integrated set of activities and assets that are not currently being operated</td>
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<tr>
<td>- IAS 22 was revised in 1993 and 1998</td>
<td>- Prohibits amortisation of goodwill</td>
<td>- All items of consideration transferred by the acquirer are measured and recognised at <strong>fair value</strong> at the acquisition date, including contingent consideration</td>
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<tr>
<td></td>
<td>- Negative goodwill to be recognised as profit</td>
<td><strong>Transaction costs</strong> incurred by the acquirer does not form a part of the business transaction</td>
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<td></td>
<td>- Post-acquisition restructuring reserves not allowed</td>
<td>- Business combination definition revised to focus on control</td>
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What is purchase price allocation?
What is Purchase Price Allocation?

The Definition

Purchase Price Allocation is the process of assigning **fair values** to all major assets and liabilities of an **acquired enterprise** following a **business combination**.

- Purchase price
- Goodwill
- Net of the acquisition date fair value of identifiable assets acquired and liabilities assumed
- Bargain purchase
- Purchase price
Phases of a Purchase Price Allocation in a Transaction Process

**NEGO TIATION**

- Perform the deal
  - Estimate the fair value of the target company;
  - Compute the potential synergies;
  - Negotiate the transaction price.

**PURCHASE PRICE ALLOCATION**

- Analyse the transaction
  - Determine the entity acquiring the target company;
  - Measure the purchase price of the target company (costs to be included).

- The PPA process
  - Identification of assets, liabilities and contingent liabilities;
  - Valuation;
  - Assessment of remaining useful lives and computation of related amortization;
  - Check for reasonability.

- Goodwill estimation
  - Calculation of fair value adjustments;
  - Allocation of purchase prices to Cash Generating Units;
  - Calculation and allocation of remaining goodwill.
Paradigm shift is required to the mundane approach by involving our Deal Accounting Team before finalizing final valuation to get the best out of the deal… …

- **Identify the potential Target**
- **Valuation**
- **Revaluation Post due diligence**
- **SPA and Closure**
- **Accounting**
- **Market Impact**

<table>
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<th><strong>Influencing deal price</strong></th>
<th>Can help you renegotiating and influencing deal price and deal structure</th>
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<tr>
<td><strong>Acquisition Price</strong></td>
<td>Can assist Board in assessing the components of purchase price and arriving at justification for the purchase price in advance</td>
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</table>
| **Accounting Impact**     | Can assist one in assessing and aligning accounting policies of Target with accounting policies of buyer and so as to analyze impact of changes in the accounting policies before the deal is consummated so as to understand impact on EPS of the consolidated results.  
Also helps in determining the impact of IFRS on future profitability and net worth projections |
| **Impairment Vs Amortization** | Can assist in comprehending and assessing amortization impact on future profit and loss which will help in managing deal impacts on the markets much before the closure of the deal. Further, one can assess the impact of future impairments by critically evaluating fair values of goodwill and intangible assets with indefinite life |
| **Last but not least… …** | Maximizing shareholders’ value and ensuring regulatory compliance |
What can go wrong… … by following standard approach

Paradigm shift is required to the mundane approach by involving our Deal Accounting Team before finalizing final valuation to get the best out of the deal… …

Transaction Closed

Accounting (post deal PPA)

Disequilibrium in goodwill & amortisation

Accounting and valuation issues if not addressed in timely and appropriate manner can erode shareholders’ value and this is easiest to happen

Negative impact on P/L leading to lower EPS

Loss in value and credibility

Adverse impact on projections

Further impairment and amortisation

Unprecedented negative impact on EPS

Further .. loss of value and credibility

….and the desired deal outcome fails
Purchase Price Allocation – An Overview
Business valuation is the foundation of the PPA exercise. Business valuation provides the basis for understanding the relative values of the intangible assets, the potential for synergies (and potentially goodwill), and the implied IRR associated with the transaction.
Recognition Criteria

- An intangible asset shall be recognized as an asset apart from goodwill if it arises from contractual or other legal rights (regardless of whether those rights are transferable or separable from the acquired entity or from other rights and obligations).

- If an intangible asset does not arise from contractual or other legal rights, it shall be recognized as an asset apart from goodwill only if it is separable, that is, it is capable of being separated or divided from the acquired entity and sold, transferred, licensed, rented or exchanged (regardless of whether there is an intent to do so).

- An intangible asset that meets the separability criterion shall be recognized apart from goodwill even if the acquiring entity does not intend to sell, lease, or otherwise exchange that asset.

- IFRS 3R does not preclude an entity from recognizing, as a single asset apart from goodwill, a group of complementary intangible assets commonly referred to as a brand if the assets that make up that group have similar useful lives.

- If an intangible asset has a finite useful life, there is a rebuttable presumption that its fair value can be measured reliably.
Recognition Criteria

Is the asset separable, or the result of contractual and/or legal rights?

- **yes**
  - Will it generate future economic benefit?
    - **yes**
      - Can this value be reliably determined?
        - **yes**
          - Selection of an appropriate valuation method

- **no**
  - No intangible asset

- **no**
  - No valuation

- **no**
  - The asset is a component of goodwill
How the intangible assets are interrelated?

In order to value intangible assets it is necessary to:
- Identify which asset is the major value driver
- Understand the extent and impact of the interrelationships
- Select valuation methodologies based on the characteristics, interrelations and hierarchy
The cash flow breakdown per asset helps to:

- Identify intangible assets
- Determine the hierarchy of assets
- Determine the materiality of assets
- Reconcile the overall business plan to the business plan for each individual intangible asset
Valuation approaches
Valuation approaches and methods for intangible assets

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<td>Direct cash flow method/ Greenfield / DCF</td>
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<td>Cost approach methods</td>
<td>Preferred approach, but not commonly used due to the lack of comparable transactions of individual assets</td>
<td>No connection to future financial benefits</td>
<td>Preferred approach</td>
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Value definition

Relative value

- Fair market value
- Fair value
- Investment value
- Value in Use
- Transaction price

Forced liquidation

Orderly liquidation
Value definition

- **Fair Market Value** is defined as the price for which property would exchange between a willing buyer and a willing seller, each having reasonable knowledge of all relevant facts, neither under compulsion to buyer or seller, and with equity to both.

- **Fair Value** is the price that would be received for an asset, or paid to transfer a liability, in a current transaction between marketplace participants in the reference market for the asset or liability.

- **Value In-Use** is defined as an amount of money that would be exchanged between a willing buyer and a willing seller with equity to both, on a as-is basis, as of certain date.

_All of the above in an arm’s length transaction_
Market Approach

The market approach is the process by which a fair value estimate is derived by analyzing similar intangible assets that have recently been sold or licensed, and then comparing these transactions to the subject intangible asset.

- The focus is on the application of valuation metrics obtained from market transactions to the data of the subject business or asset.
- Adjustments to market-derived valuation multiples are made (as and if necessary) to reflect differences between the subject business or asset and the subjects of similar transactions.

Similar transaction considerations

- Identification and comparability of transactions
- Adjustments to market-based data

Though the application of the market approach to value intangible assets is a rare occurrence, it can be used to corroborate / cross check the value of assets like patents and trademarks (practically).
Income approach can be used to value all types of intangible assets and is capable of directly indicating fair value

- The focus is on **future benefits generated by the subject business** or assets (benefits are typically defined as after-tax cash flow)
- Future benefits are discounted to present value using an appropriate **rate of return**

The value of the subject intangible asset represents the present value of the incremental cash flows attributable to that intangible asset (e.g. contrast value of a branded product with the value of a generic product)

Income Approach

- **Multi-period Excess Earnings**
- **Royalty Savings Approach**
- **Profit Premium or Incremental Cash Flow**
- **Direct Cash Flow (DCF) or Greenfield Approach**
The cost approach is based upon the economic principles of substitution and price equilibrium.

- **Prudent investor would pay no more for the subject intangible asset than the price of an intangible property of comparable utility.**

- The cost of creating an asset can only ever represent a maximum that a buyer would pay for one that was “ready made”, and because depreciation adjustments to reflect the service potential of the subject asset compared with a new replacement are often subjective, this approach is mainly used for internally generated intangible assets that have no identifiable income streams or other economic benefits.

**Methods:**

- **Reproduction cost** or the construction (or purchase) of an exact replica of the subject intangible asset.

- **Replacement cost** or the cost to recreate the utility of the subject intangible asset, but in a form or appearance that may be quite different from an exact replica of the actual intangible property subject to appraisal.

**Applications:**

**Software:** as the price of software with [the same or] similar service capacity can sometimes be obtained in the market.

- **Web sites:** as it may be possible to estimate the cost of constructing the web site.

- **Workforce:** to value the intangible benefit of the workforce through determining the cost of building up the workforce.

*The cost approach is not suitable for valuing intangible assets for which there are no comparable assets with equivalent service potential for which a price cannot be obtained.*
Methods of Valuation
The principal intangible asset valuation methods that use income approach are

- Royalty savings method;
- Premium profits method (also known as incremental income method); and
- Excess earnings method.

Each of these methods involve the capitalization of forecast cash flows using either discounted cash flow techniques or, in simple cases, the application of a valuation multiple.

In addition to capitalizing the income, cash-flows or cost savings that may be derived from use of the asset, it maybe appropriate to increase the intangible asset value to take account of any tax relief available on amortisation of the capitalized asset.

Such an adjustment, known as the tax amortisation benefit, reflects that the income derivable from an asset includes not only the income directly achievable from its use but also the reduction in tax payable by a business using the asset.

If estimating the Market Value an adjustment to the cash flows for tax amortisation should be made only if this benefit would be available to market participants generally.
Royalty savings method

- The relief-from-royalty method determines the value of an intangible asset by reference to the capitalized value of the hypothetical royalty payments that would be saved through owning the asset, as compared with licensing the asset from a third party.

- It involves estimating the total royalty payments that would need to be made over the asset’s life, by a hypothetical licensee to a hypothetical licensor. The hypothetical royalty payments over the life of the asset are adjusted for tax and discounted to present value and then are capitalized.

- Royalty rates are typically applied as a percentage of the turnover expected to be generated when using the asset. In some cases, royalty payments may include an upfront lump sum in addition to periodic amounts based on turnover or some other financial parameter.

Royalty savings method: inputs required

- the royalty rate and corresponding financial parameter, such as a percentage of turnover, that would hypothetically be paid in an arm’s length transaction by a willing licensee to a willing licensor for the rights to use the subject intangible asset;

- projections for the financial parameter, such as turnover, that the royalty rate would be applied to over the life of the asset together with an estimate of the life of the asset;

- rate at which tax relief would be obtainable on hypothetical royalty payments;

- the cost of marketing and any other costs that would be borne by a licensee in utilizing the asset;

- a discount rate to enable estimated periodic royalty payments to be brought to a single capital value; or

- in simple cases a capitalization multiple to apply to constant cash flows.
Qualitative inputs/ factors that are considered when determining a royalty rate:

- Market share
- Consumer recognition
- Longevity
- Leverage
- Product differentiation
- Barriers to entry
- Advertising and promotion

Consider how important the intangible asset is in generating and/or maintaining client’s operating margin.
Profit Premium Method

The premium profits method involves comparing the forecast profit stream or cash flows that would be earned by a business using the intangible asset with those that would be earned by a business that does not use the asset. The forecast incremental profits or cash flows achievable through use of the asset are then computed. Forecast periodic amounts are capitalized through use of either a suitable discount factor or suitable capitalization multiple.

Depending on the basis of valuation required, the forecast cash flows of a business using or not using the asset may or may not be permitted to include entity specific factors that are not available to the generality of market participants.

Profit Premium Method: Inputs Required

- forecast periodic profit, cost savings or cash flows expected to be generated by a market participant using the intangible asset;
- forecast periodic profit, cost savings or cash flows expected to be generated by a market participant not using the intangible asset;
- an appropriate capitalization multiple or discount rate to capitalize forecast periodic profit or cash flows.
Excess Earnings Method

The excess earnings method determines the value of an intangible asset as the present value of the cash flows attributable to the subject intangible asset after excluding the proportion of the cash flows that are attributable to other assets.

The excess earnings method can either be applied using a single period of forecast cash flows – the “single-period excess earnings method” or using several periods of forecast cash flows – the ‘multi-period excess earnings method’. In practice because an intangible asset will normally bring monetary benefits over an extended period, the multi-period excess earnings method is more commonly used.

The method involves forecasting the cash flows expected to arise from the business or businesses that use the subject intangible asset. From this forecast of cash flows, a deduction is made in respect of the contribution to the cash flows that is made by assets, tangible, intangible and financial, other than the subject intangible asset.

Excess Earnings Method

The effects of goodwill should also be excluded from the intangible asset value. This can be done by ensuring that:

- the forecast cash flows are reflected in the projection only to the extent that it is expected to arise from the assets in existence at the valuation date; and

- adjustments to the cash flows are made for components of goodwill that contribute to value, such as the workforce and other factors giving rise to future economic benefits that are not identifiable intangible assets.

Forecast cash flows are brought to a capital value by application of present value techniques and a suitable discount rate or, in simple cases, a capitalization factor.

The contribution to cash flows made by assets other than the subject intangible asset is known as the ‘contributory asset charge’, ‘CAC’, or ‘economic rent’.

These contributory assets support the subject intangible asset in generating cash flows.
**Excess Earnings Method: Inputs Required**

- forecast cash flows obtainable from the business(es) to which the subject intangible asset contributes to cash flows – this will involve allocating both income and expenses appropriately to the smallest business or group of businesses of the entity that includes all the income derivable from the subject intangible asset;

- contributory asset charges in respect of all other assets in such business(es), including other intangible assets; and

- an appropriate discount rate, or capitalization multiple, to enable expected cash flows attributable to the subject intangible asset alone to be brought to a capital value.

**Excess Earnings Method: Contributory Asset Charges**

- When applying the excess earnings approach to the valuation of a specific asset, the contribution of other assets to the cash flow being analysed have to be eliminated.

- This is done by deducting a contributory asset charge (CAC) in respect of such other assets. CACs should be determined on the same basis (pre-tax or post-tax) as forecast cash flows.

- The determination of CACs generally comprises three steps:
  - Identification of the assets contributing to the cash flows;
  - Measurement of the fair values of such assets; and
  - Determination of an appropriate fair return on the capital value of such assets.
Excess Earnings Method: Contributory Asset Charges

- Assets for which CACs are typically made include working capital, fixed assets, intangible assets other than the subject intangible asset, and workforce-based intangible assets.

- Care needs to be taken to ensure that there is no double counting between charges in the profit and loss account and the CACs made, and similarly that no CACs are omitted.

- CACs are generally computed as a fair return on and of the value of the underlying asset.
  - The return on a contributory asset is the investment return an investor would require on the asset. This return that an investor would require is computed with respect to the fair value of the asset.
  - The return of a contributory asset is a recovery of the original investment in respect of assets that deteriorate over time. Thus, in the case of a tangible fixed asset, the return of such asset would be represented by its depreciation charge.

WARR–IRR–WACC Reconciliation

- A check should be performed on the reasonableness of all CACs used.

- The weighted average rate of return on assets, (WARA), should be calculated by multiplying the CAC for each asset by its fair value and summing the results.

- The sum of these computations should be divided by the total fair value of all the assets used in the business and the result should approximate to the WACC for the entity.

- Check whether the IRR of the business is not significantly different from WACC and WARAn
The Build out or Greenfield method

- The Build out or Greenfield method is specifically used to value licenses;
- This method values an asset (license) by calculating the value of a hypothetical start-up Company that commences business with no assets except the asset to be valued;
- Since the hypothetical start-up has no other assets than the license being valued, the value of the asset under consideration must be equal to the value of the start-up Company;
- The direct cash flows remaining after deducting all set up costs required to establish the 'Greenfield'- start-up Company are the economic benefit received by the owner of the asset.

**Key assumptions regarding the Build-out method include:**

- Large parent company: The start-up Company is owned by a large parent company providing several competitive advantages, including:
  - Restrictions on capital are not a critical issue.
  - Enhanced buying power and borrowing capacity of the parent company lead to a lower cost structure, especially capital expenditures
- Limited Learning Curve: The management team of the start-up Company has significant industry experience and has sufficient knowledge and understanding of the industry to quickly and effectively develop the company.
Types of Intangible assets
### Customer Related Intangible

**Contractual Customers /Order backlog**
- Should be valued using _multi-period excess earnings approach_
- Two Criteria – definite term and contractual obligation to receive or pay fixed amount;
- Important characteristic of typical customer contract:
  - it should be identifiable, negotiable and exchangeable,
  - Consider renewable clause and past history if any.
- Does it carry a fixed value or it is just general. If not then they are classified as non-contractual;
- For example understand the difference between MSA and SOW or LoE and GT/AT

**Non-Contractual Customers**
- Relationships arising without contracts, if separable will fall under this category
- To substantiate analyse history of the client, sales pattern, sales amount, regularity, the way the relationship is maintained, reasonably identifiable with client, amount of information available about the customer, high inertia, attrition rate, etc
- Assessment of continuity with customer in future, expected growth rate in future, impact of change in management

**Customer Lists**
- Customer list is an access to database of customers
- Often misconstrued as customer contract
- Should be valued based on cost approach – Reproduction cost;
Technology based Intangibles

### Technology based

**Software**
- Technology which meets the contractual-legal criterion whether patented or not can be valued
- *Market approach* – Use only if similar assets are available in the market; Normally not used
- Selection Criteria between IA and CA
- Would Client pay more for technology than the cost to replicate it? (IA)
- Is Software critical to the business and better than competitor? (IA)
- Otherwise Reproduction cost is the best way to do it
- RUL – Technological trends, regulatory issues, economic contribution to the business, consistency

**IPR&D**
- IPR&D is research and development pipeline
- MA may not be usable
- Selection criteria between IA and CA
- Normally, the stages of development, regulatory scenario and marketability of the product will determine method to be used;
- IA – Greenfield Approach or Excess Earnings depending upon the stage in which the product is? Greenfield Approach is the recommended approach
- CA – Reproduction Cost – If there is significant uncertainty in terms of commercialization of IPR&D then it's better to use CA
- In some circumstances one can use Option pricing as well

**Trade Secrets**
- Normally, it is very difficult to quantify trade secrets, processes, formulas, etc.
- CA is the best approach – Replacement cost
- The main variables while using replacement cost approach would be:
  - main variable for these cost estimation models is the program’s size or functionality
  - often measured as the lines of code in the formula or number of “function points”, a standard measure of complexity used by developers
- Customer list also can be classified as Trade secrets.
Market based intangibles

- Normally, brand, trade marks or trade names are construed and valued together as it is difficult to separate them from each other.
- All the approaches can be used to value the brand.
- Best methods to value the brand is EE, RR and PP.
- Normally, brands have perpetual values unless there is likelihood that the brand will be abandoned or there would be some technological changes and technology and brand are recognised together.

Market based

Brand/Trade mark / Trade names
- Normally, brand, trade marks or trade names are construed and valued together as it is difficult to separate them from each other.
- All the approaches can be used to value the brand.
- Best methods to value the brand is EE, RR and PP.
- Normally, brands have perpetual values unless there is likelihood that the brand will be abandoned or there would be some technological changes and technology and brand are recognised together.

Non-Compete
- An agreement between buyer and seller which restricts seller from competing either in the same industry for specific period often within some geographical area.
- Incremental Cash flows or profit premium method is used to value these assets.
- What would be the extra sales the acquirer will generate because of this agreement will determine the value.

Internet domain names
- Internet domain names are often given a similar treatment as that of brand name or trade name.
- RR and EE are the methods to be used to value the internet domain names.
An assembled workforce possesses expertise and knowledge specific to a company; and is important in sustaining the profitability and continued growth of the company.

IFRS 3R states that an assembled workforce shall not be recognized as an intangible asset apart from goodwill.

However, the fair value of the assembled workforce is calculated and, using an appropriate rate of return, a charge for the use of this “contributory asset” is applied in the valuation analysis of other intangible assets.

The Cost Approach is often utilized to derive the fair value of an assembled workforce.

While valuing one needs to consider following costs:

- Average salary
- Other staff costs
- Recruitment costs
- Training costs (fixed cost + salary for the training period)
- Efficiency curve

Never add tax amortization benefit when you are valuing assembled workforce;
Goodwill is calculated as the residual between the value of the business as a whole (i.e. the purchase price) and the value of the other identifiable tangible and intangible assets of the business.

Intangible assets included in the amount recognized as goodwill might include:
- Specific synergies
- Business expectations (Growth)
- Presence in geographic markets or locations
- Non-union status or strong labor relations
- Outstanding credit ratings and access to capital markets
- Favorable government relations
Cash Flow and Goodwill

Business Enterprise Cash Flow

- **Cash flow generated by the business that existed at the closing date of the transaction.**
- **Cash flow generated by business activity that was not known and not explicitly identifiable as of the closing date.**
Remaining useful life
**Finite life**

- Finite-lived intangible assets are recorded on the balance sheet and amortized over their remaining useful lives. Amortization expense reduces reported earnings but does not impact cash flow (it is a non-cash expense);
- Because amortization expense will reduce reported earnings, all else equal, this will have a “dilutive” effect on pro forma earnings per share calculations;
- In some of the countries amortisation expense would be available as tax deduction while calculating taxable net income;

**Indefinite life**

- Indefinite-lived intangible assets are recorded on the balance sheet but not amortized; rather, they are tested periodically for impairment.
- Because there is no amortization expense associated with these intangible assets, there is no financial statement impact unless and until the asset(s) become “impaired”;
- Because there is no amortization expense, there is no impact on EPS calculations and thus there is no impact on pro forma accretion and dilution calculations;
- Assets having indefinite life are tested for impairment every year;
- Goodwill and brand are some of the examples.
Tax Amortization Benefit
The hypothetical tax benefits associated with amortizing the asset for income tax purposes must be taken into account.

The value of Tax Amortization Benefit (TAB) associated with intangible assets should be recognized when the purpose of the valuation is to estimate fair value.

- In calculating the TAB for each asset, the valuer must assess:
  - whether the asset can be amortised
  - an amortisation period for tax purposes
  - an appropriate discount rate
  - the applicable country specific corporate income tax rate
Required Rates of Return
Components of Required Rates of Return

Weighted average cost of capital (WACC)
- After-tax cost of equity
- After-tax cost of debt
- Capital structure (% equity and % debt)

Weighted average return on assets (WARA)
- After-tax returns by asset class
- Asset classes
  - net working capital
  - fixed assets
  - intangible assets and goodwill

Internal Rate of Return
- Calculate internal rate of return by carrying out the business valuation; Ensure that business plan used for the valuation of business and calculating IRR is same as that for purchase price allocation
- IRR should not be very far from WACC and WARA
WACC and WARA

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<tr>
<td>Tangible assets</td>
<td>Net Financial Debt</td>
</tr>
<tr>
<td>Working capital</td>
<td></td>
</tr>
</tbody>
</table>

- High expected return: 15% (WARA = 8.5%)
- Low expected return: 1.5% (WARA = 1.5%)
- WACC: 8.5%

WARA = WACC
Return on Assets

- Net Working Capital: 5%
- Machinery & Equipment: 7%
- Non-Compete: 8%
- Customer Relationship: 15%
- IPR&D: 15%
- Assembled Workforce: 18%
- Software Technology: 18%
- Goodwill: 22%
- Land and Building: 22%

Average ROI: 15%
WACC is traditionally calculated as an overall benchmark for the selection of other rates of return.

The Implied Rate of Return (IRR) is the rate of return that equates the estimated future cash flows of the business with the transaction value.

Because the IRR generally includes buyer-specific synergies, it is usually the case that the IRR is greater than the WACC (which is based on market participant data) for a specific transaction.

The WARA is similar to the WACC in that it is premised on a market participant view. The fundamental accounting definition allows us to compare the WARA (assets) to the WACC (debt and equity).

The purpose for calculating the WARA and comparing it to the WACC is to ensure that:

- There is internal consistency with the selection of discount rates particularly for the valuation analysis of the intangible assets.
- There is no systematic problem with the selection of intangible asset discount rates (systematically too low or too high).
Reconciliation checks

The reconciliation process will highlight

- Weaknesses in approaches and/or assumptions
- Inconsistencies in logic

Performing reconciliation procedures will ensure that the valuation analysis “ties up”

Use of assumptions that are:

- **Reasonable** individually and in the aggregate
- **Internally consistent** within the valuation model
- Consistent between related valuation models

- Consideration of all applicable professional guidance. All values for the intangible assets (in aggregate) relative to the transaction value
- Benchmarking based on industry data Values relative to industry benchmarks (percentage of total transaction value) and pre-close estimates
- Individual intangible assets
- Implied goodwill
Key Issues
Key Issues

- Under-reporting of intangible asset values
- Poor descriptions of intangible assets
- Value of goodwill being too high
- Failure to fully disclose the nature of goodwill
- No real insight given to investors of the success of the acquisition
- Wasted costs
Common Mistakes
Common Mistakes

- **Lack of documentation** regarding selection of assumptions and basis for the analysis

- Information in the allocation that **contradicts other known** (and discoverable) information

- **Inconsistent assumptions** between models and/or between the valuation analyses of various assets

- Inconsistent models and analyses pre- and post-close

- Inclusion of **buyer-specific synergies**

- Failing to perform **sensitivity analysis and reconciliation procedures**
Common Mistakes (Cont.)

- Failing to identify all intangible assets that should be valued apart from goodwill from a market participant perspective
- Failing to adequately define and apply the concept of “market participant”
- Positions taken that are contradictory to published guidance
- Pre-close valuation calculations made as of a current date (as opposed to the estimated closing date)
- Calculating the value of an intangible asset using a residual approach
- Using inappropriate discount rates
Best Practices
Best Practices

- Consider all three approaches to value

- Consider the AICPA Practice Aid relating to both valuation methodology and its application in the context of the analysis of intangible assets

- Use of an integrated valuation model to ensure consistency of approach and assumptions
  - Assumptions need to be reasonable individually and in the aggregate
  - The same or similar assumptions may be used in the valuation analyses of several intangible assets

- Beginning the reconciliation process early on in the valuation analysis (valuation is an iterative process by nature)
Best Practices (Cont.)

- Providing a **basis for all matters of professional judgment**: 
  - Items selected to be valued
  - Valuation methodology selected
  - Significant assumptions used in valuation models

- Performing sensitivity analyses to identify key input variables

- Completing the reconciliation process