Business Valuations
Seminar – August 2017
Compiled by:
Achmad Joseph, Yaeesh Yasseen & Rashied Small
Business Valuation - Concept

Valuation is the process of determining the “economic worth” of an asset or company under certain assumptions and limiting conditions and subject to the data available at the valuation date.

[International Valuation Standard Council]

Business valuation is a process and a set of procedures used to estimate the economic value of an owner's interest in a business. Valuation is used by financial market participants to determine the price they are willing to pay or receive to affect a sale of a business.
Business Valuation - Drivers

- Financial leverage
- Future performance
- Business value drivers
- Financial expected return
- Asset types
- Cash flows
- Exit strategy
Business Valuation Process

1. Obtain an in-depth understanding of the business and business ownership interest.
2. Perform a thorough financial and qualitative analysis.
3. Consider all three (3) valuation approaches.
4. Asset-based Approach
5. Market Approach
6. Income Approach
7. Consider valuation adjustments (e.g. discounts or premiums)
8. Reconcile indicated value(s) to arrive at a conclusion of value.
Business Valuation Process

VALUATION PROCESS

Understanding what is being valued
- Understanding broad overview of valuation requirements
- Industry Analysis
- Market Conditions

Valuation Methodology Assessment
- Discounted Cash Flow
- Net Tangible Assets
- Capitalization of Earnings
- Quoted Market Price

Valuation Adjustments
- Discount for lack of marketability
- Premium for control
- Discount for minority interests
- Any other case specific considerations

Valuation Calculations and Report
- Valuation Prepared
- Documentation in report consistent with ATO guidelines /audit requirements

Review Process
- Chessy quality review conducted by qualified concurring valuation partners
- Assessment of market transactions to support valuations

Presentation of Results
- Final Report Produced
- Discussions of major assumptions and valuation findings
A direct correlation exists between risk and return – the greater the risk the greater is the potential return. However, investments with the highest returns often bear the greatest risk which can lead to financial ruins.

The risk an investor is willing to accept to maximize returns will depend on his/her risk appetite and risk tolerance levels.
Business Valuation – Risk & Return

![Risk-Return Relationship Model]

- **High Risk, Low Return**
- **Low Risk, Low Return**
- **High Risk, High Return**
- **Low Risk, High Return**

Key Points:
1. **Failure Reference Point**
2. **Average of Industry Reference Point**
3. **Success Reference Point**
Business Valuation – Risk & Return
Business Valuation – Risk & Return

- **High risk investment**: futures, stock options, junk bonds, precious metals, collectibles, small-cap stocks, undeveloped land
- **Moderate risk investment**: blue chip stocks, growth stocks, real estate, mutual funds, royalty trusts
- **Low risk investment**: corporate bonds, government bonds, treasury securities
- **Cash and cash equivalents**: savings accounts, certificates of deposit, treasury bills, insurance

Increasing potential for high returns
Increasing risk
Business Valuation – Measuring Return

CAPM Formula

\[ R_s = R_f + \beta (R_m - R_f) \]

- \( R_s \) = Expected Return/ Return required on the investment
- \( R_f \) = Risk-Free Return/ Return that can be earned on a risk-free investment
- \( R_m \) = Average return on all securities
- \( \beta \) = The securities beta (systematic) risk factor.

\[ \text{CAPM} = \text{Risk Free Rate} + \beta \times \text{Excess Market Return} \]

\[ \text{Excess Market Return} = \text{Market Return} - \text{Risk Free Rate} \]
Assumption of CAPM

- All investors aim to maximise economic returns
- All investors make decisions based on risks and returns
- Investors are rational and risk-averse
- Investors cannot influence prices – price takers
- All investors have the same expectations towards input factors for investment decisions
- All investors have access to unlimited funds
- All investments are liquid and can be sold at market prices
- No or insignificant transaction costs
Weighted Average Cost of Capital

Measure the average cost of capital of the business based on its capital structure – represent the expected return for the business.

\[
WACC = \frac{E}{D+E} K_E + \frac{D}{D+E} K_D (1 - t)
\]
Weighted Average Cost of Capital

WACC
Measure the average cost of capital of the business based on its capital structure

WACC = \((E/(D+E))K_E + (D/(D+E))K_D(1-t)\)
Weighted Average Cost of Capital

<table>
<thead>
<tr>
<th></th>
<th>Capital</th>
<th>Return</th>
<th>Ratio</th>
<th>After tax return</th>
<th>WACC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>400,000</td>
<td>22%</td>
<td>67%</td>
<td>22%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Debt financing</td>
<td>150,000</td>
<td>15%</td>
<td>25%</td>
<td>10.8%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Loans</td>
<td>50,000</td>
<td>12%</td>
<td>8%</td>
<td>8.6%</td>
<td>0.7%1</td>
</tr>
<tr>
<td>Total</td>
<td>600,000</td>
<td></td>
<td></td>
<td></td>
<td>18.1%</td>
</tr>
<tr>
<td>Weighted cost of capital</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Factors affecting Business Value
Business Valuation - Risk Factors

External
- Expectations of the economy
- Existing conditions in the economy
- Expectation of the industry
- Existing conditions in the industry
- Competitive environment

Internal
- Expectation of the business
- Financial position / conditions of the business
- Competitive position of the business
- Nature and size of the business
- Quality and depth of management

Investment
- Risk factors of the investment
- Amount invested in the business
- Expectation in capital appreciation
- Expectation in liquidity of the investment
- Level of expected management burden
Types of Risk

Systematic Risk
- Uncontrollable by an organisation
- Macro in nature

Unsystematic Risk
- Controllable by an organisation
- Micro in nature
Business Valuation - Risk Factors

**Systematic Risk**
- Uncontrollable by an organisation
- Macro in nature

- Interest Rate Risk
- Market Risk
  - *Purchasing Power / Inflationary Risk*

**Unsystematic Risk**
- Controllable by an organisation
- Micro in nature

- *Business Risk / Liquidity Risk*
- **Financial Risk / Credit Risk**
- Operational Risk

*Note: In context of types of risk in finance, purchasing power risk and inflationary risk are same.
**Note: In context of types of risk in finance, business risk and liquidity risk are same.
**Note: In context of types of risk in finance, financial risk and credit risk are same.
Business Valuation – Industry Risk

- Growth prospects
- Supplier chain (Porter’s 5 Forces)
- Industry risk
- Competitive threats
- Substitute products
- Industry complexity
- Technology
Business Valuation – General Factors

What affects value?

- Trading history
- Value of fixtures / fittings
- Quality of staff
- Trading location
- Condition of property
- Strength of brand
- Lease / rent conditions
- Sector demand
- Future potential
- Opening hours
- Online presence
- Financial performance
- Suppliers

Business Valuation - August 2017
Business Valuation – Methods

**Income Based Approach**
- Perfect to explore the intrinsic value of any business by evaluating the cash flows, NPV, equity method and economic profit model.

**Asset Based Approach**
- Value the business based on the market value of assets, replacement costs, and liquidation value of the assets.

**Market Based Approach**
- This approach comes in handy when capturing the market sentiment, considering the peers e.g. trading comparables.
Business Valuation – Methods

Valuation Approaches and Methods

- Asset-Based (principle of reproduction)
  - Notional Realisation of Assets
  - Adjusted Book Value
- Earnings-Based (principle of anticipation)
  - Excess Earnings
  - Super Profits
  - Capitalised Earning
  - Capitalised Dividends
  - Discounted Cash Flow
  - Multiple of Discretionary Earnings
- Market-Based (principle of substitution)
  - Direct Market Data
  - Rules of Thumb
Business Valuation – Asset-Based Methods

**Book Value Method**
Method represents the book value of the business (assets – liabilities) based on their market values – going concern

**Liquidation Value Method**
Method represents the book value of the business based on the liquidation values – disposal values

**Replacement Value Method**
Method represents the book value of the business based on the replacement values of the assets – start-up business
The following information is the summary statement of financial position:

<table>
<thead>
<tr>
<th></th>
<th>Book value</th>
<th>Market value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-current assets</td>
<td>240 000</td>
<td>320 000</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>90 000</td>
<td>50 000</td>
</tr>
<tr>
<td>Inventory</td>
<td>180 000</td>
<td>160 000</td>
</tr>
<tr>
<td>Other assets</td>
<td>370 000</td>
<td>370 000</td>
</tr>
<tr>
<td>Equity</td>
<td>320 000</td>
<td></td>
</tr>
<tr>
<td>Non-current liabilities</td>
<td>250 000</td>
<td>250 000</td>
</tr>
<tr>
<td>Current liabilities</td>
<td>310 000</td>
<td>370 000</td>
</tr>
</tbody>
</table>
The following information is the summaries statement of financial position:

<table>
<thead>
<tr>
<th></th>
<th>Book value</th>
<th>Market value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-current assets</td>
<td>240 000</td>
<td>320 000</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>90 000</td>
<td>50 000</td>
</tr>
<tr>
<td>Inventory</td>
<td>180 000</td>
<td>160 000</td>
</tr>
<tr>
<td>Other assets</td>
<td>370 000</td>
<td>370 000</td>
</tr>
<tr>
<td>Equity</td>
<td>320 000</td>
<td></td>
</tr>
<tr>
<td>Non-current liabilities</td>
<td>250 000</td>
<td>250 000</td>
</tr>
<tr>
<td>Current liabilities</td>
<td>310 000</td>
<td>370 000</td>
</tr>
<tr>
<td>Net asset value</td>
<td>320 000</td>
<td>380 000</td>
</tr>
</tbody>
</table>

The book value of the business is R 320,000 (minimum going concern value) will the net asset value (market value of business) is R 380,000 – estimated selling value.
## Business Valuation – Net Asset Value Method

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset Accumulation Method is very useful when allocating the purchase price among the individual business assets.</td>
<td>Value of individual assets may vary significantly depending the basis used value the assets</td>
</tr>
<tr>
<td>Useful to value asset-based or property investment companies</td>
<td>May be difficult in valuing individual assets as the assets may inter-dependent</td>
</tr>
<tr>
<td></td>
<td>Method ignores “off-balance sheet” asset and liabilities</td>
</tr>
</tbody>
</table>
## Business Valuation – Net Asset Value Method

### Off-balance sheet

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
</table>
| • Intellectual property items, such as internally developed products and services.  
  • Key distribution and customer contracts.  
  • Strategic partnership agreements.        | • Pending legal judgments.  
  • Property and income tax obligations.  
  • Environmental compliance costs.     |
The following information is the summaries statement of financial position:

<table>
<thead>
<tr>
<th></th>
<th>Book value</th>
<th>Market value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-current assets</strong></td>
<td>640 000</td>
<td>Property will a carrying amount of R 120,000 generates rental income of R 30,000 per annum and the fair return is considered to be 11%.</td>
</tr>
<tr>
<td><strong>Current assets</strong></td>
<td>570 000</td>
<td>Market value of current assets is estimated to be R 550,000</td>
</tr>
<tr>
<td><strong>Non-current liabilities</strong></td>
<td>300 000</td>
<td>The loan is repayable in 5 years and bears interest at a rate of 10%. The market interest rate is 12%.</td>
</tr>
<tr>
<td><strong>Current liabilities</strong></td>
<td>390 000</td>
<td>Market value of the current liabilities amount to R 430,000</td>
</tr>
</tbody>
</table>
Valuation of Intangible Assets

Intangible assets can be valued using the following methods:

- **Market value**: based on market prices for similar transaction concluded recently
- **Capitalised income**: used for intangible assets that generate cash or income – capitalised at fair return or discounted cash flow
- **Cost based**: estimation of the cost to reproduce the intangible asset
Forecasting - Methods

Forecasting Methods

- Quantitative
  - Casual (explanatory)
  - Time Series
  - Smoothing
  - Trends & Seasonal
- Qualitative
  - Delphi
  - Scenario Writing
  - Expert judgment
Forecasting - Methods

Forecasting Techniques

- Judgmental Models
  - Delphi Method

- Time Series Methods
  - Moving Average
  - Exponential Smoothing
  - Seasonality Models

- Causal Methods
  - Regression Analysis
Forecasting - Methods

Seven Steps in Forecasting

1. Determine the use of the forecast
2. Select the items to be forecast
3. Determine the time horizon of the forecast
4. Select the forecasting model(s)
5. Gather the data
6. Make the forecast
7. Validate and implement results
Factors to consider when estimating earnings:

- Business model
- Market position
- Competitive advantage
- Product position
- Cost structure
- Strength of management
- Operating strength/weakness
- Location and accessibility
- Customer base
- Asset base
- Barriers to entry
- Supply chain
The following information related to two unrelated businesses:

**Company A: fair earnings yield is 15%**

<table>
<thead>
<tr>
<th></th>
<th>20X4</th>
<th>20X5</th>
<th>20X6</th>
<th>20X7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings</td>
<td>450,000</td>
<td>480,000</td>
<td>550,000</td>
<td>630,000</td>
</tr>
</tbody>
</table>

**Company B: fair earnings yield is 13%**

<table>
<thead>
<tr>
<th></th>
<th>20X7</th>
<th>20X8</th>
<th>20X9 &amp; after</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings</td>
<td>230,000</td>
<td>290,000</td>
<td>350,000</td>
</tr>
</tbody>
</table>
The following information related to two unrelated businesses:

**Company A: fair earnings yield is 15%**

<table>
<thead>
<tr>
<th></th>
<th>20X4</th>
<th>20X5</th>
<th>20X6</th>
<th>20X7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings</td>
<td>450,000</td>
<td>480,000</td>
<td>550,000</td>
<td>630,000</td>
</tr>
</tbody>
</table>

The value at the end of 20X7: based on the historical trend in profits which indicates an increasing trend, the estimated future earnings is deemed to be a minimum of R 630,000. Value of the business based on the capitalisation of earnings amounts to R 4,300,000 [630,000/15%].

**Company B: fair earnings yield is 13%**

<table>
<thead>
<tr>
<th></th>
<th>20X7</th>
<th>20X8</th>
<th>20X9 &amp; after</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings</td>
<td>230,000</td>
<td>290,000</td>
<td>350,000</td>
</tr>
</tbody>
</table>
Business Valuation – Super Profits Method

Supper Profits method

The supper profits method is used to reflect the value of the goodwill associated with the business.

The supper profits represents the additional profit the business generates over its competitors in the market. The value of the profits capitalised for a specified period (usually a maximum of 5 years) represents the value of goodwill.
The following information related to two unrelated businesses:

<table>
<thead>
<tr>
<th>Company B: fair earnings yield is 13%</th>
<th>20X7</th>
<th>20X8</th>
<th>20X9 &amp; after</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings</td>
<td>230,000</td>
<td>290,000</td>
<td>350,000</td>
</tr>
<tr>
<td>Discounted value</td>
<td>203,540</td>
<td>227,113</td>
<td>2,108,472</td>
</tr>
</tbody>
</table>

The earnings represents the forecasted earnings, therefore the value of the business should be based on the discounted value. The value of the business is estimated at R 2,539,125 based on the discounted earnings.
The estimated future profit of the business amounts to R 500,000 while the expected earnings yield is considered to be 18%. The average profit for the industry is considered to be R 400,000.

The maintainable earnings of the company is considered to be the average earnings for the industry and therefore the company generates super profits of R 100,000. Without any barriers to entry the company will not be able to maintain its competitive advantage indefinitely.

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capitalised earnings [400,000/18%]</td>
<td>2,222,222</td>
</tr>
<tr>
<td>Super profits – goodwill [100,000 @ 18% for 5 years]</td>
<td>312,717</td>
</tr>
<tr>
<td>Business value</td>
<td>2,534,939</td>
</tr>
</tbody>
</table>
Dividend Valuation Methods

- Dividends represent a distribution of profits in cash or equivalents – cash flow to shareholders
- Methods that can be used:
  - Dividend capitalisation
  - Discounted cash flow
  - Gordon Growth Model
Business Valuation – Capitalised Dividends

Dividend Capitalisation
- Capitalised future dividend at expected return

Gordon Growth Model
- Capitalise the future dividends at the expected return inclusive of growth

Discounted Cash Flow
- Present value of future dividends discounted at expected return
Business Valuation – Gordon Growth Model

Gordon Growth Model
Value of the business is based on capitalisation of future dividend incorporating the estimated growth in dividend distribution.
The following are key assumptions:
• Business is stable – no significant change in its business model and operations
• Constant growth – the dividends distributed will grow constantly
• Stable financial leverage – capital structure will not change significantly to affect the expected returns of equity holders
• Sufficient cash flow – cash flow of the business will be sufficient to maintain its dividends policy

Valuation = \frac{D_1}{(r - g)}

- \(D_1\) = dividend at the end of the current year
- \(g\) = growth rate on dividends
- \(r\) = discount rate
Defining Free Cash Flow

Free cash flow to the firm (FCFF) is the cash flow available to the firm’s suppliers of capital after all operating expenses have been paid and necessary investments in working capital and fixed capital have been made.

- FCFF is the cash flow from operations minus capital expenditures. To calculate FCFF, differing equations may be used depending on what accounting information is available. The firm’s suppliers of capital include common stockholders, bondholders, and, sometimes, preferred stockholders.
Business Valuation – Free Cash Flow Method

1. During the Planning Horizon
   - Forecast future free cash flows
   - Discount free cash flows for the period at the WACC

2. Beyond the Planning Horizon – Continuing/Terminal Value
   - Find the PV of the flows by making alternative assumptions about time horizons and growth rates

VALUE OF A FIRM USING FREE CASH FLOWS

ADD SHORT-TERM INVESTMENTS

- VALUE OF THE FIRM
- LESS VALUE OF DEBT
- VALUE OF EQUITY