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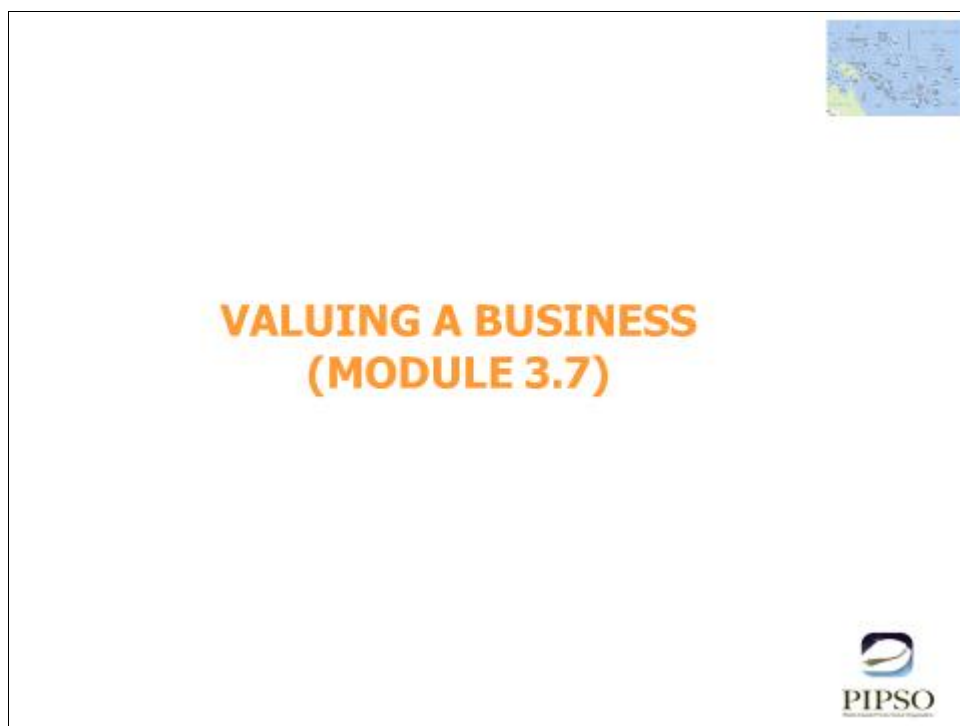
January 1

VALUING A BUSINESS

2014

This Module looks at business valuation & demonstrates the use of 5 methods of valuation appropriate to unlisted &, in particular, small business, whether incorporated or not. The Module ends with an illustrative case study.

MODULE 3.7

VALUING A BUSINESS (MODULE 3.7)

Contents

PURPOSE

We take for granted the ability to be able to calculate a valuation of listed businesses. Valuation of unlisted, small businesses, whatever their legal status, is a much less exact science.

This Module presents several relatively simple methodologies for preparing a business valuation. It aims to demystify the techniques used for this purpose & leave participants with the confidence to undertake a valuation of:

- Their own business for:
    - performance measurement purposes
    - a sale of the business, on a walk in walk out basis, to third parties
    - sales between, or by, existing owners, partners or shareholders
- A business they may wish to acquire

Each valuation method is explained &used to calculate a business valuation in a practical situation using a case study. The valuation methods applied here are not dependent on the legal form of the business, relying on asset values, cash flows & market perception. They are dependent on the reliability of the financial information used as the input to the assessments made. There is no one preferred method for valuing a business as in the end it requires the subjective judgement of the assessor.

The case study allows participants to undertake valuations based on each of the methods discussed for comparative purposes.

We then ask some what-if questions to explore the impact of different assumptions on the valuations that result.

On completion of this Module participants should understand the methods applied & able to do the respective calculations & associated research required.

WHY VALUE A BUSINESS

Before going into this Module answer the following.

QUESTION 1

How do you calculate the value for a listed company? This is a simple calculation. What is it? The answer will be offered later.

For a private company business valuation is generally not clear cut & for a small business it can be downright difficult to determine at a point in time. To complete a valuation requires:

1. Balance sheet
   a. Asset valuations at current market
   b. Details of liabilities
2. Past income statements sufficient to separate   ;
   a. Normal profit
   b. Abnormal items
3. Cash flows to confirm performance

 The period of time over which performance is measured for use in a valuation may vary, but, regardless, more is better, even if not directly used in the valuation.

A business valuation is not only required when an owner or owners are looking to buy or sell (to outside parties or to each other), it is extremely useful as an additional measure of the performance of the business & its management. Changes in valuation can be used to determine whether owner wealth is growing.

There are other measures that will indicate increased wealth, e.g. the ratio of net profit after tax to net assets. A business valuation may also provide a good benchmark against competitors or as a measure of the business's ability to create "goodwill", i.e. value over & above the assets that comprise the business.

Indeed, a business valuation is the only measure that provides an assessment of the goodwill in a business that is not listed on a stock exchange.For this reason, if no other, it is useful to value your business.

Now ... back a step ... remember the question?

QUESTION 1

How do you calculate the value for a listed company? This is a simple calculation. What is it?

ANSWER 1

Listed share price x number of shares on issue = value of the company

QUESTION 2

What then is the value of the company's goodwill?

Business valuation is taken for granted for listed companies as there is a valuation set by the market at almost all times.

VALUATION METHODS

There are many valuation methods; some are simple while others require much more complex calculations.

When valuing small businesses, there is little point getting toowound up in the theoretic valuation methods. The valuations that result from different methods are only as good as the reliability of the financial information used to do the calculations.

Therefore, in this Module we will focus on the 5 methods of business valuation listed above only. They are ample for small business assessments. The use of more than one method is recommended as thisprovides a range of values & perspectives. In the end, the individual making the valuation must exercise judgement over the output.

ASSET VALUATION METHOD

The first method we shall consider is valuation based on the assets & liabilities of the business only. Provided you have a current balance sheet of the business plus current valuations of the assets, in particular the non-current assets, this method is easy to calculate as follows.

We use the balance sheet to identify the assets to be valued, but do not rely on the book value as stated unless it is clearly a current value. In order to be satisfied with values a buyer should get independent valuationsprepared by a qualified assessor. Replace the book values with these.

All liabilities & obligations need to be confirmed, also, unless assets only are to be acquired.

The result of this calculation usually provides a low valuation unless the business is unprofitable or seriously underperforming.

Using this method, we ignore the value of any intangible assets, in particular goodwill. This may apply when:

- Management of the business is seriously underperforming
- The business faces a highly uncertain future
- The business is being sold under stress conditions
- The business as failed & is being liquidated
- Is being closed due to lack ofprofitability

ASSET VALUATION METHOD

Asset valuation may understate true value:

· Determines business worth only if it were closed today; assets sold & liabilities paid

· Doesn't take into account the ability of those assets to generate wealth in the future

· Doesn't take into account goodwill

So what about goodwill?

WHAT ABOUT GOODWILL?

· Goodwill is the difference between the true value of a business & its net asset value (crucial to the value of retail & service-based businesses)

· Asset valuation doesn't include goodwill, so may understate the true value of a business

· If a business is underperforming (has no goodwill) net asset value may be accurate

There may an element of goodwill in any business at a point in time because of its:

- Location
- Product brands

- Customer list
- Quality of service
- Reputation

Therefore, the asset valuation method, whichdoes not include a value for goodwill, may understate the true value of a profitably operating business.

For example, if you value a busy hair salon, where service, location and reputation are important, the value of any goodwill would certainly have to be added to net assets to get a valuation. But how do we then come up with an appropriate valuation?

Also, goodwill may or may not be transferred if you buy a business, since it can come from physical features like location, or from personal factors, like the owner's reputation or relationships with customers or suppliers. Sometimes it is transferable & sometimes it is not. This is a part of the judgement a buyer must make when assessing a business. Can the buyer maintain the level of goodwill that is being asked?

It is normal to have an exclusion clause in contracts for the sale of a business. This clause may preclude the seller for starting up a business of like type within a geographic area surrounding the business being sold or preclude this for an agreed period of time to enable the buyer to establish themselves in the business.

CAPITALISED EARNINGS METHOD

If we are to calculate a value for goodwill we must use an earnings based methodology, not an asset based one. We need to take considerable care that we use "sustainable" earnings, which may vary materially from net profit.

The capitalised earnings method is one such method as described below.

CAPITALISED EARNINGS METHOD

Calculate using the following steps:

1. Determine average EBIT over past period adjusted profit for one-off expenses

2. Set required annual rate of return; the higher the risk the higher the rate

3. Divide adjusted EBIT by rate of return & multiply by 100

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CAPITALISED EARNINGS METHOD

NOTE: To determine average EBIT adjusted profit:

❖ Include an allowance for owner's wages (if not already included)

❖ Exclude interest paid

❖ Exclude non-recurring/abnormal expenses

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Step 1   We begin with earnings before tax & interest.

If the owner(s) have not taken a reasonable wage or salary, we add an amount to reflect the labour input required.

We take out interest as this is a choice a business owner may make, usually as a way of increasing return on equity, as indicated in the previous Module 3.5, Funding Debt & Equity.

Finally, we adjust this amount for one-off expenses/profits or other irregular items each year. This provides an adjusted measure of profit, Earnings before interest &tax (EBIT).

The profits of past years used in this averaging exercise may impact on the valuation. If profits are rising, using past years' profits will decrease the valuation. If profits are falling, using past years' profits will increase the valuation. If stable profits have been earned during the period, the impact of using past years will be minimal.

There is no set rule about the number of past years to use. An alternative method is to weight current year higher than past years, creating a weighted average adjusted EBIT.

Step 2   The rate of return equals the sum of the bank deposit rate for a similar amount as the purchase for a medium term plus your assessment of the premium for risk for an investment of this type, refer also Module 3.4, Capital Expenditure Decisions.

The risk premium applied is a personal assessment based on expected inflation plus assessed commercial risk in the industry, location & business specific, but external advice from an accountant or broker (not the sellers' broker) may be of assistance when assessing this.

Step 3   This is purely mathematical as follows.

CAPITALISED EARNINGS METHOD

Example: Average adjusted EBIT over last 5 years is $100,000, required rate of return on investment (ROI) is 25% (5% + 20%).

Value = Adjusted EBIT / ROI

= ($100,000 / 25) x 100

= $400,000

CAPITALISED EARNINGS METHOD

When you buy a business, you're buying its assets & the right to all future profits

Capitalising future earnings is the most common method used to value small businesses

It calculates the rate of return on investment that you can expect to get from the business

This valuation method is useful as it applies the user's required rate of return. It is important to verify the assets & income stream, remembering that rubbish in equals rubbish out. If the income stream is overstated the valuation will also.

DISCOUNTED FUTURE EARNINGS METHOD

Step 1   Use the adjusted EBIT as calculated in the capitalised earnings method

Step 2   Estimate expected economic **growth rate**, being the sum of an inflation rate & real growth rate for a normal business of this type (based on historic industry information)

Step 3   Theoretically the forecast earnings will continue indefinitely, but we use a 10 year period as a proxy. It is a manageable period for calculation purposes.

Step 4   This is a mathematical exercise increasing the adjusted EBIT annually by the **growth rate** over the 10 year period

Step 5 to 7 are purely mathematical exercises

Why a residual?

This assumes that the business still has a future earnings capacity after 10 years & the sum provides a fair & reasonable estimate of its value at that time.

DISCOUNTED FUTURE EARNINGS METHOD

Example: assume the following & calculate business valuation:

Average annual profit	=	$67,000
Current bank deposit rate	=	7%
Risk premium	=	18%
Required rate of return	=	25%
Growth Rate (per annum)	=	1.05

Using this information, we can prepare a table as below. The discount table required is a table that, for a range of interest rates (required rates of return on the investment), calculates the present value for $1 received at a future date, displayed using one year intervals into the future.

DISCOUNTED FUTURE EARNINGS METHOD

Year	Adjusted earnings $	Discount factor (at 25%)	NPV $
1	70,350	0.800	56,280
2	73,868	0.640	47,275
3	77,561	0.512	39,711
4	81,439	0.410	33,390
5	85,511	0.328	28,048
6	89,786	0.262	23,524
7	94,276	0.210	19,798
8	98,990	0.168	16,630
9	103,939	0.134	13,928
10	109,136	0.107	11,678
Total discounted earnings			290,261
Residual			58,052
Valuation			348,314

Adjusted earnings is calculated as follows:

Year 1   = $67,000 x 1.05

         =   70,350

Year 2   =   Adjusted earnings Year 1 x 1.05

         =   70,350 x 1.05

         =   73,868

Subsequent years are calculated the same way as year 2

The discount rates are copied straight from a table of discount factors applying a discount rate of 25.0%, being 7.0% plus 18.0%, as this is the required rate of return on the investment (ROI).

The net present value of each cash flow is simply the multiplication of the adjusted earnings for the year by the discount factor.

The sum of the net present values is the estimated total discounted earnings (TDE).

The residual is calculated as follows:

Residual =   TDE x (ROI – growth rate)

         =   290,261 x (25 – 5)/100

         =   290,261 x 0.2

         =   58,052

Value of the business   = $290261 + 58,052

                         = $348,314   say, between $345,000 & $350,000

This method tends to provide an upper limit on the valuation of a business.

OTHER METHODS

There is no hard & fast rule setting the multiple appropriate for a particular transaction. It will depend on supply & demand for a business of the type offered, the industry that the business is a part of, its outlook & market price trends.

The earnings figures used for calculation purposes are typically before tax & interest as both of these costs are discretionary or dependent on the financial circumstance of the buyer(s).

A service-based business might be valued at as little as one year's earnings, while an established business with sustainable profits might sell for as much as six times earnings.

OTHER METHODS

Comparable sales

- ✓ Research what's happening in the market you're interested in.
- ✓ Speak to business brokers & gauge views on business value, current market price trends & activity.
- ✓ A broker may know what similar businesses sold for recently.
- ✓ Check business-for-sale listings in industry magazines, newspapers or websites.

This is all about doing your homework on the marketplace in which the business is being bought or sold.

Take advantage of all information you can find.

Do not rely solely on a single business broker or this method alone. Remember, as for the housing market, car markets & all markets, it is common to ask a higher price than the seller is willing to accept. Therefore, be prepared to negotiate.

Your return on the investment will depend on the reliability of the information you gather & in turn the price you pay.

ACTIVITIES

MULTIPLE CHOICE QUESTIONS

Participants are to answer the following questions (Activity 3.7.1)

Check answers.

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ACTIVITY 3.7.1

Valuing a Business

Q1. The value of a company listed on the South Pacific Stock Exchange is:

a)   Net present value of all assets as per the current balance sheet
b)   Current value of all future capitalized earnings
c)   Current value of share price times number of shares on issue
d)   Discounted value of all future earnings at the risk premium rate

Q2. If a business is unprofitable, which valuation method is likely to apply?

a)   Asset valuation method
b)   Capitalised earnings method
c)   Comparable sales method
d)   Discounted future earnings method

Q3. When choosing a valuation method for a small business, the method:

a)   Should reflect the complexity of the business
b)   Is only as good as the reliability of the information therein
c)   Must discount at the risk premium rate the estimated future cash flows of the business
d)   May have regard for the net assets of the goodwill arising from its past performance

Q4. When using the asset valuation method, we:

a) Discount all asset values to be conservative
b) Use the book value for all assets
c) Estimate the current value of all liabilities
d) Estimate the current value of all assets

Q5. Goodwill reflects:

a) The effort of the owners
b) The market's assessment of the value of a business
c) The ability of a business the create future earnings
d) An important component of all businesses of all sizes

Q6. Goodwill is comprised of:

a) Location
b) Brand
c) Service
d) All of the above

Q7. Goodwill may be calculated as:

a) The difference between average EBIT & net assets
b) Average earnings before interest & tax (EBIT)
c) The difference between average EBIT & total assets
d) Any of the above

Q8. The current inflation rate is 4%. The bank deposit rate is 3%. Average weekly earnings growth is 2.5%. An investor's risk premium is 12%. What is the investor's required rate of return?

a) 14.5%
b) 15%
c) 16%
d) 19%

Q9. Net profit before tax is $30,000. Tax liability is $4,000. Interest on borrowings is $2,000. Applying the earning multiple method, with a multiple of 4, what is this business worth?

a) $144,000
b) $136,000
c) $128,000
d) $120,000

Q10. When using the capitalized earnings valuation method, the period of earnings we use is:

a) 3 years
b) 5 years
c) 10 year
d) At our discretion

Q11. When calculating the value of future income streams for business valuation we use:

a) Present values
b) Future values
c) Present discounted values
d) Future discounted values

Q12. who is most interested in business valuations?

a) Bankers
b) Shareholders
c) Auditors
d) Creditors

If you use a weighted average approach, weight the latest year by five & reduce each year backwards by one. Divide the calculated weighted profits by the sum of the digits, i.e. 15, to get your weighted average five-year profit. If profits are rising as in the example, this will result in a higher profit & therefore a higher valuation.

Which calculation is better is a matter of judgement for the buyer to consider.

ACTIVITY 3.7.2

CASE STUDY

VALUATION OF A BUSINESS

Lagi is looking to purchase a bakery business. He has approached several business brokers & has had the following business, Fresh Baker, brought to his attention by one of these.

As Lagi's accountant, you have independently confirmed the asset valuations as current values.

	$	$
Current assets		79,000
Debtors	51,000	
Stock	19,000	
Other	9,000	
Non-current assets		214,000
Industrial kitchen equipment	40,000	
Accumulated depreciation	(6,000)	
Building	180,000	
Total Assets		293,000
Current liabilities		38,000
Overdraft	11,000	
Creditors	12,000	
Provisions	15,000	
Non-current liabilities		120,000
Mortgage loan	120,000	
Total liabilities		158,000

Fresh Baker's profits over the past 5 years have been as follows:

Year	EBIT	Abnormal items
	$	$
2009	30,000	
2010	43,000	9,000
2011	47,000	
2012	40,000	(2,000)
2013	52,000	

The current bank deposit rate is 5.0% & Lagi's required risk premium is 15.0% & Lagi uses a 4.0% growth rate to cover real & inflationary growth.

The seller of the business is asking for $260,000 using an earnings multiple approach & a multiplier of 5 as Fressh Baker has 15 year history since starting as a family business. The Selling agent's advice to the family is that a multiple of between 4 & 6 is appropriate for their business & this aligns with recent sales of bakery businesses on multiples of 4.6 to 5.5 times current year earnings.

Caculate the value of the business using:
1. Capitalised earnings
2. Discounted future earnings

Advise Lagi the goodwill estimated using each method.

What price should Lagi offer for Fresh Baker & what is the most he should pay for the business?

Use only the last three years earnings & calculate 1 & 2 above. Does this change your view?

Using a weighted average with year 5 highest & year 1 lowest, what happens to the valuation?

This activity ends this Module.

Discount factors: Present value of $1 to be received after t years   1/(1   r)t.

Number of Years	Interest Rate per Year														
	16%	17%	18%	19%	20%	21%	22%	23%	24%	25%	26%	27%	28%	29%	30%
1	.862	.855	.847	.840	.833	.826	.820	.813	.806	.800	.794	.787	.781	.775	.769
2	.743	.731	.718	.706	.694	.683	.672	.661	.650	.640	.630	.620	.610	.601	.592
3	.641	.624	.609	.593	.579	.564	.551	.537	.524	.512	.500	.488	.477	.466	.455
4	.552	.534	.516	.499	.482	.467	.451	.437	.423	.410	.397	.384	.373	.361	.350
5	.476	.456	.437	.419	.402	.386	.370	.355	.341	.328	.315	.303	.291	.280	.269
6	.410	.390	.370	.352	.335	.319	.303	.289	.275	.262	.250	.238	.227	.217	.207
7	.354	.333	.314	.296	.279	.263	.249	.235	.222	.210	.198	.188	.178	.168	.159
8	.305	.285	.266	.249	.233	.218	.204	.191	.179	.168	.157	.148	.139	.130	.123
9	.263	.243	.225	.209	.194	.180	.167	.155	.144	.134	.125	.116	.108	.101	.094
10	.227	.208	.191	.176	.162	.149	.137	.126	.116	.107	.099	.092	.085	.078	.073
11	.195	.178	.162	.148	.135	.123	.112	.103	.094	.086	.079	.072	.066	.061	.056
12	.168	.152	.137	.124	.112	.102	.092	.083	.076	.069	.062	.057	.052	.047	.043
13	.145	.130	.116	.104	.093	.084	.075	.068	.061	.055	.050	.045	.040	.037	.033
14	.125	.111	.099	.088	.078	.069	.062	.055	.049	.044	.039	.035	.032	.028	.025
15	.108	.095	.084	.074	.065	.057	.051	.045	.040	.035	.031	.028	.025	.022	.020
16	.093	.081	.071	.062	.054	.047	.042	.036	.032	.028	.025	.022	.019	.017	.015
17	.080	.069	.060	.052	.045	.039	.034	.030	.026	.023	.020	.017	.015	.013	.012
18	.069	.059	.051	.044	.038	.032	.028	.024	.021	.018	.016	.014	.012	.010	.009
19	.060	.051	.043	.037	.031	.027	.023	.020	.017	.014	.012	.011	.009	.008	.007
20	.051	.043	.037	.031	.026	.022	.019	.016	.014	.012	.010	.008	.007	.006	.005

Note: For example, if the interest rate is 10 percent per year, the present value of $1 received at year 5 is $.621.

ANSWERS TO ACTIVITIES

ACTIVITY 3.7.1

Valuing a Business

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f) Shareholders
g) Auditors
h) Creditors

ACTIVITY 3.7.2

CASE STUDY
VALUATION OF A BUSINESS
Capitalised earnings method

Normalised EBIT over 5 years	=	205,000	
Average profit	=	41,000	
Current deposit rate	=	5%	
Required rate of return	=	20%	
Valuation	=	205,000	

Discounted future earnings method

Growth Rate   =   1.04

Year	Adjusted earnings $	Discount factor	NPV $
1	42,640	0.833	35,519
2	44,346	0.694	30,776
3	46,119	0.579	26,703
4	47,964	0.482	23,119
5	49,883	0.402	20,053
6	51,878	0.335	17,379
7	53,953	0.279	15,053
8	56,111	0.233	13,074
9	58,356	0.194	11,321
10	60,690	0.162	9,832
Total discounted earnings			202,829
Residual			32,453
Valuation			235,281

Asset Valuation Method

Total assets	=	293,000
Total liabilities	=	158,000
Valuation	=	135,000

Goodwill using **capitalised earnings**	=	70,000
Goodwill using **discounted future earnings**	=	100,281

What price should Lagi offer?

There is no correct answer to this question.
Based on the calculations made try offering $200,000 to $210,000
Pay up to $235,000; $260,000 looks expensive.

If you use last 3 years profits only, does this influence your advice?

Normalised EBIT over 3 years	=	141,000
Average profit	=	47,000
Current deposit rate	=	4%
Required rate of return	=	20%

Capitalised earnings valuation	=	235,000

Capitalised earnings valuation	=	235,000
Discounted future earnings valuation	=	269,713

If profits are higher valuation will rise; if lower, valuation will fall.

ANSWER: Yes. Asking price no longer looks too expensive.

If you use a weighted average profit for 5 years, weighting latest year the highest?

As early years are lower profit, valuation will rise, but not as much as using last 3 years only.

Will increase valuation if profits are rising, but decrease valuation it profits are falling.

ANSWER: Yes. Even without calculating result, it is clear that the valuation will rise.