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Intangible Asset Valuation

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April 2014

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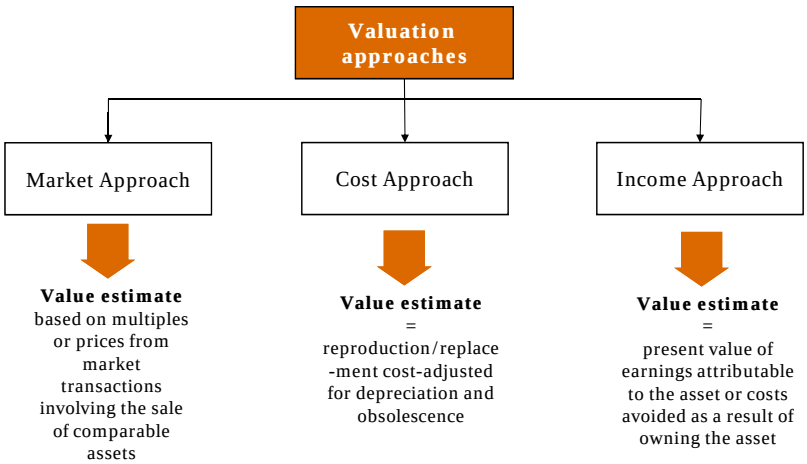
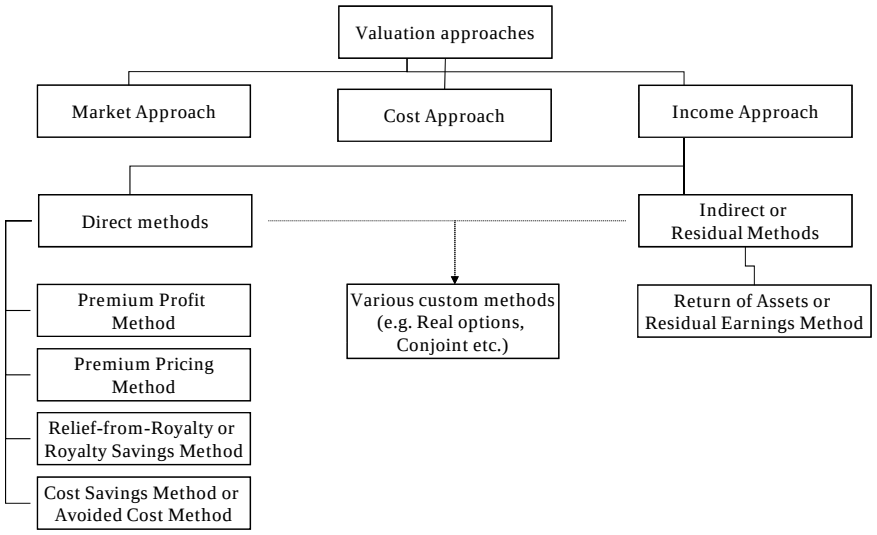
Overview of valuation methodologies

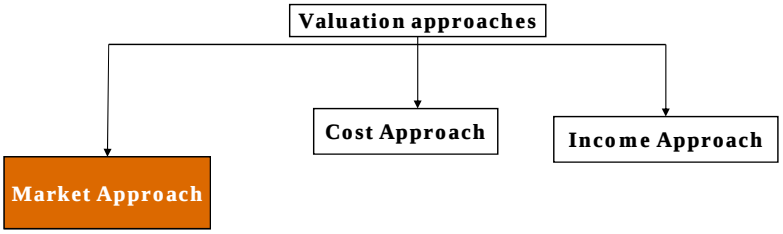
Valuation approaches - Overview



Valuation approaches



Market approach



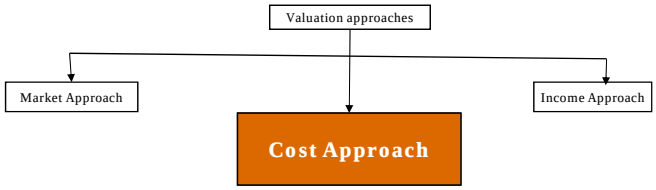
Difficult to apply to intangibles: sufficient number of transactions of truly comparable assets is rarely available

Market data is also used in income approach valuations:

comparable profit benchmarks to compute excess earnings; and

market royalty & licensing rates to compute royalty savings

Cost approach



Inappropriate for most intangibles: fails to capture expected returns to the asset

Appropriate for intangibles that do not directly generate cash flows: e.g. software for internal use and workforce

Sometimes appropriate as a second approach to check whether income approach results are reasonable: make or buy decision, assets with a short history, assets that can be reproduced

Income approach

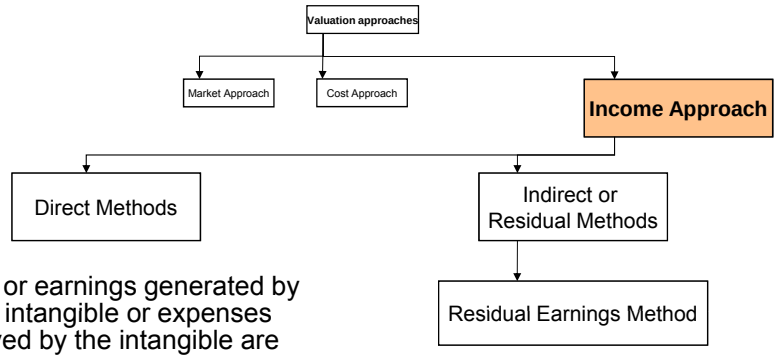
Most common approach for intangibles:

- captures expected future returns to the owner; and
- is able to estimate values for unique assets when market transaction data is not available

Several variations of the Income Approach:

- based on cash flows or earnings generated by the intangible asset or
- based on the costs saved by the intangible asset.

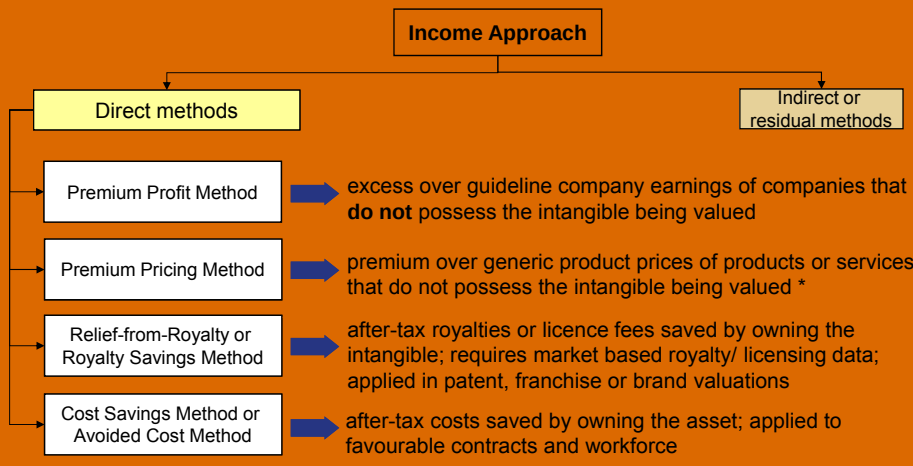
Income approach



- CF or earnings generated by the intangible or expenses saved by the intangible are estimated directly by reference to market benchmarks

- Residual earnings left after deducting from after-tax operating earnings the fair returns on all other assets employed (Multi-period Excess Earnings Method – MEEM)

Income approach - Direct methods



Typical methodologies for example intangible assets

Example intangible assets	Typical valuation method
Brand / trademark	Market benchmarks and income based method (e.g. premium profit)
Customer relationships	Income based method
Product IP/ technology	Income based method
Software	Replacement cost

Which cash flows?

What discount rate?

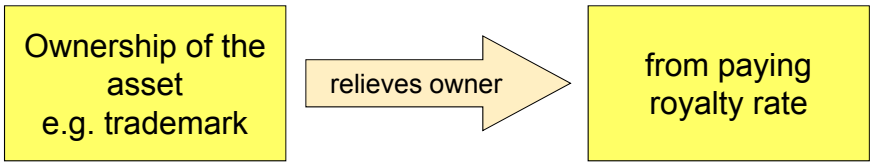
Overall cross checks (Return on assets, residual goodwill etc)

Always preferable to apply two or more methodologies to cross check results

Relief from royalty / royalties foregone method

- Key to valuing many types of IPR
- Important to recognize difference between real world licensing deals and a theoretical license used to estimate the fair market value of an outright sale of the asset
- Based upon market data for benchmarks
- Used extensively on an international basis and across industries
- Based upon the likely future royalty stream that could be earned from licensing out
- Generally expressed as a percentage of revenue
- Value = after tax present value of the stream of future royalty savings/potential future royalty payments
- Can provide misleading results unless the “right” royalty rate is chosen

Relief-from-Royalty



The royalty savings are the expected cash flows for the subject intangible asset

Relief-from-Royalty Method Valuation steps

1. Determine appropriate royalty rate
2. Multiply with matching valuation base
3. Subtract tax expenses
4. Calculate the present value of royalty savings
5. Compute the tax amortisation benefit (TAB) → if necessary (discussed later)

Worked example of Relief from Royalty method

Relief from royalty method – valuation of trade mark

License to distribute product granted to 2022

Royalty: 2%
Discount rate: 10%
Tax: 30%

Variables

- Royalty rates
- Discount rate
- Useful economic life

Business forecasts for exploitation by hypothetical licensee

		2014	2015	2016	2017	2018	2019	2020	2021	2022
Sales		500	500	500	500	500	500	500	500	500
Royalty rate	**2%**									
Royalty earned		10	10	10	10	10	10	10	10	10
Tax payable	30%	3	3	3	3	3	3	3	3	3
After-tax cash flow		7	7	7	7	7	7	7	7	7
Discount rate	**10%**									
Discount factor		0.95	0.87	0.79	0.72	0.65	0.59	0.54	0.49	0.44
Discounted Cash flow		6.7	6.1	5.5	5.0	4.6	4.1	3.8	3.4	3.1
NPV		**42.3**								

Royalty rate determinants

The need for both parties to secure a satisfactory return

The nature and geographical scope of the licence

The strength and importance of this intangible asset

The probable level of continuing sales

The commercial obligations undertaken

The relative negotiating strengths of each party

Georgia Pacific case – 15 factors

Some methods for determining an appropriate royalty rate:

Market Comparables – analysis of licensing agreements in the marketplace

Excess Operating Profit – comparison of margins enjoyed by the company exploiting the subject IP to those of companies that do not own similar IP (e.g. contract manufactures)

Return on Assets – Subtract market returns on tangible assets from forecast operating profits; the remainder is attributable to all intangible assets and must be apportioned between the different intangibles

"25% rule of thumb" (?)

Relief-from-Royalty Method Common pitfalls

Find appropriate licensing agreements!
(e.g. licensing agreements of the company, PwC-Database, www.royaltysource.com)

Do not apply the royalty rate without considering facts and circumstances – particularly profitability and need for both licensor and licensee to generate adequate returns! Consider IRRs!

Have a close look at the licensing agreements!
Are there other additional agreed terms (e.g. upfront payment) or restrictions (e.g. exclusive v non-exclusive license)!

Consider deal-specific circumstances! Many publicly available licensing agreements involve new products in new markets, rather than developed products in mature markets – ask the question: Would I license out the product/ brand for x% ?

Valuation of workforce

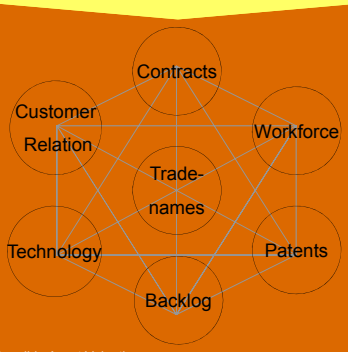
- What do you think might be components of the cost to replace an assembled workforce?

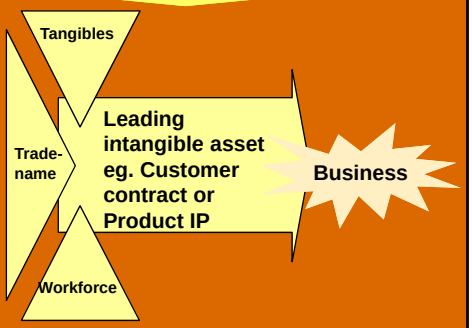
Multi-Period Excess-Earnings Method ("MEEM")

Identify hierarchical relationship between assets

How are all identified Intangible Assets linked?

Which intangible asset drives the business?
Which assets contribute?
Use MEEM to value the key asset



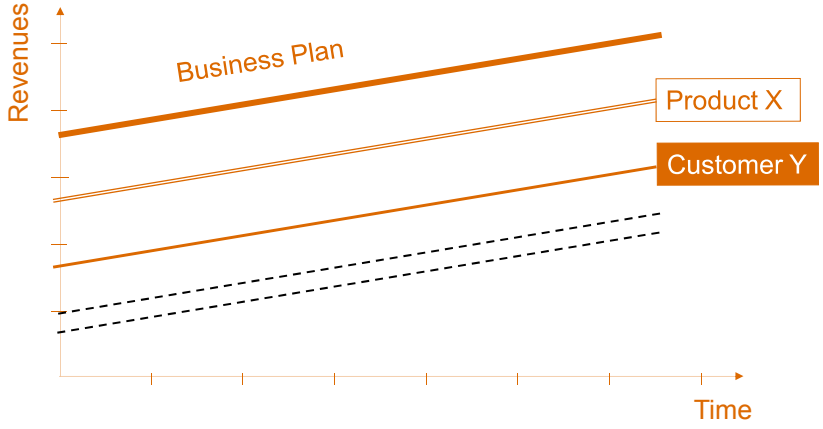


Valuation steps

1. Derive future cash flows for subject intangible asset
2. Subtract tax
3. Apply contributory asset charges (CAC)
4. Calculate present value of future cash flows
5. Compute the tax amortisation benefit (TAB) → if necessary

MEEM
Valuation steps

1. Derive future cash flows for subject intangible asset (e.g. customer contracts or product IP) – also see relevant case study on dealing with uncertainty



MEEM
Valuation steps

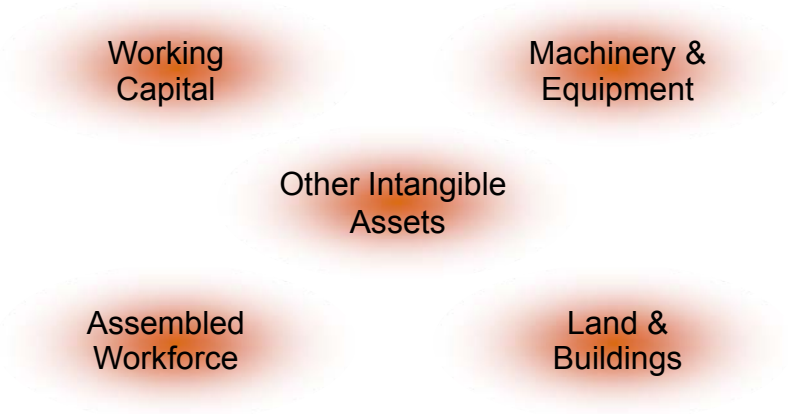
3. Apply contributory asset charges (CAC)

Question:
Would the subject intangible asset generate the same revenues on a stand-alone basis?

NO → The owner has to lease assets to generate those revenues → Concept of contributory asset charges

MEEM Valuation steps

Possible contributory asset charges (CAC):



MEEM Approach Example

(in thousand €)	2014	2015	2016	2017
Revenues	1.000,00	800,00	500,00	300,00
Costs	750,00	600,00	375,00	225,00
Profit before tax	**250,00**	**200,00**	**125,00**	**75,00**
Taxes @ 40%	100,00	80,00	50,00	30,00
Net income	**150,00**	**120,00**	**75,00**	**45,00**
Contributory Asset charges				
Land & Building	10,00	8,00	5,00	3,00
Machinery & Equipment	25,00	20,00	12,50	7,50
Working capital	15,00	12,00	7,50	4,50
Workforce	9,50	7,60	4,75	2,85
Trademarks	20,00	16,00	10,00	6,00
Total Asset Charges	79,50	63,60	39,75	23,85
Cash Flow after tax	70,50	56,40	35,25	21,15
Present value factor	0,9174	0,8417	0,7722	0,7084
Present value of cash flows	64,68	47,47	27,22	14,98
Value of key intangible	**154,35**			

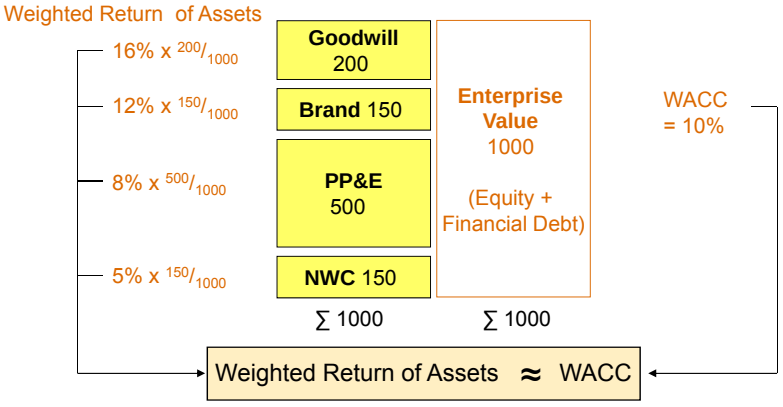
*Required Rate of Return on the Subject Assets**

Working capital	Short-term lending rates for market participants
Fixed assets (for example PP&E)	Financing rate for similar assets for market participants (e.g.terms offered by vendor financing),or rates implied by leases
Workforce, **customer lists**, **trademarks**, and **trade names**	Weighted average cost of capital (WACC) for young, single-product companies
Patents	In cases where risk of realising economic value of patent is close to the risk of realising a project, rates would be equivalent to that of the project
Other intangibles, including base (or core) **technology**	Rates appropriate to the risk of the subject intangible

•* from the perspective of a hypothetical buyer

Return on Assets Reconciliation (WACC Table)

Rates should be consistent with the relative risk of other assets in the analysis and should be higher for riskier assets.



WACC Table Review & WACC table analysis

Asset	After Tax Discount rate	Premium Discount	After Tax ROR[1]	Fair Market Value	FMV x Discount Factor
Working Capital	12.1%	-6.1%	6.0%	15,000	900
Fixed Assets	12.1%	-4.1%	8.0%	30,000	2,400
Non-Compete Agreements	12.1%	-0.1%	12.0%	5,000	600
Customer Relationships	12.1%	-0.1%	12.0%	14,000	1,680
Patented Technology	12.1%	4.9%	17.0%	10,000	1,700
IPR&D	12.1%	5.9%	18.0%	0	0
Implied Goodwill	12.1%	6.2%	18.3%	26,000	4,770
Total			**12.1%**	**100,000**	**12.050**

This is Enterprise Value
12,050 / 100,000 = 12.1%

1) ROR = Rate of Return

Key considerations

Key considerations

Ensure correct definition of assets and who owns them

In valuing the IP, identify/carve-out the cash flows that it generates

Select an appropriate valuation methodology and cross-check against other approaches

Depending on the purpose of the valuation, it may be important to seek expert legal advice, particularly if it relates to a transaction or dispute

Valuation of IP is a subjective area involving a high degree of technical complexity

Where there is a lot at stake, it is advisable to seek expert assistance

In most cases, IP valuations will be challenged and consequently the experience and credibility of the valuer is of paramount importance

Discussion

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