

Western India Regional Council of the ICAI

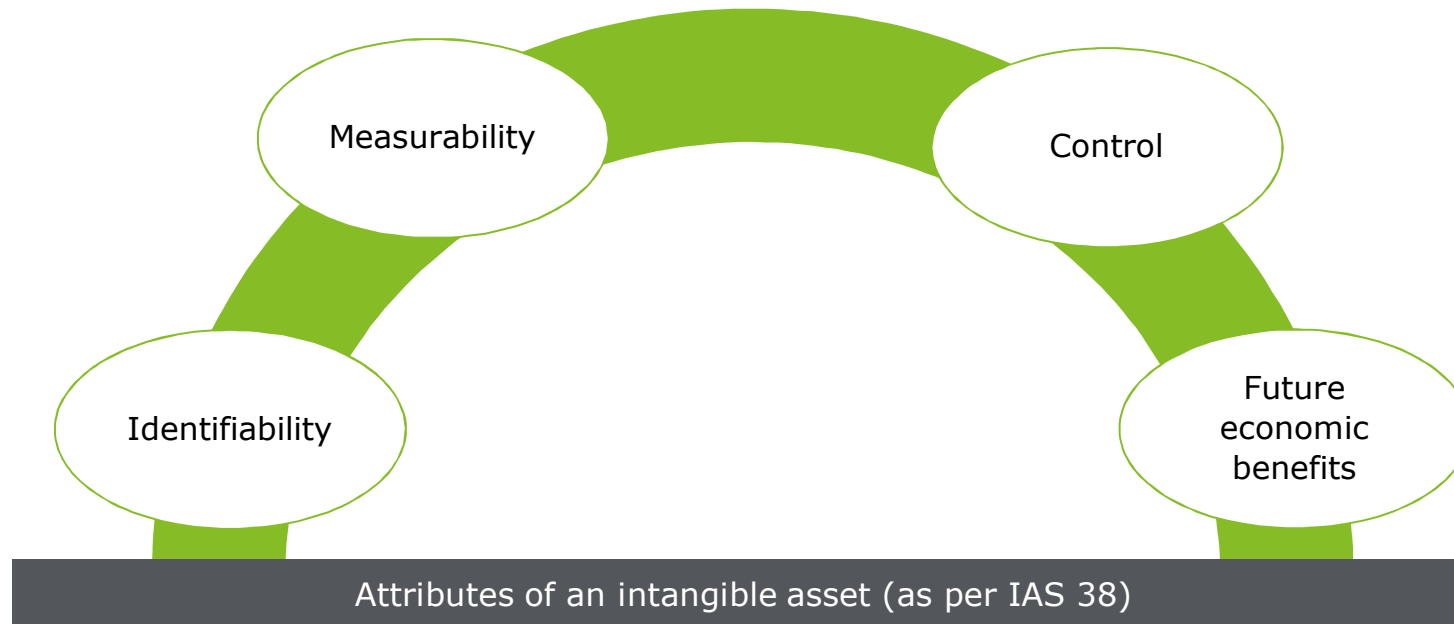
Valuation of Intangibles

- CA Nandita Pai

14 September 2019

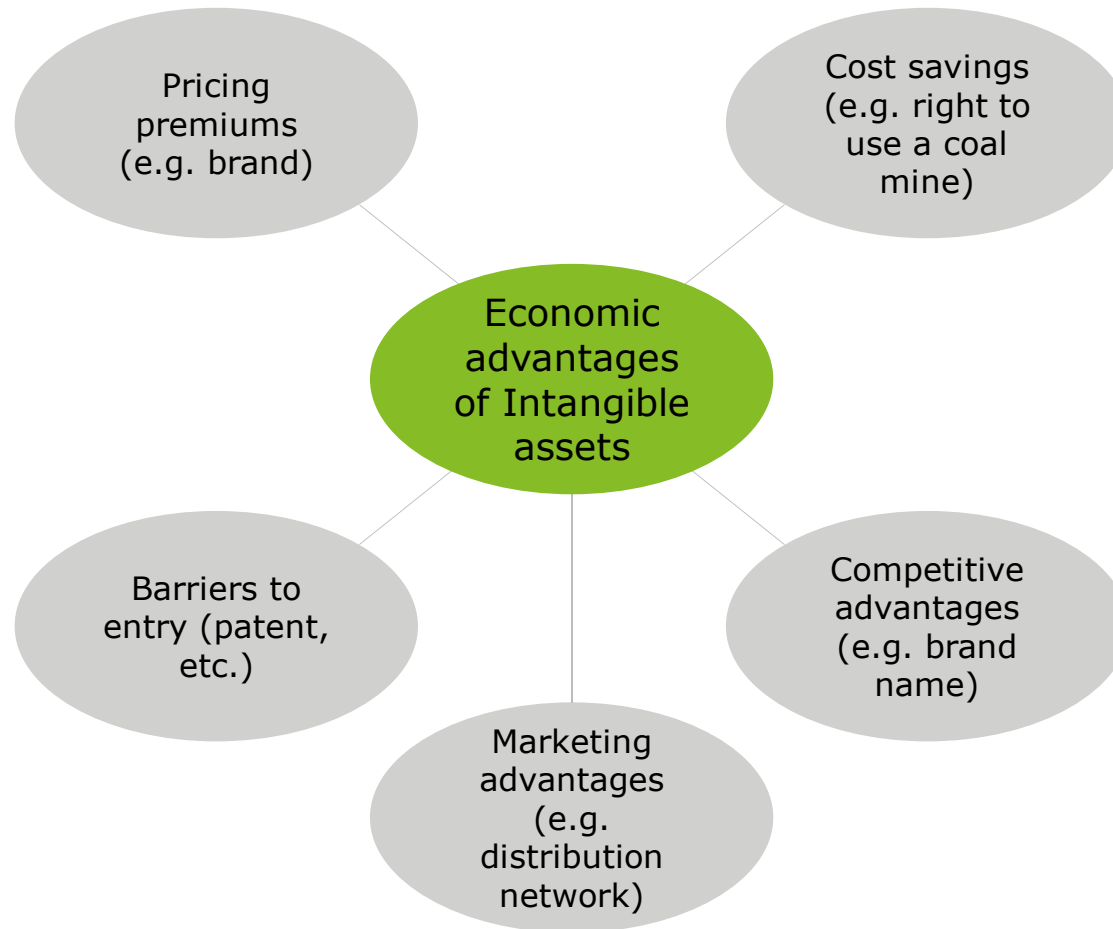
Definition of Intangible Assets

- As per the Accounting Standard (AS) 26 'Intangible Assets' issued by the Institute of Chartered Accountants of India, an intangible asset is an identifiable non-monetary asset, without physical substance, held for use in the production or supply of goods or services, for rental to others, or for administrative purposes.
- As per IAS 38, an intangible asset is an identifiable, non-monetary item without physical substance, which is within the control of the entity and is capable of generating future economic benefits for the entity.

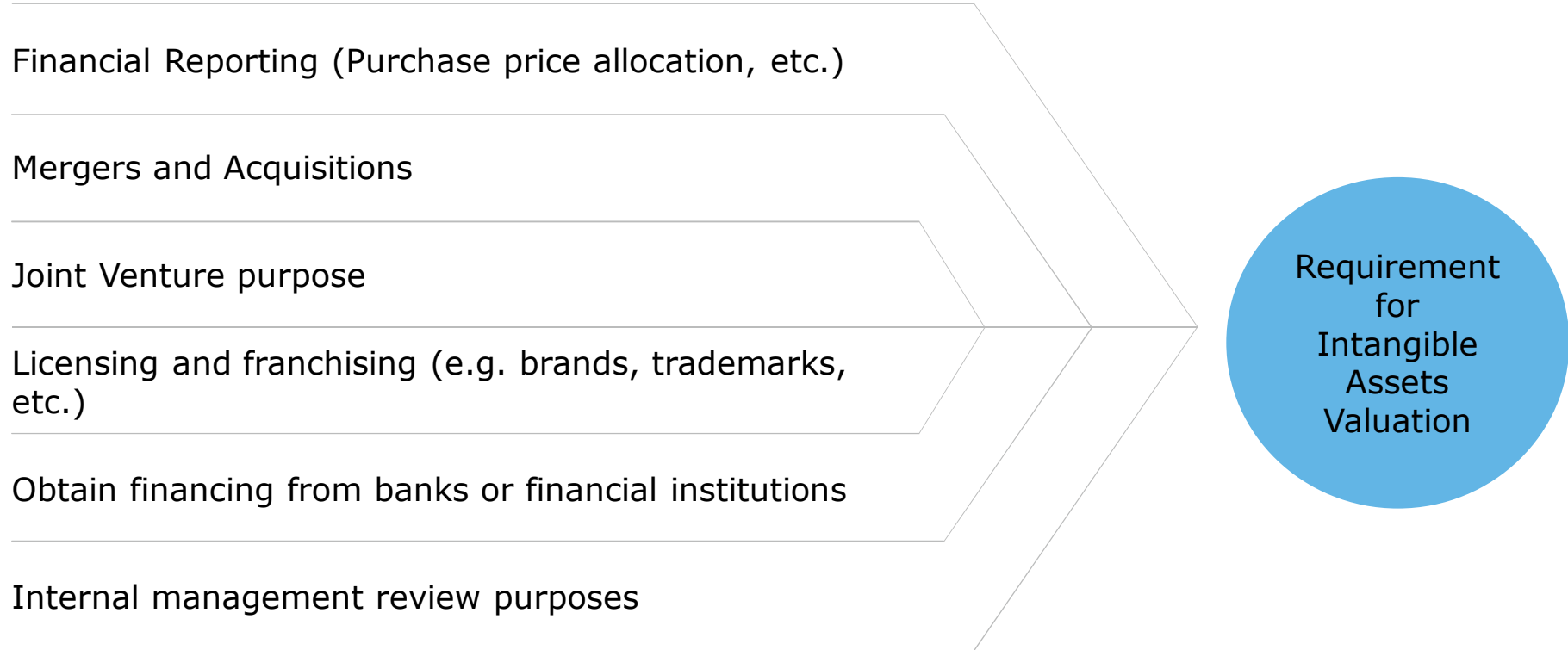


- An asset is identifiable if it is either:
 - (a) separable, i.e. is capable of being separated or divided from the entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, identifiable asset or liability, regardless of whether the entity intends to do so; or
 - (b) arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations

Definition of Intangible Assets

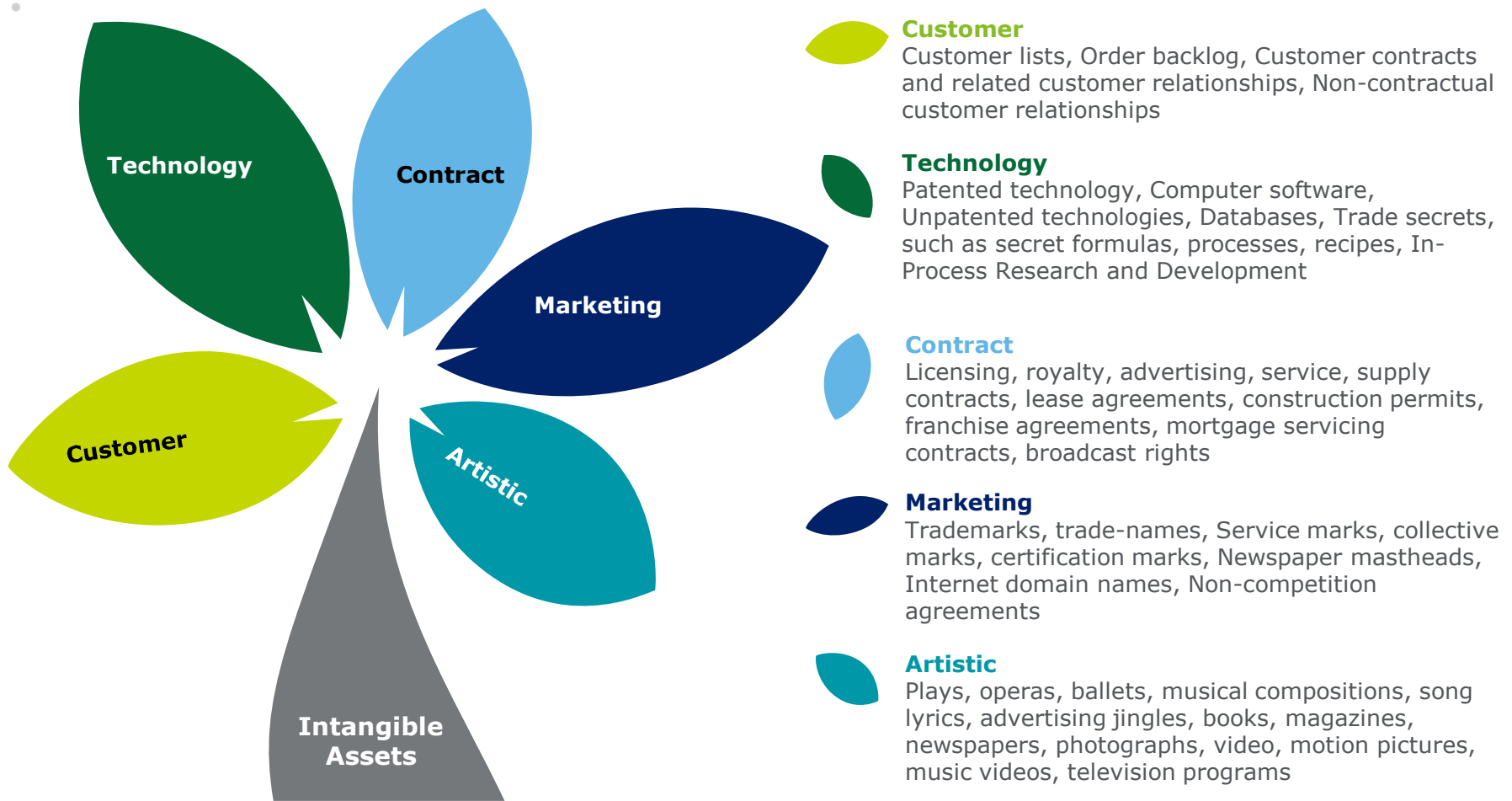


General Requirement for Intangible Assets Valuation



Types of Intangible Assets

Types of Intangible Assets



Intangible Matrix

Create a Matrix of all possible intangibles and discuss with management and / or auditors

Sample Intangible Matrix

Intangible Asset	Nature of Intangible	Recognized	Valuation Approach	Remarks
Customer Relationships	Repeat business through relationships with existing customers	Yes	Multi Period Excess Earnings Method	
Brand	Brand Name of the Target	Yes	Relief from Royalty / Profit Split Method	
Non-Compete Agreement	Non-Compete agreement signed with the Sellers	Yes	Incremental Cash Flow Method ("with and without")	
Workforce	Trained Workforce of the Target	Yes	Replacement Cost Method	
Favorable / Unfavorable Lease	Long term Lease contract giving benefit over prevailing market rates	No	N.A.	The management provided that lease rentals are at prevailing market rates and no benefit is derived from the said lease

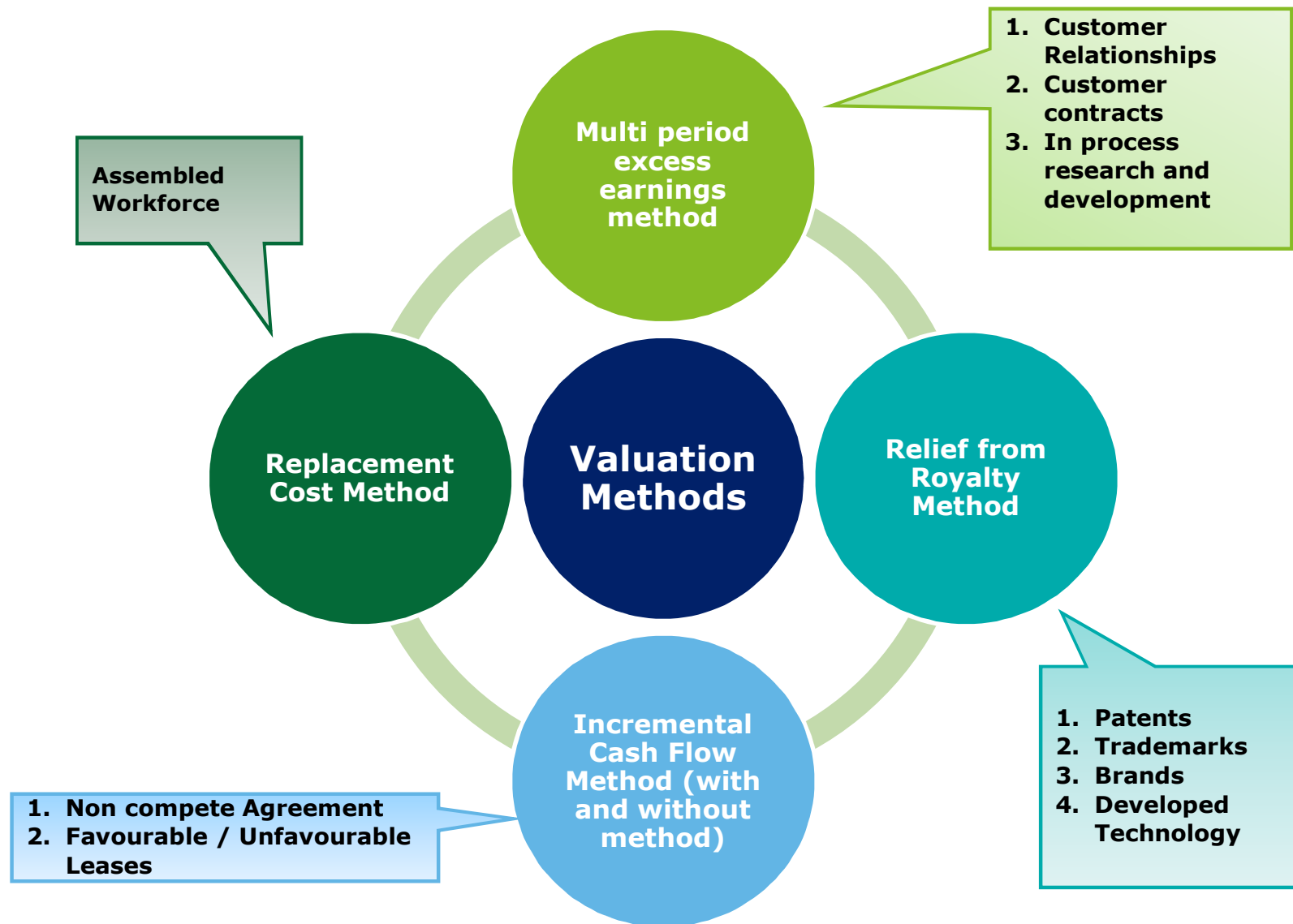
Valuation approaches and methodologies – Identified Intangible Assets

Valuation Methods and Approaches

Approaches to Intangible Asset Valuation

Income Approach	Market Approach	Cost Approach
<p>Based on the present value of expected future cash flows to be derived from ownership of the asset</p>	<p>Based on transactions involving the sale or license of similar intangible assets in the marketplace</p>	<p>Based on the cost to reproduce or replace the asset</p>
<ul style="list-style-type: none">• Discounted Cash Flow Method ("DCF")• Multi Period Excess Earnings Method• Relief-From-Royalty Method ("RFR")• Incremental Cash Flow Method ("with and without")	<p>Comparable Transactions Method</p>	<p>Replacement Cost Method</p>

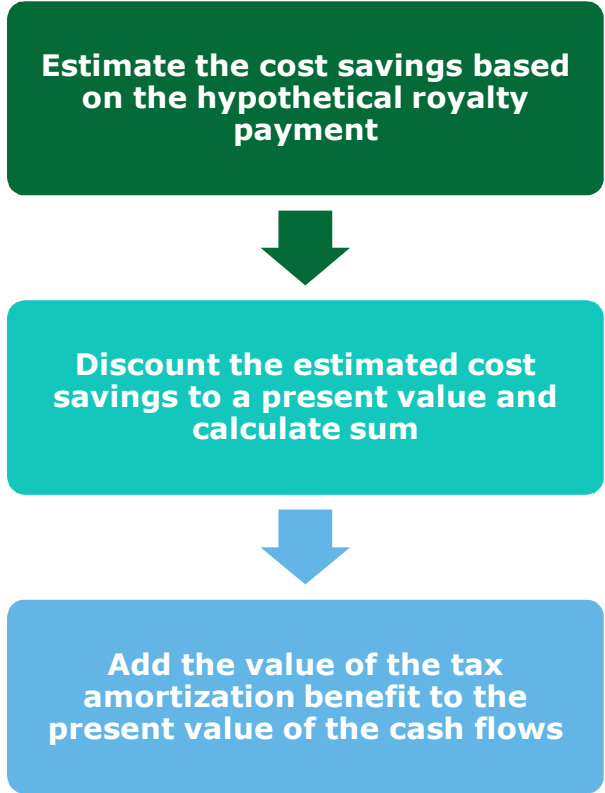
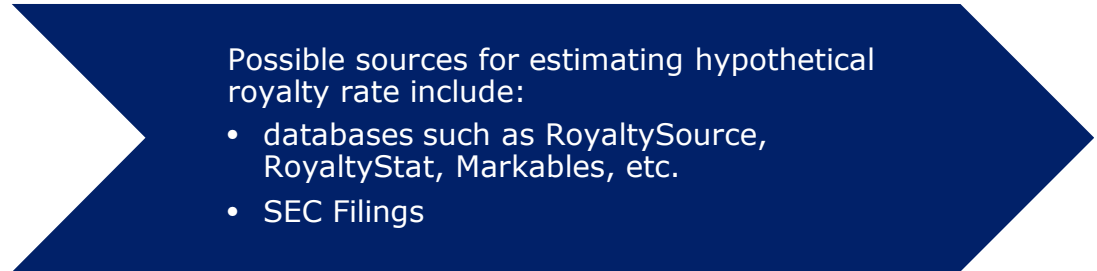
Valuation Methods commonly used



Relief from Royalty Method

Relief from Royalty Method

- Based on the premise that the only value that a purchaser of the asset receives is the exemption from paying a royalty for its use.
- Involves quantifying the present value of the stream of market-derived royalty payments that the owner of the intangible asset is exempted from or “relieved” from paying.



Relief from Royalty Method

Key Assumptions



- Net revenue should reflect all revenues associated with the intangible asset
- Net revenue should be forecasted over the estimated remaining useful life of the intangible asset
- Net revenue growth should reconcile to the overall weighted revenue growth in the acquisition model

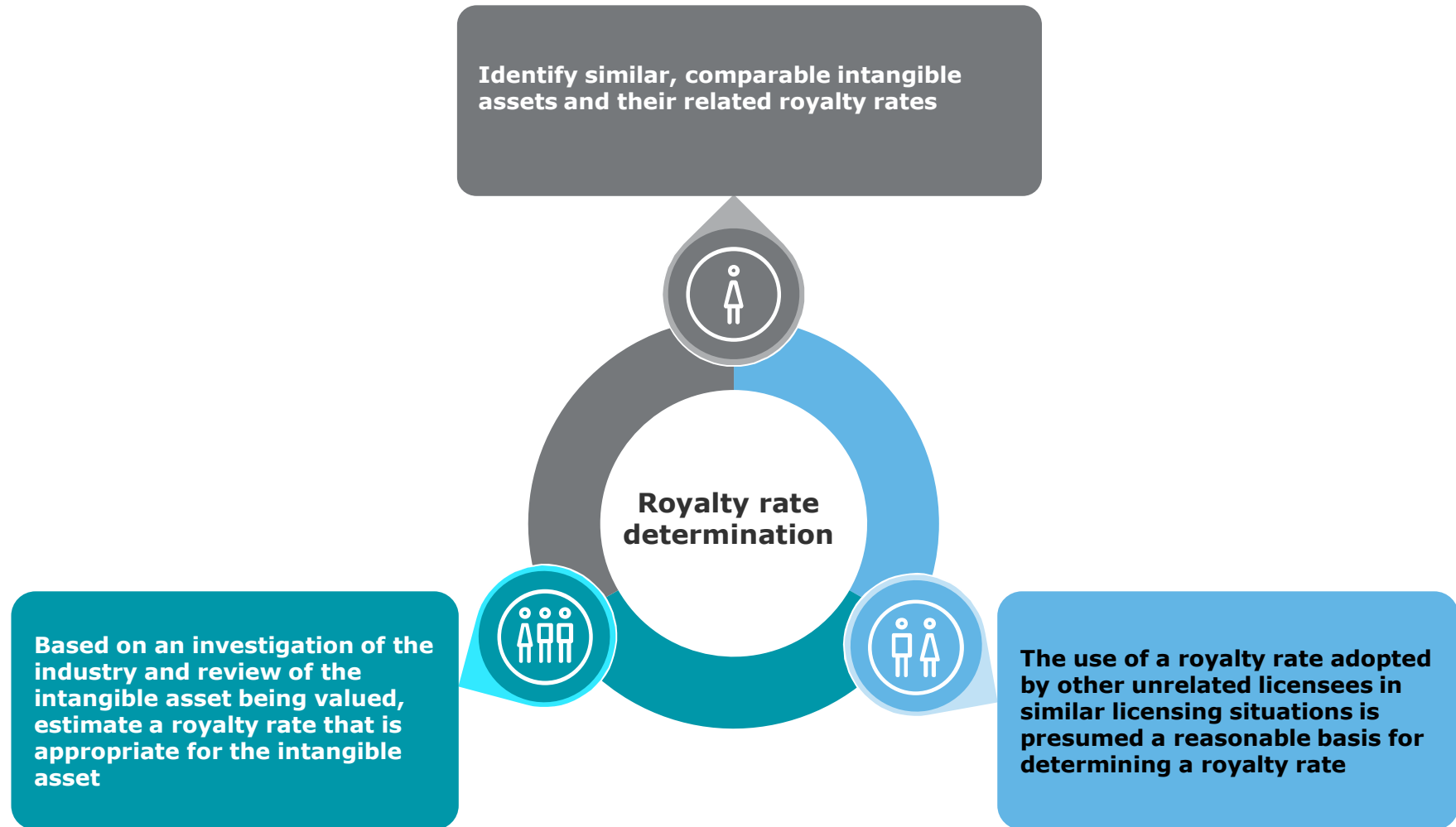


- Prevailing royalty rates for similar intangible assets in the industry
- Prospective profits to be realised, costs to be saved, or return on assets to be used in the business
- Advantages over existing products in the marketplace
- Availability of substitutes
- Royalty payments as a percentage of revenue vary widely, depending upon the profitability of the product and the industry and market being served



- Discount rate will be based on the riskiness of the intangible asset considered in isolation.

Relief from Royalty Method



Sample Valuation of Brand

ASSUMPTIONS	
Suggested Useful Life (In Years)	10 years
Pre-Tax Royalty Rate	4.0%
Discounting Rate	18.5%
Tax Rate	34.9%

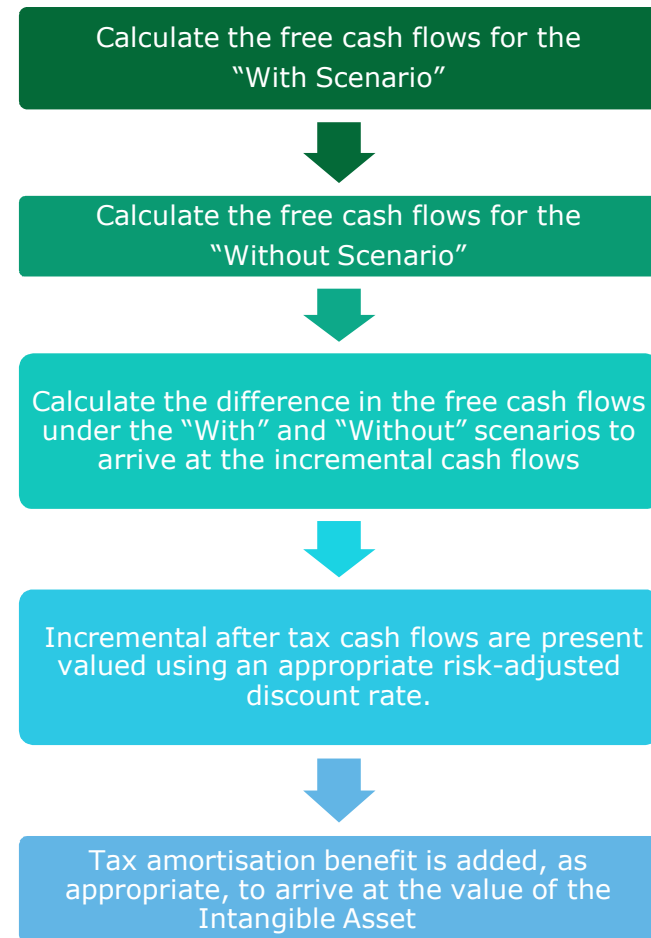
Relief from Royalty Method											INR Million	
PARTICULARS	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	
Months	2.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
Net Sales	59	390	419	451	484	521	560	602	632	664	697	
% attributable to Brand name "ABC"	100.0%	100.0%	90.0%	80.0%	70.0%	60.0%	50.0%	40.0%	30.0%	20.0%	10.0%	
Total Net Sales attributable to Brand name "ABC"	59	390	377	361	339	312	280	241	190	133	70	
Pre-Tax Royalty Savings	2	16	15	14	14	12	11	10	8	5	3	
Tax	1	5	5	5	5	4	4	3	3	2	1	
Post-Tax Royalty Savings	2	10	10	9	9	8	7	6	5	3	2	
Discounting	18.5%											
Time Factor	0.08	0.67	1.67	2.67	3.67	4.67	5.67	6.67	7.67	8.67	9.67	
Present Value Factor	0.99	0.89	0.75	0.64	0.54	0.45	0.38	0.32	0.27	0.23	0.19	
Present Value of Post-Tax Royalty Savings	2	9	7	6	5	4	3	2	1	1	0	

Sum of Present Value of Post-Tax Royalty Savings	39.7
Tax Amortisation Benefit Factor	1.28
Preliminary Indication of Value	50.6
Indicated Value (Rounded)	51.0

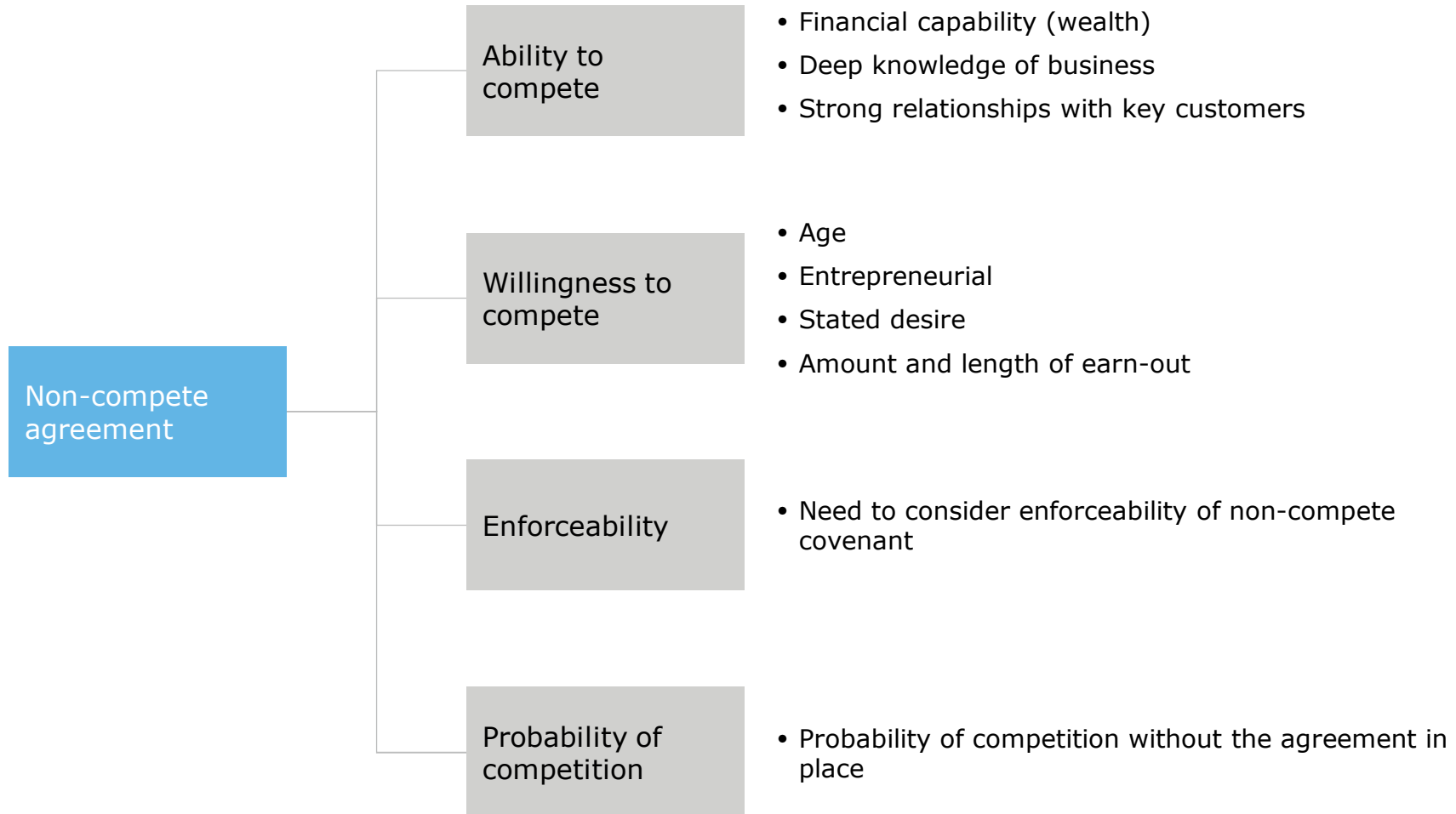
Incremental Cash Flow Method (with and without method)

Incremental Cash Flow Method (with and without method)

- Based on a comparison of the present value of the prospective cash flows for the business “with” and “without” the subject intangible asset in place.
- Useful for valuing non-compete agreements.
- Develop cash flows under the following scenarios:
 - With non compete scenarios – same projections as business enterprise valuation analysis (business operates as currently projected)
 - Without non compete scenarios – project cash flows assuming competition at time of transaction



Incremental Cash Flow Method (with and without method)



Sample Valuation of Non-compete Agreement

ASSUMPTIONS	
Economic Life in Years	5.0
Discount Rate	18.0%
Tax Rate	34.9%

PARTICULARS		INR Million					
		FY18	FY19	FY20	FY21	FY22	FY23
Months		2	12	12	12	12	12
Free Cash Flows with Non-Compete in place		(32.7)	10.0	24.9	29.2	33.9	39.2
Free Cash Flows without Non-Compete in place		(33.0)	8.8	23.9	28.3	33.1	38.8
Incremental Cash Flows		0.2	1.2	1.0	0.9	0.8	0.4
<u>Discounting</u>	18.0%						
Time Factor		0.08	0.50	1.50	2.50	3.50	4.50
Present Value Factor		0.99	0.92	0.78	0.66	0.56	0.47
Present Value of Incremental Cash Flows		0.2	1.1	0.8	0.6	0.4	0.2

Present Value of Incremental Cash Flows	3.3
Tax Amortisation Benefit Factor	1.28
Preliminary Indication of Value	4.3
Indicated Value (Rounded)	4.0

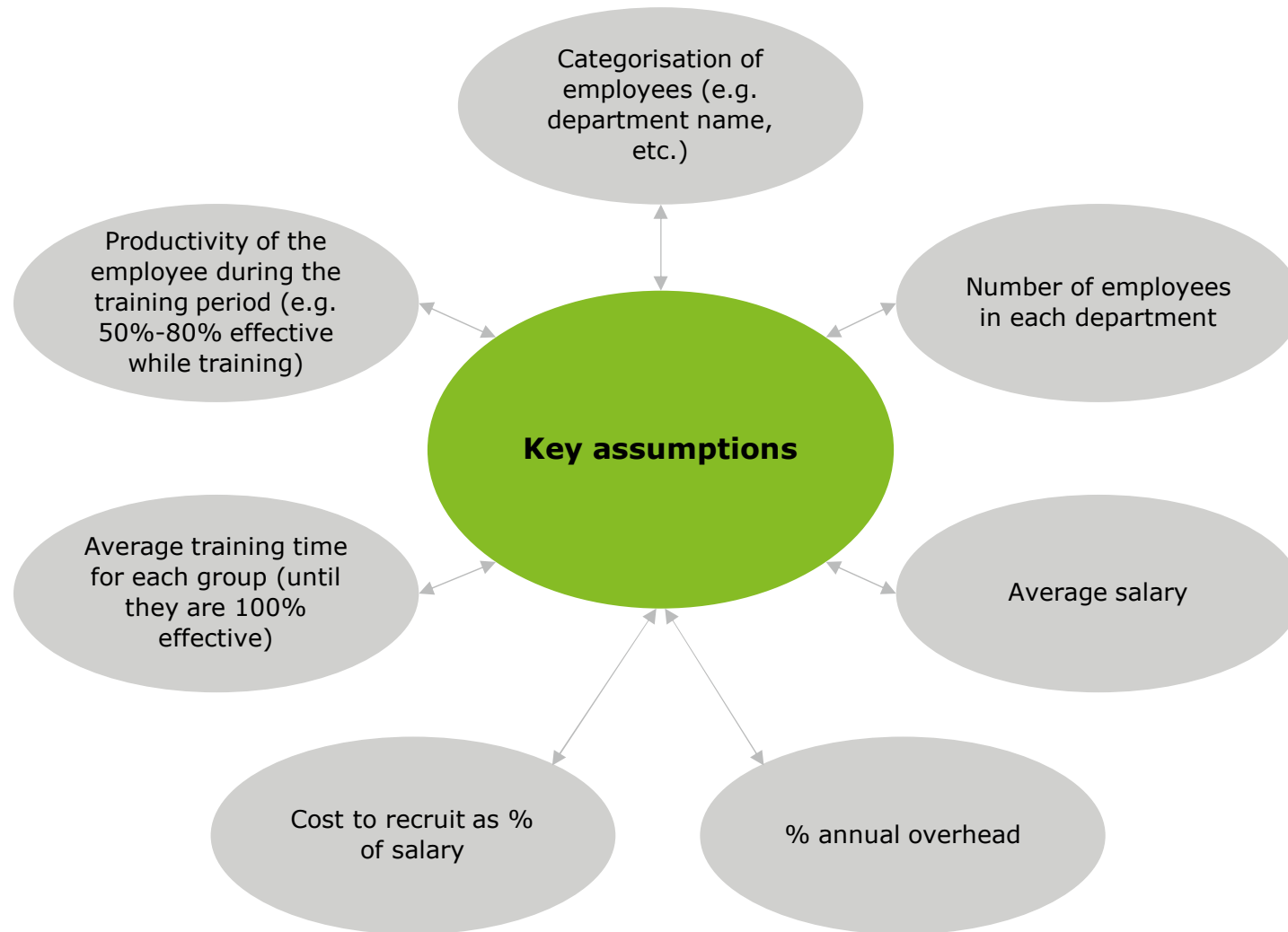
Replacement Cost Method

Replacement Cost Method

- With the underlying premise that a prudent investor would pay no more for an asset than the cost to develop or construct an asset of equal utility.
- Useful for valuation of:
 - Assembled workforce;
 - Internally developed/Internally used non-marketable software;

Assembled workforce is not a recognisable intangible asset, but it is still necessary to estimate the value of the assembled workforce for purposes of calculating contributory asset charges on other intangible assets.

Replacement Cost Method – Assembled Workforce



Sample Valuation of Assembled Workforce

ASSUMPTIONS	VALUE	SOURCE
Average Salary & Bonus (INR per annum)	3,49,576	Management
% Productivity during reduced period	50.00%	Management

Replacement Cost Method

GRADE	No. of Employees	Average Salary & Bonus including benefits	Recruiting Cost as a % of Salary	Recruiting Costs based on % above	Recruiting Costs	Months to reach full productivity	% Productivity during reduced period	Cost of Lost Productivity	Cost of Lost Productivity	INR Million
		INR per annum per employee		INR per employee	INR for total employees		Months	%	INR per employee	INR for total employees
Level 1	117	2,12,739	5.0%	10,637	12,44,523	1.0	50.0%	8,864	10,37,103	2.3
Level 2	32	3,10,145	5.0%	15,507	4,96,232	2.0	50.0%	25,845	8,27,053	1.3
Level 3	31	4,21,595	5.0%	21,080	6,53,472	2.0	50.0%	35,133	10,89,120	1.7
Level 4	7	5,70,688	5.0%	28,534	1,99,741	3.0	50.0%	71,336	4,99,352	0.7
Level 5	4	16,69,920	5.0%	83,496	3,33,984	3.0	50.0%	2,08,740	8,34,960	1.2
Level 6	2	20,75,825	5.0%	1,03,791	2,07,583	3.0	50.0%	2,59,478	5,18,956	0.7
Level 7	1	51,07,014	5.0%	2,55,351	2,55,351	3.0	50.0%	6,38,377	6,38,377	0.9
	194				33,90,885				54,44,921	8.8

Value of Assembled Workforce (INR million)

8.8

Indicated Value of Assembled Workforce (Rounded)

9.0

Multi Period Excess Earnings Method

Multi Period Excess Earnings Method (MEEM)

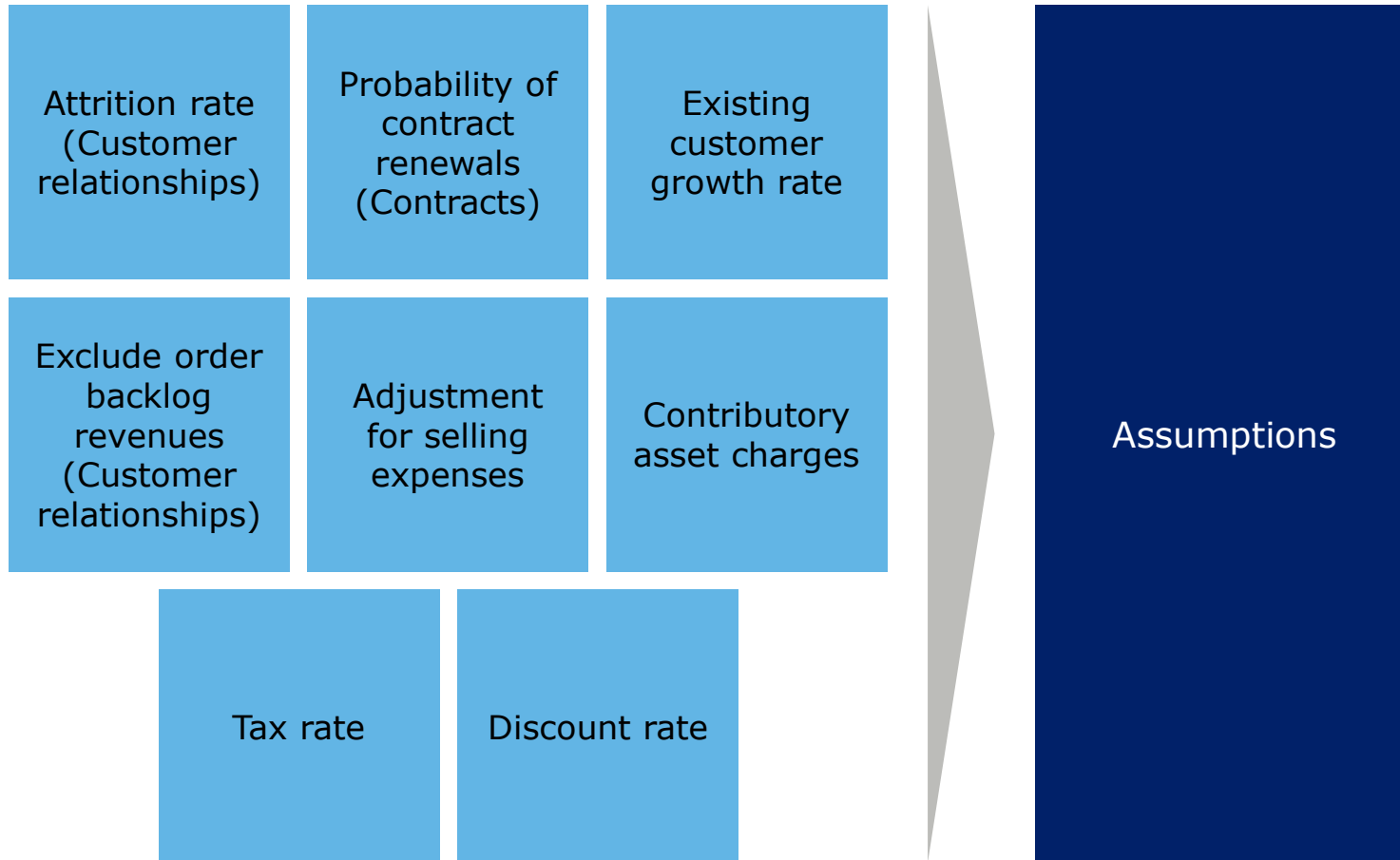
- Used when the prospective revenue and earnings generated by the subject intangible asset cannot be directly identified

Calculating incremental after-tax cash flows for the subject intangible asset

Revenues attributable to subject intangible asset	
(-) Expenses and Adjustments	<hr/>
Earnings before Interest and Tax	
(-) Taxes	
(-) After Tax CACs	<hr/>
Incremental After-Tax Cash Flows	

- Incremental after tax cash flows, computed over the life of the asset, are present valued using an appropriate risk-adjusted discount rate.
- Tax amortisation benefit is added, as appropriate, to arrive at the value of the Intangible Asset.

Multi Period Excess Earnings Method (MEEM)



Multi Period Excess Earnings Method (MEEM)

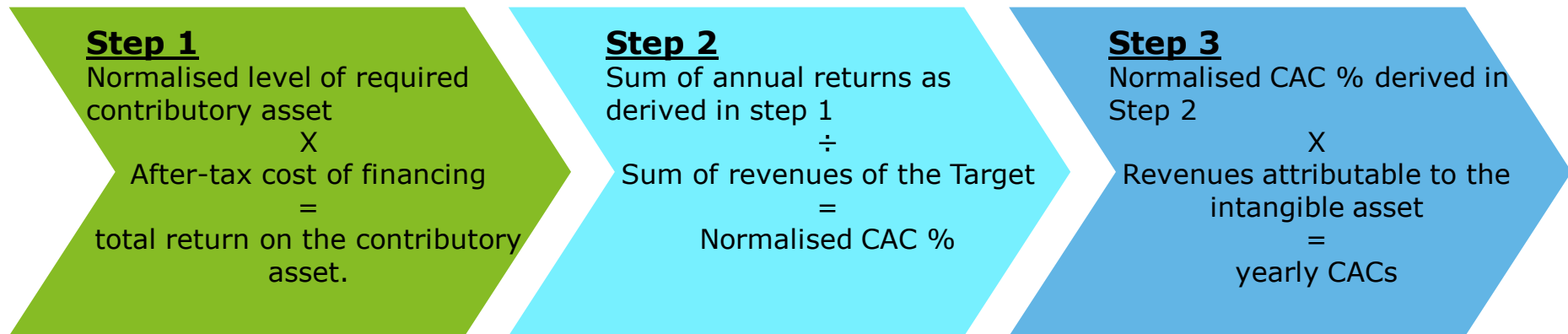
How to identify a Contributory Asset?

- Only those assets used in realizing expected future cash flows for the subject intangible asset.

What is a Contributory Asset Charge (CAC)?

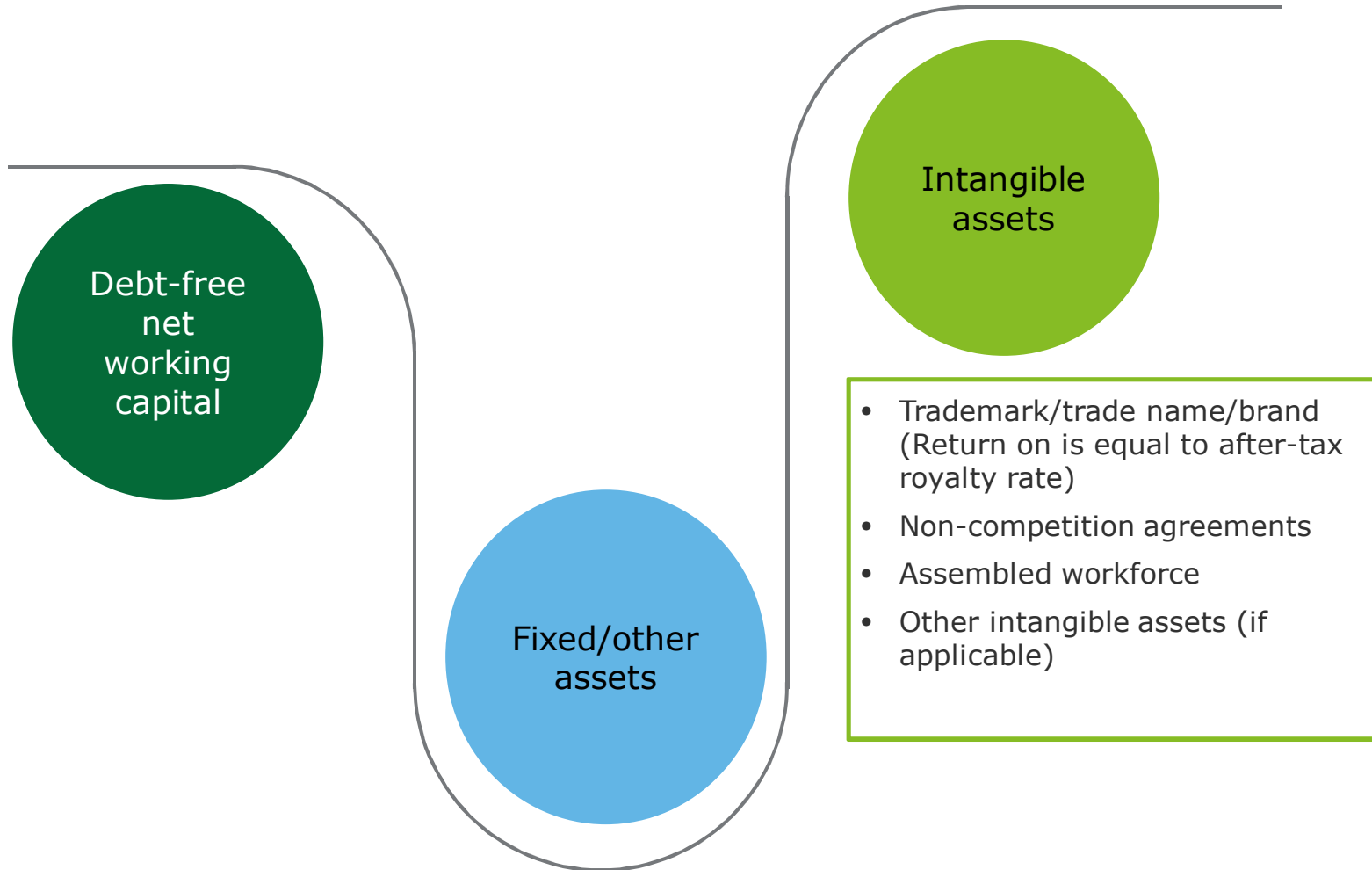
- A “return on” – reflects the fair return required for an investment in the asset, and
- A “return of” – reflects the recovery of the original investment in the asset over time.

How to calculate CAC?



Multi Period Excess Earnings Method (MEEM)

Contributory asset charges



Sample Valuation of Customer Relationships

ASSUMPTIONS	
Attrition Rate	15.0%
Discounting Rate	19.0%
Tax Rate	34.9%

Excess Earnings Method		INR Million										
PARTICULARS		FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Months		2.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Revenue - TTM Jan'18	359											
Opening		100.0%	97.5%	82.9%	70.4%	59.9%	50.9%	43.3%	36.8%	31.3%	26.6%	22.6%
Attrition (as a % of Opening)		2.5%	14.6%	12.4%	10.6%	9.0%	7.6%	6.5%	5.5%	4.7%	4.0%	3.4%
Closing		97.5%	82.9%	70.4%	59.9%	50.9%	43.3%	36.8%	31.3%	26.6%	22.6%	19.2%
Total revenue Attributable to existing customers		58	297	253	215	183	155	132	112	95	81	69
EBIT Margins		10.7%	11.5%	12.4%	13.2%	14.0%	14.8%	15.6%	16.4%	17.2%	17.9%	18.7%
EBIT		6	34	31	28	26	23	21	18	16	15	13
Tax		2	12	11	10	9	8	7	6	6	5	5
Earnings After Tax		4	22	20	18	17	15	13	12	11	9	8
Contributory Asset Charges												
Fixed Assets	1.4%	1	4	3	3	3	2	2	2	1	1	1
Other Net Assets	2.5%	1	7	6	5	4	4	3	3	2	2	2
Brand	2.6%	2	8	7	6	5	4	3	3	2	2	2
Non compete	0.1%	0.1	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Assembled Workforce	0.3%	0	1	1	1	1	0	0	0	0	0	0
Total Contributory Asset Charges		4	20	17	15	13	11	9	8	7	6	5
Net Available Excess Earnings		0	2	3	4	4	4	4	4	4	4	4
Discounting	19.0%											
Time Factor		0.08	0.67	1.67	2.67	3.67	4.67	5.67	6.67	7.67	8.67	9.67
Present Value Factor		0.99	0.89	0.75	0.63	0.53	0.44	0.37	0.31	0.26	0.22	0.19
Present Value of Excess Earnings		0	2	2	2	2	2	2	1	1	1	1
Sum of Present Value of Excess Earnings		16.0										
Tax Amortisation Benefit Factor			1.27									
Preliminary Indication of Value		20.3										
Indicated Value (Rounded)		20.0										

Contributory Asset Charges

PARTICULARS	Indicated Values	Rate of Return	INR Million										
			FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Months			2.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Total Revenue			59	390	419	451	484	521	560	602	632	664	697
<i>Revenue Growth (%)</i>				<i>10.27%</i>	<i>7.50%</i>	<i>7.50%</i>	<i>7.50%</i>	<i>7.50%</i>	<i>7.50%</i>	<i>7.50%</i>	<i>5.00%</i>	<i>5.00%</i>	<i>5.00%</i>
CONTRIBUTORY TANGIBLE ASSETS													
Fixed Assets	50	12.0%											
Beginning Balance			50	62	62	62	62	62	62	62	62	62	62
Capital Expenditure for the period			17	30	32	34	36	39	41	44	46	47	49
Depreciation for the period			(5)	(30)	(32)	(34)	(36)	(39)	(41)	(44)	(46)	(47)	(49)
Ending Balance			62	62	62	62	62	62	62	62	62	62	62
Average Balance			56	62	62	62	62	62	62	62	62	62	62
Total Return on Fixed Assets			1.1	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
<i>Return as a % of Revenues</i>													
<i>Normalised Return as a % of Revenues</i>		<i>1.4%</i>											
Other Net Assets	71	8.5%											
Beginning Balance			71	98	117	126	135	145	156	168	181	190	199
Ending Balance			98	117	126	135	145	156	168	181	190	199	209
Average Balance			84	107	121	130	140	151	162	174	185	194	204
Total Return on Other Net Assets			1.2	9.1	10.3	11.1	11.9	12.8	13.8	14.8	15.7	16.5	17.3
<i>Return as a % of Revenues</i>													
<i>Normalised Return as a % of Revenues</i>		<i>2.5%</i>											

Contributory Asset Charges

			INR Million										
PARTICULARS	Indicated Values	Rate of Return	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Months			2.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
CONTRIBUTORY INTANGIBLE ASSETS													
Non-Compete Agreement	4	18.0%											
Total Return on Non-Compete Agreement			0.12	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Return as a % of Revenues													
Normalised Return as a % of Revenues		0.1%											
Assembled Workforce	9	17.0%											
Total Return on Assembled Workforce			0.26	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53
Return as a % of Revenues													
Normalised Return as a % of Revenues		0.3%											
Brand													
Royalty Rate (pre-tax)		4.0%											
Royalty Rate (Post-Tax) = Normalised Return as a % of Revenues		2.6%											

Tax Amortisation Benefit (TAB)

- Identified intangibles are typically amortisable for tax purposes.
- Amortisation usually results in a tax-deductible expense (depending on country)
- Amortisation reduces taxable income and the resulting tax savings should be included in the fair value of the asset when performing an income approach valuation
- “Circular Reference” – Need fair value of asset to estimate TAB but need TAB to estimate fair value of asset
- Can avoid circular references by using a tax amortisation benefit factor calculation

Table for Base Computation of TAB

ASSUMPTIONS	VALUE
Life in Years*	10.0
Depreciation Rate as per Indian Income Tax Laws	25.0%
Tax Rate	34.9%
Discount Rate for the Company	19.0%

Year Ending Time Factor	Year 1 0.5	Year 2 1.5	Year 3 2.5	Year 4 3.5	Year 5 4.5	Year 6 5.5	Year 7 6.5	Year 8 7.5	Year 9 8.5	Year 10 9.5
Opening Balance of Intangible Asset	100.00	75.00	56.25	42.19	31.64	23.73	17.80	13.35	10.01	7.51
Depreciation	25.00	18.75	14.06	10.55	7.91	5.93	4.45	3.34	2.50	1.88
Closing Balance of Intangible Asset	75.00	56.25	42.19	31.64	23.73	17.80	13.35	10.01	7.51	5.63
Savings in Tax	8.74	6.55	4.91	3.69	2.76	2.07	1.55	1.17	0.87	0.66
Discounting Factor	0.92	0.77	0.65	0.54	0.46	0.38	0.32	0.27	0.23	0.19
Present Value of Tax Savings	8.01	5.05	3.18	2.00	1.26	0.80	0.50	0.32	0.20	0.13

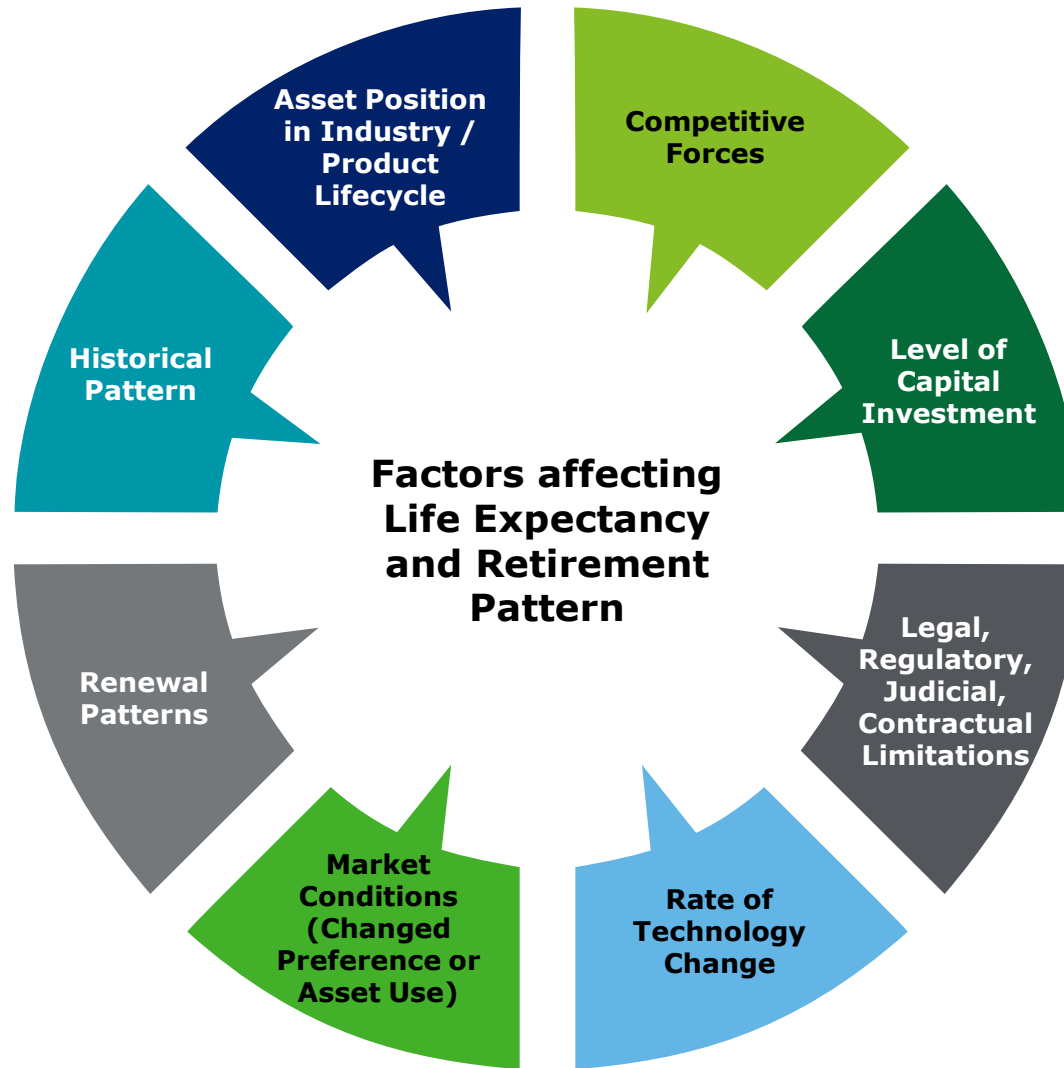
Particulars	TAB Factor
Total Present Value of Tax Savings	21.44
Fair Value of Intangible (Including TAB)	100.00
Fair Value of Intangible (Excluding TAB)	78.56
Tax Amortization Benefit Factor	1.27

*TAB is considered for 10 years since beyond that the present value of the benefit is not expected to be material

Remaining Useful Life of Intangible Assets

Life of Intangible Assets

Factors affecting life expectancy and retirement pattern



Life of Intangible Assets

Finite Life

- An intangible asset is considered to have a finite useful life if there is a visibility on the time frame over which the asset is expected to contribute to cash flows.

Indefinite Life

- Conversely, an intangible asset has an indefinite life when there is no visibility on the time frame over which the asset is expected to contribute to cash flows, and when there are no legal, regulatory, contractual, competitive, or other factors that limit the useful life of the asset.
- Note that “indefinite” life does not indicate the asset has an “infinite” life. It only means that the life of the asset is beyond the foreseeable horizon.
- Only a small group of assets such as trade names, certain licenses, franchise rights, and other assets with unique industry-specific factors can have an indefinite life.

Life of Intangible Assets

Type of Intangible	Life of the intangible
Tradenames/Trademarks	In case of a business combination, such assets are often phased out over time and replaced with acquirer's brand. This phase-out period can be considered as a reasonable proxy for the asset's useful life.
Patented technology	For such assets, the value of the asset would reduce significantly at the end of the patent protection period due to competition. Remaining term of patent protection can be considered as useful life of patented technology.
Customer relationships	Attrition factor is generally applied to value customer relationships to reflect the customer base that will diminish over time. The inverse of the attrition factor can be considered to estimate the remaining useful life of customer relationships.
Backlog	The time over which the backlog will be completed can be considered as remaining useful life of the asset.
Contractual relationships	Assets based on contract with finite life should be evaluated to determine whether the life will extend beyond the stipulated terms without significant additional costs. When that is not the scenario, the contract term can be considered as useful life.
Developed software technology	Developed software sold to customers reduces in value over time as the code is changed to include new features, update compatibility, etc. In such cases, the estimated % of code replaced each year can help in determining the useful life (e.g. software for which 20% of the code is re-written each year may have a 5-year life).

Case Studies

Case Studies

A power plant agreement is to be valued. The MEEM method is going to be used for the same. The plant is not currently operational and its construction is work-in-progress. Should the contributory asset charge for fixed assets, whose construction is in progress, considered under MEEM?

A brand is to be valued using MEEM. It is a very established brand and has an indefinite life. How are the contributory asset charges related to tangible/intangible assets considered to determine the terminal value? How do you estimate the contributory asset charge for an intangible asset with a definite life?

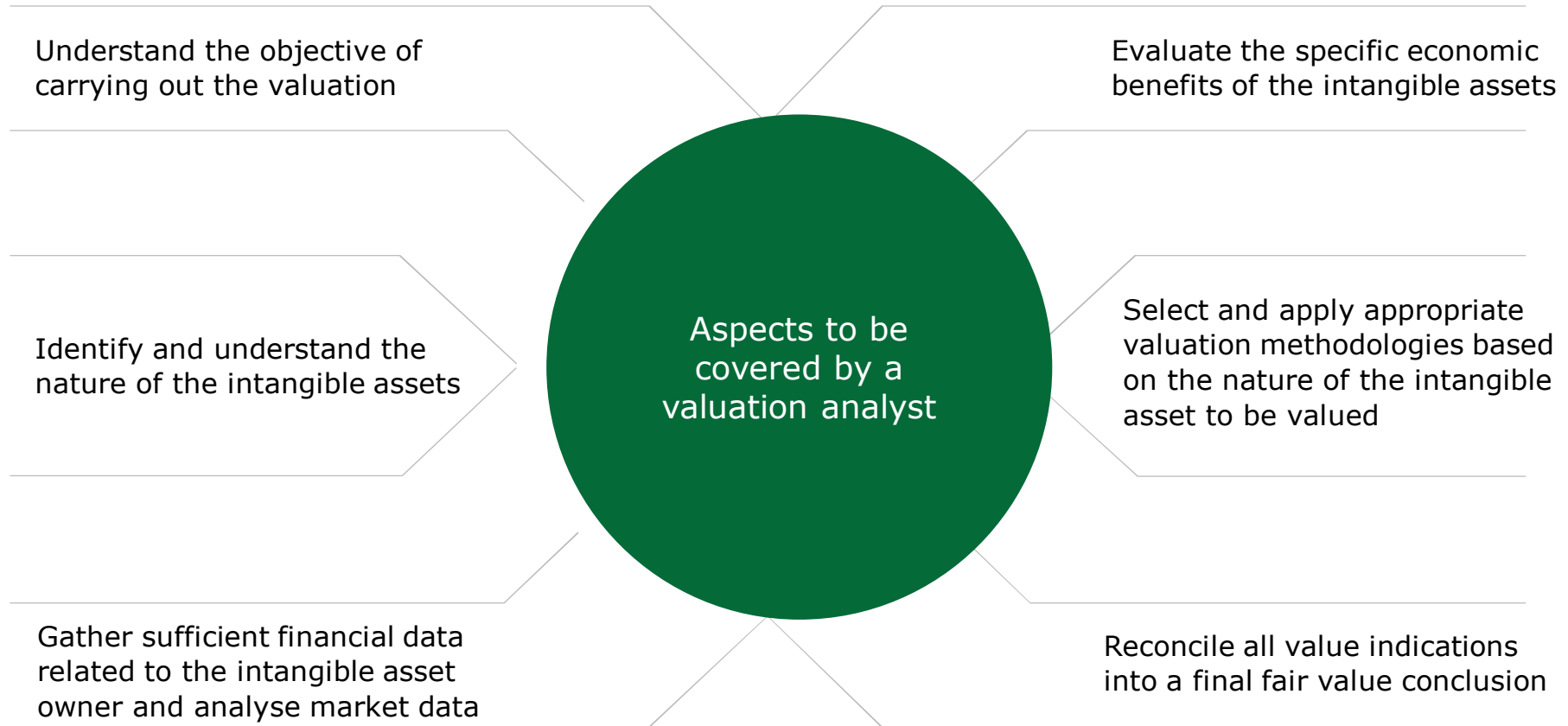
The costs to operate an intangible asset is higher compared to the cash flows expected from the asset. Should we still value the intangible asset?

The acquirer had pre-existing contractual relationship with the acquired customers prior to their acquisition. While considering the cash flows from acquired customers in MEEM, should the cash flows generating as a result of pre-existing contract/relationship with the acquirer be considered?

There are two intangible assets to be valued using MEEM in a particular company. Both have overlapping revenue streams. How will the cross charge of both the intangible assets under MEEM be considered?

Conclusion

Conclusion



THANK YOU