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SUPPLEMENT PROFESSIONAL PROGRAMME (NEW SYLLABUS)

for

December, 2020 Examination

SUBJECT NAME

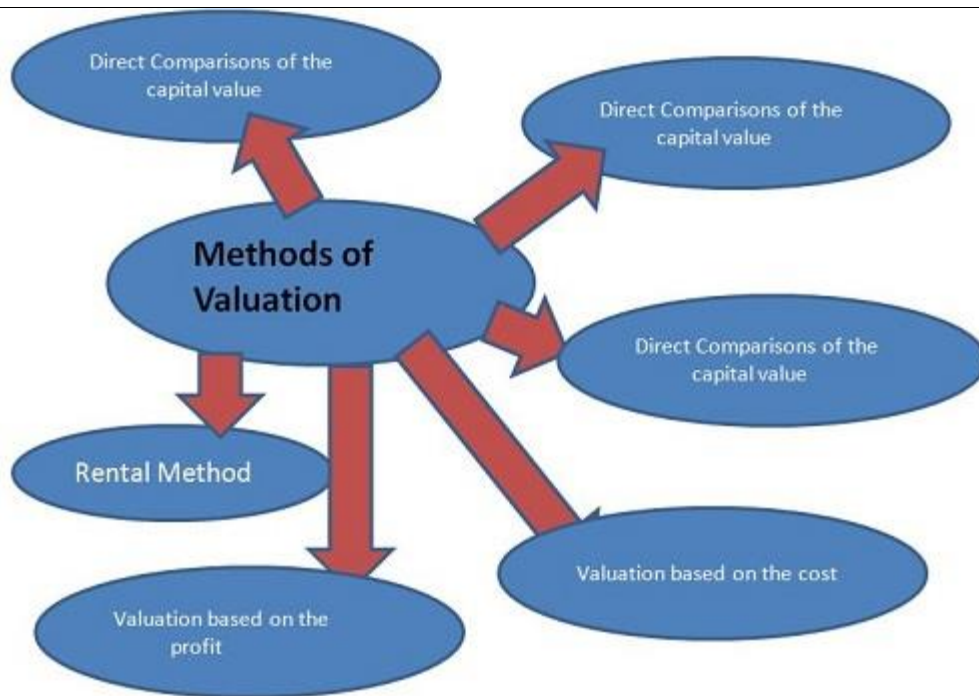
MODULE 3

PAPER 9.7

Valuations & Business Modelling

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	Particulars of Change	Page No. of the study material relevant for December 2020 examination	Remarks
Lesson 7 Valuation of Tangibles	<p>Valuation of Land and Building</p> <p>Valuation of a building depends on the type of the building, its structure and durability, on the situation, size, shape, frontage, width of roadways, the quality of materials used in the construction and present day prices of materials. Valuation also depends on the height of the building, height of the plinth, thickness of the wall, nature of the floor, roof, doors, windows etc. The valuation of a building is determined on working out its cost of construction at present day rate and allowing a suitable depreciation.</p> <p>The six methods of valuation are as under:</p> <ol style="list-style-type: none"> 1. Rental Method of Valuation 2. Direct Comparisons of the capital value 3. Valuation based on the profit 4. Valuation based on the cost 5. Development method of Valuation 6. Depreciation method of Valuation <p>The above methods of building valuation is presented in the exhibit below-</p>	169-171	Important concepts pertaining to land and building, a crucial fixed assets of business have been included



Source:Civil Projects Online

Rental Method of Valuation

In this method, the net income by way of rent is found out by deducting all outgoing from the gross rent. A suitable rate of interest as prevailing in the market is assumed and Year’s purchase is calculated. This net income multiplied by Year’s Purchase gives the capitalized value or valuation of the property. This method is applicable only when the rent is known or probable rent is determined by enquiries.

Direct comparison with the capital Value

This method may be adopted when the rental value is not available from the property concerned, but there are evidences of sale price of properties as a whole. In such cases, the capitalized value of the property is fixed by direct comparison with capitalized value of similar property in the locality.

Valuation based on profit

This method of Valuation is suitable for buildings like hotels, cinemas, theatres etc for which the capitalized value depends on the profit. In such cases, the net income is worked out after deducting gross income; all possible working expense, outgoings, interest on the capital invested etc. The net profit is multiplied by Year’s Purchase to

<p>get the capitalized value. In such cases, the valuation may work out to be high in comparison with the cost of construction.</p> <p>Valuation based on cost</p> <p>In this method, the actual cost incurred in constructing the building or in possessing the property is taken as basis to determine the value of property. In such cases, necessary depreciation should be allowed and the points of obsolescence should also be considered.</p> <p>Development Method of Valuation</p> <p>This method of Valuation is used for the properties which are in the underdeveloped stage or partly developed and partly underdeveloped stage. If a large place of land is required to be divided into plots after providing for roads, parks etc, this method of valuation is to be adopted. In such cases, the probable selling price of the divided plots, the area required for roads, parks etc and other expenditures for development should be known.</p> <p>If a building is required to be renovated by making additional changes, alterations or improvements, the development method of Valuation may be used.</p> <p>Depreciation Method of Valuation</p> <p>According to this method of Valuation, the building should be divided into four parts:</p> <ol style="list-style-type: none"> 1. Walls 2. Roofs 3. Floors 4. Doors and Windows <p>And the cost of each part should first be worked out on the present day rates by detailed measurements.</p> <p>The present value of land and water supply, electric and sanitary fittings etc should be added to the valuation of the building to arrive at total valuation of the property.</p>			
<p>Valuation of Plant and Machinery (P&M)</p> <p>Valuation of Plant & Machinery and Industrial Assets may generally be required for following purposes:</p> <p>Mergers & Acquisitions – Pre Merger and Post Merger</p>		173	Inclusion of significant points pertaining to valuation of plant

	<p>Financial Reporting – PPA or Impairment Testing (under Indian GAAP, IFRS and US GAAP)</p> <p>Raising of Funds from Public / Private Banks, NBFC’s, PE / HNI Funds, etc (Secured Lending)</p> <p>Distress Assets / Non Performing Asset</p> <p>Strategic Sale or Disinvestment</p> <p>Management information & Strategic Planning</p> <p>Dispute, Arbitration & Litigation support</p> <p>Insurance - Ascertaining right Sum Insured or for Claim submission</p> <p>Initial Public offerings</p> <p>Cost Investigations</p>		and machinery
<p>Lesson 8</p> <p>Valuation of Intangibles</p>	<p>There are a myriad of reasons why analysts would be asked to value a trademark. Those reasons often fall into one of three buckets:</p> <ol style="list-style-type: none"> 1. Valuation for transactional purposes other than tax compliance 2. Valuation for financial accounting purposes 3. Valuation for income tax and other tax compliance purposes <p>The first bucket of reasons pertains broadly to transactions between parties that involve a trademark where the value of the trademark is necessary to define the terms of the transaction or otherwise complete the transaction. For example, a buyer may require independent assessment of a trademark’s value</p> <p>A lender may require the valuation of a trademark before the trademark can be pledged as part of the collateral for a loan.</p> <p>The second bucket of reasons pertains to financial accounting requirements under the securities laws of governing jurisdictions. In the United States, federal securities law is enforced by the Securities and Exchange Commission (SEC). The SEC may, under certain circumstances, require the recognition of trademarks and other intangible property on a reporting company’s balance sheet. For example, this may occur when a trademark is acquired in a business combination.</p> <p>The third bucket of reasons pertains to the analysis of a trademark for tax compliance purposes. Many transactions involving the sale or transfer of trademarks qualify as taxable events. Income tax rules generally stipulate how the tax basis of transferred assets is determined and what expenses associated with the assets are permissible for computing taxable income</p>	189	Brief of trademark has been incorporated

Valuation of Brand

Since the early 1980s there have been lively and serious discussions about the concept of brand evaluation. In the 1990s brand evaluation was then popularised by Aaker (1991), Srivastava and Shocker (1991), Kapferer (1992), and Keller (1993, 1998, 2002) to name but a few.

Any marketer understands that brand holds tremendous value—the strength of iconic companies such as Coca-Cola or Apple is a testament to that. But, unlike other items on the balance sheet that can be assigned a dollar value—investments, liabilities, and the like—it’s difficult to assign value to the attributes associated with brand. How do you put a dollar value on consumer trust? How do you value reputation? Determining the value of brand is not as cut-and-dried as other assets. That’s not to say that many firms haven’t tried, with varying levels of “success.”

Assessing Brand Strength: Strategic Diagnosis

1. Risks associated with the future market
 - i) Growth of the market
 - ii) Profitability of the market
 - iii) Importance of competitor and retailer brands
 - iv) Expected technological innovations
 - v) Changes in customer expectations
 - vi) Strength of barriers to entry
2. Risks associated with the sources of brand value
 - i) Quality of past advertising support
 - ii) Image and reputation
 - iii) Quality of trademarks and their registration
 - iv) Customer loyalty
 - v) Distributor attitudes and loyalty
 - vi) Attitudes of opinion leaders
 - vii) Relative position in the market
3. Risk associated with the product
 - i) Life of patents
 - ii) Existence of ‘me-too’ brands and product copiability
 - iii) R&D perspectives.
4. Risk associated with the business
 - i) Financial support
 - ii) Strategic coherence
5. Potential
 - i) Potential for geographical extension
 - ii) Licensing potential

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It is imperative to comprehend the strengths of brand

iii) Potential for extension into other product categories

Brand Valuation and Brand Equity

Brand Valuation can be defined as the process used to calculate the value of a brand or the amount of money another party is willing to pay for it or the financial value of the brand.

The concept of Brand Value, although similarly constructed to that of Brand Equity, is distinct. To put it simply, while brand equity deals with a consumer based perspective, brand value is more of a company based perspective. As early as 1991, Srivastava and Shocker identified brand equity as a multidimensional construct composed of brand strength and brand value. This indicates that brand equity is a concept a lot broader than brand value.

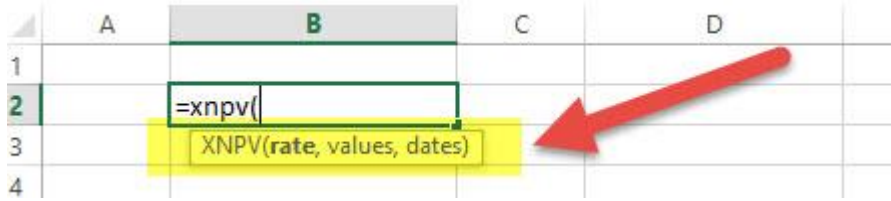
In order to further this discussion of the distinction between the two, let us consider an example. This specific case concerns the \$1.7 billion purchase of Snapple by Quaker Oats in 1994. Quaker Oats' primary distribution strength was confined to

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Overview of brand valuation and brand equity has been covered

	<p>supermarkets and drugstores whereas smaller convenience stores and gas stations constituted more than half of Snapple’s sales. But despite the purchase, Quaker Oats was unable to increase supermarket and drugstore sales enough to compensate for lost convenience and gas station sales and was forced to sell Snapple for \$ 300 million just three years later. As seen in this case, Snapple’s Brand Value decreased enormously over the three years that Quaker Oats owned it, but this had nothing to do with its brand equity, which could have been constant or increased owing to the additional exposure in supermarkets and drug stores. What can be concluded from this example is that neither a brand’s purchase price nor a dramatic change in its selling price provides information about the magnitude or movement of a brand’s equity. This also means that while a company may have the highest brand value, it is not necessary that it also has high brand equity. For example, Apple’s Brand Value ID ranked #1 is worth \$185 billion whereas its equity is #11 and Coca Cola has the highest Brand Equity.</p>						
	<p>Taking another example, Excel Limited earn an average profit of INR 50,000 with capital investment of INR 4,00,000. The normal rate of return is 10%. Using capitalisation of super profits method calculate the value of the goodwill of the company.</p> <p>Goodwill = Super profits x (100/ Normal Rate of Return) = 10,000 x 100/10 = 1,00,000.</p> <p>Working notes:</p> <p>(i). Normal Profit = Capital employed x Normal Rate of Return/100 = 4,00,000 x 10/100 = 40,000</p> <p>(ii) Super Profit = Average Profit – Normal Profit = 50,000 – 40,000 = 10,000</p>	228	Another example of valuation of goodwill through super profits have been included				
	<p>2. M/s Zenith is a partnership firm with Jack and Jill as its partners. They now decide to admit James in the firm and hence need to value goodwill. Capital employed is 5,00,000 at the end of the 4th year. The normal rate of return is 15%. Assume the interest rate is equal to the Normal Rate of Return. Calculate Goodwill using Annuity Method. Their profits for the last 4 years are:</p> <table data-bbox="154 1822 430 1892"> <thead> <tr> <th>Year</th> <th>Profits (INR)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>130000</td> </tr> </tbody> </table>	Year	Profits (INR)	1	130000	229	Case study on valuation of goodwill through annuity method
Year	Profits (INR)						
1	130000						

	<p>2 120000 3 150000 4 200000</p> <p>Goodwill = Super Profit x Discounting factor = 75,000 x 2.855 = 214,125</p> <p>Working notes:</p> <p>(i) Average Profit = Sum of profits / No. of years = 600,000/4 = 150,000</p> <p>(ii) Normal Profit = Capital employed x (Normal Rate of Return/100) = 500000 x (15/100) = 75000</p> <p>(iii) Super Profit = Average Profit – Normal Profit = 150,000 – 75000 = 75,000</p>		
	<p>Considering another example, a business earned average profits of Rs. 1,00,000 during the last few years. The normal rate of return in similar type of business is 10%. The assets of the business were Rs. 10,00,000 and external liabilities was Rs. 2,00,000. Calculate the value of goodwill of the firm by super profit method, if the goodwill is valued at 3 years' purchase of super profits.</p> <p>Average profit of the firm = INR 1,00,000 Capital employed = Assets – External Liabilities Therefore, capital employed = 10,00,000 – 2,00,000 = INR 8,00,000 Normal Profits = 8,00,000 x 10/100 = INR 80,000 Super Profits = 1,00,000 – 80,000 = INR 20,000 Goodwill = Super Profits x Purchase Year Therefore, Goodwill = 20,000 x 3 years = INR 60,000</p>	230	Case study on valuation of goodwill through super profits method.
Lesson 13	<p>Other Financial Functions</p> <p>XNPV: Financial Function in Excel</p> <p>This financial function is similar as the NPV with a twist. Here the payment and income are not periodic. Rather specific dates are mentioned for each payment and income. Here's how we will calculate it –</p>	395-399	Additional crucial financial concepts calculation through MS-Excel has been covered, as in current scenario various



XNPV = (Rate, Values, Dates)

- Rate = Discount rate for a period
- Values = Positive or negative cash flows (an array of values)
- Dates = Specific dates (an array of dates)

XNPV Example

Here is a series of data from which we need to find NPV –

Details	In US \$	Dates
Rate of Discount	5%	
Initial Investment	-1000	1 st December
Return from 1 st year	300	1 st January 2
Return from 2 nd year	400	1 st February
Return from 3 rd year	400	1 st March 20
Return from 4 th year	300	1 st April 20

Solution: In excel, we will do as follows –

financial calculations are required for formulating financial models, policies and taking financial decisions.

	A	B	C	D	E
1					
2		Details	In US \$		
3		Rate of Discount	5%		
4		Initial Investment	-1000	1-Dec-11	
5		Return from 1st year	300	1-Jan-12	
6		Return from 2nd year	400	1-Feb-13	
7		Return from 3rd year	400	1-Mar-14	
8		Return from 4th year	300	1-Apr-15	
9					
10		=XNPV(C3,C4:C8,D4:D8)			
11					
12					

=XNPV (5%, B2:B6, C2:C6)

= US\$289.90

XIRR

Formula: =XIRR(cash flows, dates)

Closely related to XNPV, another important function is XIRR, which determines the internal rate of return for a series of cash flows, given specific dates.

XIRR should always be used over the regular IRR formula, as the time periods between cash flows are very unlikely to all be exactly the same.

PMT

Formula: =PMT(rate, number of periods, present value)

This is a very common function in Excel for finance professionals working with real estate financial modelling. The formula is most easily thought of as a mortgage payment calculator.

Given an interest rate, and a number of time periods (years, months, etc.) and the total value of the loan (e.g., mortgage) you can easily figure out how much the payments will be.

Remember this produces the total payment, which includes both principal and interest.

See an example below that shows what the annual and monthly payments will be for a \$1 million mortgage with a 30-year term and a 4.5% interest rate.

	A	B	C	D
1				
2				
3				
4				
5		Rate (per period)	4.5%	
6				
7		# of Periods	30	
8				
9		Present value	1,000,000	
10				
11		PMT	(61,392)	
12		PMT	=PMT(C5,C7,C9)	
13				
14		Monthly PMT	(5,116)	
15				

IPMT

Formula: = IPMT(rate, current period #, total # of periods, present value)

IPMT calculates the interest portion of a fixed debt payment. This Excel function works very well in conjunction with the PMT function above. By separating out the interest payments in each period, we can then arrive at the principal payments in each period by taking the difference of PMT and IMPT.

In the example below, we can see that the interest payment in year 5 is \$41,844 on a 30-year loan with a 4.5% interest rate.

	A	B	C	D
1				
2				
3				
4				
5		Rate (per period)	4.5%	
6				
7		Current Period	5	
8				
9		# of Periods	30	
10				
11		Present value	1,000,000	
12				
13		IPMT	(41,844)	
14		IPMT	=IPMT(C5,C7,C9,C11)	
15				
16				

EFFECT

Formula: =EFFECT(interest rate, # of periods per year)

This finance function in Excel returns the effective annual interest rate for non-annual compounding. This is a very important function in Excel for finance professionals, particularly those involved with lending or borrowing.

For example, a 20.0% annual interest rate (APR) that compounds monthly is actually a 21.94% effective annual interest rate.

See a detailed example of this Excel function below.

	A	B	C	D
1				
2				
3				
4				
5		Interest Rate	20.00%	
6				
7		# of periods per year	12	
8				
9		Annual Interest Rate	=EFFECT(C5,C7)	
10		Annual Interest Rate	21.94%	
11				
12				

DB (Declining Balance)

Formula: =DB(cost, salvage value, life/# of periods, current period)

This is a great Excel function for accountants and finance professionals. If you want to avoid building a large Declining Balance (DB) depreciation schedule, Excel can calculate your depreciation expense in each period with this formula.

Below is an example of how to use this formula to determine DB depreciation.

	A	B	C	D
1				
2				
3				
4				
5		Cost	1,000,000	
6				
7		Salvage value	50,000	
8				
9		Life (# of periods)	12	
10				
11		Current Period	3	
12				
13		DB Depreciation	=DB(C5,C7,C9,C11)	
14		DB Depreciation	134,112	
15				

RATE

Formula: =RATE(# of periods, coupon payment per period, price of bond, face value of bond, type)

The RATE function can be used to calculate the Yield to Maturity for a security. This is useful when determining the average annual rate of return that is earned from buying a bond.

	A	B	C	D
1				
2				
3				
4				
5		# of Periods	10	
6				
7		Coupon (per period)	100	
8				
9		Cost of Bond	(950)	
10				
11		Face Value of Bond	1,000	
12				
13		Yield to Maturity (YTM)	=RATE(C5,C7,C9,C11,1)	
14		Yield to Maturity (YTM)	12.1%	
15				
16				

SLOPE

Formula: =SLOPE(dependent variable, independent variable)

Finance professionals often have to calculate the Beta (volatility) of a stock when performing valuation analysis and financial modeling. While you can grab a stock's Beta from Bloomberg or from CapIQ, it's often the best practice to build the analysis yourself in Excel.

The slope function in Excel allows you to easily calculate Beta, given the weekly returns for a stock and the index you wish to compare it to.

The example below shows exactly how to calculate beta in Excel for financial analysis.

	A	B	C	D
1				
2		Weekly returns		
3				
4		Index	Stock	
5		-6%	-9%	
6		10%	15%	
7		-3%	-5%	
8		2%	3%	
9		-2%	-3%	
10		5%	8%	
11		11%	17%	
12		9%	14%	
13		7%	11%	
14		0%	0%	
15		10%	15%	
16		9%	14%	
17		-4%	-6%	
18				
19		Beta (slope)	=SLOPE(C5:C17,B5:B17)	
20		Beta (slope)		1.5
21				