

Financial analysis

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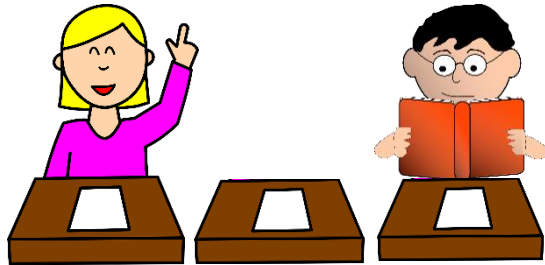
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Students in class



Speak
loud to
the class

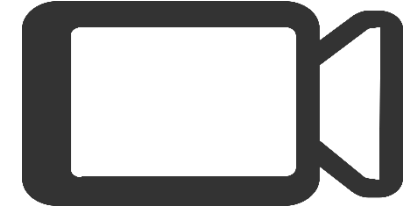


Keep
safety
distance

Students online



Connect on
zoom from
your agenda
link



Activate
your
camera



Mute your
microphone



Be connected
with a
headset/mic



Pin the screen
Use Side-by-
side mode

Analyze the different dimensions of the performance of a company in all sectors of activities (services, production or projects)

Balance sheet analysis

Profit and Loss analysis

Performance ratios

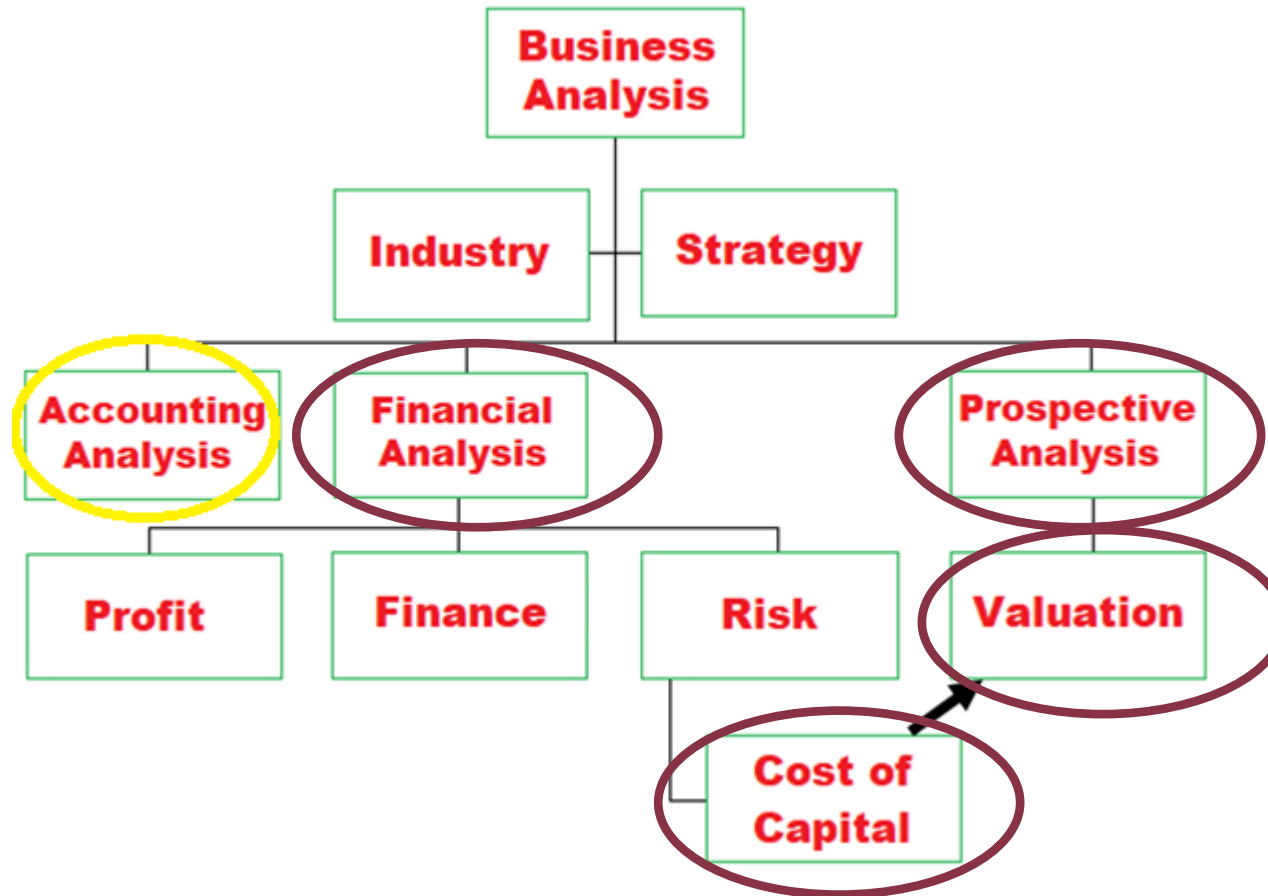
Present in writing and orally the results of a performance study and recommendations for decision-making.

Develop a first approach of valuation methods

Case NameVa	Time in class	reminder	Areas of financial analysis
Balance sheet detective	3 hrs	Balance sheet structure	Common size balance sheet matching
Financial Analysis Identifying the industry	3 hrs with time to search for industry information online	P&I structure Main Financial ratio	Common size + ratios industry wise matching
What value for ThermoCompact?	6 hrs (initial time to elaborate valuation methods)	Valuations method	Financial diagnosis; valuation method choice; value of firm
Yestudent	2 hrs	Context analysis	Valuation startup ; Seed financing ; Fundraising ; DCF Method ; Comparables Method

- Cases are released on C@mpus
- The final exam will last 1 hour at the end of the last session.
 - it will consist of 20 multiple-choice questionnaire.

Business analysis reminder



1. Historical data analysis

Analysis of available figures is a prerequisite of the initial work to be conducted before the valuation process begins. Indeed, the figures are the raw data that the assessments are based on.

Prepare (or review) a statement of financial position

Prepare (or review) a statement of profit or loss

Measure and analyze financial performance

Evaluate value creation

2. Add complementary information

Clearly identify ALL assets used in business (including intangible assets)

Estimate standardized working capital ratios and establish net financial debt on the day of valuation

Evaluate the environment

3. Validate financial forecasts by comparing them with past results (revenue, profit margin) and competitors

4. Develop a validation or modelling tool for future investments.



Case 1

Balance sheet detective

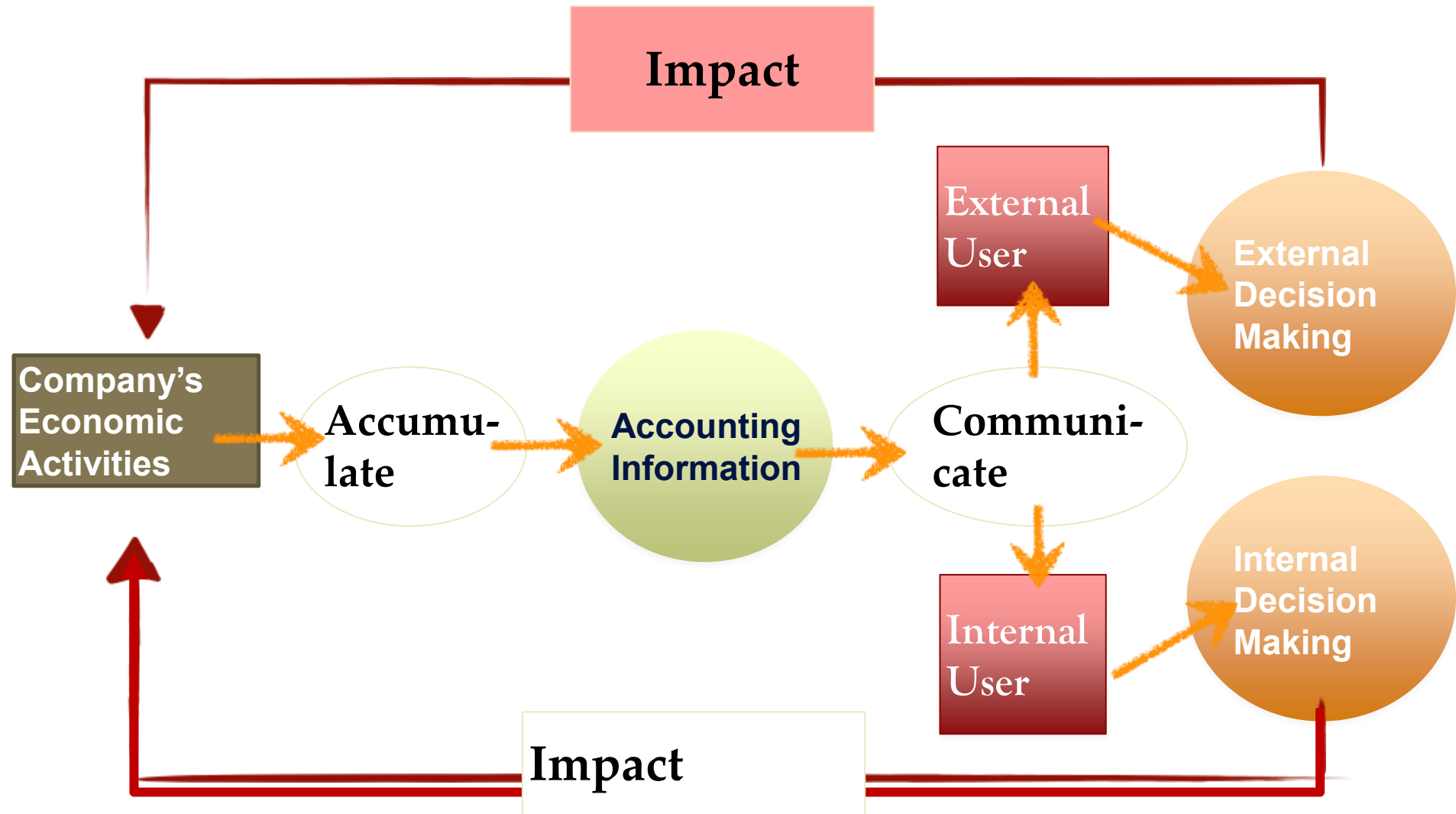
Financial statement Reminder

Financial statements are a structured representation of the financial position and financial performance of an entity.

The objective of financial statements is to provide information about

- the financial position
- financial performance and cash flows of an entity
- useful to a wide range of users in making economic decisions.
- the results of the management's stewardship of the resources entrusted to it

This information, along with other information in the notes, assists users of financial statements in predicting the entity's future cash flows and, in particular, their timing and certainty.



A complete set of financial statements

(a) a statement of financial position as at the end of the period

a photo of your business's net worth taken at the closing date :

For example 31 of December N



(b) a statement of profit or loss and other comprehensive income for the period

Explanation of how the entity performed during the last period : Revenues minus expenses = net income

(c) a statement of changes in equity for the period

Includes the net income + capital increase



(d) a statement of cash flows for the period

Explanation of how the entity managed “cash” during the last period :

Net cash provides by operating activities, capital expenditure, financing activities

(e) notes, comprising significant accounting policies and other explanatory information

Example Income statement– Orange June 30 2021

Consolidated income statement

(in millions of euros, except for per share data)	Note	June 30, 2021	June 30, 2020 ⁽¹⁾
Revenue		20,867	20,769
External purchases		(8,736)	(8,546)
Other operating income		322	271
Other operating expenses	5.1	(295)	(448)
Labor expenses		(4,421)	(4,376)
Operating taxes and levies		(1,219)	(1,232)
Gains (losses) on disposal of fixed assets, investments and activities	3.1	12	59
Restructuring costs	5.2	(245)	(13)
Depreciation and amortization of fixed assets		(3,499)	(3,549)
Depreciation and amortization of financed assets		(41)	(22)
Depreciation and amortization of right-of-use assets		(731)	(652)
Reclassification of translation adjustment from liquidated entities		(0)	-
Impairment of goodwill	6.1	(3,702)	-
Impairment of fixed assets		(4)	1
Impairment of right-of-use assets		(60)	(6)
Share of profits (losses) of associates and joint ventures		1	(6)
Operating income		(1,752)	2,250
Cost of gross financial debt excluding financed assets		(461)	(569)
Interests on debts related to financed assets		(1)	(1)
Gains (losses) on assets contributing to net financial debt		(5)	1
Foreign exchange gain (loss)		57	(115)
Interests on lease liabilities		(58)	(58)
Other net financial expenses		32	(3)
Finance costs, net	8	(436)	(744)
Income taxes	7	(417)	(491)
Consolidated net income		(2,605)	1,015
Net income attributable to owners of the parent company		(2,769)	927
Non-controlling interests		165	88
Earnings per share (in euros) attributable to parent company			
Net income			
- basic		(1.09)	0.30
- diluted		(1.09)	0.29

(1) The first semester 2020 figures have been restated of the IFRS IC decision on lease term (see Note 2.3).

Impairment of
goodwill

Consolidated statement of comprehensive income

(in millions of euros)	Note	June 30, 2021	June 30, 2020 ⁽¹⁾
Consolidated net income		(2,605)	1,015
Remeasurements of the net defined benefit liability		69	(16)
Assets at fair value		(9)	(33)
Income tax relating to items that will not be reclassified		(18)	(3)
Items that will not be reclassified to profit or loss (a)		43	(51)
Assets at fair value		(0)	(2)
Cash flow hedges	8.2	193	554
Translation adjustment gains and losses	11.5	102	(184)
Income tax relating to items that are or may be reclassified		(55)	(177)
Share of other comprehensive income in associates and joint ventures that are or may be reclassified		-	-
Items that are or may be reclassified subsequently to profit or loss (b)		239	191
Other consolidated comprehensive income (a) + (b)		282	140
Consolidated comprehensive income		(2,323)	1,155
Comprehensive income attributable to the owners of the parent company		(2,504)	1,100
Comprehensive income attributable to non-controlling interests		181	55

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Example balance sheet – Orange June 30 2021

Consolidated statement of financial position

(in millions of euros)	Note	June 30, 2021	December 31, 2020
Assets			
Goodwill	6.2	23,914	27,596
Other intangible assets		14,623	15,135
Property, plant and equipment		29,696	29,075
Right-of-use assets		7,613	7,009
Interests in associates and joint ventures		96	98
Non-current financial assets related to Mobile Financial Services activities	10.1	1,129	1,210
Non-current financial assets	8.1	978	1,516
Non-current derivatives assets	8.1	305	132
Other non-current assets		140	136
Deferred tax assets		739	731
Total non-current assets		79,234	82,639
Inventories		800	814
Trade receivables	4.1	5,461	5,620
Other customer contract assets		1,349	1,236
Current financial assets related to Mobile Financial Services activities	10.1	2,237	2,075
Current financial assets	8.1	2,361	3,259
Current derivatives assets	8.1	154	162
Other current assets		1,595	1,701
Operating taxes and levies receivables		1,039	1,104
Current taxes assets		127	128
Prepaid expenses		928	850
Cash and cash equivalents	8.1	6,791	8,145
Total current assets		22,843	25,094
Assets held for sale	3.2	790	-
Total assets		102,867	107,733

Decrease in Goodwill
High level of PPE

Very low level of
inventories

Example balance sheet – Orange June 30 2021

(in millions of euros)	Note	June 30, 2021	December 31, 2020
Equity and liabilities			
Share capital		10,640	10,640
Share premiums and statutory reserve		16,859	16,859
Subordinated notes	11.4	5,497	5,803
Retained earnings		(3,095)	1,092
Equity attributable to the owners of the parent company		29,902	34,395
Non-controlling interests	11.6	2,469	2,643
Total equity	11	32,370	37,038
Non-current financial liabilities	8.1	31,182	30,089
Non-current derivatives liabilities	8.1	384	844
Non-current lease liabilities		6,625	5,875
Non-current fixed assets payables		1,457	1,291
Non-current financial liabilities related to Mobile Financial Services activities	10.1	0	0
Non-current employee benefits		1,926	2,202
Non-current dismantling provisions		858	885
Non-current restructuring provisions		59	53
Other non-current liabilities		271	307
Deferred tax liabilities		1,168	855
Total non-current liabilities		43,930	42,401
Current financial liabilities	8.1	3,516	5,170
Current derivatives liabilities	8.1	133	35
Current lease liabilities		1,320	1,496
Current fixed assets payables		2,916	3,349
Trade payables		6,480	6,475
Customer contract liabilities		2,251	1,984
Current financial liabilities related to Mobile Financial Services activities	10.1	3,251	3,128
Current employee benefits		2,289	2,192
Current dismantling provisions		14	16
Current restructuring provisions		222	64
Other current liabilities		1,924	2,267
Operating taxes and levies payables		1,565	1,279
Current taxes payables		328	673
Deferred income		182	165
Total current liabilities		26,391	28,294
Liabilities related to assets held for sale	3.2	175	-
Total equity and liabilities		102,867	107,733

Net result not disclose
on a separate line

High level of debts

Example Change in equity – Orange June 30 2021

Balance as of December 31, 2020		2,660,056,599	10,640	16,859	5,803	1,852	(759)	34,395	2,484	159	2,643	37,038
Consolidated comprehensive income		-	-	-	-	(2,769)	265	(2,504)	165	17	181	(2,323)
Share-based compensation		-	-	-	-	4	-	4	1	-	1	5
Purchase of treasury shares	11.2	-	-	-	-	(3)	-	(3)	-	-	-	(3)
Dividends	11.3	-	-	-	-	(1,330)	-	(1,330)	(216)	-	(216)	(1,545)
Issues and purchases of subordinated notes	11.4	-	-	-	(306)	(6)	-	(311)	-	-	-	(311)
Subordinated notes remuneration	11.4	-	-	-	-	(163)	-	(163)	-	-	-	(163)
Changes in ownership interests with no gain/loss of control	3	-	-	-	-	(188)	-	(188)	(142)	-	(142)	(330)
Other movements		-	-	-	-	2	-	2	1	-	1	8
Balance as of June 30, 2021		2,660,056,599	10,640	16,859	5,497	(2,601)	(494)	29,902	2,292	176	2,469	32,371

(1) The first semester 2020 figures have been restated of the IFRS IC decision on lease term (see Note 2.3).

Example Statement of cash flow – Orange June 30 2021

Consolidated statement of cash flows

(in millions of euros)	Note	June 30, 2021	June 30, 2020 ⁽¹⁾
Operating activities			
Consolidated net income		(2,605)	1,015
Non-monetary items and reclassified items for presentation		9,817	6,355
Operating taxes and levies		1,219	1,232
Gains (losses) on disposal of fixed assets, investments and activities	3.1	(12)	(59)
Other gains and losses		(16)	(4)
Depreciation and amortization of fixed assets		3,499	3,549
Depreciation and amortization of financed assets		41	22
Depreciation and amortization of right-of-use assets		731	652
Changes in provisions		(275)	(288)
Reclassification of cumulative translation adjustment from liquidated entities		0	-
Impairment of goodwill	6	3,702	-
Impairment of fixed assets		4	(1)
Impairment of right-of-use assets		60	6
Share of profits (losses) of associates and joint ventures		(1)	6
Operational net foreign exchange and derivatives		7	(4)
Finance costs, net		436	744
Income taxes	7	417	491
Share-based compensation		5	9
Changes in working capital and operating banking activities ⁽²⁾		276	(1,013)
Decrease (increase) in inventories, gross		9	24
Decrease (increase) in trade receivables, gross		136	(699)
Increase (decrease) in trade payables		22	(248)
Changes in other customer contract assets and liabilities		164	41
Changes in other assets and liabilities ⁽³⁾		(54)	(131)
Other net cash out		(2,129)	(2,021)
Operating taxes and levies paid		(985)	(871)
Dividends received		7	3
Interest paid and interest rates effects on derivatives, net ⁽⁴⁾		(651)	(625)
Income taxes paid		(500)	(527)
Net cash provided by operating activities (a)		5,360	4,336

Income taxes paid		(500)	(527)
Net cash provided by operating activities (a)		5,360	4,336
Investing activities			
Purchases and sales of property, plant and equipment and intangible assets		(4,258)	(3,629)
Purchases of property, plant and equipment and intangible assets ⁽⁵⁾		(4,186)	(3,395)
Increase (decrease) in fixed assets payables		(227)	(441)
Investing donations received in advance		20	7
Sales of property, plant and equipment and intangible assets		135	201
Cash paid for investment securities, net of cash acquired		0	(0)
Investments in associates and joint ventures		(2)	(2)
Purchases of equity securities measured at fair value		(42)	(29)
Sales of investment securities, net of cash transferred		0	0
Sales of investment securities at fair value		90	15
Decrease (increase) in securities and other financial assets		954	301
Investments at fair value, excluding cash equivalents		899	436
Others		55	(135)
Net cash used in investing activities (b)		(3,258)	(3,344)
Financing activities			
Medium and long-term debt issuances	8.5	1,526	2,028
Medium and long-term debt redemptions and repayments ⁽⁶⁾	8.5	(3,072)	(1,575)
Repayments of lease liabilities		(882)	(644)
Increase (decrease) of bank overdrafts and short-term borrowings		655	(219)
including redemption of subordinated notes reclassified in 2019 as short-term borrowings		-	(500)
Decrease (increase) of cash collateral deposits		574	132
Exchange rates effects on derivatives, net		50	72
Subordinated notes issuances (purchases) and other related fees	11.4	(311)	-
Coupon on subordinated notes	11.4	(163)	(186)
Proceeds (purchases) from treasury shares		(3)	(0)
Capital increase (decrease) - owners of the parent company		-	-
Capital increase (decrease) - non-controlling interests		3	1
Changes in ownership interests with no gain / loss of control		(333)	(2)
Dividends paid to owners of the parent company	11.3	(1,330)	(532)
Dividends paid to non-controlling interests	11.6	(190)	(164)
Net cash used in financing activities (c)		(3,477)	(1,090)
Net change in cash and cash equivalents (a) + (b) + (c)		(1,375)	(98)
Net change in cash and cash equivalents			
Cash and cash equivalents in the opening balance		8,145	6,481
Cash change in cash and cash equivalents		(1,375)	(98)
Non-cash change in cash and cash equivalents		21	(19)
o/w effect of exchange rates changes and other non-monetary effects		21	(19)
Cash and cash equivalents in the closing balance		6,791	6,364

Financial statement Reminder Zoom on Balance Sheet



Question

A statement of financial position (balance sheet) provides:

- A. Flow analysis of net cash provides by operating activities, capital expenditure, financing activities
- B. A photo of your business's net worth taken at the closing date
- C. Information on the level of liabilities and owner's equity
- D. The net value of fixed assets at the end of the year

Balance Sheet states the **assets, liabilities**, and **owners' equity** at a particular **point in time** and illustrates your business's net worth.

This net worth may change at any moment according to the way the business is managed and to economic conditions

To evaluate the “worth” of the company, the balance sheet disclose a complete inventory of :




Positive values such as : cash, receivable from costumers, building, industrial equipment ...**called assets**

Negatives values such as : Bank debts, payable to suppliers**called liabilities**

The difference between assets and liabilities, disclosed as net assets or equity corresponds to the worth that shareholders could share when they “sell the assets and pay the debt”

Balance sheet at the end of Y N

In the Balance sheet detective case, balance sheets are disclosed from more liquid assets (cash) to less liquid assets (PPE net)

Assets		Assets - Liabilities = owner's capital Capital + performance (accumulated results- dividends paid)
Intangible assets		Liabilities Non current liability as bank debts Current liability as Working Capital Payable
Tangible assets		
Working capital inventories		
Working capital receivable		
Cash and deposit		

Equity and enterprise value are effectively linked by the way the organization is financed (the use of financial debt).

Actionnaires	Nombre de titres	En %
Blue Capital*	75 326 258	11,09%
Colony Blue Investor**	15 186 770	2,23%
Groupe Arnault SAS***	5 000 000	0,74%
Salariés	7 085 137	1,04%
Autodétention	3 657 589	0,54%
Autocontrôle	0	0,00%
Public	573 100 246	84,36%
Total	679 336 000	100,00%



Total enterprise value

=

Value of equity

+

Value of net financial debt



Enterprise value / Equity value :

Simple example : purchase of an apartment

Value of the apartment : 100 000 €

evaluated according different criteria –size-place- market....

The actual owner of the apartment (the seller) has financed through debt financing .

40 000 € remain to be paid at the date when you purchase the apartment.

His bank demands you to reimburse directly his debt

What is the value of the apartment : « enterprise value »

100 000

What amount will you pay to the actual owner : « equity value »

60 000 (100 000-40 000)

Asset.

An item owned by the company. Reported as:

owned for more than year (non – current)

and converted to cash within one year (current)

Inventories (stock).

Goods held for resale in the normal course of business

Receivables (debtors).

Amounts owed to the company for goods and services sold on credit.

Non-current operating assets (fixed assets).

Assets owned by the company (including via finance leases) and used over a number of years to support the operating activities of the company. It may include

- intangible assets such as goodwill, patents etc.
- Tangible assets such as plants, computers, planes...

Liability.

An amount owed by the company. Reported as either payable within one year (current) or payable after more than one year (non-current).

Debt.

A source of long term finance.

Generally interest bearing

but sometimes used to represent all long term liabilities of a company.

Payables (creditors).

Amounts owed by the company for goods and services supplied on credit

Equity.

The ordinary shares of the company.
Represents legal ownership. Most often what valuation is trying to find.

Long Term Capital Employed.

The total assets less current liabilities of the company.



Balance sheet detective

Specific items

Intangible assets

An intangible asset is an identifiable non-monetary asset without physical substance.

Examples

- patented technology, computer software, databases and trade secrets
- trademarks, trade dress, newspaper mastheads, internet domains
- video and audiovisual material (e.g. motion pictures, television programs)
- customer lists
- franchise agreements
- customer and supplier relationships (including customer lists)
- marketing rights

An intangible asset, whether purchased or self-created, will be recognize if, and only if: [IAS 38.21]

it is probable that the future economic benefits that are attributable to the asset will flow to the entity; and

the cost of the asset can be measured reliably.

IAS 38 includes additional recognition criteria for internally generated intangible assets (see below) as Research and development or software

- Charge all research cost to expense
- Development costs are capitalized only after technical and commercial feasibility of the asset for sale or use have been established

If an intangible item does not meet both the definition of and the criteria for recognition as an intangible asset, IAS 38 requires the expenditure on this item to be recognized as an expense when it is incurred. [IAS 38.68]

Brands, mastheads, publishing titles, customer lists and items similar in substance that **are internally generated should not be recognized as assets. [IAS 38.63]**

The following items must be charged to expenses when incurred:

- internally generated goodwill
- start-up, pre-opening, and pre-operating costs
- training cost
- advertising and promotional cost, including mail order catalogues
- relocation costs [IAS 38.69]



Balance sheet detective
specific items
Other long term liabilities

This item include **liabilities that do not currently require interest payments, but will require payments in the future for a period of longer than one year.**

Common examples of other long-term liabilities include :

- Provisions
- Differed taxes
- Future employee benefits, such as pensions for employees currently working
- and lease payments

An essential characteristic of a liability is that the entity has a present obligation : a duty or responsibility to act or perform in a certain way.

Obligations may be legally enforceable as a consequence of a binding contract or statutory requirement.

Obligations also arise, however, from normal business practice, for example :

- an entity decides to rectify faults in its products even when these become apparent after the warranty period has expired,
- the amounts that are expected to be expended in respect of goods already sold are liabilities.



Balance sheet detective

Suggested approach

30-45 minutes for break-out group preparation

Start with easier firms to detect

Each group will present one or two companies discovered and the indices used

Suggested approach

Use your knowledge of the industries' financial characteristics and financial ratio.

- To organize the 12 companies in several groups with similar attributes
- To determine the detailed financial characteristics of those group (ie high technology-retail- ...)
- To match the firms to the specific industry

And guess who is who ?

It is up to you
Balance sheet detective



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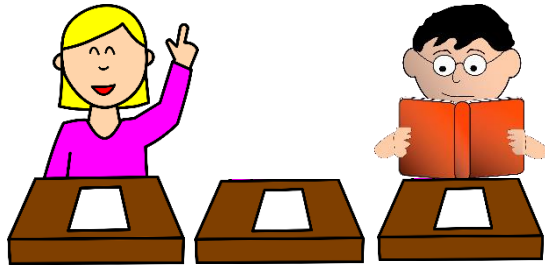
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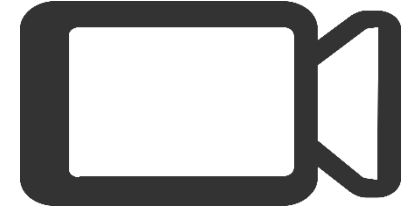


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Analyze the different dimensions of the performance of a company in all types of activities (services, production or projects)

Balance sheet analysis

Profit and Loss analysis

Performance ratios

Present in writing and orally the results of a performance study and recommendations for decision-making.

Develop a first approach of valuation methods

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Financial statements analysis

Case 2

Identifying the industry

Suggested approach

Use your knowledge of the industries' financial characteristics and financial ratio.

- To organize the 12 companies in several groups with similar attributes
- To determine the detailed financial characteristics of those group (ie high technology-retail- ...)
- To match the firms to the specific industry

And guess who is who ?

Identifying the industry

Financial statement Reminder

Financial position of an entity is affected by:

Economic resources it controls

Financial structure (equity versus liabilities)

Liquidity and solvency (ability to pay its debts)

Capacity for adaptation (ability to convert assets to cash => to adapt to changes in its environment)



**Statement of financial position
+ Changes in financial position**



Performance ratios Profitability

Gross margin Ratio :

Gros Profit/sales :60/100

Return on sales :

Net income/sales

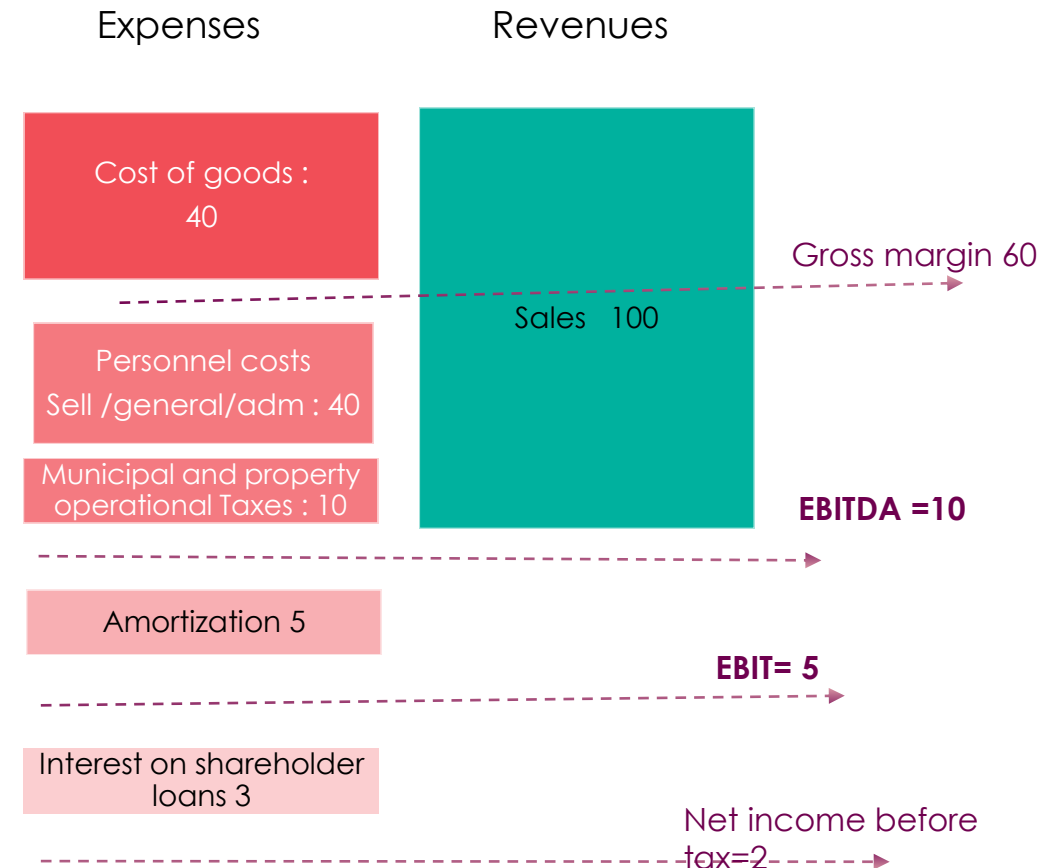
2/100

Financial leverage

Interest Coverage ratio :

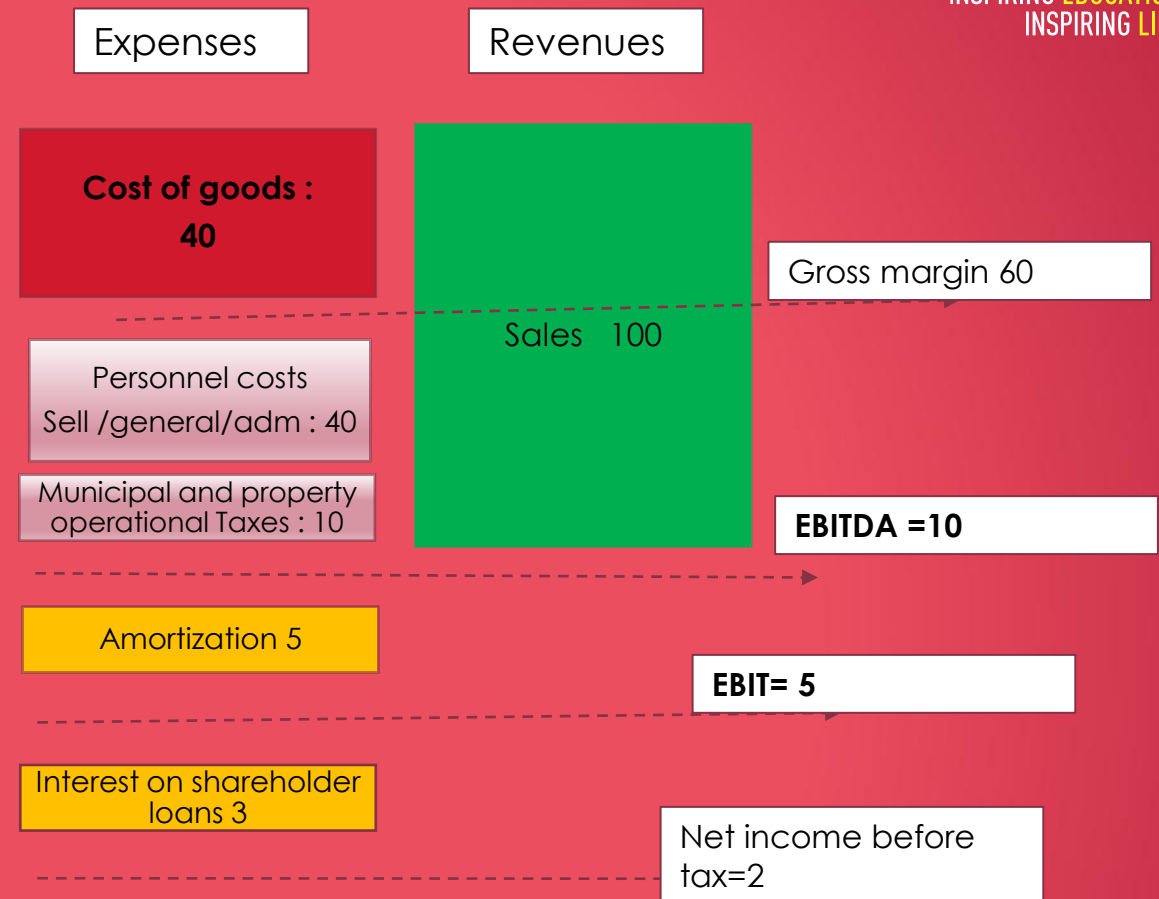
Income before Tax +interest expenses/ Interest expenses :

2+3/3=1,666





Question



What are the differences between EBIT and EBITDA?

What is the use?

Gross profit.

The direct profit from selling goods and services before overheads. This is often calculated differently in different companies

EBIT (earnings before interest and tax).

Operating profit adjusted for non-operating items.

EBITDA (earnings before interest and tax, depreciation and amortisation).

A rough approximation of cash from operations, by adding back non-cash items to profits.

Operating profit. (operating income).

The surplus from normal trading activities before tax and financing charges are taken into account.

Extraordinary items.

Items within a statement of profit or loss which are a not a normal part of business activity and are therefore deemed to be extraordinary.

In conjunction with the strategic analysis, financial analysis will ensure that the assumptions and figures used in the valuation process are objective and can be justified.

Financial statement

A thorough understanding of both the current financial position and performance of the enterprise : Balance sheet-profit and loss-ratios

Forecasts

An assessment of its future prospects, are essential to carrying out a valuation

Understanding of cash flow : inflow-outflow

Accounting environment

Analysis of the most recent statements of financial position and statements of profit or loss, especially by analytic review, enables to :

Measure the profitability and evolution of the enterprise concerned

Determine exceptional items and get closer to sustainable profits

- **Specific unusually high contract**
- **Specific issues with costumers**
- **Welcome Bonus if considered as unusual, Restructuration, ...**

Assess, in a general way if the forecasts made are prudent or overly optimistic

This analysis must also take into account season-related issues.

In this sense, when the financial year ends may influence the whole truth, especially the level of cash flow and variations in working capital requirements.

Ratio disclosed in the case : Liquidity Ratio

Cash& marketable Securities to Total assets

Information on level of cash available

Acid Test ratio (without inventories-quick ratio)

Sufficient short-term assets to cover immediate liabilities ? >1 ,

When too high, mean no investments or low dividends paid

Current Ratio = Acid ratio +inventories

also known as working capital ratio : cash mobilized to run current business

If the acid-test ratio is much lower than the current ratio, it means that current assets are highly dependent on inventory.

Comparisons are most meaningful within a given industry: example : level of inventories in retail

Day's receivable (DSO : Days Sales Outstanding)

Information on the deadlines for payment granted and customer satisfaction in specific industry as consulting

Day's Inventory

Information on the level of inventories : disposal of stocks- quality ...

Asset Turnover

efficiency with which a company is using its assets to generate revenue

Trend overs different period is more relevant as this ratio depends on the level of CAPEX of the period

if a company's operations can generate a higher rate of return than the interest rate on its loans, then the debt is helping to fuel growth in profits.

Long term debt to Total assets

Capacity to contract new debts

Long term debt to stockholders' Equity

How a company is financed : Evaluating Solvency and Capital Structure

Coverage ratio

Capacity to pay the debt cost and distribute dividends

Return on assets

efficiency with which a company is using its assets to generate revenue.

Return on equity (ROE)

Return on the capital invested : Capacity to paid dividends :

Dupont Analysis

breaks down (ROE) into three components,

asset turnover : efficiency of assets

Profit margin ; efficiency of “product” sales

Financial leverage : split among banks and shareholder.

Suggested approach :

organize the different industries in groups with similar attributes

Define specific financial attributes of each group

Classify the companies

Inside each group , match the company making more detailed analysis of the financial statements and ratio

Questions ?

The 12 companies are members of the following 12 different industries:

Advertising

Airline

Commercial banking (items fitted into the same categories as the non-financial firms)

Computer software development

Department store chain (with its own in-store credit card)

Electric utility (producer and distributor)

Liquor (producer and distributor)

Oil and gas (upstream explorer and producer)

Pharmaceutical

Retail drug

Retail grocery

Sporting (organized as a master limited partnership (MLP), hence no corporate taxes)

Identifying the industry



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Financial analysis

Catherine
Clement Chabas

Octobre 2021

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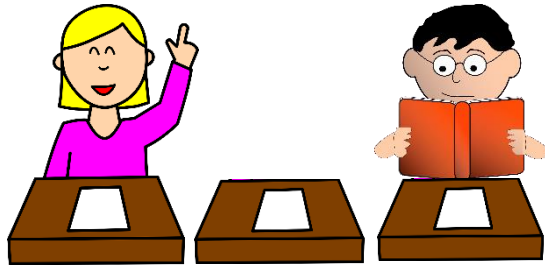
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Students in class



Speak
loud to
the class

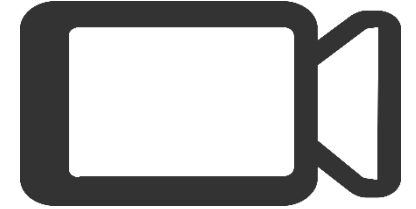


Keep
safety
distance

Students online



Connect on
zoom from
your agenda
link



Activate
your
camera



Mute your
microphone



Be connected
with a
headset/mic



Pin the screen
Use Side-by-
side mode

Case NameVa	Time in class	reminder	Areas of financial analysis
Balance sheet detective	3 hrs	Balance sheet structure	Common size balance sheet matching
Financial Analysis Identifying the industry	3 hrs with time to search for industry information online	P&I structure Main Financial ratio	Common size + ratios industry wise matching
What value for ThermoCompact?	6 hrs (initial time to elaborate valuation methods)	Valuations method	Financial diagnosis; valuation method choice; value of firm
Yestudent	2 hrs	Context analysis	Valuation startup ; Seed financing ; Fundraising ; DCF Method ; Comparables Method

Analyze the different dimensions of the performance of a company in all types of activities (services, production or projects)

Balance sheet analysis

Profit and Loss analysis

Performance ratios

Present in writing and orally the results of a performance study and recommendations for decision-making.

Develop a first approach of valuation methods

- Cases are released on C@mpus
- The final exam will last 1 hour at the end of the last session.
 - it will consist of 20 multiple-choice questionnaire.



Financial statements analysis

Case 3

What value for
ThermoCompact?

Purpose :

The aim of this case is to evaluate a medium size company (78 millions € revenues) in using different methods including comparables and discounted cash flows

Discussing different valuation methods and their relevance

Building a business plan and cash-flows according to different hypothesis

Main features

- Financial diagnostic
- Valuation methods
- Business plan
- Working capital requirement
- WACC : weighted average cost of capital
- Adjusted beta
- Sensitivity analysis

Historical data analysis

Analysis of available figures is a prerequisite of the initial work to be conducted before the valuation process begins.

Indeed, the figures are the raw data that the assessments are based on.

Prepare (or review) a statement of financial position

Prepare (or review) a statement of profit or loss

Measure and analyze financial performance

Evaluate value creation

Add complementary information

Clearly identify ALL assets used in business (including intangible assets)

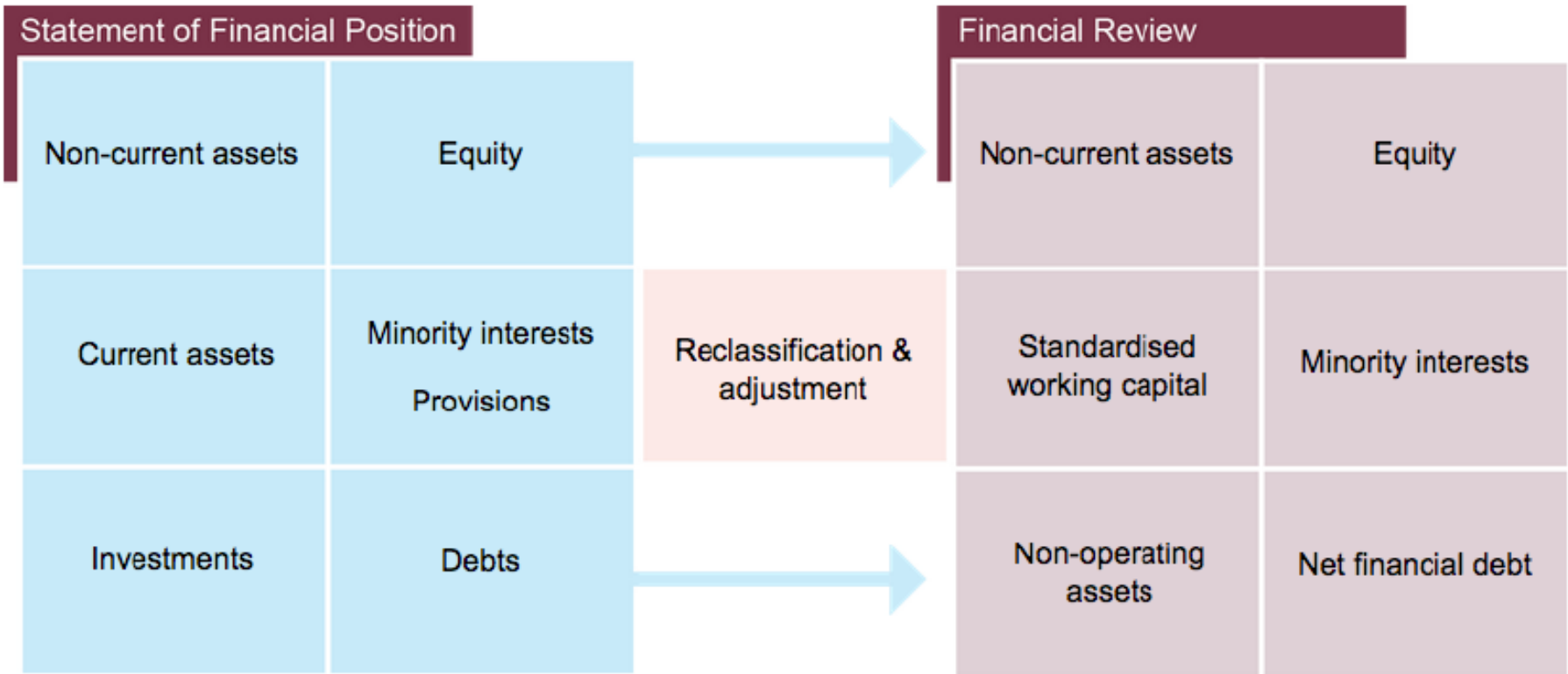
Estimate standardized working capital ratios and establish net financial debt on the day of valuation

Evaluate the environment

Validate financial forecasts by comparing them with past results (revenue, profit margin) and competitors

- Develop a validation or modelling tool for future investments.

From statement of financial position to financial review



The aim is to normalise the financial position and performance and eliminate accounting distortions.

Example of adjustment to P&L

The enterprise to be valued is privately owned. The director pays himself a salary of 250 000 € per year including social charges.

A normal salary for a director of this kind would be €100 000 €.

Corporation tax is 20%.

Overall enterprise profit before tax and interest is €10 000 € after these payments.

The adjusted “normal” profit after tax should be?

Example of adjustment to P&L

The adjusted “normal” profit after tax is :

Profit before adjustment : 10 000

Part of salary considered as distribution and not « normal salary » : $250\,000 - 100\,000 = 150\,000$

Adjusted Result : $10\,000 + 150\,000 = 160\,000$

Tax 20% : 32 000

Adjusted result after tax : 128 000



Evaluation methods

Context

Valuation is carried out in a variety of contexts and for different reasons.

Every valuation is different, and the aim of any valuation is to provide a value that is **as objective as possible** in an environment of uncertainty.

This **contextual background is crucial** to consider as it will determine both :

- the assumptions made in the valuation process
- and also the methods used,
- and hence the validity of any resulting valuation.

Internal valuation - access to the organization, its management and its records

Tax / accounting valuation

Divorce / probate valuation

Internal reward systems (stock option-Executive's compensation)

Sale of all / part of equity (vendor)

External valuation tool – Based on externally available information

Investment decision – purchase all / part of equity

Comparative analysis.

A. Introduction

1. Contexte et objectif
2. Diligences et sources d'information
3. Limites

B. Présentation générale

1. Présentation [redacted] et du marché
2. Éléments financiers historiques
3. Hypothèses générales du plan d'affaires

C. Approche d'évaluation retenues

1. Présentation de l'approche DCF
2. Présentation des approches analogiques
3. Présentation de l'approche par l'actif net réévalué (ANR)

D. Estimation de la valeur des titres [redacted]

1. Approche DCF - Paramètres d'évaluation
2. Approche DCF - Hypothèses retenues
3. Approche DCF - Scénario Prudent
 - 3.1. Valeur consolidée Distribution + Edition
 - 3.2. Valeur Distribution seule
 - 3.3. Conclusions intermédiaires
4. Approche DCF - Scénario Volontariste
 - 4.1. Valeur consolidée Distribution + Edition
 - 4.2. Valeur Distribution seule
 - 4.3. Conclusions intermédiaires
5. Approche analogique - Transactions comparables
6. Synthèse

E. Annexe

1. Approche par l'actif net réévalué
 - 1.1. Identification des actifs incorporels
 - 1.2. Évaluation des actifs incorporels

Challenging hypothesis

Although ultimately the valuation will employ some calculations what is critical is to ensure that the inputs to the calculations and the assumptions being made are as good as they can be.

**Identify the key drivers of the business plan
be critical about the assumptions in the business plan.**

Understanding the context

Every enterprise is different, and a thorough understanding of the strategic position of the enterprise is essential in the valuation process.

General background information

Story – management-

Sector / market analysis : An evaluation of the current market position and development of the enterprise.

Group considerations

Develop an understanding of the factors which may need to be considered if the valuation is for part of a group of companies.

Resources

resources currently owned and used by the enterprise and also its resource requirements for the future.

Legal – societal- environmental issues

To gain an understanding of any issues which may affect the valuation.

And any other issues which may be relevant to the valuation.

identify areas and levels of risk and opportunity

Location-ownership-management-

Prospects and trends in the sector concerned

enterprise's production tools and expertise

competitors

product lines

main suppliers

clients and market share

advances in technology, concentration

changes in legislation, breaches of contract, etc...)



Identify any reasons to justify a difference between price and value.

Understanding context

Market

Competitors

Business model

Governance

Social climate

Environmental issues

Positive

Negative

Strengths

Weaknesses

Internal

Opportunities

Threats

External

It is important to analyze all assets of the enterprise, not just those appearing on the statement of financial position

Some intangible assets as created trademark are not in the balance sheet

- **Every enterprise is different and it is important to carry out a full analysis of all relevant factors :**

Environmental

People (training, quantity or quality of personnel to do their job, key figure, stability, external staff, legal compliance, retirement plans, Collective agreements, bonus agreements, ...Insurance policies

Internal control, outcome of recent internal or external audits

Governance : Statute - Share holder agreement-minutes of meetings...

Legal : main sales and service contract (maintenance –IT)...

Financial analysis : Main ratios

Profitability : Turnover, EBITDA growth , margin ..

Assets management : WCR

Financial structure : gearing liquidity



Thermocompact : Financial analysis

QUESTIONS ?



Evaluation methods

Choice of methodology

Valuation will be the result of a series of calculations which give any result a sense of objectivity

The choice of method may make a significant difference to the result of the calculation

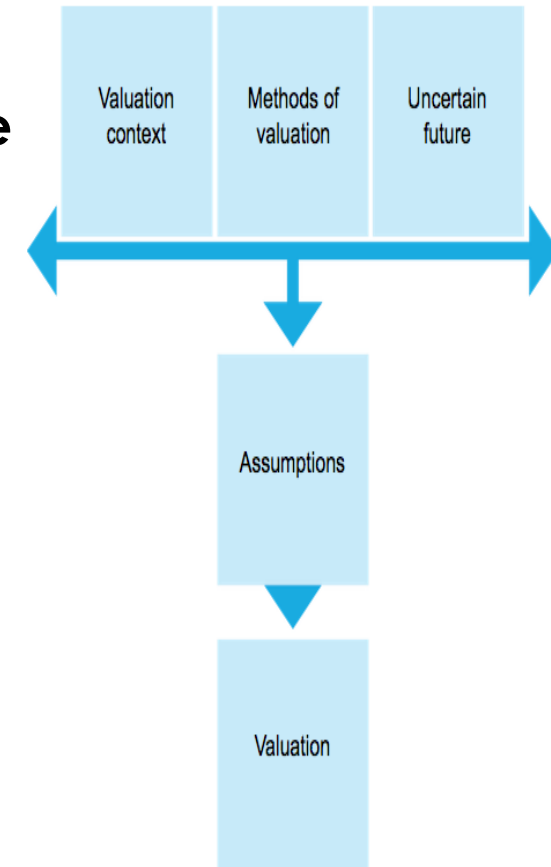
In most instances valuation is about the future value of a business

The future is by definition uncertain

Any valuation is based on a series of assumptions

Historical and comparative information is very useful in terms of making and justifying assumptions needed to conclude a valuation.

Any valuation should cover a range of possible values



In order to successfully value an enterprise it is important to understand the choice of methods available and when it is appropriate to use which method.

It is also important to understand the strengths and weaknesses of each method.

Methods can be split into 3 categories:

- **Asset based valuations**
- **Multiples based valuations**
- **Cash flow based valuations.**

Net assets based valuation method

Value the assets and liabilities of the enterprise at their current fair market value and, thus, determine an adjusted net asset value

additional calculation of goodwill to value the entire enterprise.

Discounted future net cash flows (DCF) method

Discounting a detailed future cash flow at an appropriate cost of capital

Dividend discounting – assuming either a constant dividend or a constant growth rate in dividends.

Multiples based methods

analogous methods or comparative methods

determined by referring to other comparable enterprises or transactions

The key is to establish the appropriate variables and enterprises in this process.

•

Other methods

These apply in special contexts :

the use of professional scales

- Restaurant
- Audit firm

Information on Public web site :

- Real estate : Price are released on public web site

Repayment ability of the enterprise : used particularly in leveraged buyout (LBO) transactions.

These valuation methods are not suitable in every context or for each enterprise being valued

Therefore, it is up to the professional to decide which method to adopt by considering available, usable data and to explain the process

As a general rule, not rely on only one method,

Compare values from several approaches (multi-criteria method)

Comparison between values may highlight significant discrepancies in the values obtained and question the relevance of the parameters used or the consistency of the assumptions adopted in each method

The professional must justify the methods used and also those not used. They must conduct sensitivity analysis.

Method	Advantages	Disadvantages
DCF	<ul style="list-style-type: none"> • Intrinsic valuation • Takes different options into account (going concern, profitability) 	<ul style="list-style-type: none"> • Sensitive to different assumptions • Final value and discount rate need to be precisely defined
Multiples	<ul style="list-style-type: none"> • Simple and widespread • A useful reference point in negotiations • Sectoral information available • Often based on real world market data, or transactions 	<ul style="list-style-type: none"> • Comparable samples unreliable • Stock market prices assumed to be an accurate reflection of value • Transaction price used often without understanding of the context
Adjusted net assets and other asset-based methods	<ul style="list-style-type: none"> • Simple process • Adapted for certain sectors 	<ul style="list-style-type: none"> • Accounting approach • Limited • Challenging to value goodwill

Question the pertinence of Experts' choice of valuation method

For example :

- Elimination of net assets methods and the method using discounting future dividends
- Used of recent transaction concerning the company's capital DCF



Evaluation methods

Recent transaction

Is the transaction significant ?

Does it happened in a specific context ?

Capital increase dedicated to salaries, to managers

Premium or discount ?

Controlling premium ?

Liquidity discount ?

Mandatory for listed companies :

The average stock market price of the share for the 30 days prior an event is very frequently mentioned.

Could be used in evaluation of stock options in non listed companies when a recent transaction has occurred

- Is the recent transaction price relevant ?

Volume

Price

Parties



Evaluation methods

Business plan

Which forecasting tools the enterprise use ?

How directors are involved in the forecasting process,

which may make it more credible

or less credible if they have a vested interest in a high valuation : **bonus policy** ?

If the enterprise has a reliable organization system that enables it to define and quantify assumptions

Was the forecast conservative or proactive, pessimistic or optimistic? (comparison between last budget and real data)

How were inflation and the growth rates determined?

Revenue
Profit margin
Tax cost
Working capital requirements
Investment requirements
Funding methods and requirements
Forecast horizon

Revenue growth and “product-mix” used,

in line with the reasonable nature of expected contracts or proposed developments

Consistent with the strategic analysis

Changes in costs

Consistent with revenue growth

Change in the margin,

In line to what is currently obtained by the enterprise and in its line of business

consistent with what could be expected in the sector over the same period as the valuation

Term of payment – working capital growth

Consistent with business growth

Client ,supplier negotiation

Changes in investments required to support the turnover growth (new technical equipment...)

and how they are funded ?

Review the Equity/debt ratio and the WACC

New funding needed for working capital requirements and investment
rate changes observed on the market,

Better or Worst ability of the enterprise to borrow money



Thermocompact : business plan

- Up to you : Prepare expected cash flows



Evaluation methods

DCF

This method assumes that an asset is worth the cash flows it can bring in the future

The value is determined in 3 steps

determining future cash flows (free cash flow) attributable to all fund providers (shareholders and financial creditors)

and discounting them at a rate that represent the requirement of fund provider in terms of profitability

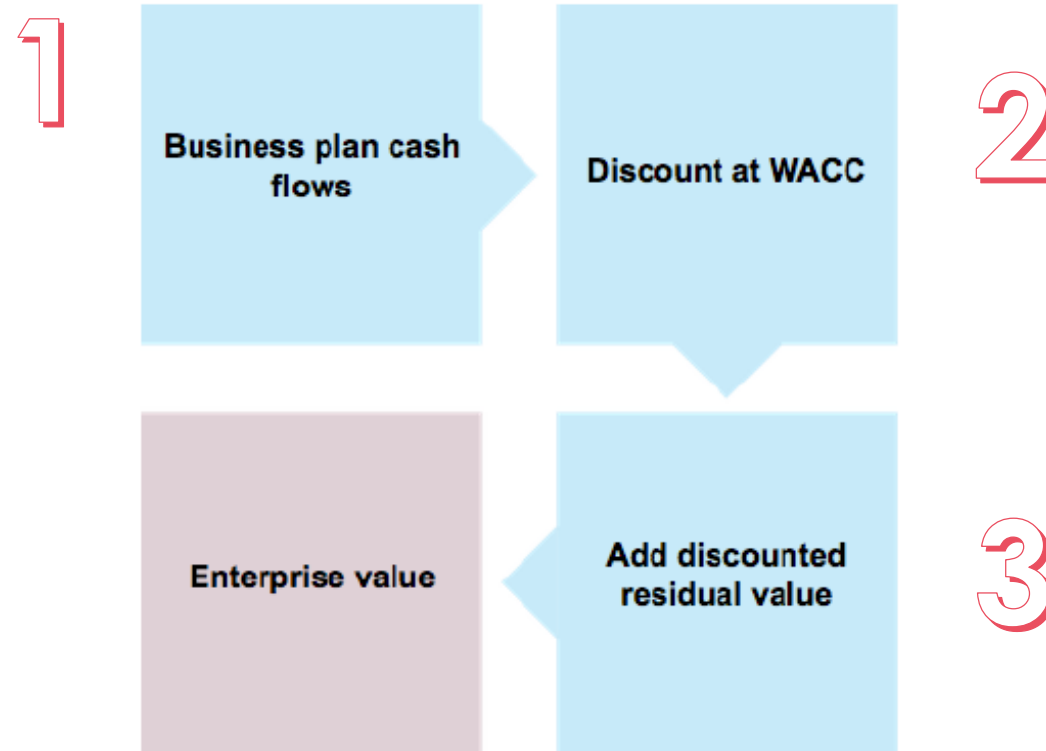
It is often considered the most relevant part of the valuation

because it includes,

The specific risk (strategic and economic components) of the valued enterprise through the cash flow projection

And the profitability requirement of fund providers, given the level of risk associated with their investment (market risk)

Discounting cash flow : 3 steps methodology



- **Cash flows over the period relevant to the business plan "explicit forecast period"**

le : For very capital-intensive companies like EDF, the business plan can be established over a period of 20 years

- **Residual value corresponding to the funding of a standard cash flow at the end of the period relevant to the qualified business plan**
- **The Weighted Average Cost of Capital (WACC), from which the cash flow and residual value will be discounted.**

It takes into consideration the notions of risk and time.

DCF allows to determine the value of the enterprise

To obtain a value of its equity

Long term liabilities have to be subtracted to the value calculated by DCF

Non operating assets has to be added to the DCF value :

Since the cash flows included are those generated by the operations of the enterprise it does not affect the estimate of non- operating assets (which must, therefore, be valued separately) and added to the DCF Value

= rate that reflects current market assessments of:



Time value of money



Risks specific to the asset

Rate of return that investors **would require** if they were to choose an investment that would generate cash-flows equivalent to those expected from the asset

=> **WACC or incremental borrowing rate**

The discount rate usually adopted is the weighted average cost of capital (WACC).

To calculate WACC, multiply the cost of each « founders 'component » by its proportional weight and take the sum of the results.

$$WACC = \frac{E}{V} * Re + \frac{D}{V} * Rd * (1 - Tc)$$

Shareholder remuneration

Re = cost of equity

E = market value of the firm's equity

E/V = percentage of financing that is equity

Bank remuneration (after tax impact)

Rd = cost of debt

D = market value of the firm's debt

D/V = percentage of financing that is debt

Tc = corporate tax rate

V = E + D = total market value of the firm's
financing (equity and debt)

Should be adopted the current financial structure or a target structure ?

Do we apply the same WACC rate for the entire forecast period, regardless of the flows to be discounted and change in financial structure ?

Current practices do not appear to be unanimous

Current account : debt or equity ?

In some cases, it may be necessary to determine which items to include in the equity or liability.

Therefore, if the current accounts of the partners in a partnership are considered “frozen”, they are treated as equity, whereas, if they are not “frozen”, they are added to debt

Shareholders will expect to receive a certain return on their investments in a company,

the equity holders' required rate of return is a cost from the company's perspective,

because if the company fails to deliver this expected return, shareholders will simply sell off their shares, which leads to a decrease in share price and in the company's value.

The cost of equity, then, is essentially the amount that a company must spend in order to maintain a share price that will satisfy its investors.

Using the capital asset pricing model (CAPM)

$$k_e = r_f + \beta \times (r_m - r_f)$$

- **r_f :** Risk-free rate. In reality, this will be the rates on government bonds, the rate of a state investment, normally considered the least risky. In practice, the risk-free rate in five years is adopted (as it fits with the business plan period), even if the theory presupposes retaining a maturity spread over the term of the business plan. It would be more appropriate to use the rate in 30 years, as this time is the closest to the infinite forecast period of a discounted cash flow (DCF)
- **r_m :** Profitability of the market portfolio. This measures the expected profitability of the market in its entirety. Consider the risk premium of expected market shares (in the market of the target country)
- **β :** Measures the sensitivity of a stock relative to the evolution of the market as a whole = systematic risk assessment (not diversifiable risk) It is assigned a "beta" coefficient related to the company itself in its sector
- For a non-quoted enterprise we may use comparable quoted companies to calculate β and the cost of equity.

Cost of debt

k_d : Profitability rate demanded by creditors taking account of:

- Financial structure of the enterprise being valued or
- Financial structure of target enterprise (longer term) consistent with the forecast period and the tax “rate at which the enterprise could refinance its debt, taking into account its economic situation”
- Always a cost after tax.

Tax. Corporation tax. Beware rates will vary by country, so an average effective rate for a company is generally used.

The market related content (r_f , r_m , β) can be found via various financial websites (Bloomberg, Yahoo, FT etc.)

In any event, it is advisable to ensure that the same risk is not taken into account twice:

- Once in the business plan
- And again in the discount rate used.



Thermocompact : WACC

Up to you : Calculate WACC

Calculating discounted residual value

It is represented by the Gordon-Shapiro formula:

$$\text{Discounted residual value} = \frac{\text{S.C.F}}{(i - g)} \times \frac{1}{(1 + i)^n}$$

S.C.F is the standardised cash flow (after the business plan period)

i is the discount rate

g is the perpetual growth rate

n is the last year of the business plan

Future standard cash flow should be calculated independently of the last flow of the business plan since, for example, depreciation to infinity is mostly equal to the asset investment. It should be consistent with the profitability levels observed in the type of business studied, which can be analysed using ROCE: Return on Capital Employed, determined by dividing the net operating income before tax by the amount of capital used.

Capital used is also defined as the sum of the non-current assets and working capital.

The growth rate to infinity to be adopted is a growth rate of net flow and not revenue. It is also an inflated rate. A number of items can be considered to help estimate it:

- Long-term growth prospects of the economy
- Long-term growth prospects of the line of business of the enterprise being valued
- Organic growth in recent years; possibly the last ten
- Sustainable growth by the enterprise, assessed in terms of capital, productivity and market prospects.

In practice, the growth rate to infinity is usually between 1 and 3%.

It is also possible to determine residual value on the basis of a multiple of a suitable aggregate, such as Gross Operating Surplus, based on the last year of the business plan.

In any event, it is advisable to assess the likelihood of this value by determining the multiple brought about by the residual value, on the basis of the main financial aggregates of the business concerned (GOS, operating income, net income, revenue, etc.) by comparing them with financial aggregates today and finally, by analysing the importance of the residual value in the overall value.

The cash flow method enables you to determine enterprise value, from which net liabilities are deducted (or net cash added) in order to get equity value.

Pension liabilities and certain non-recurring provisions for risks and expenses, if disbursement is not included in the cash flow forecast operating cash flow

Financial assets, including equity securities for which it is advisable to adopt the actual value

Financial instruments whose fair value must also be taken into account if it has not contributed to the determination of net liabilities (rate or currency swap)

Assets and deferred tax liabilities that have not been identified through the use of an effective tax rate in the cash flow (losses carried forward before business plan...)

Review of the valuation achieved

Compare the results obtained with those obtained using other valuation methods, analyze the differences

Sensitivity analysis

The cash flow method is based on numerous assumptions (worst –medium –best cases):

conduct the calculations under several alternative assumptions

Several scenarios can then be built using data from the business plan, especially when some achievements are related to external factors.

This model is sensitive to changes in actuarial data. Therefore you should simulate the impact of changes in the discount rate or the growth rate to infinity.

Adjustment to the overall value or to the assumptions about required returns (and therefore the value) could be made depending on these factors.

Value in whose hands:

The value of an enterprise will vary depending on who owns it :

- Family business-LBO-
- The value to a buyer or a seller may be different (value versus price)

Size of equity stake:

We would expect to see a premium for a controlling stake or a discount for a minority in practice

But not in theory

Liquidity of the equity:

The value of equity will be increased if it is liquid

equity shares in a stock-exchange-listed company will have a premium in value versus an identical company which isn't listed.

When to apply

- Enterprises likely to establish sufficiently reliable medium-term business plans

In most cases, this means enterprises of a certain size that can make forecasts with sufficient outlook on their future

Businesses of an industrial nature or with significant investments

- **With great prudence** the method can be applied **to start ups**,

which by their nature (high fixed costs, weak or no revenue, significant losses as a result of the latter and often with negative equity) make it difficult to apply another method, unless consistent forecasts can be established.

When not to apply

- small enterprises with no reliable budget planning process.



Question

The DCF method is effective when the company to be valued is :

1. An enterprises likely to establish sufficiently reliable medium-term business plans
2. A start-up
3. A small enterprises with no reliable budget planning process
4. A real estate company



Thermocompact : DCF

Up to you : Finalize the DCF
valuation



Evaluation methods

Multiple based evaluation

Defining the performance measure

- The first thing to do is to define the aggregate that you want to use which, from the sample of comparable companies, will determine a "multiple" which, when applied to the aggregate of the enterprise to value, will enable you to calculate its value

it is possible to choose an aggregate which will either value the entire enterprise or just the owners' equity

It is critical to ensure that the numerator and denominator match the aim of the valuation.

The most common aggregates used are:

- Revenue , EBITDA , EBIT, Net income
- Operating cash flow

Revenue, EBITDA, and EBIT are used to determine the enterprise value because they correspond to flows which cover remuneration from all fund providers. They are independent of the company's financial structure.

Revenue

This is the simplest information

Its relevance to valuation is conditional on other features of the companies included in the sample, such as the level of margin generated or their size and how capital-intensive they are

It is most often used for professional service companies such as lawyers and accountants.

EBITDA

- This introduces the concept of profitability while avoiding distortions associated with the depreciation or funding policy of the comparative enterprises.

This aggregate does not take into account capital intensity

It may be necessary, if appropriate, to make adjustments to ensure comparability.

lease classification : include or exclude from EBITDA

Analysis of charges and revenues highlights specificities :

Choice of compensation: salary or dividends

Grant : in France for example : presentation of CICE advantage

EBIT

- Similar to EBITDA but caution must be exercised to ensure consistency of depreciation approaches.



Question

The enterprise to be valued is privately owned.

The director pays himself a salary of 250 000 €, A normal salary for a director of this kind would be €100 000 €.

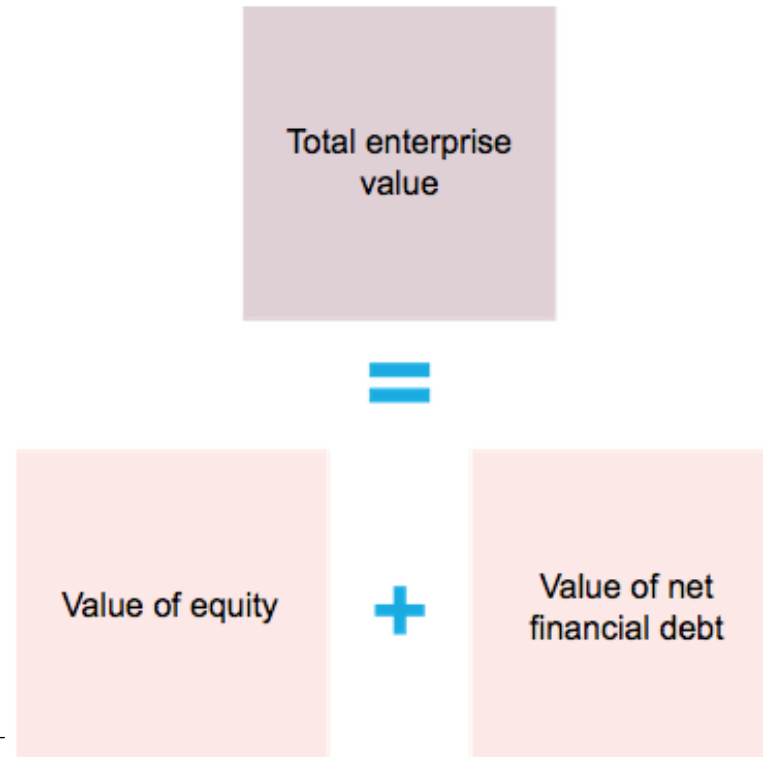
Corporation tax is 20%.

Profit before tax and interest is €10 000 € after these payments.

The adjusted “normal” profit after tax should be ?

Company value versus equity value

To move from the value of the company to the value of equity, you have to take into account, in particular, net liabilities (positive or negative), provisions for liabilities and disbursements and for deferred taxation.



Homogeneous sample

- It is best determined by considering two criteria rather than just one

one being size-related

and the other profitability-related, for example.

Databases enable you to help you go about this

Accessing comparable financial data

It is important to know under which accounting regulations comparative data were established.

It is necessary to ensure EBITDA or net operating income are consistency between the enterprise being valued and the enterprises included in the sample,

which can result in a certain number of adjustments, e.g., inclusion of provisions for risks and charges or pension liabilities.

Obtaining relevant data

Stock market was facing, before Covid, a financial bubble that leads to an artificial increase in quotation prices,

From 7 EBITDA to 11 EBITDA

Period of economic depression introducing volatility of the quoted prices

Volume of transaction

"forced" conditions

Exclude companies too dissimilar (financial structure, business model, etc.)

Focus on transactions involving a significant part of the capital and which were conducted in cash

as transactions paid for in securities are more difficult to analyze

Ensure that the transaction price is not augmented by a premium justified by specific synergies

Verify the advertised selling price

It may include other factors, such as a future price supplement or commitments made by the buyer, which contribute to lowering the apparent sale price

Non operating assets valued at market price (building, ...)

Analyze the shareholder structure

Family business, subsidiary of a group

Verify Specific situations,

regulatory constraints

or tax assets

Corporate reputation

Take account of any discounts to be applied

for example, a minority stake in an unlisted company).

The success of identifying the correct comparable data will in part be driven by the quality of the strategic and financial analysis



Thermocompact : Multiples
observed method

Up to you : Finalize valuation
using the comparable

Adjusted net asset valuation.

The value of net assets in the statement of financial position adjusted to reflect current market values.

β (beta).

The systematic risk (undiversifiable) of investing in a particular security. Measured by correlation of returns of the security to the market.

CAPM (Capital Asset Pricing Model).

An academic model for calculating the rate of return required for investing in a given asset given its risk. Most often used to calculate the cost of equity.

Company value. Enterprise value.

The value of the entire company, or the total that would need to be financed either by debt or equity.

DCF (discounted cash flow).

Decision making tool based on the time value of money.

Discount rate.

The factor used to convert future cash flows into today's terms. Usually the WACC.

Enterprise value.

This is the same as the company value, but NOT the equity value.

Exceptional items.

Items within a statement of profit or loss which are a normal part of business activity but are exceptional in terms of either size or frequency.

Cost of debt :

The required rate of return (after tax) required for lending long term funds to the company. Often approximated to the rate of interest.

Cost of equity :

The required rate of return, taking account of risk, required for investing in the equity of the company.

NPV (net present value). The summation of a DCF calculation, taking account of all future cash flows.

Non-operating assets. Assets owned by the company but not directly involved in the operational activity of the company.

PV (present value). The value in today's terms of a future cash flow, after the application of a discount rate.

Residual value.

The value of the company after the period of detailed forecasts have finished. Usually 3-5 years depending on the industry.

The risk free rate of return.

Generally accepted to be the return on long dated government securities.

The expected return of on the (stock) market.

Hard to predict, but evidence suggests that the market risk premium (the excess of r_m over r_f) is more consistent at between 5 and 8%.

SWOT (Strengths, Weaknesses, Opportunities and Threats). A tool used for strategic analysis of company position.

WACC (Weighted Average Cost of Capital). The average return expected for providers of finance to the company (debt and equity).

THANK YOU!

Financial analysis

Catherine
Clement Chabas

Octobre 2021

4



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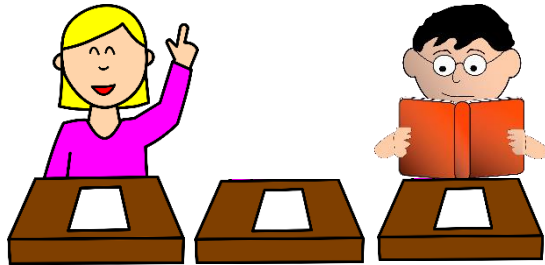
TOULOUSE • PARIS • BARCELONA • CASABLANCA



Students in class



Speak
loud to
the class



Keep
safety
distance

Students online



Connect on
zoom from
your agenda
link



Activate
your
camera



Mute your
microphone



Be connected
with a
headset/mic



Pin the screen
Use Side-by-
side mode

Case NameVa	Time in class	reminder	Areas of financial analysis
Balance sheet detective	3 hrs	Balance sheet structure	Common size balance sheet matching
Financial Analysis Identifying the industry	3 hrs with time to search for industry information online	P&I structure Main Financial ratio	Common size + ratios industry wise matching
What value for ThermoCompact?	6 hrs (initial time to elaborate valuation methods)	Valuations method	Financial diagnosis; valuation method choice; value of firm
Yestudent	2 hrs	Context analysis	Valuation startup ; Seed financing ; Fundraising ; DCF Method ; Comparables Method

Analyze the different dimensions of the performance of a company in all types of activities (services, production or projects)

Balance sheet analysis

Profit and Loss analysis

Performance ratios

Present in writing and orally the results of a performance study and recommendations for decision-making.

Develop a first approach of valuation methods

- Cases are released on C@mpus
- The final exam will last 1 hour at the end of the last session.
 - it will consist of 20 multiple-choice questionnaire.



Case 4

Yes student

DCF allows to determine the value of the enterprise :

To obtain a value of its equity

- **Long term liabilities have to be subtracted to the value calculated by DCF (indirect method)**

Non operating assets has to be added to the DCF value :

Since the cash flows included are those generated by the operations of the enterprise it does not affect the estimate of non- operating assets (which must, therefore, be valued separately) and added to the DCF Value

	Direct Method	Indirect Method
Objectives	Equity value	Economic value
Cash flow used in DCF	Cash flow distributable to shareholders (average of dividends paid) Cash flow after interest and tax	Cash flow for shareholders and Bank (free cash flow after tax and before interest)
Discount rate	Equity Cost (Risk free+risk premium Beta weighted)	WACC Equity cost + debt cost

Adjustments to make - 1

There are a number of factors we must take into account when conducting and concluding a valuation.

It is likely that we will make some adjustments either to the overall value or to the assumptions about required returns (and therefore the value) depending on these factors.

Value in whose hands:

The value of an enterprise will vary depending on who owns it, and the value to a buyer or a seller may be different (see value versus price later in this module).

Size of equity stake:

The value of an asset will depend on the level of control over that asset. As such we would expect to see a premium for a controlling stake or a discount for a minority.

Liquidity of the equity:

The value of equity will be increased if it is liquid. As such we would expect to see equity shares in a stock-exchange-listed company to have a premium in value versus an identical company which isn't listed.

"There are a number of factors we must take into account when conducting and concluding a valuation."

"It is likely that we will make some adjustments either to the overall value or to the assumptions about required returns (and therefore the value) depending on these factors."

Source
ACCA

Are following factors likely to result in a lower or a higher valuation than might market expects ?

Add a comment

	Higher	Lower	Market valuation
Valuation of a 55% stake in a company			
Valuation of shares in a company which is quoted on a recognized stock exchange			
Valuation of a company for sale, with patented technology, to its main competitor			
Valuation of a company currently involved in a legal case over a major accident caused by the alleged failure of one of its main products			

Are following factors likely to result in a lower or a higher valuation than might otherwise be expected ? Add a comment

	Higher	Lower	Market valuation
Valuation of a 55% stake in a company	X control premium		
Valuation of shares in a company which is quoted on a recognized stock exchange			X Transaction volume has to be considered
Valuation of a company for sale, with patented technology, to its main competitor	X synergy		
Valuation of a company currently involved in a legal case over a major accident caused by the alleged failure of one of its main products		X legal risk	

How will you consider these information in the valuation process: positive or negative impact

Entity A : The plant and equipment is recently purchased and well maintained

B. The enterprise is reliant on a short term licence agreement
accounting for 60% of sales

D. The enterprise spends 30% of revenue on research and
development compared to an industry average of 15%, but has
launched no new products in the last 5 years

E. The enterprise has one key customer which currently accounts for 80% of sales

Entity A : The plant and equipment is recently purchased and well maintained :

Positive factor

B. The enterprise is reliant on a short term licence agreement accounting for 60% of sales

Negative factor

D. The enterprise spends 30% of revenue on research and development compared to an industry average of 15%, but has launched no new products in the last 5 years

Negative factor except a new product launch is announced

E. The enterprise has one key customer which currently accounts for 80% of sales

Negative factor



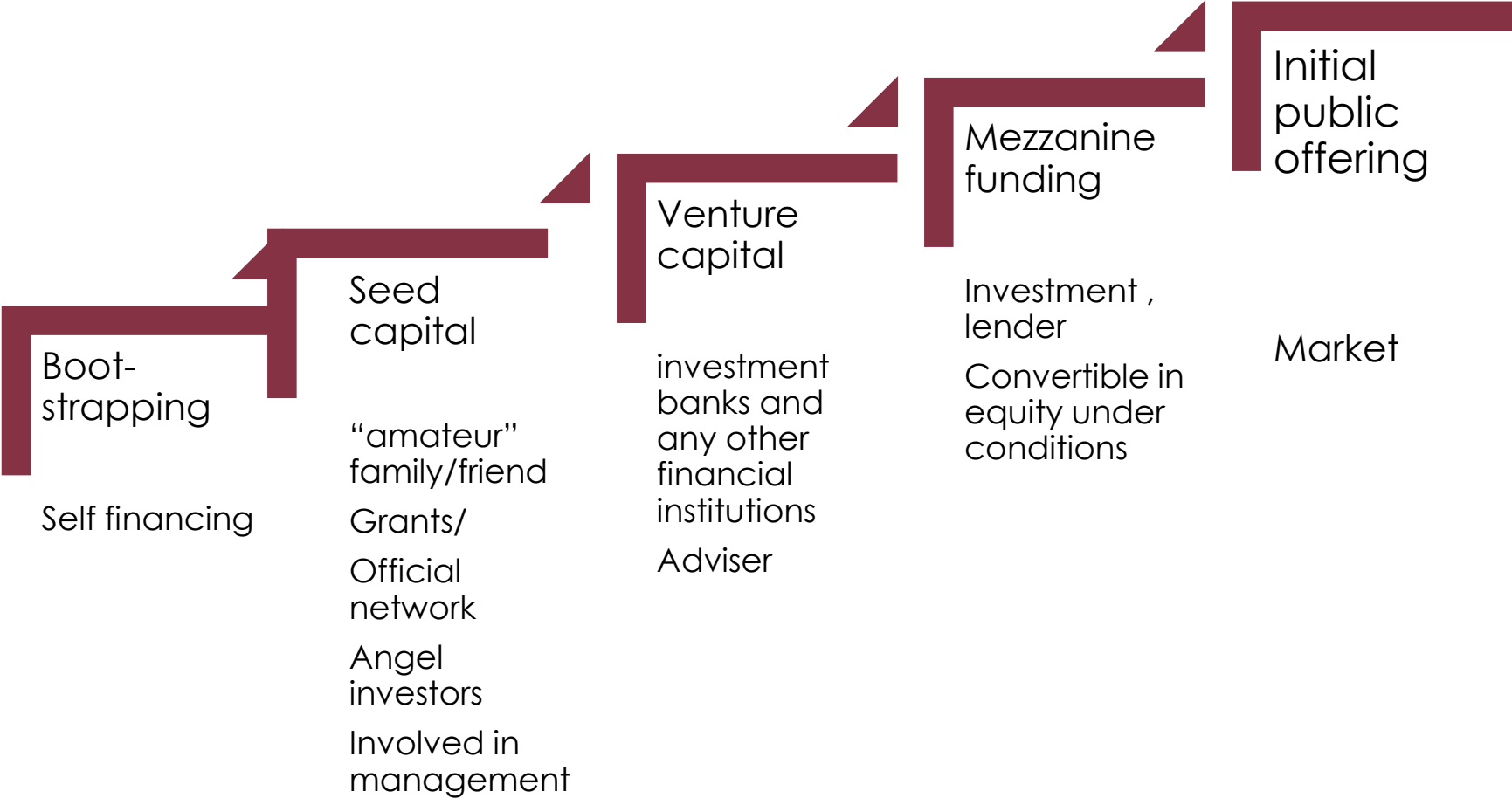
Financing a start up

Initial capital used when starting a business, often coming from the founders' personal assets, friends or family, “love money” for covering initial operating expenses and attracting venture capitalist “business angel”.

Often obtained in exchange for an equity stake in the enterprise, although with less formal contractual overhead than standard equity financing.

Banks and venture capital investors view seed capital as an "at risk" investment and may wait until a business is more established before making larger investments of venture capital funding.

Stages involved in financing startups



Looking for external financing

- Sources of finance
- Love money : friends and family
- Business Angel
- Venture Capital

The team estimate that it need 500 000 euros

What dilution will they accept :

$500\,000 / \text{equity value} = ?$

What risk will take t

Return on Investment ? Exit in 7 years'time (2022) : final value ?



Case study 4

Yes student



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