

# CASH FLOW CALCULATION: THE IMPORTANCE OF WORKING CAPITAL



## Lesson 6

*Corporate Finance*

Castellanza, 10<sup>th</sup> October 2018

## LESSON 6 - SUMMARY



- Financial statements – a brief review
- Financial statements and cash flows
- The cash source / cash use prospect
- From the cash source / cash use prospect to the cash flow statement
- The cash flow statement
- The importance of the cash flow statement

# BALANCE SHEET RECLASSIFICATION

## Current Assets

*Cash and Cash Equivalents*

*Deferred liquidity* ( commercial receivables[- bad debts provision], other current receivables, accruals & prepayments)

*Inventories* (raw materials, semi-processed, finished goods [- slow-moving provision])

## Fixed Assets

*Tangible Assets* [- depreciation]

*Intangible Assets* [- amortisation]

*Financial Assets*

*Financial Items - over 12 months*

## Current Liabilities

*Short Term liabilities* (bank overdrafts)

*Other Current Liabilities* (commercial payables, tax payables, other payables, accrued expenses)

## Non-current Liabilities

*ETP fund, risk funds, other long term non-financials liabilities*

*Bonds, bank loans, other long term financial debts*

## Shareholder Equity

*Share Capital*

*Reserves*

*Net Result of the Year*

# THE INCOME STATEMENT

Sales  
- Operating expenses  
= EBITDA  
- Depreciation and Amortization  
= EBIT  
- Financial expenses/revenues  
- Extraordinary items  
= EBT  
- Taxes  
= Net Result

# FINANCIAL STATEMENTS AND CASH FLOWS

The Balance Sheet measures the amount of wealth owned by stockholders.

$$\text{Assets} - \text{Liabilities} = \text{Equity}$$

Each of the elements of this *equilibrium* has some associated cash flows:

- Assets have the capacity to generate benefits to the firm
- Liabilities have associated inflows and outflows
- Equity has associated inflows and outflows

# FINANCIAL STATEMENTS AND CASH FLOWS

The income statement reports the **Net Result** of the financial year, also showing its components, in terms of difference between costs and revenues.

Both financial statements (Balance sheet and Income Statement) are constructed on the basis of the **accrual concept**.

How will the cash flow statement be released? Under which principle?

# THE CASH SOURCE/CASH USE PROSPECT

- The “cash source / cash use” prospect reports the inflows (source of cash) and outflows (use of cash) of money and measures the liquidity of the firm for each period.
- The starting point in drawing up the prospect is **to detect the changes (increase or decrease) between the same items in different periods**. These variations have the nature of flows.
- The variations’ identification allows to understand what operations or transactions generate / will generate or absorb / will absorb financial resources.

In order to compute variations, what do we need?

# THE CASH SOURCE/CASH USE PROSPECT

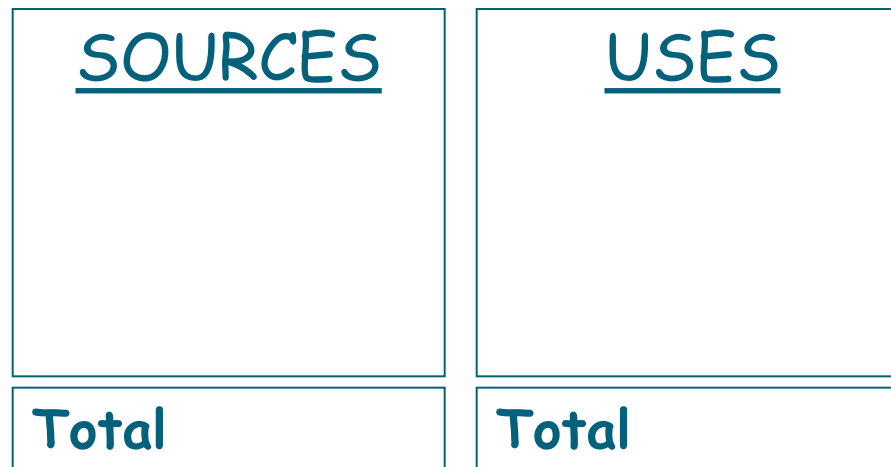


- The main rule to respect is the following:
  - Any increase in liabilities represents a financing source, because it generated financial resources for the company and, similarly, any decrease in assets is treated as a source because it implies a financial resources' release.
  - Similarly, any increase in assets and any decrease in liabilities is treated as an use, because they imply a financial resources' absorption or a reduction of company's financial resources.



# THE CASH SOURCE/CASH USE PROSPECT

- All detected variations are organized in a two-columns layout, the sources/use prospect, depending on their nature.
- While in the balance sheet the total amount of assets has to be equal to the total amount of liabilities, similarly the total amounts of sources and of uses account for the same amount.



# FROM THE CASH SOURCE/CASH USE PROSPECT TO THE CASH FLOW STATEMENT

- Unlike balance sheet and profit and loss, the cash source / cash use prospect starts from the comparison between the balance sheets of two subsequent financial years. It represents a **dynamic analysis**.



BUT.....

- The information obtained by comparing the two balance sheets must be completed and integrated with some **adjustments** to the source/use prospect to obtain a cash flow statement.

# FROM THE CASH SOURCE / CASH USE PROSPECT TO THE CASH FLOW STATEMENT

- These adjustments are necessary because some of the variations detected by comparing two balance sheets do not fully represent real financial flows, but rather variations due to **accrual basis**.
- The aim of adjustment is to **purify the prospect from accrual differences and to highlight only real financial flows.**

The cash flow statement reports the flow of **cash in and out** of the business.

We can find relevant information for these adjustments in the Income Statement and in the Annual Report.

# FROM THE CASH SOURCE/CASH USE PROSPECT TO THE CASH FLOW STATEMENT

- The cash flow statement can start from the cash source/cash use prospect
- Then adjustments are made in order to find the real monetary flows of the analyzed period generated by any of the management areas of the business structure.
- The goal is **to verify the weight of each company's cycle (investment, operating, financial,...) on the entire financial evolution.**

# THE CASH FLOW STATEMENT

- Basically the adjustments are related to two different cases:
  1. Variations which have been accounted as sources or uses, but which do not originate any financial flow.
  2. Variations which have been accounted as sources or uses, but whose financial flows are different from the variation between balance sheet amounts.

# THE CASH FLOW STATEMENT

- It is really important **to identify the components of the financial dynamics and the specific company's cycle where such flows come from.**

It is possible to divide cash flows into two different macro-areas:

- **Cash flows from current operations** (operational areas);
- **Flows not related to current operations:** flows originated by financing, asset management and extraordinary activities (non operational areas).

# THE CASH FLOW STATEMENT

## Ebit

- + Depreciation/Amortization
- ± Balance of source/use of Funds (Etp fund, others)
- Tax
- = **First Cash flow from current operations**
- ± Changes in Net Working Capital
- = **Second Cash flow from current operations**
- Capital Expenditures
- + Divestments
- = **Cash flow from operations**

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- ± Financing flows
- ± Dividends & Changes in Equity
- ± Non recurring/Extraordinary flows
- = **Free cash flow( $\Delta$  Cash)**

**NON OPERATIONAL  
AREA**

## OPERATIONAL AREAS – DEPRECIATION

- Depreciation refers to the allocation of the cost of assets to periods in which the assets are used (accrual concept).

So, **is it a cash out** every year?



## OPERATIONAL AREAS – ETP FUND

- ETP = Employment termination payments
- Companies accrue the employee's ETP every year but they pay it off only in the moment in which the employee leaves the company. If nobody leaves the company the ETP fund (Balance Sheet) increases every year.

So, **is it a cash out** every year?

- The same method can be applied also to other funds

## OPERATIONAL AREAS - NWC

- The **Net Working Capital** is calculated as the difference between current assets and current liabilities.
- The strict definition of NWC is the sum of current assets and liabilities excluding cash & cash equivalents and bank overdrafts. The comprehensive definition includes also these items.
- The working capital reflects the cash required to cover financing shortfalls arising from day-to-day operations.

How do we consider a variation in NWC for the cash flow statement?

## OPERATIONAL AREAS - NWC

### NWC

Trade receivables

Other current receivables

Inventories

Deferred charges and prepaid expenses

Trade payables

Other commercial payables

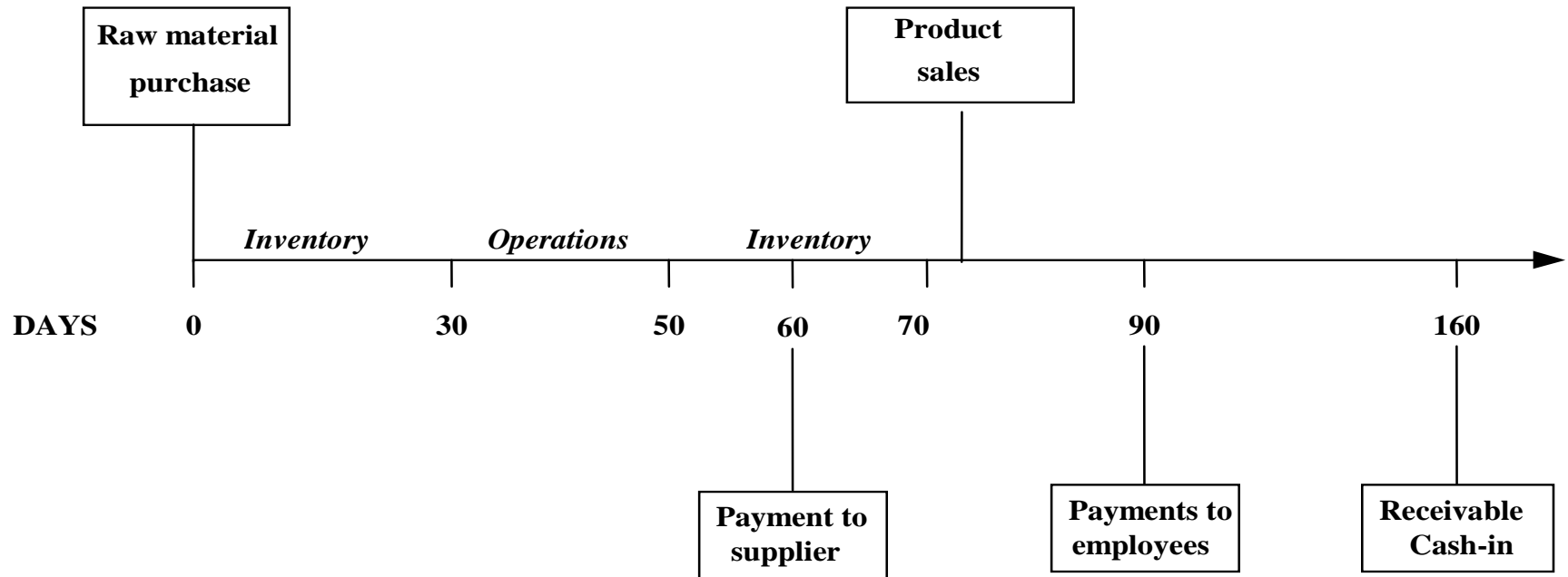
Deferred revenues

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= NWC

# OPERATIONAL AREAS - NWC

## OPERATIVE CYCLE



## WORKING CAPITAL CYCLE

## OPERATIONAL AREAS - INVESTMENTS

- The investments cycle generates cash flows related to the acquisitions or sells of tangible and intangible assets.
- If the company owns “non-operating assets”, wherever possible, it is helpful to distinguish them from operating assets.
- IMPORTANT: The balance sheet reports **NET** assets. That means that every year the value of existing assets decreases due to depreciation.

# NON OPERATIONAL AREAS

## **Financing Flows**

- + Interest incomes
- + Other financial incomes
- Interest expenses
- Other financial expenses
- + Bond issues
- Bond repayments
- + Rising of Mortgages/Financial loans
- Repayment of Mortgages/Financial loans

# NON OPERATIONAL AREAS



## Dividends & changes in Equity

- + Equity increase
- + Shareholders' contributions
- Dividend payout
- Equity decrease

# NON OPERATIONAL AREAS



## Non recurring/Extraordinary flows

- + Gains on fixed assets and capital gains
- + Non recurring incomes
- + Extraordinary Income
- Extraordinary Cost
- Non recurring expenses
- Losses on fixed assets and capital losses



# THE IMPORTANCE OF THE CASH FLOW STATEMENT

- As already reported, the cash flow statement provides an explanation of the reasons why changes occurred in a company's financial structure.
- Moreover, it allows to identify the contribution of each management area (operations, finance, extraordinary) to the entire financial dynamics of a company.
- Accordingly, it is possible to analyze and evaluate the financial strategies that have been adopted and to assess the financial equilibrium of the company.

# HOW TO USE OF A CASH FLOW STATEMENT

The **cash flow statement** can be drawn up at the end of the financial year and it is **based on the actual financial statements**. This method allows to understand the past performances and to verify the origin of the current cash balance.

Differently, a cash flow statement **based on projected data** represents the reference document for:

- Assessments of short-term **cash requirements**
- **Investment analysis** and valuations;
- **Company's valuation** through financial methods.

# EXAMPLE N°1

<b>Assets</b>	<b>2006</b>	<b>2007</b>	<b>Liabilities</b>	<b>2006</b>	<b>2007</b>
Cash equivalent	200	350	Short term financial debt	1.780	2.250
Accounts receivable	4.210	4.370	Accounts payable	3.690	4.380
Inventories	2.070	2.120	Employee's termination pay	860	1.200
Other accounts receivable	550	510	Long term financial debt	1.000	1.000
Technical assets	6.350	7.210	Mortgage	3.000	2.500
Intangible assets	2.100	1.980	Equity	2.000	2.500
Financial assets	100	0	Reserves	2.000	1.500
			Profit	1.250	1.210
<b>Total</b>	<b>15.580</b>	<b>16.540</b>	<b>Total</b>	<b>15.580</b>	<b>16.540</b>

# EXAMPLE N°1

Values\*1000

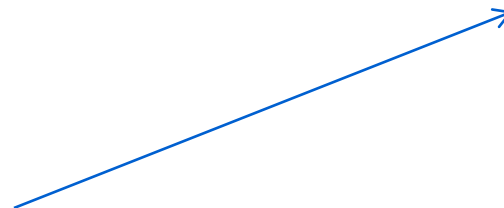
<b>Income statement</b>	<b>2007</b>
Sales	25.890
Operating expenses	-21.950
<b>EBITDA</b>	<b>3.940</b>
Technical Depreciation	-1.000
Intangible Amort./depr.	-120
<b>EBIT</b>	<b>2.820</b>
Financial Expenses	-540
Financial Revenues	20
Extraordinary expenses	-150
Extraordinary revenues	270
<b>EBT</b>	<b>2.420</b>
Taxes	-1.210
<b>Net profit</b>	<b>1.210</b>

- From the annual report:
- Asset purchasing for a total amount of 1.860.000 Euro
  - Employee's termination pay for 260.000 Euro
  - Distribution of 1.250.000 Euro earnings
  - Divestment of participation in a real estate company
  - Increase of equity by 500.000 Euro, through conversion of reserves

# EXAMPLE N°1 - SOLUTION

EBIT	2.820
Technical Depreciation	1.000
Intangible Amort./depr.	120
Δ ETP Fund	340
Taxes	-1.210
<b>First cash flow from operations</b>	<b>3.070</b>
Accounts receivable	-160
Inventories	-50
Other accounts receivable	40
Accounts payable	690
Δ NWC	520
<b>Second cash flow from operations</b>	<b>3.590</b>
Capital expenditures	-1.860
Divestments	100
<b>Cash flow from operations</b>	<b>1.830</b>
Financial Expenses	-540
Financial Revenues	20
Extraordinary expenses	-150
Extraordinary revenues	270
Dividends	-1.250
Mortgage	-500
<b>Free cash flow</b>	<b>-320</b>

**Check: cash - ST fin. Loans**  
 2006: 200 - 1.780 = - 1.580  
 2007: 350 - 2.250 = - 1.900  
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**- 320**



## EXAMPLE N°2

Balance sheet

Assets	2011	2012	Liabilities	2011	2012
Technical assets	4.200.000	4.580.000	Short term financial debt	810.000	495.000
Financial assets	1.000.000	1.000.000	Long term financial loan	800.000	800.000
Accounts receivable	2.250.000	2.560.000	Accounts payable	2.550.000	3.110.000
Financial receivable	-	-	ETP fund	1.000.000	1.020.000
Inventories	1.800.000	2.000.000	Mortgages	1.200.000	1.400.000
Cash	<b>10.000</b>	<b>15.000</b>	Equity	2.000.000	2.400.000
			Reserves	700.000	850.000
			Profit	200.000	80.000
<b>Total</b>	<b>9.260.000</b>	<b>10.155.000</b>	<b>Total</b>	<b>9.260.000</b>	<b>10.155.000</b>

## EXAMPLE N°2

Profit & Loss	2012
Revenues	15.500.000
Operating Costs	-14.700.000
EBITDA	<b>800.000</b>
Deprec. Technical assets	- 500.000
EBIT	<b>300.000</b>
Financial expenses	- 250.000
Extraordinary revenues	30.000
EBT	<b>80.000</b>
Taxes	-
Net Income	<b>80.000</b>

From annual report:

- 400.000 Euro increase in Equity through new equity
- 2011 net income distributed for 50.000 Euro
- Investment in technical assets
- 2 workers retired and their ETP is equal to 80.000
- Euro 200.000 of additional mortgage

# EXAMPLE N°2 - SOLUTION

<b>EBIT</b>	300.000
Technical Depreciation	500.000
Δ ETP fund	20.000
Taxes	-
<b>First cash flow from operations</b>	<b>820.000</b>
Accounts receivable -	310.000
Inventories -	200.000
Accounts payable	560.000
Δ NWC	50.000
<b>Second cash flow from operations</b>	<b>870.000</b>
Capital expenditures	- 880.000
Divestments	-
<b>Cash flow from operations</b>	<b>- 10.000</b>
Financial expenses	- 250.000
Extraordinary revenues	30.000
Dividends	- 50.000
Mortgage	200.000
Equity	400.000
<b>Free Cash Flow</b>	<b>320.000</b>

<b>Check: cash - ST fin. Loans</b>	
2011:	10.000 - 810.000 = - 800.000
2012:	15.000 - 495.000 = - 480.000
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	<b>+ 320.000</b>

