AIFSlab

1. NWC

   current assets – current liabilities

   - Measure of a company's liquidity and short- term financial health.
   - A company has negative working if its ratio of current assts to liabilities is less than one (more liabilities than assets). The company has more short-debt than it has short-term resources. Negative working capital is an indicator of poor short-term health, low liquidity, and potential problems paying its debt obligations as they become due.
   - Positive working capital indicates that a company can fund its current operating and invest in future activities and growth. The company has more than enough resources to cover its short-term debt, and there is residual cash should all current assets be liquidate to pay this debt.
   - High working capital is not always a good thing. It might indicate that the business has too much inventory, not investing its excess cash or not capitalizing on low-expense debt opportunities.

   - Current assets are economic benefits that the company expects to receive within the next 12 months. The company has a claim or right to receive the financial benefit, and calculating working capital poses the hypothetical situation of the company liquidating all items below into cash.

     Cash and cash equivalents: All of the money the company has on hand. This includes foreign currency and certain types of investments such as money market accounts with very low risk and very low investment term periods.

     Inventory: All of the unsold goods being stored. This includes raw materials purchased to manufacture, partially assembled inventory that is in process, and finished goods that have not yet been sold.

     Accounts Receivable: All of the claims to cash for inventory items sold on credit. This should be included net of any allowance for doubtful payments.

     Notes Receivable: All of the claims to cash for other agreements, often agreed to through a physically signed agreement.

     Prepaid Expenses: All of the value for expenses paid in advance. Though it may be difficult to liquidate these in the event of needing cash, they still carry short-term value and are included.

     Others: Any other short-term asset. An example is some companies may recognize a short-term deferred tax asset that reduces a future liability.

- Current liabilities are simply all debts a company owes or will owe within the next twelve months. The overarching goal of working capital is to understand whether a company will be able to cover all of these debts with the short-term assets it already has on hand.

  Accounts Payable: All unpaid invoices to vendors for supplies, raw materials, utilities, property taxes, rent, or any other operating expense owed to an outside third party. Credit terms on invoices are often net 30 days, so essentially all invoices are captured here.

  Wages Payable**:** All unpaid accrued salary and wages for staff members. Depending on the timing of the company's payroll, this may only accrue up to one month's worth of wages (if the company only issues one paycheck per month). Otherwise, these liabilities are very short-term in nature.

  Current Portion of Long-Term Debt**:** All short-term payments related to long-term debt. Imagine a company finances its warehouse and owes monthly debt payments on the 10-year debt. The next 12 months of payments are considered short-term debt, while the remaining 9 years of payments are long-term debt. Only the 12 months is included when calculating working capital.

  Accrued Tax Payable: All obligations to government bodies. These may be accruals for tax obligations for filings not due for months. However, these accruals are usually always short-term (due within the next 12 months) in nature.

  Dividend Payable: All authorized payments to shareholders that have authorized. A company may decide to decline future dividend payments but must fulfill obligations on already authorized dividends.

  Unearned Revenue**:** All capital received in advance of having completed work. Should the company fail to complete the job, they may be forced to return capital back to the client.

- A company can improve its working capital by increasing its current assets. This includes saving cash, building higher inventory reserves, prepaying expenses especially if it results in a cash discount, or closely considering which customers to extend credit to in an attempt to reduce its bad debt write-offs. It can also improve working capital by reducing its short-term debts. The company can avoid taking on debt when unnecessary or expensive, and the company can strive to get the best credit terms available. The company can be mindful of spending both externally to vendors and internally with what staff they have on hand.

2. NOWC

   Recurring operating assets – operating liabilities

- It demonstrates how able a company is to pay off its current operational liabilities with its current operational assets. This ratio is important because it reveals the amount of leverage that the company carries along with its net operating assets. Ultimately, this ratio shows how well a company is able to use its current operating assets and how able it is to make changes to accommodate both new opportunities and unforeseen events.

- In the calculation marketable securities and short-term debt are both excluded from the equation.

NOWC is a direct measure of a company's liquidity, operational efficiency, and overall financial health.

- Companies that have a large amount of NOWC have the potential to grow over time and also make investments if necessary.

- NOWC indicates that the company has some financial troubles.

- It should also be noted that net operating working capital does not take either natural or human capital into account. This effectively allows companies to ignore any inefficiencies in their use of human or natural resources and assess their performance strictly according to what the numbers show. This allows investors to make apples-to-apples comparisons between one company's cash flow and another's without having to take the human aspect of operations into account. Net operating working capital is therefore critically important to know when assessing a company's cash flow and balance sheet.

- Operating Recurring Assets: Cash, Liquidity, Trade Receivables, Account Receivables, Inventory, Other operating assets (taxes, deferred tax assets),inventory, if there are securities we need to subtract them from the operating assets.

- Operating Liabilities: Trade Payables, Account Payables, Other operating liabilities; accrued expenses, Tax payable, Wages payable, social security payable, deferred tax liabilities, provisions, merchandise credits and deferred revenues, commercial paper, other current liabilities.

3. BUSINESS ASSETS

   Tot Assets – Operating Liabilities

   - Operating Liabilities = Trade Payables, Account Payables, Other operating liabilities; accrued expenses, Tax payable, Wages payable, social security payable, deferred tax liabilities, provisions, merchandise credits and deferred revenues, commercial paper, other current liabilities, other non current liabilities, other non-current provision.

4. Average Cost Method

	units	£ units	£
Beginning inventory	12000	13	156000
I purchased	8000	14	112000
II purchased	6000	12	72000
Sales	19000	16	304000

Average Cost x unit = (156000+112000+72000)/(12000+8000+6000)
Average Cost = Average Cost x unit ^ ending inventory (sales – beginning)

FIFO

Consider the same table above

Consider only the I purchase
Ending inventory = 12000+8000-19000
FIFO = ending inventory ^(price x unit I purchase) +II purchase unit ^ price per unit II purchase.

5. CR and QR

- Current Ratio
  Current Assets / Current Liabilities

  Liquidity ratio that measures a company's ability to pay short-term obligations or those due within one year. It tells investors and analysts how a company can maximize the current assets on its balance sheet to satisfy its current debt and other payables.
  A current ratio that is in line with the industry average or slightly higher is generally considered acceptable. A current ratio that is lower than the industry average may indicate a higher risk of distress or default. Similarly, if a company has a high current ratio compared with its peer group, it indicates that management may not be using its assets efficiently.

- Quick Ratio

  (Quick Assets) / Current Liabilities

  The quick ratio is an indicator of a company's short-term liquidity position and measures a company's ability to meet its short-term obligations with its most liquid assets.
  The quick ratio measures the dollar amount of liquid assets available against the dollar amount of current liabilities of a company. Liquid assets are those current assets that can be quickly converted into cash with minimal impact on the price received in the open market, while current liabilities are a company's debts or obligations that are due to be paid to creditors within one year.
  A result of 1 is considered to be the normal quick ratio. It indicates that the company is fully equipped with exactly enough assets to be instantly liquidated to pay off its current liabilities. A company that has a quick ratio of less than 1 may not be able to fully pay off its current liabilities in the short term, while a company having a quick ratio higher than 1 can instantly get rid of its current liabilities. For instance, a quick ratio of 1.5 indicates that a company has $1.50 of liquid assets available to cover each $1 of its current liabilities.

  Quick Assets = current assets – inventory – prepaid expenses

6. Days Receivables, Days Inventory, Days Payables, Length Operating Cycle
   - Days receivables
     Is a measure of the average number of days that it takes a company to collect payment for a sale.

$$\frac{\text{Accounts Receivable}}{\text{Tot credit Sales (Revenues from sales and services)}} \times \text{number of days}$$

High DR number shows that a company is selling its product to customers on credit and waiting a long time to collect the money; this can lead to cash flow problems.
A low DR value means that it takes a company fewer days to collect its account receivable.

- Days Inventory
  Is a financial ratio that indicates the average time in days that a company takes to turn its inventory, including goods that are a work in progress, into sales.

$$\frac{\text{Inventory}}{\text{COGS}} \text{ X 365 days}$$

To manufacture a salable product, a company needs raw materials and other resources which form the inventory and come at a cost. Additionally, there is a cost linked to the manufacturing of the salable product using the inventory. Such costs include labor costs and payments towards utilities like electricity, which is represented by the cost of goods sold (COGS) and is defined as the cost of acquiring or manufacturing the products that a company sells during a period. DSI is calculated based on the average value of the inventory and cost of goods sold during a given period or as of a particular date.

A smaller number indicates that a company is more efficiently and frequently selling its inventory, which means rapid turnover leading to the potential for higher profit.
A large value indicates that the company may be struggling with obsolete, high-volume inventory and may have invested too much into the same.

Inventory turnover = Revenues/inventory

- Days Payables
  Indicates the average time that a company takes to pay its bills and invoice to its trade creditors.

$$\frac{\text{Accounts payable}}{\text{COGS}} \text{ X N of Days}$$

Where COGS = beginning inventory + Purchases – Ending inventory

A high value can retain available funds for a longer duration, allowing the company an opportunity to use those funds in a better way to maximize the benefits; it can also indicate an inability to pay its bills on time.

- Length Operating Cycle
  Is a metric that expresses the time that it takes for a company to convert its investments in inventory and other resources into cash flow from sales. It attempts to measure how long each net input dollar is tied up In the production and sales process before it gets converted into cash received.

Days receivables + Days inventory – Days payable

7. Return on Equity

Is the measure of financial performance calculated by dividing net income by shareholders' equity. ROE is considered an indicator of a corporation's profitability and how efficient it is in generating profits.
The higher the ROE, the more efficient a company's management is at generating income and growth from its equity financing.

Net Income / Shareholders' Equity

8. ROBA net EBIT / BA

9. Earnings Before Interest and Taxes
EBIT is an indicator of a company's profitability. EBIT is calculated as revenue minus expenses excluding tax and interest.

Revenue – COGS – Operating Expenses
Or
Net Income + Interest + Taxes
Or
Operating income + interest expenses
Or
Operating margin + financial income

The EBIT calculation takes a company's cost of manufacturing including raw materials and tot operating expenses, which include employee wages.

a. Take the value for revenue or sales at the top of the income statement.
b. Subtract the COGS form revenue or sales, which gives you gross profit.
c. Subtract the operating expenses. (if other income expenses has a positive sign you don't have to subtract it but add it because it has a positive influence on ebit)

It focuses on a company's ability to generate earnings from operations; It helps to identify a company's ability to generate enough earnings to be profitable, pay down debt, and fund ongoing operations.

The EBIT calculation combines a company's manufacturing cost, including raw materials, and total operating expenses, including employee wages. These items are subtracted from revenue:

1. Take the value for revenue or sales from the top of the income statement.
2. Subtract the cost of goods sold from revenue or sales, which gives you gross profit.
3. Subtract the operating expenses from the gross profit figure to achieve EBIT.

Only in the last exercise In the calculation we have to subtract Amortization and depreciation and add Dividend interest income

NET EBIT = EBIT(1-t)

Tax = t = Provision before income taxes/(EBIT+Income before provision for income taxes) or income taxes / income before income taxes

EBITDA = EBIT + Amortization and Depreciation + provision (if there are any)

EBITDA, or earnings before interest, taxes, depreciation, and amortization, is an alternate measure of profitability to net income. By including depreciation and amortization as well as taxes and debt payment costs, EBITDA attempts to represent the cash profit generated by the company's operations.
EBITDA is not a metric recognized under generally accepted accounting principles (GAAP). Some public companies report EBITDA in their quarterly results along with adjusted EBITDA figures typically excluding additional costs, such as stock-based compensation
If a company doesn't report EBITDA, it can be easily calculated from its financial statements.

The earnings (net income), tax, and interest figures are found on the income statement, while the depreciation and amortization figures are normally found in the notes to operating profit or on the cash flow statement.

There are two EBITDA formulas, one based on net income and the other on operating income, both of which will arrive at basically the same result. (Net income is operating income minus non-operating expenses, such as taxes and interest.)
The respective EBITDA formulas are:
EBITDA=Net Income+Taxes+Interest Expense+D&AorEBITDA=Operating Income+D&Awhere :D&A=Depreciation and amortization
EBITDA=Net Income+Taxes+Interest Expense+D&AorEBITDA=Operating Income+D&A**where :**D&A=Depreciation and amortization

Understanding EBITDA
By adding interest, taxes, depreciation, and amortization back to net income. EBITDA can be used to track and compare the underlying profitability of companies regardless of their depreciation assumptions or financing choices.
Like earnings, EBITDA is often used in valuation ratios, notably in combination with enterprise value as EV/EBITDA, also known as the enterprise multiple.
EBITDA is widely used in the analysis of asset-intensive industries with a lot of property, plant, and equipment and correspondingly high non-cash depreciation costs. In those sectors, the costs that EBITDA excludes may obscure changes in the underlying profitability—for example, as with energy pipelines.
Meanwhile, amortization is often used to expense the cost of software development or other intellectual property. That's one reason early-stage technology and research companies may use EBITDA when discussing their performance.
Annual changes in tax liabilities and assets that must be reflected on the income statement may not relate to operational performance. Interest costs depend on debt levels, interest rates, and management preferences regarding debt vs. equity financing. Excluding all of these items keeps the focus on the cash profits generated by the company's business.

EBIT and EBITDA remove the cost of debt financing and taxes, while EBITDA adds depreciation and amortization expenses back into profit. Since depreciation is not captured in EBITDA, it can lead to profit distortions for companies with a sizable amount of fixed assets and substantial depreciation expenses. The greater the depreciation expense, the more it will boost EBITDA.

10. Financial Leverage

Is the result of using borrowed money capital as a funding source when investing to expand the firm's asset base and generate returns on risk capital.
It can also refer to the amount of debt a firm uses to finance assets.
When one refers to a company… as "highly leveraged" it means that the item has more debt than equity.

Financial Liabilities / Tot Equity

Financial Liabilities = current debt (current borrowings, bank overdrafts, current portion of non-current borrowings), non current debt (long-term borrowings/financial liabilities subordinated debentures), lease liabilities, financial debts.

11. ROBA %
    Net EBIT/BA
    Or
    NOPAT/BA+NIPAT/BA
    Because Net EBIT = NOPAT+NIPAT

12. ROE = Net income / Tot Shareholders' equity %

13. Financial Gain = Financial Leverage*Spread %
    Spread = ROBA – interest rate after tax%
    Interest rate after tax = (financial expenses(or interest expenses)/financial liabilities)*(1-t)%

14. OFATR
    Find the Operating Fixed Assets
    OFA =non-current tangible assets → property, plants and equipment, land and buildings, right of use, deferred tax; Non-current intangible assets →Goodwill, Software developed, development costs, other non-current assets.

    OFATR = Revenues/OFA

    ROS = EBIT/Revenues %
    Net ROS = ROS(1-t)%
    BATR = Revenues/BA

    13. and 14. Are drivers

15. NIPAT = (Financial income or other income expenses + dividends or securities)1-t

    NOPAT = Operating income*(1-t)
    Operating income = Gross profit – operating expenses
    Operating expenses = day-to-day costs associated with running the core operating of the business. Operating expenses include items like salaries and wages, rent, utilities , marketing, depreciation, and other costs not directly tied to the production of goods or services. (found in financial statemen

16. Investment assets return RIA %
    NIPAT/Investment assets

    Investment assets = securities, short term financing receivables, long term financing receivables.

17. Return on Net Assets RONA %

    Return on net assets is a measure of financial performance calculated as net profit divided by the sum of fixed assets and net working capital.
    It shows how well a company and its management are deploying assets in economically valuable ways; a high ratio result indicates that management is squeezing more earnings out of each dollar invested in assets. RONA is also used to assess how well a company is performing compared to others in its industry.

    Net Profit/ (fixed assets + NWC)
    Or
    NOPAT / Operating net Assets

    . NOPAT = operating margin (1-tax) or
    (if we only have net profit) = Profit – Net Profit after tax + interest expenses after tax
    . fixed assets = tangible property used in production, such as real estate and machinery, and do not include goodwill or other intangible assets carried on the balance sheet.
    .operating net assets = tot assets – financing assets – tot liabilities + financing liabilities or
    BA – investment assets
    .Financial liabilities = current debt, current borrowings, bank overdrafts, current portion of non current borrowing, non current debt, long term borrowings, lease liabilities, financial debts, short term debt, long term debt. (NON OPERATING)
    .Investment Assets = securities, minor equity investment (long term), investment property (long term), other financial assets.

18. Italian according standard vs IAS/IFRS

    Under the Italian according standard the costs that can be capitalized are:
    - All the costs collected for a new project like patents, staff cost for logo development, cost of external services for the logo industrialization, cost for brand registration. The start-up staff training is the context where a staff training can be capitalized.
    - Advertising costs, administrative costs and selling costs can't be capitalized.

    Under IAS/IFRS the cost that can be capitalized are

    - each cost collected with a new project, employees benefit collected with a new plan and equipment and new machineries.

- Start up costs, administrative costs, marketing costs and research costs for <u>new</u> things can't be capitalized.

  Net book Value
  a. Calculate the amortization expense of the year → Capitalized amount/useful life(n of year, can be found in costs)
  b. NBV = capitalized amount – amortization expense of the year

  If asked to consider the financial report before any capitalization occurs

  a. After calculating the capitalized amount and dividing it into groups (cost of raw material, cost of service, cost of labor … (see 1 exercises of exam 11-01-21))
  b. Subtract each cost form the balance sheets in they respective section like cost of labor subtract from account and receivable, labor cost from inventories, cost of service from prepaid expenses, amortization expenses from goodwill. Remember to calculate the taxes = income before tax*tax (you can find tax in the income statement).

19. Gross Profit = Revenues – Sales

20. Operating margin = $\frac{Operating\ Income}{Net\ sales} x\ 100$ or Ebit -Dividend Interest income