Management Accounting

PRACTICAL CLASS 1

Illustration by Ana Seixas

About Management Accounting

THE COURSE

Loose Notes

A PERSONAL VIEW ON THE COURSE

Intellectually challenging but rigorous: only one answer but room to be creative!

Rewarding and impactful: create actionable information to enable business decisions

Deductive: you don't have to memorize if you understand formulas and concepts

Time Pressure: execute fast so that you can have the time to think

Information Overload: you will get a lot of information - take (good) shortcuts wherever possible

Accounting is the language of business

Warren Buffet

Assessment

WHEN IT REALLY COUNTS

- **Week 5 (March 3rd – 7th): Moodle Quiz – 5%**
- **March 14th : Midterm – 35%**
- **Week 13 (April 28th – May 2th): Moodle Quiz – 5%**
- **May 31th : Final Exam – 55%**
- June 25th : Resit Exam – 100%

Housekeeping

PRACTICAL STUFF

- ***Moodle Password: MA2425***
- *Use the Forum **Help Center** on Moodle for doubts*
- *Bring the Exercise Book, a calculator and laptop*
- *Attend both theoretical and practical classes!*
- Participate so we don't waste time with awkward silence, plus we can get out earlier ☺
- TA's will make a formula sheet available!

Office Hours

DON'T FORGET TO SEND AN E-MAIL BEFORE!

Rui Augusto (Professor)
rui.augusto@novasbe.pt
Thursdays from 11 am

Madalena Paiva
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Tuesdays from 3:30pm

Francisca Caldas
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Thursdays from 2:00pm

Pedro Perdigão
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Wednesdays from 5:00pm

Course Material

PART I

Types of Companies

3 MAIN TYPES:

In Financial Accounting, we always worked with Merchandise Companies – they would simply purchase and sell merchandise

For Manufacturing Companies, Cost of Goods Sold is not as straight-forward, and we will devote some time trying to quantify it for increasingly complex problems

Merchandise Companies

Purchase and sell products without changing their basic form

Service Providers

Produce services / nontangible products
Do not hold inventories

Manufacturing Companies

Purchase materials and convert them into a different finish good
Hold inventories

Management Accounting

WHY IS IT RELEVANT?

Value Inventory for External Profit Reporting

- Inventory Valuation
- COGS

Provide information for decision making

- Profitability Analysis
- Product Pricing
- Outsourcing Decisions

Provide Information for Planning, Control and Performance

- Budgeting
- Variance Analysis

Concepts & Formulas

GLOSSARY AND FORMULAS

MC : Manufacturing Costs

DM: Direct Materials

DL: Direct Labour

MOH: Manufacturing Overheads

COGM: Cost of Goods Manufactured

COGS: Cost of Goods Sold

FG: Finish Goods *(Inventory)*

WIP: Work in Progress

Δ: *Greek Delta – Means Change, usually (Closing – Opening)*

MC = DM + DL + MOH

COGM = **MC** - **Δ WIP** stocks

COGS = **COGM** - **Δ FG** stocks

Closing DM = **Initial DM + Purchased – Consumption**

Closing FG = **Initial FG + Production – Sales**

Note: Prime Costs = DM + DL ; Conversion Costs = DL + MOH

P&L Statements

BY FUNCTION VS FINANCIAL ACCOUNTING

P&L by Function: purpose of the costs applied

P&L FA: where are costs applied

They **complement** each other into the analysis

Changes in Inventory ? (WIP + FG Only)

Yes! While they are not a revenue per se, they are there to “adjust” the expenses to report the COGS

P&L By Function	
(+)	1. Sales
(-)	2. Cost of Goods Sold (COGS)
(=)	**3. Gross Profit**
(-)	4. Selling, General & Administrative Costs (SG&A)
(=)	**5. Operating Profit**
(-)	6. Financial Costs
(+)	7. Financial Revenues
(=)	**8. Profit Before Taxes (PBT)/EBT**

P&L Financial Accounting	
(+)	1. Sales
(+)	2. **Δ** Inventories
(=)	**3. Operating Revenue**
(-)	4. Cost of Merchandise Sold & Materials Used (C.M.S.M.U)
(-)	5. Miscellaneous Costs
(-)	6. Personnel Costs
(=)	**7. EBITDA**
(-)	8. Depreciation Costs
(=)	**9. EBIT**
(-)	10. Financial Costs
(+)	11. Financial Revenues
(=)	**12. Profit Before Taxes**

Inventory Valuation

FIFO VS LIFO VS WAC

First In First Out (FIFO)
Items bought first will be sold first

Last In First Out (LIFO)
Items bought last will be sold first

Weighted Average Cost (WAC)
The average cost per unit is calculated by dividing the total cost by the total number of units purchased during the period

Note: *Same system should be used by DM and FG Inventories*

Unless **FG/DM Opening = 0** or **FG/DM Closing = 0,** different inventory valuation systems give rise to different profit levels reflected on:

- **COGS** in the P&L by Function
- **ΔInventories** and **C.M.S.M.U.** in the P&L FA

However, the costs are all the same, and the different systems just split them differently between the Inventory and P&L. Ultimately, between any two methods:

ΔCOGS = - ΔInventories + ΔC.M.S.M.U.

Shortcuts

THE EASY WAY FOR FIFO AND LIFO

1) Compute Unitary Costs for All Batches (Initial Inventory + Production)

$$Unit\ Cost = \frac{€\ Value}{\#\ Units}$$

2) Reason as if you are fulfilling sales (picking units from 2 piles of goods)

You have **X** amount Sales to fulfil.

Under **FIFO**, you look first for the **Initial Inventor**y. If it is equal/larger than sales, you'll consume all your sales from the **Initial Inventory.** If it is not enough, you "grab" the rest out of the **Production** "pile".

Under **LIFO**, you look first for the **Production**. If it is equal/larger than sales, all your Sales will come from the **Production.** If that is not enough, you "grab" the rest out of the **Initial Inventory** "pile".

Shortcuts

THE EASY WAY FOR WAC

1) Find the WAC for Production + Sales

$$WAC_{FG} = \frac{€\ Initial\ Inventory + COGM}{\#\ Initial\ Inventory + \#\ Production}$$

For P&L By Function

2) Obtain COGS

$$COGS_{WAC} = \#\ Sales * WAC_{FG}$$

For P&L FA

3) Obtain FG Closing

$$FG_{Closing} = \#FG_{Closing} * WAC_{FG}$$

Exercise

PROBLEM 3 – THE ALIMENTAR COMPANY

Difference in Profit

FIFO VS LIFO VS WAC

Which profit will be higher?

Depends if the older units were more or less costly than the newer units

If COGM/un of FGop < COGM/un of units produced:

(Older units had a cheaper producing cost than newer units)

- COGS FIFO < COGS WAC < COGS LIFO
- π FIFO > π WAC > π LIFO
- FGcl (FIFO) > FGcl (WAC) > FGcl (LIFO)

If COGM/un of FGop > COGM/un of units produced:

(Older units had a cheaper producing cost than newer units)

- COGS FIFO > COGS WAC > COGS LIFO
- π FIFO < π WAC < π LIFO
- FGcl (FIFO) < FGcl (WAC) < FGcl (LIFO)