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Management Accounting
7th Edition

- Link 3.A –
Preparation of Financial Statements
PENOR PLC

In preparation for reporting financial statements, companies are obliged to record all their business activities. In the UK, International Financial Reporting Standards IFRSs apply.
We start off from the incorporation. The Bookkeeping records only show 2 accounts: Cash/Bank and Issued Capital account.
Figure 0.1 shows PENOR PLC's accounts after incorporation.

D	Cash/Bank C/B		C
(1)	400,000.00		

D	Issued Capital ISS		
		(1)	400,000.00

Figure 1: Accounts

PENOR PLC's Bookkeeping entries are related to
- Financing,
- Acquisition of P, P, E,
- Other operations,
- Purchase of material,
- Proceeds,
- Calculation of finished goods,
- Profit calculation and
- Appropriation of profits.

On 2.01.20X1, PENOR PLC takes out a bank loan for 200,000.00 GBP. The bank loan comes with an annual rate of interest of 3 %/a. Interest is paid at the end of each fiscal year. The interest paid in the first Accounting period 20X1 is equal to: 3% × 200,000 = ***6,000.00 GBP/a****. The pay-off amount is 20,000.00 GBP/a and must be paid at the yearends as well as interest. The bank charges a once-off issue fee of 1,500.00 GBP which is deducted from the principal.* ***The principal is the nominal value of a bank loan and is relevant for the interest calculation.*** *According to IFRS 9, bank loans must be accounted for at amortised costs (effective interest method). This guarantees a loan disclosure at true and fair view. For disclosure at amortised costs, we calculate the effective rate of interest. This is the internal rate of return of the cash flow vector for the loan. The cash flow vector contains the annual payments for interest and for pay-off. In the first Accounting period that is: 3% × 200,000 + 20,000 =* ***26,000.00 GBP****. In the next period, we calculate: 3% × (200,000 – 20,000) + 20,000 =* ***25,400.00 GBP*** *etc.*

Figure 1 shows the payments for interest and pay-off.

Penor PLC's INTEREST and PAY-OFF PLAN

Year	Opening amount	Interest	Pay-off	Rest
	[GBP]	[GBP]	[GBP]	[GBP]
20X1	200,000	6,000	20,000	180,000
20X2	180,000	5,400	20,000	160,000
20X3	160,000	4,800	20,000	140,000
20X4	140,000	4,200	20,000	120,000
20X5	120,000	3,600	20,000	100,000
20X6	100,000	3,000	20,000	80,000
20X7	80,000	2,400	20,000	60,000
20X8	60,000	1,800	20,000	40,000
20X9	40,000	1,200	20,000	20,000
20Y0	20,000	600	20,000	0

Figure 2: PENOR PLC's bank loan calculation

The effective interest rate[1] is calculated by the complete cash flow vector for the bank loan BL(t) = {198,500; -26,000; -25,400; -24,800; -24,200; -23,600; -23,000; -22,400; -21,800; -21,200; 20,600}. It gives 3.15 % (rounded)[2].

Next, we record interest. It is an expense and recorded in a nominal account, called Interest account. In this textbook all nominal accounts show the Accounting period in the name, as you can observe in the accounts. Hence, the interest is recorded on the debit side of the Interest-20X1 account.

*The interest disclosed on the income statement is the initial liability of 198,500.00 GBP multiplied with the effective rate of interest. In the first year it amounts to: 198,500 × 3.15% = **6,260.61 GBP**[3]. The interest exceeds the interest as paid to the bank which is 6,000.00 GBP. Therefore, the bank loan liability on the balance sheet increases step by step. The entire increase will amount to 1,500.00 GBP which is also the value of the issue fee. Accordingly, the fees are not recorded as expense for the first Accounting period.*

In contrast to interest, a pay-off cash flow is no expense but a (re-)payment. Therefore, pay-off cash flows are debited to the account for the bank loan, called Interest Bearing Liability account. The Bookkeeping entries (2 … 4) are recorded on 2.01.20X1 and 31.12.20X1.

DR Cash/Bank..... 198,500.00 GBP
CR Interest Bearing Liabilities. 198,500.00 GBP

[1] Check about the calculation of effective interest rates in our textbook Financial Statements 7e, pg. 361.

[2] For the calculation we applied the MS-Excel function IRR().

[3] We calculate more accurate than displayed in the text.

DR Interest..... 6,260.61 GBP
CR Interest Bearing Liabilities. 6,260.61 GBP

DR Interest Bearing Liabilities. 26,000.00 GBP
CR Cash/Bank..... 26,000.00 GBP

The liability disclosure follows IAS 1.69. In compliance with this paragraph, we split liabilities in current and non-current portions. What is due within the next upcoming Accounting period is short-term. This means, we must record the pay-off amount for 20X2 under accounts payables which is the standard account for short-term liabilities.

Bookkeeping entry (5) is for the re-classification of long-term liabilities towards short-term liabilities and is recorded on 31.12.20X2.

DR Interest Bearing Liabilities. 20,000.00 GBP
CR Short-term Liabilities..... 20,000.00 GBP

*Figure 3 displays the accounts as far as discussed and not yet balanced-off at this stage. Balancing-off an account means to calculate and display its balancing figure. It would be 598,500 – 26,000 = **572,500.00 GBP** for the Cash/Bank account at this stage.*

D	Cash/Bank C/B			C
(1)	400,000.00	(4)	26,000.00	
(2)	198,500.00			

D	Issued Capital ISS			C
		(1)	400,000.00	

D	Interest bearing liabilities IBL			C
(4)	26,000.00	(2)	198,500.00	
(5)	20,000.00	(3)	6,260.61	

D	Interest-20X1 INT			C
(3)	6,260.61			

D	Short-term liabilities A/P			C
		(5)	20,000.00	

Figure 3: PENOR PLC's accounts

P, P, E stands for property, plant, equipment which represents long-term and tangible assets used for manufacturing, service rendering or administration.

*On 3.01.20X1, PENOR PLC buys 5 saws at 30,000.00 GBP/u each. The above given costs of acquisition for the saws are the net values.[4] Companies covered in this textbook act as VAT vendors. **A***

[4] Costs of acquisition are defined in IAS 16.16.

VAT vendor is registered for input-VAT reduction and must collect output-VAT on behalf of the revenue service. PENOR PLC is registered for VAT reduction and pays the gross amount which includes input-VAT: 5 × 30,000 × 120% = 180,000.00 GBP. The price is paid to the supplier. Observe the Bookkeeping entry (6), as recorded on 3.01.20X1:

```
DR P, P, E.....................   150,000.00 GBP
DR VAT.........................    30,000.00 GBP
CR Cash/Bank...................   180,000.00 GBP
```

The recorded input-VAT for the acquisition of saws will be refunded by the HMRC (Her Majesty's Revenue and Customs)[5] after PENOR PLC's VAT difference between output-VAT and input-VAT has been reported thereto.

The deployment of machinery is considered as an expense, as the value of the saws declines by use. This leads to depreciation to be disclosed on the income statements. The saws have a useful life of five years. Depreciation is accounted for on a straight-line method base. 150,000.00 GBP is the depreciable value. Thus, the annual depreciation on saws is equal to: 150,000 / 5 = 30,000.00 GBP/a.

As part of the adjustments[6], PENOR PLC's Accountant records the Bookkeeping entry (7) for depreciation on the saws.

Following IFRSs, we apply the Accumulated Depreciation account dedicated to the saws for the credit entry.

```
DR Depreciation................   30,000.00 GBP
CR Acc. Depr. CNC-Saws.........   30,000.00 GBP
```

The Bookkeeping entry implies that a specific Accumulated Depreciation CNC-saws account has been linked to machinery. This is common procedure for Asset Management in compliance with IFRSs.

The saws are installed in the factory which is a rented building. Monthly rent is 7,500.00 GBP/m and must be paid one month in advance. In 20X1, PENOR PLC makes 13 monthly rent payments which add up to: 13 × 7,500 = 97,500.00 GBP. See the simplified Bookkeeping entry (8) which considers all payments for the factory rent together. In the case of PENOR PLC, rent is not subjected to VAT[7].

```
DR Rent........................   97,500.00 GBP
CR Cash/Bank...................   97,500.00 GBP
```

[5] This is the British revenue service.

[6] Adjustments or adjustment Bookkeeping entries are made in preparation for financial statements at the end of the Accounting period. Their date of recording is 31.12.20XX.

[7] We pretend the building's owner is a private person.

The last rental payment is for January 20X2's factory rent. To allocate the rent to the next year's expenses at the beginning of 20X2, the Accountant credits the Rent account and recognises prepaid expenses[8]. This is Bookkeeping entry (9) made on 31.12.20X1.

DR Prepaid Expenses..... 7,500.00 GBP
CR Rent..... 7,500.00 GBP

Observe the accounts at this stage of recording displayed in Figure 4.

Cash/Bank C/B

D		C	
(1)	400,000.00	(4)	26,000.00
(2)	198,500.00	(6)	180,000.00
		(8)	97,500.00

Issued Capital ISS

D		C	
		(1)	400,000.00

Interest bearing liabilities IBL

D		C	
(4)	26,000.00	(2)	198,500.00
(5)	20,000.00	(3)	6,260.61

Interest-20X1 INT

D		C	
(3)	6,260.61		

Short-term liabilities A/P

D		C	
		(5)	20,000.00

Property, plant, equipment PPE

D		C	
(6)	150,000.00		

Value added tax VAT [20 %]

D		C	
(6)	30,000.00		

Depreciation-20X1 DPR

D		C	
(7)	30,000.00		

Acc depr ACC

D		C	
		(7)	30,000.00

Rent-20X1 RNT

D		C	
(8)	97,500.00	(9)	7,500.00

Prepaid expenses PRE

D		C	
(9)	7,500.00		

Figure 4: PENOR PLC's accounts

Purchases is buying goods which classify for inventory. *In contrast, buying machinery is referred to as an acquisition. Purchases themselves are*

[8] Following German law, prepaid expenses would be recorded under accruals, known as 'Abgrenzungsposten'

no expenses as no consumption occurs. Only once goods are released from stock for use in production, for service rendering or for administration, we record material expenses.
During the Accounting period 20X1, PENOR PLC buys materials for the production of windows and doors. The materials' net purchase prices are as listed below:
- Aluminium profiles 20.00 GBP/kg.
- Hinges at 30.00 GBP/u.
- Glass panes at 100.00 GBP/u.
- Aluminium sheets at first at 50.00 GBP/u and later at 52.00 GBP/u.
- Sealing strips at 10.00 GBP/m.
- 90°-fasteners at 25.00 GBP/u.

During the Accounting period 20X1, PENOR PLC buys 30t aluminium profiles which cost: 30,000 × 20 = 600,000.00 GBP. The gross purchase price is equal to: 600,000 × 120% = 720,000.00 GBP.
The Bookkeeping entry (10) is made in the Purchase account. We only make one Bookkeeping entry and pretend that all profiles are bought together on 4.01.20X1.

DR Purchase ..... 600,000.00 GBP
DR VAT ..... 120,000.00 GBP
CR Cash/Bank ..... 720,000.00 GBP

PENOR PLC buys 15,000 hinges. The purchase costs (net value) are: 15,000 × 30 = 450,000.00 GBP. The gross purchase price is: 450,000 × 120% = 540,000.00 GBP. PENOR PLC pays half of the due amount in 20X1 and the other half in the next Accounting period. The Bookkeeping entry (11) shows the recording of hinges.

DR Purchase ..... 450,000.00 GBP
DR VAT ..... 90,000.00 GBP
CR Accounts Payables ..... 270,000.00 GBP
CR Cash/Bank ..... 270,000.00 GBP

PENOR PLC orders from its supplier 6,000 glass panes. The costs of purchase are: 6,000 × 100 = 600,000.00 GBP. The gross purchase price is: 600,000 × 120% = 720,000.00 GBP. This purchase is recorded by Bookkeeping entry (12). PENOR PLC pays for the glass panes in the next Accounting period.

DR Purchase ..... 600,000.00 GBP
DR VAT ..... 120,000.00 GBP
CR Accounts Payables ..... 720,000.00 GBP

On 5.01.20X1, PENOR PLC orders 800 aluminium sheets at 50.00 GBP/u. The costs of purchase are: 800 × 50 = 40,000.00 GBP. The gross purchase price is paid instantly: 40,000 × 120% = 48,000.00 GBP. On 4.03.20X1, PENOR PLC orders another batch of 500 aluminium sheets at 52.00 GBP/u. The

costs of purchase now are: 500 × 52 = 26,000.00 GBP. Its gross value is equal to: 26,000 × 120% = 31,200.00 GBP. Observe Bookkeeping entry (13a) and (13b) for the purchases of aluminium sheets.

```
DR Purchase ..................    40,000.00 GBP
DR VAT .......................     8,000.00 GBP
CR Cash/Bank .................    48,000.00 GBP

DR Purchase ..................    26,000.00 GBP
DR VAT .......................     5,200.00 GBP
CR Cash/Bank .................    31,200.00 GBP
```

On 5.01.20X1, PENOR PLC orders 27,000 metre of sealing strips at 10.00 GBP/m from its supplier. The costs of purchase are: 27,000 × 10 = 270,000.00 GBP. The gross purchase price is transferred to the supplier's bank account: 270,000 × 120% = 324,000.00 GBP. The Bookkeeping entry (14) is displayed below.

```
DR Purchase ..................   270,000.00 GBP
DR VAT .......................    54,000.00 GBP
CR Cash/Bank .................   324,000.00 GBP
```

On 10.01.20X1, the supplier for the sealing strips offers PENOR PLC a 5 % discount on all purchases which includes the purchase from 5.01.20X1, too. The discount is recorded by Bookkeeping entry (15). PENOR PLC receives a voucher worth: 324,000 × 5% = 16,200.00 GBP. The voucher is added to the Accounts Receivables account. The discount reduces the valuation of raw materials and requires an input-VAT adjustment[9]. The adjusted costs per metre of sealing strip are: 10 × (1 - 5%) = 9.50 GBP/m. Check Bookkeeping entries (15, 16).

```
DR Accounts Receivables ......    16,200.00 GBP
CR Discount Received .........    16,200.00 GBP

DR Discount Received .........    16,200.00 GBP
CR VAT .......................     2,700.00 GBP
CR Purchase ..................    13,500.00 GBP
```

On 5.01.20X1, PENOR PLC buys 50,000 90°-fasteners from its supplier at 25.00 GBP/u. The costs of purchase are: 50,000 × 25 = 1,250,000.00 GBP. The gross purchase price equals: 1,250,000 × 120% = 1,500,000.00 GBP. The Accountant records Bookkeeping entry (17).

[9] Required by VAT-law.

DR Purchase ..... 1,250,000.00 GBP
DR VAT ..... 250,000.00 GBP
CR Cash/Bank ..... 1,500,000.00 GBP

*500 of the delivered 90°-fasteners are faulty as detected by goods inspection upon receipt. PENOR PLC returns the 500 damaged 90°-fasteners and receives a check from the supplier. Its value is equal to: 500 × 25 × 120% = **15,000.00 GBP**. The return outward is recorded as Bookkeeping entry (18).*

DR Cash/Bank ..... 15,000.00 GBP
CR VAT ..... 2,500.00 GBP
CR Return Outwards ..... 12,500.00 GBP

*PENOR PLC buys 4,000 containers with 100 self-tapping-screws at 5.00 GBP/u. The costs of acquisition are: 4,000 × 5 = **20,000.00 GBP**. The gross purchase price is equal to: 20,000 × 120% = **24,000.00 GBP**. See Bookkeeping entry (19) below.*

DR Purchase ..... 20,000.00 GBP
DR VAT ..... 4,000.00 GBP
CR Cash/Bank ..... 24,000.00 GBP

The total purchases are tabled in Figure 5.

	purchase amount	unit costs	purchase costs	gross amount
		[GBP]	[GBP]	[GBP]
aluminium profiles	**30,000**	20.00	600,000.00	720,000.00
hinges	**15,000**	30.00	450,000.00	540,000.00
glass panes	**6,000**	100.00	600,000.00	720,000.00
sealing strips	**27,000**	9.50	256,500.00	307,800.00
90°-fasteners	**50,000**	25.00	1,250,000.00	1,500,000.00
alu sheets	**800**	50.00	40,000.00	48,000.00
alu sheets	**500**	52.00	26,000.00	31,200.00
self-tapping-screws	**400,000**	0.05	20,000.00	24,000.00

Figure 5: PENOR PLC's purchases in 20X1

Observe the accounts in Figure 6:
:

D	Cash/Bank C/B		C	D	Issued Capital ISS		C
(1)	400,000.00	(4)	26,000.00			(1)	400,000.00
(2)	198,500.00	(6)	180,000.00				
(18)	15,000.00	(8)	97,500.00				
(24)	6,062,280.00	(10)	720,000.00				
		(11)	270,000.00				
		(12)	720,000.00				
		(13a)	48,000.00				
		(13b)	31,200.00				
		(14)	324,000.00				
		(17)	1,500,000.00				
		(19)	24,000.00				

D	Interest bearing liabilities IBL		C	D	Interest-20X1 INT		C
(4)	26,000.00	(2)	198,500.00	(3)	6,260.61		
(5)	20,000.00	(3)	6,260.61				

D	Short-term liabilities A/P		C	D	Property, plant, equipment PPE		C
		(5)	20,000.00	(6)	150,000.00		

D	Value added tax VAT [20 %]		C	D	Depreciation-20X1 DPR		C
(6)	30,000.00	(16)	2,700.00	(7)	30,000.00		
(10)	120,000.00	(18)	2,500.00				
(11)	90,000.00	(24)	1,010,380.00				
(12)	120,000.00						
(13a)	8,000.00						
(13b)	5,200.00						
(14)	54,000.00						
(17)	250,000.00						
(19)	4,000.00						

D	Acc depr ACC		C	D	Rent-20X1 RNT		C
		(7)	30,000.00	(8)	97,500.00	(9)	7,500.00

D	Prepaid expenses PRE		C	D	Accounts payables A/P		C
(9)	7,500.00					(11)	270,000.00

Figure 6: PENOR PLC's accounts

D	Purchase-20X1 PUR		C	D	Returns Outwards R.O.		C
(10)	600,000.00	(16)	13,500.00			(18)	12,500.00
(11)	450,000.00						
(12)	600,000.00						
(13a)	40,000.00						
(13b)	26,000.00						
(14)	270,000.00						
(17)	1,250,000.00						
(19)	20,000.00						

D	Discount received DIS		C	D	Accounts receivables A/R		C
(16)	16,200.00	(15)	16,200.00	(15)	16,200.00		

D	Labour-20X1 LAB		C	D	Social securities/p A/P		C
(20)	1,750,000.00			(22)	500,000.00	(20)	250,000.00
(21)	250,000.00					(21)	250,000.00

D	Payroll tax PRT		C	D	Revenue-20X1 REV		C
(23)	400,000.00	(20)	400,000.00			(24)	5,051,900.00

Figure 6: PENOR PLC's accounts (continued)

During the Accounting period 20X1, PENOR PLC pays 2,000,000.00 GBP for labour. The net salary is 1,100,000.00 GBP. The gross salary is equal to 1,750,000.00 GBP and contains the payroll tax to the extent of 400,000.00 GBP and social securities of 250,000.00 GBP (employee contribution). At the end of the Accounting period, the Accountant records labour by Bookkeeping entries (20 ... 23). The Bookkeeping entry (21) is for the contribution of the employer.

```
DR Labour ..................... 1,750,000.00 GBP
CR Social Security /p ..........   250,000.00 GBP
CR Payroll tax .................   400,000.00 GBP
CR Cash/Bank ................... 1,100,000.00 GBP

DR Labour .....................   250,000.00 GBP
CR Social Security /p ..........   250,000.00 GBP
```

DR Social Security /p..... 500,000.00 GBP
CR Cash/Bank..... 500,000.00 GBP

DR Payroll tax..... 400,000.00 GBP
CR Cash/Bank..... 400,000.00 GBP

Proceeds is the gross value of the earned revenue. During the Accounting period 20X1, PENOR PLC produces 5,000 windows and 1,000 doors. The company sells 4,678 windows at 800.00 GBP/u and 873 doors at 1,500.00 GBP/u. Not yet sold products are added to stock. The revenue is: 4,678 × 800 + 873 × 1,500 = 5,051,900.00 GBP. The proceeds (gross value) are: 5,051,900 × 120% = 6,062,280.00 GBP. All customers pay instantly and on cash/bank base. Proceeds are recorded by Bookkeeping entry (24).

DR Cash/Bank..... 6,062,280.00 GBP
CR VAT..... 1,010,380.00 GBP
CR Revenue..... 5,051,900.00 GBP

As PENOR PLC does not sell all windows and doors a valuation of its finished goods is required. The company accounts for profit on the nature of expense base. Accordingly, all manufacturing costs are considered and the costs for changes in finished goods inventory must be adjusted. The contra entry for those adjustments is made in the Inventories of Finished Goods-account. The product calculation is the basis for the recognition of finished goods on the balance sheet. The valuation is here required for: 5,000 – 4,678 = 322 windows and: 1,000 – 873 = 127 doors. The cost for 322 windows and 127 doors are deducted from cost of manufacturing when we calculate PENOR PLC's profit (paragraph 'profit calculation').
The valuation of finished goods is referred to as product calculation.[10] The calculation adds all direct costs and allocated manufacturing overheads which are (here) labour, depreciation and rent.

At first we discuss direct costs: direct costs are costs applying for one product only, e.g. direct labour or direct materials. At PENOR PLC, no direct labour applies, hence, materials are the only direct costs.
Material costs are calculated as price × amount. The prices depend on the supplier. The material input amounts are derived from the bill of materials. A bill of materials is a document that shows the part-structure of a product. PENOR PLC got 2 bills of materials, one for windows and another one for doors. Check Error! Reference source not found. and Error! Reference source not found..

[10] Calculations are covered in chapters (18) and (19) of this textbook.

DIRECT MATERIALS windows	unit costs	/window	costs
aluminium profile [kg]	20.00	**4**	80.00
hinge [u]	30.00	**2**	60.00
glass pane [u]	100.00	**1**	100.00
sealing strip [m]	9.50	**4**	38.00
90°-fastener [u]	25.00	**8**	200.00
			478.00

Figure 7: Direct materials for windows

*The units in Figure 0.7 are kg for kilogram, u for unit and m for metres. By multiplying the amount per window with its unit costs, we calculate the cost per item. E.g., the calculation of aluminium profile input is: 20 × 4 = **80.00 GBP**. The total material costs per window are: 80 + 60 + 100 + 40 + 200 = **478.00 GBP**.*

DIRECT MATERIALS doors	unit costs	/door	costs
aluminium profile [kg]	20.00	**6**	120.00
hinge [u]	30.00	**3**	90.00
alu sheet [u]	50.00	**1**	50.00
alu sheet [u]	52.00	**1**	52.00
sealing strip [m]	9.50	**6**	57.00
90°-fastener [u]	25.00	**8**	200.00

Figure 8: Direct materials for doors[11]

*For financial statements, unit costs must be consistent with the Bookkeeping records[12]. PENOR PLC applies the first-in-first-out cost formula for inventory movements as its materials are interchangeable.[13] **The first-in-first-out cost formula applies for inventory that cannot be distinguished and it pretends a stock release in the sequence of intakes**. Notice the calculation of doors is based on 2 batches, one with aluminium sheets at 50 GBP/u and another one with aluminium sheets at 52 GBP/u.*

For the calculation of direct materials, the screws must be added, too. Although the screws are displayed on the bill of materials, the screw consumption is not recorded accurate to the products at PENOR PLC. Instead the total of screws is allocated to the number of windows/doors. The company applies a periodic inventory system for the screw consumption.

[11] We do not disclose the total of the material input for doors on the bottom line because the prices for the aluminium sheets differ.
[12] In contrast, Manufacturing Accounting can use average prices.
[13] Read our textbook Financial Statements, chapter (9) for the details.

PENOR PLC takes stock on 31.12.20X1 to determine how many screws are left. The stock taking gives 1,000 boxes with each box containing 100 self-tapping-screws. Therefore, the total screw consumption is: (400,000 – (1,000 × 100)) × 0.05 = ***15,000.00 GBP****. The material expenses for screws are allocated by piece count (of products) towards windows and doors. A door contains as many screws as a window. Based on production amounts of 5,000 windows and 1,000 doors this results in screw costs of: 15,000 / (5,000 + 1,000) =* ***2.50 GBP/u****.*

At this stage of the calculation, the unit costs per window are:
- Direct materials: 478.00 GBP/u.
- Screws: 2.50 GBP/u.

The door costs for the first batch of 800 doors (based on the first order of aluminium sheets) are:
- Direct materials: 517.00 GBP/u.
- Screws: 2.50 GBP/u.

The costs per door for the next batch of 200 doors (based on the second order of aluminium sheets) are:
- Direct materials: 519.00 GBP/u.
- Screws: 2.50 GBP/u.

Next, we calculate manufacturing overheads: They include labour, depreciation and rent:
Labour is divided at a 60:40 ratio between manufacturing workforce and administration. Hence, 1,200,000.00 GBP is for labour in the manufacturing department. 2/3 of the manufacturing labour costs is allocated to the window production (based on time count): 1,200,000 × 2/3 = ***800,000.00 GBP****. The remainder of: 1,200,000 – 800,000 =* ***400,000.00 GBP*** *is assigned to door manufacturing. The labour costs per window are: 800,000 / 5,000 =* ***160.00 GBP/u****. The labour costs per door are: 400,000 / 1,000 =* ***400.00 GBP/u****.*
Depreciation on the manufacturing facilities (saws) is divided based on product count. Depreciation assigned to all windows equals: 30,000 × 5,000 / (1,000 + 5,000) = ***25,000.00 GBP****. Depreciation per window is: 25,000 / 5,000 =* ***5.00 GBP/u****. Depreciation allocated to one door is: (30,000 - 25,000) / 1,000 =* ***5.00 GBP/u****.*
Rent for the factory is accounted for as manufacturing overheads. It is allocated to goods based on manufacturing volume. Hence, the rent to be allocated to one window/door is equal to: 90,000 / 6,000 = ***15.00 GBP/u****.*

Now, we complete the calculation of finished goods:
The unit costs per window are:
- Direct materials: 478.00 GBP/u.
- Screws: 2.50 GBP/u.
- Labour: 160.00 GBP/u.
- Depreciation: 5.00 GBP/u.
- Rent: 15.00 GBP/u.

A window's unit costs of manufacturing are: 478 + 2.50 + 160 + 5 + 15 = ***660.50 GBP/u****.*

Per door the following unit costs occur:
- Direct materials: 517.00 GBP/u for the first 800 doors manufactured and for the next 200 units 519.00 GBP/u.
- Screws: 2.50 GBP/u.
- Labour: 400.00 GBP/u.
- Depreciation: 5.00 GBP/u.

- Rent: 15.00 GBP/u.

A door's unit costs of manufacturing for the first batch of 800 doors are: 517 + 2.5 + 400 + 5 + 15 = ***939.50 GBP/u****.*
A door's unit costs of manufacturing for the next batch of 200 doors are: 519 + 2.5 + 400 + 5 +15 = ***941.50 GBP/u****.*

The value of inventories of finished goods is based on the unit costs of manufacturing. ***Costs of manufacturing comprise direct materials, direct labour and allocated manufacturing overheads.*** *To calculate the unit costs we divide the total costs of manufacturing by the lot size.* ***The lot size is the number of goods produced in one batch.*** *As PENOR PLC accounts for inventory movements on a first-in-first-out basis, only 1,000 – 873 =* ***127 doors*** *from the second batch are added to stock. Hence, the total of finished goods is: 127 × 941.50 + 322 × 660.50 =* ***332,251.50 GBP****.*

The profit calculation at PENOR PLC follows a Trading account. We consider only opening values and closing stock for the materials and finished goods. ***A Trading account calculates the gross profit by deducting opening values for inventory and purchases from revenue and closing stock, adjusted for returns****.*
The closing stock of aluminium profiles[14] is: (30,000 – (5,000 × 4) – (1,000 × 6)) × 20 = ***80,000.00 GBP****. The closing stock of hinges[15] is: (15,000 – (5,000 × 2) – (1,000 × 3)) × 30 =* ***60,000.00 GBP****. The closing stock of glass panes[16] is: (6,000 – 5,000) × 100 =* ***100,000.00 GBP****. The closing stock of sealing strips[17] is: (27,000 – (5,000 × 4) – (1,000 × 6)) × 10 × (1 – 5%) =* ***9,500.00 GBP****. The closing stock of 90°-fasteners[18] requires an adjustment for the return of 500 units to the supplier. It is: (50,000 - 500 – ((5,000 + 1,000) × 8)) × 25 =* ***37,500.00 GBP****. The closing stock of aluminium sheets[19] contains the ones bought at 52.00 GBP/u only due to the FIFO application and is equal to: (1,300 – 1,000) × 52 =* ***15,600.00 GBP****. The value of the remaining screws[20] has been calculated to be 15,000.00 GBP above already.*

Observe the accounts for details. The profit calculation is based on the nature of expense format. ***For profit calculation based on the nature of expense method we must consider all expenses and deduct the cost of manufacturing for additions to finished goods inventories.*** *Hence, the profit is revenue plus additions to finished goods less expenses.*
As the Bookkeeping entries are almost completed at PENOR PLC, all accounts are balanced-off in .

[14] Abbreviated by alu.
[15] Abbreviated by hin.
[16] Abbreviated by pan.
[17] Abbreviated by str.
[18] Abbreviated by fst.
[19] Abbreviated by sht.
[20] Abbreviated by scr.

D	Cash/Bank C/B		C		
(1)	400,000.00	(4)	26,000.00		
(2)	198,500.00	(6)	180,000.00		
(18)	15,000.00	(8)	97,500.00		
(24)	6,062,280.00	(10)	720,000.00		
		(11)	270,000.00		
		(13a)	48,000.00		
		(13b)	31,200.00		
		(14)	324,000.00		
		(17)	1,500,000.00		
		(19)	24,000.00		
		(20)	1,100,000.00		
		(22)	500,000.00		
		(23)	400,000.00		
		c/d	1,455,080.00		
	6,675,780.00		6,675,780.00		
b/d	1,455,080.00				

D	Issued Capital ISS		C
c/d	400,000.00	(1)	400,000.00
		b/d	400,000.00

D	Interest bearing liabilities IBL		C
(4)	26,000.00	(2)	198,500.00
(5)	20,000.00	(3)	6,260.61
(3b)	6,000.00		
c/d	158,760.61		
	210,760.61		204,760.61
		b/d	158,760.61

D	Interest-20X1 INT		C
(3)	6,260.61	c/d	6,260.61
b/d	6,260.61	P&L	6,260.61

D	Short-term liabilities A/P		C
c/d	20,000.00	(5)	20,000.00
		b/d	20,000.00

D	Property, plant, equipment PPE		C
(6)	150,000.00	c/d	150,000.00
b/d	150,000.00		

D	Value added tax VAT [20 %]		C
(6)	30,000.00	(16)	2,700.00
(10)	120,000.00	(18)	2,500.00
(11)	90,000.00	(24)	1,010,380.00
(12)	120,000.00		
(13a)	8,000.00		
(13b)	5,200.00		
(14)	54,000.00		
(17)	250,000.00		
(19)	4,000.00		
c/d	334,380.00		
	1,015,580.00		1,015,580.00
		b/d	334,380.00

D	Depreciation-20X1 DPR		C
(7)	30,000.00	c/d	30,000.00
b/d	30,000.00		

Figure 9: Accounts

Acc depr ACC

D			C
c/d	30,000.00	(7)	30,000.00
		b/d	30,000.00

Rent-20X1 RNT

D			C
(8)	97,500.00	(9)	7,500.00
		c/d	90,000.00
	97,500.00		97,500.00
b/d	90,000.00	P&L	90,000.00

Prepaid expenses PRE

D			C
(9)	7,500.00	c/d	7,500.00
b/d	7,500.00		

Accounts payables A/P

D			C
c/d	990,000.00	(11)	270,000.00
		(12)	720,000.00
	990,000.00		990,000.00
		b/d	990,000.00
c/d	1,190,000.00	(25)	200,000.00
	1,190,000.00		1,190,000.00
		b/d	1,190,000.00

Purchase-20X1 PUR

D			C
(10)	600,000.00	(16)	13,500.00
(11)	450,000.00		
(12)	600,000.00		
(13a)	40,000.00		
(13b)	26,000.00		
(14)	270,000.00		
(17)	1,250,000.00		
(19)	20,000.00	c/d	3,242,500.00
	3,256,000.00		3,256,000.00
b/d	3,242,500.00	T/A	3,242,500.00

Returns Outwards R.O.

D			C
T/A	12,500.00	(18)	12,500.00

Discount received DIS

D			C
(16)	16,200.00	(15)	16,200.00

Accounts receivables A/R

D			C
(15)	16,200.00	c/d	16,200.00
b/d	16,200.00		

Labour-20X1 LAB

D			C
(20)	1,750,000.00		
(21)	250,000.00	c/d	2,000,000.00
	2,000,000.00		2,000,000.00
b/d	2,000,000.00	P&L	2,000,000.00

Social securities/p A/P

D			C
(22)	500,000.00	(20)	250,000.00
		(21)	250,000.00
	500,000.00		500,000.00

Payroll tax PRT

D			C
(23)	400,000.00	(20)	400,000.00

Revenue-20X1 REV

D			C
T/A	5,051,900.00	(24)	5,051,900.00

Figure 9: Accounts (continued)

D	RM aluminum profiles (alu)		C
T/A	80,000.00	c/d	80,000.00
b/d	80,000.00		

D	RM hinges (hin)		C
T/A	60,000.00	c/d	60,000.00
b/d	60,000.00		

D	RM panes (pan)		C
T/A	100,000.00	c/d	100,000.00
b/d	100,000.00		

D	RM sealing strips (str)		C
T/A	9,500.00	c/d	9,500.00
b/d	9,500.00		

D	RM 90°-fasteners (fst)		C
T/A	37,500.00	c/d	37,500.00
b/d	37,500.00		

D	RM aluminum sheets (sht)		C
T/A	15,600.00	c/d	15,600.00
b/d	15,600.00		

D	RM self-tapping-screws (scr)		C
T/A	5,000.00	c/d	5,000.00
b/d	5,000.00		

D	Finished goods inventory (FGI)		C
T/A	322,251.50	c/d	332,251.50
b/d	332,251.50		

D	Trading account-20X1 T/A		C
PUR	3,242,500.00	REV	5,051,900.00
		alu	80,000.00
		hin	60,000.00
		pan	100,000.00
		str	9,500.00
		fst	37,500.00
		sht	15,600.00
		scr	5,000.00
		FGI	332,251.50
GP	2,461,751.50	R.O.	12,500.00
	5,704,251.50		5,704,251.50
P&L	2,461,751.50	b/d	2,461,751.50

D	Profit and Loss-20X1 P&L		C
LAB	2,000,000.00	T/A	2,461,751.50
RNT	90,000.00		
DPR	30,000.00		
INT	6,260.61		
EBT	335,490.89		
	2,461,751.50		2,461,751.50
ITL	100,647.27	b/d	335,490.89
R/E	234,843.62		
	335,490.89		335,490.89

D	Retained earnings R/E		C
c/d	234,843.62	P&L	234,843.62
(25)	200,000.00	b/d	234,843.62
(26)	34,843.62		
c/d	234,843.62		234,843.62

D	Income tax liabilities ITL		C
c/d	100,647.27	P&L	100,647.27
		b/d	100,647.27

D	Earnings reserves RES		C
c/d	34,843.62	(26)	34,843.62
		b/d	34,843.62

Figure 9: Accounts (continued)

From the profit calculation, we can derive the income statement directly. It is shown in the textbook. The income statement is an aggregation of the information on the Profit&Loss account.

A profit appropriation is the allocation of earnings after taxes to owners and/or the company. The distributable amount is the profit of the Accounting period plus profits carried forward less losses carried forward. The funds are either paid out as a dividend[21], added to reserves or stay in retained earnings. PENOR PLC declares a dividend to each owner of 25,000.00 GBP. The remainder is added to the Earnings Reserves account. The Bookkeeping entries (25, 26) record the appropriation of profits. PENOR PLC has 8 owners.

DR Retained Earnings ..... 200,000.00 GBP
CR Accounts Payables ..... 200,000.00 GBP

DR Retained Earnings ..... 34,843.62 GBP
CR Earnings Reserves ..... 34,843.62 GBP

After recording all Bookkeeping entries the balance sheet can be prepared based on real accounts' balancing figures. Under IFRSs, all values are disclosed on a fair value presentation. The balance sheet is displayed in the textbook. Note, the disclosure of values is to the nearest Pound Sterling.
The bank loan is disclosed on the balance sheet at a valuation as at 31.12.20X1 less 20,000.00 GBP for the upcoming pay-off.
The balance sheet has been prepared after the appropriation of profits.

A cash flow statements shows the total of payments and receipts over the Accounting period which is classified in cash flows from operations, investments and financing. For financing the business, information about cash flows during the Accounting period is important. A company that is unable to make due payments is obliged to file for bankruptcy. This would be called illiquidity. IAS 7.10 requires a business to present its cash flows classified in operating, investing and financing activities. The statement of cash flows for PENOR PLC is prepared following the direct method.[22] See the statement of cash flows in Figure 10:

[21] As the pay-out only occurs in the next Accounting period, we record payables.

[22] Read the textbook Financial Statements, chapter (10).

PENOR PLC
STATEMENT of CASH FLOWS
for the period ended 31.12.20X1

	[GBP]	[GBP]
Cash flow from operating acitivities		
Proceeds	6,062,280	
Purchase	(2,917,200)	
Refund for returns	15,000	
Rent payment	(97,500)	
Net salary payment	(1,100,000)	
Payroll tax	(400,000)	
Social securities payment	(500,000)	
...		
		1,062,580
Cash flow from investing activities		
Investments	(180,000)	
…		
		(180,000)
Cash flow from financing activities		
Share issue	400,000	
Bank loan received	198,500	
Interest	(6,000)	
Pay-off	(20,000)	
…		
		572,500
Total cash flow		1,455,080

Figure 10: PENOR PLC's statement of cash flows

Check the payment for interest. The interest on the income statement is different to the one on the income statement due to the effective interest method application. 6,000.00 GBP in interest have been paid by PENOR PLC on 31.12.20X1. However, PENOR PLC records interest expenses following IFRS 9 at amortised costs.

As part of a full set of financial statements, PENOR PLC prepares a statement of changes in equity, too. ***The statement of changes in equity shows how each equity item on the balance sheet has changed based on the last Accounting period's activities.*** *The equity items are issued capital, reserves and retained earnings.*

The total equity also is called the book value of the company. It represents the company's value at a liquidation. As all values are derived from the Bookkeeping records, the valuation is referred to as 'book value'. Carrying values according to IFRSs apply.

The statement of changes in equity discloses the opening equity value and any changes thereto. PENOR PLC's equity increased during 20X1 because of the profit earned and added to retained earnings and additions to reserves as part of the appropriation of profits. In

contrast, the declaration of dividends reduced PENOR PLC's equity. See the statement of changes in equity in Figure 11:

PENOR PLC
STATEMENT of CHANGES in EQUITY
as at 31.12.20X1

	Share capital	Reserves	Retained earnings	total
	[GBP]	[GBP]	[GBP]	[GBP]
as at 1.01.20X1	400,000			400,000
Profit 20X1			234,844	234,844
Dividend 20X1			(200,000)	(200,000)
Additions to reserves		34,844	(34,844)	0
as at 31.12.20X1	400,000	34,844	0	434,844

Figure 11: PENOR PLC's statement of changes in equity

With notes omitted here for the sake of textbook space, PENOR PLC provides a full set of financial statements.[23] *The way how to prepare financial statements, the recognition and valuation of items are subjected to IFRSs regulations.*

[23] For studying the notes, read chapter (6) of the textbook Financial Statements.