

1 ACCOUNTING FOR BUSINESS TRANSACTIONS

80/100 pts

The Financial Accounting syllabus introduces five business activities:

- Selling Goods or Services: This can involve immediate payment from customers (Cash Sales) or a promise of payment at a later date (Credit Sales).
- Customer Returning Goods: When customers bring back items they bought (Sales Returns).
- Buying Goods or Services: This can involve paying immediately with cash (Cash Purchases) or promising to pay later (Credit Purchases).
- Returning Goods to Suppliers: When our business sends back items we bought (Purchase Returns).
- Small Cash Payments: Handling minor, everyday expenses using a special small cash fund (Petty Cash transactions).

The business activities can be also be further split into three groups: activities that affect cash, activities that affect credit and activities that affect petty cash. Cash sales and purchases, credit sales and purchases, petty expenses.

Each of these business transactions goes through a consistent three-step process.

Firstly, when a business transaction takes place, it creates a source document. This document acts as an original piece of evidence for the transaction.

Secondly, this source document is used to write down the transaction in a journal entry. The journal entry is a chronological diary where every business transaction is initially recorded. In this entry we figure out what specific accounts (like 'Cash', 'Sales Revenue', or 'Accounts Payable') are affected and whether they need to increase or decrease. This is important because for each transaction, *at least* two accounts will be affected. One will be debited and at least one will be credited for the exact amount.

Lastly, after a journal entry is made, its details are posted to the affected individual ledger accounts. Each individual ledger account resides within a document called the general ledger. A simple way to think of this is as a binder, where each page is an individual ledger account and the binder is the general ledger account. When an entry is *posted*, we simply take the debit and credit amounts from the journal entry and apply them to the correct sides of their respective individual accounts in the general ledger. This updates the balance of each account, so we always know how much money we have, how much customers owe us, what our expenses are, and so on.

1.1 Receivables

Receivables are debts owed to a business by its customers, typically originating from previous credit transactions.

2 Formulas

2.1 Allowance for Doubtful Debts

$$\text{Allowance} = \sum_{i=1}^m (S_i \times \text{Allowance Rate}_i) + \sum_{j=1}^n (G_j \times \text{Allowance Rate}_j)$$

2.1.1 Step 1: Writing off irrecoverable (bad) debt

DR Irrecoverable Debts Expense (P/L) = amount

CR Trade Receivables (SFP) = amount

2.1.2 Step 2: Calculating the allowance

1. Identify specific receivables requiring 100% allowance:

$$\text{Allowance} = \text{Receivable Balance} \times 100\%$$

2. Apply a percentage allowance to the remaining receivables:

$$\text{Allowance} = \text{Remaining Receivables} \times \text{Allowance Rate}$$

3. Closing allowance = total of specific + general allowances.

2.1.3 Step 3: Adjustment for allowance at year-end

If Closing Allowance > Opening Allowance:

DR Irrecoverable Debts Expense, CR Allowance for Doubtful Debts

If Closing Allowance < Opening Allowance:

DR Allowance for Doubtful Debts, CR Irrecoverable Debts Expense

2.1.4 Step 4: When a debt is written off after an allowance was made

DR Irrecoverable Debts Expense, CR Trade Receivables

Simultaneously, reduce the allowance account (credit to expense), so the debt is not double-counted.

2.1.5 Formula Summary

$$\text{Closing Allowance} = \text{Specific Doubtful Debts} + (\text{Remaining Receivables} \times \text{General \%})$$

$$\text{Adjustment} = \text{Closing Allowance} - \text{Opening Allowance}$$

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3 Accounting Equation

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

$$\text{Capital at Year-end} = \text{Opening Capital} + \text{Capital Introduced} + \text{Profit} - \text{Drawings}$$

Rearranging for Profit:

$$\text{Profit} = (\text{Assets} - \text{Liabilities}) - (\text{Opening Capital} + \text{Capital Introduced}) + \text{Drawings}$$

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4 Control Account Pro formas

4.1 Trade Receivables

$$\text{Credit Sales} = \text{Cash Received from Customers} + \text{Closing Receivables} - \text{Opening Receivables}$$

$$\text{Closing Receivables} = \text{Credit Sales} - \text{Cash Received} + \text{Opening Receivables}$$

4.2 Trade Payables

$$\text{Credit Purchases} = \text{Cash Paid to Suppliers} + \text{Closing Payables} - \text{Opening Payables}$$

$$\text{Closing Payables} = \text{Credit Purchases} - \text{Cash Paid to Suppliers} + \text{Opening Payables}$$

4.3 Bank (Cash) Account

$$\text{Opening Bank Balance} + \text{Cash Receipts} = \text{Cash Payments} + \text{Closing Bank Balance}$$

$$\text{Drawings} = \text{Opening Bank Balance} + \text{Cash from Customers} - \text{Cash to Suppliers} - \text{Other Expenses Paid} - \text{Closing Bank Balance}$$

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5 Mark-up, Margin and Inventory Formulas

5.1 1. Mark-up (profit on cost)

$$\text{Sales} = \text{COGS} \times \frac{100 + \text{Mark-up \%}}{100}$$

$$\text{COGS} = \text{Sales} \times \frac{100}{100 + \text{Mark-up \%}}$$

$$\text{Gross Profit} = \text{Sales} \times \frac{\text{Mark-up \%}}{100 + \text{Mark-up \%}}$$

5.2 2. Margin (profit on sales)

$$\text{Sales} = \text{COGS} \times \frac{100}{100 - \text{Margin \%}}$$

$$\text{COGS} = \text{Sales} \times \frac{100 - \text{Margin \%}}{100}$$

$$\text{Gross Profit} = \text{Sales} \times \frac{\text{Margin \%}}{100}$$

5.3 3. Inventory

$$\text{COGS} = \text{Opening Inventory} + \text{Purchases} - \text{Closing Inventory}$$

$$\text{Closing Inventory} = \text{Opening Inventory} + \text{Purchases} - \text{COGS}$$

$$\text{Inventory Lost or Drawn for Personal Use} = \text{Expected Closing Inventory} - \text{Actual Closing Inventory}$$

5.4 Decision Aid

- If percentage is based on cost → use Mark-up formulas.
- If percentage is based on sales → use Margin formulas.
- If the question involves missing stock or movement → use Inventory formulas.

Journal Entry: Cash Sales

	Account Title	Category	Explanation	Amount (\$)
Dr	Cash	Asset	Cash increased	1,000
Cr	Sales Revenue	Income	Sales increased	(1,000)

Journal Entry: Cash Sales

	Account Title	Category	Explanation	Amount (\$)
Dr	Trade Receivables	Asset	Trade Receivables increased	1,000
Cr	Sales Revenue	Income	Sales increased	(1,000)

Journal Entry: Trade Receivables

	Account Title	Category	Explanation	Amount (\$)
Dr	Sales as Sales returns	Income	Sales decreased	1,000
Cr	Trade Receivables	Asset	Receivables decreased	(1,000)

Journal Entry: Sales Return

	Account Title	Category	Explanation	Amount (\$)
Dr	Bank/Cash	Asset	Bank/Cash increased	1,000
Cr	Trade Receivables	Asset	Receivables decreased	(1,000)

Journal Entry: Receipts from customers

	Account Title	Category	Explanation	Amount (\$)
Dr	Purchases	Expense	Purchases increased	1,000
Cr	Cash/Bank	Asset	Cash decreased	(1,000)

Journal Entry: Cash purchases

	Account Title	Category	Explanation	Amount (\$)
Dr	Purchases	Expense	Purchases increased	1,000
Cr	Trade Payables	Liability	Payables increased	(1,000)

Journal Entry: Credit purchases

	Account Title	Category	Explanation	Amount (\$)
Dr	Trade Payables	Liability	Payables decreased	1,000
Cr	Purchases	Expense	Purchase decreased	(1,000)

Journal Entry: Purchase Returns

	Account Title	Category	Explanation	Amount (\$)
Dr	Trade Payables	Liability	Payables decreased	1,000
Cr	Bank/Cash	Asset	Cash decreased	(1,000)

Journal Entry: Payment to Suppliers

5.5 Irrecoverable Debts

	Account Title	Category	Explanation	Amount (\$)
Dr	Irrecoverable debt expenses account	expenses	Irrecoverable debt expenses increased	1,000
Cr	Trade Receivables	Asset	Receivables decreased	(1,000)

Journal Entry: Payment to Suppliers

5.5.1 Subsequent Recovery of Irrecoverable Debt

Step 1: Reverse the irrecoverable debt write-off

	Account Title	Category	Explanation	Amount (\$)
Dr	Receivables	Asset	Receivables increased	1,000
Cr	Irrecoverable debts expense account	Expense	Irrecoverable debts expensed decreased	(1,000)

Journal Entry: Payment to Suppliers

Since the balance owed has been paid, the amount is not irrecoverable. Therefore, an adjustment to reverse the earlier write-off is made.

Step 2: Record the Receipts

	Account Title	Category	Explanation	Amount (\$)
Dr	Bank	Asset	Bank increased	1,000
Cr	Receivables	Asset	Receivables decreased	(1,000)

Journal Entry: Payment to Suppliers

Therefore, the net effect of the above two entries is Dr Bank, Cr. Irrecoverable debts expense account.

5.6 Allowance for irrecoverable debts

- 1 Calculate the closing allowance for the allowance for irrecoverable debts at the year-end.
- 2 Calculate the difference between the closing allowance and the opening allowance (brought forward from the previous accounting period)
- 3 The difference is posted as a journal entry to the allowance for irrecoverable debts ledger. The corresponding account is the irrecoverable debts expense account.

If the closing allowance is more than the opening allowance, the double entry to record the adjustment is:

	Account Title	Category	Explanation	Amount (\$)
Dr	Irrecoverable debts expense	Expense	Bank debt increased	1,000
Cr	Allowance for irrecoverable debts	Asset	Receivables decreased	(1,000)

Journal Entry: Payment to Suppliers

Since it has been identified that the closing allowance is more than the opening allowance, the difference is posted as an irrecoverable debts expense in the statement of profit or loss (in the same way as an irrecoverable debt written off).

If the closing allowance calculated is less than the opening allowance, the double entry to record the adjustment is:

	Account Title	Category	Explanation	Amount (\$)
Dr	Allowance for irrecoverable debts	Asset	Receivables increased	1,000
Cr	Irrecoverable debt expense	Expense	Irrecoverable debts expense decreased	(1,000)

Journal Entry: Payment to Suppliers

Since the closing allowance is less than the opening allowance, the difference is posted to decrease the irrecoverable debt expense. The reduced expense will be shown in the statement of profit or loss.

(Note –while the Allowance for irrecoverable debts is described as an asset account, it is a negative asset, as it reduces the value of trade receivables in the statement of financial position.)

5.7 Inventory

The record of inventory and cost of goods sold are made at the end of the year using journals. The objective of the double entries is to: Ensure the Inventory account reflects the closing inventory valuation Cost of goods sold account is created and reflects the correct amount

To achieve these objectives, there are three double-entry steps to make:

1. Remove the Opening Inventory

Opening inventories are removed and transferred to the Cost of goods sold account. This entry is necessary because the opening inventories are now used to generate sales in the current accounting period.

	Account Title	Category	Explanation	Amount (\$)
Dr	Cost of goods sold	Expense	Opening inventory cost now included as expenses	1,000
Cr	Inventory	Asset	Inventory decreased	(1,000)

Journal Entry: Payment to Suppliers

The cost of opening inventories is reflected as a current-year expense in the Statement of Profit or Loss.

2. Close off the Purchases Account

A business makes purchases for inventory for resale. The cost is debited to the Purchases account and credited to cash/payables at the point of purchase. At year-end, the amount in the Purchases account is closed off and transferred to the Cost of Goods Sold.

	Account Title	Category	Explanation	Amount (\$)
Dr	Cost of goods sold	Expense	Purchases is transferred to COGS	1,000
Cr	Purchases	Expense	Purchases is closed off	(1,000)

Journal Entry: Payment to Suppliers

3. Post the Closing Inventory

The balance in the inventory account at year-end should reflect the value of closing inventory. The closing balance is presented in the statement of financial position as a current asset.

Since closing inventories are items purchased that are not sold in the accounting period, their cost should not be reflected as an expense in the Cost of goods sold account (SPL). Therefore, the value of closing inventory is transferred out of expenses and reflected as Closing inventory in the Statement of Financial Position.

	Account Title	Category	Explanation	Amount (\$)
Dr	Inventory	Asset	Inventory is increased	1,000
Cr	Cost of goods sold	Expense	Costs decreased	(1,000)

Journal Entry: Payment to Suppliers

The value of closing inventory will be next year's opening inventory value.

Inventory Valuation and Cost of Sales

1. Cost of Sales Formula

$$\text{Cost of Sales} = \text{Opening Inventory} + \text{Cost of Goods} - \text{Closing Inventory}$$

2. IAS 2: Lower of Cost or NRV

Net Realisable Value (NRV):

$$\text{NRV} = \text{Estimated Selling Price} - \text{Estimated Future Costs of Completion} - \text{Estimated Future Selling Expenses}$$

Final Inventory Valuation:

$$\text{Inventory Value} = \min(\text{Cost}, \text{NRV})$$

3. Inventory Valuation Methods

First-In, First-Out (FIFO) Method

- **Principle:** Assumes the first units purchased are the first ones sold.
- **Closing Inventory Valuation:** Valued at the *most recent purchase prices*.

Average Cost (AVCO) Methods

(a) Periodic Weighted Average

$$\text{Average Cost per Unit} = \frac{\text{Total Cost of Opening Inventory} + \text{All Purchases}}{\text{Total Units in Opening Inventory} + \text{All Purchases}}$$

$$\text{Closing Inventory Value} = \text{Number of Closing Units} \times \text{Average Cost per Unit}$$

(b) Cumulative Weighted Average

$$\text{New Average Cost per Unit} = \frac{\text{Total Cost of Inventory after Purchase}}{\text{Total Units of Inventory after Purchase}}$$

Accruals and Prepayments

1. Accruals

Accrual Amount Formula

This formula estimates the value of an expense incurred but not yet paid or invoiced by the end of an accounting period:

$$\text{Accrual Amount} = \left(\frac{\text{Total Cost of Last Invoice}}{\text{Number of Months in Last Invoice}} \right) \times \text{Number of Months Accrued}$$

Example: If electricity costs \$7,230 for 3 months, and 2 months need to be accrued:

$$\frac{7,230}{3} \times 2 = 4,820$$

Journal Entry Formulas for Accruals

Creating an Accrual (at year-end)

DR Individual Expense Account
CR Accruals Account

Reversing an Accrual (in the next period)

DR Accruals Account
CR Individual Expense Account

Recording the Expense Payment

DR Individual Expense Account
CR Bank or Payables Account

2. Prepayments

A prepayment is an asset recognized when a business pays for an expense in the current period that relates to a future period. The purpose is to match expenses to the correct accounting period.

Prepayment Amount Formula

$$\text{Prepayment Amount} = \text{Total Amount Paid} \times \frac{\text{Number of Months Prepaid}}{\text{Total Months Covered by Payment}}$$

Example 1: A rent payment of \$1,200 covers 3 months (Dec, Jan, Feb). At Dec 31 year-end, 2 months (Jan, Feb) are prepaid:

$$1,200 \times \frac{2}{3} = 800$$

Example 2: A payment of \$4,875 covers 12 months (Sept X2–Aug X3). At Dec 31 year-end, 8 months (Jan–Aug X3) are prepaid:

$$4,875 \times \frac{8}{12} = 3,250$$

Expense for the Period Formula

$$\text{Expense for the Period} = \text{Total Amount Paid} - \text{Prepayment Amount}$$

Alternative form:

$$\text{Expense for the Period} = \text{Total Amount Paid} \times \frac{\text{Months in Current Period}}{\text{Total Months Covered}}$$

Example: For the \$1,200 rent payment (Dec 1 covering Dec–Feb):

$$1,200 \times \frac{1}{3} = 400$$

The total expense for 20X2 could include multiple payments (e.g. June + September + December portions).

Journal Entry Formulas for Prepayments

Recording the Expense Payment

DR Individual Expense Account
CR Bank / Trade Payables

Creating a Prepayment (at year-end)

DR Prepayment Account (Asset)
CR Individual Expense Account

Reversing a Prepayment (in the next period)

DR Individual Expense Account

CR Prepayment Account (Asset)

Share Issues, Dividends, and Finance Costs

1. Share Issues

(a) Rights Issue

Cash Raised Formula:

$$\text{Cash Raised} = \text{Number of Existing Shares} \times \frac{\text{New Shares}}{\text{Existing Shares}} \times \text{Issue Price per Share}$$

Accounting Entries:

DR Bank : Number of New Shares \times Issue Price

CR Ordinary Share Capital : Number of New Shares \times Par Value

CR Share Premium : Number of New Shares \times (Issue Price – Par Value)

(b) Bonus Issue

Number of New Shares Formula:

$$\text{Number of New Shares} = \text{Existing Shares} \times \text{Bonus Ratio}$$

Increase in Share Capital Formula:

$$\text{Increase in Ordinary Share Capital} = \text{Number of New Shares} \times \text{Par Value}$$

Accounting Entries:

DR Share Premium or Retained Earnings

CR Ordinary Share Capital

2. Dividends and Finance Costs

(a) Ordinary Share Dividends

Percentage of Profit:

$$\text{Dividend Amount} = \text{Net Profit} \times \text{Dividend Percentage}$$

Percentage of Par Value:

$$\text{Dividend Amount} = \text{Number of Shares} \times \text{Par Value} \times \text{Dividend Percentage}$$

Per Share:

$$\text{Dividend Amount} = \text{Number of Shares} \times \text{Dividend per Share}$$

Accounting Entries (when paid):

DR Retained Earnings

CR Bank

(b) Finance Costs

Redeemable Preference Shares:

$$\text{Annual Finance Cost} = \text{Number of Shares} \times \text{Par Value} \times \text{Dividend Percentage}$$

Interest on Borrowings:

$$\text{Annual Finance Cost} = \text{Principal Amount} \times \text{Interest Rate}$$

Accounting Entries (when paid):

DR Finance Costs
CR Bank

Statement of Profit or Loss for the year ended 31 October 2016

Sales	£100,250
Cost of Sales	
Purchases	£60,400
Less: Closing inventory	(15,600)
Cost of sales	£44,800
Gross profit	£55,450
Expenses	
Salaries	£29,300
Motor expenses	£1,200
Rent	£950
Insurance	£150
General expenses	£85
Total expenses	£31,685
Profit for the year	£23,765