MBA in Food & Agribusiness

Financial Management

Measuring Business Income

Why Important?

BBC NEWS

Accounting panic hits Xerox

Friday, 28 June, 2002, 20:25 GMT 21:25 UK

Xerox has admitted overstating revenues and profits for five years between 1997 and 2001 as a result of over-aggressive revenue recognition policies.

The company is **restating $1.9 billion (€1.92bn) of revenues and $1.4 billion (€1.41bn) in pre-tax profits**

The restatement regards the **early recognition** of revenue from on-going equipment, service, rental and finance contracts

Agenda

- Profitability Measurements: Issues and Ethics
- Accrual Accounting
- The Adjustment Process
- Using the Adjusted trial balance to prepare financial statements

Profitability Measurement: Issues and Ethics

Net Income = Revenues – Expenses

Net increase in stockholders' equity resulting from operations

Retained Earnings
Net income is accumulated here

If expenses exceed revenues, a net loss occurs

Profitability Measurement: Issues and Ethics - Assumptions

✓ Continuity	What is the expected life of the business?
✓ Periodicity	Over what period of time are transactions measured?
✓ Matching	Are expenses assigned to the period in which they are used to generate revenue?

Profitability Measurement: Issues and Ethics - Matching

1. **Revenues** should be assigned to the accounting period in which the goods are sold or the services performed
2. **Expenses** must be assigned to the accounting period in which they are used to produce revenue

If cause and effect relationship exists… → Recognize expenses and related revenues in same period

If no cause and effect relationship exists… → Allocate costs in a systematic way to accounting periods that benefit from the costs

Accrual Accounting

Revenues and expenses are recorded in the periods in which they occur rather than in the periods when cash is received or paid

HOW?

✓Recording revenues when **earned**

✓Recording expenses when **incurred**

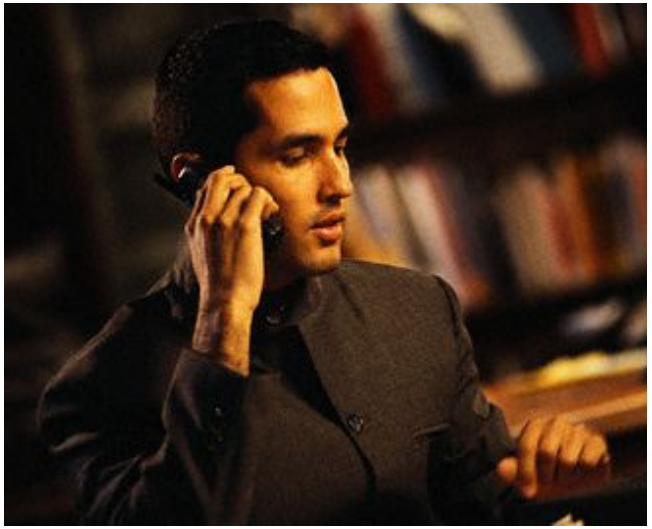
=

✓Adjusting the accounts

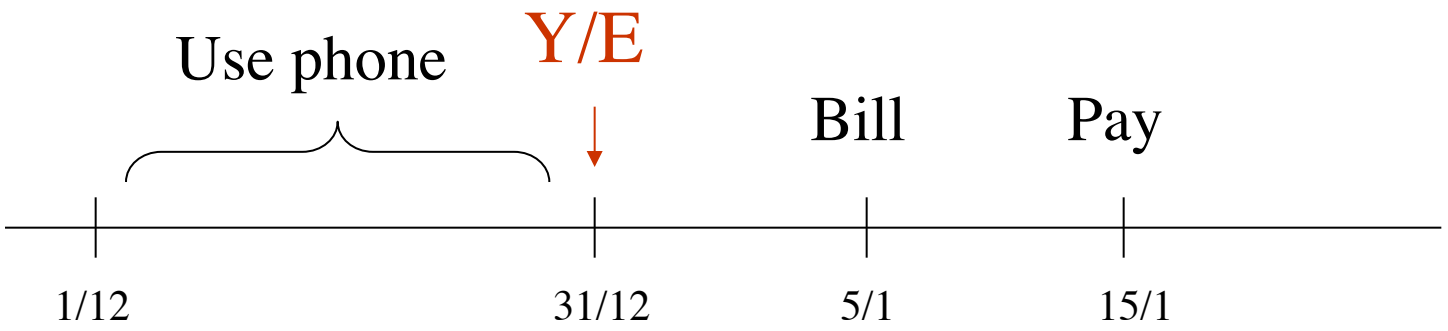
Accrual Accounting

Record when these conditions are met:

- ✓ agreement exists to purchase goods or services
- ✓ goods **have been delivered or services rendered**
- ✓ a price is established or can be determined
- ✓ goods or services have been used to produce revenue



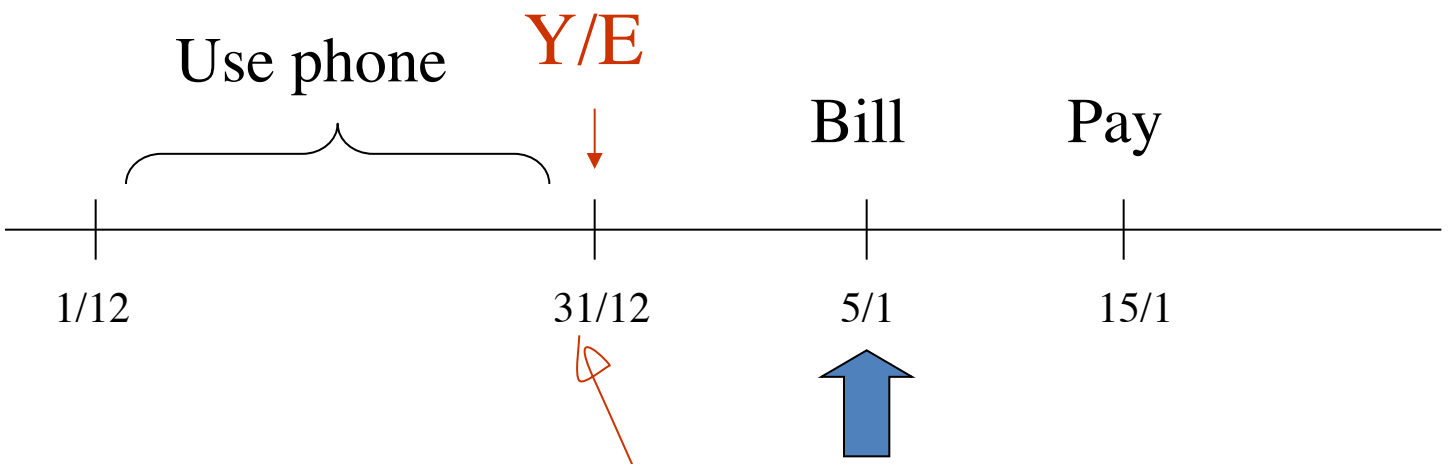
Expense Recognition Illustrated



When should Treadle inc recognise phone expense?

Treadle has received services (the use of the telephone) and Treadle has entered into a contract to pay for these services. So Treadle knows the expense has been ***incurred at 31/12*** *and has helped produce revenue, it should be recorded by debiting telephone Expense*.

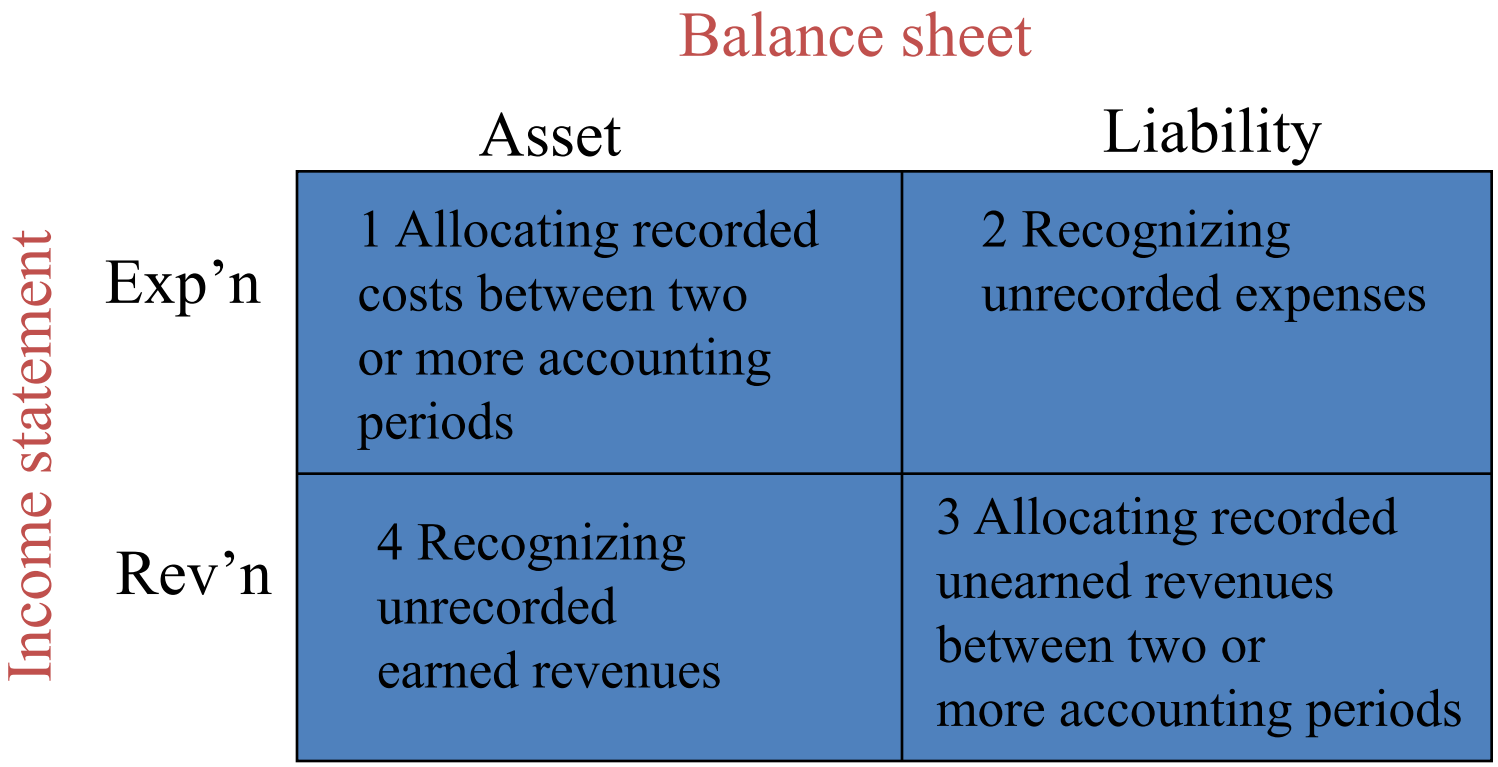
Accrual Accounting



But accountant only does journal entries when receive source documentation!

Hence adjustment at Y/E

The Adjustment Process



Type 1 Adjustment: Allocating Recorded Costs (Deferred expenses)

Expenditures often benefit more than one period
When first recorded, they are usually debited to an asset account

Two common kinds of adjustments
Prepaid Expenses
Depreciation of Plant and Equipment

Prepaid Rent Adjustment Illustrated

On July 3, Treadle Website Design paid two months' rent in advance, $3,200. The amount was recorded in the Prepaid Rent account.

Prepaid Rent			Rent Expense		
July 3	3,200				

By July 31, half of the prepaid rent has expired and should be treated as an expense

This is the Y/E

Prepaid Rent Adjustment Illustrated

Adjustment July 31: Prepaid rent of $1,600 has expired for July. Adjust account by allocating the amount to the Rent Expense account.

Prepaid Rent

July 3	3,200	July 31	1,600
Bal.	1,600		

The account now reflects the prepaid August amount

Rent Expense

July 31	1,600		

The account now reflects the July rent expense amount

		Dr.	Cr.
July 31	Rent Expense	1,600	
	Prepaid Rent		1,600

Type 2 Adjustment: Recognizing Unrecorded Expenses (Accrued Expenses)

Expenses are often incurred in a period, but not yet recorded

Common types of unrecorded expenses
Interest
Taxes
Wages
Utilities

Wages Adjustment Illustrated

Treadle Website Design pays its employees every two weeks. The last pay period ended on July 26. The secretary worked July 29 – 31, but will not be paid until the regular payday in August.

Wages Payable		Wages Expense	
		July 26 4,800	

The unrecorded wages for July 29 – 31 are an expense of July even though they will not be paid until August.

Wages Adjustment Illustrated

Adjustment July 31: Accrue the unrecorded wages. The secretary earns $2,400 every two weeks. ($2,400/ 10 working days = $240/day x 3 days = $720)

Wages Payable

	July 31 720

The account now reflects the liability applicable to July

Wages Expense

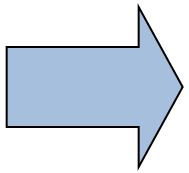
July 26 4,800	
Bal. 5,520	

The account now reflects the total July wages expense

		Dr.	Cr.
July 31	Wages Expense	720	
	Wages Payable		720

Type 3 Adjustment: Allocating Recorded, Unearned Revenues (Deferred Revenues)

Revenues can be received before they are earned



Unearned revenues are **liabilities**

When **goods are delivered or services are performed**, the liability…

into a revenue

Unearned Revenue Adjustment Illustrated

On July 19, Treadle Website Design received $1,400 as an advance payment for designs to be prepared for a client. By the end of the month, $800 of the design was completed and accepted by the client. When the payment was originally received, it was recorded as a liability.

Unearned Design Revenue	
	July 19 1,400

Design Revenue	

$800 of the advance payment has been earned in July

Unearned Revenue Adjustment Illustrated

Adjustment July 31: Recognize $800 of the unearned revenue as earned in July.

Unearned Design Revenue

July 31 800	July 19 1,400
	Bal. 600

Design Revenue

	July 31 800

The account now reflects a balance that is unearned revenue

The account now reflects the total revenue applicable to July

		Dr.	Cr.
July 31	Unearned Design Revenue	800	
	Design Revenue		800

Type 4 Adjustment: Recognizing Unrecorded, Earned Revenues

Revenues can be earned but not yet recorded

Common types of unrecorded revenues
Interest
Revenues earned on operations

Unrecorded Revenue Adjustment Illustrated

In July, Treadle Website Design agreed to design a website for Marsh Tire Company with the first section operational by July 31. The fee for this section is $400.

Accounts Receivable	**Design Revenues**

The fee has been earned by the end of the month, but has not been recorded

Unrecorded Revenue Adjustment Illustrated

Adjustment July 31: Recognize $400 as revenue earned in July

Accounts Receivable

July 31	400		
Bal.	400		

The account now reflects all receivables for July

Design Revenues

		July 31	400

The account now reflects the total revenue applicable to July

July 31	Accounts Receivable	400	
	Design Revenue		400

Using the Adjusted Trial Balance to Prepare

Relationship of the Adjusted Trial Balance to the Income Statement

Treadle Website Design
Adjusted Trial Balance
July 31, 20xx

Cash	$ 22,480	
Accounts Receivable	5,000	
Office Supplies	3,660	
Prepaid Rent	1,600	
Office Equipment	16,320	
Accumulated Depreciation–Office Equipment		$ 300
Accounts Payable		6,280
Unearned Design Revenue		600
Wages Payable		720
P. Treadle, Capital		40,000
P. Treadle, Withdrawals	2,800	
Design Revenue		13,600
Wages Expense	5,520	
Utilities Expense	680	
Rent Expense	1,600	
Office Supplies Expense	1,540	
Depreciation Expense–Office Equipment	300	
	$61,500	$61,500

Treadle Website Design
Income Statement
For the Month Ended July 31, 20xx

Revenues		
Design revenue		$13,600
Expenses		
Wages expense	$5,520	
Utilities expense	680	
Rent expense	1,600	
Office supplies expense	1,540	
Depreciation expense–office equipment	300	
Total expenses		9,640
Net income		$ 3,960

Relationship of the Adjusted Trial Balance to the Balance Sheet and Statement of Owner's Equity

Treadle Website Design
Adjusted Trial Balance
July 31, 20xx

Cash	$22,480	
Accounts Receivable	5,000	
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Wages Expense	5,520	
Utilities Expense	680	
Rent Expense	1,600	
Office Supplies Expense	1,540	
Depreciation Expense–Office Equipment	300	
	$61,500	$61,500

Treadle Website Design
Balance Sheet
July 31, 20xx

Assets		
Cash		$22,480
Accounts receivable		5,000
Office supplies		3,660
Prepaid rent		1,600
Office equipment	$16,320	
Less accumulated depreciation	300	16,020
Total assets		$48,760
Liabilities		
Accounts payable		$ 6,280
Unearned design revenue		600
Wages payable		720
Total liabilities		$ 7,600
Owner's Equity		
P. Treadle, Capital		41,160
Total liabilities and owner's equity		$48,760

Treadle Website Design
Statement of Owner's Equity
For the Month Ended July 31, 20xx

P. Treadle, Capital, July 1, 20xx	$ 0
Investment by P. Treadle	40,000
Net income	3,960
Subtotal	$43,960
Less withdrawals	2,800
P. Treadle, Capital, July 31, 20xx	$41,160

Financial Statement Analysis

- *Profitability ratios*
  - **Profit margin** = Net income/Sales

Inventories (IAS 2)

Why Inventory?

- In connection with its restructuring, Sunbeam planned to eliminate half of its household product lines. Its inventory of eliminated products was to be sold to liquidators at a substantial discount. In adjusting its inventory of household products at year-end 1996, however, **Company management knowingly or recklessly failed to distinguish excess and obsolete inventory from "good" inventory from continuing product lines.**

- As a result, Sunbeam **understated the balance sheet value** of its good household inventory at year-end 1996 **by $2.1 million**. This caused Sunbeam's 1996 loss to be overstated by $2.1 million, and **improved Sunbeam's profitability by the same amount when household products were sold at inflated margins during the first quarter of 1997**

Agenda

- Inventory cost and valuation
- Inventory cost under the Periodic Inventory System
- Impact of inventory decisions
- Inventory cost under the Perpetual Inventory System

What Is Inventory?

Inventory is considered to be a current asset

When sold it appears in the income Statement as Cost of Goods Sold (COGS)

Merchandising Businesses
(Albert Hein, Hema)
Inventory consists of goods held for sale in regular course of business

Manufacturing Businesses
(Bolletje, DAF)
Inventory consists of:
- ✓ Raw materials or goods used in production of products
- ✓ Work in process or partially completed products
- ✓ Finished goods ready for sale

Inventory Cost and Valuation

Inventory <u>cost</u> includes (IAS 2 §10):

- **Invoice price less purchase/trade discount**
- **Cost incurred to bring inventory in present location and condition**

Inventory costing and valuation methods really depend on the *flow of costs* rather than the *flow of physical inventory*	Goods flow—movement of goods in operations *versus* Cost flow—association of cost with its *assumed* flow in operations

Inventory Cost Under the Periodic Inventory System

Inventory cost is determined using one of the following generally accepted methods, each *based on a different assumption of cost flow*:

1. Specific identification method
2. Average-cost method
3. First-in, first-out (FIFO) method
4. Last-in, first-out (LIFO) method

Basic Data

Inventory Data				
June 1	Inventory	80 units	@ $10.00	$ 800
June 6	Purchase	220 units	@ $12.50	2,750
June 25	Purchase	200 units	@ $14.00	2,800
Goods available for sale		500 units		$6,350
Sales		280 units		
On hand June 30		**220 units**		

Specific Identification Method

Inventory Data				
June 1	Inventory	80 units	@ $10.00	$ 800
June 6	Purchase	220 units	@ $12.50	2,750
June 25	Purchase	200 units	@ $14.00	2,800
Goods available for sale		500 units		$6,350
Sales		280 units		
On hand June 30		220 units		

Specific Identification Method

50 units @ $10.00	$ 500	Cost of goods avail. for sale	$6,350
100 units @ $12.50	1,250	Less June 30 inventory	2,730
70 units @ $14.00	980	Cost of goods sold	$3,620
220 units at cost of	$2,730		

Units in the ending inventory are identified as coming from specific purchases

Average-Cost Method

Inventory Data				
June 1	Inventory	80 units	@ $10.00	$ 800
June 6	Purchase	220 units	@ $12.50	2,750
June 25	Purchase	200 units	@ $14.00	2,800
Goods available for sale		500 units		$6,350
Sales		280 units		
On hand June 30		220 units		

Cost of Goods Available for Sale ÷ Units Available for Sale = Average Unit Cost

$6,350 ÷ 500 units = $12.70

Ending Inventory = 220 units @ $12.70 = $2,794

Cost of goods avail. for sale	$6,350
Less June 30 inventory	2,794
Cost of goods sold	$3,556

Inventory is priced at the average cost of the goods available for sale during the period

First-In, First-Out (FIFO) Method

Inventory Data				
June 1	Inventory	80 units	@ $10.00	$ 800
June 6	Purchase	220 units	@ $12.50	2,750
June 25	Purchase	200 units	@ $14.00	2,800
Goods available for sale		500 units		$6,350
Sales		280 units		
On hand June 30		220 units		

First-In, First-Out (FIFO) Method

200 units @ $14.00 from purchase of June 25	$2,800
20 units @ $12.50 from purchase of June 6	250
220 units at a cost of	$3,050

Cost of goods avail. for sale	$6,350
Less June 30 inventory	3,050
Cost of goods sold	$3,300

*Inventory is priced at the price of the **last** items purchased*

Last-In, First-Out (LIFO) Method

Inventory Data				
June 1	Inventory	80 units	@ $10.00	$ 800
June 6	Purchase	220 units	@ $12.50	2,750
June 25	Purchase	200 units	@ $14.00	2,800
Goods available for sale		500 units		$6,350
Sales		280 units		
On hand June 30		220 units		

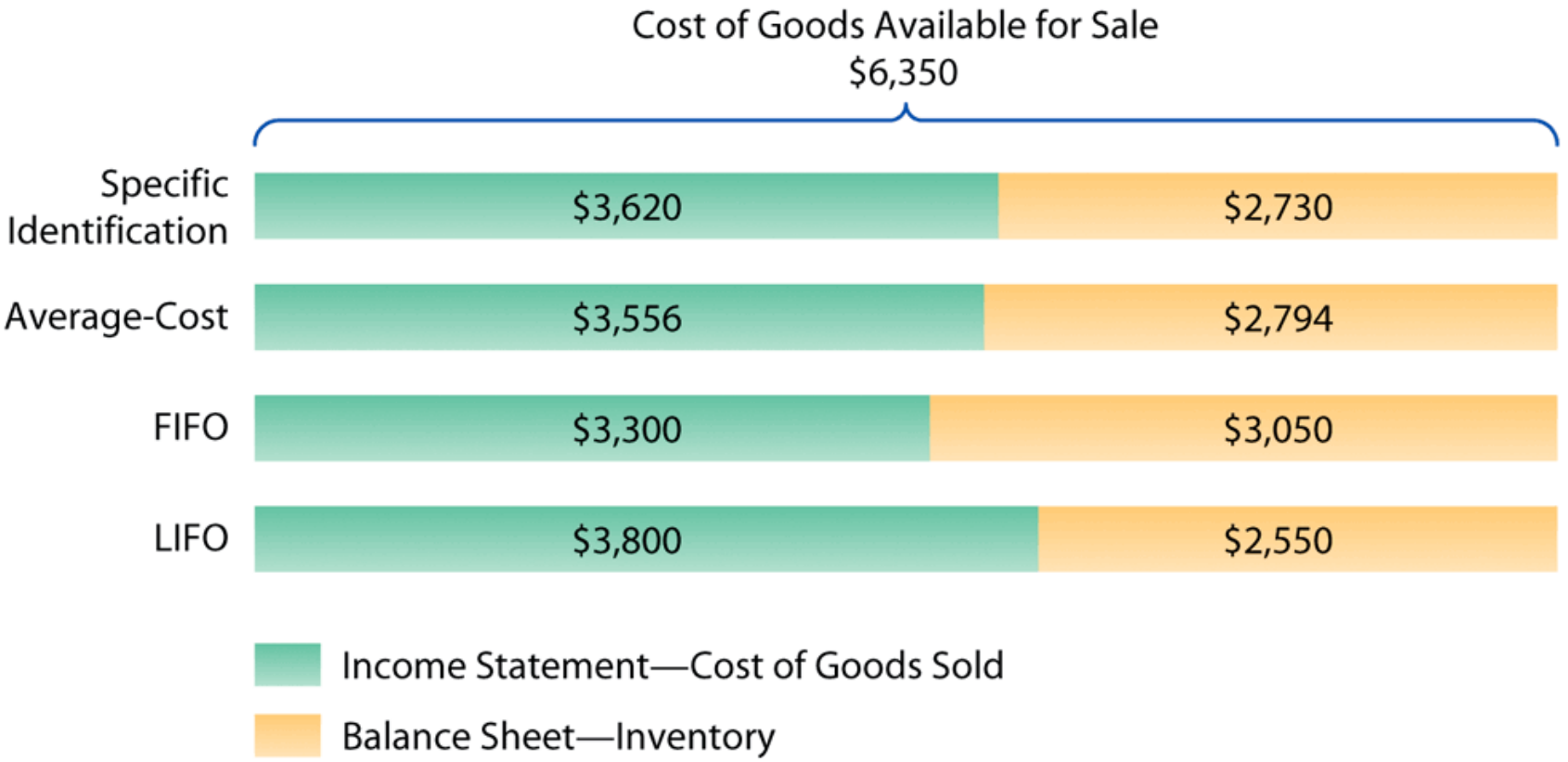
Last-In, First-Out (LIFO) Method

80 units @ $10.00 from June 1 inventory	$ 800
140 units @ $12.50 from purchase of June 6	1,750
220 units at a cost of	$2,550

Cost of goods avail. for sale	$6,350
Less June 30 inventory	2,550
Cost of goods sold	$3,800

*Inventory is priced at the price of the **first** items purchased*

Impact of Inventory Methods



Impact of Inventory Choices

First-In, First-Out	During periods of consistently rising prices, this method yields the highest possible amount of net income because cost of goods sold will show the earliest costs incurred, which are lower during periods of inflation The inventory valuation is fairest since current prices are used which are close to the market values at the balance sheet date.
Last-In, First-Out IAS 2 Forbids	Yields the fairest determination of income since current costs of merchandise are matched against current sales prices Income is low as the cost of goods sold are stated at current prices hence less tax. Inventory is valued very low as the cost of inventory is calculated using earliest cost incurred.