Lecture VII: Understanding the Balance Sheet and Measuring Income

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Users of Accounting Statements

- King (2006) develops four different users of accounting information:
  - creditors and investors who rely on financial accounting,
  - managers of the firm who are interested in the cost of production (hence, cost or managerial accounting),
  - the federal government as a taxing authority (the Internal Revenue Service tax-accounting requirements), and
  - government entities with regulatory authority (such as the Securities and Exchange Commission).

Accounting Principles

1. **Historical Cost Principle** – The cost of an expenditure or value of an item entered on the balance sheet is actual price paid. The primary advantage to this rule is that this value is "definite and determinable."
2. **Revenue Realization Principle** – "Revenue is realized when (1) the earnings process is virtually complete and (2) an exchange has occurred."
3. **Matching Principle** – The matching principle forms the basis of accrual based accounting as opposed to cash based accounting. It states that the expenditures are to be matched with the revenues when reporting accounting transactions.
4. **Consistency Principle** – This principle states that the business should use the same accounting methods over time to avoid confusion of the economic meaning of the financial statements.
5. **Full Disclosure** – If the financial statements are materially affected by a choice of accounting procedure or valuation (maybe the valuation of a contingent liability), the financial statements should disclose the potential effects of the choice.
6. **Objectivity or Verifiability Principle** – The amounts reported should be based on the adequacy and availability of evidence "... essentially similar measures and conclusions would be reached if two or more qualified persons examined the same data."

Understanding the Balance Sheet

- The growth of railroads in the United States and the significant amount of capital they required led to an increase in the importance of accounting statements.
  - The significance of the capital requirement resulted in the sale of bonds to European investors.
  - Railroads initially raised this money without formal disclosure King (2006,p.15).
  - The banks who marketed the bonds to the public were expected to investigate the soundness of each bond issue.
  - This led to an increased demand for **balance sheet** information to provide evidence of the overall solvency of the railroad (i.e., provide information as to whether the assets exceeded the bond debt of the railroad).

- Table 1 depicts a shortened balance sheet for an Arkansas farm.

Assets			Ownership		
Item	Total	Detail	Item	Total	Detail
Current Assets	242,610		Current	123,937	
Non-Current	1,697,099		Non Current	261,843	
Land and Buildings		1,172,865	Real Estate		226,149
Farm Equipment		483,041	Non-Real Estate		35,694
Other		41,193	Total Liabilities	385,780	
Total Assets	1,939,709		Owner's Equity	1,553,929	

- While the debt decisions will be discussed in more detail later in this course, imagine that this firm purchases 40 additional acres at a price of \$ 2,390 per acre.
- The total cash required for this purchase would be \$ 95,600.
- The balance sheet presented in Table 1 indicates sufficient current assets to make this purchase, but it is unlikely that the farm firm will have sufficient disposable cash for this purchase (i.e., reserves for the \$ 123,937 in current liabilities).
- Let us assume that the farmer will be able to put 20 % down from cash (or \$ 19,120).
- The firm will borrow \$ 76,480 from a lender. The double entry accounting entries required are presented in Table **??**.
- The new balance sheet for this transaction is presented in Table 2.

Accounting Entries for Land Purchase

Item	Debit	Credit
Cash	76,480	
Real Estate Debt		76,480
Land and Building	95,600	
Cash		95,600

Balance Sheet for Arkansas Farm - After Purchase

Assets			Ownership		
Item	Total	Detail	Item	Total	Detail
Current Assets	223,490		Current	123,937	
Non-Current	1,792,699		Non Current	338,323	
Land and Buildings		1,268,465	Real Estate		302,629
Farm Equipment		483,041	Non-Real Estate		35,694
Other		41,193	Total Liabilities	462,260	
Total Assets	2,016,189		Owner's Equity	2,016,189	

Equity Transactions and the Accounting Cycle

- The first entry recognizes interest expense making a liability in the interest payable account.
- The second entry recognizes income at the end of the year (more detail on this entry will be presented in the next section).
- The third entry recognizes the payment of real estate interest and principal.

Accounting Entries for Income Recognition

Item	Debit	Credit
Interest Expense	9,560	
Interest Payable		9,560
Income Summary	198,262	
Owner Equity		198,262
Interest Payable	9,560	
Real Estate Debt	1,001	
Cash		10,562

Questions Typically not Addressed – Equity

- Sole proprietors make withdraws (either systematically or in an *ad hoc* fashion) for consumption.
  - This can be accomplished by crediting cash and debiting owner's equity.
- The standard presentation for a corporation involves dividing the owner's equity into two components - Common Stock and Retained Earnings.
  - The value in common stock is determined by the initial sale of the stock plus any additions by distribution.
  - Retained earnings are profits not paid out in dividends or repayments of debt.
  - Retained earnings can become a source of investment resources – leading to a further increase in stock values.
- In the case of the sole proprietorships, a similar concern for lenders would be the excessive withdraw from owner's equity.

Historical Cost Valuation

- Historical Cost Valuation is the coin of the realm in accounting.
- Accounting principles turn on three concepts: recognition, valuation, and classification. Recognition determines when a tool or claim should be recorded on the books. Valuation ascribes a dollar measurement to that tool or claim. Classification places the item somewhere in the geography of the balance sheet (King, 2006, pp 6-7).

Measuring Income

- While railroads spawned the balance sheet, manufacturing and the stock market gave rise to the income statement.
- Several interesting questions occur where the balance sheet and the income statement intersect – one involves the valuation of inventories.
    - The two most popular methods of inventory valuation are **First In First Out** (FIFO) and **Last In First Out**.
    - The two measures tend to diverge as inflation accelerates.

Accounting for Purchase of Inputs

Item	Debit	Credit
Seed Expense	XXX	
Cash		XXX
Fertilizer Expense	XXX	
Cash		XXX
Fuel Expense	XXX	
Cash		XXX

Accounting for Work in Progress

Item	Debit	Credit
Work in Progress	XXX	
Seed Expense		XXX
Fertilizer Expense		XXX
Fuel Expense		XXX

Recognition of Revenue and Profit

Item	Debit	Credit
Cash	XXXX	
Gross Sales		XXXX
Gross Sales	XXXX	
Income Summary		XXXX
Income Summary	XXX	
Work in Progress		XXX