Accounting: Common Body of Knowledge Review

General Accounting
Accounting is a system that measures, processes, and communicates financial information about a business entity. Another simple definition of accounting is “the language of business.”

A business entity will engage in operating, investing, and financing activities. Operating activities will include the buying and selling of goods and services. Investing activities include the purchase and sale of land, buildings, and equipment. Financing activities include obtaining funds by issuing stock and obtaining long-term or short-term debt.

Business Types
There are three main types of organizations that businesses can form. These are sole proprietorships, partnerships, and corporations.

Sole proprietorships are businesses with one owner. The advantage of this type of business is that it is easy to form. The major disadvantage is the unlimited personal liability of its owner for payment of all of the debts of the business.

A partnership is a business with two or more owners. The advantage of a partnership is ease of formation while the major disadvantage is that all partners are personally liable for the debts of the partnership.

A corporation is a separate entity owned by stockholders. Ownership in a corporation is evidenced by shares of stock. The major advantage of forming a corporation is limited liability; the stockholders are only liable for the amount of their investments. A disadvantage is that the corporation is subject to double taxation. The corporation is subject to corporate income tax and the after-tax profits (dividends) distributed to the owners are subject to personal income tax.

Sole proprietorships and partnerships can offset the unlimited personal liabilities by forming Limited Liability Corporations (LLCs) or Partnerships ( LLPs). For tax purposes the LLC can be taxed as a sole proprietorship if there is only one owner. Or, it can be taxed as a partnership if there are two or more owners, yet maintain the privilege of limited personal liability.

Double-Entry System
Each accounting transaction must be recorded with at least one debit (DR) and one credit (CR). A debit is an increase in the left side of the accounting equation (assets = liabilities + stockholders’ equity) while a credit is an increase in the right side of the equation. An increase in an asset or expense is a debit and a decrease in an asset or expense is a credit. An increase in a liability, equity, or revenue is a credit and a decrease in a revenue, liability, or equity is a debit. Assets and expenses are normally debit balances. Revenue, liabilities, and equity are normally credit balances. A reminder that may be used for helping you recall normal debit and credit balances is ALICE.

\[
\begin{align*}
A &= \text{Assets} & \text{DR} \\
L &= \text{Liabilities} & \text{CR} \\
I &= \text{Income (Revenue)} & \text{CR} \\
C &= \text{Capital (Owners' Equity)} & \text{CR} \\
E &= \text{Expenses} & \text{DR}
\end{align*}
\]

The basic accounting journal entry looks like this with the debit or credit being the name of the account affected by the transaction or adjustment creating the journal entry: The DR entry is always first and always on the left-hand margin or side of the column.

$$\text{Debit} \quad $$$$
\text{Credit} \quad $$
For example, when an expenditure of $1,000 is spent on the purchases of equipment, the journal entry would be:

\[
\begin{array}{ccc}
\text{Equipment} & 1,000 \\
\text{Cash} & 1,000 \\
\end{array}
\]

Note in the entry above the equipment and cash are both assets. The overall total asset value remains the same. What has happened is the cash asset was used up to acquire the equipment asset.

**Accounting Cycle**

The accounting cycle begins by analyzing the information from a business transaction. A source document or documents provide information about the transaction which is used to record the debits and credits using a general journal entry. The process of analyzing the transaction and recording an entry to the journal is called journalization. The journal entry is then entered into the general ledger which contains the balances of all the accounts: Assets, Liabilities, Equities, Revenues, and Expenses. This process is called posting. From the general ledger we create an unadjusted trial balance by listing all of the general ledger accounts and the debit or credit balance. The accounts are then analyzed and adjusting entries are made to record the usage of assets that are not automatically expensed, such as depreciation, prepaid expenses, payables, and unearned revenue. Once all of the adjustments are completed, an adjusted trial balance is created from the adjusted general ledger balances. Financial statements are then created and published.

After the financial statements are created, all temporary accounts are closed. Temporary accounts are all of the revenue, expense, and withdrawal accounts as well as the income summary account. This closing process essentially moves the net income or net loss to the Owners’ or Stockholders’ Equity accounts. The Income Accounts begin a new accounting period with zero balances.

**Accounting Concepts**

There are certain concepts, principles, and assumptions that are relevant to the accounting process. The cost principle states that most assets and liabilities are recorded at their acquisition price. The going concern assumption assumes that the company will have an indefinite life. The monetary unit assumption means that stable money is the common unit for economic activity. Revenue recognition states that revenue is recognized (recorded) when it is earned and realized and the matching principle states that expenses should be matched to the period when the revenues that created the expense were incurred.

There can be exceptions to these principles based on special circumstances. For example, a firm in bankruptcy or reorganization is temporarily in the trust of the courts. The going concern assumption would not apply since the firm is obviously in distress. Also, certain inventory items held for resale may become obsolete or damaged. When that happens, the cost must be readjusted to “Lower of Cost or Market.” This means the cost will be written down to a level at which it can be sold.

**Accrual Accounting**

The cash basis of accounting states that “revenue is recognized when cash is received and expenses are recognized when cash is paid.” The accrual basis of accounting states that “revenue is recognized when it is earned and realized (not received), and expense is matched to the revenue in the period in which the revenue was earned and realized.” This concept creates prepaid expenses, unearned revenues, expenses payable (or accrued) and revenues receivable (or accrued).

Prepaid amounts are expense amounts that are recorded initially as an asset and are expensed in the future as they are matched to appropriate revenue. For example, rent paid ahead of time would be recorded as a debit to Prepaid Rent and a credit to Cash. When the rent becomes due, the resulting entry would be a debit to Rent Expense and a credit to Prepaid Rent. Unearned revenues are receipts...
that are recorded initially as a liability and then adjusted to revenue as the amount becomes earned. An example would be insurance premiums collected ahead of time by an insurance company, which would be a debit to Cash and a credit to Unearned Premiums. When the premiums are earned, the resulting entry would be a debit to Unearned Premiums and a credit to Premium Revenue.

Payables are amounts owed to an entity that are expensed prior to the cash payment, such as a debit to Wage Expense and a credit to Wages Payable. When these amounts are paid, the debit is to Wages Payable and the credit is to Cash. Receivables are assets that are created prior to the actual amount of revenue being received. For example, interest that has been earned but not yet received would be recorded as a debit to Interest Receivable and a credit to Interest Revenue. When the amount is collected, the journal entry would be a debit to Cash and a credit to Interest Receivable.

At year end prepaid expenses, unearned revenues, accrued payables, and accrued receivables are often adjusting entries journalized and then posted to the ledger. In addition to these items being adjusted, depreciation, depletion, and amortization expenses are part of year-end adjustments.

**Financial Statements**

There are four major financial statements required to be filed with the Securities and Exchange Commission (SEC): The income statement, the statement of retained earnings or owner's capital, the balance sheet, and the statement of cash flows.

The income statement is the first statement prepared and is a summary of revenue and expenses over a period of time, usually one year. A single step income statement is shown as:

\[
\text{Revenue} - \text{Expenses} = \text{Net Income}
\]

The basic format of the multiple step income statement is:

\[
\text{Sales} - \text{Cost of Goods Sold} = \text{Gross Profit}
\]

\[
\text{Gross Profit} - \text{Operating Expenses} = \text{Net Income from Operations,}
\]

\[
\text{Net Income from Operations} - \text{Other Revenue/Expense} = \text{Net Income before Income Tax}
\]

\[
\text{Net Income before Income Tax} - \text{Income Tax} = \text{Net Income}
\]

Either income statement results in the same amount of Net Income. The difference is in presentation of the income statement numbers.

Revenues are the increase in stockholders’ equity as a result of business activity, while expenses are the decrease in stockholders’ equity as a result of business activity.

The statement of Owners’ Equity is prepared for sole proprietorships and partnerships. Each owner has a capital account that accounts for each person’s net capital valuation. Withdrawals are distributions made to the owner(s) of a sole proprietorship or partners in a partnership. The Statement of Owner’s Equity uses the following basic format:

\[
\text{Beginning Capital} + \text{Additional Paid-In Capital} + \text{Net Income (Loss)} - \text{Withdrawals} = \text{Ending Capital}
\]
The statement of Retained Earnings is prepared by a corporation and summarizes the changes to retained earnings. The statement’s basic format is:

\[
\begin{align*}
\text{Beginning Retained Earnings} & + \text{Net Income} - \text{Dividends} \\
\text{Ending Retained Earnings} &
\end{align*}
\]

Retained earnings are defined as the cumulative profits generated by the business and kept in the business. Dividends are the distribution of profit back to the corporate owners.

The balance sheet is a summary of the assets, liabilities, and owners’ equity of a business at a point in time. This relationship (also known as the “accounting equation”) is expressed as Assets equal Liabilities plus Owners’ Equity \((A = L + OE)\). Assets are the resources owned by the business. They will be used to generate revenue. As revenue is generated, expenses are incurred signifying the use of assets. Liabilities are defined as obligations (claims on assets) of the business or what is owed to outsiders. Stockholders’ or Owner's equity is the residual, after liabilities are subtracted from assets. Liabilities and Owners’ Equity signify what resources were used to purchase the assets and how those purchases were financed.

In a classified balance sheet assets are divided into current assets and long term assets. Current assets include cash, marketable securities, accounts receivable, inventory, and prepaid items. Long-term assets include land, buildings, furniture, investments, intangibles, and natural resources. The liabilities are classified as current and long term. Current liabilities include accounts payable, accrued liabilities and notes payable within the current accounting period or one year, whichever is shorter. Long-term liabilities include bonds payable and mortgages payable beyond one year. Stockholders’ or Owners’ equity is composed of contributed capital and retained earnings. Retained earnings are the accumulated earnings over the life of an entity that has not been distributed to the entity’s owners.

The statement of cash flows shows the sources and uses of cash from operating, investing, and financing activities. Operating activities include sources or uses of cash from revenues, expenses, and changes in current assets and current liabilities, including interest income and expense. Investing activities include sources and uses of cash due to purchases or sales of long-term assets. Financing activities include sources and uses of cash from changes in long-term liabilities, equity, and dividends or owners’ distributions.

There are two different methods for calculating cash flow, the direct and indirect methods. The direct method is preferred by the Financial Accounting Standards Board (FASB) but is not required. The indirect method is used by 99 percent of the companies reporting. The differences occur in the operating section. The indirect method starts with net income and adds back depreciation and other non-cash items and then determines the changes in all current asset and current liability accounts during the current accounting period. The direct method reports operating sources of cash, such as cash received from customers, and deducts use of cash on accounts, such as merchandise payments, payments for operating expenses, and the like. No matter which method is used, the bottom line is the cash balance as shown on the balance sheet.
**Basic Ratios**

In the analysis of financial statements certain ratios are used. The following table lists several of the most common ratios and defines their usage.

<table>
<thead>
<tr>
<th>Solvency/Liquidity Measures</th>
<th>Method of Computation</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Capital</td>
<td>Current Assets – Current Liabilities</td>
<td>To indicate the ability to meet currently maturing obligations</td>
</tr>
<tr>
<td>Current Ratio</td>
<td>Current Assets</td>
<td>To indicate instant debt-paying ability</td>
</tr>
<tr>
<td>Quick Ratio</td>
<td>Quick Assets</td>
<td>To indicate instant debt-paying ability</td>
</tr>
<tr>
<td>Accounts Receivable Turnover</td>
<td>Net Sales Average Accounts Receivable</td>
<td>To assess the efficiency in collecting receivables and in the management of credit</td>
</tr>
<tr>
<td>Number of Days’ Sales in Receivables</td>
<td>Average Accounts Receivable Average Daily Sales</td>
<td>To assess the efficiency in collecting receivables and in the management of credit</td>
</tr>
<tr>
<td>Inventory Turnover</td>
<td>Cost of Goods Sold Average Inventory</td>
<td>To assess the efficiency in the management of inventory</td>
</tr>
<tr>
<td>Number of Days’ Sales in Inventory</td>
<td>Average Inventory Average Daily Cost of Goods Sold</td>
<td>To indicate the margin of safety to long-term investors</td>
</tr>
<tr>
<td>Ratio of Fixed Assets to Long-Term Liabilities</td>
<td>Fixed Assets (net) Long-Term Liabilities</td>
<td>To indicate the margin of safety to long-term investors</td>
</tr>
<tr>
<td>Ratio of Liabilities to Stockholders’ Equity</td>
<td>Total Liabilities Total Stockholders’ Equity</td>
<td>To indicate the margin of safety to creditors</td>
</tr>
<tr>
<td>Number of Times Interest Charges are Earned</td>
<td>Income Before Income Tax + Interest Expense Interest Expense</td>
<td>To assess the risk to debt holders in terms of the ability to pay the interest on the debt</td>
</tr>
</tbody>
</table>

**Profitability Measures**

| Ratio of Net Sales to Assets                                     | Net Sales Average Total Assets                              | To assess the effective use of assets. |
| Rate Earned on Total Assets                                      | Net Income + Interest Expense Average Total Assets          | To assess the profitability (effective use) of the assets |
| Rate Earned on Stockholders’ Equity                              | Net Income Average Total Stockholders’ Equity               | To assess the profitability of the investment by stockholders |
| Rate Earned on Common Stockholders’ Equity                       | Net Income – Preferred Dividends Average Common Stockholders’ Equity | To assess the profitability of the investment by stockholders |
| Earnings Per Share on Common Stock (EPS)                         | Net Income – Preferred Dividends Shares of Common Stock Outstanding | To indicate future earnings prospects based on the relationship between market value of common stock and earnings. |
| Price-Earnings Ratio                                             | Market Price per Share of Common Stock EPS                  | To indicate the extent to which earnings are being distributed to common stockholders |
| Dividends per Share                                              | Dividends Shares of Common Stock Outstanding               | To indicate the extent to which earnings are being distributed to common stockholders |
| Dividend Yield                                                   | Dividends per Share of Common Stock Market Price per Share of Common Stock | To indicate the rate of return to common stockholders in terms of dividends |
Sales and Purchases
When merchandise is sold, it is recorded as a sale in the accounts of the business making the sale. The terms of sale defines the contract between the seller and the purchaser. The sales discount determines the amount of discount, if any, allowed by the seller. For example, the invoice terms “2/10, n/30” means that the purchaser can take a 2% discount if the invoice is paid within 10 days. At the 10-day discount period, the full amount must be paid and is due by day 30. This discounted amount is recorded as “sales discount” by the seller and is a reduction of net sales. When items are returned, they are debited to an account called Sales Returns and Allowances with an offsetting amount credited to Cash or Accounts Receivable. This DR also reduces net sales.

FOB shipping point means that the freight is paid by the buyer since ownership of the goods is with the buyer once it is shipped. FOB destination means that the freight is paid by the seller since ownership is with the seller until it arrives at the buyer’s destination.

Merchandise purchased for resale is recorded to either a Merchandise Inventory account or to a Purchases account depending on the type of inventory system used. If the inventory accounting system is “Periodic,” then the Purchases account is debited. During the course of the accounting period, Cost of Goods Sold cannot be determined since the inventory is not known without taking a physical inventory. Once the physical inventory is complete, Cost of Goods Sold is determined by:

Beginning Inventory
+ Net Purchases
- Ending Inventory
Cost of Goods Sold

The other type of inventory accounting system is the one we are most familiar with when we check out of a store and a scanner is used. When using the Perpetual System, all new merchandise is debited to the Merchandise Inventory account, and when a sale is made, the Cost of Merchandise Sold is recorded for each sale and the inventory balance is credited. Management can review the Inventory balance and Cost of Merchandise Sold throughout the accounting period. Each sales transaction is recorded as follows:

Accounts Receivable (or Cash) $$$$ Sales $$$$ Cost of Merchandise Sold $$$ Merchandise Inventory $$$

A physical inventory is taken in the perpetual inventory system at least once per accounting period to verify the inventory balances. Usually this is accomplished with the annual audit performed by the company’s CPA firm.

Inventory
Inventory is classified as goods held for resale. If a perpetual inventory system is used, when the goods are sold, an amount is transferred from the inventory account to a cost of goods sold (CGS) account. The inventory amount is valued using specific identification, average cost, LIFO, or FIFO.

Using specific identification each item is uniquely identified and the cost of that item is used to determine the amount of CGS and inventory. Average cost uses a weighted average cost of the inventory items to calculate the value of the inventory and CGS. LIFO stands for last-in, first-out. LIFO assumes that the values of the last items acquired are assigned to CGS while the remainder is assigned to ending inventory. FIFO stands for first-in, first-out. FIFO assumes that the values of the first items acquired are assigned to CGS while the remainder is assigned to ending inventory. LIFO will show the highest cost of goods sold on the Income Statement and the lowest goods inventory on the Balance Sheet. Conversely, FIFO will show the lowest cost of goods sold on the Income Statement and the highest goods inventory on the Balance Sheet.
At the end of the period CGS can be calculated by using the CGS statement. This statement is prepared using a similar form:

\[
\text{Beginning Inventory} + \text{Net Purchases} - \text{Ending Inventory} = \text{CGS}
\]

*Net Purchases = gross purchases less (purchase discounts and returns and allowances) plus freight in

This form can be used to determine the Cost of Goods Sold in the Periodic Inventory System or to verify the Cost of Goods Sold account in the Perpetual Inventory System.

**Cash and Accounts Receivable**

Current assets are assets that will become cash in one year or one operating cycle, whichever is greater. Cash usually consists of currency, coin, and deposits in checking and savings accounts. Credit card sales are also treated as cash. However, the card processor takes a percentage of the sales as a fee for providing credit.

Bank reconciliation is the process of reconciling the difference between the balance on the bank statement and the balance recorded on the company books. Start with the balance per bank statement and add deposits sent to the bank but not yet included in the bank statement. These are called deposits in transit. Subtract outstanding checks to get to the adjusted balance. Then adjust the balance per your ledger. Record any deposits the bank has received on your behalf, deduct non-sufficient funds (NSF) checks, bank service charges, or any other deposits or charges you did not know about and that were not recorded in your ledger. Also, there may be a check or deposit entered on the books incorrectly; that needs to be corrected. Sometimes, but rarely, the bank makes an error in which case the bank has to be contacted to correct its error.

From here we take the balance per books, add items added by the bank statement, and subtract items subtracted on the bank statement per our bank reconciliation analysis. The two adjusted balances should equal. If we listed any adjustments to our bank ledger balance, a journal entry must be made to correct our ledger balance. This is the only time we adjust our cash balance with a general journal entry. The result is the company’s one and only cash balance.

**Bank Reconciliation**

<table>
<thead>
<tr>
<th>Cash Balance on Bank Statement</th>
<th>Cash Balance on Depositor’s Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Deposits in Transit</td>
<td>+ Collections made recorded by bank</td>
</tr>
<tr>
<td>- Checks that have not cleared</td>
<td>- NSF checks</td>
</tr>
<tr>
<td>+/- Bank errors</td>
<td>- Service charges</td>
</tr>
<tr>
<td>Adjusted balance*</td>
<td>+/- Depositor’s errors</td>
</tr>
<tr>
<td></td>
<td>Adjusted balance</td>
</tr>
</tbody>
</table>

*These will agree

Accounts receivable are the result of giving credit to customers and allowing the customers to pay at a later date for purchases of service or merchandise. Accounts Receivables are normally current assets. Net accounts receivable is equal to the accounts receivable balance less the allowance for bad debt (sometimes called doubtful accounts or uncollectible accounts). The allowance for bad debts is
calculated using either of two different methods, the percent of sales or the aging method. The percent of sales method calculates bad debt expense by multiplying sales by a predetermined percent; this is the income statement approach correcting the bad debt expense as matched against the sales and adjusting the allowance account as needed. The aging method calculates the allowance amount based on analysis of the aged receivables to correct the amount of the allowance. This is the balance sheet approach; correcting the allowance account, and adjusting the bad debt expense as necessary. The general journal entry for Bad Debts Expense is:

\[
\begin{align*}
\text{Bad Debts Expense} & \quad $$$ \\
\text{Allowance for Bad Debts} & \quad $$$
\end{align*}
\]

**Investments**

Investments can be either short-term or long-term. Short-term investments include held-to-maturity, trading, and available-for-sale securities. Long-term include investments that are influential but non-controlling and controlling.

Trading securities are held to be resold in the near term (less than 30 days) and are initially recorded at cost. At the balance sheet date trading securities are valued at current market amount and an unrealized gain or loss is recorded in the income statement. Available-for-sale securities can be either short-term or long-term and are initially recorded at cost. At the balance sheet date available-for-sale securities are valued at current market amount and an unrealized gain or loss is recorded in the balance sheet as part of comprehensive income.

Long-term investments include securities in which the ownership is influential but non-controlling (between 20% and 50% generally). The accounting treatment for this security is the equity method; initially recorded at cost and subsequently adjusted for investor’s share of net income/ (loss) and reduced by any dividends received. Controlling investments (more than 50%) are treated as part of consolidated financial statements where the two company’s financial statements are merged as if they were just one entity of multiple legal companies.

**Long-Term Assets**

Long-term assets are assets that have a useful life of over one year. These include tangible assets, intangible assets, and natural resources.

Tangible assets are assets that have a physical substance such as land, building, furniture, and equipment. These assets are expensed using a periodic allocation called depreciation (except for land, which is not depreciated). Depreciation is an expense created by allocating the cost of plant and equipment to periods in which they are used. Common depreciation methods include straight line, declining balance, and units of production depreciation. Note that land is not depreciated. Book value of an asset is equal to the cost of the asset less its accumulated depreciation. Accumulated depreciation is the summation of all depreciation expenses for the years of ownership of that asset. The journal entry to record depreciation expense is a debit to Depreciation Expense and a Credit to Accumulated Depreciation. Accumulated depreciation is also known as a contra asset account because it has a credit balance but is reported in the asset section as a reduction to the corresponding long-term asset account.

The annual depreciation expense using the straight-line depreciation method is calculated by subtracting the estimated salvage value from the asset’s cost. This result is the depreciable value. Divide the depreciable value by the estimated useful life of the asset. The result is the annual depreciation expense. An optional calculation is to determine the depreciation rate by using the reciprocal of the useful life. For example, an asset with a useful life of 5 years will have a straight-line depreciation rate of 1/5 or 20%. Multiply this rate times the depreciable value and you will calculate the annual depreciation expense. The units of production depreciation method calculates annual depreciation expense by taking cost and subtracting salvage value, then dividing the depreciable value by total production amount.
The double declining balance method calculates the annual depreciation expense by multiplying the straight line rate by two. Then the Net Book Value is multiplied by the depreciation rate. As the book value of the asset is reduced, the depreciation expense is also reduced. This method is known as an accelerated method because earlier years’ depreciation expense is higher than latter years’ depreciation expense.

Intangible assets are assets that have no physical substance and whose value is based on rights of owners. Intangible assets include patents, copyrights, trademarks, franchises, leaseholds, and goodwill. The periodic allocation of intangibles is called amortization and is usually done on a straight-line basis. Amortization expense is debited and the intangible asset is reduced by the amount of amortization expensed. The book value of an intangible will be its original cost less the amount of amortization taken (expensed) during its useful life. Note the intangible asset called goodwill is not amortized. However, goodwill may be impaired because the business purchased that generated the goodwill is not performing as expected. This causes goodwill to be written down to an amount that reflects the value of the purchased entity.

Natural resources are assets that can be taken from the land. These include oil and gas, mineral deposits, timberlands, and other items extracted from the land. The allocation basis for natural resources is called cost depletion and is done on the units of production basis. The cost of the mineral rights or leases are divided by the estimated amount of the mineral that can be extracted per ton, barrel, ounce, or some unit common to that particular extraction industry. This unit cost is multiplied times the units of the mineral extracted in a given year to calculate the cost depletion annually. The depletable asset cannot be depleted below cost.

Different methods of depreciation, amortization, and depletion may be available for tax purposes creating some temporary tax timing difference between the accounting net income and the taxable income for the entity.

**Current Liabilities**

Current liabilities are liabilities that must be paid within one year or within the current operating cycle. Current liabilities include accounts payable, notes payable, accrued liabilities, unearned revenues and payroll liabilities.

Accounts payable are the amounts owed to suppliers in the normal business environment. The terms of sale (2/10, n/30) are also appropriate for accounts payable, just as they were for accounts receivable. Accrued liabilities include Wages Payable, Taxes Payable, Interest Payable, and any other Accrued Payable. These are usually amounts accrued for various reasons that must be paid within one year.

Estimated liabilities are obligations whose exact dollar amounts are not known. These are amounts that are probable and that are reasonably estimated. Examples include vacation pay liabilities and product warranty liability. An estimated amount is entered in the financial statements when the expense is assured but the actual amount is not yet known. Contingent liabilities are liabilities that may arise from past transactions if certain events occur in the future. The accounting for contingent liabilities depends on the following two factors:

1. Likelihood of occurring: Probable, reasonably possible, or remote.

If the result of the event produces a contingent liability that is both probable and estimable, it is recorded and disclosed. In other cases, except for remote, information about the contingent liability is recorded in the footnotes. If it is remote, no disclosure in the footnotes or financial statements is required. Common examples of contingent liabilities are lawsuits and environmental matters.
**Long-Term Liabilities**

Long-term liabilities are obligations that will be paid in more than one year. These include bonds payable, mortgages, and leases. Long-term liabilities are usually recorded at their principal or face value. If a portion of a note must be paid in the current accounting period, that portion of long-term debts is listed with current liabilities.

Types of bonds include unsecured, secured, term, serial, callable, convertible, registered and coupon bonds. Unsecured bonds are issued only with the backing of the company. Secured bonds have a payment guarantee by securing them with an asset of the company. Term bonds become due all at one time while serial bonds mature in different time periods. Callable bonds can be purchased back by the issuing company while convertible bonds can be exchanged for stock of the issuing company. Registered bonds have ownership recorded by the company, which keeps track of owners, while coupon bonds are not recorded and ownership is determined by whoever holds the bond.

Bonds usually have a face value of $1,000 and are listed for sale as a percentage of their face amount. Bonds are issued at par when the stated interest rate is equal to the market interest rate and will be listed for sale at 100. Bonds are issued at a discount when the stated interest rate of the bond is less than the market interest rate and will be listed for sale at less than 100. Bonds are issued at a premium when the stated interest rate of the bond is more than the market interest rate and will be listed for sale at greater than 100. The premium and discount is amortized over the life of the bond using the straight line method or the effective interest method. The effective interest method is preferred.

**Contributed Capital**

Capital stock or stockholders’ equity are ownership rights issued by a corporation. The corporation’s stockholders equity contains two sections; contributed capital and retained earnings. Stocks are issued at par (or stated value) or no-par. Par, or stated value, has no real relationship to the initial issue price of the stock and does not determine the market value at which the shares will be sold. The number of shares is classified as authorized, issued, and outstanding. Authorized shares are the maximum amount allowed to be sold by the corporate charter. Issued shares are all the shares actually sold by the corporation. Outstanding shares are issued shares that have not been repurchased by the firm as treasury stock. Treasury stock is issued shares of stock that have been repurchased by a corporation and are recorded in a contra-equity account.

The two basic types of contributed capital (stock) are common stock and preferred stock. Preferred stockholders have preferential treatment as to payment of dividends (dividends paid are a set amount) and to liquidation. Common stockholders receive the remainder of the dividends after the preferred holders are paid their predetermined share (par value x stated percentage rate x no. of preferred shares outstanding).

Cash or property dividends are distributions back to owners from the net profits of the current year and from past years (retained earnings) of the corporation. There are three dates relating to dividends; the declaration date, the record date, and the payment date. The declaration date creates a liability and the journal entry is shown as:

\[
\begin{align*}
\text{Retained Earnings} & \quad $$$ \\
\text{Dividends Payable} & \quad $$$
\end{align*}
\]

Distribution in excess of current earnings and retained earnings are a return of contributed capital to the shareholders. The record date simply denotes that the registered owner of the stock on that date will be the recipient of the dividend when paid. The payment date is when the actual dividend check is sent to the record date shareholder and the journal entry is shown as:

\[
\begin{align*}
\text{Dividends Payable} & \quad $$$ \\
\text{Cash} & \quad $$$
\end{align*}
\]
Stock dividends are extra shares of stock distributed instead of a cash dividend. Small stock dividends (less than 20% to 25%) are valued at the stock’s market, while large stock dividends (more than 20% to 25%) are valued at the stock’s par or stated value. The value of the stock dividend is a reduction of retained earnings.

Stock splits occur when a corporation increases the number of shares and proportionally decreases the par value of the stock. The value of “contributed capital,” “retained earnings,” and “total market capitalization” do not change due to a stock split. Shareholders exchange their current shares of stock for more new shares with a lower par or stated value.

**International Accounting**

International business operations are becoming commonplace for even small businesses. When conducting business overseas (we consider the U.S. the base for this discussion), there are two major accounting challenges, in addition to several risk factors that must be considered. The two major accounting challenges are: accounting for sales and purchases in a foreign currency and preparing consolidated financial statements with international subsidiaries.

If the sales or purchase transaction is in U.S. dollars (USD), then the transaction is recorded as usual in USD. The problem arises when the sale or purchase transaction is in a foreign currency, then we must consider the current exchange rate and track changes in the rate. For example, when we sell something in a foreign currency denomination, we record the sale in USD at the present exchange rate and note that calculation in the description of the journal entry. As the rates change, we have to record either a gain or loss on the transaction due to exchange rate fluctuation since our customer will be paying in their currency.

When preparing consolidated financial statements for a U.S. based corporation, the foreign subsidiary’s financial statements must first be converted to USD. The corporation is responsible for selecting the proper exchange rate and converting the statements.

Additionally, risks doing business overseas must be considered in addition to recording transactions. Companies must consider the exchange rate risk when selling and purchasing items overseas. Significant exchange rate variances can either adversely affect or assist the trade. The corporation should also consider the stability of the government. Risk is much higher in a country that has a history of frequent coups and terrorist activity than in one of the Western European countries or modern Asian countries, such as Hong Kong or Singapore. A third consideration is the ethos of the country. Proper preparation, research, and planning are a requisite for successful overseas operations.

**Cost Concepts and Cost Allocation**

Cost behavior can be classified as either variable cost or fixed cost. When operating in the relevant range, variable cost changes in direct proportion to total production levels while fixed cost is constant in relationship to total production levels. Also, variable costs are fixed in regard to unit cost, and fixed costs change in relation to unit production amounts (total fixed costs / no. of units produced = fixed cost / unit). Some costs can be mixed—partially fixed and partially variable.

Costs can also be classified as direct and indirect. Direct costs can be conveniently and economically traced to a cost object (while indirect costs cannot) and are normally allocated as factory overhead.

Other cost classifications are product costs and period costs. Product costs are the direct and indirect costs to produce inventory. Product costs are direct materials, direct labor, and factory overhead. Period costs are assigned as expenses to the period incurred but are not product costs. These are often referred to as selling and administrative costs.

The elements of product costs are direct materials cost, direct labor costs and overhead costs. Direct material costs are expenditures on materials that can be traced directly to the product being produced.
Direct labor costs are those expenditures for labor that can be traced directly to the product being produced. Overhead costs include indirect material, indirect labor, and other manufacturing overhead costs. Other classifications of costs include prime and conversion costs. Prime costs are direct material and direct labor costs. Conversion costs include direct labor and overhead costs. Note you cannot add Prime and Conversion costs since direct labor costs would be counted twice.

There are three inventories associated with manufacturing. They are direct material inventory, work-in-process inventory and finished goods inventory. These amounts are needed to calculate cost of goods manufactured (CGM) and cost of goods sold (CGS).

To calculate the cost of goods manufactured, begin by calculating direct material used;

- Beginning direct material inventory
  + Material purchased
  - Ending direct material inventory
- Direct Material Used

From beginning work-in-process inventory, we add material used plus direct labor and manufacturing overhead added for the period. This amount is called total manufacturing cost.

- Total manufacturing cost
  - ending work-in-process inventory
- Cost of Goods Manufactured (CGM)

Beginning finished goods inventory
+ CGM
- ending work-in-process inventory
- Cost of Goods Sold for a manufacturing operation.

In retailing or wholesaling there is only one inventory, called merchandise inventory. The CMS is calculated by:

- Beginning merchandise inventory
  + Net purchases *
  - ending merchandise inventory
- Cost of Merchandise Sold

*Purchases less (purchase discounts and purchase returns and allowances) plus freight in

Cost allocation is the process of assigning indirect cost to a cost object (product or service, or sales territory, or other object). A predetermined overhead rate is calculated by dividing the estimated overhead costs (cost pool) by the estimated operating activity (cost driver). Common manufacturing cost drivers are total man-hours or machine hours. This cost per activity is used to allocate overhead costs to the specific cost object.

**Job Order and Process Costing**

The two major types of costing systems are job-order and process costing. A job-order costing system is used in companies that produce special orders or unique products or services, such as vehicles, computers, and jewelry. A process system is used when the products are similar, or it is used with continuous production. Some companies use a combination of both job order and process.

In a job-order system, costs are assigned directly to the job on a job-order cost card. Direct material and direct labor are recorded to the cost card for the actual amount used. Overhead is allocated to the cost card using a predetermined rate. This entire amount is accumulated in the work-in-process account. As such, the amount of work-in-process would include all costs of the job order cost card for items still in
production that have not been transferred out to Finished Goods Inventory. When the job is finished, it moves to finished goods inventory. Finished Goods Inventory would include all job cost cards for items no longer in production that have not yet been sold. When sold, Finished Goods Inventory is transferred to CGS. They are now expenses and no longer inventory assets:

<table>
<thead>
<tr>
<th>Cost of Goods Sold</th>
<th>$$$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished Goods Inventory</td>
<td>$$$</td>
</tr>
</tbody>
</table>

In a process system the costs are accumulated by process or department. Material, labor, and overhead are recorded in the process account. At the end of the period equivalent units of production are calculated for material, labor, and overhead. An equivalent unit is a factor that applies a percentage to partially completed units. Using one method, FIFO, LIFO, or average method, costs are allocated to ending inventory units and completed units. Completed units are assigned to the next process or department. When they are completed in the last process or department, such costs and inventory are transferred to finished goods:

| Work in Process | $$$ |
| Finished Goods Inventory | $$$ |

When sold they are transferred to CGS:

| Cost of Goods Sold | $$$ |
| Finished Goods Inventory | $$$ |

**Cost Behavior**

Variable costs vary directly with the level of production while fixed costs do not change as production changes. Mixed costs have both variable and fixed components. A common approach to analyzing mixed costs is the high-low method. In this method, total cost is graphed with cost on the y-axis and activity on the x-axis. The highest and the lowest point are used to calculate cost per activity. This amount is the variable cost per unit. Using the equation for a straight line, the y-intercept is calculated and is determined to be the fixed cost. Also, regression analysis can be used to determine variable and fixed costs from a collection of data points. With regression available easily to anyone with a computer and a spreadsheet program, or a hand held business calculator, it would be the preferred method of determining the cost behavior or cost formula for an expense rather than the high-low method. Regression is mathematically more accurate than the high-low method.

Cost-volume-profit (C-V-P) analysis is a management accounting process to demonstrate how specific accounting information interrelates. The basic equation is: Sales Revenue – Variable Costs – Fixed Costs = Profit. Sales Revenue is Price times Quantity (SP (Q)). Variable Cost is Unit Variable Cost times Quantity (VC(Q)). Fixed Costs are the identified fixed costs for the relevant range of production. When profits are set to zero, the quantity can be calculated, and this is known as the breakeven point. (SP(Q) - VC(Q) – FC = 0) Another tool in C-V-P is the contribution margin (CM) which is equal to SP(Q) - VC(Q), or (SP - VC) x Q. Contribution Margin shows what remains to cover fixed costs after variable costs are covered. The CM Ration (CM / SP(Q)) shows what percentage of each $1 of sales becomes profit if the sales level is above the break-even point.

In C-V-P costing, net income is determined by:

Sales Revenue
- Total VC
CM
- fixed costs
Profit before Taxes.

To target an after-tax profit, divide the targeted after-tax profit by (1-TR), where TR is the income Tax Rate.
In full absorption costing, used in preparing financial statements, sales less CGS (both variable and fixed) equal gross profit. Subtract selling and administrative costs to get Profit. Profit less income tax expense is Net Income. In full Absorption costing, many period costs are assigned to the products that remain in inventory. These costs are not recognized until the finished goods inventory is sold.

**Budgeting**

Budgeting is the process of gathering information about a business' future activity. Budgets can be long term (strategic planning) or short term (tactical and operational planning). A master budget is the set of budgets and financial plans for a given period.

The operating budget process in a profit-making entity starts with the sales budget that identifies the expected sales for the accounting period. The production budget needs to be prepared next. In order to finish the production budget, the amount of direct material, the amount of labor, and the amount of overhead must be estimated using standard costs and budgeted. The next budgets that need to be prepared are the cost-of-goods manufactured budget and the cost-of-goods sold budget. After the sales budget is prepared, the selling and administrative expense budget can be completed.

After completing the operating budgets, the proposed/pro-forma financial budgets can be prepared. These include the budgeted income statement, the budgeted balance sheet, and the cash budget. In order to prepare the cash-budget-expected capital expenditures, interest expense and interest income need to be known. Capital expenditures are usually found on a Capital Expenditures Budget, which is a long range budget for additions and replacements of property, plant, and equipment, and referred to as part of the Capital Budgeting process.

Governmental and not-for-profit organizations apply different methods for calculating budgets. These organizations first would determine what they need to expend and then determine how the expenditures will be funded. Governments would obtain funding from various forms of taxes and grants. Not-for-profit organizations would estimate funding to be received from grants and contributions.

**Capital Budgeting**

Capital budgeting deals with the investment decisions made pertaining to the purchase of long-term assets. Decision methods used to determine if the asset should be purchased include the net present value method, the internal rate of return method, the payback period method, and the accounting rate of return method.

The net present value method (NPV) and the internal rate of return method (IRR) rely on the time value of money while the other two do not, and are preferred. Both methods are integrally related in their methodology and usually result in the same decision to accept or reject an investment, but there are some exceptions.

In the net present value method the present value of future cash flows is compared to the initial cost outlay. If this number is zero or positive, it may be selected if it is the best alternative presented. This means the investment returns at or above the required discount rate used in the method. In the internal rate of return method the initial outflow of cash and all future cash flows are analyzed to determine the rate of return that would make the net present value equal to zero. If this rate is equal to or more than the required rate of return, the asset should be purchased. The internal rate of return method assumes all future cash flows can be reinvested at the calculated IRR. If this assumption is not true, the investment rate can be modified to be more conservative.

If you are deciding between investment projects that are mutually exclusive, that is, one or the other will be done, but not both, use NPV instead of IRR. If you’re comparing mutually exclusive capital projects in which there is little or no positive cash flow, use NPV and select the capital project with the least negative NPV. This can be used by governments and not-for-profits as well since they have no positive cash flow on most operations.
If funding is limited and therefore the number of independent projects that can be accepted is limited, use NPV instead of IRR. Compute the combination of projects that maximizes the total of the individual NPVs of the projects.

The payback period method is concerned with determining when the cash invested will be recovered. If the net cash flows each year are equal, then the payback period is equal to the Cost of the Investment divided by the Annual Net Cash Inflows. If the net cash flows are unequal, then the analyst will add up the annual cash flows until the total cash flow equals the investment amount. The point in time where the inflows equal the investment is the payback period. If this amount is less than the company’s desired payback period, the project should be approved. When capital budgeting involves short-lived investments, payback would be preferred over the NPV or IRR. Payback is main method used by Asian firms.

The accounting rate of return is equal to the Project’s Average Annual Net Income divided by the Average Investment Cost. If this amount is higher than the desired return, the project should be approved. This was a method commonly used before computers were available to analyze a project. This method is still used by a number of European firms since it is a more conservative benchmark.

All of the methods are based on cash flows except the accounting rate of return which is based on accounting income.

**Decision-Making Analysis**

In the process of decision making the concept of incremental analysis is very important. Incremental analysis means that only costs and revenues that differ between alternatives are relevant. Costs that are the same for each decision are not relevant to the decision, such as sunk costs—money already spent. Also important is the concept of opportunity cost. Opportunity cost is the benefit lost when one alternative is chosen over another.

In a make-or-buy decision, incremental analysis is used to determine if a product should be made internally or purchased from an outside source. All revenue and expenses that will change due to the decisions are summed to determine the best alternative. Other types of decisions that are made from this concept include special order decisions, and sell or process further decisions.

In addition to quantitative analysis, all decisions must consider qualitative factors. For example, a special order quantitative analysis determines that accepting the special order will cause the company to lose money. If the special order is in a new market for the firm, perhaps the loss should be incurred to establish new relationships with potential new clients in a new market. In short, the know risk (the loss) is worth doing for the possibility of a new potential source of new income. However, if the quantitative analysis determines that outsourcing a manufacturing process is financially feasible, what consideration should be given to the morale of the remaining employees? How will the market accept the outsourcing? As many of the qualitative and quantitative factors as possible must be considered when making decisions.
Standard Costing and Variance Analysis

Standard costs are estimates of costs based on past and projected costs. Standard costs are used for budgetary purposes and for preparing performance reports for more effective production management.

Standard Direct Material cost = Direct Material Price per Unit X Direct Material Quantity Standard per Unit.

Standard Direct Labor Cost = Direct Labor Rate Standard per Unit X Direct Labor Time Standard per Unit.

Standard Variable Overhead Rate = \( \frac{\text{Total Budgeted Variable Overhead Costs}}{\text{Expected Number of Standard Units of Production}} \).

Standard Fixed Overhead Rate = \( \frac{\text{Total Budgeted Fixed Overhead Costs}}{\text{Normal Capacity in Terms of Standard Basis}} \).

Total direct material cost variance = material price variance plus material quantity variance.

Direct material price variance = (standard price – actual price) X actual quantity used.

Direct material quantity variance = (standard quantity - actual quantity used in production) X standard material price per unit.

Direct labor rate variance = (standard rate – actual rate) X actual hours used in production.

Direct labor efficiency variance = (standard hours required for the production output - actual hours used in production) X standard labor rate per hour.

Total direct labor cost variance = Direct labor rate variance + the labor efficiency variance.

Variable Overhead Spending Variance = (Standard Variable Rate per Unit X Actual Hours Worked*) – Actual Variable Overhead Costs.

Variable overhead efficiency variance = Standard Variable Rate per Unit X (Standard Hours required for the production output – Actual Hours used in production).

Fixed overhead budget variance = Budgeted Fixed Overhead – Actual Fixed Overhead.

Fixed overhead volume variance = Budgeted Fixed Overhead Costs – Costs Applied to Production using Standard Fixed Overhead Rate.

*The overhead cost driver listed is direct labor hours. The cost driver could be other measurements like machine hours or direct labor costs. In activity-based costing there may be multiple bases for allocation of variable and fixed overhead costs.

Activity Based Costing

Activity based costing (ABC) is a process that calculates a more accurate product cost than traditional methods. Traditional methods often apply overhead to production based on a single cost driver for all overhead. The cost drivers have often been direct labor or machine hours. In modern production direct labor cost is only a small portion of total production costs and overhead is the largest cost. Although ABC was actually suggested in the 1930s, it was not applied until computers made the application more cost effective. The major steps in ABC include identifying each specific activity used, estimating the cost for each activity, identifying a unique cost driver for each activity, and then calculating and assigning the cost to the cost object. ABC can be used for manufacturing activities, selling, and administrative activities. It can also be applied to service industries. In service industries it is usually referred to as ABC management.
Performance Management and Evaluation
The balanced scorecard is a measure of performance management. It looks at specific performance objectives for managers. The benchmarks established in the balanced scorecard are not only financial comparisons, but those in which non-financial measurements are used as well. These include perspectives in financial, internal business processes, customers, and learning and growth.

In order for performance to be measured, information must be captured so that individuals, processes, and divisions can be evaluated. Responsibility accounting is an information system that classifies data according to areas of responsibility. These responsibility centers include cost centers, revenue centers, profit centers, and investment centers. A cost center is a center whose manager is accountable for only controllable costs. A revenue center is a center whose manager is responsible for generating revenue. A profit center is a center whose manager is responsible for both revenue and expenses control. An investment center is a center whose manager is responsible for revenue, expenses, and significant investment decisions.

Other measures of evaluation include return on investment (ROI), residual income (RI), and economic value added (EVA). ROI is calculated by Operating Income divided by Assets Invested. RI is calculated by Operating Income – (Desired ROI times Assets Invested). Finally EVA is calculated by taking After-Tax Operating Income – Cost of Capital in Dollars. Cost of Capital in Dollars is equal to Cost of Capital times Net Assets. Application of these methods may use different definitions of Operating Income, Assets Invested, and Desired ROI (or Cost of Capital) depending on the firm or analyst.