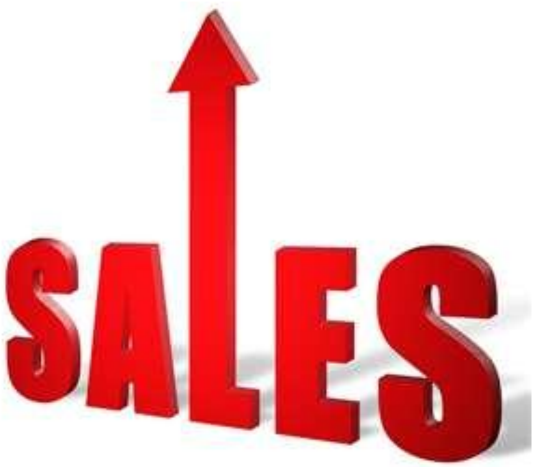
Finance

by Boundless

Forecasting the Income Statement

Sales Forecast Input

Target volume, price, and contribution margin per unit are the key inputs to a sales forecast.



Sales

Increasing sales revenue is one of the goals of businesses.

- Net sales are operating revenues earned by a company for selling its products or rendering its services.
- Gross sales are the sum of all sales during a time period. Net sales are gross sales minus sales returns, sales allowances, and sales discounts.
- The purpose of profit-based sales target metrics is to ensure that marketing and sales objectives mesh with profit targets.

- Contribution Margin

In cost-volume-profit analysis, a form of management accounting, contribution margin is the marginal profit per unit sale.

- Fixed costs

  In economics, fixed costs are business expenses that are not dependent on the level of goods or services produced by the business.

Sales

Net sales are operating revenues earned by a company for selling its products or rendering its services. Also referred to as revenue, they are reported directly on the income statement as Sales or Net sales.

For financial ratios that use income statement sales values, "sales" refers to net sales, not gross sales. Sales are the unique transactions that occur in professional selling or during marketing initiatives.

The term sales in a marketing, advertising or a general business context often refers to a contract in which a buyer has agreed to purchase some products at a set time in the future. "Outstanding orders" refers to sales orders that have not been filled.

A sale is a transfer of property for money or credit. In double-entry bookkeeping, a sale of merchandise is recorded in the general journal as a debit to cash or accounts receivable and a credit to the sales account. A discount from list price might be noted if it applies to the sale (discount expense debit).

Fees for services are recorded separately from sales of merchandise, but the bookkeeping transactions for recording sales of services are similar to those for recording sales of tangible goods (Figure 0).

Forecasting: Gross Sales and Net Sales

Net sales = Gross sales - (Customer discounts, returns, allowances)

Gross sales are the sum of all sales during a time period. Net sales are gross sales minus sales returns, sales allowances, and sales discounts. Gross sales do not normally appear on an income statement. The sales figures reported on an income statement are net sales.

- sales returns are refunds to customers for returned merchandise/credit notes
- debit notes
- sales journal entries non-current, current batch-processed transactions, predictive analytics in strategic management/administration/governance research metaframeworks

- sales allowances are reductions in sales price for merchandise with minor defects, the allowance agreed upon after the customer has purchased the merchandise
- sales discounts allowed are reduced payments from the customer based on invoice payment terms such as 2/10, n/30 (2% discount if paid within 10 days, net invoice total due in 30 days)
- interest received for amounts in arrears
- includes/excludes amounts capital goods & services, non-capital goods & services, input valued-added tax, with cost of non-capital goods sold
- input vat - output vat
- sales of portfolio items and capital gains taxes
- Sales Returns and Allowances and Sales Discounts are contra-revenue accounts

Sales Forecasting

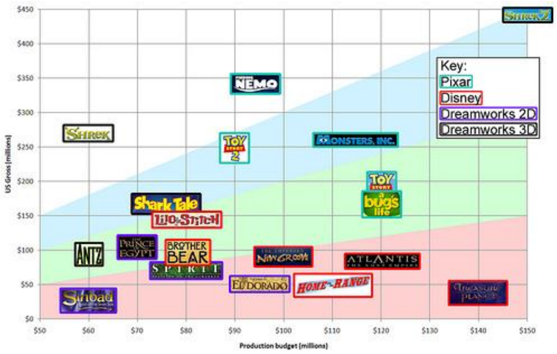
In launching a program, managers often start with an idea of the dollar profit they desire and ask what sales levels will be required to reach it. Target volume is the unit sales quantity required to meet an earnings goal. Target revenue is the corresponding figure for dollar sales. Both of these metrics can be viewed as extensions of break-even analysis. Increasingly, marketers are expected to generate volumes that meet the target profits of their firm. This will often require them to revise sales targets as prices and costs change.

- Target volume: the volume of sales necessary to generate the profits specified in a company's plans.
- Target Volume = [Fixed costs + Target Profits] / Contribution per Unit
- The formula for target volume will be familiar to those who have performed break-even analysis. The only change is to add the required profit target to the fixed costs. From another perspective, the break-even volume equation can be viewed as a special case of the general target volume calculation — one in which the profit target is zero, and a company seeks only to cover its fixed costs.
- In target volume calculations, the company broadens this objective to solve for a desired profit.
- Target Revenue = Target Volume * Selling Price per Unit; or
- Target Revenue = 100 * [{ Fixed Costs + Target Profits } / Contribution Margin]

The purpose of profit-based sales target metrics is to ensure that marketing and sales objectives mesh with profit targets. In target volume and target revenue calculations, managers go beyond break-even analysis (the point at which a company sells enough to cover its fixed costs) to determine the level of unit sales or revenues needed not only to cover a firm's costs but also to attain its profit targets.

Production Schedule Input

Production schedule can be divided into raw materials, work in process, finished goods and goods for resale.



Production budget

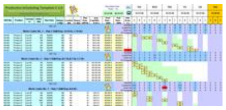
Production budget is important for inventory and sales revenue

- A good purchased as a "raw material" goes into the manufacture of a product.
- A good only partially completed during the manufacturing process is called "work in process".
- When the good is completed as to manufacturing but not yet sold or distributed to the end-user, it is called a "finished good".
- Inventory management is primarily about specifying the shape and percentage of stocked goods.
- Basic reasons for keeping an inventory involve time, uncertainty and economics of scales.

- ABC analysis
  - The ABC analysis is a business term used to define an inventory categorization technique often used in materials management. It is also known as Selective Inventory Control. Policies based on ABC analysis: A ITEMS, very tight control and accurate records; B ITEMS, less tightly controlled, and good records; and C ITEMS, simplest controls possible and minimal records.

Examples

- By taking the Costs-To-Date divided by the Cost Estimate, the "percentage complete" for the project is calculated. For example: Assume a project is estimated to cost $70,000 by the time the work is complete, Assume at the end of December, $35,000 has been spent to date for the project, $35,000 divided by $70,000 is 50%, therefore, the project can be considered 50% complete at December 31.



Production schedule

Production schedule plays an important role in financial forecasting

Production schedule inputs:

- A good purchased as a "raw material" goes into the manufacture of a product.
- A good only partially completed during the manufacturing process is called "work in process."
- When the good is completed as to manufacturing but not yet sold or distributed to the end user, it is called a "finished good." Figure 1

Raw materials - materials and components scheduled for use in making a product.

A raw material is the basic material from which a product is manufactured or made, frequently used with an extended meaning. For example, the term is used to denote material that came from nature and is in an unprocessed or minimally processed state. Latex, iron ore, logs, and crude oil, and salt water are examples. The use of raw material by non-human species includes twigs and found objects as used by birds to make nests.

Work in process, WIP - materials and components that have begun their transformation to finished goods.

Work in process (WIP) or in-process inventory includes the set at large of unfinished items for products in a production process. These items are not yet completed but either just being fabricated or waiting in a queue for further processing or in a buffer storage. The term is used in production and supply chain management.

Optimal production management aims to minimize work in process. Work in process requires storage space, represents bound capital not available for investment, and carries an inherent risk of earlier expiration of shelf life of the products. A queue leading to a production step shows that the step is well buffered for shortage in supplies from preceding steps, but may also indicate insufficient capacity to process the output from these preceding steps.

Finished goods - goods ready for sale to customers.

Finished goods are goods that have completed the manufacturing process but have not yet been sold or distributed to the end user. Finished goods is a relative term. In a Supply chain management flow, the finished goods of a supplier can constitute the raw material of a buyer.

Goods for resale - returned goods that are salable.

Inventory management

Inventory management is primarily about specifying the shape and percentage of stocked goods. It is required at different locations within a facility or within many locations of a supply network to precede the regular and planned course of production and stock of materials.

The scope of inventory management concerns the fine lines between replenishment lead time, carrying costs of inventory, asset management, inventory forecasting, inventory valuation, inventory visibility, future inventory price forecasting, physical inventory, available physical space for inventory, quality management, replenishment, returns and defective goods, and demand forecasting. Balancing these competing requirements leads to optimal inventory levels, which is an on-going process as the business needs shift and react to the wider environment.

Inventory management involves a retailer seeking to acquire and maintain a proper merchandise assortment while ordering, shipping, handling, and related costs are kept in check. It also involves systems and processes that identify inventory requirements, set targets, provide replenishment techniques, report actual and projected inventory status, and handle all functions related to the tracking and management of material. This would include the monitoring of material moved into and out of stockroom locations and the reconciling of the inventory balances. It also may include ABC analysis, lot tracking, cycle counting support, etc. Management of the inventories, with the primary objective of determining/controlling stock levels within the physical distribution system, functions to balance the need for product availability against the need for minimizing stock holding and handling costs. Figure 0

There are three basic reasons for keeping an inventory:

- Time: The time lags present in the supply chain, from supplier to user at every stage, requires that you maintain certain amounts of inventory to use in this lead time. However, in practice, inventory is to be maintained for consumption during variations in lead time. Lead time itself can be addressed by ordering that many days in advance.
- Uncertainty: Inventories are maintained as buffers to meet uncertainties in demand, supply and movements of goods.
- Economies of scale: Ideal condition of "one unit at a time at a place where a user needs it, when he needs it" principle tends to incur lots of costs in terms of logistics. So bulk buying, movement, and storing brings in economies of scale, thus inventory.

COGS Input

COGS is difficult to forecast due to the sheer amount of expenses included and differing methods of estimating each.

XYZ Retailers

Income Statement

For the year ended 30 June 2011

REVENUE	$	$
Sales		250,000
Cost of Goods Sold		
Opening inventories (as at 1 July 2010)	40,000	
Add purchases	100,000	
Add freight-in and customs duty	10,000	
Less closing inventory (as at 30 June 2011)	60,000	
Less Cost of Goods Sold		90,000
Gross Profit		160,000
Add other operating revenue		
Rent received	3,000	
Commission received	2,000	
Total Revenue		165,000
LESS OTHER OPERATING EXPENSES		
Selling & Distribution expense		
Advertising	5,000	
Public Relations	2,000	
Website marketing	7,500	
General and Administrative expenses		
Depreciation	10,000	
Electricity	1,500	
Insurance	1,000	
Rent expense	30,000	
Wages & salaries	46,500	
Financial expenses		
Bad debts	1,500	
Total expenses		105,000
NET PROFIT (EBIT)		60,000

A Sample Income Statement

The cost of goods sold in a given accounting period is recorded on a company's income statement.

- Costs include all costs of purchase, costs of conversion, and other costs incurred in bringing the inventories to their present location and condition.
- The key components of cost generally include: parts - raw materials and supplies used, labor - including associated costs such as payroll taxes and benefits, and overhead of the business allocable to production.
- A miscalculation or faulty estimation can be amplified drastically, causing a vastly different forecasted amount of income than what will actually come to pass.

- allocate

  To distribute according to a plan.

- overhead

  Any cost or expenditure (monetary, time, effort or otherwise) incurred in a project or activity, which does not directly contribute to the progress or outcome of the project or activity.

Cost of goods sold (COGS) refer to the inventory costs of the goods a business has sold during a particular period. Costs include all costs of purchase, costs of conversion, and other costs incurred in bringing the inventories to their present location and condition. Costs of goods made by the business include material, labor, and allocated overhead. The costs of those goods not yet sold are deferred as costs of inventory until the inventory is sold or written down in value.

Figure 0

Because costs of goods sold is a major expense for most companies, it is an extremely important input to a forecast of the income statement. A miscalculation or faulty estimation can be amplified drastically, causing a vastly different forecasted amount of income than what will actually come to pass. Specifically, underestimating the costs associated with goods to be sold can cause the forecasted income to be much higher than what it actually will be, and vice versa. Also, because cost of goods sold is such a broad input, encompassing many separate expenses with different methods of estimating each, it becomes difficult to accurately forecast all phases.

Components of COGS

Parts, Raw Materials, and Supplies Used

Most businesses make more than one of a particular item. Therefore, costs are incurred for multiple items rather than a particular item sold. Determining how much of each of these components to allocate to particular goods requires either tracking the particular costs or making some allocations of costs. Parts and raw materials are often tracked to particular sets (e.g., batches or production runs) of goods, then allocated to each item.

Labor and Associated Costs

Labor costs include direct labor and indirect labor. Direct labor costs are the wages paid to those employees who spend all their time working directly on the product being manufactured. Indirect labor costs are the wages paid to other factory employees involved in production. Costs of payroll taxes and employee benefits are generally included in labor costs, but may be treated as overhead costs. Labor costs may be allocated to an item or set of items based on timekeeping records.

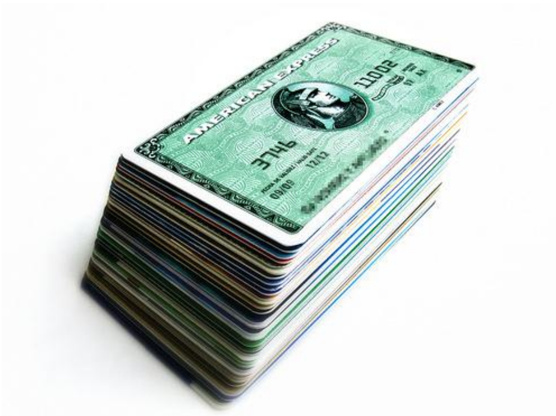
Overhead of the Business Allocable to Production

Determining overhead costs often involves making assumptions about what costs should be associated with production activities and what costs should be associated with other activities. Traditional methods attempt to make these assumptions based on past experience and management judgment as to factual relationships. Activity based costing attempts to allocate costs based on those factors that drive the business to incur the costs.

Variable production overheads are allocated to units produced based on actual use of production facilities. Fixed production overheads are often allocated based on normal capacities or expected production. More or fewer goods may be produced than expected when developing cost assumptions (like burden rates). These differences in production levels often result in too much or too little cost being assigned to the goods produced. This also gives rise to variances.

Other Expenses Input

Other expenses include SG&A, depreciation, amortization, R&D, finance costs, income tax expense, discontinued operations expenses.



Expenses

Operational expenses and non-operational expenses are the main cash outflow of a business.

- Other expenses include operation expenses section and non-operation expenses section.
- Operation section expenses include SG&A, depreciation, amortization, and R&D expenses.
- Non-operation section expenses include finance costs, income tax expense, and discontinued operations expenses.
- SG&A is usually understood as a major portion of non-production related costs, in contrast to production costs such as direct labour.

- deferred tax liabilities

  Deferred tax liabilities generally arise where tax relief is provided in advance of an accounting expense, or income is accrued but not taxed until received.

- intangible assets

  Intangible assets are defined as identifiable non-monetary assets that cannot be seen, touched or physically measured, and are created through time and effort, and are identifiable as a separate asset.

Examples

- Extraordinary items: natural disaster might not qualify depending on location.

Operation Section:

Figure 0

Selling, General, and Administrative expenses (SG&A or SGA)

Selling, General, and Administrative expenses (SG&A or SGA) consist of the combined payroll costs. SGA is usually understood as a major portion of non-production related costs, in contrast to production costs such as direct labor.

- Selling expenses - represent expenses needed to sell products (e.g. salaries of sales people, commissions and travel expenses, advertising, freight, shipping, depreciation of sales store buildings and equipment, rent, and all expenses and taxes directly related to producing and selling product, etc.)
- General expenses- general operating expenses and taxes that are directly related to the general operation of the company, but don't relate to the other two categories.
- Administrative expenses - executive salaries, general support, and all associated taxes related to the overall administration of the company.

Depreciation

1. The decrease in value of assets (fair value depreciation).

2. The allocation of the cost of assets to periods in which the assets are used (depreciation with the matching principle).

The former affects values of businesses and entities. The latter affects net income. Generally, the cost is allocated, as depreciation expense, among the periods in which the asset is expected to be used. Such expense is recognized by businesses for financial reporting and tax purposes. Methods of computing depreciation may vary by asset for the same business. Methods and lives may be specified in accounting and/or tax rules in a country. Several standard methods of computing depreciation expense may be used, including fixed percentage, straight line, and declining balance methods. Depreciation expense generally begins when the asset is placed in service.

Amortization

Amortization (or amortisation) is the process of decreasing or accounting for an amount over a period. When used in the context of a home purchase, amortization is the process by which loan principal decreases over the life of a loan. With each mortgage payment that is made, a portion of the payment is applied towards reducing the principal, and another portion of the payment is applied towards paying the interest on the loan. An amortization table shows this ratio of principal and interest and demonstrates how a loan's principal amount decreases over time. Amortization is generally known as depreciation of intangible assets of a firm.

Research & Development (R&D) Expenses

The term R&D or research and development refers to a specific group of activities within a business. The activities that are classified as R&D differ from company to company, but there are two primary models. In one model, the primary function of an R&D group is to develop new products. In the other model, the primary function of an R&D group is to discover and create new knowledge about scientific and technological topics for the purpose of uncovering and enabling development of valuable new products, processes, and services.

Non-operating section

- Other expenses or losses - expenses or losses not related to primary business operations, (e.g. foreign exchange loss).
- Finance costs - costs of borrowing from various creditors (e.g. interest expenses, bank charges).
- Income tax expense - sum of the amount of tax payable to tax authorities in the current reporting period (current tax liabilities/ tax payable) and the amount of deferred tax liabilities (or assets).
- Discontinued operations are the most common type of irregular items. Shifting business location(s), stopping production temporarily, or changes due to technological improvement do not qualify as discontinued operations. Discontinued operations must be shown separately.
- Extraordinary items are both unusual (abnormal) and infrequent, for example, unexpected natural disaster, expropriation, prohibitions under new regulations.

Pro Forma Income Statement

A *pro forma* income statement is planned and prepared in advance to of a transaction to project the future status of the company.

XYZ Retailers
Income Statement
For the year ended 30 June 2011

REVENUE	$	$
Sales		250,000
Cost of Goods Sold		
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Financial expenses		
Bad debts	1,500	
Total expenses		105,000
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Income statement

Pro forma income statement is an estimate for the profits or losses of a company.

- The *pro forma* accounting is a statement of the company's financial activities while excluding "unusual and nonrecurring transactions" when stating how much money the company actually made.
- Income statement is a company's financial statement that indicates how the revenue is transformed into the net income during a certain period of time.
- *Pro forma* Income statement includes revenue, COGS, operational expenses and non-operational expenses.

- depreciation

  The measurement of the decline in value of assets. Not to be confused with impairment, which is the measurement of the unplanned, extraordinary decline in value of assets.

- write-offs

  The term written-off describes a reduction in recognized value. In accounting terminology, it refers to recognition of the reduced or zero value of an asset.

- pro forma

  For the sake of form only.

Pro forma

The term *pro forma*, Latin for "as a matter of form" or "for the sake of form", is a term applied to practices or documents that are done as a pure formality, perfunctorily, or seek to satisfy the minimum requirements or to conform to a convention or doctrine. It has different meanings in different fields.

Pro forma financial statements are prepared in advance of a planned transaction, such as a merger, an acquisition, a new capital investment, or a change in capital structure like an incurrence of new debt or issuance of equity.

The *pro forma* models the anticipated results of the transaction, with particular emphasis on the projected cash flows, net revenues and (for taxable entities) taxes. Consequently, *pro forma* statements summarize the projected future status of a company, based on the current financial statements. For example, when a transaction with a material effect on a company's financial condition is contemplated, the Finance Department will prepare, for management and Board review, a business plan containing *pro forma* financial statements demonstrating the expected effect of the proposed transaction on the company's financial viability. Lenders and investors will require such statements to structure or confirm compliance with debt covenants, such as debt service reserve coverage and debt to equity ratios. Similarly, when a new corporation is envisioned, its founders will prepare *pro forma* financial statements for the information of prospective investors.

Pro forma accounting is a statement of the company's financial activities while excluding "unusual and nonrecurring transactions" when stating how much money the company actually made. Expenses often excluded from *pro forma* results include company restructuring costs, a decline in the value of the company's investments, or other accounting charges, such as adjusting the current balance sheet to fix faulty accounting practices in previous years.

Income Statement

The income statement is a company's financial statement that indicates how the revenue is transformed into the net income (the result after all revenues and expenses have been accounted for, also known as Net Profit or the "bottom line"). It displays the revenues recognized for a specific period, and the cost and expenses charged against these revenues, including write-offs (e.g., depreciation and amortization of various assets) and taxes.

Pro Forma Income Statement

(Figure 0)

Pro forma figures should be clearly labeled as such and the reason for any deviation from reported past figures clearly explained. A *pro forma* Income statement could be planned and prepared in advance, which includes the items below:

Operating Section:

- Revenue - Cash inflows or other enhancements of assets of an entity during a period from delivering or producing goods, rendering services, or other activities that constitute the entity's ongoing major operations. It is usually presented as sales minus sales discounts, returns, and allowances.
- Expenses - Cash outflows or other using-up of assets or incurrence of liabilities during a period from delivering or producing goods, rendering services, or carrying out other activities that constitute the entity's ongoing major operations.
- Cost of Goods Sold (COGS) / Cost of Sales - represents the direct costs attributable to goods produced and sold by a business (manufacturing or merchandizing). It includes material costs, direct labour, and overhead costs (as in absorption costing).
- Selling, General and Administrative expenses (SG&A or SGA) - consist of the combined payroll costs. SGA is usually understood as a major portion of non-production related costs, in contrast to production costs such as direct labour.
- Depreciation / Amortization - the charge with respect to fixed assets / intangible assets that have been capitalised on the balance sheet for a specific (accounting) period. It is a systematic and rational allocation of cost rather than the recognition of market value decrement.
- Research & Development (R&D) expenses - expenses included in research and development.

Non-Operating Section:

- Other revenues or gains - income from other than primary business activities (e.g. rent, income from patents). It also includes gains that are either unusual or infrequent, but not both (e.g. gain from sale of securities or gain from disposal of fixed assets)
- Other expenses or losses - not related to primary business operations, (e.g. foreign exchange loss).
- Finance costs - costs of borrowing from various creditors (e.g. interest expenses, bank charges).
- Income tax expense - sum of the amount of tax payable to tax authorities in the current reporting period (current tax liabilities / tax payable) and the amount of deferred tax liabilities (or assets).
- Irregular items - these are reported separately because this way users can better predict future cash flows - irregular items most likely will not recur. These are reported net of taxes.
- Discontinued operations is the most common type of irregular items. Shifting business location(s), stopping production temporarily, or changes due to technological improvement do not qualify as discontinued operations. Discontinued operations must be shown separately.