Week 4 – Networking

Investment Banking Recruiting

September 27, 2024

IBR
Brigham Young University
SINCE 2023

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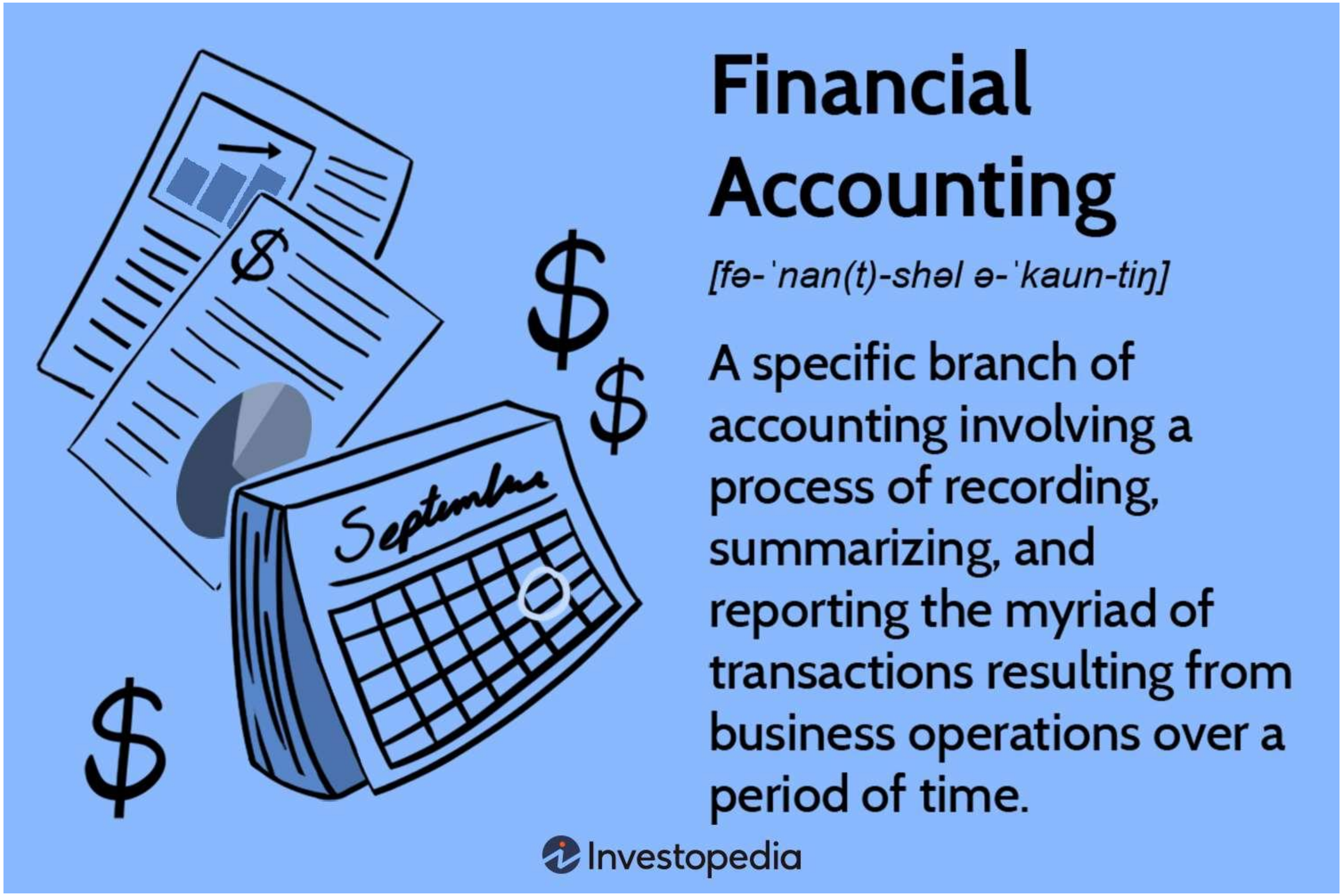
Why is accounting important?

- The overall objective of accounting is to **provide information** that can be used in **making economic decisions**

- The **financial statements** are the primary output of financial accounting

Overview of Accounting



Key Players in the World of Accounting

What do you need to know for recruiting?

Accounting Questions & Answers – Basic

Here are the 5 most important Accounting concepts you need to know:

1. The 3 financial statements and what each one means.
2. How the 3 statements link together and how to walk through questions where one or multiple items change.
3. Different methods of accounting – cash-based vs. accrual, and determining when revenue and expenses are recognized.
4. When to *expense* something and when to *capitalize* it. Not all expenses are created equal.
5. What individual items on the statements, like Goodwill, Other Intangibles and Shareholders' Equity, actually mean.

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What is GAAP and who establishes accounting rules?

1

In the Unites States, a governmental agency called the Securities and Exchange Commission (SEC) authorizes the Financial Accounting Standards Board (FASB) to determine U.S. accounting rules.

2

FASB communicates these rules through the issuance of Statements of Financial Accounting Standards (SFAS). These statements make up the body of accounting rules known as the Generally Accepted Accounting Principles (GAAP).

3

These rules have been developed to provide guidelines for financial accounting in order to ensure that businesses present their financial information in a fair, consistent, and straight-forward basis. Financial statements must be prepared according to GAAP.

What is GAAP and who establishes accounting rules?

- While this course focuses on the US standards, over 100 countries, including the EU, UK, Canada, Australia, Russia (see map) have adopted a unified set of international accounting standards (IFRS).
- Many other countries like China, India, Brazil, are either actively pursuing convergence with IFRS or have incorporated IFRS standards into their national accounting standards.

IFRS Global Map – Legend	
Blue	Adopted
Gray	In Process
White	Not Adopted

Source: Globalexecutives.org

Important filings – 10K

Form 10-K (annual filing)

- At the end of each fiscal year, publicly-traded companies must file a 10-K report which includes a thorough overview of their businesses and finances as well as their financial statements.
- 10-K's must be filed within 60-90 days within year end, depending on the filer's status (large accelerated / accelerated / non-accelerated filer)

Why is the 10-K important?

- It is a required annual filing.
- 10-K usually provides the most detailed overview of companies' financial operations and regulations governing them.

Annual Report vs. 10-K:

- The two terms are often used interchangeably but be careful!
- Sometimes companies provide a "polished" Annual Report that summarizes data in the 10-K and adds marketing fluff but is not the complete 10-K
- As an analyst, the complete 10-K is the primary document for company data

Important filings – 10Q

- At the end of each quarter of their fiscal year (for the first three quarters of a fiscal year), publicly-traded companies also file a report with the SEC which includes financial statements and non-financial data.
- 10-Q's must be filed within 40-45 days of quarter end.

10-K vs. 10-Q – what's the difference?

1. Both 10-K's and 10-Q's include financial statements, important footnotes and management commentary on the state of the business, but 10-Ks are generally more detailed filings than 10-Qs.
2. A 10-K will usually contain more details regarding stock options, fixed and intangible assets, debt, and future expectations and include extensive management, as well as commentary on the state of the business (management discussion & analysis "MD&A").
3. 10-K reports are audited by an independent firm, while 10-Q filings are reviewed by a CPA but are unaudited.
4. This is important because an auditing firm may sometimes highlight certain financial information and valuation methodologies it believes do not conform with GAAP.

Important filings

Form 8-K

- An 8-K is a required filing any time a company undergoes or announces a materially significant event.
- For example: earnings press release, an acquisition, a disposal of assets, bankruptcy, etc. 8-Ks are usually filed within 4 days of the event.

Form 14-A (Proxy Statement)

- Form 14A is a required filing prior to companies' annual shareholder meetings.
- It contains detailed information about top officers and their compensations.
- The form often solicits shareholder votes (proxies) for Board nominees and other important matters.

Proxy	• DEF 14A is a notification to shareholders of matters to be brought before shareholders meeting. It solicits proxy. Especially useful when analyzing an acquisition because companies provide shareholders a lot of technical details regarding the deal when soliciting shareholder approval.
Securities Offering *IPO, equity offered in merger, etc.*	• S-1 registration filed by a company when it decides to go public and sell securities and an Initial Public Offering (IPO). This document includes the prospectus – the company document outlining the companies' operations to help investors make an informed decision about investing. • S-2 and S-3 are required filings for secondary offerings. • S-4 filed to register a securities offering in certain mergers or reorganizations. • S-11 Filed by real estate companies (limited partnership and investment trusts).
Annual Report of Foreign Companies	• 20-F is an annual report filed by certain foreign issuers of securities trading in the U.S.

Fiscal year vs calendar year

- **Companies are required to file annual and interim reports.**
  - In the US and many other countries, quarterly and annual financial reports are required (some countries still require only annual or annual and half-year filings).
- **An accounting year (fiscal year) is frequently (but not always) aligned with the calendar year (January 1 – December 31).**
  - ExxonMobil and GE have December 31st as their fiscal year-end.
  - Microsoft (June 30th), Wal-Mart (January 31st), and Apple (September 29th) all have off-calendar year fiscal year ends.

Historical Cost

- Financial statements report companies' resources at an initial historical cost.
- Let's assume a company purchased a piece of land for $1 million ten years ago. Under US GAAP, it will continue to record this original purchase price (typically called book value) even though the market value (referred to as fair value) of this land has risen to $10 million.

Why is such undervaluation of a company's resources required?

Represents the easiest measurement method without a need for appraisal and revaluation.

Marking resources up to fair value allows for management discretion and subjectivity, which US GAAP attempts to minimize by using historical cost.

Book value vs market value

Market Value

The market value of an asset is the present value of all future cash flows of the asset. This value is determined by forces of supply and demand in the market, hence the name “market value”

$$= \sum_{t=1}^{N} \frac{CF_t}{(1+r)^t}$$

Book Value

The book value of an asset is the value that is recorded on the financial statements and observed for accounting purposes including amortization. This is recorded at historical cost.

Accrual accounting vs cash-based accounting

Accrual accounting is one of the most important concepts in accounting, and governs the company's timing in recording its revenues (i.e. sales) and associated expenses.

- **Principle #2: Revenue Recognition:** Accrual basis of accounting dictates that revenues must be recorded when earned and measurable.
- **Principle #3: Matching Principle:** Under the matching principle, costs associated with making a product must be recorded during the same period as revenue generated from that product.

Exercise: Amazon.com sells a book

The following transactions occurred on the specified dates:	
6/5/13	Amazon.com purchases a book from a publisher for $10
12/29/14	Amazon.com receives a $20 credit card order for that book
1/4/15	The book is shipped to customer
2/1/15	Amazon.com receives cash

1. **From the options above, when should Amazon.com record revenue?**
2. **From the options above, when should Amazon.com record expenses?**

Accrual accounting vs cash-based accounting

Why can't companies immediately record these revenues and expenses?

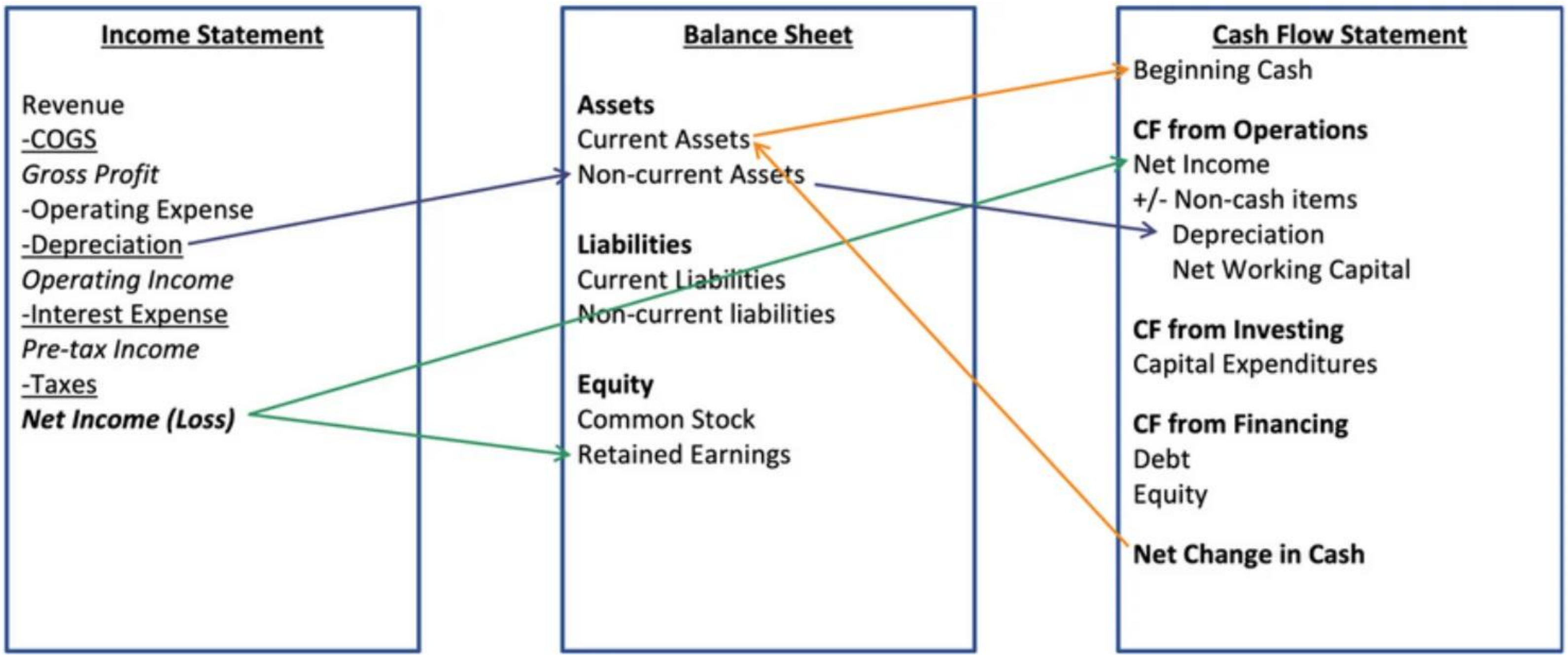
- According to the revenue recognition principle, a company cannot record revenue until that order is shipped to a customer.
- Only then, is the revenue earned.
- Collection from that customer (who uses a credit card) is reasonably assured.

Why shouldn't Amazon.com record the expense when it bought the book?

According to the matching principle, costs associated with the production of the book should be recorded in (matched to) the same period as the revenue from the book's sale.

Overview of the 3 statements

Why do we need 3 statements?



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Income statement overview

What Is the Income Statement?

- The income statement is a financial report that depicts the operating performance of a company (i.e. revenues less expenses generated – i.e. profitability) over a specific period of time (typically a quarter or year).

Also referred to as:

- The Consolidated Statement of Earnings
- The Profit and Loss (P&L) Statement
- Statement of Revenues and Expenses

Why is it Important?

- It facilitates the analysis of a company's growth prospects, cost structure, and profitability.
- Analysts can use the income statement to identify the components and sources ("drivers") of net earnings.

Major line items

Major Typical Components & Definitions	
Net Revenues	Total dollar payment for goods and services that are credited to an income statement over a particular time period.
Cost of Goods Sold	Cost of Goods sold represents a company's direct cost of manufacture (for manufacturers) or procurement (for merchandisers) of a good or service that the company sells to generate revenue.
Gross Profit	Revenues - Cost of Goods Sold
Selling, General & Administrative (SG&A)	Operating costs not directly associated with the production or procurement of the product or service that the company sells to generate revenue. Payroll, wages, commissions, meal and travel expenses, stationary, advertising, and marketing expenses fall under this line item.
Research & Development (R&D)	A company's activities that are directed at developing new products or procedures.

Major line items

Major Typical Components & Definitions	
EBITDA	Earnings before interest, taxes, depreciation & amortization : Gross Profit - SG&A - R&D. EBITDA is a popular measure of a company's financial performance.
Depreciation & Amortization (D&A)	The allocation of cost over a fixed asset's useful life in order to match the timing of the cost of the asset with when it is expected to generate revenue benefits.
Other Operating Expenses / Income	Any operating expenses not allocated to COGS, SG&A, R&D, D&A
Operating profit (EBIT)	Earnings before interest & taxes: EBITDA - D&A
Interest Expense	Interest expense is the amount the company has to pay on debt owed. This could be to bondholders or to banks. Interest expense subtracted from EBIT equals earnings before taxes (EBT).

Major line items

Major Typical Components & Definitions	
Interest Income	A company's income from its cash holdings and investments (stocks, bonds, and savings accounts).
Non-operating items	Items peripheral to core operations. Includes gains/losses on investments and revaluation of certain financial assets and debt obligations.
Income Tax Expense	The tax liability a company reports on the income statement.
Net Income	EBIT - Net Interest Expense - Other Nonoperating Income - Taxes
Basic earnings per share (EPS)	Net income / Basic Weighted Average Shares Outstanding
Diluted EPS	Net income / Diluted Weighted Average Shares Outstanding

Income statement example

Revenue

Not all income is revenue

- A company may have other income streams, which are not related to its main operations:
  - Interest income earned from investments (recorded as non-operating income on the income statement)
  - Income received from a legal settlement (if material, identified as a separate line item on the income statement below revenue) or netted against operating expenses
  - You will see revenues represented on the income statement as Revenues, Sales, Turnover, Net Sales or Net Revenues. We'll explain what is being "netted" out of net revenues shortly.
  - Revenues are referred to colloquially as a company's top-line.

Examples of revenues include:

- Sale of crude oil by ExxonMobil
- Sale of books by Amazon.com
- Sale of hamburgers by McDonald's

“Net” revenue

“records reductions”

Example question

In July 2014, CVS, a drugstore chain, recorded the following transactions:

- ❑ Collected $450m in cash
- ❑ Sold $500m in merchandise
- ❑ Sold $100m in prescriptions
- ❑ Won a legal settlement of $400m
- ❑ Collected $20m in interest income from a bank account

Record total revenue for CVS in July 2014

Example question

In July 2014, CVS, a drugstore chain, recorded the following transactions:

- ☐ Collected $450m in cash
- ✓ Sold $500m in merchandise
- ✓ Sold $100m in prescriptions
- ☐ Won a legal settlement of $400m
- ☐ Collected $20m in interest income from a bank account

Total revenue = $600m (merchandise and prescriptions)

Legal settlement and interest income are NOT part of revenues.

Under accrual accounting, receiving cash in and of itself does not constitute revenue.

Revenue recognition

Recall that accrual basis of accounting dictates that revenue must be recorded only when it is earned and measurable.

Amazon Example:

Amazon.com received a $20 book order on 12/29/14, but it could only record it as revenue once it was shipped on 1/4/15.

According to the revenue recognition principle, a company cannot record revenue until it is earned – that is, until that order is shipped to a customer and collection from that customer, who used a credit card, is reasonably assured.

Revenue recognition

For long-term projects, companies have some flexibility with respect to revenue recognition:

1

Percentage of Completion Method

Revenues are recognized on the basis of the percentage of total work completed during the accounting period.

2

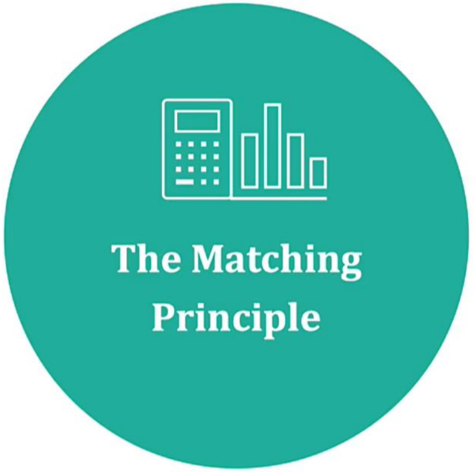
Completed Contract Method

Rarely used in the U.S., this method allows revenue recognition only once the entire project has been completed.

Revenue recognition: Boeing example

- On January 12, 2015, Boeing agreed to deliver 6 Boeing airplanes to Bavaria Aircraft Leasing for $330 million. Delivery of the airplanes begins in July 2015 and extends through 2017. Boeing is paid upon delivery of each plane.
- **Assuming Boeing uses the percentage of completion method, when should Boeing recognize $330 million of revenues?**

Recording expenses - the matching principle



- **The Matching Principle** states that expenses should be "matched" to revenues. In other words, the costs of manufacturing a product are matched to the revenue generated from that product during the same period.
  - In our Amazon example, costs associated with the procurement of the book must be recorded in the same period as the revenue from its sale.
  - In our Boeing example, costs associated with the production of airplanes must be recorded in the same period as the revenue from their sale.

Tie back to accrual accounting

Revenues are recognized and recorded when an economic exchange occurs, while expenses are recognized when the associated revenues are recognized, not necessarily when cash is exchanged.

Why we do this

- In the Boeing example, Boeing presumably had to purchase raw materials (metal, plane parts, etc.) some time ago, before any revenues from its contract with Bavaria Leasing were recognized.
- If it recognized them then instead of matching revenues with expenses, Boeing would have reported the material costs back when they were acquired on their financial statements. The financials would show a company with high costs and no revenues.
- This, of course, would not be an accurate depiction of the company's profitability because we know that Boeing bought those raw materials for the purpose of fulfilling an order which will generate future revenues.

By matching costs with revenues, the accrual concept strives to more accurately depict a company's operating results.

COGS and gross profit

Cost of Goods Sold (COGS) or Cost of Sales (COS), represents a company's direct cost of manufacture (for manufacturers) or procurement (for merchandisers) of a good or service that the company sells to generate revenue.

Remember the matching principle!

- Many of these costs are not going to be immediately recognized.
- For example, merchandise inventories are only recognized when revenue from their sale is recognized.

Examples of COGS

- Merchandise inventory
- Manufactured goods inventory
  - Raw material costs
  - Direct labor costs
  - Factory overhead
- Shipping and delivery costs
- Any other costs directly associated with the generation of revenue
- Depreciation of fixed assets

COGS and gross profit

	Years ended		
	September 30, 2023	September 24, 2022	September 25, 2021
Net sales:			
Products	$ 298,085	$ 316,199	$ 297,392
Services	85,200	78,129	68,425
Total net sales	383,285	394,328	365,817
Cost of sales:			
Products	189,282	201,471	192,266
Services	24,855	22,075	20,715
Total cost of sales	214,137	223,546	212,981
Gross margin	169,148	170,782	152,836

COGS and gross profit

COGS do not include administrative costs

- Costs such as corporate overhead, marketing and administrative expenses, research and development, and salaries of employees not associated directly with the manufacture or procurement of a good or service are not included in COGS.
- Those costs are included under Selling, General & Administrative Expenses or other line items (discussed in the next section).

COGS and gross profit

For a Manufacturer	Examples
Inventory	The cost of tires that Michelin sells.
Direct labor	The laborers working on an Exxon Mobil oil well.
Factory overhead (indirect costs)	Rents, heat, administrative salaries, equipment maintenance costs, custodial costs in a GM automotive plant.
Shipping & delivery costs	Lumber delivery costs for Sierra Pacific.

For a Merchandiser	Examples
Inventory	The cost of TV sets for Walmart.
Shipping & delivery costs	Shipping & delivery costs of Apple's inventory (Apple is both a manufacturer and merchandiser).

For a Service Provider	Examples
Direct service costs	• Google's payments to its advertising network (traffic acquisition costs). • Compensation of Huron consultants that directly generate consulting fees.

SG&A / D&A

	Years ended		
	September 30, 2023	September 24, 2022	September 25, 2021
Net sales:			
Products	$ 298,085	$ 316,199	$ 297,392
Services	85,200	78,129	68,425
Total net sales	383,285	394,328	365,817
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Services	24,855	22,075	20,715
Total cost of sales	214,137	223,546	212,981
Gross margin	169,148	170,782	152,836
Operating expenses:			
Research and development	29,915	26,251	21,914
Selling, general and administrative	24,932	25,094	21,973
Total operating expenses	54,847	51,345	43,887

SG&A (selling, general and administrative) expenses

- Operating expenses that are not included in cost of goods sold, are allocated to categories titled 'Selling, general, & administrative expenses' (SG&A) but may also include terms like marketing and operating expenses in the title.
- SG&A represents the operating expenses not directly associated with the production or procurement of the product or service that the company sells to generate revenue.

- **Examples of SG&A**
  - A store lease expense for a retail business
  - Salaries and commissions of salespeople and cashiers
  - Marketing and advertising expenses
  - Administrative, IT, and office support staff
  - Equipment used for selling (a cash register)
  - Executive salaries
  - Legal expenses

R&D (research and development) expenses

- Research and development (R&D) expenses stem from a company's activities that are directed at developing new products or procedures.
- Research-intensive industries such as healthcare, energy and technology often identify R&D expenses separately because they constitute such a large component of total expenses.
- For example, Microsoft, Exxon Mobil, Google, Apple, EMC, and Pfizer all identify R&D expenses separately.
- Other companies aggregate the R&D expense within Other Operating Expenses or SG&A.
- R&D expenses include compensation for employees, equipment, and facilities engaged in the R&D process.

Depreciation and amortization

- Up to now, we have been talking about classifying expenses based on their function – whether they are direct costs (COGS) or non-direct operating costs (SG&A, R&D, etc.).
- Another important question is if a purchase is expected to help generate revenue for several years, should the entire cost of the purchase be expensed at once or whether that cost should be spread out evenly over the useful life of the asset.
- Accrual accounting (and specifically the matching principal) dictates that we spread the cost evenly over the life of the asset so that costs are matched to the period when revenue is earned as a result of using the asset.
- The resulting annual expense is called depreciation.

Depreciation and amortization

Example: GE buys a sensor

- GE invests $30 million (in an upfront cash payment) in a new flow meter sensor, which it expects will significantly improve productivity.
- The equipment is expected to have a useful life of 10 years, at which point it will be disposed of (assume no salvage value).
- Accordingly, on the income statement, GE will recognize an annual depreciation expense of $3 million for this sensor, every year for the next 10 years.

Depreciation and amortization

- Depreciation quantifies the wear and tear (from use and passage of time) of the physical asset through a systematic decrease (depreciation) of the assets' book (historical) value.

Useful life of fixed assets

- Assets that have physical substance, along with typical depreciable period:
  - Plants and buildings (15- 40 years)
  - Machinery & equipment (3-20 years)
  - Furniture & fixtures (5-10 years)
  - Computer software & hardware (3-5 years)

Land

- Land is a fixed asset but is NOT depreciated

Depreciation and amortization

- You will not see a line item on the I/S specifically identifying depreciation expense.
- Depreciation is included within COGS or SG&A, depending on whether the asset being depreciated is directly tied with manufacture or procurement (i.e. cost of building a tire plant) or tied to something not directly tied like selling or marketing (i.e. cost of a point-of-sale cash register system).
- However, you will almost always find depreciation expense identified separately on the cash flow statement (which we'll address in detail later).

Depreciation and amortization

WAL-MART STORES, INC.
Consolidated Statements of Income

(Amounts in millions except per share data)	Fiscal Years Ended January 31, 2012	2011	2010
Revenues:			
Net sales	$ 443,854	$ 418,952	$ 405,132
Membership and other income	3,096	2,897	2,953
	446,950	421,849	408,085
Costs and expenses:			
Cost of sales	335,127	314,946	304,106
Operating, selling, general and administrative expenses	85,265	81,361	79,977
Operating income	26,558	25,542	24,002
Depreciation and amortization	8,130	7,641	7,157

Straight-line depreciation method

Accordingly, depreciation expense for each period (quarter or year) is the same, and can be calculated as follows:

$$Annual\ depreciation\ expense = \frac{Original\ cost - Salvage\ value}{Useful\ life}$$

- **Original Cost** = Original cost of the asset.
- **Salvage (residual) value** = The asset's estimated salvage (or disposal/residual/trade-in value) at the time of disposal.
- Original cost minus salvage value is often referred to as the depreciable cost.
- **Useful Life** = Total years the asset is expected to remain in service.

Straight-line depreciation method

- A tire maker spends $100,000 in 2014 to acquire manufacturing equipment that is expected to be productive for the next five years, at which point the estimated salvage value is $20,000.
- **Calculate the annual depreciation expense using the straight-line depreciation method.**

$$16{,}000 = \frac{100{,}000 - 20{,}000}{5}$$

Year	Depreciation expense	Accumulated depreciation *end of year*	Book value *end of year*
			100,000 (at purchase)
2014	16,000	16,000	84,000
2015	16,000	32,000	68,000
2016	16,000	48,000	52,000
2017	16,000	64,000	36,000
2018	16,000	80,000	20,000

Depreciation and amortization

- Depreciation is a non-cash expense and can make up a significant portion of total expenses on a company's income statement.
- That makes the income statement a poor tool for tracking a company's cash position:
  - **Income statement profits** are reduced every year by depreciation expense, whereas actual Cash profits are affected only when cash payments for purchases of assets are made.

Amortization

- Amortization is the allocation of the cost of intangible assets over the number of years that these assets are expected to help generate revenue for the company.
- Conceptually similar to depreciation and often lumped in with depreciation as Depreciation & Amortization (D&A) in financial disclosures.
- Like with fixed assets, when a company purchases an intangible asset from which it expects to generate benefits over future periods, the cost of that asset is not simply recognized during the year it was acquired.
- Instead, it is spread over that particular asset's useful life in the form of amortization expense.

Amortization

Types of intangible assets:

- Customer Lists
- Franchise, Memberships, Licenses
- Patents and Technology
- Trademarks and goodwill are considered to have indefinite useful life so they are not amortized (more on this later)

Amortization

- Amortization expense does not depict any actual cash outflow (payment).
- The only difference between depreciation and amortization is that depreciation refers to fixed (physical) assets, while amortization refers to acquired intangible (not physical) assets.
- **Internally-generated intangible assets**
  - Expenses associated with internally developing intangible assets like patents, customer lists, trademarks are expensed fully as they are incurred (no amortization).
  - Since companies are not allowed to write up the value of intangible assets (historical cost and conservatism), companies with very valuable trademarks and patents (Coke, GE, Apple) do not recognize or amortize these assets.

Stock based comp

- We've already discussed how the expense of employee salaries are embedded within the expense categories based on the employee's job function.
  - A corporate manager or salesperson's salary will likely be embedded **in SG&A**.
  - The salary of a software engineer will likely be embedded **in R&D**.
  - The salary of a factory supervisor at a tire manufacturer will likely be embedded **in COGS**.
- But what happens when a company compensates an employee with stock (like stock options or restricted stock)? **Hint: Accrual accounting**

Stock based comp

- When a company compensates an employee with stock (like stock options or restricted stock), the value of that compensation (called "stock-based compensation" or "SBC") is recognized as an expense in the same expense category as the employee's regular cash compensation.[1]

Stock based comp

For example, a company that pays a salesperson a cash salary of $100,000 and stock options valued at $50,000 will recognize:

- $150,000 in SG&A compensation (even though only $100,000 was spent).
- The extra $50,000 reflects that the employee earned an additional $50,000 in compensation (the actual payment down the road in the form of additional shares may not happen for a while).
- Even though it's recognized as an expense as an employee earns the SBC, remember that SBC is a **non-cash** form of compensation.

Stock based comp

META PLATFORMS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Year Ended December 31,		
	2023	2022	2021
Cash flows from operating activities			
Net income	$ 39,098	$ 23,200	$ 39,370
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	11,178	8,686	7,967
Share-based compensation	14,027	11,992	9,164
Deferred income taxes	131	(3,286)	609
Impairment charges for facilities consolidation, net	2,432	2,218	—
Data center assets abandonment	(224)	1,341	—
Other	635	641	(127)
Changes in assets and liabilities:			
Accounts receivable	(2,399)	231	(3,110)
Prepaid expenses and other current assets	559	162	(1,750)
Other assets	(80)	(106)	(349)
Accounts payable	51	210	1,436
Partners payable	(271)	90	(12)
Accrued expenses and other current liabilities	5,352	4,210	3,544
Other liabilities	624	886	941
Net cash provided by operating activities	71,113	50,475	57,683

Other operating expenses

Companies will sometimes recognize expenses (or income) on the income statement that, while still related to operating activities, are a little less typical. Common examples include:

- Gains/losses on sale of fixed assets
- Gains/losses from a legal settlement
- Restructuring expenses and severance costs
- Losses do to inventory spoilage (inventory write-down)

SGA = $30m / Disclosure that there was $5m of expenses

Where are these items classified on the income statement?

- Unless these items are material, they will often be embedded within larger operating expense categories like SG&A, or in a separate line item called "Other operating expenses."
- Companies sometimes provide a separate disclosure in their press releases where they have more freedom to detail these items (called a "non-GAAP" reconciliation).

Important metrics: EBIT

- When analyzing a businesses, analysts are often comparing to the performance of other businesses.
- Since non operating items like interest expense, interest income, and taxes can vary widely across even similar types of businesses, analysts focus on operating income, or earnings before interest and taxes (EBIT).

Everything above operating profit is tied to core operations.

Everything below operating profit is not directly related to the operations of the business.

P&G

Consolidated Statements of Earnings

Amounts in millions except per share amounts; Years ended June 30	2013	2012	2011
NET SALES	**$ 84,167**	$ 83,680	$ 81,104
Cost of products sold	**42,428**	42,391	39,859
Selling, general and administrative expense	**26,950**	26,421	25,750
Goodwill and indefinite-lived intangible asset impairment charges	**308**	1,576	—
OPERATING INCOME	**14,481**	13,292	15,495
Interest expense	**667**	769	831
Interest income	**87**	77	62
Other non-operating income, net	**942**	185	271
EARNINGS FROM CONTINUING OPERATIONS BEFORE INCOME TAXES	**14,843**	12,785	14,997
Income taxes on continuing operations	**3,441**	3,468	3,299
NET EARNINGS FROM CONTINUING OPERATIONS	**11,402**	9,317	11,698

Important metrics: EBITDA

- An even more popular profit metric is EBITDA, which starts with EBIT but adds back D&A expense.
- **The rationale for using EBITDA as a way to compare companies is twofold:**
  1. D&A is a huge noncash expense for fixed asset and intangible asset intensive businesses and stripping out the biggest noncash expense provides a more accurate picture of "real" profits during the year.
  2. Since companies can use different useful life assumptions and even depreciation methods to calculate D&A this can significantly skew the comparison of operating profitability across two otherwise identical firms.

Important metrics: EBITDA

Since D&A is not usually disclosed explicitly on the income statement, analysts have to go to the cash flow statement to get D&A and simply add it back to EBIT:

P&G

Consolidated Statements of Earnings

Amounts in millions except per share amounts; Years ended June 30	2013	2012	2011
NET SALES	$ 84,167	$ 83,680	$ 81,104
Cost of products sold	42,428	42,391	39,859
Selling, general and administrative expense	26,950	26,421	25,750
Goodwill and indefinite-lived intangible asset impairment charges	308	1,576	—
OPERATING INCOME	14,481	13,292	15,495
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Consolidated Statements of Cash Flows

Amounts in millions; Years ended June 30	2013	2012	2011
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	$ 4,436	$ 2,768	$ 2,879
OPERATING ACTIVITIES			
Net earnings	11,402	10,904	11,927
Depreciation and amortization	2,982	3,204	2,838

IBR

Non-operating income and expenses

Non-operating Income and Expenses

- Up to now, we have been talking about income and expense generated and incurred from a company's core operations.
- Companies also generate income and expenses that are not tied to the core operations of their business.

P&G

Consolidated Statements of Earnings

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Everything below operating profit is not directly related to the operations of the business.

Interest expense and interest income

- **Interest expense** are payments the company makes for its outstanding debt.
- Just as the interest we pay on credit cards or a car loan, corporations must make regular interest payments (interest expense) on debt owed to banks or other lenders.

- **Interest income** is a company's income from its cash holdings and investments (stocks, bonds, and savings accounts).

Net Interest Expense

Sometimes, interest income and expense are netted against one another when presented on the income statement.

Tax expense

- Under US GAAP and IFRS, companies report tax expense as a separate line item usually right below a line item called 'Pretax Income' or 'Income before provision for income taxes.
- **Tax expense doesn't equal the actual cash taxes paid!**
    - Although this topic can get quite esoteric and is firmly outside the scope of this course, we can broadly say that because of the ability of companies to defer certain taxes, the tax expense companies recognize on their income statement does not equal that actual cash taxes they have to pay for the same period.

Diving a little deeper

- The calculation of cash taxes are made using the relevant country's tax code accounting 'tax rules', while the tax expense on the income statement is calculated using the relevant local 'book rules' (US GAAP, IFRS, etc.)
- The different accounting rules, primarily revolving the calculation of deprecation, when revenues are recognized, and how losses are treated create many of the differences between the tax expense and the actual taxes paid.

Tax expense

CONSOLIDATED STATEMENTS OF OPERATIONS
(In millions, except number of shares which are reflected in thousands and per share amounts)

	Years ended September 28, 2013	September 29, 2012	September 24, 2011
Net sales	$ 170,910	$ 156,508	$ 108,249
Cost of sales	106,606	87,846	64,431
Gross margin	64,304	68,662	43,818
Operating expenses:			
Research and development	4,475	3,381	2,429
Selling, general and administrative	10,830	10,040	7,599
Total operating expenses	15,305	13,421	10,028
Operating income	48,999	55,241	33,790
Other income/(expense), net	1,156	522	415
Income before provision for income taxes	50,155	55,763	34,205
Provision for income taxes	13,118	14,030	8,283
Net income	$ 37,037	$ 41,733	$ 25,922

Note 5 – Income Taxes

The provision for income taxes for 2013, 2012 and 2011, consisted of the following (in millions):

	2013	2012	2011
Federal:			
Current	$ 9,334	$ 7,240	$ 3,884
Deferred	1,878	5,018	2,998
	11,212	12,258	6,882
State:			
Current	1,084	1,182	762
Deferred	(311)	(123)	37
	773	1,059	799
Foreign:			
Current	1,559	1,203	769
Deferred	(426)	(490)	(167)
	1,133	713	602
Provision for income taxes	$13,118	$14,030	$ 8,283

Below the line

	Years ended		
	September 30, 2023	September 24, 2022	September 25, 2021
Net sales:			
Products	$ 298,085	$ 316,199	$ 297,392
Services	85,200	78,129	68,425
Total net sales	383,285	394,328	365,817
Cost of sales:			
Products	189,282	201,471	192,266
Services	24,855	22,075	20,715
Total cost of sales	214,137	223,546	212,981
Gross margin	169,148	170,782	152,836
Operating expenses:			
Research and development	29,915	26,251	21,914
Selling, general and administrative	24,932	25,094	21,973
Total operating expenses	54,847	51,345	43,887
Operating income	114,301	119,437	108,949
Other income/(expense), net	(565)	(334)	258
Income before provision for income taxes	113,736	119,103	109,207
Provision for income taxes	16,741	19,300	14,527
Net income	$ 96,995	$ 99,803	$ 94,680

Net income, EPS and dividends

Net Income

- **Net Income** is the final measure of profitability on the income statement. It represents income after all expenses have been paid out.
- It is the bottom line of a company's income statement.
- Net income is also called:
  - Net earnings
  - Net profit
  - "Bottom line"

CONSOLIDATED STATEMENTS OF OPERATIONS
(In millions, except number of shares which are reflected in thousands and per share amounts)

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Net income, EPS and dividends

- A very common way that investors analyze company profits is by dividing net income by shares outstanding, and this metric is called ‘earnings per share’ (EPS). EPS measures how much of the total current period profits belong to each shareholder.
- **There are two ways to think about who is a shareholder, which leads to two different ways to reference and calculate EPS:**

$$Basic\ EPS = \frac{Net\ income}{Basic\ shares\ outstanding}$$

$$Diluted\ EPS = \frac{Net\ income}{Diluted\ shares\ outstanding}$$

Net income, EPS and dividends

CONSOLIDATED STATEMENTS OF OPERATIONS
(In millions, except number of shares which are reflected in thousands and per share amounts)

	Years ended September 28, 2013	September 29, 2012	September 24, 2011
Net sales	$ 170,910	$ 156,508	$ 108,249
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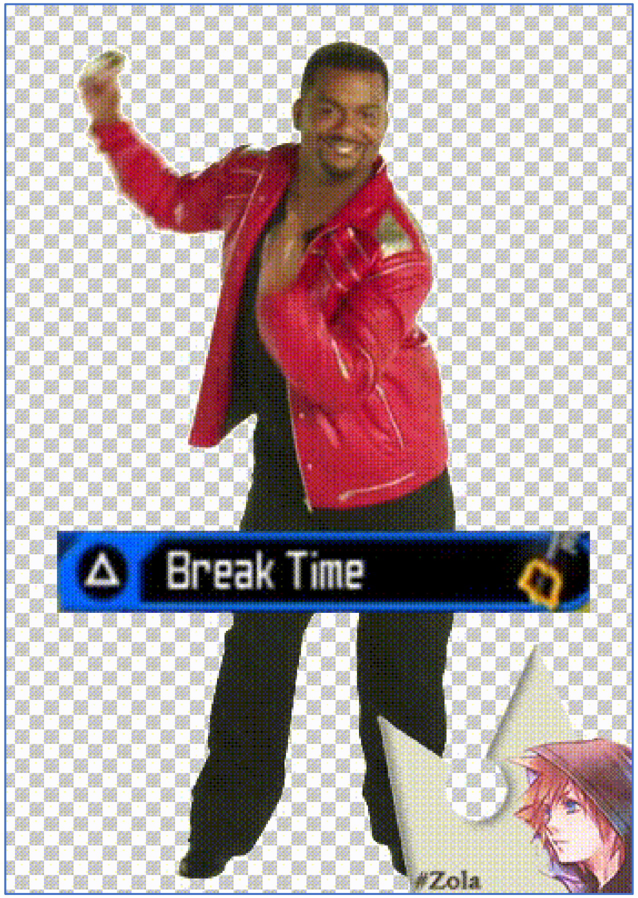
Income before provision for income taxes	50,155	55,763	34,205
Provision for income taxes	13,118	14,030	8,283
Net income	$ 37,037	$ 41,733	$ 25,922
Earnings per share:			
Basic	$ 40.03	$ 44.64	$ 28.05
Diluted	$ 39.75	$ 44.15	$ 27.68
Shares used in computing earnings per share:			
Basic	925,331	934,818	924,258
Diluted	931,662	945,355	936,645
Cash dividends declared per common share	$ 11.40	$ 2.65	$ 0.00

Break



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Balance Sheet Overview

- The balance sheet reports the company's resources (assets) and how those resources were funded (liabilities and shareholders' equity) on a particular date (end of the quarter, end of the year).
    - Contrast with the income statement, which reports a company's revenues, expenses and profitability over a specified period of time.
- The fundamental equation in accounting is:

$$Assets = Liabilities + Equity$$

Current vs Long Term

Current	This sort of asset or liabilities is due within the current operating cycle – **for nearly all companies this is one calendar year.** Current assets and liabilities are also often known as short-term.	
Long Term	Assets or liabilities whose useful life or time to maturity extends beyond the current operating cycle – **assets in this category often face amortization and debt of this sort is interest bearing.**	

Assets

Assets

Assets represent the company's resources. To qualify as an asset, the following requirements must be met:

- A company must own the resource.
- The resource must be of value.
- The resource must have a quantifiable, measurable cost.

Assets	Description
Cash	Money held by the company in its bank accounts.
Marketable Securities	Debt or equity securities held by the company.
Accounts Receivable (A/R)	Payment owed to a business by its customers for products and services already delivered to them.
Inventories	Inventories represent any unfinished or finished goods that are waiting to be sold, and the direct costs associated with the production of these goods.
Prepaid Expenses	When a company prepays for things like utilities, insurance and rents, the right to the future services become assets.
Property, Plant & Equipment (PP&E)	Land, buildings, and machinery used in the manufacture of the company's services and products.
Intangible Assets & Goodwill	Non-physical assets such as patents, trademarks, and goodwill acquired by the company that have value based on the rights belonging to that company.

Assets are Presented in Descending Order of Liquidity

- Cash is the most liquid asset so it's always first.
- Cash is usually followed by assets like accounts receivable and inventory, as these can be converted into cash (i.e. sold) quickly.
- Less liquid assets like PP&E and intangible assets are listed towards the bottom of the asset side of the balance sheet.
- **Current assets:** As long as assets can be converted into cash within 12 months, they are considered "current" and classified as such on the balance sheet.

Walmart

(Amounts in millions except per share data)	As of January 31, 2012	2011
ASSETS		
Current assets:		
Cash and cash equivalents	$ 6,550	$ 7,395
Receivables, net	5,937	5,089
Inventories	40,714	36,437
Prepaid expenses and other	1,685	2,960
Current assets of discontinued operations	89	131
Total current assets	54,975	52,012
Property and equipment:		
Property and equipment	155,002	148,584
Less accumulated depreciation	(45,399)	(43,486)
Property and equipment, net	109,603	105,098
Property under capital lease:		
Property under capital lease	5,936	5,905
Less accumulated amortization	(3,215)	(3,125)
Property under capital lease, net	2,721	2,780
Goodwill	20,651	16,763
Other assets and deferred charges	5,456	4,129
Total assets	$ 193,406	$ 180,782

Net Working Capital

NWC is the difference between a company's current operating assets and current operating liabilities - it represents the short-term liquidity available to a company to fund its day-to-day operations

Working Capital Schedule								
	2017A	2018A	2019A	2020P	2021P	2022P	2023P	2024P
Working Capital Balances								
Accounts receivable, net		3,498	4,272	4,630	5,015	5,450	5,944	6,505
Inventories		5,261	5,622	6,148	6,660	7,238	7,893	8,638
Prepaid expenses and other current assets		1,130	1,968	2,112	2,288	2,487	2,712	2,968
Total non-cash current assets		9,889	11,862	12,890	13,963	15,175	16,548	18,111
Accounts payable		2,279	2,612	2,816	3,051	3,315	3,616	3,957
Accrued liabilities		3,269	5,010	5,397	5,846	6,353	6,928	7,583
Total non-debt current liabilities		5,548	7,622	8,213	8,897	9,669	10,544	11,540
Net working capital		4,341	4,240	4,677	5,067	5,506	6,004	6,571
Change in net working capital			**(101)**	**437**	**389**	**440**	**498**	**567**

The accounting treatment of NWC will also have significant impact on cash flow and will be a major factor of the adjustment of your net income to retained earnings by way of cash flow from operations

Forecasting NWC

Forecasting NWC lies at the intersection of accounting and finance and will be a critical factor in your role building financial models and advising and mergers and acquisitions

Prepaid exp. as % of revenue							
Days sales outstanding (DSO)	35	40	40	40	40	40	40
Inventory Turns	3.9x	3.8x	3.8x	3.8x	3.8x	3.8x	3.8x
Prepaid exp. as % of revenue	3.1%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Days payables outstanding (DPO)			44	44	44	44	44
Accrued liabilities as % of COGS			23.1%	23.1%	23.1%	23.1%	23.1%

$$\text{Days Sales Outstanding (DSO)} = \frac{\text{Average Accounts Receivable}}{\text{Revenue}} \times \text{365 Days}$$

$$\text{Days Payable Outstanding (DPO)} = \frac{\text{Average Accounts Payable}}{\text{Cost of Goods Sold (COGS)}} \times \text{365 Days}$$

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Goods Sold (COGS)}}{\text{Average Inventory}}$$

Amortization of Long-Term Assets

Amortization – the allocation of the cost of an asset over its useful life

Depreciation – the sort of amortization applicable to tangible and fixed long-term assets

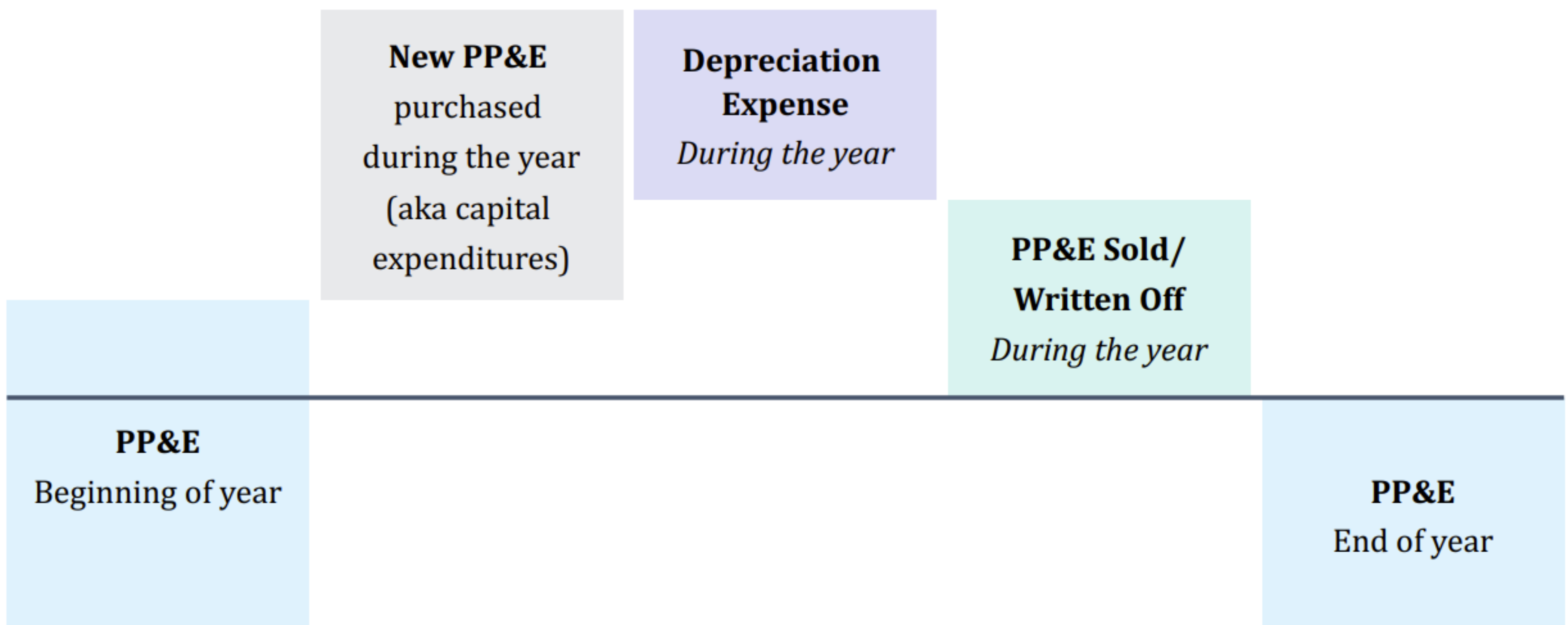
PP&E

- Property, Plant & Equipment (PPE) represent land, buildings, and machinery used in the manufacture of the company's services and products plus all costs (transportation, installation, other) necessary to prepare those fixed assets for their service.

$$Net\ PP\&E = Gross\ PP\&E - Accumulated\ depreciation$$

PP&E over the Course of the Year

This is what happens visually to a company's PP&E balance during the year:



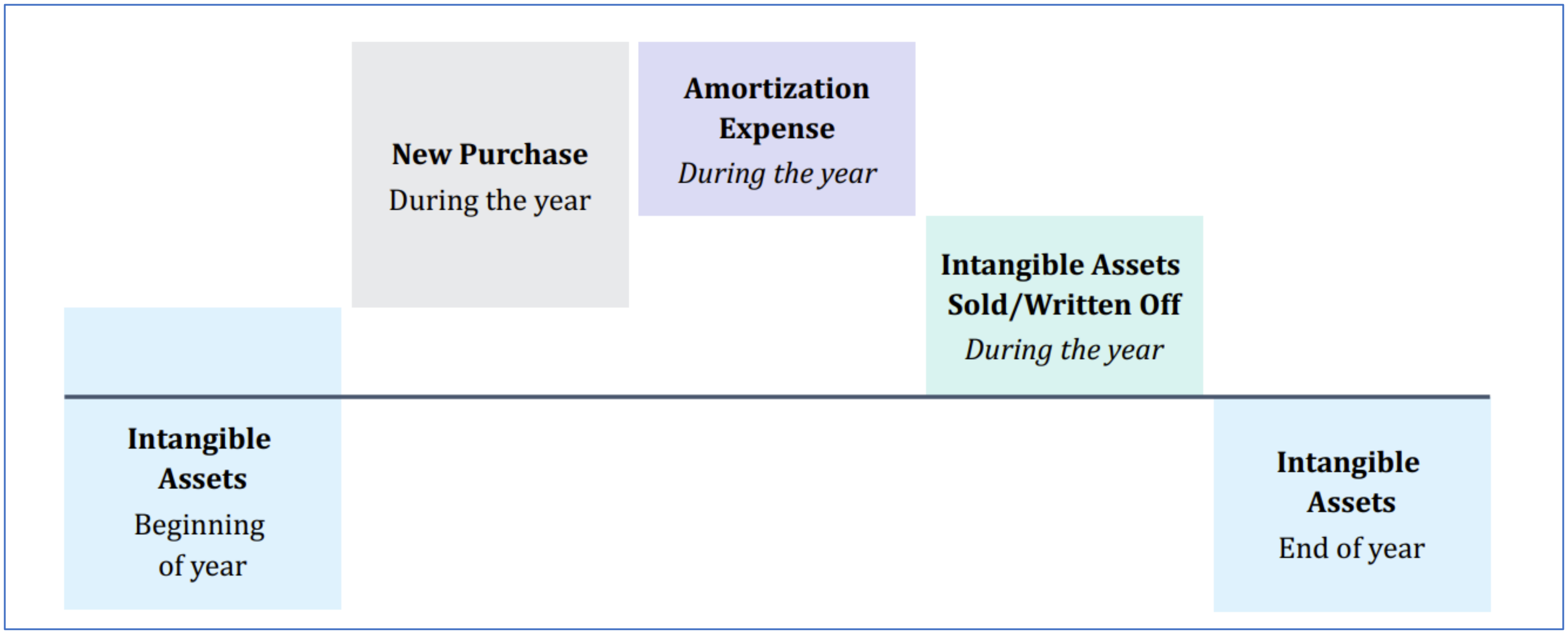
Intangibles

- Intangible assets are comprised of non-physical acquired assets.
- These intangible assets are items that have value based on the rights belonging to that company.

Types of intangible assets:

- Customer Lists
- Franchises, Memberships, Licenses
- Patents and Technology
- Trademarks and goodwill are considered to have indefinite useful life so they are not amortized

Intangibles

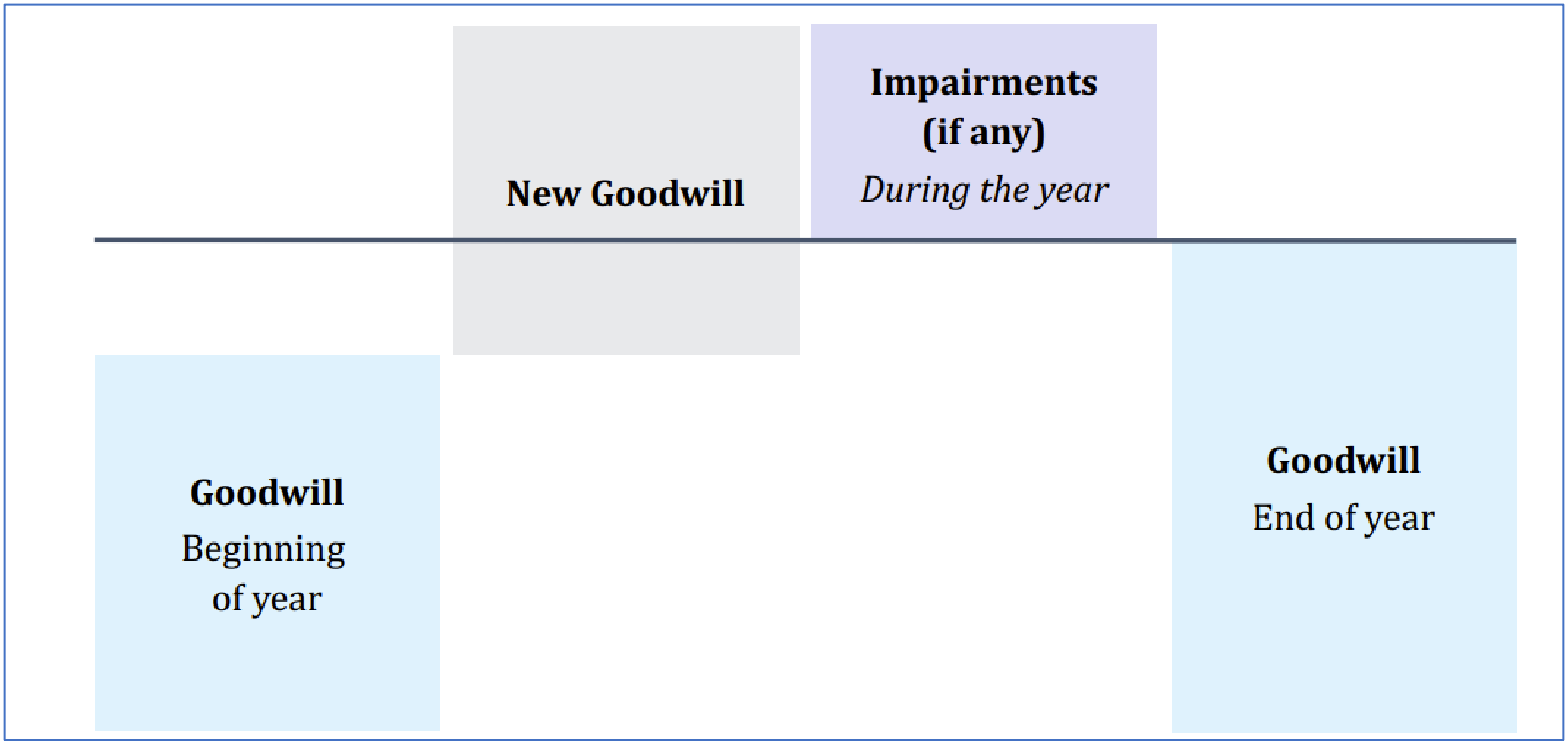


Goodwill

- For companies that acquire a lot, goodwill is a sizeable asset on the B/S.
- **Goodwill** is the amount by which the purchase price for a company exceeds its fair market value (FMV), representing the "intangible" value stemming from the acquired company's business name, customer relations, employee morale.
- Goodwill is effectively an accounting plug, created only if the purchase price exceeds the FMV of all the assets acquired.

Unlike finite life intangible assets, Goodwill is not amortized, but is tested annually for loss of value (impairment).

Goodwill


New Goodwill
Impairments
(if any)
During the year
Goodwill
Beginning
of year
Goodwill
End of year

Balance Sheet Example

NIKE, INC.

CONSOLIDATED BALANCE SHEETS

(Dollars in millions)	MAY 31, 2019	MAY 31, 2018
ASSETS		
Current assets:		
Cash and equivalents	$ 4,466	$ 4,249
Short-term investments	197	996
Accounts receivable, net	4,272	3,498
Inventories	5,622	5,261
Prepaid expenses and other current assets	1,968	1,130
Total current assets	16,525	15,134
Property, plant and equipment, net	4,744	4,454
Identifiable intangible assets, net	283	285
Goodwill	154	154
Deferred income taxes and other assets	2,011	2,509
TOTAL ASSETS	**$ 23,717**	**$ 22,536**

Liabilities and Equity

Liabilities and equity represent the company's sources of funds (how it pays for assets).

Liabilities represent what the company owes to others:

1. They must be measurable
2. Their occurrence is probable

Equity represents sources of funds through:

1. Equity investment
2. Retained earnings (what the company has earned through operations since its inception)

Liabilities

Liabilities	Description
Accounts Payable	A company's obligations to suppliers for services and products already purchased from them, but which have not been paid. In other words, accounts payable represent the company's unpaid bills to its suppliers for services obtained on credit from them.
Accrued Expenses	Expenses like employee compensation that the company has incurred, but for which it has not yet paid.
Short-term Debt	Debt due within 12 months.
Long-term Debt	Debt whose maturity exceeds 12 months.

Liabilities are Presented According to Who Has to Be Paid First

Walmart

LIABILITIES AND EQUITY		
Current liabilities:		
Short-term borrowings	$ 4,047	$ 1,031
Accounts payable	36,608	33,676
Accrued liabilities	18,154	18,701
Accrued income taxes	1,164	157
Long-term debt due within one year	1,975	4,655
Obligations under capital leases due within one year	326	336
Current liabilities of discontinued operations	26	47
Total current liabilities	62,300	58,603
Long-term debt	44,070	40,692
Long-term obligations under capital leases	3,009	3,150
Deferred income taxes and other	7,862	6,682
Redeemable noncontrolling interest	404	408

IBR

Deferred Revenue

- **Deferred (unearned) revenue** is revenue received for services not yet provided by the company. This is a sizeable liability for software companies, as well as companies that sell long term memberships like magazine subscriptions and gift certificates.
- Deferred revenue is a current liability if the revenue is expected to be recognized within the year, otherwise, it is a long-term liability.

Deferred Tax Liability

Deferred taxes represent a temporary discrepancy in taxation reported on the financial statements and the tax schedule.

A **deferred tax asset** represents the potential to pay less taxes in the future – this often arises out of net operating loss carryforwards.

A **deferred tax liability** represents the obligation to pay more taxes in the future. This will often occur because of accelerated depreciation.

Equity

Like debt, equity represents another major source of funds via:

1. Preferred stock issuance
2. Equity investment (net of share repurchases "treasury stock")
3. Retained earnings (what the company has earned through operations since its inception)

Equity	Description
Preferred Stock	Stock that has special rights and takes priority over common stock.
Common stock	Represents capital received by a company when it issues shares.
Treasury Stock	Common stock that had been issued and then reacquired (bought back) by a company.
Retained Earnings	Total company earnings/losses since its inception less all dividends.

Preferred Stock

- When companies raise capital especially at early stages, investors often prefer (no pun intended) to contribute capital in the form of preferred stock instead of common stock.
- Preferred stock is a class of stock that takes priority over common stock and has special rights such as priority over dividends and claims on assets in bankruptcy.
- Preferred stock is often structured to include the possibility of conversion into common stock at a pre-set exchange rates, enabling investors to benefit from a set dividend, but participate in the upside if the company's common equity value increases.

Common Stock and APIC

- Aside from debt, the primary way companies can raise money (for growth, acquisitions, etc.) is through the sale (issuance) of common stock (equity).
- Because of an old convention, the accounting for common stock involves splitting the value of a share of common stock into two components:

Common stock par value

Represents some nominal value to an issued share ($0.10/share).

Additional paid in capital

Represents the excess value of the share issued over par value.

Treasury Stock

- Shares once issued but subsequently repurchased by the company are called treasury stock.
- Companies repurchase stock for reasons including boosting EPS (repurchase of shares reduces total shares outstanding) or to change the company's capital structure (more debt/less equity).
- When a company repurchases shares, it either goes into the open market and buys them at the current share price, or through negotiation with specific shareholders.
- Treasury stock is a contra equity account to capture the value of common stock that was once issued but then repurchased by the company.
- Below we lay out journal entries for Colgate using $1 billion to buy back 20m at $50 per share.

AOCI – Accumulated Other Comprehensive Income

- OCI is an equity line item on the B/S that captures the accumulation of income or loss that a company has recognized over time that is not recognized directly on the I/S and thus not captured in retained earnings.
- OCI includes gains and losses from foreign currency translations, unrealized gains and losses on available for sale securities, etc.

Retained Earnings

- **Retained earnings** represent cumulative earnings (net of dividends) over a company's entire existence.
- As a reminder, the I/S is connected to the B/S through RE:
  - **All income** on the I/S increases retained earnings on the balance sheet (credits).
  - **All expenses** on the I/S decrease retained earnings (debits).
- In addition, **all common and preferred dividends** decrease retained earnings (debits).

Retained Earnings =

$(\text{Net Income - Dividends})_1$

$+ (\text{Net Income - Dividends})_2$

$+ (\text{Net Income - Dividends})_3$

$+ \ldots$

$+ (\text{Net Income - Dividends})_t$

Retained Earnings (Beginning of Year) + **Net Income** (During the Year) - **Dividends** (During the Year) = **Retained Earnings** (End of the Year)

Liabilities and Equity Example

LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt	$ 6	$ 6
Notes payable	9	336
Accounts payable	2,612	2,279
Accrued liabilities	5,010	3,269
Income taxes payable	229	150
Total current liabilities	7,866	6,040
Long-term debt	3,464	3,468
Deferred income taxes and other liabilities	3,347	3,216
Commitments and contingencies (Note 18)		
Redeemable preferred stock	—	—
Shareholders' equity:		
Common stock at stated value:		
Class A convertible — 315 and 329 shares outstanding	—	—
Class B — 1,253 and 1,272 shares outstanding	3	3
Capital in excess of stated value	7,163	6,384
Accumulated other comprehensive income (loss)	231	(92)
Retained earnings	1,643	3,517
Total shareholders' equity	9,040	9,812
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	**$ 23,717**	**$ 22,536**

Sources and Uses of Funds

Every single transaction can be viewed as having two sides – the source of funds, and the way the funds were used (use of funds). Other examples:

Buying a plant

- Cash is the **source of funds.**
- The **funds were used** to build the plant.

Buying inventory on credit from the seller

- The **source of funds** is the creation of a new liability (accounts payable).
- The **funds were used** to buy inventory.

Issuing stock

- The additional equity investors are the **source of funds** and lead to an increase in equity.
- The **funds were used** to add cash for the company.

Understanding what constitutes a source and use of cash will be critical to your understanding of M&A

Sources and Uses of Funds

Uses of Funds	Source of Funds
Increase in assets	**Decrease** in assets
Decrease in liabilities	**Increase** in liabilities
Decrease in equity	**Increase** in equity

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Linking the 3 Statements

Cash flow statement overview

- While the I/S is very useful because it attempts to provide insight to a company's "true" profitability using accrual accounting which matches revenues with their corresponding expenses, it also requires management judgment (i.e. useful life, inventory cost , revenue recognition assumptions can have material impacts on profitability) and is thus not only potentially misleading about the company's liquidity, it is also prone to manipulation.
  - A company may show high profitability but running out of cash because significant revenues recognized were noncash.
  - A company may show low or negative profitability but generating a ton of cash during the period because the major expense was noncash D&A.

- Along with the B/S and I/S, the cash flow statement (CFS) is a required financial statement that provides insight that the I/S cannot – namely, exactly how much cash a company generates and from what activities.
- The CFS reconciles net income to a company's actual change in cash balance over a period in time (quarter or year).

Structure of cash flow statement

1. **Cash from operations (CFO)**
   - How much cash did the company generate from operations during the period?
   - Uses net income as a starting point and converts accrual-based net income into cash flow from operations via a series of adjustments (i.e., non-cash and accrual).
2. **Cash from investing activities (CFI)**
   - Capital expenditures/asset sales and purchases.
3. **Cash from financing activities (CFF)**
   - New borrowing/pay-down of debt/new issuance of stock/share repurchases
   - Issuance of dividends

Cash flow example

Cash from operations

- While the I/S recognizes non-cash income (i.e. credit sales, write-ups) and expenses (i.e. D&A, credit purchases), on the CFS, these items are ignored.
- The starting point on the CFS is thus to start with net income and back all the noncash expenses and income out of net income, to get at “cash income” or “cash from operations.”

The remaining line items are adjustments to remove noncash income/expense to get at “cash income” or “cash from operations.”

Consolidated Statements of Earnings

Amounts in millions except per share amounts; Years ended June 30	2013	2012	2011
NET SALES	$ 84,167	$ 83,680	$ 81,104
Cost of products sold	42,428	42,391	39,859
Selling, general and administrative expense	26,950	26,421	25,750
Goodwill and indefinite-lived intangible asset impairment charges	308	1,576	—
OPERATING INCOME	14,481	13,292	15,495
Interest expense	667	769	831
Interest income	87	77	62
Other non-operating income, net	942	185	271
EARNINGS FROM CONTINUING OPERATIONS BEFORE INCOME TAXES	14,843	12,785	14,997
Income taxes on continuing operations	3,441	3,468	3,299
NET EARNINGS FROM CONTINUING OPERATIONS	11,402	9,317	11,698
NET EARNINGS FROM DISCONTINUED OPERATIONS	—	1,587	229
NET EARNINGS	11,402	10,904	11,927

Consolidated Statements of Cash Flows

Amounts in millions; Years ended June 30	2013	2012	2011
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	$ 4,436	$ 2,768	$ 2,879
OPERATING ACTIVITIES			
Net earnings	11,402	10,904	11,927
Depreciation and amortization	2,982	3,204	2,838
Share-based compensation expense	346	377	414
Deferred income taxes	(307)	(65)	128
Gain on sale and purchase of businesses	(916)	(2,106)	(203)
Goodwill and indefinite-lived intangible asset impairment charges	308	1,576	—
Change in accounts receivable	(415)	(427)	(426)
Change in inventories	(225)	77	(501)
Change in accounts payable, accrued and other liabilities	1,253	(22)	358
Change in other operating assets and liabilities	68	(444)	(1,221)
Other	377	210	16
TOTAL OPERATING ACTIVITIES	14,873	13,284	13,330

Cash from operations – depreciation

- Often the biggest adjustment to get from net income to CFO is depreciation expense, because it is usually the largest noncash expense included within net income.
- As you can see from P&G's CFS, depreciation is the largest adjustment for them.
- In addition to depreciation, there are several common adjustments, which we will now address…

P&G

Consolidated Statements of Earnings

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NET SALES	$ 84,167	$ 83,680	$ 81,104
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TOTAL OPERATING ACTIVITIES	14,873	13,284	13,330

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Cash from operations – working capital

- The other major adjustment from net income to CFO is for a specific grouping of B/S line item: working capital.
  - Current assets like A/R, inventories, prepaid expenses are called "working capital" assets.
  - Current liabilities like A/P, accrued expenses, deferred revenue are called "working capital" liabilities.
- Both represent assets and liabilities that are tied up in the ordinary course of operations, which is why we classify their cash impact under CFOs.

Consolidated Statements of Cash Flows

Amounts in millions; Years ended June 30	2013	2012	2011
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	$ 4,436	$ 2,768	$ 2,879
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TOTAL OPERATING ACTIVITIES	14,873	13,284	13,330

Cash from operations – working capital

- **The impact on the CFS of changes in working capital assets and liabilities is an example of a broader accounting concept we have been discussing:**
  - Increases in assets represent a usage of funds (cash outflow)
    - Example: A company buys inventory with cash
  - Increases in liabilities and equity represents a source of funds (cash inflow)
    - Example: A company issues stock or debt and gets cash in return

Cash from operations – other items

- **CFO: Other items**
  - Asset write downs/impairments: Since write downs or asset impairments are recognized as an expense on the I/S, they represent a noncash expense that must be added back on the CFS within CFO.

Example

Simple Income Statement	
Revenues	100
Cash expenses	80
D&A	10
Net income	10
How much cash goes in my pocket?	
Simple CFS	
Net income	
D&A	
- increase in A/R	
Cash from operations	

$92 in cash / $8 credit sales

Accounts Receivable on B/S	
Accounts receivable - BOP	7
Change in A/R during period	
Accounts receivable – EOP	

Let's generalize

- Increases in A/R, inventory, prepaid expenses, taxes payable, other current assets should be subtracted from net income to get to CFO
- Conversely, increases in A/P, accrued expenses, other current liabilities should be added to net income to get to CFO

Example

Income Statement	
Revenues	100
Expenses	80
D&A	10
Net income	10
How much cash goes in my pocket?	
CFS	
Net income	
D&A	
- increase in A/R	
- Increase in inventory	
+ increase in A/P	
+ increase in Deferred revenue	
+ increase in Accrued expenses	
Cash from operations	

$92 cash sales/$8 credit sales. Separately, company sold (for cash) $20 in gift cards (still unused)

- $77 worth of inventory purchased during year:
- $61 in cash, $16 on credit; $72 were used in COGS;
- $8 in wages earned but not yet paid to employees

Inventory on B/S	
Inventory – BOP	0
Change during period	
Inventory – EOP	

Deferred revenue on B/S	
Def. revenue – BOP	0
Change during period	
Def. revenue – EOP	

Accounts Payable on B/S	
Accounts payable – BOP	9
Change during period	
Accounts payable – EOP	

Accrued expenses on B/S	
Accrued expenses – BOP	0
Change during period	
Accrued expenses – EOP	

Accounts receivable on B/S	
Accounts receivable – BOP	7
Change during period	
Accounts receivable – EOP	

Cash from investing

The CFI section is much more straight forward than CFO – it simply tracks additions and reductions to fixed assets and investments during the year (corresponding primarily to the long-term asset side of the balance sheet). The most common investing inflows/outflows are:

- Capital expenditures (cash outflow)
- Purchases of intangible assets (cash outflow)
- Asset sales (cash inflow)
- Purchases and sales of debt & equity securities (cash outflow/inflow)

Amounts in millions; Years ended June 30	2013	2012	2011
INVESTING ACTIVITIES			
Capital expenditures	**(4,008)**	(3,964)	(3,306)
Proceeds from asset sales	**584**	2,893	225
Acquisitions, net of cash acquired	**(1,145)**	(134)	(474)
Purchases of available-for-sale investment securities	**(1,605)**	—	—
Change in other investments	**(121)**	112	73
TOTAL INVESTING ACTIVITIES	**(6,295)**	(1,093)	(3,482)

Cash from financing

The CFF section of the cash flow statement tracks changes in the company's sources of debt and equity financing (corresponding primarily to the liabilities and shareholders' equity side of the balance sheet). The most common financing inflows/outflows are:

- Issuance/repayment of debt (cash inflow/outflow)
- Common stock issued/repurchased (cash inflow/outflow)
- Payment of common & preferred dividends (cash outflow)

P&G

Amounts in millions: Years ended June 30	2013	2012	2011
FINANCING ACTIVITIES			
Dividends to shareholders	**(6,519)**	(6,139)	(5,767)
Change in short-term debt	**3,406**	(3,412)	151
Additions to long-term debt	**2,331**	3,985	1,536
Reductions of long-term debt	**(3,752)**	(2,549)	(206)
Treasury stock purchases	**(5,986)**	(4,024)	(7,039)
Impact of stock options and other	**3,449**	1,729	1,203
TOTAL FINANCING ACTIVITIES	**(7,071)**	(10,410)	(10,122)
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	**4**	(113)	163
CHANGE IN CASH AND CASH EQUIVALENTS	**1,511**	1,668	(111)
CASH AND CASH EQUIVALENTS, END OF YEAR	**$ 5,947**	$ 4,436	$ 2,768

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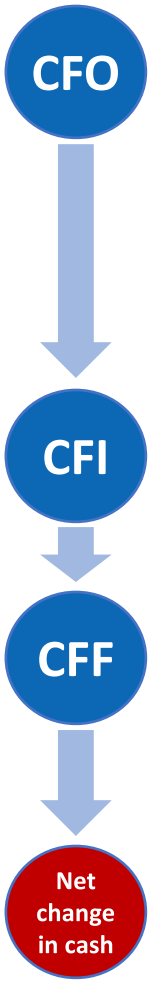


Apple Inc.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Years ended September 30, 2023	Years ended September 24, 2022	Years ended September 25, 2021
Cash, cash equivalents and restricted cash, beginning balances	$ 24,977	$ 35,929	$ 39,789
Operating activities:			
Net income	96,995	99,803	94,680
Adjustments to reconcile net income to cash generated by operating activities:			
Depreciation and amortization	11,519	11,104	11,284
Share-based compensation expense	10,833	9,038	7,906
Other	(2,227)	1,006	(4,921)
Changes in operating assets and liabilities:			
Accounts receivable, net	(1,688)	(1,823)	(10,125)
Vendor non-trade receivables	1,271	(7,520)	(3,903)
Inventories	(1,618)	1,484	(2,642)
Other current and non-current assets	(5,684)	(6,499)	(8,042)
Accounts payable	(1,889)	9,448	12,326
Other current and non-current liabilities	3,031	6,110	7,475
Cash generated by operating activities	110,543	122,151	104,038
Investing activities:			
Purchases of marketable securities	(29,513)	(76,923)	(109,558)
Proceeds from maturities of marketable securities	39,686	29,917	59,023
Proceeds from sales of marketable securities	5,828	37,446	47,460
Payments for acquisition of property, plant and equipment	(10,959)	(10,708)	(11,085)
Other	(1,337)	(2,086)	(385)
Cash generated by/(used in) investing activities	3,705	(22,354)	(14,545)
Financing activities:			
Payments for taxes related to net share settlement of equity awards	(5,431)	(6,223)	(6,556)
Payments for dividends and dividend equivalents	(15,025)	(14,841)	(14,467)
Repurchases of common stock	(77,550)	(89,402)	(85,971)
Proceeds from issuance of term debt, net	5,228	5,465	20,393
Repayments of term debt	(11,151)	(9,543)	(8,750)
Proceeds from/(Repayments of) commercial paper, net	(3,978)	3,955	1,022
Other	(581)	(160)	976
Cash used in financing activities	(108,488)	(110,749)	(93,353)
Increase/(Decrease) in cash, cash equivalents and restricted cash	5,760	(10,952)	(3,860)
Cash, cash equivalents and restricted cash, ending balances	$ 30,737	$ 24,977	$ 35,929
Supplemental cash flow disclosure:			
Cash paid for income taxes, net	$ 18,679	$ 19,573	$ 25,385
Cash paid for interest	$ 3,803	$ 2,865	$ 2,687

Break

Table of Contents

Accounting Overview

Income Statement

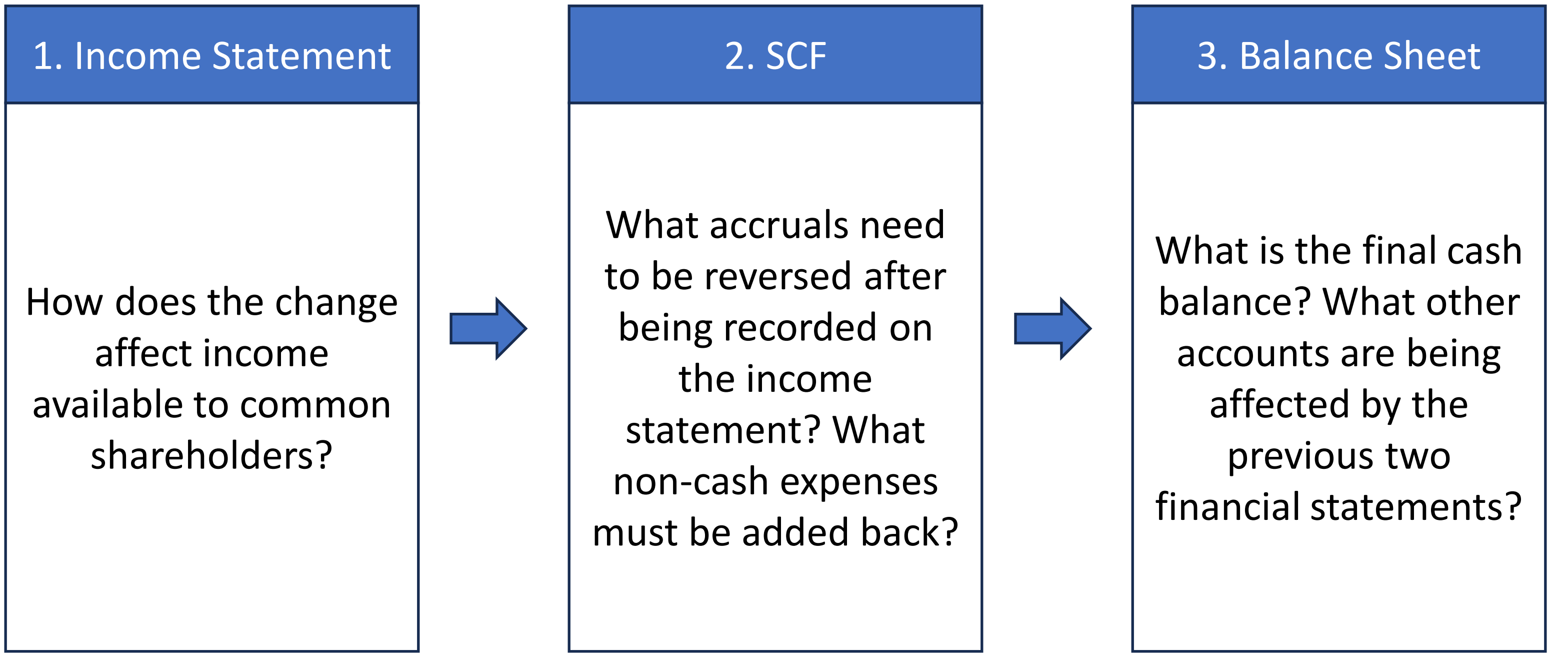
Balance Sheet

Cash Flow Statement

Linking the 3 Statements

How do the financial statements link together?

Throughout the recruiting process, the most asked questions you will receive on accounting will test your knowledge of how the three financial statements fit together – be sure to always answer in the format provided below



Other Links Between 3 Financial Statements

	Income Statement	SCF	Balance Sheet
D&A	Depreciation Expense	Add Back Depreciation to CFO	Accumulated Depreciation Reduces PP&E
Debt	Interest Expense	Affects CFO	Reflects Debt on Balance Sheet
Net Income	Net Income	Affects CFO	Accumulates to Retained Earnings

Other Links Between 3 Financial Statements

	Income Statement	SCF	Balance Sheet
NWC	Impact of NWC on P&L is Variable	Changes in NWC	Appear in Cash and Short-Term Accounts
Purchase of PP&E	Expensed Through Depreciation	Capex in CFI	Affects PP&E and Final Cash
Stock Based Comp	SBC Appears as an expense on the income statement	SBC is non-cash and therefore an add back to CFO	SBC increases common stock and reduces RE

Depreciation Example

Income Statement	SCF	Balance Sheet
Depreciation Expense	Add Back Depreciation to CFO	Accumulated Depreciation Reduces PP&E

With a $30 increase in depreciation, walk me through the 3 financial statements. Assume a 40% tax rate.

1. Income Statement	2. SCF	3. Balance Sheet
How does the change affect income available to common shareholders?	What accruals need to be reversed after being recorded on the income statement? What non-cash expenses must be added back?	What is the final cash balance? What other accounts are being affected by the previous two financial statements?

Depreciation Walk-Through

With a $30 increase in depreciation, walk me through the 3 financial statements. Assume a 40% tax rate.

1. Income Statement

Depreciation reduces taxable incomes by $30. At a 40% tax rate, net income has dropped by $18.

2. SCF

On the statement of cash flows, net income is down $18. Because depreciation is a non-cash expense, we add back $30. CFO is up $12.

3. Balance Sheet

Cash is up $12 from the changes to cash flow from operations. PP&E is down $30 from the accumulated depreciation, and retained earnings are down $18 from the decrease in net income.

NWC Example

Income Statement	SCF	Balance Sheet
Impact of NWC on P&L is Variable	Changes in NWC	Appear in Cash and Short-Term Accounts

With a $100 sale on account, walk me through the 3 financial statements. Assume a 20% tax rate.

1. Income Statement	2. SCF	3. Balance Sheet
How does the change affect income available to common shareholders?	What accruals need to be reversed after being recorded on the income statement? What non-cash expenses must be added back?	What is the final cash balance? What other accounts are being affected by the previous two financial statements?

NWC Walk-Through

With a $100 sale on account, walk me through the 3 financial statements. Assume a 20% tax rate.

1. Income Statement

The $100 is directly added to sales revenue, which increases our taxable income by $100. With a 20% tax rate, net income is up by $80.

2. SCF

Net income has increased by $80 to begin the cash flow to operations section of the SCF. However, because the sale was on account, our NWC has increased by $100, and our CFO is down $20.

3. Balance Sheet

Cash is down $20, and accounts receivable is up by $100. The assets side of the balance sheet is up by $80, which matches with the $80 increase in retained earnings.

Sale of PP&E Example

Income Statement	SCF	Balance Sheet
Gain on Sale Taxable on P&L	Adjustment to CFI	Affects PP&E and Final Cash

Company A purchased PP&E worth $200 10 years ago. The PP&E has a useful life of 20 years and is depreciated on a straight-line basis. They just sold the PP&E for $180. Walk me through the changes in the 3 financial statements.

1. Income Statement	2. SCF	3. Balance Sheet
How does the change affect income available to common shareholders?	What accruals need to be reversed after being recorded on the income statement? What non-cash expenses must be added back?	What is the final cash balance? What other accounts are being affected by the previous two financial statements?

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Sale of PP&E Walk-Through

Company A purchased PP&E worth $200 10 years ago. The PP&E has a useful life of 20 years and is depreciated on a straight-line basis. They just sold the PP&E for $180. Walk me through the changes in the 3 financial statements (%20 tax).

1. Income Statement

The PP&E has been depreciated to a book value of $100. Thus, the sale at a price of $180 represents an $80 gain on the sale, which will directly increase the taxable income. At a 20% tax rate, our net income is up $64.

2. SCF

Net income has increased by $64 to begin the CFO sections of the SCF. The $80 gain on sale is deducted out of CFO, and the entire sale of the asset ($180) is added into the CFI section. Cash is up by $164.

3. Balance Sheet

Cash is up by $164. PP&E is down by $100. Retained earnings has increased by $64, and both sides of the balance sheet have increased by $64.

Stock based comp Example

Income Statement

Stock based comp expense

→

SCF

Add back stock-based comp to CFO

→

Balance Sheet

APIC adjustment on equity portion

With a $20 increase in stock based comp, walk me through the 3 financial statements. Assume a 40% tax rate.

1. Income Statement

How does the change affect income available to common shareholders?

→

2. SCF

What accruals need to be reversed after being recorded on the income statement? What non-cash expenses must be added back?

→

3. Balance Sheet

What is the final cash balance? What other accounts are being affected by the previous two financial statements?

IBR

Depreciation Walk-Through

With a $20 increase in stock based comp, walk me through the 3 financial statements. Assume a 40% tax rate.

1. Income Statement	2. SCF	3. Balance Sheet
SBC reduces taxable incomes by $20. At a 40% tax rate, net income has dropped by $12.	On the statement of cash flows, net income is down $12. Because SBC is a non-cash expense, we add back $20. CFO is up $8.	Cash is up $8 from the changes to cash flow from operations, so assets are up 8. Retained earnings are down by $12, but APIC is up by $20, resulting in equity portion being up $8.

Selling inventory Example

Income Statement	SCF	Balance Sheet
Revenue increase, COGS expense	Add back decrease in inventory	Adjust cash and inventory assets

You sell $10 of inventory for $20, what happens to the three statements, assuming a 40% tax rate.

1. Income Statement	2. SCF	3. Balance Sheet
How does the change affect income available to common shareholders?	What accruals need to be reversed after being recorded on the income statement? What non-cash expenses must be added back?	What is the final cash balance? What other accounts are being affected by the previous two financial statements?

Depreciation Walk-Through

You sell $10 of inventory for $20, what happens to the three statements, assuming a 40% tax rate.

1. Income Statement	2. SCF	3. Balance Sheet
Revenue increases by $20, but COGS increases by $10, leaving you up $10 in pre tax income. After tax, net income is up $6.	Net income is up $6, and since inventory was purchases previously, you add back the $10 non-cash expense, leaving change in cash up $16.	Cash is up $16 on the asset side, but inventories have dropped by $10, so total change to assets is +$6. This is balanced by retained earnings being up $6 from the net income increase.

Assignments

1. **Attendance quiz:** due this Saturday at 11:59pm

2. **Accounting quiz:** due this Saturday at 11:59pm

3. **First networking call/meeting screenshots:** due in 1 week

Attendance word