Analyzing Financial Statements

(AFS4)

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ANALYZING FINANCIAL STATEMENTS (AFS4)

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Unit 1

Overview

LEARNING OBJECTIVES

After completing this unit, participants will be able to accomplish the following.

- Describe the different financial statement users and their information needs.
- For each financial statement, the balance sheet, income statement, and cash flow statement, identify characteristics, alternatives, and risks associated with specific financial statement elements.
- Describe the importance of developing expectations prior to performing financial statement analysis.

OBJECTIVE OF FINANCIAL REPORTING

The objective of financial reporting is to provide useful measures and disclosures about an entity's financial performance and financial condition. Users of financial reports employ financial analytical techniques to assess management's performance in creating value historically and to forecast future value. From this financial analysis, users of financial reports make operating, investing, and financing decisions.

The Financial Accounting Standards Board (FASB) formally addressed financial reporting as early as 1978 when it published the first of a series of eight concepts statements. Statements of Financial Accounting Concepts' (SFACs) main purpose is to establish the foundation for the FASB's financial accounting and reporting guidance development. SFACs are not codified and, thus, are not authoritative GAAP.

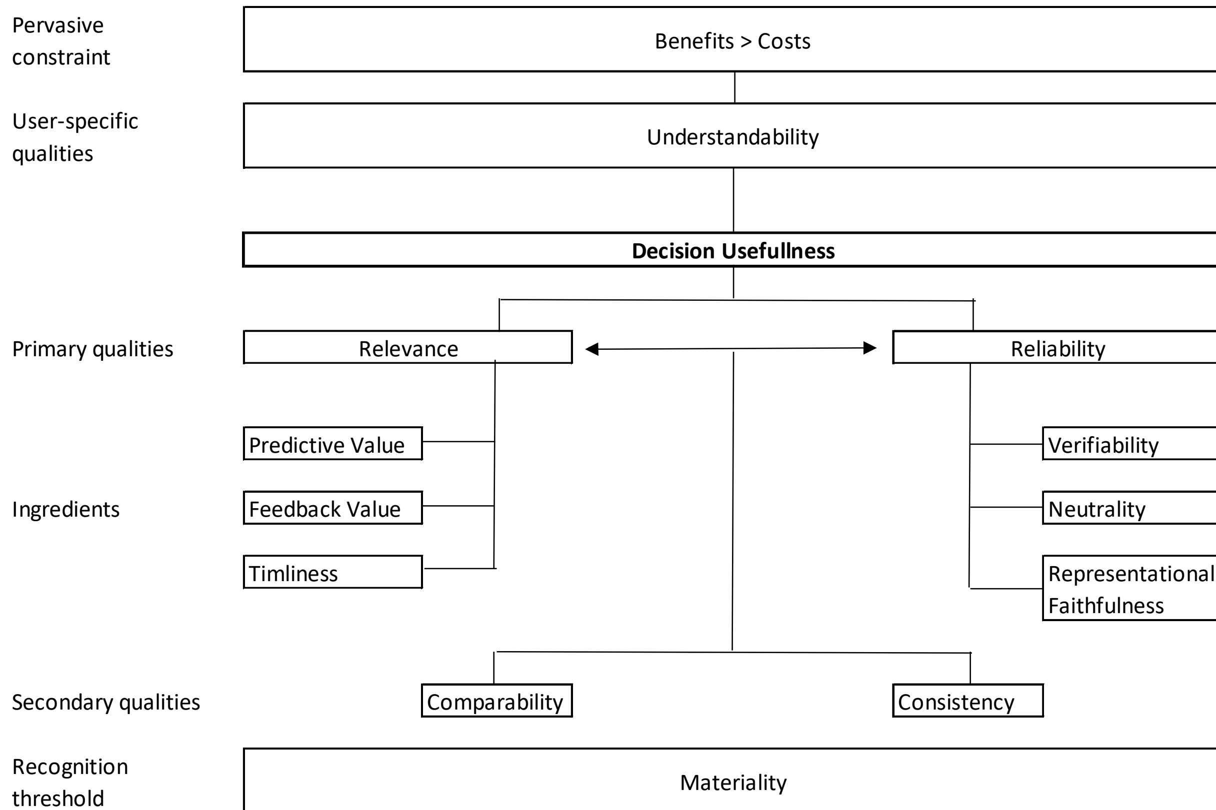
A secondary purpose of SFACs is to also enable financial statement users to understand the content and limitations of accounting and financial information they use in performing financial analysis. Together with information from other sources, SFACs serve financial information users by facilitating efficient functioning of capital and other markets which promotes efficient allocation of scarce resources based on users' financial analysis.

Over the years, the SFACs have been updated and reorganized. You should refer to the FASB.org website (https://fasb.org/page/PageContent?pageId=/standards/concepts-statements.html) for a current listing of the SFACs.

Financial statements communicate historical data, which is most useful for current-state compliance purposes, such as filing with providers of debt and equity financing, tax authorities, and other regulatory agencies. It is also useful for assessing management's performance and compensation awards. While financial reporting tells us "where we've been," users must apply financial analytical techniques to tell us "where we're going." As a result, there are generally **five themes that underlie financial statement analysis:**

1. The types and uses of financial analysis depend on the user and the decisions the user is making.

2. In most cases, financial statement analysis involves using historical data to assess past performance and to make judgments about future potential performance. SFAC No. 2, *Qualitative Characteristics of Accounting Information*, (Note, this SFAC has since been superseded by SFAC No. 8, Chapter 3) shows a decision usefulness diagram and specifies qualitative ingredients that financial and accounting information should possess to be useful for making decisions. Even though this information is no longer included in the SFAC, the principles and key takeaways are still relevant to this day.



Decision usefulness is based on primary qualities of relevance and reliability as well as secondary qualities of comparability and consistency. Financial statement users must assess both these qualities. The following are decision usefulness quality definitions.

- **Relevance** is the capacity of information to make a difference in a decision by helping users to form predictions about the outcomes of past, present and future events or to confirm or correct prior expectations.

  - Predictive value is the quality of information that helps users to increase the likelihood of correctly forecasting the outcome of past or present events.

  - Feedback value is the quality of information that enables users to confirm or correct prior expectations.

  - Timeliness is having information available to a decision maker before it loses its capacity to influence decisions.

- **Reliability** is the quality of information that assures that information is reasonably free from error and bias and faithfully represents what it purports to represent.
  - Verifiability is the ability through consensus among measurers to ensure that information represents what it purports to represent or that the chosen method of measurement has been used without error or bias.
  - Neutrality is the absence in reported information of bias intended to attain a predetermined result or to induce a particular mode of behavior.
  - Representational faithfulness is correspondence or agreement between a measure or description and the phenomenon that it purports to represent. This is also referred to as validity.
- **Comparability** is the quality of information that enables users to identify similarities in and differences between two sets of economic phenomena.
- **Consistency** is conformity from period to period with unchanging policies and procedures.

CON Statement No. 8 (Chapter 3) also states that "…cost is a pervasive constraint on the information that can be provided by financial reporting." As a result, reporting financial information "… imposes costs, and it is important that those costs are justified by the benefits of reporting that information."

1. Financial analysis should incorporate broad sources of financial and non-financial information about an entity. This includes entity-specific financial statements including note disclosures. It also includes non-entity-specific industry, economic, and political environmental information. This information can be critical to understanding an entity's financial status, business and financial performance, and future prospects.
2. GAAP-(accrual)-based analysis can be prone to distortion and/or manipulation due to the uncertainty of estimates and judgments made by management, or changes in accounting standards.
3. As a result of #4, cash-flow-based analysis may be better suited for evaluating a reporting entity's earnings quality and financial flexibility in dealing with changing business, competitive, and economic conditions or with pursuing new opportunities. While earnings can be manipulated through biased estimates or alternative GAAP applications, cash flow measurements are more difficult for management manipulation.

Users of financial statement information are presumed to have a reasonable understanding of business and economic principles. To effectively analyze financial statement information, users must gain knowledge concerning the **company's industry, past experience, competitors, and financial trends**. Financial statement users must also become knowledgeable about **changing business, economic, and regulatory conditions or operational changes affecting the entity**.

External (owners and creditors) and internal (management) financial statement users generally make three types of decisions from their financial analysis:

1. Operating:
   - Effective asset utilization

   - Business performance
   - Profitability
   - Operating leverage
   - Liquidity
2. Investing:
   - Capital budgeting for committing funds to working capital, new plant and equipment, and major strategic initiatives
   - Disinvestment by disposing of significant assets or withdrawing from markets
3. Financing:
   - Capital structure
   - Returns on capital
   - Types of equity and debt
   - Risk tolerance
   - Dividend policy

FINANCIAL STATEMENT ANALYSIS

Financial statement analysis is the method of using analytical techniques applied to an entity's financial statements – balance sheet, income statement, cash flow statement, and note disclosures. Specifically, these analytical techniques include selecting, evaluating, predicting, and interpreting financial statement data to form a conclusion concerning the entity's current and future status and performance. These analytical techniques may include, but are not limited to, the following:

- Perform an overall risk assessment (external and internal) of the industry and the entity you are interested in analyzing
- Common size analysis (horizontal and vertical)
- Trend analysis
- Comparative or benchmarking analysis (entities and industry)
- Ratio analysis (accrual and cash flow)
- Forecasting results
- Valuation

These analytical techniques permit an analyst to understand the elements of the financial statements and how they relate to each other; recognize the economic strength and weaknesses the entity and/or the industry operates in; and the competitive strength the entity has as it relates to the marketplace. **Process steps** an analyst may use generally include the following:

1. Develop an understanding of the industry by reviewing an industry analysis report from a brokerage firm
2. Read recent articles in business publications concerning the industry or entities operating in the industry
3. Identify the entity you are interested in analyzing
4. If a public company, read its Management's Discussion and Analysis section of its 10K where management provides its explanation of the company's financial performance, financial condition, and future expectations or strategies
5. Perform common size analysis, trend analysis, comparative analysis, and ratio analysis
6. When performing the analysis above, focus on quality of the entity's financial statements, profitability, and risk
7. Reach conclusions based on the financial statement analysis performed
8. Prepare forecasted financial statements for at least one year
9. Perform a valuation of the entity

Challenges with Financial Statement Analysis

There are several challenges underlying financial statement analysis that may impact user expectations, conclusions, and decisions:

First, no established methodologies exist that stipulate which ratios, accounting standards, figures, trend length of time, industry or peer comparisons, or benchmarks to use in performing financial statement analysis. Thus, the analyst must exercise significant judgment in determining which ratios/trends matter most and what a high or low metric value may be.

Second, comparability between companies being analyzed and with benchmarks can be muddled because many entities are conglomerates that operate unrelated businesses.

Third, additional challenges include companies that are clearly in the same industry and using the same accounting framework may adopt different GAAP accounting principles within that framework. Examples are different inventory methods (LIFO or FIFO), contract accounting (percentage of completion or completed contract), or depreciation methods (straight line or double declining balance).

Lastly, globalization produces other challenges. Financial statements may be prepared under different accounting frameworks, such as GAAP or IFRS that inhibit comparability. Foreign currency exchange rates also may impact comparability both from a revenue and cost perspective and also from a currency translation impact. A multi-national company's risk management strategy will influence currency hedging which makes comparisons among companies and industries even more difficult.

The remainder of this section identifies users of financial information and includes two cases designed to illustrate the use of expectations when performing financial statement analysis.

USERS

Investors and creditors are the obvious users of financial information. Other stakeholders include employees, the supply chain, competitors, the general public, and governments. Each uses different information and different analytical approaches to meet its decision-making objectives.

Creditors perform financial statement analysis to evaluate new or continuing lending relationships. Emphasis is placed generally on the following:

- Assess financial risk, or the ability to repay principal and interest as debt becomes due over the loan term
- Reliability and stability of cash flows and earnings quality
- Monitoring the value of the collateral
- Document lending decisions for internal policies and external regulatory compliance

Investors evaluate the attractiveness of investing in equity securities. Emphasis is placed generally on the following:

- Earnings quality and variability as well as cash flows relative to risk
- Dividend payment growth and the potential for stock buy-backs
- Equity appreciation potential
- Rates of return relative to risk over time
- Ownership structures and possible ownership transfers (private companies)
- Fair value of the enterprise, assets, and liabilities
- Equity metrics, such as earnings multiples

Employees broadly include the board of directors, management, non-exempt workers, and unions. Management uses financial data to make short-term and long-term decisions to manage operations and to maximize shareholder value. Employees evaluate job security, potential compensation increases, and whether to remain at a company. Potential employees evaluate whether to join a company. Unions use financial data in their wage and benefits negotiations. Emphasis is placed on:

- Providing appropriate strategic, financial, and risk oversight
- Analyzing investment proposals' impact on earnings, cash flows, and business resources
- Assessing performance trends and monitoring performance by comparing reported information against budgets or forecasts

- Determine strategy and assess strategic performance

The ***supply chain*** consists of suppliers and customers. Suppliers assess customer financial health and credit worthiness to determine whether or not to extend credit and, if so, the credit terms. Customers assess whether a supplier will be able to supply products and services reliably so that the entity will be able to serve its customers. This is especially important for purchasing specialized components.

Competitors will assess financial health of other market rivals as a part of its strategic planning and operating tactics and develop strategies to improve their competitiveness.

The ***general public*** may be interested in the impact of the entity on the local community for employment, purchasing from other local companies, and civic participation.

Governments are interested in regulatory compliance and tax receipts.

Outside accountants perform analytical procedures to assess risk of financial misstatements and plan the audit. In conducting the audit, auditors evaluate the reasonableness of management assertions, such as historical recorded amounts. This involves analyzing predictive trends and financial data to develop independent expectations for recorded amounts and investigate variances from those expectations.

These areas of emphasis are not mutually exclusive, however. Ultimately, various measures of an entity's financial history and outlook for the future intertwine over time.

EXAMPLE

A creditor is most concerned with the adequacy of a company's cash flows to service debt, usually through measures of liquidity and solvency. But the creditor will also analyze profitability, because ultimately, profitability impacts the ability to generate cash. This is why the financial covenants contained in loan agreements often include minimum net income amounts.

Expectations

When comparing two entities (companies) in the same industry, analysts should develop certain expectations for financial results and operational outcomes (for those entities) since they are operating in the same economic environment with similar customer bases. Valid comparative examples would include companies such as United Airlines and American Airlines (airline industry) Verizon Communications, Inc. and Sprint Nextel Corporation (telecommunications industry), and Chevron and Shell (energy industry). These expectations then allow the analyst to identify differences more clearly between the companies and ask appropriate questions concerning unusual or unexpected results.

It is possible that the analyst could develop invalid and/or incorrect expectations if he or she does not fully understand the business or operational activities of the companies being analyzed. For example, it would appear that a comparable company to Coca-Cola would be PepsiCo, but this would not be correct.

Coca-Cola and PepsiCo

Comparing the Coca-Cola Company and PepsiCo, Inc. is imperfect because Coca-Cola is a pure beverage company; whereas, PepsiCo is a beverage and snack food company. Some comparisons may exist with segment reporting (Topic 280); however, segment reporting has many limitations regarding costs, allocations, assets, and liabilities.

EXAMPLE

Source: The Coca Cola Company 2021 10K

General

The Coca-Cola Company is a total beverage company, and beverage products bearing our trademarks, sold in the United States since 1886, are now sold in more than 200 countries and territories. We own or license and market numerous beverage brands, which we group into the following categories: Trademark Coca-Cola; sparkling flavors; hydration, sports, coffee and tea; nutrition, juice, dairy and plant-based beverages; and emerging beverages. We own and market five of the world's top six nonalcoholic sparkling soft drink brands: Coca-Cola, Sprite, Fanta, Diet Coke and Coca-Cola Zero Sugar.

We make our branded beverage products available to consumers throughout the world through our network of independent bottling partners, distributors, wholesalers, and retailers as well as our consolidated bottling and distribution operations. Beverages bearing trademarks owned by or licensed to the Company account for 2.1 billion of the approximately 63 billion servings of all beverages consumed worldwide every day.

We believe our success depends on our ability to connect with consumers by providing them with a wide variety of beverage options to meet their desires, needs, and lifestyles. Our success further depends on the ability of our people to execute effectively, every day..

We are guided by our purpose, which is to refresh the world and make a difference, and rooted in our strategy to drive net operating revenue growth and generate long-term value. Our vision for growth has three connected pillars:

1. Loved Brands. We craft meaningful brands and a choice of drinks that people love and that refresh them in body and spirit.
2. Done Sustainability. We use our leadership to be part of the solution to achieve positive change in the world and to build a more sustainable future for our planet.
3. For A Better Shared Future. We invest to improve people's lives, from our employees to all those who touch our business system, to our investors, to the brand communities we call home.

Effective January 1, 2021, we transformed our organizational structure in an effort to better enable us to capture growth in the fast-changing marketplace by building a networked global organization designed to combine the power of scale with the deep knowledge required to win locally. We created new operating units, which are focused on regional and local execution. The operating units, which sit under four geographic operating segments, as discussed below, are highly interconnected, with more consistency in their structure and a focus on eliminating duplication of resources and scaling new products more quickly. The operating units work closely with five global marketing category leadership teams to rapidly scale ideas while staying close to the consumer. The global marketing category leadership teams primarily focus on innovation as well as marketing efficiency and effectiveness. Our organizational structure also includes a center and a platform services organization, as discussed below.

We were incorporated in September 1919 under the laws of the State of Delaware and succeeded to the business of a Georgia corporation with the same name that had been organized in 1892.

Operating Segments

The Company's operating structure is the basis for our internal financial reporting. Our operating structure included the following operating segments, which are sometimes referred to as "operating groups" or "groups":

- Europe, Middle East and Africa
- Latin America
- North America
- Asia Pacific
- Global Ventures
- Bottling Investments

Our operating structure also includes Corporate, which consists of two components: (1) a center focusing on strategic initiatives, policy, governance, and scaling global initiatives; and (2) a platform services organization supporting the operating units, global marketing category leadership teams and the center by providing efficient and scaled global services and capabilities including, but not limited to, transactional work, data management, consumer analytics, digital commerce, and social/digital hubs.

For additional information about our operating segments and Corporate, refer to Note 19 of Notes to Consolidated Financial Statements set forth in Part II, "Item 8. Financial Statements and Supplementary Data" of this report.

Except to the extent that differences among operating segments are material to an understanding of our business taken as a whole, the description of our business in this report is presented on a consolidated basis.

EXAMPLE

Source: PepsiCo 2021 10K

Company Overview

We were incorporated in Delaware in 1919 and reincorporated in North Carolina in 1986. We are a leading global beverage and convenient food company with a complementary portfolio of brands, including Lays, Doritos, Cheetos, Gatorade, Pepsi-Cola, Mountain Dew, Quaker, and SodaStream. Through our operations, authorized bottlers, contract manufacturers, and other third parties, we make, market, distribute, and sell a wide variety of beverages and convenient foods, serving customers and consumers in more than 200 countries and territories.

Our Operations

We are organized into seven reportable segments (also referred to as divisions), as follows:

1) Frito-Lay North America (FLNA), which includes our branded food and snack businesses in the United States and Canada;
2) Quaker Foods North America (QFNA), which includes our cereal, rice, pasta and other branded food businesses in the United States and Canada;
3) PepsiCo Beverages North America (PNBA), which includes our beverage businesses in the United States and Canada;

4) Latin America, which includes all of our beverage, food and snack businesses in Latin America;
5) Europe Sub-Saharan Africa (ESSA), which includes all of our beverage, food and snack businesses in Europe and Sub-Saharan Africa; and
6) Africa, Middle East, and North Africa (AMESA), which includes all of our beverage, food and snack businesses in Africa, the Middle East and South Asia; and
7) Asia Pacific, Australia and New Zealand and China Region (APAC), which includes all of our beverage, food and snack businesses in Asia Pacific, Australia and New Zealand, and China region.

As a result of the above examples, it is obvious that comparing two companies that operate unrelated businesses is difficult and, in some cases, due to the availability of meaningful comparable data, impossible. While Coca-Cola and Pepsi appear to be comparable entities because they compete against each other in the beverage marketplace, the existence of Pepsi's food and snack business makes Pepsi a much different company than Coca-Cola.

So, the challenge when performing financial statement analysis is to identify comparable entities, of about the same size and operations, in order to compare "apples and oranges." The use of available objective industry data is also helpful for the analyst when performing financial statement analysis.

As shown later in this section**, developing expectations prior to performing analysis is critical to attaining an overall understanding of an entity's status and performance.** At times, though, the analyst can develop expectations that are not supported by the facts (similar to Coca-Cola vs. Pepsi being comparable). For example, the expectation that McDonald's is a fast food restaurant chain.

EXAMPLE

McDonald's Corporation is generally considered to be a fast food company operating in the restaurant industry. Yet, reviewing McDonald's balance sheet perhaps indicates a different industry. Following is a McDonald's summary balance sheet:

McDonald's Corporation

Summary Balance Sheet
For the period ended December 31, 2021
($ Millions)

ASSETS:	
Current Assets	$7,148
Lease Right-of-Use Asset, net	13,552
Property, Plant and Equipment, net	24,720
Other Non-Current Assets	8,433
Total Assets	$53,854
LIABILITIES AND OWNERS' EQUITY:	
Current Liabilities	$4,020
Non-Current Liabilities	54,435
Total Liabilities	48,455
Total Stockholders' Equity	(4,601)
Total Liabilities and Shareholders' Equity	$53,854

Analyzing McDonald's balance sheet shows that its largest asset is property, plant, & equipment. PP&E comprises 70% of total assets on a net basis and over 100% of total assets on a gross basis. Thus, McDonald's balance sheet may indicate it is primarily a real estate company that happens to serve fast food!

CASE 1 – INDUSTRY RATIOS

This case extends our discussion of expectations. Entities in certain industries will have financial statement amounts and related ratios that represent the operating characteristics of the industry. For example, a school system or municipal government would not expect to have much inventory and would not present net income as a performance metric. This case presents selected financial statement line items and their amounts and selected related ratios for 10 different industries, all publicly held information.

Your goal is to review these amounts and ratios and identify which column represents which industry. The purpose of the case is to demonstrate that you can begin your investigation of an entity with certain financial statement expectations in many cases. The industries represented by the columns below, in alphabetical order, are as follows:

- Airlines
- Auto manufacturer
- Banking
- Department store
- Hyper market
- Hotel management company
- Oil and gas
- Pharmaceutical
- Restaurant chain
- Telecom

	1	2	3	4	5	6	7	8	9	10
Balances (millions)										
Current Assets	$ 11,990	$ 5,247	$ 361,164	$ 115,902	$ 7,844	$ 2,747	$ 24,766	$ 79,146	$ 47,134	$ 2,507
Receivables	$ -	$ 378	$ 956,185	$ 10,599	$ 2,377	$ 1,991	$ 6,873	$ 16,522	$ 25,597	$ 400
Inventories	$ 8,309	$ 3,795	$ -	$ 10,277	$ 1,330	$ -	$ 5,096	-	$ 17,000	$ 13
Current Liabilities	$ 12,708	$ 2,974	$ 1,474,541	$ 94,600	$ 18,573	$ 6,010	$ 18,614	$ 81,389	$ 57,771	$ 1,512
P,P&E	$ 24,658	$ 8,103	$ 8,333	$ 35,327	$ 26,563	$ 1,793	$ 12,439	$ 125,222	$ 252,630	$ 1,697
Total Assets	$ 37,431	$ 13,574	$ 1,930,115	$ 99,000	$ 38,641	$ 5,936	$ 87,872	$ 444,097	$ 348,691	$ 5,311
Long-Term Debt	$ 11,031	$ 2,795	$ 255,077	$ 15,931	$ 6,592	$ 7,840	$ 21,353	$ 125,972	$ 24,406	$ 9,429
Other Non-Current Lia	$ 1,860	$ 2,628	$ -	$ 128,192	$ 14,200	$ 6,400	$ 13,400	$ 94,729	$ 72,014	$ 704
Revenue	$ 69,495	$ 18,686	$ 84,000	$ 145,653	$ 41,244	$ 5,029	$ 40,122	$ 160,546	$ 237,162	$ 5,878
Cost of Sales	$ 48,872	$ 11,944	$ -	$ 131,332	$ 16,647	$ -	$ 12,775	$ 77,379	$ 162,000	$ 3,300
S,G & A Exp	$ 13,356	$ 4,435	$ 41,000	$ 11,527	$ 17,067	$ 894	$ 9,830	$ 34,917	$ 10,956	$ 999
R&D	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,208	-	-	-
Gross Profit	$ 20,623	$ 6,742	$ -	$ 14,321	$ 24,597	$ -	$ 27,347	$ 83,167	$ 75,162	$ 2,578
Net Income	$ 2,737	$ 556	$ 20,373	$ 7,259	$ 3,577	$ 1,372	$ 2,418	$ 29,847	$ 19,710	$ 1,340
Ratios										
Current Ratio	94%	176%	24%	123%	42%	46%	133%	97%	82%	166%
AR Turnover	-	53	0.09	13.49	18.75	2.74	5.77	9.67	10.09	15.27
Num Days Sales in AR	-	7	4,029	27	19	132	63	37	36	24
Inventory Turnover	5.78	3	-	13.68	14.93	-	2.56	-	10.13	132
Num Days Sales in Inv	62.24	118	-	26.31	24.11	-	142.31	-	35.56	3
AP Turnover	6.66	9	-	6.05	5.33	-	4.32	2.34	4.70	3.51
Num Days Sales in AP	54.07	42	-	59.48	67.54	-	84.41	153.53	76.67	102.55
LT Debt to Total Assets	37%	21%	13%	16%	17%	132%	24%	28%	7%	178%
LT Debt to Equity	126%	54%	127%	46%	47%	210%	23%	89%	13%	-149%
Cos to Revenue	70%	64%	-	90%	40%	-	32%	48%	68%	56%
Gross Profit Margin	30%	36%	-	10%	60%	-	68%	52%	32%	44%
Net Profit Margin	4%	3%	24%	5%	9%	27%	6%	19%	8%	23%
Oper Exp to Revenue	19%	24%	62%	14%	41%	18%	25%	22%	5%	17%
Return on Assets	10%	4%	1%	3%	9%	21%	3%	7%	6%	25%

**** Schedule excludes from total/average assets - intangibles.

YOUR CASE 1 SOLUTION

CASE 2 – LOWE'S AND HOME DEPOT

In this case, we are again focusing on expectations. Since Home Depot and Lowe's compete directly for customers and sales against each other, the expectation should be that their financial relationships and ratios are very similar. As you can see from the information below, though, Home Depot's and Lowe's performance measurements are not all that consistent. For example, looking at comparable valuations from Value Line as of 31 March 2021, we find the following:

	Home Depot	Lowe's
Price/Earnings (forward)	24.0	19.7
Price/Book Value	98.7	94.2
Price/Sales	2.47	1.58
Dividend Yield	2.2%	1.4%
Market Cap	325.5B	135.3B

The question is, why are Home Depot's and Lowe's performance very inconsistent compared with each other?

The answer has to do with information other than accounting outcomes. For example:

- 40% of Home Depot's sales are to professional contractors while Lowe's are 30%. Professional contractors are a greater income source than do-it-yourself homeowners.
- Home Depot and Lowe's cater to a different type of customer – HD overwhelming male/Lowe's majority female.
- Home Depot has opened stores in China; Lowe's has not.
- Home Depot is much larger than Lowe's – better market penetration.
- Home Depot does a much better job managing its inventory than Lowe's.
- Investment in online operations – Home Depot sales online are about twice Lowe's.

The above, and the performance metrics below, might conclude that Home Depot has superior management over Lowe's. This case demonstrates the importance of understanding the industry and the operating characteristics of companies being analyzed in addition to the financial analysis results. In other words, why are the performance metrics of one company better than another company?

The following table compares selected financial results and ratio analysis for Home Depot and Lowe's.

	Lowe's				The Home Depot			
Balances ($ millions)	29-Jan-21		31-Jan-20		31-Jan-21		2-Feb-20	
Receivables	$ 937		$ 1,263		$ 2,992		$ 2,106	
Inventories	16,193		13,179		16,627		14,531	
Current assets	22,326		15,318		28,477		19,810	
Accounts payable	10,884		7,659		11,606		7,787	
Current liabilities	18,730		15,182		23,166		18,375	
PP&E	19,155		18,769		24,705		22,770	
Total Assets	46,735		39,471		70,581		51,236	
Long-term debt (ex cur por)	20,668		16,768		35,822		28,670	
Other L-T liabilities	5,900		5,549		8,294		7,307	
Stockholder's equity	1,437		1,972		3,299		(3,116)	
Revenue	89,597		72,148		132,110		110,225	
Cost of goods sold	60,025		49,205		87,257		72,653	
Gross profit	29,572		22,943		44,853		37,572	
SG&A	19,925		16,629		26,575		21,729	
Net income	5,835		4,281		12,866		11,242	
Operting cash flow	11,049		4,296		18,839		13,687	
Ratios								
Current ratio	1.2		1.0		1.2		1.1	
Receivables turnover	95.6	X	57.1	X	44.2	X	52.3	X
DSO	3.8	days	6.3	days	8.2	days	6.9	days
Inventory turnover	3.7	X	3.7	X	5.2	X	5.0	X
DOH	97.1	days	96.4	days	68.6	days	72.0	days
Payables turnover	5.5	X	6.4	X	7.5	X	9.3	X
DPO	65.3	days	56.0	days	47.9	days	38.6	days
Debt to assets	0.56		0.60		0.62		0.73	
Debt to equity	18.2		12.0		13.2		(12.0)	
Gross profit margin	33.0%		31.8%		34.0%		34.1%	
Op income margin	10.8%		8.8%		13.8%		14.4%	
Net profit margin	6.5%		5.9%		9.7%		10.2%	
Return on assets	13.9%		12.2%		22.6%		27.1%	
Quality of earnings	1.49		0.75		1.2		1.0	
Market capitalization	$ 135.3	billion	$ 88.7	billion	$ 325.5	billion	$ 248.8	billion

Unit 2

Financial Reporting and Financial Statements

LEARNING OBJECTIVES

After completing this unit, participants will be able to accomplish the following.

- Use example financial statements as a best practice.
- Use example critical accounting policies to improve your company disclosures.
- Describe the reporting differences between public company and non-public company financial reporting processes.
- Explain financial statement regulators' and users' biggest preferences for financial reporting and disclosure improvements so that you can improve your company's financial reporting and disclosures.

INTRODUCTION

The purpose of this unit is to emphasize the importance of understanding financial reporting and financial statements in order to perform effective financial statement analysis. Many investors and analysts apply certain ratios or trends to financial information without a thorough understanding of the company, its products or services, its corporate strategies, its competition or the industry it operates in.

We believe that by understanding the financial reporting processes and the financial statements and notes within the financial reporting processes, investors and analysts can obtain a more complete evaluation of a company and can better predict the future outcomes of the organization.

This section is organized as follows:

- Financial Reporting and Financial Statements
- Public Company Reporting Including MD&A
- Non-Public Company Reporting

- Critical Accounting Policies
- Note Disclosures
- SEC Disclosure Comment Letters

FINANCIAL REPORTING AND FINANCIAL STATEMENTS

Financial reporting is a broad concept including **public communications** to investors, owners, management, third parties, and regulatory agencies. These communications can take many forms but generally they consist of the following:

- Annual and quarterly reports to shareholders including Management's Discussion and Analysis (MD&A)
- Press releases including 8-K filings
- Management conference calls to interested parties
- Non-GAAP performance measurements and key performance indicators (KPIs)
- Reports to regulatory agencies such as the Department of Labor or the Securities and Exchange Commission
- Reports to third parties such as banks or not-for-profit funding organizations such as the United Way
- Financial information placed on the company's website
- Financial statements including the balance sheet, income statement, cash flow statement, and for public entities, a statement of stockholders' equity

This program will focus primarily on annual reports to shareholders, MD&A, and financial statements.

Financial statements as indicated above consist of the following:

- Statement of financial condition or balance sheet
- Income or comprehensive income statement (also commonly referred to as a profit and loss statement or "P&L")
- Statement of cash flows
- Statement of stockholders' equity (deficit) for public companies

These financial statements are normally presented with note disclosures, including accounting policy notes, providing additional information concerning the elements of the financial statements. These note disclosures are integral to understanding the financial statements and should be considered by any investor or analyst when performing financial statement analysis.

Below are the published financial statements of Ford Motor Company. Note the detailed information provided in the five financial statements.

FORD MOTOR COMPANY AND SUBSIDIARIES
CONSOLIDATED INCOME STATEMENTS
(In millions, except per share amounts)

	For the years ended December 31,		
	2018	2019	2020
Revenues			
Automotive	$ 148,294	$ 143,599	$ **115,885**
Ford Credit	12,018	12,260	**11,203**
Mobility	26	41	**56**
Total revenues (Note 4)	160,338	155,900	**127,144**
Costs and expenses			
Cost of sales	136,269	134,693	**112,752**
Selling, administrative, and other expenses	11,403	11,161	**10,193**
Ford Credit interest, operating, and other expenses	9,463	9,472	**8,607**
Total costs and expenses	157,135	155,326	**131,552**
Operating income/(loss)	3,203	574	**(4,408)**
Interest expense on Automotive debt	1,171	963	**1,603**
Interest expense on Other debt	57	57	**46**
Other income/(loss), net (Note 5 and Note 22)	2,247	(226)	**4,899**
Equity in net income/(loss) of affiliated companies	123	32	**42**
Income/(Loss) before income taxes	4,345	(640)	**(1,116)**
Provision for/(Benefit from) income taxes (Note 7)	650	(724)	**160**
Net income/(loss)	3,695	84	**(1,276)**
Less: Income/(Loss) attributable to noncontrolling interests	18	37	**3**
Net income/(loss) attributable to Ford Motor Company	$ 3,677	$ 47	$ **(1,279)**
EARNINGS/(LOSS) PER SHARE ATTRIBUTABLE TO FORD MOTOR COMPANY COMMON AND CLASS B STOCK (Note 8)			
Basic income/(loss)	$ 0.93	$ 0.01	$ **(0.32)**
Diluted income/(loss)	0.92	0.01	**(0.32)**
Weighted-average shares used in computation of earnings/(loss) per share			
Basic shares	3,974	3,972	**3,973**
Diluted shares	3,998	4,004	**3,973**

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)

	For the years ended December 31,		
	2018	2019	2020
Net income/(loss)	$ 3,695	$ 84	$ **(1,276)**
Other comprehensive income/(loss), net of tax (Note 23)			
Foreign currency translation	(523)	174	**(901)**
Marketable securities	(11)	130	**85**
Derivative instruments	183	(689)	**222**
Pension and other postretirement benefits	(56)	23	**27**
Total other comprehensive income/(loss), net of tax	(407)	(362)	**(567)**
Comprehensive income/(loss)	3,288	(278)	**(1,843)**
Less: Comprehensive income/(loss) attributable to noncontrolling interests	18	37	**2**
Comprehensive income/(loss) attributable to Ford Motor Company	$ 3,270	$ (315)	$ **(1,845)**

The accompanying notes are part of the consolidated financial statements.

FORD MOTOR COMPANY AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(In millions)

	December 31, 2019	December 31, 2020
ASSETS		
Cash and cash equivalents (Note 9)	$ 17,504	$ **25,243**
Marketable securities (Note 9)	17,147	**24,718**
Ford Credit finance receivables, net of allowance for credit losses of $162 and $394 (Note 10)	53,651	**42,401**
Trade and other receivables, less allowances of $63 and $84	9,237	**9,993**
Inventories (Note 11)	10,786	**10,808**
Assets held for sale (Note 2, Note 10, and Note 22)	2,383	**47**
Other assets	3,339	**3,534**
Total current assets	114,047	**116,744**
Ford Credit finance receivables, net of allowance for credit losses of $351 and $911 (Note 10)	53,703	**55,277**
Net investment in operating leases (Note 12)	29,230	**27,951**
Net property (Note 13)	36,469	**37,083**
Equity in net assets of affiliated companies (Note 14)	2,519	**4,901**
Deferred income taxes (Note 7)	11,863	**12,423**
Other assets	10,706	**12,882**
Total assets	$ 258,537	$ **267,261**
LIABILITIES		
Payables	$ 20,673	$ **22,204**
Other liabilities and deferred revenue (Note 16 and Note 25)	22,987	**23,645**
Automotive debt payable within one year (Note 19)	1,445	**1,194**
Ford Credit debt payable within one year (Note 19)	52,371	**49,969**
Other debt payable within one year (Note 19)	130	**180**
Liabilities held for sale (Note 22)	526	**—**
Total current liabilities	98,132	**97,192**
Other liabilities and deferred revenue (Note 16 and Note 25)	25,324	**28,379**
Automotive long-term debt (Note 19)	13,233	**22,342**
Ford Credit long-term debt (Note 19)	87,658	**87,708**
Other long-term debt (Note 19)	470	**291**
Deferred income taxes (Note 7)	490	**538**
Total liabilities	225,307	**236,450**
EQUITY		
Common Stock, par value $0.01 per share (4,025 million shares issued of 6 billion authorized)	40	**40**
Class B Stock, par value $0.01 per share (71 million shares issued of 530 million authorized)	1	**1**
Capital in excess of par value of stock	22,165	**22,290**
Retained earnings	20,320	**18,243**
Accumulated other comprehensive income/(loss) (Note 23)	(7,728)	**(8,294)**
Treasury stock	(1,613)	**(1,590)**
Total equity attributable to Ford Motor Company	33,185	**30,690**
Equity attributable to noncontrolling interests	45	**121**
Total equity	33,230	**30,811**
Total liabilities and equity	$ 258,537	$ **267,261**

The following table includes assets to be used to settle liabilities of the consolidated variable interest entities ("VIEs"). These assets and liabilities are included in the consolidated balance sheets above. See Note 24 for additional information on our VIEs.

	December 31, 2019	December 31, 2020
ASSETS		
Cash and cash equivalents	$ 3,202	$ **2,822**
Ford Credit finance receivables, net	58,478	**51,472**
Net investment in operating leases	14,883	**12,794**
Other assets	12	**—**
LIABILITIES		
Other liabilities and deferred revenue	$ 19	$ **56**
Debt	50,865	**46,770**

The accompanying notes are part of the consolidated financial statements.

FORD MOTOR COMPANY AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY
(in millions)

	Equity Attributable to Ford Motor Company							
	Capital Stock	Cap. in Excess of Par Value of Stock	Retained Earnings/ (Accumulated Deficit)	Accumulated Other Comprehensive Income/(Loss) (Note 23)	Treasury Stock	Total	Equity Attributable to Non-controlling Interests	Total Equity
Balance at December 31, 2017	$ 41	$ 21,843	$ 21,906	$ (6,959)	$ (1,253)	$ 35,578	$ 28	$ 35,606
Adoption of accounting standards	—	—	—	—	—	—	—	—
Net income	—	—	3,677	—	—	3,677	18	3,695
Other comprehensive income/(loss), net of tax	—	—	—	(407)	—	(407)	—	(407)
Common stock issued (a)	—	163	—	—	—	163	—	163
Treasury stock/other	—	—	—	—	(164)	(164)	—	(164)
Dividend and dividend equivalents declared (b)	—	—	(2,915)	—	—	(2,915)	(12)	(2,927)
Balance at December 31, 2018	$ 41	$ 22,006	$ 22,668	$ (7,366)	$ (1,417)	$ 35,932	$ 34	$ 35,966
Balance at December 31, 2018	$ 41	$ 22,006	$ 22,668	$ (7,366)	$ (1,417)	$ 35,932	$ 34	$ 35,966
Adoption of accounting standards	—	—	13	—	—	13	—	13
Net income	—	—	47	—	—	47	37	84
Other comprehensive income/(loss), net of tax	—	—	—	(362)	—	(362)	—	(362)
Common stock issued (a)	—	159	—	—	—	159	—	159
Treasury stock/other	—	—	—	—	(196)	(196)	(26)	(222)
Dividend and dividend equivalents declared (b)	—	—	(2,408)	—	—	(2,408)	—	(2,408)
Balance at December 31, 2019	$ 41	$ 22,165	$ 20,320	$ (7,728)	$ (1,613)	$ 33,185	$ 45	$ 33,230
Balance at December 31, 2019	**$ 41**	**$ 22,165**	**$ 20,320**	**$ (7,728)**	**$ (1,613)**	**$ 33,185**	**$ 45**	**$ 33,230**
Adoption of accounting standards	**—**	**—**	**(202)**	**—**	**—**	**(202)**	**—**	**(202)**
Net income/(loss)	**—**	**—**	**(1,279)**	**—**	**—**	**(1,279)**	**3**	**(1,276)**
Other comprehensive income/(loss), net of tax	**—**	**—**	**—**	**(566)**	**—**	**(566)**	**(1)**	**(567)**
Common stock issued (a)	**—**	**125**	**—**	**—**	**—**	**125**	**—**	**125**
Treasury stock/other	**—**	**—**	**—**	**—**	**23**	**23**	**86**	**109**
Dividend and dividend equivalents declared (b)	**—**	**—**	**(596)**	**—**	**—**	**(596)**	**(12)**	**(608)**
Balance at December 31, 2020	**$ 41**	**$ 22,290**	**$ 18,243**	**$ (8,294)**	**$ (1,590)**	**$ 30,690**	**$ 121**	**$ 30,811**

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(a) Includes impacts of share-based compensation.
(b) We declared dividends per share of Common and Class B Stock of $0.73, $0.60, and $0.15 per share in 2018, 2019, and 2020, respectively.

The accompanying notes are part of the consolidated financial statements.

FORD MOTOR COMPANY AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	For the years ended December 31,		
	2018	2019	**2020**
Cash flows from operating activities			
Net income/(loss)	$ 3,695	$ 84	**$ (1,276)**
Depreciation and tooling amortization (Note 12 and Note 13)	9,385	9,689	**8,751**
Other amortization	(972)	(1,199)	**(1,294)**
Held-for-sale impairment charges (Note 22)	—	804	**23**
Brazil manufacturing exit non-cash charges (excluding accelerated depreciation of $145) (Note 21)	—	—	**1,159**
Provision for credit and insurance losses	504	413	**929**
Pension and other post-retirement employee benefits ("OPEB") expense/(income) (Note 17)	400	2,625	**1,027**
Equity investment dividends received in excess of (earnings)/losses	206	203	**130**
Foreign currency adjustments	529	(54)	**(420)**
Net (gain)/loss on changes in investments in affiliates (Note 5)	(42)	(29)	**(3,446)**
Stock compensation (Note 6)	191	228	**199**
Provision for deferred income taxes	(197)	(1,370)	**(269)**
Decrease/(Increase) in finance receivables (wholesale and other)	(2,408)	1,554	**12,104**
Decrease/(Increase) in accounts receivable and other assets	(2,239)	(816)	**(63)**
Decrease/(Increase) in inventory	(828)	206	**148**
Increase/(Decrease) in accounts payable and accrued and other liabilities	6,781	5,260	**6,809**
Other	17	41	**(242)**
Net cash provided by/(used in) operating activities	15,022	17,639	**24,269**
Cash flows from investing activities			
Capital spending	(7,785)	(7,632)	**(5,742)**
Acquisitions of finance receivables and operating leases	(62,924)	(55,576)	**(55,901)**
Collections of finance receivables and operating leases	50,880	50,182	**48,746**
Proceeds from sale of business (Note 22)	—	—	**1,340**
Purchases of marketable securities and other investments	(17,140)	(17,472)	**(39,624)**
Sales and maturities of marketable securities and other investments	20,527	16,929	**32,395**
Settlements of derivatives	358	(114)	**(323)**
Other	(177)	(38)	**494**
Net cash provided by/(used in) investing activities	(16,261)	(13,721)	**(18,615)**
Cash flows from financing activities			
Cash payments for dividends and dividend equivalents	(2,905)	(2,389)	**(596)**
Purchases of common stock	(164)	(237)	**—**
Net changes in short-term debt	(2,819)	(1,384)	**(2,291)**
Proceeds from issuance of long-term debt	50,130	47,604	**65,900**
Principal payments on long-term debt	(44,172)	(46,497)	**(60,514)**
Other	(192)	(226)	**(184)**
Net cash provided by/(used in) financing activities	(122)	(3,129)	**2,315**
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	(370)	45	**225**
Net increase/(decrease) in cash, cash equivalents, and restricted cash	$ (1,731)	$ 834	**$ 8,194**
Cash, cash equivalents, and restricted cash at beginning of period (Note 9)	$ 18,638	$ 16,907	**$ 17,741**
Net increase/(decrease) in cash, cash equivalents, and restricted cash	(1,731)	834	**8,194**
Cash, cash equivalents, and restricted cash at end of period (Note 9)	$ 16,907	$ 17,741	**$ 25,935**

The accompanying notes are part of the consolidated financial statements.

PUBLIC COMPANY REPORTING

Periodic Reporting Requirements

Once securities are registered with the SEC, the issuer is required to comply with the reporting requirements of The Securities Exchange Act of 1934. One of these reporting requirements is that a domestic public corporation must prepare its financial statements based on Generally Accepted Accounting Principles (GAAP) as established by the Financial Accounting Standards Board (FASB). Complying with the SEC's periodic reporting requirements are accomplished by filing the following forms with the SEC:

- Form 8-K – Current Report
- Form 10-K – Annual Report
- Form 10-Q – Quarterly Report

Form 8-K is required to be filed upon the occurrence of an unscheduled material event or change at a company that is important to the stockholders and the SEC. The form is required to be filed within 4 business days after the occurrence of the event. The list of events required to be reported is extensive. Below are some examples of these events:

- Filing for bankruptcy or receivership
- Completion of the acquisition or disposition of significant amounts of assets
- Any creation of a material direct financial obligation or a material obligation under an off-balance sheet arrangement
- Triggering events that accelerate or increase a direct financial obligation or an obligation under an off-balance sheet arrangement
- Material impairment of assets discovered during the fiscal year
- Non-reliance on previously issued financial statements or a related audit report or completed interim review due to a material error
- Change in control of the registrant
- Financial statements necessary to comply with the above events

Form 10-K represents the annual report to shareholders and the SEC. Form 10-K is a comprehensive summary report of both financial and non-financial performance of a public company including its audited financial statements. Form 10-K must be filed with the SEC within 60 days of a company's year-end for large accelerated filers. These annual reports are required to also be posted on the company's website.

Form 10-K's content is specified by SEC Regulations S-K and S-X. Regulation S-K includes requirements for filing Form 10-K including information related to the entity's business, securities, management and financial information. Regulation S-X provides requirements for the form and content of financial reports such as audited financial statements included in the Form 10-K filing.

Information required by Form S-X includes qualifications and reports of accountants, general instructions as to financial statements, financial statements of smaller reporting companies, and pro forma financial information.

As required by Forms S-K and S-X, Form 10-K includes the following information:

1. Business, risk factors and any unresolved SEC staff comments

2. Properties

3. Legal proceedings

4. Mine safety disclosures

5. Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities

6. Selected financial data

7. Management's discussion and analysis of financial condition and results of operations and quantitative and qualitative disclosures about market risk

8. Financial statements and supplemental data

9. Changes in and disagreements with accountants on accounting and financial disclosure, controls and procedures, and other Form 8-K information not previously reported

10. Directors, executive officers, and corporate governance

11. Executive compensation

12. Security ownership of certain beneficial owners and management and related stockholder matters

13. Certain relationships and related transactions, and director independence

14. Principal accounting fees and services

15. Exhibits, other financial statement schedules

Form 10-Q represents quarterly financial reports to shareholders and the SEC. Filings are made for the first, second, and third quarters of the year with the fourth quarter included in the annual Form 10-K filing. Form 10-Q provides unaudited financial information and related disclosures. As with Form 10-K filings, Form 10-Q's content is specified by SEC Regulations S-K and S-X.

As required by Forms S-K and S-X, Form 10-Q includes the following information:

Part 1 – Financial Information:

1. Financial statements
2. Management's discussion and analysis of financial condition and results of operations
3. Quantitative and qualitative disclosures about market risk
4. Controls and procedures

Part 2 – Other Information:

1. Legal proceedings and risk factors
2. Unregistered sales of equity securities and use of proceeds
3. Defaults upon senior securities
4. Mine safety disclosures
5. Other Form 8-K information not previously reported
6. Exhibits

As you can see, filings with the SEC include a significant amount of both financial and non-financial information that can be useful when analyzing financial information of a public company.

You should note that all Form 8-Ks, Form 10-Ks, and Form 10-Q are publicly available on the SEC's website.

NON-PUBLIC COMPANY REPORTING

A non-public or private company's reporting requirements are determined by the needs of management, requirements of a third party, and/or the basis of accounting followed by the company to prepare its financial statements. Bases of accounting acceptable for a non-public company to use to prepare its financial statements include:

- GAAP
- Income tax basis
- Cash basis
- Contractual basis
- Financial reporting framework for small- and medium-sized businesses (FRF for SMEs)
- IFRS for Small- and Medium-Sized Businesses

These bases of accounting would require full disclosure financial statements if the financial statements are audited or reviewed. Non-disclosure financial statements are permitted if the financial statements are compiled or if management had no need for full disclosure financial statements used for internal purposes only.

As you might expect, the financial statement outcomes of these various bases of accounting will be different for assets, liabilities, revenue and expense accounts and the investor or analyst will need to determine the reporting basis of the company being analyzed, and for comparative purposes, make sure the comparable entities are following the same bases of accounting.

CRITICAL ACCOUNTING POLICIES

Many bases of accounting require that an accounting policy note be included as the first note disclosure in full disclosure financial statements. Using U.S. GAAP as the example, Topic 235, *Notes to Financial Statements*, requires a company's significant accounting policies to be disclosed. This disclosure should be labeled "Summary of Significant Accounting Policies" and it should identify and describe the accounting principles followed by the reporting entity and the methods of applying those principles that materially affect the determination of financial position, cash flows, and the results of operations.

As noted in Topic 235, in general, the policy disclosure should encompass important judgments as to appropriateness of principles relating to recognition of revenue and allocation of asset costs to current and future periods. In particular, the policy note should include those accounting principles and methods that involve any of the following:

- A selection from existing GAAP alternatives (LIFO/FIFO for example)
- Principles and methods particular to the industry in which the reporting entity operates
- Unusual or innovative applications of GAAP

While this policy note guidance is important to determine what information to include in a policy note, FASB in recent years has required additional information to be included in a policy note based on the issuance of an Accounting Standards Update. As a result, there are now over 120 possible topics that may be included in an accounting policy note and it is important for an investor or analyst to be familiar with the information contained in a reporting entity's policy note in order to perform an effective financial statement analysis.

The following is a list of **significant accounting policies**, with selected examples, that are frequently included in a public company's accounting policy note:

- Principles of Consolidation and Basis of Presentation

EXAMPLE

Where we hold current or potential rights that give us the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, combined with a variable interest that gives us the right to receive potentially significant benefits or the obligation to absorb potentially significant losses, we have a controlling financial interest in that VIE. Rights held by others to remove the party with power over the VIE are not considered unless one party can exercise those rights unilaterally. When changes occur to

the design of an entity, we reconsider whether it is subject to the VIE model. We continuously evaluate whether we have a controlling financial interest in a VIE.

We hold a controlling financial interest in other entities where we currently hold, directly or indirectly, more than 50% of the voting rights or where we exercise control through substantive participating rights or as a general partner. Where we are a general partner, we consider substantive removal rights held by other partners in determining if we hold a controlling financial interest. We reevaluate whether we have a controlling financial interest in these entities when our voting or substantive participating rights change.

Associated companies are unconsolidated VIEs and other entities in which we do not have a controlling financial interest, but over which we have significant influence, most often because we hold a voting interest of 20% to 50%. Associated companies are accounted for as equity method investments. Our share of the results of associated companies are presented on a one-line basis. Investments in, and advances to, associated companies are presented on a one-line basis in the caption “All other assets” in our Statement of Financial Position, net of allowance for losses, which represents our best estimate of probable losses inherent in such assets.

- Acquisitions or Dispositions
- Estimates and Assumptions

EXAMPLE

Preparing financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, and expenses. Examples of estimates include: loss contingencies; product warranties; the fair value of and/or potential impairment of goodwill and intangible assets for our reporting units; product life cycles; useful lives of our tangible and intangible assets; allowances for doubtful accounts; allowances for product returns; the market value of, and demand for, our inventory; and stock-based compensation forfeiture rates. Examples of assumptions include: the elements comprising a software arrangement, including the distinction between upgrades or enhancements and new products; when technological feasibility is achieved for our products; the potential outcome of future tax consequences of events that have been recognized on our consolidated financial statements or tax returns; and determining when investment impairments are other-than-temporary. Actual results and outcomes may differ from management’s estimates and assumptions.

- Businesses and Assets Held for Sale

EXAMPLE

Businesses and assets held for sale represent components that meet accounting requirements to be classified as held for sale and are presented as single asset and liability amounts in our financial statements with a valuation allowance, if necessary, to recognize the net carrying amount at the lower of cost or fair value, less cost to sell. Financing receivables that no longer qualify to be presented as held for investment must be classified as assets held for sale and recognized in our financial statements at the lower of cost or fair value, less cost to sell, with that amount representing a new cost basis at the date of transfer.

The determination of fair value for businesses and assets held for sale involves significant judgments and assumptions. Development of estimates of fair values in this circumstance is complex and is dependent upon, among other factors, the nature of the potential sales transaction (for example, asset sale versus sale

of legal entity), composition of assets and/or businesses in the disposal group, the comparability of the disposal group to market transactions, negotiations with third party purchasers, etc. Such factors bear directly on the range of potential fair values and the selection of the best estimates. Key assumptions were developed based on market observable data and, in the absence of such data, internal information that is consistent with what market participants would use in a hypothetical transaction.

We review all businesses and assets held for sale each reporting period to determine whether the existing carrying amounts are fully recoverable in comparison to estimated fair values.

- Revenue Recognition

EXAMPLE FROM AT&T 2021 10-K[1]

NOTE 5. REVENUE RECOGNITION

We report our revenues net of sales taxes and record certain regulatory fees, primarily Universal Service Fund (USF) fees, on a net basis. No customer accounted for more than 10% of consolidated revenues in 2021, 2020, or 2019.

Wireless, Advanced Data, Legacy Voice & Data Services, and Equipment Revenue

We offer service-only contracts and contracts that bundle equipment used to access the services and/or with other service offerings. Some contracts have fixed terms and others are cancellable on a short-term basis (i.e., month-to-month arrangements).

Examples of service revenues include wireless, strategic services (e.g., virtual private network service), and legacy voice and data (e.g., traditional local and long-distance). These services represent a series of distinct services that is considered a separate performance obligation. Service revenue is recognized when services are provided, based upon either usage (e.g., minutes of traffic/bytes of data processed) or period of time (e.g., monthly service fees).

Some of our services require customer premises equipment that, when combined and integrated with AT&T's specific network infrastructure, facilitates the delivery of service to the customer. In evaluating whether the equipment is a separate performance obligation, we consider the customer's ability to benefit from the equipment on its own or together with other readily available resources and if so, whether the service and equipment are separately identifiable (i.e., is the service highly dependent on, or highly interrelated with the equipment). When the equipment does not meet the criteria to be a separate performance obligation (e.g., equipment associated with certain video services), we allocate the total transaction price to the related service. When equipment is a separate performance obligation, we record the sale of equipment when title has passed and the products are accepted by the customer. For devices sold through indirect channels (e.g., national dealers), revenue is recognized when the dealer accepts the device, not upon activation.

Our equipment and service revenues are predominantly recognized on a gross basis, as most of our services do not involve a third party and we typically control the equipment that is sold to our customers.

We offer the majority of our customers the option to purchase certain wireless devices in installments over a specified period of time, and, in many cases, they may be eligible to trade in the original equipment for a new device and have the remaining unpaid balance paid or settled. For customers that elect these equipment installment payment programs, at the point of sale, we recognize revenue for the entire amount of revenue allocated to the customer receivable net of fair value of the trade-in right guarantee. The difference between the revenue recognized and the consideration received is recorded as a note receivable

[1] Note: For presentation purposes, the entire revenue recognition note has not been presented for purposes of this course.

when the devices are not discounted and our right to consideration is unconditional. When installment sales include promotional discounts (e.g., "buy one get one free" or equipment discounts with trade-in of a device), the difference between revenue recognized and consideration received is recorded as a contract asset to be amortized over the contract term.

Less commonly, we offer certain customers highly discounted devices when they enter into a minimum service agreement term. For these contracts, we recognize equipment revenue at the point of sale based on a stand-alone selling price allocation. The difference between the revenue recognized and the cash received is recorded as a contract asset that will amortize over the contract term.

Our contracts allow for customers to frequently modify their arrangement, without incurring penalties in many cases. When a contract is modified, we evaluate the change in scope or price of the contract to determine if the modification should be treated as a new contract or if it should be considered a change of the existing contract. We generally do not have significant impacts from contract modifications.

Revenues from transactions between us and our customers are recorded net of revenue-based regulatory fees and taxes. Cash incentives given to customers are recorded as a reduction of revenue. Nonrefundable, upfront service activation and setup fees associated with service arrangements are deferred and recognized over the associated service contract period or customer relationship life.

Subscription Revenue

Subscription revenues from cable networks and premium pay and basic-tier television services are recognized over the license period as programming is provided to affiliates or digital distributors based on negotiated contractual programming rates. When a distribution contract with an affiliate has expired and a new distribution contract has not been executed, revenues are based on estimated rates, giving consideration to factors including the previous contractual rates, inflation, current payments by the affiliate, and the status of the negotiations on a new contract. When the new distribution contract terms are finalized, an adjustment to revenue is recorded, if necessary, to reflect the new terms.

Subscription revenues from end-user subscribers are recognized when services are provided, based upon either usage or period of time. Subscription revenues from streaming services are recognized as programming services are provided to customers..

Content Revenue

Feature films typically are produced or acquired for initial exhibition in theaters, followed by distribution, generally commencing within three years of such initial exhibition. Revenues from film rentals by theaters are recognized as the films are exhibited.

Television programs and series are initially produced for broadcast and may be subsequently licensed or sold in physical format and/or electronic delivery. Revenues from the distribution of television programming through broadcast networks, cable networks, first-run syndication, and streaming services are recognized when the programs or series are available to the licensee. In certain circumstances, pursuant to the terms of the applicable contractual arrangements, the availability dates granted to customers may precede the date in which the customer can be billed for these sales.

Revenues from sales of feature films and television programming in physical format are recognized at the later of the delivery date or the date when made widely available for sale or rental by retailers based on gross sales less a provision for estimated returns, rebates, and pricing allowances. Revenues from the licensing of television programs and series for electronic sell-through or video-on-demand are recognized when the product has been purchased by and made available to the consumer to either download or stream.

Upfront or guaranteed payments for the licensing of intellectual property are recognized as revenue at either the inception of the license term if the intellectual property has significant standalone functionality

or over the corresponding license term if the licensee's ability to derive utility is dependent on our continued support of the intellectual property throughout the license term.

Revenues from the sales of console games are recognized at the later of the delivery date or the date that the product is made widely available for sale or rental by retailers based on gross sales less a provision for estimated returns, rebates, and pricing allowances..

Advertising Revenue

Advertising revenues are recognized, net of agency commissions, in the period that the advertisements are aired. If there is a targeted audience guarantee, revenues are recognized for the actual audience delivery and revenues are deferred for any shortfall until the guaranteed audience delivery is met, typically by providing additional advertisements. Advertising revenues from digital properties are recognized as impressions are delivered or the services are performed.

- Costs of Revenue
- Financing Receivables
- Stock-Based Compensation
- Income Taxes

EXAMPLE

Income tax expense includes U.S. and international income taxes, the provision for U.S. taxes on undistributed earnings of international subsidiaries not deemed to be permanently reinvested, and interest and penalties on uncertain tax positions. Certain income and expenses are not reported in tax returns and financial statements in the same year. The tax effect of such temporary differences is reported as deferred income taxes. Deferred tax assets are reported net of a valuation allowance when it is more likely than not that a tax benefit will not be realized. All deferred income taxes are classified as long-term on our consolidated balance sheets.

- Fair Value Measurements
- Financial Instruments
- Cash and Cash Equivalents
- Accounts Receivable
- Inventories

EXAMPLE

Inventories are stated at average cost, subject to the lower of cost or market. Cost includes materials, labor, and manufacturing overhead related to the purchase and production of inventories. We regularly review inventory quantities on hand, future purchase commitments with our suppliers, and the estimated utility of our inventory. If our review indicates a reduction in utility below carrying value, we reduce our inventory to a new cost basis through a charge to cost of revenue.

- Property and Equipment
- Foreign Currency Transactions and Translations
- Goodwill and Other Intangibles

EXAMPLE

We do not amortize goodwill, but test it at least annually for impairment at the reporting unit level. A reporting unit is the operating segment, or one level below that operating segment (the component level) if discrete financial information is prepared and regularly reviewed by segment management. However, components are aggregated as a single reporting unit if they have similar economic characteristics. We recognize an impairment charge if the carrying amount of a reporting unit exceeds its fair value and the carrying amount of the reporting unit's goodwill exceeds the implied fair value of that goodwill. We use a market approach, when available and appropriate, or the income approach, or a combination of both, to establish fair values. When a portion of a reporting unit is disposed, goodwill is allocated to the gain or loss on disposition based on the relative fair values of the business or businesses disposed and the portion of the reporting unit that will be retained.

We amortize the cost of other intangibles over their estimated useful lives unless such lives are deemed indefinite. The cost of intangible assets is generally amortized on a straight-line basis over the asset's estimated economic life, except that individually significant, customer-related intangible assets are amortized in relation to total related sales. Amortizable intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the related carrying amounts may not be recoverable. In these circumstances, they are tested for impairment based on undiscounted cash flows and, if impaired, written down to fair value based on either discounted cash flows or appraised values. Intangible assets with indefinite lives are tested annually for impairment and written down to fair value as required.

- Impairments of Long-Lived Assets
- Leases
- Loss Contingencies
- Subsequent Events
- New Accounting Pronouncements

Following is AT&T's accounting policy note from its 2021 10-K:

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation Throughout this document, AT&T Inc. is referred to as "AT&T," "we" or the "Company." The consolidated financial statements include the accounts of the Company and subsidiaries and affiliates which we control. AT&T is a holding company whose subsidiaries and affiliates operate worldwide in the telecommunications, media and technology industries.

On July 31, 2021, we closed our transaction with TPG Capital (TPG) to form a new company named DIRECTV Entertainment Holdings, LLC (DIRECTV). With the close of the transaction, we separated and deconsolidated our Video business, comprised of our U.S. video operations, and began accounting for our investment in DIRECTV under the equity method (see Notes 6 and 10). On November 15, 2021, we sold our Latin America video operations, Vrio, to Grupo Werthein (see Note 6).

All significant intercompany transactions are eliminated in the consolidation process. Investments in subsidiaries and partnerships which we do not control but have significant influence are accounted for under the equity method. Earnings from certain investments accounted for using the equity method are included in our results on a one quarter lag. We also record our proportionate share of our equity method investees' other comprehensive income (OCI) items, including translation adjustments. We treat distributions received from equity method investees as returns on investment and classify them as cash flows from operating activities until those distributions exceed our cumulative equity in the earnings of that investment. We treat the excess amount as a return of investment and classify it as cash flows from investing activities.

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (GAAP) requires management to make estimates and assumptions, including other estimates of probable losses and expenses, that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates. Certain prior-period amounts have been conformed to the current period's presentation.

Accounting Policies and Adopted Accounting Standards

Credit Losses as of January 1, 2020, we adopted, through modified retrospective application, the Financial Accounting Standards Board's (FASB) Accounting Standards Update (ASU) No. 2016-13, "Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments," or Accounting Standards Codification (ASC) 326 (Topic 326), which replaces the incurred loss impairment methodology under prior GAAP with an expected credit loss model. Topic 326 affects trade receivables, loans, contract assets, certain beneficial interests, off-

balance-sheet credit exposures not accounted for as insurance and other financial assets that are not subject to fair value through net income, as defined by the standard. Under the expected credit loss model, we are required to consider future economic trends to estimate expected credit losses over the lifetime of the asset. Upon adoption on January 1, 2020, we recorded a $293 reduction to "Retained earnings," $395 increase to "Allowances for credit losses" applicable to our trade and loan receivables, $10 reduction of contract assets, $105 reduction of net deferred income tax liability and $7 reduction of "Noncontrolling interest." Our adoption of Topic 326 did not have a material impact on our financial statements.

Leases as of January 1, 2019, we adopted, with modified retrospective application, the FASB's ASU No. 2016-02, "Leases (Topic 842)" (Topic 842), which replaces existing leasing rules with a comprehensive lease measurement and recognition standard and expanded disclosure requirements (see Note 8). Topic 842 requires lessees to recognize most leases on their balance sheets as liabilities, with corresponding "right-of-use" assets. For income statement recognition purposes, leases are classified as either a finance or an operating lease without relying upon bright-line tests.

The key change upon adoption of the standard was balance sheet recognition of operating leases, given that the recognition of lease expense on our income statement is similar to our historical accounting. Using the modified retrospective transition method of adoption, we did not adjust the balance sheet for comparative periods but recorded a cumulative effect adjustment to retained earnings on January 1, 2019. We elected the package of practical expedients permitted under the transition guidance within the new standard, which, among other things, allowed us to carry forward our historical lease classification. We also elected the practical expedient related to land easements, allowing us to carry forward our accounting treatment for land easements on existing agreements that were not accounted for as leases. We excluded leases with original terms of one year or less. Additionally, we elected to not separate lease and non-lease components for certain classes of assets. Our accounting for finance leases did not change from our prior accounting for capital leases.

The adoption of Topic 842 resulted in the recognition of an operating lease liability of $22,121 and an operating right-of-use asset of the same amount. Existing prepaid and deferred rent accruals were recorded as an offset to the right-of-use asset, resulting in a net asset of $20,960. The cumulative effect of the adoption to retained earnings was an increase of $316 reflecting the reclassification of deferred gains related to sale/leaseback transactions. The standard did not materially impact our income statements or statements of cash flows, and had no impact on our covenant compliance under our current debt agreements.

Income Taxes. We record deferred income taxes for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the computed tax basis of those assets and liabilities. We record valuation allowances against the deferred tax assets (included, together with our deferred income tax assets, as part of our reportable net deferred income tax liabilities on our consolidated balance sheets), for which the realization is uncertain. We review these items regularly in light of changes in federal and state tax laws and changes in our business.

As of January 1, 2021, we adopted, with modified retrospective application, the FASB's ASU No. 2019-12, "Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes" (ASU 2019-12), which is expected to simplify income tax accounting requirements in areas deemed costly and complex. ASU 2019-12 did not have a material impact on our financial statements.

Cash and Cash Equivalents. Cash and cash equivalents include all highly liquid investments with original maturities of three months or less. The carrying amounts approximate fair value. At December 31, 2021, we held $5,204 in cash and $15,965 in money market funds and other cash equivalents. Of our total cash and cash equivalents, $2,706 resided in foreign jurisdictions, some of which is subject to restrictions on repatriation.

Allowance for Credit Losses. We record expense to maintain an allowance for credit losses for estimated losses that result from the failure or inability of our customers to make required payments deemed collectible from the customer when the service was provided or product was delivered. When determining the allowances for trade receivables and loans, we consider the probability of recoverability of accounts receivable based on past experience, taking into account current collection trends and general economic factors, including bankruptcy rates. We also consider future economic trends to estimate expected credit losses over the lifetime of the asset. Credit risks are assessed based on historical write-offs, net of recoveries, as well as an analysis of the aged accounts receivable balances with allowances generally increasing as the receivable ages. Accounts receivable may be fully reserved for when specific collection issues are known to exist, such as catastrophes or pending bankruptcies.

Inventories. Inventories primarily consist of wireless devices and accessories and are valued at the lower of cost or net realizable value.

Licensed Programming Inventory Cost Recognition and Impairment. We enter into agreements to license programming exhibition rights from licensors. A programming inventory asset related to these rights and a corresponding liability payable to the licensor are recorded (on a discounted basis if the license agreements are long-term) when (i) the cost of the programming is reasonably determined, (ii) the programming material has been accepted in accordance with the terms of the agreement, (iii) the programming is available for its first showing or telecast, and (iv) the license period has commenced. There are variations in the amortization methods of these rights, depending on whether the network is advertising-supported (e.g., TNT and TBS) or not advertising-supported (e.g., HBO and Turner Classic Movies).

For the advertising-supported networks, our general policy is to amortize each program's costs on a straight-line basis (or per-play basis, if greater) over its license period. In circumstances where the initial airing of the program has more value than subsequent airings, an accelerated method of amortization is used. The accelerated amortization upon the first airing versus subsequent airings is determined based on a study of historical and estimated future advertising sales for similar

programming. For rights fees paid for sports programming arrangements, such rights fees are amortized using a revenue-forecast model, in which the rights fees are amortized using the ratio of current period advertising revenue to total estimated remaining advertising revenue over the term of the arrangement.

For premium pay television, streaming and over-the-top (OTT) services that are not advertising-supported, each licensed program's costs are amortized on a straight-line basis over its license period or estimated period of use, beginning with the month of initial exhibition. When we have the right to exhibit feature theatrical programming in multiple windows over a number of years, historical audience viewership is used as the basis for determining the amount of programming amortization attributable to each window.

Licensed programming inventory is carried at the lower of unamortized cost or fair value. For networks that generate both advertising and subscription revenues, the net realizable value of unamortized programming costs is generally evaluated based on the network's programming taken as a whole. In assessing whether the programming inventory for a particular advertising-supported network is impaired, the net realizable value for all of the network's programming inventory is determined based on a projection of the network's profitability. This assessment would occur upon the occurrence of certain triggering events. Similarly, for premium pay television, streaming and OTT services that are not advertising-supported, an evaluation of the fair value of unamortized programming costs is performed based on services' licensed programming taken as a whole. Specifically, the fair value for all premium pay television, streaming and OTT service licensed programming is determined based on projections of estimated subscription revenues less certain costs of delivering and distributing the licensed programming. Changes in management's intended usage of a specific program, such as a decision to no longer exhibit that program and forgo the use of the rights associated with the program license, results in a reassessment of that program's fair value, which could result in an impairment (see Note 11).

Film and Television Production Cost Recognition, Participations and Residuals and Impairments
Film and television production costs on our consolidated balance sheets include the unamortized cost of completed theatrical films and television episodes, theatrical films and television series in production and undeveloped film and television rights. Film and television production costs are stated at the lower of cost, less accumulated amortization, or fair value. For films and television programs predominantly monetized individually, the amount of capitalized film and television production costs and the amount of participations and residuals to be recognized as broadcast, programming and operations expenses for a given film or television series in a particular period are determined using the film forecast computation method. Under this method, the amortization of capitalized costs and the accrual of participations and residuals are based on the proportion of the film's (or television program's) revenues recognized for such period to the film's (or television program's) estimated remaining ultimate revenues (i.e., the total revenue to be received throughout a film's (or television program's) life cycle).

The process of estimating a film's ultimate revenues requires us to make a series of judgments related to future revenue-generating activities associated with a particular film. We estimate the

ultimate revenues, less additional costs to be incurred (including exploitation and participation costs), in order to determine whether the value of a film or television series is impaired and requires an immediate write-off of unrecoverable film and television production costs. To the extent that the ultimate revenues are adjusted, the resulting gross margin reported on the exploitation of that film or television series in a period is also adjusted (see Note 11).

Prior to the theatrical release of a film, our estimates are based on factors such as the historical performance of similar films, the star power of the lead actors, the rating and genre of the film, pre-release market research (including test market screenings), international distribution plans and the expected number of theaters in which the film will be released. In the absence of revenues directly related to the exhibition of owned film or television programs on our television networks, premium pay television, streaming or OTT services, we estimate a portion of the unamortized costs that are representative of the utilization of that film or television program in that exhibition and expense such costs as the film or television program is exhibited. The period over which ultimate revenues are estimated generally does not exceed ten years from the initial release of a motion picture or from the date of delivery of the first episode of an episodic television series. Estimates were updated based on information available during the film's production and, upon release, the actual results of each film.

For a film (or television program) predominantly monetized as part of a film (or television program) group, the amount of capitalized film and television production costs is amortized using a reasonably reliable estimate of the portion of unamortized film costs that is representative of the use of the film. Production costs are expensed as the film (or television program) is exhibited or exploited.

Property, Plant and Equipment Property, plant and equipment is stated at cost, except for assets acquired using acquisition accounting, which are initially recorded at fair value (see Note 7). The cost of additions and substantial improvements to property, plant and equipment is capitalized, and includes internal compensation costs for these projects. The cost of maintenance and repairs of property, plant and equipment is charged to operating expenses. Property, plant and equipment costs are depreciated using straight-line methods over their estimated economic lives. Certain subsidiaries follow composite group depreciation methodology. Accordingly, when a portion of their depreciable property, plant and equipment is retired in the ordinary course of business, the gross book value is reclassified to accumulated depreciation, and no gain or loss is recognized on the disposition of these assets.

Property, plant and equipment is reviewed for recoverability whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable. We recognize an impairment loss when the carrying amount of a long-lived asset is not recoverable. The carrying amount of a long-lived asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset (see Note 7).

The liability for the fair value of an asset retirement obligation is recorded in the period in which it is incurred if a reasonable estimate of fair value can be made. In periods subsequent to initial measurement, we recognize period-to-period changes in the liability resulting from the passage of time and revisions to either the timing or the amount of the original estimate. The increase in the carrying value of the associated long-lived asset is depreciated over the corresponding estimated economic life.

Software Costs We capitalize certain costs incurred in connection with developing or obtaining internal-use software. Capitalized software costs are included in "Property, Plant and Equipment – Net" on our consolidated balance sheets. In addition, there is certain network software that allows the equipment to provide the features and functions unique to the AT&T network, which we include in the cost of the equipment categories for financial reporting purposes.

We amortize our capitalized software costs over a three-year to seven-year period, reflecting the estimated period during which these assets will remain in service.

New Accounting Standards

Reference Rate Reform in March 2020, the FASB issued ASU No. 2020-04, "Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting" (ASU 2020-04, as amended), which provides optional expedients, and allows for certain exceptions to existing GAAP, for contract modifications triggered by the expected market transition of certain benchmark interest rates to alternative reference rates. ASU 2020-04 applies to contracts, hedging relationships, certain derivatives and other arrangements that reference the London Interbank Offering Rate (LIBOR) or any other rates ending after December 31, 2022. ASU 2020-04, as amended, became effective immediately. We do not believe our adoption of ASU 2020-04, including optional expedients, will materially impact our financial statements.

Convertible Instruments Beginning with 2022 interim reporting, we will adopt ASU No. 2020-06, "Debt—Debt With Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity" (ASU 2020-06). ASU 2020-06 eliminated certain separation models regarding cash conversion and beneficial conversion features to simplify reporting for convertible instruments as a single liability or equity, with no separate accounting for embedded conversion features. Additionally, ASU 2020-06 requires that instruments which may be settled in cash or stock are presumed settled in stock in calculating diluted earnings per share. While our intent is to settle the Mobility II preferred interests in cash (see Note 17), settlement of this instrument in AT&T shares will result in additional dilutive impact, the magnitude of which is influenced by the fair value of the Mobility II preferred interests and the average AT&T common stock price during the reporting period, which could vary from period-to-period. We are

currently evaluating our adoption method and the impact on our financial statements, as our recent decision (February 2022) on methodology of distribution to AT&T's shareholders (i.e., pro rata dividend) for the pending WarnerMedia transaction could affect the impact of ASU 2020-06 on our financial statements (see Note 6).

Government Assistance In November 2021, the FASB issued ASU No. 2021-10, "Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance" (ASU 2021-10), which requires annual disclosures, in the notes to the financial statements, about transactions with a government that are accounted for by applying a grant or contribution accounting model by analogy to other guidance. The annual disclosures include terms and conditions, accounting treatment and impacted financial statement lines reflecting the impact of the transactions. ASU 2021-10 will be effective for annual reporting periods beginning after December 15, 2021, under prospective or retrospective application for all in scope government transactions in the financial statements as of our adoption date or thereafter. We are evaluating the disclosure impacts of our adoption of ASU 2021-10.

The following is an example of **significant accounting policies note** for a non-public company:

EXAMPLE

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Operations – The Company is engaged primarily in the production and sale of medical device components sold to manufacturers of imaging equipment. Approximately 10% of revenues are derived from contract design services performed under long-term contracts.

Consolidation – The consolidated financial statements include the accounts of the Company and its majority-owned subsidiary. All material intercompany accounts and transactions have been eliminated.

Investment in Affiliate – The Company's investment in an unconsolidated affiliate is accounted for under the equity method.

Use of Estimates – The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue Recognition – Revenues from sales are generally recognized when delivered and accepted by the customer; under some contracts, revenue is partially deferred to the extent the functionality of delivered components are dependent on future delivery of product and recognized when the orders are complete. Fees under long-term design contracts are accounted for under the percentage-of-completion method, based on level of effort.

Accounts Receivable – The Company carries its accounts receivable at cost less an allowance for doubtful accounts. Periodically, the Company evaluates its accounts receivable and establishes an allowance for doubtful accounts based on historical experience with bad debts and collections, as well as current credit conditions.

Interest is accrued on receivables considered past due at the rate of 1% per month, starting 30 days after the payment due date. Accounts on which payments have not been received by the company for 90 days are turned over for collection. Accounts are written off as uncollectible if no payments are received 90 days after they have been turned over for collection.

Property and Equipment – Property and equipment are carried at cost. Depreciation is determined using accelerated and straight-line methods over the estimated useful lives of the property.

Intangibles and Other Assets – The acquisition cost of customer lists is amortized over five years on a straight-line basis. Deferred financing costs are amortized using the interest method over the terms of the related debt.

Inventories – Inventories are valued at the lower of cost or market, with cost determined on the first-in, first-out method.

Income Taxes – Deferred taxes are provided for temporary differences in the bases of assets and liabilities for financial and tax purposes, and arise principally from methods used for depreciation, capitalization of costs in inventory, and certain accrued expenses.

The Company classifies interest accrued on unrecognized tax benefits with interest expense and penalties thereon with operating expenses. The Company's tax returns since 201X generally remain open to possible examination.

Cash Equivalents – The Company considers all highly-liquid debt instruments with an original maturity of three months or less to be cash equivalents.

Advertising – The Company expenses advertising costs when the advertising first takes place, except for direct-response advertising.

Direct-response advertising consists primarily of print advertisements with coupons for the company's products. The cost of these ads is capitalized and amortized over a six-month period following publication, based on expiration of the coupons.

Shipping and Handling Costs – Shipping costs billed to customers are included in sales. Shipping and handling costs are included in cost of goods sold.

Sales Tax – Sales tax collected from customers is recorded as a liability, pending remittance to the taxing jurisdiction. Consequently, sales taxes have been excluded from revenues and costs ("net method").

Subsequent Events – The Company has evaluated subsequent events through March 11, 20X5, the date the financial statements were available to be issued.

Reclassifications – Certain reclassifications have been made to 20X3 amounts in the accompanying financial statements to conform to the 20X4 presentation.

NOTE DISCLOSURES

Again, using U.S. GAAP as the example, the FASB Codification is organized in the following topics:

- Topic 100 – General Principles
- Topic 200 – Presentation
- Topic 300 – Assets
- Topic 400 - Liabilities
- Topic 500 – Equity
- Topic 600 – Revenue
- Topic 700 – Expenses
- Topic 800 – Broad Transactions
- Topic 900 – Industry

These topics include 59 subtopics in topics 100 through 800 that each have disclosure requirements. It is important that these disclosures be reviewed by the investor or analyst in order to obtain a full understanding of the company and its accounting practices and outcomes.

SEC DISCLOSURE COMMENT LETTERS

Overview

As noted on the SEC's website, comment letters between SEC staff and SEC filers are contained in the SEC's EDGAR database. The SEC began publicly releasing this correspondence in 2005 for filings made after August 1, 2004, that were reviewed by the SEC staff. SEC staff from the Divisions of Corporation Finance and Investment Management issues this type of comment letter in connection with their review of disclosure filings. The staff's comments are in response to a company's disclosure and other public information and are based on the staff's understanding of that company's facts and circumstances.

In issuing comments to a company, the staff may request that a company provide additional supplemental information so the staff can better understand the company's disclosure, revise disclosure in a document on file with the SEC, provide additional disclosure in a document on file with the SEC, or provide additional or different disclosures in a future filing with the SEC. There may be several rounds of letters from the SEC staff and responses from the filer until the issues identified in the review are resolved. These letters set forth staff positions and do not constitute an official expression of the SEC's views. The letters are limited to the specific facts of the filing in question and do not apply to other filings.

We have included this information for you to assist in identifying areas in company disclosures where additional scrutiny may be necessary when performing financial statement analysis. Although SEC comments apply specifically only to public companies, this highlights financial statement users' focus in general, which applies to private company financial statement users.

SEC Letter Focus Areas

Based on publications from PWC, Deloitte, and Audit Analytics, the most frequent SEC comment letters in 2021 and 2022 focused on the following areas:

1. Non-GAAP Financial Performance Measurements
2. Management's Discussion & Analysis (MD&A)
3. Segment Reporting
4. Risk Factors-Climate Change Matters
5. Revenue Recognition
6. Fair Value Measurements
7. Form Compliance and Exhibits
8. Disclosure Controls and ICFR
9. Inventory and Cost of Goods Sold
10. Debt, Quasi-Debt, Warrants, and Equity

Non-GAAP Financial Performance Measurements – This topic was the most frequently commented on topic by the SEC during 2021 and 2022. The comments addressed both 10-K and 10-Q filings as well as company press releases on Form 8-K.

- 10-K and 10-Q filings:
  - Non-GAAP performance and liquidity measurements presented more prominently than GAAP measurements
  - Non-GAAP performance and liquidity measurements not quantitatively reconciled with the most comparable GAAP measurements (net income or cash flows) – this reconciliation should begin with the GAAP measurement
  - Lack of appropriate disclosures concerning the purpose and use of non-GAAP measurements
  - Not distinguishing between non-GAAP performance and liquidity measurements
  - Inconsistent presentations when including unusual gains in a non-GAAP presentation but excluding unusual losses or excluding cash operating expenses from non-GAAP performance measures
  - The nature of certain adjustments potentially misleading or representing tailored accounting
  - Not presenting the tax impact of non-GAAP adjustments
- Press releases included in 8-K filings:
  - Adjustments to reported net income that eliminate normal recurring operating expenses in the non-GAAP measurement
  - Not properly describing the reasons for certain adjustments to a GAAP measurement when presenting a non-GAAP measurement

Management Discussion and Analysis (MD&A)

- Need to increase transparency about the following:
  - Material trends and uncertainties affecting financial performance and liquidity
  - Critical accounting estimates
  - Material contractual obligations
  - Liquidity and capital resources discussing drivers of cash flows
  - Metrics used by management in assessing performance
- In addition, the SEC staff indicated that special purpose acquisition companies (SPACs) and their targets should focus on the following issues in MD&A disclosures:

- Transitioning to public company disclosure requirements and U.S. GAAP for public business entities
- Determining the accounting acquirer
- Accounting for earn-out and compensation arrangements
- Accounting for complex financial instruments, specifically warrants

Segment Reporting

- How management identified and grouped operating segments
- Reasons for reportable segment changes
- Single reportable segment justification
- Revenue from external customers

Risk Factors-Climate Change Matters – The SEC staff began in 2021 commenting on the quality and adequacy of climate-related disclosures under existing SEC rules and regulations. These comments have been focused on information and disclosures related to climate change related risks and opportunities that should be considered in a company's description of business, legal proceedings, risk factors, and MD&A. Areas of emphasis in these comment letters include:

- Inconsistencies between a company's corporate responsibility report and it submitted financial statements
- The lack of relevant disclosure in the company's financial statements related to risks, trends, and impact of climate change for the company and its business
- The lack of disclosure concerning existing or proposed climate related legislation and/or regulations that could have a material effect on the company's business

In addition, the SEC has created a sample comment letter with sample comments that companies should take into consideration as they prepare disclosure documents for climate change disclosures.

SAMPLE LETTER

General:

1. *We note that you provided more expansive disclosure in your corporate social responsibility report (CSR report) than you provided in your SEC filings. Please advise us what consideration you gave to providing the same type of climate-related disclosure in your SEC filings as you provided in your CSR report.*

Risk Factors:

1. *Disclose the material effects of transition risks related to climate change that may affect your business, financial condition, and results of operations, such as policy and regulatory changes that could impose*

operational and compliance burdens, market trends that may alter business opportunities, credit risks, or technological changes.

2. *Disclose any material litigation risks related to climate change and explain the potential impact to the company.*

Management's Discussion and Analysis of Financial Condition and Results of Operations:

1. *There have been significant developments in federal and state legislation and regulation and international accords regarding climate change that you have not discussed in your filing. Please revise your disclosure to identify material pending or existing climate change-related legislation, regulations, and international accords and describe any material effect on your business, financial condition, and results of operations.*
2. *Revise your disclosure to identify any material past and/or future capital expenditures for climate-related projects. If material, please quantify these expenditures.*
3. *To the extent material, discuss the indirect consequences of climate-related regulation or business trends, such as the following:*
    - *Decreased demand for goods or services that produce significant greenhouse gas emissions or are related to carbon-based energy sources;*
    - *Increased demand for goods that result in lower emissions than competing products;*
    - *Increased competition to develop innovative new products that result in lower emissions;*
    - *Increased demand for generation and transmission of energy from alternative energy sources; and*
    - *Any anticipated reputational risks resulting from operations or products that produce material greenhouse gas emissions.*
4. *If material, discuss the physical effects of climate change on your operations and results. This disclosure may include the following:*
    - *Severity of weather, such as floods, hurricanes, sea levels, arability of farmland, extreme fires, and water availability and quality;*
    - *Quantification of material weather-related damages to your property or operations;*
    - *Potential for indirect weather-related impacts that have affected or may affect your major customers or suppliers;*
    - *Decreased agricultural production capacity in areas affected by drought or other weather-related changes; and*
    - *Any weather-related impacts on the cost or availability of insurance.*
5. *Quantify any material increased compliance costs related to climate change.*
6. *If material, provide disclosure about your purchase or sale of carbon credits or offsets and any material effects on your business, financial condition, and results of operations.*

Revenue Recognition

- Recognizing revenue as to the timing of the transfer of control
- Disclose significant management judgments, including the disaggregation of revenue
- Performance obligation determination and disclosing unfulfilled amounts
- Transaction price determination and allocation, including variable consideration
- Revenue breakdown into different reporting categories
- Gross vs. net presentation

Fair Value Measurements – Primarily addressing fair value disclosures as required by Subtopic 820-10-50-2 in *Fair Value Measurements.*

- Disclosure lacking information about valuation techniques and inputs used to measure fair value
  - Recurring and non-recurring measurement disclosure
- For Level 3 inputs, lack of specific disclosure concerning valuation techniques and inputs for significant unobservable inputs used in measuring fair value
- Lack of or incomplete disclosure (narrative description) of Level 3 sensitivity measurements for changes in unobservable

Form Compliance and Exhibits

- The lack of required disclosures related to management's report on internal control over financial reporting
- The lack of required certifications
- Errors in dates or references included in submitted certifications
- Errors in dates or references included in submitted agreements

Disclosure Controls over Financial Reporting – SEC comments concerning internal control over financial reporting and disclosures include the following:

- Management's disclosure concerning the effectiveness of internal control over financial reporting and disclosure controls and procedures – must have an explicit conclusion
- Failure to disclose material changes to internal controls
- Inadequate descriptions of internal control failures
- Failure to disclose the nature and timely identification of material weaknesses
- Lack of disclosure about the status of remediation of a previously identified material weakness

- The lack of disclosure concerning changes in internal controls after a significant event takes place that should impact internal controls

Inventory and Cost of Goods Sold

- Accounting policy disclosures regarding inventory valuation, specifically valuation changes in determining excess and obsolete inventories.

- Disclosure about the types of expenses that are included in or excluded from cost of sales in arriving at gross profit, as well as the types of expenses included in or excluded from operating expenses.

Debt, Quasi-Debt, Warrants, and Equity – The SEC staff are increasingly concerned about restatements and revisions of financial statements due to errors in the application of GAAP guidance when significant estimates are required in the areas of debt and equity. Example comments have focused on the following areas:

- Debt or equity classification when conversion and redemption options exist

- Support documentation for the classification of financing transactions when debt is extinguished or modified

- Terms of debt agreements

SEC comments that have been prominent in the past are as follows:

Acquisitions, Mergers, and Business Combinations – The comments for this topic are primarily discussing business combination disclosures. Topic 805, *Business Combinations*, includes the disclosures required for an acquisition, merger, and business combination.

- Present a schedule identifying the components of the consideration transferred for the acquisition

- When goodwill is a significant portion of the consideration transferred, the SEC will often ask for a qualitative discussion of the factors that make up the amount of goodwill recognized

- How was the acquisition price allocated to the net assets acquired?

- What are the primary reasons for the business combination and a description of how the acquirer obtained control of the acquired (Subtopic 805-10-50-2)?

- What is the nature of any contingent consideration and the basis for estimating the amount of any future payments?

- Pro forma information is required assuming the business acquisition occurred at the beginning of the reporting period. Pro forma disclosures are at times not provided and when this occurs the SEC requires its disclosure

- SEC often comments as to how the company determined that the acquisition was that of a business and not simply an asset acquisition

Intangible Assets and Goodwill – SEC comments related to goodwill are found both in MD&A disclosures and financial statement notes.

- Goodwill impairment disclosures, such as early-warning signals and the specific events and circumstances (versus general market conditions) that led to the impairment write-off in the period
  - Known trends or uncertainties that caused or may reasonably be expected to have a material favorable or unfavorable impact on revenues or income (Regulation S-K – Item 303(a)(3)(ii))
  - Disclosure of known events that may cause a material change in the relationship between costs and revenue
- Disclosure about asset groupings (reporting unit composition) for goodwill impairment testing
- If performing an interim impairment test, the reasons that caused this interim test and the results of any such interim impairment test.
- Intangible assets newly recognized in a business combination
  - Useful lives of identified intangible assets
  - Method of determining fair value
- Disclosing goodwill impairment testing policies
- Sensitivity analysis performed, including the assumptions used in goodwill impairment testing and how assumption changes could affect the goodwill impairment results
- What future events could lead to future goodwill impairments

Loss Contingencies – Accounting and disclosure guidance for loss contingencies is found in Topic 450, *Contingencies*. In that guidance, contingent losses are evaluated to be probable, reasonably possible, or remote. "Probable" must be recorded and disclosed and "reasonably possible" must be disclosed (including an estimate of the loss or range of loss if that estimate can be made. The primary area of SEC comments is with reasonably possible loss contingencies.

- Lack of adequate disclosures concerning reasonably possible losses, including the timeliness of the loss contingency disclosures (nature and estimate of the possible loss or range of loss or a statement that such an estimate cannot be made)
- When a company indicates that an estimate of a reasonably possible loss or range of loss cannot be made, the SEC has asked why this is the case
- When historical contingent losses have been settled, the SEC wants to know why these settlements cannot be used to arrive at an estimate of a current loss contingency

Related Party Transactions – Regulation S-K – Item 404, *Transactions with Related Persons, Promoters, and Certain Control Persons*, is the principal guidance in the related party area. This item requires disclosure of *any transaction, since the beginning of the registrant's last fiscal year, or any currently proposed transaction, in which the registrant was or is to be a participant and the amount involved exceeds $120,000, and in*

which any related person had or will have a direct or indirect material interest. The principal comments in this area include the following:

- Asking the company to provide a description of the transaction or proposed transaction including the nature of the transaction both in qualitative and quantitative terms

- Based on a review of other note disclosures, the SEC may ask for information of any new contracts or other agreements that could include related party activity

Income Taxes – Primarily addresses the realizability of deferred tax assets and changes in the valuation allowance. Deferred tax assets are presented when it is more likely than not that all or a portion of the deferred tax asset will be realized as required in Subtopic740-10-30-18 in *Income Taxes*.

- Why does a deferred tax asset continue to be presented when there has been past and current losses recognized (realizability)?

- How was positive and negative evidence weighed when assessing realizability of a deferred tax asset (future taxable income)?

- Were the assumptions used to determine future taxable income for determining the realizability of deferred tax assets consistent with the cash flow assumptions associated with impairment analysis, useful lives of property, plant & equipment and other related predictions?

- Calculation of the valuation allowance when evidence suggests it should be increased or decreased

- Lack of support for the reversal of an existing valuation allowance

- What is the basis for recognizing unrecognized tax benefits?

- Disclosures required by Subtopic 740-10-50-15 concerning unrecognized tax benefits including the nature of the uncertainty, and the nature of any event that could occur in the next 12 months that could cause a change in the liability

3

A Closer Look at Financial Statements

LEARNING OBJECTIVES

After completing this unit, participants will be able to accomplish the following.

- Describe external financial reporting trends and characteristics.
- Explain how management's judgment can have an impact on financial reporting.
- Describe the result of applying different bases of accounting on financial reporting outcomes.

INTRODUCTION

For more than a decade, accounting standard-setters such as the FASB and AICPA have been emphasizing specific **external financial reporting trends and characteristics** in their authoritative literature that can influence the financial analysis approaches used by many users. These characteristics include:

- **Increased balance sheet emphasis** when addressing emerging accounting issues. The FASB for example, has been placing greater focus on **asset realization and liability recognition** than on the matching of revenues and expenses. Examples include ASC Topics Topic 320, *Investments – Debt and Equity Securities*, Topic 350, *Intangibles – Goodwill and Other*, Topic 360, *Property, Plant, and Equipment*, Topic 740, *Income Taxes*, and Topic 820, *Fair Value Measurement and Disclosures*.

- **Increased use of fair value** for measuring assets and liabilities. Fair value is replacing historical cost as the measurement method for many assets and liabilities. The FASB believes that changes in asset and liability values not only occur from operational activities but also from changes in economic value. Examples include ASC Topics such as Topic 805, *Business Combinations*, Topic 815, *Derivatives and Hedging*, Topic 820, *Fair Value Measurement and Disclosures,* and Topic 825, *Financial Instruments*. To take this further, in Topic 820 the FASB stated its intention to issue future standards utilizing the fair value methodology illustrated in Topic 820.

- **Increased consistency with international accounting standards**. The SEC and FASB are generally working to converge GAAP in the United States with international accounting standards (at least as it relates to major new standards such as the previously released revenue recognition standards and lease accounting standards). The goal is to improve overall financial reporting and create accounting consistencies by reducing many differences that currently exist in

accounting standards spanning nearly 165 different countries. Examples include redefining the basis for consolidation, accounting for financial instruments, presenting comprehensive income, establishing a new conceptual framework for developing future accounting standards, and revamping the accounting for leases and revenue recognition.

- **Increased financial statement disclosures**. With Topics such as Topic 275, *Risks and Uncertainties*, and Topic 820, *Fair Value Measurement and Disclosures,* the FASB requires additional disclosures to identify a reporting entity's business risks (concentrations of risk, significant estimates, etc.), and identify the sources of changes in asset and liability fair values.

- **Increased principles-based and decreased rules-based new guidance**. The Sarbanes-Oxley Act required that the SEC conduct a feasibility study of implementing a principles-based approach to accounting. In addition, IFRS is primarily principle-based, and the FASB/IASB convergence initiative is also driving the change from rules-based principles.

  Principles-based accounting results in significantly greater judgment by preparers of financial statements. Because of this greater judgment, disclosures need to increase substantially so that the decision inputs of preparers are available to financial statement users. Examples are Topic 606, *Revenue from Contracts with Customers*, and Topic 842, *Leases*.

- **Increased financial accounting and reporting complexity.** In spite of well-publicized FASB and SEC financial accounting and reporting simplification initiatives, it should be no surprise that accounting standards continue to become more complex. A Wall Street Journal article a few years ago reported that the average 10K contained 42,000 words in 2013 which was a 40% increase from 30,000 words in 2000.

There are several drivers behind the increasing complexity which, despite the Financial Accounting Foundation's (FAF) Private Company Counsel (PCC), also impacts non-public entity financial reporting. Transactions are becoming more complex as new products and services emerge and financial instruments become more sophisticated. Many entities are developing new transaction structures for asset sales or purchases, derivative transactions, and operating agreements. Institutional investors' demand more information has resulted in greater disclosure requirements to provide more transparency.

The impact on users is that overly complex financial reports may obscure important financial information needed to properly analyze financial statements and reach appropriate decisions.

These trends and characteristics illustrate the belief of many in the marketplace that users have become less interested in historical cost information, and are more interested in having **financial statement information that provides more assistance with future decision making as well as for measuring past performance.**

FASB Financial Statement Presentation Project

Since 2010 when the FASB posted its "Staff Draft" *Financial Statement Presentation Project*, not much has happened due to other priorities. The "Staff Draft" is not as significant as an Exposure Draft; however, it signals the FASB's thinking about financial statement presentation which may underpin future pronouncements. We mention this project because it would have made fundamental changes to financial statements and would have impacted the user's analysis of these financial statements. However, this project was originally a joint convergence initiative with the IASB, and that initiative has largely ended.

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MANAGEMENT JUDGMENT AND ITS IMPLICATIONS ON FINANCIAL REPORTING

As an insider, management has greater access than outsiders to information about an entity's present financial condition and operating performance as well as future strategy and outlook. Thus, management has broad discretion to the degree of financial reporting and disclosure transparency. Management can enhance its financial reporting transparency or make it more difficult for users to understand the true financial condition and operating performance and more difficult for users to assess the amount, timing, and uncertainty of future cash flows.

Management judgment can influence financial reporting through 1) earnings management, 2) management bias, and 3) opaque footnote disclosure. Management must use significant judgment in estimating, measuring, classifying, reporting, and disclosing economic events such as transactions, accruals, reserves, impairments, and contingencies, to name a few. **Management actions that affect the numbers also affect financial statement analysis.**

Earnings management – "Earnings management" is defined as situations when management uses its accounting judgment and disclosure discretion to produce financial statements that position entity performance in a predetermined viewpoint. The earnings management spectrum extends from aggressive accounting that still complies with GAAP to "bending the rules" to extreme cases of financial fraud. The sheer magnitude of earnings restatements beginning during the 2000s highlights the vulnerability of financial statements to manipulation.

Earnings management is broader than the income statement. It actually includes the three major financial statements. In fact, most earnings management also includes the balance sheet management – examples are capitalizing expenses or reserve management. An example of managing the statement of cash flows is reclassifying cash inflows from investing or financing activities into operating activities.

Large public companies are especially motivated to overstate assets and earnings in order to increase EPS and present a favorable picture to shareholders. Selfishly, this also favorably impacts incentive compensation. Private companies, on the other hand, are typically motivated to understate assets and earnings in order to reduce tax payments. In other cases, recurring financial trends and ratios will appear more consistent than they really are. Consistency tends to create misplaced complacency among financial statement users.

It is of great concern to users when financial gymnastics minimizes bad news which, in turn, results in management complacency in denying or understating true operational problems that truly exist. The outcome is that management neither acknowledges nor fixes fundamental business problems until it is too late.

Companies that report strong profits in some industries may receive unfavorable media coverage or government regulatory attention about unfair profits. Examples are banking, electric and gas utilities, pharmaceuticals, and oil companies. These companies have an incentive to dampen reported profits to avoid costly public backlash or government pressures.

Management may have selfish reasons for making reported earnings look less favorable. In a management leverage buy out (LBO), management would acquire all of the outstanding stock of the

company. By making the company appear less profitable, management would lower the valuation and be able to buyout the entity at a lower price.

EXAMPLE

When Dell instituted a management buyout of all publicly traded stock, many in the market believed the buyout price set by management was under-valued. Below is media coverage at one stage in the buyout process. The point is not the legal process and subsequent appeals, but that management, due to its insider status, has better information than outsiders in the equity market.

By *REUTERS*

May 31, 2016

Michael Dell and Silver Lake Partners underpriced their 2013 $24.9 billion buyout of Dell by about 22% and may have to pay tens of millions to investors who opposed the deal for the computer maker, a Delaware judge ruled on Tuesday.

The fair value of Dell's stock at the time of the buyout was $17.62 per share, not the original price of $13.75 per share, according to Delaware Vice Chancellor Travis Laster.

The 114-page ruling stems from one of the most hotly contested appraisal cases, a legal strategy that has become a popular way for specialized investment funds to squeeze added cash out of merger deals.

Scores of investors who voted against the deal filed a lawsuit in Delaware's Court of Chancery, asking the court to determine the fair value of the stock.

The investors originally sought appraisal on nearly 40 million shares and some claimed a fair value was as high as $25 per share.

Monday's ruling, which can be appealed, could add tens of millions of dollars to the final cost of the deal for the buyers. Based on court documents filed in September, about 5.2 million shares were still eligible for appraisal. The investors are also eligible for interest that began accruing when the deal closed.

The damage could have been far worse for Dell.

During the litigation, Dell's legal team knocked out the bulk of the stock seeking appraisal, which had been beneficially owned by T Rowe Price.

The money manager could have collected more than $100 million from Monday's ruling, if all of its Dell stock had qualified for appraisal.

Dell and a lawyer for the stockholders, Stuart Grant, did not immediately respond to a request for comment.

When most financial statement users hear about earnings management, they typically think of overstated earnings. Most earnings management, however, extend well beyond the income statement. Following are some frequent **earnings management schemes** and their detectability using financial analytical techniques:

- **"When it rains, it pours"** – is a form of earnings management where in a year with poor financial and operating performance, the entity "drains the swamp" and understates earnings further. Using judgment, management defers revenues, makes more conservative liability estimates, accelerates expense accruals, increases reserves, or over impairs assets. In future years,

the deferred revenues will naturally flow into the income statement or the newly-lower-valued assets will naturally flow through expense at reduced amounts and boost profitability.

- **"Cookie jar accounting"** – is a form of the above example. The difference is that the conservative judgments used to justify balances when filling the cookie jar are deliberately changed in future periods which empties the accounting reserve cookie jar.

EXAMPLE

During a good year with higher sales volume than prior year and budget, a company increased its warranty reserve liability. This increased warranty expense and reduced reported income. A few years later when the overall economy was in a recession causing sales volume and profits to fall, the company "discovered" that its warranty reserve liability was too high and decided to correct it. This produced lower net warranty expense and higher income than operations would normally generate.

The effect was to smooth earnings over a longer period giving the false impression to financial statement users that the company had lower volatility and, thus, was less risky. A less risky company will have a higher valuation.

A good financial analyst could detect this earnings manipulation by reading the notes to the financial statements. Topic 460, *Guarantees*, requires disclosing a roll forward of the warranty reserve liability.

- **"Banking next year's bonus"** – is a form of the above two schemes. The difference is that it often occurs when financial and operating performance is very favorable. The reasons are management selfishness and incentive compensation plan design. These plans often have a ceiling; thus, any performance above the ceiling is "wasted" according to management because bonuses are capped at a certain threshold. In addition, incentive compensation plans for the next year generally have a floor that is set by the prior-year performance. By purposely delaying sales and profit, next year's floor is lower which means next year's bonus is already partly achieved.

Conservatism has long been part of accounting and financial reporting practices. There is a big difference, however, between conservatism and deliberate understatement. Delaying income recognition due to uncertainty is conservative; fabricating a liability that does not exist or overstating an existing liability is not conservative and is wrong. It is also wrong in subsequent periods when reversing the overstated liability to boost income without also fully disclosing the impact of liability changes so that financial statement users can assess true operating performance.

By improperly using accounting to smooth operating performance over time also impacts entity valuation. This misleads financial statement users to assess incorrectly that the entity's business and underlying industry economics are less risky than they are in reality.

A good financial analyst can detect these income statement schemes through financial statement horizontal analysis and vertical analysis for individual line items. For example, trending the allowance for doubtful accounts as a percent of accounts receivable and as a percent of sales over several years. As long as the reporting entity provides "full and fair" disclosure, it is up to the financial statement user to perform their reasonable diligence and research business, economic, financial, and accounting that they do not understand.

The hidden downside of the income statement schemes above is that they reduce net worth and many debt agreements have a minimum net worth covenant which may become endangered. Also on the balance sheet, asset turnover is boosted which inaccurately indicates greater operating efficiency.

The FASB also addresses off balance sheet financing through two of its ASC Topics. This includes Topic 860, *Transfers and Servicing*, covers guidance on accounting, presentation, and disclosure of repurchase agreements as well as Topic 842, *Leases*, that effectively eliminated most off-balance-sheet-financing through operating leases. However, short-term leases with lease terms not too exceed 12 months can still be kept off-balance sheet.

Management bias. FASB Concepts Statement No. 8, *Conceptual Framework for Financial Reporting*, issued in 2010, defines reliability as "information that is reasonably free from error and bias and faithfully represents what it purports to represent." Although many people refer to bias as being intentional, FASB's reliability definition includes the possibility that accounting information may be affected by bias that is "not necessarily intended."

AU-C Section 540, *Auditing Accounting Estimates, Including Fair Value Accounting Estimates, and Related Disclosures*, is consistent with FASB CON Statement No. 8. This auditing guidance mentions the imprecise nature of accounting estimates and management judgment may be intentional or unintentional.

COSO, in March 2012, published *Enhancing Board Oversight – Avoiding Judgment Traps and Biases.* In this report, COSO focused on four mental-shortcut tendencies that can lead to bias:

1. **Overconfidence bias** – especially relevant to the C-Suite is that confidence grows more rapidly with experience than competence does. This means the most confident people have the most experience. The impact on bias is that management may overestimate future growth and profitability as well as may underestimate risk and thus neglect to plan for adverse scenarios.

2. **Confirmation bias** – putting more weight on information that aligns with their initial beliefs to the detriment of objectivity by looking for information that may be inconsistent with their beliefs.

3. **Anchoring bias** – making judgments by starting from an initial numerical value and adjusting insufficiently away from that initial value in assessing the situation. Generally, the initial numerical value is unsubstantiated or comes from historical precedent or past experience.

4. **Availability tendency bias** – relying more on information that is easily obtainable in making a decision. This may be from memory or from immediately accessible sources and influence estimates or probability assessments.

Opaque note disclosures – Significant matters "buried" in the footnotes must be considered in performing meaningful financial analysis. An interesting example of this is Enron's incomprehensible year 2000 related-party disclosure footnote. Fortunately, there are not more recent examples of such opaque footnote disclosure.

EXAMPLE

ENRON'S RELATED PARTY FOOTNOTE – 2000

RELATED PARTY TRANSACTIONS

In 2000 and 1999, Enron entered into transactions with limited partnerships (the Related Party) whose general partner's managing member is a senior officer of Enron. The limited partners of the Related Party are unrelated to Enron. Management believes that the terms of the transactions with the Related Party were reasonable compared to those which could have been negotiated with unrelated third parties.

In 2000, Enron entered into transactions with the Related Party to hedge certain merchant investments and other assets. As part of the transactions, Enron (i) contributed to newly-formed entities (the Entities) assets valued at approximately $1.2 billion, including $150 million in Enron notes payable, 3.7 million restricted shares of outstanding Enron common stock and the right to receive up to 18.0 million shares of outstanding Enron common stock in March 2003 (subject to certain conditions) and (ii) transferred to the Entities assets valued at approximately $309 million, including a $50 million note payable and an investment in an entity that indirectly holds warrants convertible into common stock of an Enron equity method investee. In return, Enron received economic interest for the Entities, $309 million in notes receivable, of which $259 million is recorded at Enron's carryover basis of zero, and a special distribution from the Entities in the form of $1.2 billion in notes receivable, subject to changes in the principal for amounts payable by Enron in connection with the execution of additional derivative instruments. Cash in these Entities of $172.6 million is invested in Enron demand notes. In addition, Enron paid $123 million to purchase share-settled options from the Entities on 21.7 million shares of Enron common stock. The Entities paid Enron $10.7 million to terminate the share-settled options on 14.6 million shares of Enron common stock outstanding.

In late 2000, Enron entered into share-settled collar arrangements with the Entities on 15.4 million shares of Enron common stock. Such arrangements will be accounted for as equity transactions when settled.

In 2000, Enron entered into derivative transactions with the Entities with a combined notional amount of approximately $2.1 billion to hedge certain merchant investment and other assets. Enron's notes receivable balance was reduced by $36 million as a result of premiums owed on derivative transactions. Enron recognized revenues of approximately $500 million related to the subsequent change in the market value of these derivatives, which offset market value changes of certain merchant investments and price risk management activities. In addition, Enron recognized $44.5 million and $14.1 million of interest income and interest expense, respectively, on the notes receivable from and payable to the Entities.

In 1999, Enron entered into a series of transactions involving a third party and the Related Party. The effect of the transactions was (i) Enron and the third party amended certain forward contracts to purchase shares of Enron common stock, resulting in Enron having forward contracts to purchase Enron common shares at the market price on that day, (ii) the Related Party received 6.8 million shares of Enron common stock subject to certain restrictions and (iii) Enron received a note receivable, which was repaid in December 1999, and certain financial instruments hedging an investment held by Enron.

Enron recorded the assets received and equity issued at estimated fair value. In connection with the transactions, the Related Party agreed that the senior officer of Enron would have no pecuniary interest in such Enron common shares and would be restricted from voting on matters related to such shares. In 2000, Enron and the Related Party entered into an agreement to terminate certain financial instruments that had been entered into during 1999. In connection with this agreement, Enron received approximately 3.1 million shares of Enron common stock held by the Related Party. A put option, which was originally entered into in the first quarter of 2000 and gave the Related Party the right to sell shares of Enron common stock to Enron at a strike price of $71.31 per share, was terminated under this agreement. In return, Enron paid approximately $26.8 million to the Related Party.

In 2000, Enron sold a portion of its dark fiber inventory to the Related Party in exchange for $30 million cash and a $70 million note receivable that was subsequently repaid. Enron recognized gross margin of $67 million on the sale.

In 2000, the Related Party acquired, through securitizations, approximately $35 million of merchant investments from Enron. In addition, Enron and the Related Party formed partnerships in which Enron contributed cash and assets and the Related Party contributed $17.5 million in cash. Subsequently, Enron sold a portion of its interest in the partnership through securitizations. See Note 3. Also, Enron contributed a put option to a trust in which the Related Party and Whitewing hold equity and debt interests. At December 31, 2000, the fair value of the put option was a $36 million loss to Enron.

In 1999, the Related Party acquired approximately $371 million of merchant assets and investments and other assets from Enron. Enron recognized pre-tax gains of approximately $16 million related to these transactions. The Related Party also entered into an agreement to acquire Enron's interests in an unconsolidated equity affiliate for approximately $34 million.

We publish the older Enron story because it is such a classic example of financial reporting abuse. Topic 810, *Consolidation* (subtopic – *Variable Interest Entities*), is the profession's response to the accounting standards' "loophole" that was exploited by Enron to avoid consolidating related entities that held underperforming assets and debt.

ACCOUNTING BASIS

This section covers the GAAP accounting framework in FASB CON No. 8 (Chapter 4) and non-GAAP special purpose frameworks.

Elements of Financial Statements

Elements of financial statements are the building blocks that construct financial statements which are the classes of items that comprise financial statements. The items in financial statements represent the entity resources, claims to those resources, and the effects of transactions, other events, and circumstances that produce changes in those resources and claims.

FASB CON No. 8 (Chapter 4) defines the following ten most commonly identified financial statement elements that are directly related to measuring performance and status of an entity. These elements have broad characteristics as the FASB does not define particular assets, liabilities, and etc.

1. Assets	6. Comprehensive Income
2. Liabilities	7. Revenues
3. Equity	8. Expenses
4. Investments by Owners	9. Gains
5. Distributions to Owners	10. Losses

These financial statement elements consist of two types, analogous to a photograph and a motion picture. Assets, liabilities, and equity are the photograph at a moment in time comprising the statement of financial position or balance sheet. The other seven are the motion picture that affect an entity during intervals of time comprising changes in financial position or income statement and statement of cash flows.

Following are definitions and characteristics of each financial statement element listed above.

1. **Assets** are a present right of an entity to an economic benefit. An asset has two essential characteristics:

   a. It is a present right.

   b. The right is to an economic benefit.

From an economics perspective, assets are commonly called economic resources because they are the scarce means for carrying out economic activities of consumption, production, and exchange.

The resulting "future economic benefit" is the scarce capacity to provide services or benefits, which, in a for-profit business, is eventual net cash inflows.

Asset values change both from transactions and from events that happen to the entity. Transactions are 1) obtaining cash or other assets from other entities or 2) transferring cash and other assets to other entities.

Events are operations adding value to noncash assets by directly using, combining, or transforming goods and services to make other goods or services. Events may also be indirectly non-controllable such as a value change caused by market conditions, technology changes, natural disaster, or government regulatory actions.

Uncertainty about business and economic activity is common and may make it unclear about the measurement of an asset. Thus, management judgment is frequently required. Uncertainty about the future economic benefits of an asset requires management judgment. Examples are an asset's residual value, estimated economic useful life, impairment, realization, or collectability. Other examples are the requirement to expense advertising and research & development costs.

Once acquired, an asset continues to exist until the entity collects it, transfers it to another entity, uses it up, or an event destroys the future benefit or removes the entity's ability to obtain the future benefit.

2. **Liabilities** are a present obligation of an entity to transfer an economic benefit. A liability has two essential characteristics:

    a. It is a present obligation.

    b. The obligation requires an entity to transfer or otherwise provide economic benefits to others.

    Most liabilities result from human inventions such as financial instruments, contracts, and laws. Liabilities are claims to the entity's assets by other entities, and once incurred, create nondiscretionary future sacrifices of assets that must be satisfied on demand, at a specified or determinable date, or on occurrence of an event. From an economic perspective, liabilities facilitate the functioning economy by permitting delays in payment or delivery.

    Entities incur most liabilities from agreed-upon exchange transactions to obtain needed resources. These are legally enforceable, contractual liabilities based on written or oral agreements to pay cash or provide goods or services. Other non-transactional liabilities may be imposed by governments or courts.

    Liability values change both from transactions and from events that happen to the entity as described in the previous paragraph. Events may also be indirectly non-controllable such as a value change caused by market conditions such as interest rate changes, government regulatory actions, or court actions.

Uncertainty about business and economic activity is common and may make it unclear whether an event qualifies as a liability. Both the existence and the amount of a liability can be probable but not certain. An example is a contingent liability governed by Topic 450, *Contingencies*.

Once incurred, a liability continues to exist until the entity settles it or an event discharges it.

3. **Equity** (also referred to as net assets) is the residual interest in the assets of an entity that remains after deducting its liabilities. In a for-profit business enterprise, the equity is the ownership interest. (In a not-for-profit organization, which has no ownership interest in the same sense as a business enterprise, net assets is defined differently.)

   Assets are funded by both liabilities and equity, but their claims on the assets are mutually exclusive. Liabilities are claims against the entity's assets while equity is a residual interest of what remains after liabilities are deducted from assets. Since in liquidation, equity ranks after liabilities as a claim to or interest in the entity's assets, equity is a residual interest.

   Although the difference between equity and liabilities may be conceptually clear, in practice it may be obscured. Financial instruments may have characteristics of both liabilities and equity to varying degrees depending on the terms. In addition, naming of financial instruments may not accurately describe its true characteristics. Examples are convertible debt, preferred stock, and warrants.

   Equity values may change through 1) operations generating a profit or a loss or 2) through owners' asset investments or distributions to owners. Liabilities have required payments or settlements, such as debt interest. Owner distributions, such as dividends, however, are discretionary or may be restricted by law, regulation, or agreement.

4. **Investments by owners** increases in equity of an entity resulting from transfers to the entity from other entities of something valuable to obtain or increase ownership interests (or equity) in the entity. Assets are most commonly received as investments by owners, but investments may also include services or liability conversion.

5. **Distributions to owners** are decreases in equity of a business enterprise resulting from transferring assets, rendering services, or the entity incurring liabilities to owners. Distributions to owners decrease ownership interest (or equity) in an entity.

6. **Comprehensive income** is the change in equity of a business entity during a period from transactions and other events and circumstances from nonowner sources.

   Topic 220, *Comprehensive Income*, provides guidance on this topic.

7. **Revenues** are inflows, other asset enhancements, or liability settlements from delivering or producing goods, rendering services, or conducting other activities constituting the entity's operations.

   Revenues represent actual or expected cash inflows that have occurred or will occur as a result of the entity's operations. Revenues increase assets in various forms, such as cash, claims against customers (accounts receivable), or non-cash goods or services received.

8. **Expenses** are outflows, using up assets, or incurring liabilities from delivering or producing goods, rendering services, or conducting other activities constituting the entity's operations.

Expenses are actual or expected cash outflows that have occurred or will eventually occur as a result of the entity's operations. The assets that flow out are used up, or the liabilities incurred may be different types. Examples are units of product produced and delivered, employee services used, equipment used, electric kilowatt hours consumed, or income taxes, etc. Similarly, the transactions or events producing expenses are called cost of goods sold, cost of services provided, depreciation expense, utility expense, rent expense, income tax expense, etc.

9. **Gains** are equity increases from peripheral or incidental transactions and from all other transactions and other events affecting the entity except those that result from revenues or investments by owners.

10. **Losses** are equity decreases from peripheral or incidental transactions and from all other transactions and other events affecting the entity except those that result from expenses or distributions to owners.

    Gains and losses classification as operating or non-operating depends on their relation to the entity's operations. Operating classification examples are asset impairment or writing down inventory to lower of cost or market. Non-operating classification depends on peripheral transactions to operations. Examples of peripheral transactions are sales of marketable security investments, dispositions of used equipment, or settling a liability at less than its carrying value.

    Revenues and gains are similar, as are expenses and losses. There are, however, differences in the information conveyed. Revenues and expenses result from ongoing operations and are displayed as gross inflows or outflows. In contrast, gains and losses generally result from incidental or peripheral transactions and are displayed as net inflows or outflows, primarily classified as non-operating.

    The nature of ongoing operations establishes operating versus non-operating classification. Items that are revenues and expenses for one entity may be gains or losses for another entity.

EXAMPLE

Transactions from investments in financial instruments will produce operating revenues and expenses for financial institutions but non-operating gains and losses for a manufacturer.

EXAMPLE

Technological changes will be operating revenue and expense for high technology and research & development entities but non-operating gains and losses for most other entity types.

EXAMPLE

Commodity price changes and foreign currency exchange rate changes occurring during periods of asset production or liabilities owned may directly or indirectly affect the amounts of revenues or expenses. However, these items are only sources of revenues and expenses for entities whose operations trade in foreign currencies or commodities.

Special Purpose Frameworks

This section introduces the accounting concept of special purpose frameworks and the types of special purpose frameworks (SPF).

Special purpose frameworks (SPFs) are designed to be **alternatives to U.S. GAAP** primarily for non-public or private entities. Special purpose frameworks have an accounting or financial reporting foundation based on concepts different than generally accepted accounting principles (GAAP). These foundations include:

- Tax basis – foundation is tax law
- Financial Reporting Framework for SMEs – simplified system jointly developed by The AICPA and the Canadian Institute of Chartered Accountants
- Cash and modified cash basis – foundation is cash receipts and cash disbursements
- Contractual basis – foundation is the related contract
- Regulatory basis – foundation is the related regulation

The Tax Basis (often referred to as "Income Tax Basis") of accounting is a basis of accounting that the reporting entity uses to file its U.S. federal income tax return for the period covered by the financial statements. Accordingly, the framework for recognition and measurement of amounts and results are defined in the United States Internal Revenue Code (IRC). Prescribed disclosures, thus, are set forth as to providing meaningful and informative context while defining and describing the specific bases for income tax accounting recognition and measurement.

The practitioner must first consider whether utilization of the Tax Basis might be misleading to the users of financial statements. We will look at the applicable attributes of tax basis reporting and disclosure, attest and non-attest engagement considerations, and other aspects that represent compliance with the framework, and which must be considered in assessing the appropriateness of the reporting framework.

Since tax law may vary from year to year based on economic and political goals of the federal administration, proper knowledge and application of, and related disclosure of changes impacting comparability is also crucial (such as expiring special accelerating depreciation provisions, tax credits, or re-codified capitalization and expense guidance as provided in the 2014 Tangible Property Regulations).

FRF for SMEs is an AICPA initiative to create an additional special purpose framework as an alternative to U.S. GAAP.

The FRF for SMEs document is designed to be a self-contained and standalone framework, providing comprehensive guidance pertaining to the accounting principles intended to be the most appropriate for the preparation of smaller businesses' financial statements, and based on the needs of bankers and other users, and focuses on the performance of the company and its assets, liabilities and cash flows.

The AICPA produced the framework as a blend of traditional accounting principles combined with accrual income tax accounting so as to provide a familiar and intuitive reporting that should be easier understood by lenders, insurers, and other users of financial statements.

FRF for SMEs was developed as a special purpose framework (SPF) intended for small- to medium-sized entities that require reliable and comparable financial statements for internal and external use, and such financial statements are not required to be prepared in accordance with U.S. GAAP. While there is not a definitive measure of whether an entity is an SME, the framework does identify specific characteristic indicators of an entity that would meet the guidance associated with an SME, and thus provide a basis for consideration for management the option to adopt FRF for SMEs as the accounting and reporting framework. Some of these characteristics include:

- The entity does not have regulatory reporting requirements that would essentially require GAAP financial statements.
- The majority of the owners and management do not intend to take the company "public."
- The entity is for-profit.
- The entity is generally owner-managed (a closely-held enterprise in which the people who own a controlling interest are substantially the same people who manage/run the business).
- Management/owners rely on financial statements to assess performance, cash flows, and managing assets and obligations (liabilities).
- The entity is not in an industry involved in transactions requiring highly specialized accounting guidance (such as financial institutions or governmental entities).
- Does not engage in overly complicated transactions.
- Does not have significant foreign operations.
- The key users of the entity's financial statements have direct access to management and additional, supplemental financial data.
- The users of the entity's financial statements have a greater interest in cash flows, liquidity, financial position strength, and interest coverage.

The financial statements support applications for bank financing when the banker does not base a lending decision solely on the financial statements but also on available collateral, guarantees, and/or other evaluative mechanisms not directly related to the financial statements.

The Cash Basis of accounting is a basis of accounting that the reporting entity uses to record cash receipts and cash disbursements, along with modifications of the cash basis having substantial support by practitioners. Prescribed disclosures, thus, are set forth as providing meaningful and informative context while defining and describing the specific bases for recognition and measurement within the parameters of "cash" transactions.

The practitioner must first consider whether utilization of the Cash Basis is misleading to the users of financial statements. We will look at the applicable attributes of cash basis reporting and disclosure, attest and non-attest engagement considerations, and other aspects that represent compliance with the framework, and which must be considered in assessing the appropriateness of the reporting framework.

A strong working knowledge of GAAP is important when preparing cash basis financial statements. Understanding the differences between cash basis and GAAP, along with evaluating their impact on users requires a thorough knowledge of GAAP. The foundation of disclosure requirements under SPF are based on GAAP.

As few entities utilize a "pure" cash basis. When this occurs, the elected modifications must (1) have substantial support (the modification is a method equivalent to the accrual basis of accounting), and (2) must not be illogical (such as recording revenues under accrual method, but not recognizing trade/accrued payables). As a result, inclusion of such measurement or recognition would constitute a reportable departure from the cash basis of reporting framework which must be evaluated the same as a practitioner would evaluate a GAAP departure from GAAP financial statements.

The Contractual Basis of accounting, previously called special purpose financial statements, is a basis of accounting that the reporting entity uses to comply with an agreement between the reporting entity and one or more third parties other than the auditor/accountant. The prescribed disclosures are set forth by the specific contract agreement along with many areas that would "default" to guidance under GAAP.

The practitioner must determine that the entity is required to report using a framework or measurement and recognition set forth in a contract of agreement rather than what might be a supplemental or special purpose report such as an incomplete information, specified elements, accounts or items report that may or may not require a contractual accounting framework. Reports issued using a contractual accounting basis must be a restricted use/limited distribution report.

While the parties to the contract or agreement determine the requirement for the contractual reporting framework requirement, a strong working knowledge of GAAP is essential in understanding the differences and the inherent implications of certain differences. Audited, reviewed or compiled financial reports/statements using the contractual basis of accounting, like other SPF bases, require knowledge of GAAP and can distinguish and assess the implications of those differences.

Generally, an entity reporting on the contractual basis as an SPF reporting framework is used primarily by the restricted-use third party relative to assessing compliance with the guiding contract or agreement. AU-C 800 for SPF reporting and two SSARS Interpretations (Special Purpose Financial Statements to Comply with Contractual Agreements or Regulatory Provision) provide some performance context in these SPF engagements.

The Regulatory Basis of accounting is a basis of accounting that the reporting entity uses to comply with the requirements or financial reporting provisions of a regulatory agency to whose jurisdiction the entity is subject. The prescribed disclosures are set forth by the specific regulatory or governmental agency along with many areas that would "default" to guidance under GAAP.

The practitioner must determine that the entity is in fact a regulated company required to report financial information to the federal, state, or local government agencies that regulate them. Usually, the regulating agency requires unique reporting requirements and information related to the specific regulated process. Some entities that may be called upon to report using the regulatory basis include insurance companies, credit unions, construction contractors, certain state and local governmental entities, and even some nonprofits.

While the financial statements of most regulated companies may differ from GAAP, some regulated operations are covered by GAAP. Topic 980, *Accounting for the Effects of Certain Types of Regulation*, has applied to many public utilities. However, many of these utilities were moved off of GAAP under

GASB 62 that became effective after December 15, 2011. Accordingly, the practitioner must know all prevailing standards for compliance.

Generally, an entity reporting on the regulatory basis as an SPF reporting framework used solely for filing with a governmental regulatory agency should include a separate paragraph at the end of the audit report (per AU-C 800 for SPF reporting), or specifically identify the reporting framework in the accountant's compilation or review reports. Most often the report utilizing the regulatory basis of accounting will be a restricted use report, and thus state that the report is intended solely for the purpose for the information and use of those within the entity and the regulatory agencies to whose jurisdiction the entity is subject, and is not intended to be and should not be used by anyone other than the named specific parties.

THE NATURE OF FINANCIAL STATEMENTS

Financial statements are backward looking and explain what occurred in the past. Financial statement users interpret this historical operating performance and current financial condition to form the basis of assessing the nature, timing, and extent of future cash flows which determines entity value. This financial statement analysis requires obtaining an understanding of economics, finance, and accounting principles. Nevertheless, financial statements contain significant ambiguity resulting from management judgment, different accounting principle alternatives, and management's position on financial reporting disclosure and transparency.

This next section addresses the three basic financial statements in detail and identifies techniques financial statement users can employ to analyze operations and financial condition.

1. Balance sheet – cumulative as of a specified date (e.g., as of December 31, 2022)

2. Income statement – covers a specified period or range of dates (e.g., for the 12 months ended December 31, 2022)

3. Cash flows – covers a specified period or range of dates concurrent with the income statement period and balance sheet date

Balance Sheet

The balance sheet is cumulative because it captures all transactions and management decisions since the entity was founded. It presents at a point in time the resources, or assets, that a reporting entity has to operate the business. The balance sheet also presents how these assets are funded among liabilities and equity. Furthermore, the order of the individual line items in the balance sheet is from highest liquidity (i.e., their ability to be converted into cash) at the top to lowest liquidity at the bottom.

Assets are measured at historical cost, with the exception of investments in marketable securities or other financial instruments required to be impaired (e.g., Topic 326 related to the Current Expected Credit Loss Model). Liabilities are generally measured at their present value.

The balance sheet portrays the accounting equation which is:

Assets = Liabilities + Owners' Equity

Both sides of the equation can be grouped into three broad categories.

Assets or Uses of Funds	Liabilities & Owners' Equity or Sources of Funds
Current assets	Current liabilities
Non-current (long-term) fixed assets	Non-current (long-term) liabilities
Non-current (long-term) other assets	Owners' equity

Asset and liability classification as current or non-current provides important information to financial statement users for assessing liquidity as well as debt covenant compliance and debt availability.

Current assets and current liabilities are components of **working capital**. Net working capital is an important metric for analyzing financial condition and is calculated as follows:

Net Working Capital = Current Assets – Current Liabilities

Current assets are resources an entity needs (to be converted into cash) for its operating requirements in the short term which is one operating cycle or one year, whichever is longer. An operating cycle starts and ends with cash and is the amount of time it takes to complete the procurement and sales process in cash. Current liabilities are obligations expected to require the use of cash from current assets in the same short-term period.

Current assets generally consist of the following: cash and cash equivalents, accounts receivable, inventory, prepaid expenses, and short-term marketable securities. The nature of each item and focus financial statement users should consider follow:

Cash appears on the balance sheet at face value and consists of currency, checks received, and bank deposits with no restrictions on daily withdraws. **Cash equivalents** are short-term investments with original maturity dates of 90 days or less. Investments with maturity dates between 91 days and 365 days are short-term marketable securities.

There are two important concerns a financial statement user should analyze about cash.

1. **Restrictions** are placed by creditors on the entity's access to its cash. This is typical of debt covenants in loan agreements. The lender's goal is to make sure the borrower has sufficient cash for its short-term needs and to make principal and interest payments.

   Lending institutions generally require borrowers to dedicate all cash management activities with the lender, which generates fee income. Lenders may also require a minimum cash amount, which is called a **compensating balance**. Lenders benefit from the interest rate spread between the very-low interest rate paid to the borrower and the higher rate received on loans. Thus, compensating balances increase the reporting entity's effective interest rate for borrowing.

   Restricted cash must be shown on a separate line in the balance sheet if the amount is material. The location would depend on the terms of the cash restriction because the balance sheet is ordered from highest to lowest liquidity. If the amount is not material, it would be disclosed parenthetically on the balance sheet or in the financial statement notes.

   An additional restriction with consolidated financial statements is that not all of the cash may be available. For example, cash from one subsidiary legal entity may not be used to pay the obligations of another subsidiary legal entity. These situations would need to be disclosed in the notes to the financial statements.

EXAMPLE

We often receive questions from equity analysts or shareholders regarding the combination of high cash balances and high short-term revolver debt. Prudent cash management would suggest minimizing revolver debt by paying unused cash. Revolver debt has a measurable interest cost while cash balances for bank business accounts pay little or no interest income.

The explanation is due to cash restrictions, such as because cash in one subsidiary may not be used to pay obligations of a different subsidiary.

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2. Prudent **cash management** can be a double-edged sword for reporting entities fortunate enough to have cash balances greater than their short-term operating needs. Cash earns little or no interest on deposits at a financial institution which makes it prudent to invest this cash in higher interest bearing financial instruments. In addition to the restrictions discussed above, companies need to adhere to their investment policy which is set by the board of directors or private owners as a part of their risk tolerance.

   Prudent financial instruments that pay higher financial returns of interest, dividends, or capital gains may not fit within the company's risk tolerance due to the risk of losing cash principal. Reporting entities that make these investments need to disclose its investment policy in the financial statement notes.

   In addition, investment income should be classified as non-operating in the income statement as to not be misleading about true operating performance.

Trade accounts receivable results from granting delayed payment terms for customer sales. Users need to analyze revenue recognition when analyzing accounts receivable because accounts receivable result from credit sales. Accounts receivable are short-term credit extended to customers with no interest. Industry practice typically determines the credit period, which in general ranges between 30 and 60 days.

Financial statement users analyze a reporting entity's accounts receivable as a part of assessing liquidity and working capital management. The most often accounts receivable metrics are turnover and days sales outstanding (DSO). These metrics measure how quickly the reporting entity's customers pay their invoices. Because accounts receivable typically have large balances, they also impact higher-level important indicators of entity valuation, such as asset turnover which is a component of return on assets. It is also a part of the cash cycle.

Important analytical approaches are to look at DSO trends and compare DSO with industry levels. This is only the starting point that may lead to secondary causal interpretation and insight that typically requires industry contact outside the reporting entity. For example:

- DSO trend is getting shorter or has fewer days than the industry may be assessed as:
  - Favorable – generally true when it indicates reporting entity focuses on accounts receivable management or the entity has industry selling power
  - Unfavorable – may indicate an underlying liquidity problem because the reporting entity is offering expensive high early-payment discounts or needs to factor accounts receivable to

get cash sooner. Terms of "2/10, net 30" mean the customer may take a 2% discount if it pays within ten days.

It may also indicate that the reporting entity is factoring accounts receivable. Factoring is where an entity sells, at a discount, its accounts receivable to a financial institution (i.e., a method of accelerating cash collection).

Short payment terms may be reducing sales because the reporting entity is not offering competitive terms within its industry.

- DSO trend is getting longer or has more days than the industry may be assessed as:
  - Unfavorable – may indicate an undesirable industry competitive position, such as a lower-quality or obsolete product, poor distribution network, delivery delays, or lack of post-sale service capabilities. As a result of these weaknesses, the reporting entity needs to grant longer terms.

The entity may be reporting sales growth, which is favorable, but at the expense of reducing the credit-quality of customers. The expense comes from a higher allowance for doubtful account collections as well as from increased sales commission and management incentive compensation that resulted from increased risk and not better operational performance.

Accounts receivable must be reported on the balance sheet at net realizable value which is the amount expected to be ultimately collected. Accordingly, deductions from gross accounts receivable are expected discounts, allowances, and returns. Thus, the balance sheet reflects net accounts receivable.

Financial statement users must analyze the allowance for doubtful accounts. Important analytical approaches are to look at the allowance as a percent of accounts receivable and as a percent of sales. Next, evaluate the resulting trends and compare the result with industry levels.

An accounts receivable aging analysis provides a more sophisticated and accurate estimation of uncollectible accounts. Instead of applying a single bad debts percentage across all accounts which is used to accrue for the monthly allowance for doubtful accounts, an aging analysis stratifies accounts receivable by the length of time it has gone unpaid and applies different collection percentages to each stratum. The older unpaid accounts receivable receives a lower collectability percentage.

Inventory is product held for sale in the ordinary course of business, and is pivotal for both retail and distribution companies that both acquire inventory for resale and manufacturing companies that make product. Entities capitalize inventory costs because they have future economic benefit. Inventory management is a balancing act of having enough to meet customer needs versus too much which has costs of storage, tracking, moving, insurance, financing, shrink, damage, and obsolescence.

Financial statement users analyze a reporting entity's inventory levels as part of assessing liquidity and working capital management. The most frequent inventory metrics are turnover and days on hand (DOH). These metrics measure how efficiently the reporting entity can deliver product to customers. Because inventory typically has large balances, it also impacts higher-level important indicators of entity valuation, such as asset turnover which is a component of return on assets. It is also a part of the cash cycle.

Important analytical approaches are to look at DOH trends and compare DOH with industry levels. This is only the starting point as inventory analysis requires secondary analysis for financial statement users to conclude about a company's inventory. For example:

- Inventory costs – there are three product costs and standard cost variances that may be capitalized into inventory. Product costs are direct materials, direct labor, and manufacturing overhead. Direct materials and direct labor are fairly straightforward.

  Manufacturing overhead and standard cost variances, however, require significant management judgment about amounts that are capitalized into inventory and amounts that are expensed in cost of goods sold as a period cost. Manufacturing overhead includes indirect costs of materials (supplies), labor (fringe benefits and factory supervisors and management), utilities, plant and equipment depreciation, property taxes, insurance, etc. Management judgment determines how to allocate these costs to products by a systematic and rational basis.

  If a company has a standard cost system that determines inventory values, management provides significant judgment not only in establishing standard product cost for direct material, direct labor, and manufacturing overhead but also accounting for manufacturing variances. The conservative approach is to expense manufacturing variances as a period cost; however, many companies capitalize these costs into inventory as a product cost.

  There is a trade-off between cost of goods sold on the income statement and inventory on the balance sheet. Thus, management judgment about manufacturing overhead classification and manufacturing variance capitalization into inventory or expensing into cost of goods sold impacts financial statement analysis of profitability and efficiency in opposite ways. Unfortunately, financial statement users need access to inside information to complete this analysis.

  One sign of aggressive inventory cost and manufacturing variance capitalization is a lower of cost or net realizable value (LCNRV) adjustment at year end. Topic 330, *Inventory*, requires inventory be valued at lower of cost or net realizable value.

  When inventory cost is higher than market, it must be written down to net realizable value. Generally, unless there are interim-period indicators that inventory cost is greater than market, this LCNRV write down occurs at year-end. Thus, aggressive inventory cost capitalization can be misleading during interim periods because it delays expense recognition until the year-end LCNRV adjustment.

EXAMPLE

A company has a factory that is running at 75% of manufacturing capacity. The fixed manufacturing overhead costs are $600,000 per year comprised of the following:

Building depreciation	$500,000
Property taxes	40,000
Insurance	25,000
Utilities costs	35,000
Total	$600,000

How should the company allocate its fixed manufacturing overhead costs to inventory product costs?

Idle capacity costs should be period expenses in cost of goods sold. The company should expense $150,000 ($600,000 X (1-0.75)) in idle capacity costs each year.

If the inventory market value (net realizable value) exceeds the inventory carrying cost, no LCM adjustment occurs. The inventory continues to be valued at cost. On the other hand, if cost exceeds market, then the reporting entity establishes an LCM reserve which reduces the net inventory value with an offset to cost of goods sold. This is a conservative approach because a reporting entity is required to immediately recognize an expense for inventory value decreases, but defers recognizing inventory value increases until future periods when the inventory is sold.

Determining market value (net realizable value) is subjective which requires significant management judgment.

- Inventory cost flows – GAAP provides entities with different inventory cost flow method alternatives that impacts both ending inventory and cost of goods sold. The three alternatives are Average Cost, Last-In First-Out (LIFO), and First-In First-Out (FIFO).

  Because the inventory cost flow method impacts cost allocation between both ending inventory and cost of goods sold, the method that management chooses impacts working capital, gross profit (and net income), and efficiency such as inventory turnover. Over the life of the entity, aggregate cost of goods sold will be the same with any inventory cost flow method; thus, the inventory cost flow method is a **timing difference** in cost recognition.

  Cash flows are the same regardless of the inventory cost flow method chosen. On a secondary basis, there is a favorable cash flow impact from lower income taxes using LIFO during period of rising prices as long as inventory levels do not decrease.

  Under FIFO, the oldest inventory flows first to cost of goods sold. Thus, during periods of rising prices, FIFO produces the highest profitability because the older inventory is carried at the lowest cost.

  Under LIFO, the newest inventory flows first to cost of goods sold. Thus, during periods of rising prices, LIFO produces the lowest profitability because the newest inventory is carried at the highest cost.

  Management judgment about inventory cost flow also impacts efficiency measurements in financial statement analysis. This is because inventory cost flow methodology has a trade-off between cost of goods sold on the income statement and inventory on the balance sheet.

Topic 340, *Other Assets and Deferred Costs*, provides guidance on **prepaid expenses**. Prepaid expenses have future economic value because they are amounts paid to secure the use of assets or the receipt of services at a future date or continuously over one or more future periods. Prepaid expenses will not be converted to cash, but are still classified as current assets because, if they were not prepaid, they would have required the use of current assets during the next twelve months.

Examples of prepaid expenses are insurance paid in advance, advertising paid in advance, rent paid in advance, and deposits on purchase orders issued to suppliers. Prepaid expenses must be consumed within twelve months to be classified as current assets. Prepayments that will be consumed in more than twelve months must be classified in other long-term assets.

Short-term marketable securities are investments in financial instrument investments that will mature in less than twelve months. This maturity may be the stated term of the financial instrument, such as a money market mutual fund or certificate of deposit, or where the reporting entity has both the intent and ability to convert the financial instrument into cash, such as publicly traded marketable securities.

Current liabilities are obligations an entity incurs (to be paid in cash or from other current assets) for its operating requirements in the short term which is one operating cycle or one year, whichever is longer. They include both operating and financing activities; however, classification depends on timing of satisfying the liability instead of their nature.

Current liabilities may have significantly greater management judgment than current assets because many current liabilities are future obligations. Examples of judgment are the liability's future value, discount rate to arrive at its present value, or estimating contingent liabilities.

Current liabilities consist primarily of the following: accounts payable, accrued expenses, deferred revenues, short-term debt as well as the current portion of long-term debt. The nature of each item and focus financial statement users should consider follow.

Trade accounts payable result from suppliers granting deferred payment for purchases of products, such as inventory, or services, such as legal fees. Accounts payable are short-term credit extended by suppliers with no interest, and often with no written contract.

Financial statement users need to analyze cost of goods sold when analyzing accounts payable because inventory purchases are generally the predominant component in accounts payable. "Predominant" means that non-trade items may comprise accounts payable, making this an imperfect measure of trade activity. Examples of non-trade items are corporate or operating expense items such as dividends payable, taxes payable, legal or office items, and amounts owed for investing activities such as building construction or equipment purchases.

The most often accounts payable metrics are turnover and days payable outstanding (DPO). These metrics measure how quickly the reporting entity pays its suppliers. Accounts payable are also a part of the cash cycle.

Important analytical approaches are to look at DPO trends and compare DPO with industry levels. This is only the starting point that may lead to secondary causal interpretation and insight that typically requires industry contact outside the reporting entity. For example:

- DPO trend is getting shorter or has fewer days than the industry may be assessed as:

– Favorable – generally true when it indicates the reporting entity has strong cash flow or excess cash and is taking advantage of its suppliers' early-payment discounts. Terms of "2/10, net 30" mean the reporting entity may take a 2% discount if it pays within ten days.

– Unfavorable – may indicate an underlying liquidity problem because the suppliers have reduced their credit terms because the reporting entity's financial risk.

– It may also indicate that the company has suppliers with increasing financial risk that need to be paid sooner to survive. This situation may indicate operating risk at the reporting entity if its suppliers cannot fulfill their obligations which, in turn, may impede the reporting entity's ability to fulfill their customer needs.

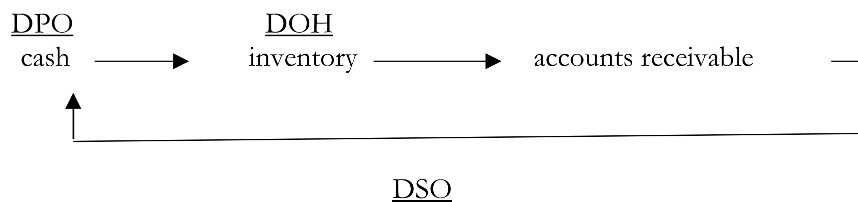
- DPO trend is getting longer or has more days than the industry may be assessed as:

  – Favorable – generally true when it indicated reporting entity focus on accounts payable management or the entity has industry buying power. Furthermore, it may be receiving free financing from its suppliers.

  – Unfavorable – may indicate an undesirable industry competitive position, weak financial condition, or deteriorating cash flows. As a result, the reporting entity needs to rely on its suppliers as a source of financing to maintain liquidity or solvency.

  Slowing payments to suppliers can increase operational risk if it damages supplier business relationships. Suppliers may retaliate with price increases or delivery delays because of giving priority to better customers. However, there may be times when this "slowing of payments" is predicated on a form of "reverse factoring." The supplier gets paid as normal, but the buyer is allowed additional time to make payment to a financial intermediary in the arrangement.

The **operating cycle** is an important indicator of a reporting entity's working capital management and liquidity. The operating cycle is the amount of time to convert inventory into cash and is shown as:



Operating Cycle = DSO + DOH – DPO

EXAMPLE

Mark Company has the following working capital efficiency metrics:

Inventory days of 110, days sales in accounts receivable of 75, and days cost of goods sold in accounts payable of 60.

What is Mark's operating cycle in days?

Operating cycle = DOH + DSO + DPO = 110 + 75 – 60 = 125 day

Reporting entities create **accrued expenses** as a result of the matching principal, which is one of the basic underlying guidelines in accounting. The matching principle directs a company to report an expense on its income statement in the same period as the related revenues.

This is the foundation for accrual accounting that recognizes expenses when they are incurred instead of when paid (i.e., cash basis accounting). Examples are accruing for utilities costs at month end even though no invoice has been received or accruing for salaries at month end that are not paid until the next payroll date.

Customer advance payments are classified as deferred revenue (whose nomenclature changed to "contract liability" under Topic 606, *Revenue from Contracts with Customers*, the new revenue recognition standard). These receipts are liabilities and not revenues because the sales-entity performance obligations have not been completed. If the sales-entity will perform this future obligation in less than twelve months, then the customer advance payment is a current liability.

Examples of deferred revenue include security deposits, gift certificates, airline tickets, and magazine subscriptions. The conceptual equivalent in current assets of the liability-deferred revenue is prepaid expense.

There are other types of short-term liabilities that may be combined within accrued expenses or other current liabilities. Examples are amounts collected for other entities, such as sales taxes and payroll taxes collected for governments; income taxes that are remitted quarterly; and incentive compensation such as profit sharing and bonus payments that will be paid after determining year-end financial performance.

Warranty liability is a part of short-term liabilities, and may need to be allocated between current and non-current liabilities if the warranty period extends beyond year after the sale. Product warranty is a selling entity's obligation to correct product quality or performance deficiencies.

Warranty liability requires management judgment to estimate due to its future and uncertain nature. This warranty cost judgment is similar to the bad debt expense and allowance for doubtful account judgments introduced earlier in this section in that management bias can influence the accounting. Reporting entities introducing a substantial number of new products may need to accelerate the warranty accrual basis because newly introduced products generally have higher warranty costs than mature products.

Thus, the financial statement user analyzing warranty performance needs to perform a trend analysis by comparing actual warranty costs accrued and incurred as a percent of sales (sales should be lagged to match timing). Not only does this analysis analyze product profitability but it also indicates future sales potential because poor product quality generally impacts future sales volume.

Topic 460, *Guarantees*, provides guidance for warranty accounting. It requires guarantee disclosure even if performance may be a remote possibility. A reporting entity's obligation to stand ready to perform is not a contingency (Topic 450), and thus meets the liability definition.

For product warranties, Topic 460 requires disclosing the warranty policy and method used to calculate the warranty liability. It also requires warranty liability roll-forward disclosure. This roll-forward shows increases to the warranty reserve and decreases from actual warranty costs incurred.

A selling-entity estimates and accrues warranty expense in the same period that it recognizes revenue under the matching principle. This reduces net income in the sale period. Subsequent warranty costs actually incurred are charged against this warranty liability and not current earnings.

Short-term debt includes bank lines of credit, commercial paper, and short-term bank loans. These are important items for financial statement user analysis to indicate reporting entity liquidity and solvency. Analyzing short-term debt trend increases or decreases may indicate either favorable or unfavorable situations. For example, a decreasing trend may favorably indicate improving cash flow or it may unfavorably indicate banks have reduced the entity's credit lines due to increased financial risk at the reporting entity.

Important disclosure in the notes to the financial statements are credit availability which indicates liquidity and solvency. Entities typically establish short-term revolving debt with financial institutions, and the amount of debt available may be based on a formula that indicates asset strength, liquidity, or cash flows. Credit availability is reduced by current short-term borrowing so financial statement users need to assess unused borrowing capacity which is calculated as follows:

Unused borrowing capacity = maximum amount of credit available – current borrowing

A balance sheet vertical, or common size, analysis is also a tool for financial statement users analyzing short-term borrowings. The vertical analysis removes absolute size from the analysis and focuses on relative size. Looking at short-term debt as a percent of total assets over time shows whether the reporting entity is funding more or less of its assets from short-term debt.

Similar to short-term debt is the **current portion of long-term debt**. This means the amount of long-term borrowings that must be paid back over the next 12 months. Long-term debt principal is generally paid back as a part of debt amortization, such as with a mortgage, or through periodic balloon payments.

A shortcoming of users performing a liquidity analysis on the current portion of long-term debt is that it is a cliff amount. A sizeable debt balloon payment due in thirteen months is still reflected in long-term debt which may falsely make near-term liquidity look acceptable. A user financial statement analysis of near-term liquidity should be corroborated by reading the note to the financial statements disclosing payment obligations over the future five years to check for required cliff debt payment obligations.

Non-current assets include property, plant, & equipment which comprises a significant portion of total assets for manufacturing companies. Thus, it is prudent to analyze changes in fixed assets. In addition to the significant initial cost, the total cost flows through the income statement as depreciation expense over a long period of time.

Topic 360, *Property, Plant, & Equipment*, provides guidance for fixed assets and requires the following disclosures.

- Balances of major classes of depreciable assets, such as property, buildings, machinery & equipment, and vehicles
- Depreciation expense for each period presented in the financial statements
- Accumulated depreciation by major asset class or in total
- The methods used to calculate depreciation expense

This information provides the financial statement user analyzing operating performance and projecting future cash flows. For example, one can understand new fixed asset investments to support volume growth, and determine the impact of fixed asset divestitures or retirements.

Analyzing changes in fixed assets, without having inside information, is not straightforward due to depreciation, disposals, and non-recurring write-offs that affect the account balances.

EXAMPLE

Mark Company reports the following fixed asset information for the year and does not provide cash flow statements. Full-year depreciation expense was $349K. Analyze Mark's fixed assets changes, determine the amount of new fixed asset investments and whether there were any divestitures or retirements.

$000	20x7	20x6
Gross Fixed Assets	$ 4,127	$ 3,733
Less: Accumulated Depreciation	(2,173)	(1,940)
Net Fixed Assets	1,954	1,793

Stage 1 Analysis

Calculate the horizontal and vertical changes

$000	20x7	20x6	Δ
Gross Fixed Assets	$ 4,127	$ 3,733	$ 394
Less: Accumulated Depreciation	(2,173)	(1,940)	(233)
Net Fixed Assets	1,954	1,793	161
As a % of Gross Fixed Assets			
Gross Fixed Assets	100%	100%	100%
Less: Accumulated Depreciation	-53%	-52%	-59%
Net Fixed Assets	47%	48%	41%

The horizontal analysis shows $394K in fixed asset additions, is this truly the amount of new fixed assets acquired?

The relative amount of accumulated depreciation increased by 6% points over the year which is much higher than expected. This may indicate a non-recurring fixed asset write-down.

On the other hand, the $233K absolute increase in accumulated depreciation was less than the $349K depreciation expense. One would expect these two figures to be the same in the absence of dispositions, which must have occurred.

Assumption: in the absence of disclosure, assume that the unexplained difference in accumulated depreciation was due to disposing of a fully depreciated asset.

There are two alternative assumptions. First is an asset sale, but a sale would be complicated by a gain or loss. Second is a business combination, which has its own complexities. Thus, our asset disposal assumption provides a clearer analysis.

The estimate of the asset disposal is calculated by:

$233 Increase in accumulated depreciation

(349) Depreciation expense, or the expected increase in accumulated depreciation

(116) Unexplained difference assumed to be a fully depreciated asset disposal

Gross Fixed Assets			
Beginning balance 31-Dec-x6	$ 3,733		
+ Purchases		<= solve for one unknown =	$ 510
- Disposals	(116)		
= Ending balance 31-Dec-x7	4,127		

Accumulated Depreciation			
Beginning balance 31-Dec-x6	$ 1,940		
+ Depreciation Expense		<= solve for one unknown =	$ 349
- Disposals	(116)		
= Ending balance 31-Dec-x7	2,173		

Net Fixed Assets	
Beginning balance 31-Dec-x6	$ 1,793
+ Purchases	510
- Depreciation Expense	(349)
= Ending balance 31-Dec-x7	1,954

Using the relationships above, we calculate that new fixed assets purchased were $510K. We also corroborate our answer by reconciling accumulated depreciation with depreciation expense at $349K and by reconciling our change in net fixed assets.

We conclude that Mark Company needs significantly greater investment in fixed assets to support growth than originally appeared on the face of the balance sheet.

Other long-term assets can include many different types of assets. This section focuses on the following most common types of other long-terms assets:

- Goodwill
- Other intangible assets such as patents and trademarks
- Investments

Topic 350, *Intangibles – Goodwill and Other*, provides guidance for **goodwill and other intangible assets**. In addition, Topic 805, *Business Combinations*, provides guidance to identify and measure intangible assets acquired in a business combination.

There are two intangible assets categories based on the assets' life:

1. **Indefinite life** – goodwill and other intangible assets with an indefinite life are not amortized and, thus, must be tested annually for impairment.

   The FASB endorsed two Private Company Council (PCC) recommendations for private companies that allowed amortizing goodwill for up to ten years, simplifying goodwill impairment testing from a two-step test to a one-step test, and simplifying intangible asset recognition and measurement from business combinations. Private companies may elect these two GAAP alternatives:

   – ASU 2014-02 – Intangibles – Goodwill and Other (Topic 350): Accounting for Goodwill (a consensus of the Private Company Council)

   – ASU 2014-18 – Business Combinations (Topic 805): Accounting for Identifiable Intangible Assets in a Business Combination (a consensus of the Private Company Council)

   ASU 2017-04 *(Topic 350): Simplifying the Test for Goodwill Impairment*, followed the PCC and simplified goodwill impairment testing from a two-step test to a one-step test. Unlike the PCC (ASU 2014-02) which created an accounting election, ASU 2017-04 makes the one-step test mandatory. The effective date was 2020 for public entities, 2021 for public entities that do not file with the SEC, and 2022 for all other entities. Early adoption was permitted as early as January 1, 2017, as long as financial statements were not previously filed.

2. **Definite life** – other intangible assets are amortized and, thus, only tested for impairment when there is an impairment indicator (trigger). This is similar to guidance for tangible assets.

Goodwill is defined as "an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized." It results from paying more than the fair value of the identifiable net assets in a business combination.

Topic 805, *Business Combinations*, guides goodwill recognition and measurement for acquisitions of less than 100% of the target business. Reporting entities measure the resulting **non-controlling interest** at fair value which means the reporting entity does not reduce the goodwill measurement for the non-controlling interest.

Intangible asset disclosures help the financial statement user analyze the origination and economic justification for these intangible assets. Disclosures also indicate the facts and circumstances that created intangible asset impairment and the financial statement lines impacted which can be important indicators for the financial statement user to assess future cash flows.

Intangible asset presentation on the balance sheet must separate goodwill on its own line and a separate intangible assets other than goodwill on an aggregate line or separate lines, depending on materiality. The notes to the financial statements provide further disclosure detail for indefinite life and definite life intangible assets.

Intangible asset amortization for goodwill and intangible assets other than goodwill must be shown separately. The amortizable life by asset class is disclosed as well. In the year of the business combination, the intangible asset additions need to be disclosed separately for each acquisition.

Investments. Entities with idle cash, and a board-approved investment policy, may make investments in other entities' financial instruments, generally marketable securities such as stocks and bonds. Investments are generally presented at their fair market value.

Investments are important indicators of liquidity and solvency; however, they are not directly a determinant in financial ratios. Because of this, financial statement users may consider investments as a secondary step in profitability and efficiency ratio analysis.

Non-current liabilities follow the guidance in Topic 470, *Debt*, and provide guidance for liability measurement and classification. The general classification rule between current and non-current liabilities is straightforward - current liabilities are due within one year whereas non-current liabilities are due after a year. Topic 470 does not distinguish between substantive and non-substantive issues, especially with debt classification. For example, tripping a minor debt covenant such as a deadline for submitting financial statements or a debt compliance certificate triggers the due-on-demand clause in a loan agreement just as would occur with major violations. In practice, however, diversity exists.

Auditor peer reviewers have found many cases where reporting entities continued to classify debt as current even though its maturity date was less than twelve months or there was a violated debt covenant which caused the debt to become due on demand. Private company financial statement users need insider information to fully analyze this debt status.

Topic 470 requires **current classification** for liabilities under any of the following circumstances.

1. Due on demand

2. Due on demand within one year, even if liquidation is not expected within the year

3. Long-term debt that is callable because of a debt agreement violation unless the creditor has waived or subsequently lost the right to demand payment.

   Long-term debt should be classified as noncurrent unless both of the following two conditions exist:

   a. There is a debt covenant violation at the balance sheet date or a violation would have occurred if the loan was not modified

   b. It is probable that the default would not be cured or a covenant breach would not be cured at measurement dates within the next twelve months

   If a debt violation is cured after the balance sheet date and the debt is not callable at the time the financial statements are issued, then the debt can be classified as noncurrent, provided the debt instrument does not give the creditor a call privilege after the violation has been cured.

4. Long-term debt that will be callable by the creditor if a violation is not cured within a specified grace period. In this situation, the debt should be classified as current unless it is probable that the ovulation will be cured during the grace period. If the debt is classified as noncurrent, then the reporting entity needs to disclose the facts and circumstances determining the classification.

   If a loan agreement has a "lock-box" provision, the provision's terms may impact debt classification. If the provision automatically applies a reporting entity's cash collections against its debt, then the debt must be classified as current. However, if the provision is a springing arrangement, then the debt remains as noncurrent. A springing arrangement is one where cash

collections are deposited in the reporting entity's bank account and do not automatically pay down the debt unless the creditor exercises its subjective acceleration clause or another triggering event takes place.

If the debt agreement includes a subjective acceleration clause, then the reporting entity must assess the probability of the creditor invoking the clause. If the probability is remote, then the debt classification remains noncurrent.

Topic 450, *Contingencies*, provides guidance for contingency recording, measurement, and disclosure. Loss contingency accounting and disclosure are based on whether a loss is assessed as probable, possible, or remote.

Contingent losses are accrued and disclosed if both of the following conditions exist:

1. The future confirming event is probable.

2. The loss amount can be reasonably estimated. If the estimate is a range, then accrue the best estimate. If all outcomes in the range are equally likely, then accrue the minimum amount in the range and disclose the range.

Contingent losses are disclosed but not accrued if either of the following conditions exist:

1. A loss is probable but cannot be estimated. Disclose the nature of the loss and that the reporting entity cannot make an estimate.

2. A loss is assessed to be reasonably possible. Disclose the nature of the loss and an estimate of the amount or a range of amounts. Also disclose if it is not possible to make an estimate.

Gain contingencies are normally not recorded. Rarely, if collection is assured soon after year end, a receivable may be recorded. Disclosure should be made of unrecorded contingencies that may result in gains. The disclosure, however, should not imply that the gain will be realized.

Restructuring reserves, by their nature, create opportunity for management financial reporting abuse, and financial statement users analyzing operating performance need to pay close attention to these liabilities. One abuse is when reporting entities frequently report "one-time" restructuring charges which create restructuring liability reserves. Furthermore, reporting entity press releases often include non-GAAP financial reporting outcomes that excludes restructuring charges from operating performance.

Topic 420, *Exit or Disposal Cost Obligations*, provides guidance for restructuring reserve liabilities. It defines exit or disposal costs as:

- Involuntary termination benefits under an arrangement that did not exist previously and does not constitute a deferred compensation arrangement

- Costs to terminate contracts other than finance leases (see Topic 842)

- Costs to consolidate facilities or relocate employees

Public reporting entities have included items in restructuring charges such as: special warranty accruals, inventory write-downs, asset write-downs, impaired investments, and idled or closed facilities.

Topic 505, *Equity*, codifies disclosure requirements for capital structure and applies to all entities, public and non-public, that have issued equity securities.

Equity disclosures reflect two overriding objectives:

1. Disclose for each account within stockholders' equity all changes in amounts and number of shares

2. Describe all special features of each equity account, such as rights, privileges, special features, restrictions, etc.

Equity disclosures may be presented on the face of the basic financial statements, in the financial statement notes, or in a separate financial statement such as the statement of retained earnings or statement of changes in stockholders' equity. Most reporting entities use a combination of these presentations.

Each class of **common stock and preferred stock** requires separate disclosure for the par value per share and the number of shares authorized, issued, and outstanding. It also requires special feature descriptions such as dividend and liquidation preferences, participation rights, call provision terms, conversion provision terms, sinking fund requirements, contract terms for issuing additional shares, unusual voting rights, and redemption requirements for each of the next five years.

Additional preferred stock disclosures are liquidation preference, especially if there are more than one class of preferred stock; aggregate or per-share amounts if the reporting entity can call or redeem the shares; aggregate and per-share amounts of cumulative preferred dividends in arrears, if any.

Disclosures for unretired **treasury stock** are the number of shares, valuation basis, and any treasury stock restrictions such as restrictions imposed by state laws. Some state laws prohibit treasury stock. Treasury stock is presented as a deduction from shareholders' equity and never as an asset.

Disclosures for retained earnings include any restrictions on dividends, such as imposed by debt covenants, or appropriations which must be disclosed separately on the face of the balance sheet.

Income Statement

The income statement should present all significant items of revenues and expenses. Specific disclosure requirements exist for certain earnings and expense categories. The basic income statement format separates operating from non-operating items and is shown below:

Sales or Revenues

– Cost of Goods Sold

= Gross Profit

– Selling, General, & Administrative Expenses

– Unusual or Infrequent Items

= Operating Income

+- Interest (Income)/Expense

+- (Gains)/Losses

+- Net Income (Loss) in Equity Method Investments

Income Before Taxes

– Income Taxes

= Net Income (Loss) from Continuing Operations

+- Net Income (Loss) from Discontinued Operations

= Net Income

Statement of Financial Accounting Concepts No. 5, *Recognition and Measurement in Financial Statements of a Business Enterprise*, discusses categories of earnings. Special categories of earnings include:

1. **Unusual or Infrequent Gains and Losses** – They should be presented as separate line items within income from continuing operations, and may also be included in disclosures required for sales of investments, contingencies, etc., covered in previous sections.

2. **Discontinued Operations** – Topic 205, *Presentation of Financial Statements*, provides accounting guidance for discontinued operations. Some important points about discontinued operations are:

   a. Assets held for sale, whether or not they are part of discontinued operations, are carried at the lower of net carrying amounts or fair value less costs to sell (rather than net realizable value). Assets and related liabilities held for sale must be separately disclosed on the face of the balance sheet or in the notes. Depreciation ceases for assets classified as held for sale.

   b. Estimated future operating losses from discontinued operations are not recognized before they occur. Rather, the discontinued operations section of the income statement reflects only the results of operations for the period and realized losses on asset disposal.

   c. Entities with discontinued operations may even have significant continuing involvement and continuing cash flows with the discontinued operation.

   FASB income statement guidance is in Topic 205, *Presentation of Financial Statements*. For discontinued operations, this guidance requires:

   a. Discontinued operations, net of applicable income taxes, be shown separately from continuing operations

   b. Discontinued operations are generally shown as a single amount that includes:

      – Income/(loss) from operations, net of tax, including changes in carrying amounts

      – Gain or loss on disposals – this amount must be disclosed on the face of the statements or in the notes

   c. Any adjustments to amounts previously reported in discontinued operations (due to changes in estimates) must be shown separately in current period discontinued operations.

   d. Discontinued operations disclosures for periods when a discontinued operation either has been disposed of or is classified as held for sale:

      – The facts and circumstances leading to the disposal or expected disposal

      – The expected manner and timing of that disposal

- If not separately presented on the face of the income statement (or statement of activities for a not-for-profit entity) as part of discontinued operations, the gain or loss recognized on the disposal
- If applicable, the segment(s) in which the discontinued operation is reported

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EXAMPLE

Income Statement (in part)
Discontinued Operations

Income from continuing operations before income taxes	$2,000,000	
Income taxes	500,000	
Net income from continuing operations		1,500,000
Discounted operations (Note X)		
Loss from operations of discontinued division (including loss on disposal of $400,000)	(1,300,000)	
Income tax benefit	300,000	
Loss on discontinued operations		(1,000,000)
Net income		$500,000

NOTE X: DISCOUNTED OPERATIONS

In 20X1, the Company closed its Virginia operations due to reduced sales and continued operating losses. In 20X1, the Virginia operations generated gross revenue of $1,000,000 and pre-tax losses of $900,000. All assets have been sold for a loss of $400,000.

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3. **Changes in Accounting Principle** – Topic 250, *Accounting Changes and Error Corrections*, provides guidance requiring retrospective adjustment of all periods presented. In effect, Topic 250 accounts for these changes as if the new accounting treatment was always in effect, which is mechanically equivalent to a restatement.

   Topic 250 applies to voluntary accounting changes; it does not apply to transition with respect to new ASUs issued by the FASB. Each new ASU includes specific guidance on transition, often involving a simplification of retrospective treatment and/or disclosures that would otherwise apply to changes in accounting principle. They can also involve only prospective treatment.

   The guidance also does not apply to changes from one acceptable depreciation method to another for assets placed in service in prior years. A change in depreciation method is a change in estimate, with the effects handled prospectively.

In practice, voluntary changes from one acceptable method to another are rare, as examples where GAAP allows such latitude are dwindling. When a reporting entity incurs this change, the guidance requires:

- The "cumulative effect" on all periods prior to those presented adjusts the book value of assets and liabilities as of the beginning of the earliest period presented. For example, if the entity changes its method of valuing inventory in 20X1 but also presents 20X0 comparative statements. The cumulative effect would restate inventory as of the beginning of 20X0.
- Beginning retained earnings is adjusted for the change made to assets and liabilities as of the beginning of the earliest period presented.
- Statements for each prior period presented are "restated" to show the effect of the change on that specific period.

EXAMPLE

NOTE 6: CHANGE IN INVENTORY VALUATION METHODS

Inventories are stated at the lower of cost or market. Cost, which includes material, labor, and factory overhead, is determined on a FIFO basis.

Prior to January 1, 20X9, we valued certain inventories under the LIFO cost method. As of January 1, 20X9, we changed our method of accounting for these inventories from the LIFO method to the FIFO method. As of December 31, 20X8, the inventories for which the LIFO method of accounting was applied represented approximately 85% of total net inventories. We believe that this change is to a preferable method which better reflects the current cost of inventory on our consolidated balance sheets. Additionally, this change conforms all of our worldwide inventories to a consistent inventory costing method and provides better comparability to our peers.

We applied this change in accounting principle retrospectively to all prior periods presented herein in accordance with Topic 250 "*Accounting Changes and Error Corrections*." As a result of this accounting change, our retained earnings as of December 31, 20X6 decreased to $621.2 million using the FIFO method from $638.6 million as originally reported using the LIFO method. The following tables summarize the effect of the accounting change on our consolidated financial statements.

	Year Ended December 31, 20X9		
	Computed Under Prior Method	**Effect of Change**	**As Computed Under FIFO**
	(Thousands, Except per share data)		
Statement of Operations:			
Cost of sales	$807,275	($3,739)	$803,536
Income taxes	55,436	1,226	56,662
Net income	113,391	2,513	115,904
Earnings per common share:			
Basic	1.41	0.03	1.44
Diluted	1.4	0.03	1.43
Statement of Cash Flows:			
Net income	113,391	2,513	115,904
Deferred income taxes	1,081	1,226	2,307
Changes in inventories	23,149	(3,739)	19,410
Net cash provided by operating activities	212,532	-	212,532

	Year Ended December 31, 20X8		
	Computed Under Prior Method	**Effect of Change**	**As Computed Under FIFO**
	(Thousands, Except per share data)		
Statement of Operations:			
Cost of sales	$892,038	($6,476)	$885,562
Income taxes	65,201	2,142	67,343
Net income	127,026	4,334	131,360
Earnings per common share:			
Basic	1.55	0.05	1.6
Diluted	1.53	0.06	1.59
Statement of Cash Flows:			
Net income	127,026	4,334	131,360
Accrued Expenses	1,215	(614)	601
Deferred income taxes	(10,817)	2,621	(8,196)
Changes in inventories	(4,389)	(5,270)	(9,659)
Net cash provided by operating activities	223,060	1,071	224,131

	Year Ended December 31, 20X7		
	Computed Under Prior Method	Effect of Change	As Computed Under FIFO
	(Thousands, Except per share data)		
Statement of Operations:			
Cost of sales	$792,470	($2,288)	$790,182
Income taxes	78,457	843	79,300
Net income	153,700	1,445	155,145
Earnings per common share:			
Basic	1.89	0.02	1.91
Diluted	1.87	0.02	1.89
Statement of Cash Flows:			
Net income	153,700	1,445	155,145
Deferred income taxes	1,470	979	2,449
Changes in inventories	(191)	(3,311)	(3,502)
Net cash provided by operating activities	198,994	(887)	198,107

	As of December 31, 20X9			As of December 31, 20X8		
	Computed Under Prior Method	Effect of Change	As Computed Under FIFO	Computed Under Prior Method	Effect of Change	As Computed Under FIFO
Balance Sheet:						
Inventories	$159,463	$36,699	$196,162	$181,200	$32,960	$214,160
Other current assets (prepaid taxes)	35,545	(9,669)	25,876	32,866	(8,443)	24,423
Accrued expenses (income tax payable)	98,730	(614)	98,116	117,186	(614)	116,572
Deferred income tax liability	148,806	2,352	151,158	141,984	2,352	144,336
Cumulative translation adjustment	59,399	(262)	59,137	40,204	(331)	39,873
Retained earnings	896,977	25,623	922,600	822,286	23,110	845,396

IBM adopted Topic 606, *Revenue from Contracts with Customers*, in 2018. IBM's change in accounting principle disclosure example can be a model for companies adopting Topic 606.

EXAMPLE

Notes to Consolidated Financial Statements
International Business Machines Corporation and Subsidiary Companies

NOTE O. REVENUE RECOGNITION

Disaggregation of Revenue

The following tables provide details of revenue by major products/services offerings and by geography.

Revenue by Major Products/Service Offerings

($ in millions)

For the year ended December 31, 2018:	Cognitive Solutions	Global Business Services	Technology Services & Cloud Platforms	Systems	Global Financing	Other	Total Revenue
Solutions Software	$12,903	$ —	$ —	$ —	$ —	$ —	$12,903
Transaction Processing Software	5,578	—	—	—	—	—	5,578
Consulting	—	7,705	—	—	—	—	7,705
Global Process Services	—	1,259	—	—	—	—	1,259
Application Management	—	7,852	—	—	—	—	7,852
Infrastructure Services	—	—	23,007	—	—	—	23,007
Technical Support Services	—	—	6,961	—	—	—	6,961
Integration Software	—	—	4,493	—	—	—	4,493
Systems Hardware	—	—	—	6,363	—	—	6,363
Operating Systems Software	—	—	—	1,671	—	—	1,671
Global Financing*	—	—	—	—	1,590	—	1,590
Other Revenue	—	—	—	—	—	207	207
Total	$18,481	$16,817	$34,462	$8,034	$1,590	$207	$79,591

* Contains lease and loan/working capital financing arrangements which are not subject to the guidance on revenue from contracts with customers.

Revenue by Geography

($ in millions)

For the year ended December 31, 2018:	Total Revenue
Americas	$36,994
Europe/Middle East/Africa	25,491
Asia Pacific	17,106
Total	$79,591

Remaining Performance Obligations

The remaining performance obligation (RPO) disclosure provides the aggregate amount of the transaction price yet to be recognized as of the end of the reporting period and an explanation as to when the company expects to recognize these amounts in revenue. It is intended to be a statement of overall work under contract that has not yet been performed and does not include contracts in which the customer is not committed, such as certain as-a-Service, governmental, term software license and services offerings. The customer is not considered committed when they are able to terminate for convenience without payment of a substantive penalty. The disclosure includes estimates of variable consideration, except when the variable consideration is a sales-based or usage-based royalty promised in exchange for a license of intellectual property.

Additionally, as a practical expedient, the company does not include contracts that have an original duration of one year or less. Remaining performance obligation estimates are subject to change and are affected by several factors, including terminations, changes in the scope of contracts, periodic revalidations, adjustments for revenue that has not materialized and adjustments for currency.

At December 31, 2018, the aggregate amount of the transaction price allocated to RPO related to customer contracts that are unsatisfied or partially unsatisfied was $124 billion. Given the profile of contract terms, approximately 60 percent of this amount is expected to be recognized as revenue over the next two years, approximately 35 percent between three and five years and the balance (mostly Infrastructure Services) thereafter.

Revenue Recognized for Performance Obligations Satisfied (or Partially Satisfied) in Prior Periods

For the year ended December 31, 2018, revenue was reduced by $51 million for performance obligations satisfied (or partially satisfied) in previous periods mainly due to changes in estimates on percentage-of-completion based contracts. Refer to note A, "Significant Accounting Policies," for additional information on percentage-of-completion contracts and estimates of costs to complete.

Reconciliation of Contract Balances

The following table provides information about notes and accounts receivables—trade, contract assets and deferred income balances:

($ in millions)

	At December 31, 2018	At January 1, 2018[2]
Notes and accounts receivable—trade (net of allowances of $309 and $297 at December 31, 2018 and January 1, 2018, respectively)	$ 7,432	$ 8,295
Contract assets[1]	470	557
Deferred income (current)	11,165	11,493
Deferred income (noncurrent)	3,445	3,758

[1] Included within prepaid expenses and other current assets in the Consolidated Statement of Financial Position.

[2] As adjusted, upon adoption of the revenue standard on January 1, 2018.

The amount of revenue recognized during the year ended December 31, 2018 that was included within the deferred income balance at January 1, 2018 was $10.2 billion and primarily related to services and software.

Deferred Costs

($ in millions)

	At December 31, 2018
Capitalized costs to obtain a contract	$ 717
Deferred costs to fulfill a contract:	
Deferred setup costs	2,085
Other deferred fulfillment costs	2,173
Total deferred costs[1]	$4,975

[1] Of the total, $2,300 million is current and $2,676 million is noncurrent. Prior to January 1, 2018, the current and noncurrent balance of deferred costs were included within prepaid expenses and other current assets and investments and sundry assets, respectively.

On January 1, 2018, in accordance with the transition guidance, $737 million of in-scope sales commissions that were previously recorded in the Consolidated Statement of Earnings were capitalized as costs to obtain a contract. The amount of total deferred costs amortized during the year ended December 31, 2018 was $3,690 million. There were no material impairment losses incurred during the period. Refer to note A, "Significant Accounting Policies," for additional information on deferred costs to fulfill a contract and capitalized costs of obtaining a contract.

Transition Disclosures

In accordance with the modified retrospective method transition requirements, the company has presented the financial statement line items impacted and adjusted to compare to presentation under the prior GAAP for each of the annual periods during the first year of adoption of the new revenue standard. The following tables summarize the impacts as of and for the year ended December 31, 2018. The adjustments to prior GAAP include results of the transition adjustments recorded at adoption and current period impacts. Refer to note B, "Accounting Changes," for additional information on the transition adjustments.

Consolidated Statement of Earnings Impacts

($ in millions except per share amounts)

For the year ended December 31, 2018:	As Reported under New Revenue Standard	Adjustments to Convert to Prior GAAP	Adjusted Amounts under Prior GAAP
Revenue	$79,591	$ (63)	$79,528
Cost	42,655	(40)	42,615
Gross profit	36,936	(23)	36,912
Selling, general and administrative expense	19,366	7	19,373
Income from continuing operations before income taxes	11,342	(30)	11,312
Provision for/(benefit from) income taxes	2,619	(6)	2,613
Net income	$ 8,728	$ (24)	$ 8,704
Earnings/(loss) per share of common stock—continuing operations:			
Assuming dilution	$ 9.51	$(0.03)	$ 9.49
Basic	$ 9.56	$(0.03)	$ 9.54

Consolidated Statement of Financial Position Impacts

($ in millions)

At December 31, 2018:	As Reported under New Revenue Standard	Adjustments to Convert to Prior GAAP	Adjusted Amounts under Prior GAAP
Assets:			
Notes and accounts receivable—trade (net of allowances)	$ 7,432	$ 533	$ 7,965
Deferred costs (current)	2,300	(273)	2,027
Prepaid expenses and other current assets	2,378	(430)	1,948
Deferred taxes	5,216	190	5,406
Deferred costs (noncurrent)	2,676	(444)	2,231
Investments and sundry assets	2,386	—	2,386
Total assets	$123,382	$(425)	$122,957
Liabilities:			
Taxes	$ 3,046	$ 56	$ 3,102
Deferred income (current)	11,165	67	11,232
Deferred income (noncurrent)	3,445	31	3,476
Total liabilities	$106,452	$ 154	$106,606
Equity:			
Retained earnings	$159,206	$(604)	$158,601
Accumulated other comprehensive income/(loss)	(29,490)	26	(29,464)
Total stockholders' equity	$ 16,929	$(578)	$ 16,351
Total liabilities and stockholders' equity	$123,382	$(425)	$122,957

Consolidated Statement of Cash Flows Impacts

($ in millions)

For the year ended December 31, 2018:	As Reported under New Revenue Standard	Adjustments to Convert to Prior GAAP	Adjusted Amounts under Prior GAAP
Cash flows from operating activities:			
Net income	$ 8,728	$(24)	$ 8,704
Adjustments to reconcile net income to cash provided by operating activities:			
Changes in operating assets and liabilities, net of acquisitions/divestitures	554	24	578
Net cash provided by operating activities	$15,247	$ —	$15,247

Operating Expenses. Financial statement users need to analyze operating expenses horizontally and vertically. Financial statement notes provide important disclosures of dollar amounts and descriptions about the reporting entity's policies and expense classification on the income statement.

One caveat is that expense disclosures that appear only in schedules or information labeled "supplemental" are not in accordance with GAAP. This is because supplemental data is identified as information not required by GAAP and, unlike the notes, are not an integral part of the financial statements.

Specific operating expense accounting relevant to financial statement users follows:

1. **Shipping and handling costs** – Prior revenue recognition guidance in **Topic** 605 required shipping and handling be reported "gross," with charges to customers in revenue and related costs classified as expenses. The costs may be included in either Cost of Sales or another category of expense; if material and *not* included in Cost of Sales, disclosure must be made of the amount of these costs and where they are reflected in the income statement.

2. **Expense amounts of depreciation and amortization, pension, rent, and interest are required disclosures** if they are not listed separately on the face of the income statement. The amounts shown on the income statement may not represent the total amount incurred. Examples are when some of these items are capitalized, such as capitalized interest, product costs in inventory, and discontinued operations.

3. **Advertising expense** – This expense not only includes traditional advertising (such as print and media ads), but also catalogs, point-of-sale materials, sponsorship of special events, etc. Subtopic 720-35 permits advertising costs to be expensed either as incurred, or the first time the advertising takes place.

   This distinction may appear trivial but can be significant if prolonged production predates the publication or dissemination of advertising, or costs are incurred near year end. For example, assume a calendar year company produces a costly annual January catalog; as a result, the timing of expenses incurred near year end could fall in December in some years and January in others. If the company's accounting policy is to expense costs as incurred, there is a potential doubling up in some years, with no expense in others. (Arbitrary deferral to avoid doubling up would smooth out expenses, but violate the policy.) Choosing instead to expense the costs when the advertising first appears would ensure that the related costs are expensed each January, when the catalog is distributed. Any costs incurred before year end would be deferred.

   Therefore, in addition to disclosing the amount of advertising expense, the accounting policy must also be disclosed.

EXAMPLE

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (IN PART)

Advertising expense includes costs for production and distribution of catalogs, print ads, and internet advertising. The Company expenses these costs when the advertising first appears. Advertising expense was approximately $215,000 and $205,000 for the years ended December 31, 20X2 and 20X1, respectively.

(This disclosure could also be presented in a separate note for advertising.)

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4. **Income Taxes and Deferred Taxes** –All deferred taxes are reported as non-current assets and liabilities.

   Topic 740, *Income Taxes*, requires the liability method for measuring deferred taxes. This method accrues the future tax effect of all temporary differences, using the applicable tax rates expected to be in effect at that time.

   Deferred tax liabilities represent future taxable amounts. Deferred tax assets represent future deductible amounts, as well as operating loss and tax credit carryforwards. Like with any asset, deferred tax assets are reduced by a valuation allowance if it is more likely than not that the reporting entity will not realize all, or a portion, of the future tax benefits.

   In calculating deferred taxes, the liability method follows:

   1. Identify future taxable items (deferred tax liability)
   2. Identify future deductible items (deferred tax asset)
   3. Tax effect of all future taxable/deductible items
   4. Compare the beginning balances of deferred tax asset to the ending balance
   5. Compare the beginning and ending balances of deferred tax assets and liabilities to derive the deferred tax provision
   6. Determine the need for a deferred tax asset valuation allowance
   7. Derive income tax expense

   Topic 740 requires financial statement recognition of the possibility that certain tax positions that avoid or defer income taxes may not be sustainable upon examination of returns by taxing authorities. In applying this provision, an entity must presume that any and all tax positions on its returns will be examined, regardless of the likelihood that this will occur.

   "Tax positions" can relate to previous returns filed or taxes for the current period. They can involve a permanent reduction of taxes or a deferral of tax, and also include matters such as:

   - The entity's tax status (e.g., pass-through entity or not-for-profit)
   - A decision not to file returns in certain jurisdictions
   - Allocations of income and tax among jurisdictions (including issues such as transfer pricing)
   - Characterization or exclusion of certain taxable income on returns
   - Classification of income as exempt from tax

   Topic 740 applies to all entities that are potentially subject to income taxes, including not-for-profits, pass-through entities, and entities whose tax liability is subject to 100% credit for dividends, such as REITs and registered investment companies, but the disclosure requirements are more onerous for public companies.

Topic 740 only applies to taxes based on income. Therefore, it is not applicable to payroll taxes, sales and use tax, or taxes based on gross receipts, revenue, capital, or property. Topic 450 guidance for contingent losses applies to these taxes.

LEASES

ASU 2016-02, *Leases* (Topic 842)

Since the effective date of ASU 2016-02, *Leases*, for non-public reporting entities is for periods beginning after December 15, 2021, we begin this year's FASB Update with an overview of Topic 842.

Objective

The FASB issued ASU 2016-02, *Leases*, as amended (Topic 842), to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements.

The **core principle** of Topic 842 is that a reporting entity should recognize assets and liabilities arising from a lease. A lessee will recognize a liability to make lease payments and a right-of-use (RoU) asset representing its right to use the leased asset for the lease term. Our focus in this sub-section is leasing from the lessee's perspective.

Scope

According to Topic 842, a lease conveys the right to control the use of an identified property, plant, and equipment (an identified asset) for a period of time in exchange for consideration. A reporting entity should apply Topic 842 to all leases, including subleases. Topic 842 does not apply to the following:

- Leases of intangible assets
- Leases to explore for or use minerals, oil, natural gas, and similar assets
- Leases of biological assets, including timber
- Leases of inventory
- Leases of assets under construction

A short-term lease is a lease that, at the commencement date, has a lease term of 12 months or less and does not include an option to extend the lease term or purchase the underlying asset that the lessee is reasonably certain to exercise.

Note: "Reasonably certain" is defined as a high degree of confidence (for example, 85% to 90%) that an event will take place.

The lessee has an accounting policy option to recognize payments on a short-term lease on a straight-line basis over the lease term. If the accounting policy option is elected, short-term leases would not be reflected on the lessee's statement of financial position—policy note disclosure is required.

Lease Definition—Contract

A lease is a contract or part of a contract that conveys the right to control the use of an identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration. A contract is (or contains) a lease when the following two criteria are met:

1. The contract explicitly or implicitly specifies the use of an identifiable asset:

   – Asset is physically distinct

   – Lessor does not have any substitution rights. A protective right defines the scope of the lessee's right of use within applicable laws and regulations but does not, in isolation, prevent the lessee (customer) from having the right to direct the use of the asset.

2. The lessee (customer) controls the use of the asset for that period of use:

   – The lessee has the right to obtain substantially all of the economic benefits from use of an identified asset, and

   – The lessee has the right to direct the use of the identified asset during the period of use. Note that the period of time can be expressed in months or years or it can be expressed in terms of the amount of use of the identified assets such as production units

Examples of decision-making rights that would normally grant the right to direct how and for what purpose an asset is used include the following:

- The right to change the type of output that is produced by the asset
- The right to change when the output is produced
- The right to change where the output is produced
- The right to change whether the output is produced and the quantity of that output

At the inception of a contract, a reporting entity must determine whether the contract is or contains a lease. If the lessee has the right to control the use of an identified asset for only a portion of the term of the contract, the contract contains a lease for that portion of the term. In identifying the asset, the lessor must not have substantive substitution rights for the identified asset; meaning the lessor has no practical ability to substitute or would not benefit from substituting. An entity would reassess whether a contract is or contains a lease only if the terms and conditions of the contract are changed.

Lease Classification

According to Topic 842, a reporting entity must classify each lease component within a lease contract at the commencement date. A reporting entity should not reassess this lease classification after the commencement date unless the lease contract is modified and the modification is not accounted for as a separate contract. However, the lessee is required to reassess this lease classification after the commencement date if there is a change in the lease term or a change in the assessment as to whether the lessee is reasonably certain or not to exercise an option to purchase the underlying asset.

A lessee will **classify** a lease as a **finance lease and a lessor will classify a lease as a sales-type lease** when the lease contract meets any of the following criteria at the lease commencement date.

This criterion classifies a lease based on whether the lease contract effectively reflects a purchase of the underlying asset:

- The lease **transfers ownership** of the underlying asset to the lessee by the end of the lease term

- The lease grants the lessee an **option to purchase the underlying asset** that the lessee is reasonably certain (probable) to exercise

- The lease term is for the **major part** (legacy GAAP 75%) of the remaining economic life of the underlying asset—note that if the commencement date falls at or near the end of the economic life of the underlying asset, this specific criterion should not be used for purposes of classifying the lease

  - If a single lease component contains the right to use more than one underlying asset, the reporting entity should consider the remaining economic life of the predominant asset in the lease component for the purpose of applying this criterion

- The present value of the sum of the lease payments and any residual value guaranteed by the lessee that is not already reflected in the lease payments, **equals or exceeds substantially all of the fair value** (legacy GAAP 90%) of the underlying asset

- The underlying asset is of such a **specialized nature** that it is expected to have no alternative use to the lessor at the end of the lease term

When **none of the criteria for a finance lease are met**, a lessee classifies the lease as an operating lease. When none of the criteria for a sales-type lease are met, a lessor will classify the lease as either a direct financing lease or an operating lease. The lessor will classify the lease as an operating lease unless both of the following criteria are met:

- The present value of the sum of the lease payments and any residual value guarantee by the lessee that is not already reflected in the lease payments and/or any other third-party guarantee unrelated to the lessor equals or exceeds substantially all of the fair value of the underlying asset, and

- It is probable that the lessor will collect the lease payments plus any amount necessary to satisfy a residual value guarantee

When both of the above criteria are met, a lessor must classify the lease as a direct financing lease.

Note: The reason it is important to determine the lease classification of a lease is because the subsequent accounting for a lessee is based on the lease classification (pattern of expense measurement and recognition) and for a lessor, the initial and subsequent measurement is based on whether the lease is classified as a sales-type lease, direct financing lease or an operating lease.

Lessee Initial Measurement

At the lease commencement date, a lessee should recognize in the statement of financial position both of the following:

- A **lease payment liability** based on the present value of the lease payments, discounted using the discount rate for the lease, and

- A **right-of-use (RoU) asset** representing the lessee's right to use the underlying asset for the lease term.

EXAMPLE

Initial Measurement

DB: Right-of-Use Asset	XX	
CR: Lease Payment Liability		XX

When calculating the lease payment liability, if the rate implicit in the lease is not readily determinable, the lessee will use its incremental borrowing rate for borrowings of the similar amounts and terms. A lessee may use a single discount rate to apply to a portfolio of leases, assuming the result would not be significantly different than individual lease discount rates.

Note: Non-public reporting entities are permitted an accounting policy election to use a risk-free discount rate for the lease (normally the federal funds rate).

The RoU asset and the lease payment liability may not be the same on commencement, nor throughout the lease term, because the RoU asset is calculated as the amount of the initial measurement of the lease payment liability plus payments made by a lessee to the lessor at or before the lease commencement date minus any lease incentives the lessee received from the lessor and any initial direct costs incurred by the lessee.

When initially measuring the **lease payment liability** at the commencement date, the lease payments consist of the following payments relating to the use of the underlying asset during the lease term:

- **Fixed payments**, including in substance fixed payments, less any lease incentives paid or payable to the lessee.
- **Variable lease payments** that depend on an index or rate, initially measured using the index or rate at the commencement date.
- The **exercise price of an option** to purchase the underlying asset if the lessee is reasonably certain to exercise this option.
- **Payments for penalties for terminating the lease** if the lease term reflects the lessee exercising the option to terminate the lease.
- **Fees paid by the lessee to the owners of a special-purpose entity for structuring the transaction.** These fees are not included in the fair value assessment of the underlying asset for purposes of determining fair value for lease classification purposes.
- For the lessee only, amounts probable of being owed by the lessee under **residual value guarantees**.

From the **lessee's perspective**, to determine whether a lease is a finance lease or an operating lease, we must evaluate the lease classification criteria presented earlier in this section. The following example evaluates these classification criteria to make the lease classification decision.

EXAMPLE

Finance Lease—Subsequent Measurement

ABC Lessee enters into a five-year equipment lease (no renewal options) with Lessor Inc. with annual lease payments of $24,000. The economic life of the equipment is 7 years and its fair value is $150,000. There is no purchase option available, there is not a residual value guarantee made by the lessee, and the payments are due annually on January 1st of each year. The rate implicit in the lease is 6 percent. There are no other payments associated with this lease. The equipment will be returned to Lessor Inc. at the end of the five-year lease term.

Using the five lease classification criteria, we can determine whether this lease is a finance or operating lease:

1. Transfer of ownership—Ownership does not transfer to the lessee
2. Option to purchase the underlying asset—The lease does not contain a purchase option
3. Lease term is for the major part of the remaining economic life of the underlying asset—Five-year lease term is a major part of the economic life of the asset (5/7 = 71%)
4. Present value of the sum of the lease payments and any residual value guarantee amounts to substantially all of the fair value of the underlying asset—Present value of 5 payments of $24,000 at 6% is $107,163. This is approximately 71% of the fair value of the leased asset and is not substantially all of the fair value of the underlying asset
5. Underlying asset is of such a specialized nature—There is no indication that this equipment is of a specialized nature

Based on this analysis, the lease term is for a major part of the economic life of the asset, and therefore, this lease is a finance lease.

1/1 Year 1:

DB: RoU Asset	$107,163	
CR: Lease Payment Liability		$107,163
DB: Lease Payment Liability	$24,000	
CR: Cash		$24,000

Subsequent Measurement—Finance Lease

The lease payment liability is increased by recognizing periodic interest on the lease liability and decreased by payments made during the lease periods. The RoU asset is amortized on a straight-line basis from the commencement date to the earlier of the end of the lease term or the useful life of the RoU asset. The RoU asset is reduced by accumulated amortization and any impairment losses based on reassessment requirements. If the RoU asset will be transferred to the lessee at the end of the lease term or it is reasonably certain that the lessee will exercise a purchase option for the RoU asset, then the RoU asset's amortization period should be to the end of the useful life of the RoU asset.

EXAMPLE

ABC Lessee enters into a five-year equipment finance lease (no renewal options) with Lessor Inc. with annual lease payments of $24,000. The economic life of the equipment is six years and its fair value is

$150,000. There is no purchase option available, there is not a residual value guarantee made by the lessee, and the payments are due annually on January 1. The rate implicit in the lease is 6%. There are no other payments associated with this lease. The equipment will be returned to Lessor Inc. at the end of the five-year lease term.

Operating Lease—Subsequent Measurement

Year 1:

January 1

Account	Debit	Credit
DB: RoU Asset	$107,163	
CR: Lease Payment Liability		$107,163
(Present value of 5 payments of $24,000 at 6% is $107,163)		
DB: Lease Payment Liability	$24,000	
CR: Cash		$24,000
DB: Lease Amortization Expense	$21,433	
CR: RoU Asset		$21,433
(RoU asset of $107,163 / 5 = $21,432.60)		

December 31

Account	Debit	Credit
DB: Interest Expense	$4,990	
CR: Lease Payment Liability		$4,990
(Lease payment liability of $107,163 – $24,000 payment = $83,163 × 6% = $4,990)		

Year 2:

January 1

Account	Debit	Credit
DB: Lease Payment Liability	$24,000	
CR: Cash		$24,000
DB: Lease Amortization Expense	$21,432	
CR: RoU Asset		$21,432

December 31

Account	Debit	Credit
DB: Lease Expense	$3,849	
CR: Lease Payment Liability		$3,849

Year 3:

January 1

Account	Debit	Credit
DB: Lease Payment Liability	$24,000	
CR: Cash		$24,000
DB: Lease Amortization Expense	$21,433	
CR: RoU Asset		$21,433

December 31

DB: Interest Expense	$2,640	
CR: Lease Payment Liability		$2,640

Year 4:

January 1

DB: Lease Payment Liability	$24,000	
CR: Cash		$24,000
DB: Lease Amortization Expense	$21,432	
CR: RoU Asset		$21,432

December 31

DB: Interest Expense	$1,358	
CR: Lease Payment Liability		$1,358

Year 5:

January 1

DB: Lease Payment Liability	$24,000	
CR: Cash		$24,000
DB: Lease Amortization Expense	$21,432	
CR: RoU Asset		$21,432

Subsequent Measurement—Operating Lease

As stated previously, when none of the criteria for a finance lease are met, the lease is classified as an operating lease. The lessee recognizes a right-of-use (RoU) asset and a lease payment liability in the statement of financial position in the same manner as a finance lease. The lessee though, in an operating lease, will recognize a **single lease cost**, calculated so that the undiscounted cost of the lease is allocated over the lease term, generally on a straight-line basis. This is accomplished by amortizing the lease liability on an effective interest basis and then amortizing the RoU asset by adjusting (plugging) the lease asset's amortization to arrive at a constant lease expense amount.

Stated differently, the lease payment liability is reduced over time by recognizing the present value of the remaining lease payments not yet paid. The initial RoU asset balance is reduced by periodically adjusting the amortization of the RoU asset by the effective interest on the lease payment liability to arrive at a constant straight-line expense amount. As with finance leases, the RoU asset may also be impacted by any prepaid or accrued expenses, the remaining balance of any lease incentives received, unamortized initial direct costs or any impairment.

For clarity purposes, Topic 842-20-25-6a, *Recognition*, states the following as it relates to operating lease recognition:

> *A single lease cost, calculated so that the remaining cost of the lease is allocated over the remaining lease term on a straight-line basis unless another systematic and rational basis is more representative of the pattern which benefit is expected to be derived from the right to use the underlying asset unless the right of use asset has been impaired.*

EXAMPLE

Note 7—Leases

ABC Lessee enters into a five-year equipment lease (no renewal options) with Lessor Inc. with annual lease payments of $24,000. The economic life of the equipment is 10 years and its fair value is $150,000. There is no purchase option available, there is not a residual value guarantee made by the lessee, and the payments are due annually on January 1. The rate implicit in the lease is 6%. There are no other payments associated with this lease. The equipment will be returned to Lessor Inc. at the end of the five-year lease term. None of the five finance lease criteria are met; therefore, the lease is an operating lease.

Year 1:

January 1

DB: RoU Asset	$107,163	
CR: Lease Payment Liability		$107,163

(Present value of 5 payments of $24,000 at 6% is $107,163)

DB: Lease Payment Liability	$24,000	
CR: Cash		$24,000

December 31

DB: Lease Expense	$24,000	
CR: Lease Payment Liability		$4,990
CR: Accumulated Amortization		$19,010

[The lease payment liability is increased by calculating the effective interest ($107,163 – $24,000 = $83,163 × 6% = $4,990).]

The reduction in the RoU asset is calculated by subtracting the effective interest ($4,990) from the required straight-line expense amount ($24,000) = $19,010.

Year 2:

January 1

DB: Lease Payment Liability	$24,000	
CR: Cash		$24,000

December 31

DB: Lease Expense	$24,000	
CR: Lease Payment Liability		$3,849
CR: Accumulated Amortization		$20,151

[The lease payment liability is increased by calculating the effective interest ($107,163 – $24,000 – $19,010 = $64,153 × 6% = $3,849).]

The reduction in the RoU asset is calculated by subtracting the effective interest ($3,849) from the required straight-line expense amount ($24,000) = $20,151.

Year 3:

January 1

DB: Lease Payment Liability	$24,000	
CR: Cash		$24,000

December 31

DB: Lease Expense	$24,000	
CR: Lease Payment Liability		$2,640
CR: Accumulated Amortization		$21,360

[The lease payment liability is increased by calculating the effective interest ($107,163 – $24,000 – $19,010 – $20,151 = $44,002 × 6% = $2,640).]

The reduction in the RoU asset is calculated by subtracting the effective interest ($2,640) from the required straight-line expense amount ($24,000) = $21,360.

Year 4:

January 1

DB: Lease Payment Liability	$24,000	
CR: Cash		$24,000

December 31

DB: Lease Expense	$24,000	
CR: Lease Payment Liability		$1,359
CR: Accumulated Amortization		$22,641

[The lease payment liability is increased by calculating the effective interest ($107,163 – $24,000 – $19,010 – $20,151 – $21,360) = $22,642 × 6% = $1,359).]

The reduction in the RoU asset is calculated by subtracting the effective interest ($1,359) from the required straight-line expense amount ($24,000) = $22,641.

Year 5:

January 1

DB: Lease Payment Liability	$24,000	
CR: Cash		$24,000

December 31

DB: Lease Expense $24,000

CR: Accumulated Amortization $24,000

Note: Each year, the credit to the RoU asset (amortization) gets larger. This is the only way to achieve a straight-line lease expense while the interest decreases each year on the lease payment liability.

STATEMENT OF CASH FLOWS

Topic 230, *Statement of Cash Flows*, requires that whenever a business entity or not-for-profit organization reports financial position and results of operations, a cash flow statement is to be presented for each period for which results of operations are presented. However, Topic 230 exempts most pension plans from presenting a Statement of Cash Flows.

The Statement of Cash Flows includes the following categories of cash flows:

1. **Investing activities**, such as:
   - Making and collecting loans, including related party loans
   - Acquiring and disposing of debt and equity securities which are held to maturity or available for sale
   - Acquiring and disposing of property, plant, and equipment and other productive assets
   - Deposits or deferred costs that relate to investing assets or liabilities
   - Cash paid to increase the cash surrender value of life insurance
2. **Financing activities**, such as:
   - Borrowing money and repaying amounts borrowed, including related party loans
   - Issuing and reacquiring the entity's own equity instruments
   - Dividends or other distributions to owners

   Capitalized debt issue costs are financing activities. Fees and other costs deducted from the proceeds of borrowing should be offset against the face amount of the debt so that only the net proceeds are reflected on the cash flows statement.
3. **Operating activities** include all activities other than financing or investing, such as:
   - Receipts from the sale of goods and services and the collection of accounts and notes receivable
   - Receipts and payments of interest, even for a not-for-profit

- Receipts of dividends, even for a not-for-profit
- Distributions to equity method investors
- Receipts or payments from the sale or purchase of trading securities
- Payments to acquire goods for resale or materials for the manufacture of goods and principal payments on accounts or notes payable
- Payments to suppliers and employees for other goods and services
- Payments to governmental units for taxes, fines, duties, penalties, and other fees
- Payments to settle an asset retirement obligation (Topic 410)

4. The effect of fluctuations in exchange rates on foreign cash balances is reported as a separate item.

EXAMPLE

INDIRECT METHOD
Taylor Products Company
Statement of Cash Flows
For the Year Ended December 31, 202X

Operating Activities:	
Net Income	$1,762,400
Adjustments to reconcile net income to net cash provided by operating activities:	
Depreciation	197,420
Provision for Deferred Income Taxes	37,111
Provision for Bad Debts	6,200
Gain on Sale of Machinery	(26,200)
Changes in operating assets and liabilities:	
Accounts Receivable	(87,400)
Inventories	89,174
Prepaid Assets	42,819
Accounts Payable	174,899
Net Cash Provided by Operating Activities	2,196,423
Investing Activities:	
Purchase of Machinery	(375,472)
Proceeds from Sale of Machinery	51,674
Net Cash Used in Investing Activities	(323,798)
Financing Activities:	
Proceeds from Long-Term Borrowings	1,500,000
Principal Payments on Debt	(2,651,900)
Dividends Paid	(40,000)
Net Cash Used in Financing Activities	(1,191,900)
Increase (Decrease) in Cash	680,725
Cash and Cash Equivalents, and Restricted Cash at Beginning of Year	14,271
Cash and Cash Equivalents, and Restricted Cash at End of year	$ 694,996
Supplemental Disclosures:	
Interest Paid	165,000
Income Taxes Paid	515,000

EXAMPLE

DIRECT METHOD
Taylor Products Company
Statement of Cash Flows
For the Year Ended December 31, 202X

Cash flows from operating activities:	
Cash received from customers	$7,680,912
Cash paid to suppliers and employees	(4,777,715)
Interest paid	(165,000)
Income taxes paid	(515,000)
Other operating cash receipts (payments)	(26,774)
Net Cash Provided by Operating Activities	2,196,423
Cash flows from investing activities:	
Purchase of Machinery	(375,472)
Proceeds from Sale of Machinery	51,674
Net Cash Used in Investing Activities	(323,798)
Cash flows from financing activities:	
Proceeds from Long-Term Borrowings	1,500,000
Principal Payments on Debt	(2,651,900)
Dividends Paid	(40,000)
Net Cash Used in Financing Activities	(1,191,900)
Increase (Decrease) in Cash	680,725
Cash and Cash Equivalents, and Restricted Cash at Beginning of Year	14,271
Cash and Cash Equivalents, and Restricted Cash at the End of Year	$ 694,996
Reconciliation of net income to net cash provided by operating activities:	
Net Income	$1,762,400
Adjustments to reconcile net income to cash provided by operating activities:	
Depreciation	197,420
Provision for Deferred Income Taxes	37,111
Provision for Bad Debts	6,200
Gain on Sale of Machinery	(26,200)
Change in operating assets and liabilities:	
Accounts Receivable	(87,400)
Inventories	89,174
Prepaid Assets	42,819
Accounts Payable	174,899
Net Cash Provided by Operating Activities	$2,196,423

In addition to presenting the three categories of cash flows (operating, investing, and financing), Subtopic 230-10-50 requires the following **additional cash flow disclosures**:

- The entity's accounting policy for determining which items are treated as cash equivalents.
- Income taxes paid and interest paid (net of amounts capitalized) when the indirect method is used.
- Non-cash investing and financing activities disclosure may be presented as a schedule or in narrative form. Best practice discloses this on the face of the Statement of Cash Flows; this is not required. Subtopic 230-10-50 actually states that if there are only a few non-cash transactions to disclose, it may be convenient to include the disclosure on the same page. If the information is disclosed in the notes, it should be clearly referenced to the statement.
- At a minimum, changes in receivables, inventory, prepaids, and payables must be shown separately when reconciling net income to cash flows from operating activities under the indirect method.
- Using the direct method, net income must also be reconciled to net cash provided by operating activities (equivalent to the operating section of the Statement of Cash Flows using the indirect method).

  Please refer to the Ford Motor Company financial statement examples in Section 2.

Unit

4

Financial Statement Analysis – Part 1

LEARNING OBJECTIVES

After completing this unit, participants will be able to accomplish the following.

- Perform financial statement analysis using best practices and various cases.
- Compare financial statements of different companies in the same industry and the same company across different time periods.
- Explain the importance of using a company's MD&A for effective financial statement analysis.

INTRODUCTION

The financial statement analysis process is based on applying analytical tools and techniques to financial statements and operating data with the purpose of producing systematic, rational, and meaningful information as a basis for sound decision making. When rigorously applied, financial analysis reduces the reliance on non-financial decision-making approaches of hunches, intuition, feelings, and gut reaction.

One of the biggest weaknesses of non-financial, non-quantitative decision-making is that these soft approaches make it impossible to document and share knowledge about what went right and wrong. Thus, the financial statement user or organization cannot learn from its decision-making actions. For example, it is important to validate correct analysis made to make investments/projects that performed well so that the process can be repeated with future decisions.

Even more important is to learn from mistakes on decisions made on poorly performing investments/projects so that future decisions will have a better chance of success. Or, as writer and philosopher George Santayana's famous quotation said, "Those who cannot remember the past are condemned to repeat it."

Lastly, sound financial analysis builds an environment of accountability for investment decisions. It avoids the phenomenon of the "flight from facts" by replacing fantasy and wishful thinking with systematic and rational thinking.

Contrary to the belief of some, rigorous quantitative financial analysis does not reduce judgment but actually increases it. This is because by choosing appropriate rational analytical techniques and the analyst can add insight when interpreting the results before making investment decisions.

There are several **objectives to financial analysis**:

- **Screening** – used to select a sample of investment choices that meet certain financial and operational criteria. Examples are matching investor strategy with size (under $25 million in sales), growth (growing faster than their industry), profitability (gross profit greater than their industry), efficiency (high accounts receivable turnover more than 10X), etc.

- **Performance evaluation** – evaluate management performance compared with budget or industry benchmarks.

- **Diagnostic tool –** identify problems within an organization or within an industry.

- **Predictive indicator** – forecast the nature, timing, and extent of future cash flows.

The financial analysis tools and techniques deployed depends on the decision maker and the decision to be made. Apart from specific quantitative solutions, the answer to financial questions depends on the perspective of the financial statement user. The qualitative judgments made in reaching conclusions to financial questions are equally important as the technical quantitative answer. Thus, no financial analysis is complete without documenting qualitative judgments.

The financial analysis objective must be clearly enumerated before collecting and analyzing data; otherwise, the process is purely number crunching. The following decision makers have different objectives:

- **Credit grantor** – Will the interest and principal be paid back?

- **Equity investor** – Will the investment achieve an acceptable risk-adjusted return?

- **Management** – A feedback mechanism about whether the entity or operation is performing according to advance expectations (budget) or industry benchmarks.

- **Supplier** – Can I rely on this supplier to provide a critical raw material or subcomponent into my entity's production process?

- **Customer** – What payment terms should I allow this customer and what is the maximum amount of payment risk I am willing to take?

- **Mergers & acquisitions** – What is the value of the target entity and what is the maximum amount we should pay?

- **Auditors** – Risk-based audit planning to determine the nature, timing, and extent of tests to be performed.

- **Employees** – Does this entity have sustainability and longevity, and do I want to leave or join the organization?

- **Stakeholders** – Lawyers evaluate the amount of settlement an entity can pay, government tax authorities evaluate financial reasonableness, labor unions evaluate the amount of wage and benefit increases to negotiate, etc.

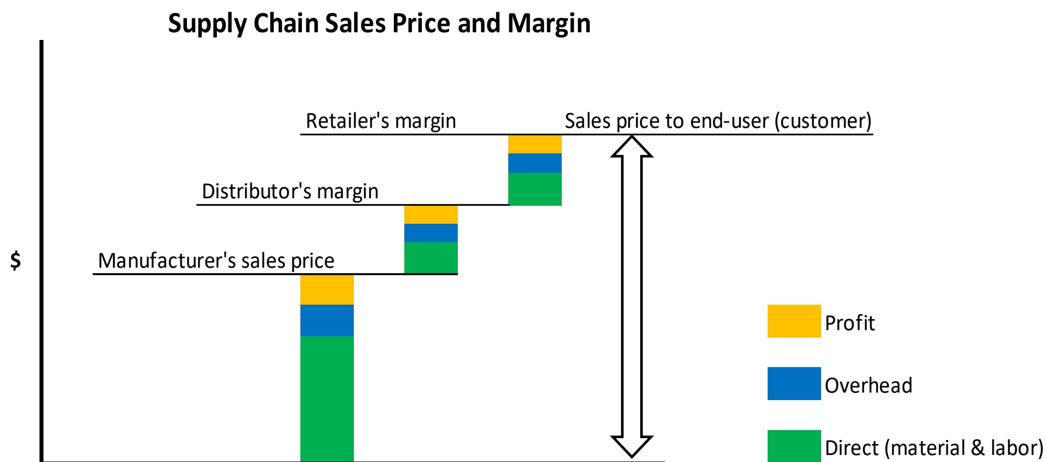
Financial analysis is both an analytical and judgmental process to provide support for making sound investment and other decisions. Mastering quantitative tools and techniques to arrive at accurate numerical calculations are not the end of the analysis but just the beginning, due to the contribution of judgment.

Industry Differences

It is fairly obvious that industries have their own unique cost structures. Thus, comparing a reporting entity's financial metric with the industry average provides meaningful analysis. Comparing a reporting entity's financial metric with an entity in a different industry is not meaningful. One exception is best practice benchmarking which has frequently occurred for efficiency best practices with Japanese automobile manufacturing companies.

Within an industry, however, there can be significant financial and operational differences depending on where the reporting entity operates in the supply chain to reach the end-user customer. The supply chain components are manufacturers, distributors, and retailers.

No matter what the product, the manufacturer must get it to the end-user customer, and there may be several intermediary steps along the way to the market. If the manufacturer sells directly to end-users to a distributor or to a retailer, pricing and profit margins are critical components for each link in the supply chain. This is illustrated in the following chart.



When discussing industry pricing and gross margin, it is important to clarify which reporting entity in the supply chain is being measured. As the chart shows, not all margin (mark-up) is profit for intermediary entities between the manufacturer and the end-user customer. Distributors and retailers, to earn their margin, must incur storage, overhead, and freight costs.

Operating Strategy Differences

Let's look at a specific example. Both Mattel and Hasbro are in the toy industry, and annual sales for both are about $5 billion. Both companies sell through the same market channels, and both

companies have the same customers. What is different, however, is each company has a different operating strategy.

Hasbro uses **contract manufacturing** and outsources all product production to third-party companies mostly in China.

Mattel has a **captive manufacturing** strategy and owns and operates its own manufacturing facilities. Its rationale is this provides better control over volume, timing, and product quality.

EXAMPLE

In addition to the reasons above, Mattel management believes owning manufacturing is more efficient than contracting out. This is an opportunity for financial statement users to analyze Mattel's financial statements to confirm or dispute management's efficiency representation.

The proper financial analysis sequence is:

1. Document expectations
2. Perform financial analysis
3. Compare expectations with the financial analysis result
4. Document reasons for variances with expectations

Following is the user financial statement analysis:

1. Since Mattel states that owning and operating its own manufacturing is more efficient, the financial statement user would expect higher gross margins from the greater efficiency.
2. Calculate annual gross margin for Mattel and Hasbro.

In $ millions	Mattel		Hasbro	
	2020	2019	2020	2019
Sales	$4,584	$4,505	$5,465	$4,720
Cost of Sales	2,340	2,524	1,719	1,808
Gross Profit	2,244	1,981	3,746	2,912
% of Sales	49.0%	44.0%	68.5%	61.7%

3. Hasbro, a company that outsources 100% of its manufacturing, has higher gross profit margins than Mattel, a company that owns and operates its manufacturing. This refutes Mattel management's operational strategy of captive manufacturing.

   Because gross profit margins in 2020, the most recent year, looked very poor, the financial statement user also included the prior year in the analysis. The conclusion was the same in both years.
4. The reasons are not readily apparent. The next step in the financial statement analysis would be to calculate and analyze efficiency ratios, such as asset turnover and ROA.

Understanding a Reporting Entity's Goals, Objectives, and Strategy

Financial analysis and forecasting require knowledge about a reporting entity's short-term goals and objectives as well as about long-term strategy. For private entity's, this information needs to be disclosed voluntarily to financial statement users.

For public companies, there are many sources of this information. Examples are SEC requirements in the Form 10-K (MD&A), the annual CEO letter to shareholders (Warren Buffet's CEO letter for Berkshire Hathaway is highly anticipated each year), annual meeting presentations to shareholders, and equity analyst presentations. In addition to quarterly and annual reporting requirements, the SEC also requires in Regulation FD (Full Disclosure) requires these latter documents be published so that the investor market has equal access to reporting entity's information.

Strategy is generally disclosed in the SEC Form 10-K under "Business." Following are Mattel and Hasbro's strategy.

EXAMPLE

Source: Mattel 2021 Form 10K

Mattel is the owner of a portfolio of iconic brands and partners with global entertainment companies to license other intellectual property. Mattel's portfolio of owned and licensed brands and products are organized into the following categories:

- Dolls—including brands such as Barbie, Monster High, American Girl, Polly Pocket, Spirit (Universal), and Enchantimals. Mattel's Dolls portfolio is driven by the flagship Barbie brand and a collection of complementary brands offered globally. Empowering girls since 1959, Barbie has inspired the limitless potential of every girl by showing them that they can be anything. With an extensive portfolio of dolls and accessories, content, gaming, and lifestyle products, American Girl is best known for imparting valuable life lessons through its inspiring dolls and books, featuring diverse characters from past and present. Its products are sold directly to consumers via its catalog, website, and proprietary retail stores.
- Infant, Toddler, and Preschool—including brands such as Fisher-Price, Thomas & Friends, Power Wheels, and Fireman Sam. As a leader in play and child development, Fisher-Price's mission is to provide meaningful solutions for parents and enrich children's lives from birth to school readiness, helping families get the best possible start. Thomas & Friends is an award-winning preschool train brand franchise that brings meaningful life lessons of friendship and teamwork to kids through content, toys, live events, and other lifestyle categories.
- Vehicles—including brands such as Hot Wheels, including Hot Wheels Monster Trucks and Hot Wheels Mario Kart (Nintendo), Matchbox, and CARS (Disney Pixar). In production for over 50 years, Hot Wheels continues to push the limits of performance and design and ignites the challenger spirit of kids, adults, and collectors. From die-cast vehicles to tracks, playsets, and accessories, the Mattel Vehicles portfolio has broad appeal that engages and excites kids of all ages.

Action Figures, Building Sets, Games, and Other—including brands such as Masters of the Universe, MEGA, UNO, Lightyear (Disney Pixar), Jurassic World (NBCUniversal), WWE, and Star Wars (Disney). Mattel's action figure portfolio is comprised of product lines associated with licensed entertainment franchises that are driven by major theatrical releases, such as Lightyear and Jurassic World, as well as product lines from Mattel's owned IP, including Masters of the Universe. As the challenger brand in Building Sets, MEGA sparks creativity through the power of connection with builders of all ages and fans of global franchises. UNO is the classic matching card game that is easy to learn and fast fun for everyone. Other includes Plush, which

contains product offerings associated with theatrical releases from Mattel's licensed entertainment franchises.

EXAMPLE

Source: Hasbro 2021 Form 10K

Business

Hasbro, Inc. ("Hasbro") is a global play and entertainment company committed to Creating the World's Best Play and Entertainment Experiences and its purpose of making the world a better place for all children, fans, and families. Hasbro delivers immersive brand experiences for global audiences through consumer products, including toys and games; entertainment through Entertainment One ("eOne,"), our independent studio; and gaming, led by the team at Wizards of the Coast, an award-winning developer of tabletop and digital games. With our eOne studio and Wizards gaming business, we continue to expand our global audiences beyond children, fans, and families, through content and gaming.

Our iconic brands include NERF, MAGIC: THE GATHERING, MY LITTLE PONY, TRANSFORMERS, PLAY-DOH, MONOPOLY, BABY ALIVE, DUNGEONS & DRAGONS, POWER RANGERS, PEPPA PIG, and PJ MASKS, as well as premier partner brands. For the past decade, we have been consistently recognized for our corporate citizenship, including being named one of the 100 Best Corporate Citizens by 3BL Media and one of the World's Most Ethical Companies by Ethisphere Institute.

MD&A

Much of the information an analyst needs to identify industry differences and strategy can be found in a company's Management's Discussion and Analysis (MD&A) found in its filed 10K. It is beyond the scope of this program to dive deeply in a company's published MD&A but below are the topics covered in General Electric's MD&A (88 pages long):

- Introduction and Definition of Terms
- Key Performance Indicators
- Consolidated Results
- GE Capital Reorganization (Exit Plan)
- Segment Operations
- GE Corporate Items and Eliminations
- Discontinued Operations
- Other Consolidated Information (Interest, Postretirement Benefit Plans, Pension Costs, Income Taxes, Geographic Data, Revenues, and Foreign Currency Exposure)
- Statement of Financial Position
- Financial Resources and Liquidity
- Critical Accounting estimates

- Other Items (New Accounting Standards, GE Digital, Iran Threat reduction and Syria Human Rights Act of 2012, Environmental Matters, and Research and Development)
- Supplemental Information

EARNINGS QUALITY

Net income is high quality if it is earned in the ordinary course of business, which means it represents the underlying economics of the business, and it is sustainable over time. If instead, net income was financially engineered, then it was not earned in the ordinary course of business and is low quality.

Significant related-party transactions are not considered to be in the ordinary course of business because these transactions are not "arm's length." Any party (entity) that controls or can significantly influence another company's management or operations can result in non-economic events occurring. Related-party transactions are often difficult to detect and measure. Although Topic 850, *Related-Party Disclosures*, requires specific disclosures on related-party transactions, even those without cash transfers, these disclosures are frequently lacking.

Unsustainable earnings can result from unfilled executive positions, reductions in research & development investment spending, reductions in advertising spending, and deferring plant and equipment maintenance.

An ideal (but not perfect due to the potential for related-party transactions) approach to assess earnings quality is by comparing net income with cash flow from operating activities, commonly referred to as CFFO. Over several periods if CFFO is negative while net income is positive or if net income constantly is greater than CFFO, then a reporting entity's earnings may be of lower quality.

Financial statement users can validate earnings quality with the 'earnings quality ratio.' This ratio is best used as an indicator of problems in reported earnings and not as an absolute measure of earnings quality. The earnings quality ratio, which should be near 1 over time is:

$$\frac{\text{Cash Flow from Operating Activities}}{\text{Net Income + Depreciation + Amortization}}$$

When this ratio is consistently below 1, it is an indicator of lower earnings quality. If it is consistently above 1, then it may suggest accelerated receivables collections, inventory reductions, or management intentionally understating earnings.

The earnings quality ratio is most applicable to mature companies whose sales, costs, and working capital are more consistent over time. The ratio is less applicable to early-stage high-growth profitable companies that must fund growing working capital to support its high growth.

CONVENTIONAL ANALYTICAL TOOLS

To effectively analyze financial statement information, financial statement users must develop knowledge about the reporting entity's industry, historical experience, competitors, and financial trends. In effect, financial statement users must develop **expectations** regarding a reporting entity's performance prior to analyzing a company's financial information. Expectations are critical to financial analysis, as they form the basis for establishing benchmarks used when comparing actual to expected results, and when further analyzing financial and operating data.

Most financial statement users are familiar with common analytical approaches for comparing and analyzing historical financial data: **horizontal** (trend) analysis and **vertical** (common size) analysis. This unit will review these analytical approaches.

SEC requirements for public companies include a five-year trend disclosure of selected financial information. This disclosure for Mattel and Hasbro is shown here.

MATTEL

Mattel Selected Financial Data

$ Millions	2020	2019	2018	2017	2016
Net Sales	$4,583.7	$4,504.6	$4,514.8	$4,882.0	$5,156.7
Operating Income	380.9	39.2	(234.3)	(339.4)	527.7
Net Income	126.6	(213.5)	(533.3)	(1,053.8)	318.0
Per Common Share Data					
Basic	$ 0.36	$ (0.62)	$ (1.55)	$ (3.07)	$ 0.93
Diluted	$ 0.36	$ (0.62)	$ (1.55)	$ (3.07)	$ 0.92
Weighted Average Number of Commmon Shares					
Basic	347.5	346.1	345.0	343.0	343.0
Diluted	349.1	346.1	345.0	343.0	345.0
Total Assets	$5,521.1	$5,325.2	$5,243.5	$6,238.6	$6,493.8
Total Debt	2,855.6	2,846.6	3,321.4	3,357.2	2,580.4

HASBRO

		Fiscal Year				
		2020	2019	2018	2017	2016
Consolidated Statements of Operations Data:						
Net revenues	$	5,465.4	4,720.2	4,579.6	5,209.8	5,019.8
Operating profit	$	501.8	652.1	331.1	810.4	788.0
Net earnings	$	225.4	520.5	220.4	396.6	533.2
Net earnings (loss) attributable to noncontrolling interests	$	2.9	—	—	—	(18.2)
Net earnings attributable to Hasbro, Inc.	$	222.5	520.5	220.4	396.6	551.4
Per Common Share Data:						
Net Earnings Attributable to Hasbro, Inc.						
Basic	$	1.62	4.07	1.75	3.17	4.40
Diluted	$	1.62	4.05	1.74	3.12	4.34
Cash dividends declared	$	2.72	2.72	2.52	2.28	2.04
Consolidated Balance Sheets Data:						
Total assets	$	10,818.4	8,855.6	5,263.0	5,290.0	5,091.4
Total long-term debt (1)	$	5,127.9	4,084.9	1,709.9	1,709.9	1,559.9
Weighted Average Number of Common Shares:						
Basic		137.3	127.9	126.1	125.0	125.3
Diluted		137.6	128.5	126.9	127.0	127.0

Horizontal (Trend) Analysis

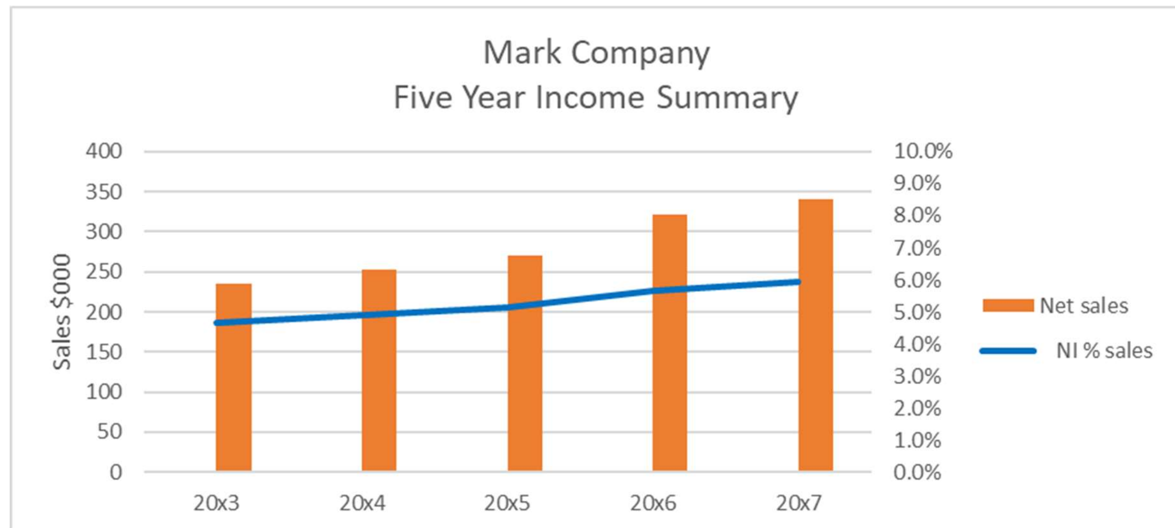
Horizontal analysis involves the review and analysis of a particular piece of data over time – for instance, reviewing a trend of sales performance (growth/deterioration) over, say, three years. Horizontal analysis provides important information regarding historical performance, and, given a sufficiently long history of accurate seasonal information, can be of great assistance as a planning and forecasting tool for management and analysts. It is typically conducted by calculating year-to-year percentage changes, or by selecting a base year upon which to compare with (often the earliest year presented), assigning that base year a value of "100," and then expressing comparative amounts as a percentage of that base year amount (as illustrated above):

Graphical Presentation

The analysis may be clearer when shown in graphical form, keeping with the adage "a picture paints a thousand words."

EXAMPLE

The graph below shows both sales growth and profitability growth in net income as a percentage of sales.



Vertical (Common Size) Analysis

Vertical analysis expresses financial statement amounts as a percentage of:

- Net sales, for the Income Statement.
- Total assets, for the Balance Sheet.
- Total cash inflows, for the Statement of Cash Flows (rarely used).

Vertical analysis is used on the income statement because it improves/enhances judgments about the interrelationship between various expenses to sales. Its use on the balance sheet shows capital structure analysis about whether assets are funded primarily through debt or equity and shows efficiency of asset use. You should note that the use of vertical analysis to cash flows is employed less frequently.

Vertical analysis is especially informative when reviewed in connection with industry norms or benchmarks versus trends in specific company data over time. For example, if the results of vertical analysis performed on a company's balance sheet show that the percentage of total assets invested in property and equipment is significantly less than that of its peer companies or industry, then this may suggest that there is inadequate investment being made in property and equipment or that the current property and equipment is aged and requires updating. This type of assessment could not be made by simply looking at a trend in the company's relative data over time.

An example of a 5-year horizontal (trend) analysis and a vertical (common size) analysis follows.

EXAMPLE

Mark Company

Income Statement Summary

($000)

	20x3	20x4	20x5	20x6	20x7
Net sales	$ 235	$ 253	$ 270	$ 321	$ 341
Cost of goods sold	113	120	127	149	157
Gross profit	122	133	143	172	184
Operating expenses	94	101	108	128	136
Operating income	28	32	35	43	48
Other (income)/expense	10	11	12	13	14
Income before taxes	18	21	23	30	34
Income taxes	7	8	9	12	13
Net income	11	12	14	18	20
As a % of sales (vertical analysis)					
Net sales	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of goods sold	48.0%	47.5%	47.0%	46.5%	46.0%
Gross profit	52.0%	52.5%	53.0%	53.5%	54.0%
Operating expenses	40.0%	40.0%	40.0%	40.0%	40.0%
Operating income	12.0%	12.5%	13.0%	13.5%	14.0%
Other (income)/expense	4.3%	4.3%	4.4%	4.0%	4.1%
Income before taxes	7.7%	8.2%	8.6%	9.5%	9.9%
Income taxes	3.1%	3.3%	3.4%	3.8%	4.0%
NI % sales	4.6%	4.9%	5.1%	5.7%	5.9%
Trend index (horizontal analysis)					
Net sales	100.0	107.7	114.9	136.6	145.1
Cost of goods sold	100.0	106.5	112.5	132.3	139.1
Gross profit	100.0	108.7	117.1	140.5	150.7
Operating expenses	100.0	107.7	114.9	136.6	145.1
Operating income	100.0	112.1	124.5	153.7	169.3
Other (income)/expense	100.0	110.0	120.0	130.0	140.0
Income before taxes	100.0	113.3	126.9	166.7	185.4
Income taxes	100.0	113.3	126.9	166.7	185.4
Net Income	100.0	113.3	126.9	166.7	185.4

Analyzing the index trend from the chart above, sales of $253 in 20x4 were 7.7% above $235 in 20x3. Similarly, sales of $341 in 20x6 are 45.1% higher than sales of $235 in 20x3. Changes from the base year are calculated by subtracting the indices.

For changes from years other than the base year, period-to-period changes are calculated without holding the earliest year presented as the base year.

The year-to-year sales percentage change for 20x6 to 20x7 is 6.2%. The calculation is:

(Current/Base – 1) X 100 = ($341/$321 – 1) X 100 = 6.2%

– Or –

(Current – Base)/Base) X 100 = ($341 – $321)/$321) X 100 = 6.2%

Discussion Points

1. Horizontal analysis allows us to determine if trends are consistent over time. Trend analysis has better predictive value when a greater number of periods is used, because the real story can be obscured by aberrations in data when too few periods are used. Users rely quite heavily on this – but this analysis during economic recession times can lead to conclusions whereby trends and performance dips are attributed to the economic impacts more heavily than a real assessment of the company's ability to perform, react, respond, adjust, etc. – it is very hard to separate all these contributing aspects!

2. Horizontal analysis allows us to view interrelationships more clearly. Note that in this example sales are increasing, and so are cost of goods sold, which is to be expected. Comparing the rate of change of both tells an important performance metric. Cost of goods sold increased by 39.1% from 20x3 to 20x7, while sales increased by 45.1% over the same period.

   This helps explain how gross profit is up 50.7% from 20x3 to 20x7 and may be due to the entity realizing economies of scale (cost of goods sold is increasing at a lower rate over time than are sales). Similarly, from 20x3 to 20x7, operating expenses grew at the same rate as sales. Because operating expenses are often comprised of many fixed costs, they would not be expected to grow equally to sales during periods of well-managed growth.

3. Some amounts calculated in horizontal analysis may have limited, if any usefulness, such as the other income/expense line in the example. Financial analysis can be more meaningful if extraneous amounts are excluded from the percentage or ratio presentation. An analysis that highlights significant trends and findings is most useful and works best. This point correlates to the accounting concepts of materiality and decision usefulness.

ACCOUNTING PROFIT VERSUS ECONOMIC PROFIT – EVA

Popularized by the consulting firm, Stern Stuart, Economic Value Added (EVA) is a financial analysis technique for assessing entity performance. Performance means increasing shareholder wealth or value.

The EVA concept is based on economic profit, which means that a reporting entity does not achieve "real" earnings or increase "real" value until profits earned exceed the entity's cost of financing its capital. The cost of financing its capital is the minimum required risk-adjusted rate of

return for shareholders and creditors combined, commonly referred to as the Weighted Average Cost of Capital (WACC).

A positive EVA indicates real increased entity value, meaning shareholders gain, only when the return from capital employed is greater than the cost of capital. Just the opposite, a negative EVA indicates real entity value is being destroyed because the cost of capital employed exceeds the "return" realized from that overall investment. A negative EVA destroys value even with a positive net income.

The premise behind EVA is that conventional financial performance measures, based on accounting profit, produce misleading results and create conflicting management incentives to do things that may actually destroy shareholder value.

Common management incentive compensation rewards achieving certain milestones in earnings per share (EPS), return on equity (ROE), return on assets (ROA), return on capital employed (ROCE), etc. These are conventional financial ratios that, while on the surface may be appropriate, may not truly increase shareholder wealth.

EXAMPLE

Conventional financial ratios may produce results that can indicate the opposite of reality. The ratio may indicate improvement, when true performance is actually deteriorating, and vice versa.

Scenario 1: A reporting entity reports net losses or slight net income. It can increase its ROCE by making any investment with a positive return, even if that return is beneath its cost of capital.

Thus, the favorable appearance of increased ROCE is misleading because shareholders are not in a better position as their wealth has actually decreased.

Scenario 2: A reporting entity reports strong profitability and high ROCE. It is evaluating an investment project with a return greater than its cost of capital. Making this investment, however, will reduce ROCE. Thus, management does not make the investment and now has an opportunity loss of slower future growth and profitability.

The apparent potential unfavorable decreased ROCE is misleading because shareholders would have been in a better position as their wealth would have increased.

Scenario 3: Stock buybacks

EPS and ROE both improve for a profitable reporting entity from stock buybacks, but this "improvement" can be misleading. For a reporting entity with decreased net income, a stock buyback of significant scale will produce just the opposite result of improved EPS and ROA.

Scenario 4: Financing new investment entirely with new borrowings

EPS and ROE both improve after an investment in a new project financed entirely with new debt when the project earns a greater return than the cost of the new debt.

If the new project return is less than the reporting entity's WACC, then the investment destroys shareholder value. The appearance of EPS and ROE growth is misleading as a favorable outcome.

Scenario 5: EPS and ROE both decline after an investment in a new project financed entirely with new equity when the project earns a lower return than the cost of equity.

If the new project return is greater than the reporting entity's WACC, then the investment increases shareholder value.

The apparent potential unfavorable decreased EPS and ROE growth is misleading because shareholders would have been in a better position as their wealth would have increased.

Remember that conventional financial ratios are based on GAAP, which includes significant management judgment. The weakness with ratio analysis is that this judgment impacts the financial statements.

The point is not to stop using ratios in financial analysis. **The point is that financial statement users performing financial analysis need to dive deeper into the meaning behind the numbers before reaching a conclusion.**

Another weakness of GAAP-based ratio analysis is that it ignores the cost of equity capital while including the cost of debt capital. GAAP deducts interest expense as a cost of debt and treats equity as being free. EVA corrects this shortcoming by deducting the opportunity cost of all capital. The basic EVA formula follows:

Accounting Profit (Net Income)

– Capital Charge (Capital Investment × WACC)

= Economic Profit (EVA)

CASE 3 – ECONOMIC VALUE ADDED

Mark Company is experiencing tremendous growth. The Board of Directors measures management performance based on return on assets (ROA) and pays management bonuses based on the size and growth of ROA. The Board's rationale behind ROA is that it incentivizes management to manage both income growth and asset efficiency.

Mark's risk-adjusted weighted average cost of capital (WACC) of 20% for its combined debt and equity capital funding is the hurdle rate the Board of Directors uses for capital budgeting decisions. Capital budgeting is forward-looking because it requires an estimate of future cash flows to value a project by discounting the projected cash flows at the appropriate WACC.

Mark's budget for the upcoming year had the following financial summary ($000)

Pretax income	$3,000
Net income	$2,000
Average assets	$3,000

Effective income tax rate	33.3%
Weighted average cost of capital (WACC)	20%
Interest expense	$0

Mark's management is considering an incremental (unbudgeted) project that would earn $1 million per year in perpetuity on an investment of $2 million.

1. Assuming funds are available to fund this expenditure, will Mark's management accept this project?

2. Will the Board support management's decision?

3. Does this project create entity value?

DASHBOARDS – ANALYTIC TOOL TO IMPACT POSITIVE ORGANIZATIONAL CHANGE

Dashboards are a valuable analytic tool that builds accountability in an organization. What makes dashboards so valuable is the fast speed that it communicates performance by translating financial data into insight. Dashboards are a quick way to communicate performance and actionable items by translating financial, operational, and strategic data into meaningful and relevant information.

Dashboards are similar to **balanced scorecards,** which communicate more than financial performance. Both are frequently interchanged; however, there are subtle differences. A dashboard is a performance monitoring system, and a scorecard management system. Both terms are frequently interchanged, because of the adage that "you manage what you measure."

Accounting and finance departments generally deliver to the CEO, the Board of Directors, and management thick financial reports including variance analyses. The thickness of the reports and mounds of data often obscure the key issues the reports were intended to communicate. This situation manifests itself and frustrates CFOs when no improvement actions result from the financial reports.

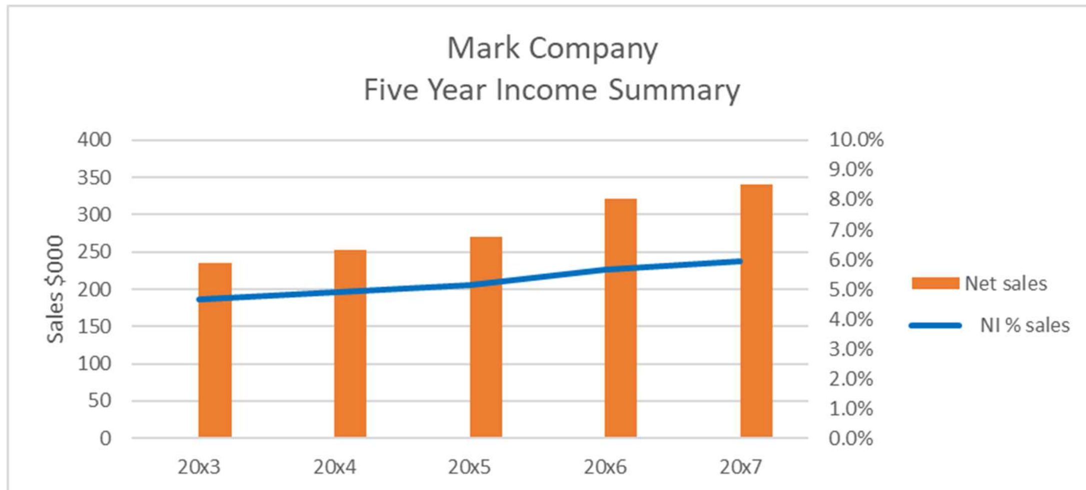
Dashboards have a visual benefit over written reports that speeds up communication. This is illustrated in the following example showing three different methods of communicating financial performance.

EXAMPLE

Refer back to Mark Company's five-year horizontal and vertical analysis from earlier in this section. Assume one of Mark's strategic objectives was to grow both sales and profitability. Evaluate the speed that each of the three methods communicates performance of this strategic objective:

Sales increased over the last five years from $235,000 in 20x3 to $341,000 in 20x7, and return on sales increased from 4.6% to 5.9%, respectively over the same time period.

	20x3	20x7
Sales	$235,000	$341,000
Return on sales	4.6%	5.9%



The balanced scorecard, popularized by Robert Kaplan and David Norton and the Harvard Business Review, is a performance management tool encompassing financial and non-financial measures. The scorecard is balanced because it reports both financial and non-financial measures. These measures are collectively called **Key Performance Indicators** (KPI)s which are quantifiable measures of task progress or attainment.

The balanced scorecard's heart is the **company's vision and strategy**. To achieve its vision and strategy, a company needs to excel in four areas:

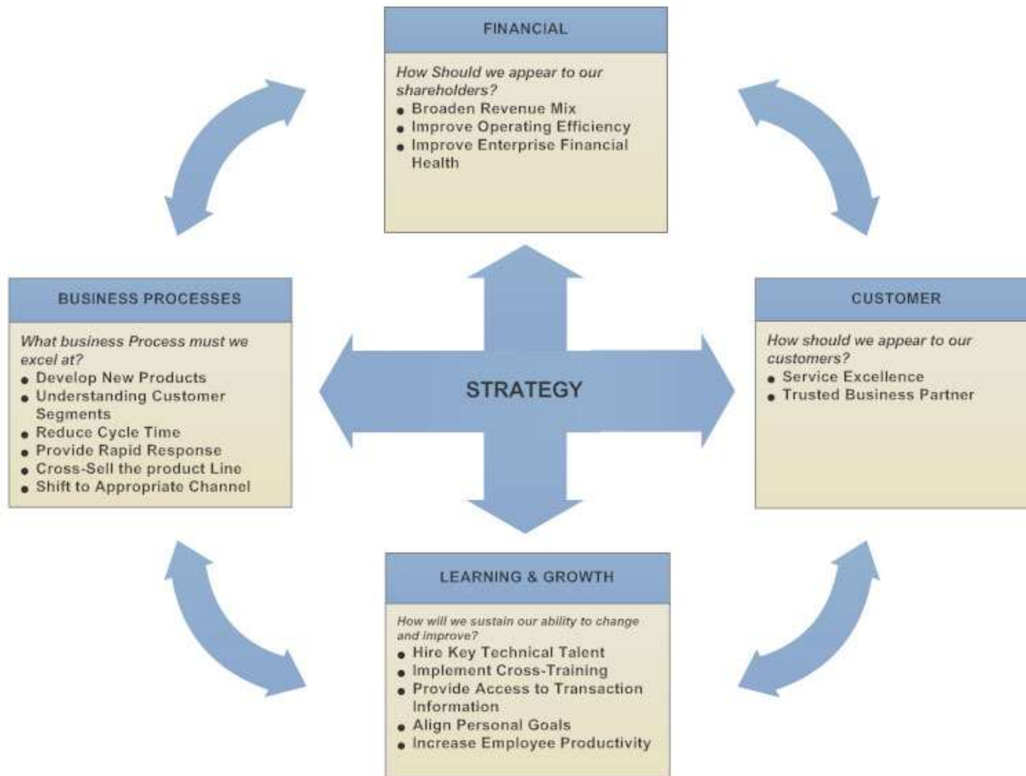
1. Financial – To succeed financially, how should we appear to our shareholders?

2. Customer – To achieve our vision, how should we appear to our customers?

3. Internal Business Processes – To satisfy our shareholders and customers, what business processes must we excel at?

4. Learning and Growth – To achieve our vision, how will we sustain our ability to change, improve, and continue to create value?

A balanced scorecard example is shown below. Each bullet-point is an objective that must be assigned to an individual for accountability and measured for effective management and dashboards can be effectively used to measure progress achieving these goals.



Dashboards impact positive corporate change because they provide not only the big picture, but also enhance accountability by showing the impact of individual actions on the rest of the organization. The visual graphs and pictures provide immediate status on attaining objectives and set the stage for taking targeted and immediate action. Thus, from a financial perspective, dashboards fulfill FASB CON No. 8 (Chapter 3) decision usefulness qualities of relevance by providing timely feedback value.

Dashboards build accountability when each executive/manager/employee receives an objective, understands the context of their role through the dashboard, and measures their individual performance from the dashboard. Strategically, dashboards let every person with objectives work toward common organization goals.

Following is an example of a patient satisfaction dashboard.[2]

Mechanically implementing the dashboard to work can be challenging because the non-financial data does not come from the general ledger. The data comes from multiple systems and is assembled through some type of integration process that generally does not already exist. Automated integration depends upon technologies such as online analytical processing (OLAP), data analytics, or business intelligence systems. Manual integration depends upon query, data mining, ad-hoc analysis, spreadsheets, or flat files.

Transactional systems or applications can include order processing, manufacturing, customer service, warranty, shipping, invoicing, collections, customer relationship management, human resources information systems, etc.

[2] https://www.klipfolio.com/resources/dashboard-examples/healthcare/patient-satisfaction

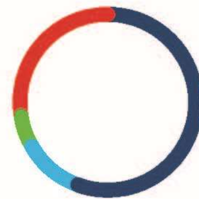
Company Website Example

The following is a dashboard example from the Cisco investor relations website for its 2020 financial performance.

Financial highlights for fiscal 2020

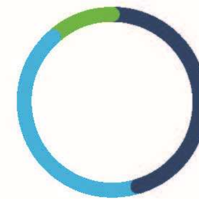
Revenue Trend
($B)

Revenue
by product category and services*



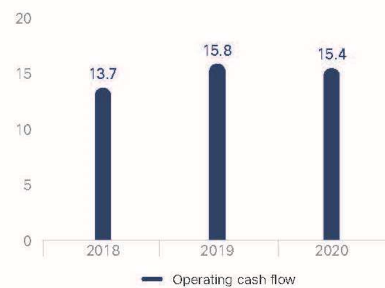
55% Infrastructure platforms
11% Applications
6% Security
<1% Other
27% Services

Revenue
by geographical segment



59% Americas
26% EMEA
15% APJC

Operating cash flow
($B)



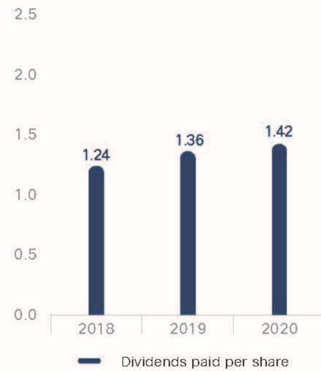
Margins
(%)

* percentages may not equal 100% due to rounding

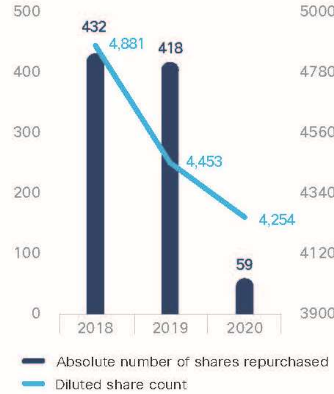
4 Cisco 2020 Annual Report

Capital allocation

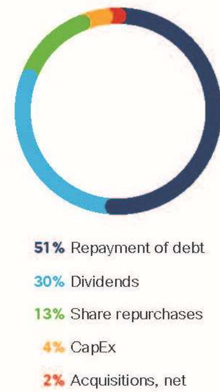
Dividends paid per share
($)



Share repurchases
and diluted share count
(M)



Primary uses of cash

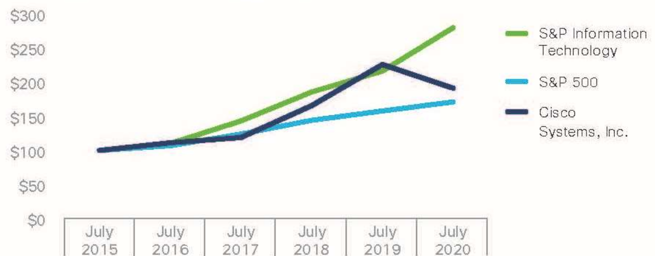


51% Repayment of debt
30% Dividends
13% Share repurchases
4% CapEx
2% Acquisitions, net

Total shareholder return

This graph shows a five-year comparison of the cumulative total shareholder return on Cisco common stock with the cumulative total returns of the S&P 500 Index and the S&P Information Technology Index. The graph tracks the performance of a $100 investment in Cisco's common stock and in each of the indexes (with the reinvestment of all dividends) on the date specified. Shareholder returns over the indicated period are based on historical data and should not be considered indicative of future shareholder returns.

Comparison of 5-year cumulative total return*
among Cisco Systems, Inc., the S&P 500 Index, and the S&P Information Technology Index



* $100 invested on 7/25/15 in stock or index, including reinvestment of dividends. Fiscal year ending July 25.

NOTES

Unit

5

Financial Statement Analysis – Part 2

LEARNING OBJECTIVES

After completing this unit, participants will be able to accomplish the following.

- Perform financial statement analysis using best practices and various cases.
- Compare financial statements of different companies in the same industry and the same company across different time periods.
- Apply accrual and cash-based ratios to published financial statements.
- Describe the limitations of ratio-based analysis.
- Identify an entity's quality of earnings and explain the results.

INTRODUCTION

The primary purpose of this unit is to discuss useful accrual and cash-flow-based ratios with a specific emphasis on cash-flow-based ratios. Ratio analysis is perhaps the best-known and most widely used tool for conducting financial analysis. At the same time, however, ratios and their meanings are frequently misunderstood and often times misused.

Ratio analysis deals with assessing relationships between two or more financial statement and/or nonfinancial elements in order to obtain a meaningful measurement of an entity's liquidity, efficiency, leverage (solvency), and/or profitability. To be useful, ratios must either be analyzed over time to identify trends, compared to corresponding ratios for similar companies, or compared to industry norms or benchmarks.

There are some caveats and key points to bear in mind when using ratios in the analysis process:

- **Ratios are particularly industry dependent**. For example, the profit margins for manufacturers are very different from the profit margins for discount retailers. In addition, the collection periods for different businesses such as industrial products versus medical practices

vary. Finally, R&D expenses as a percentage of total expenses or sales will differ greatly depending on the industry.

- Theoretically, **one may derive an infinite number of ratios** from any set of financial statements – yet not all of those ratios provide key performance information. Again, the technological ease with which one can crunch numbers often results in information overload, obscuring significant data with trivia.

- **In order for a ratio to be useful, its numerator has to have some meaningful relationship with its denominator**. For example, an item's cost has some relationship to its sales price; therefore, comparing cost of goods sold to sales is a meaningful comparison. On the other hand, dividing commission expense by temporary investments provides no meaningful analysis because the numerator and denominator have no clear, direct relationship.

- **Ratios are difficult to interpret when additional outside information is necessary for a complete understanding.**

EXAMPLE

Utilities expense is analyzed over time by dividing it by units sold, on the premise that more production drives more sales through more utility consumption. In analyzing the results, one must also factor in (a) how cold the winter was, or how hot the summer which could impact consumption, (b) changes in production methodology, such as automation, that could also impact consumption, (c) changes in utility rates during the period, which could drive an increase in utility expense without additional consumption, and (d) variances between units sold and units produced, particularly when production, which may not necessarily result in sales, is directly responsible for the utility consumption.

EXAMPLE

An analysis of accounts receivable turnover suggests that a company achieved faster collections in the current year. Further investigation reveals that the company has begun to make significant credit card sales, which are really cash sales that should be excluded from an analysis of collections on credit sales.

- **Interpretation of ratios can also be complicated by the use of different acceptable accounting methods.**

EXAMPLE

Consider how inventory turnover would be affected by the use of FIFO versus LIFO cost methodologies, which produce differing amounts of cost of goods sold and inventory.

- **Ratios can be affected by interdependencies between the numerator and denominator.**

EXAMPLE

A company achieves cost reductions by reducing spending on advertising. Here, the ratio of operating expenses to sales has been reduced by cutting costs in an area that stimulates sales. The apparent increase in profitability in the short run resulted from an action that will have the opposite effect in the long run.

- **Ratios based on total assets or total equity should be carefully scrutinized to determine if the results are meaningful.** Total assets and total equity are influenced by numerous estimates and judgments as well as past acquisition costs (i.e., historical costs) not adjusted for subsequent fair value or "purchasing power" changes. When comparing performance metrics that provide measurements over a "current" period of time (i.e., net income) to balance sheet amounts or those metrics that provide measurements as of a particular point in time that disregard "current value or purchasing power" (i.e., assets), the result is often skewed because the dollar does not provide the same measuring unit over time.

- And lastly, ratios are most useful as **diagnostic tools** to highlight trends or changes that warrant special attention. They do a better job raising questions than providing answers.

In consideration of these caveats and key points, a list of common ratios used in financial analysis follows with a description of their meaning and use.

LIQUIDITY RATIOS

Liquidity analysis and liquidity ratios, which focus on cash flows, measure a company's ability to meet and pay off its short-term obligations. Effectively, liquidity measures how quickly assets are converted into cash. Higher ratios of this type typically indicate greater liquidity.

<table>
<tr><th>Ratio</th><th>Formula</th><th>Meaning</th></tr>
<tr><td>Current Ratio</td><td>Current Assets / Current Liabilities</td><td>The extent that an entity's current assets can cover (or be used to repay) its current liabilities</td></tr>
<tr><td colspan="3"><u>Comments</u>:
Current assets are either cash or convertible to cash within one business cycle. Current liabilities are obligations that are to be settled in cash within one business cycle. Almost universally, one business cycle is considered a period of one year.</td></tr>
<tr><th>Ratio</th><th>Formula</th><th>Meaning</th></tr>
<tr><td>Quick Ratio</td><td>(Cash + Cash Equivalents + Net Receivables) / Current Liabilities</td><td>The extent to which an entity's more liquid assets can cover (or be used to repay) its current liabilities; the quick ratio is a more conservative view of liquidity, which removes less liquid assets (such as inventory and prepaid expenses) from the ratio formula.</td></tr>
<tr><td colspan="3"><u>Comments</u>:
For purposes of the quick ratio presentation in this course, Cash Equivalents includes Short-Term Marketable Investments. In practice, the quick ratio is often presented as: (Cash + Short-Term</td></tr>
</table>

Marketable Investments + Net Receivables)/Current Liabilities. For the most part, the difference between the Current Ratio and the Quick Ratio is that the Quick Ratio excludes both Inventory and Prepaid Expenses from its numerator.

The same comments provided above with regard to assessing decreasing and increasing trends in the Current Ratio also apply to the Quick Ratio.

EFFICIENCY RATIOS

Efficiency ratios (sometimes referred to as "activity ratios") measure how efficiently an entity utilizes its assets. These ratios (when using working capital accounts in their calculations) also assess the "quality" of a company's liquidity by evaluating management's ability to convert current assets into cash and liquidate payables on a timely basis. As indicated previously, liquidity ratios are of limited use without also analyzing a company's efficiency concurrently. When calculating efficiency ratios, if year-end balances in accounts such as accounts receivable, inventory, or accounts payable are not consistent with their balances throughout the year, monthly rather than annual averages should be used in the denominator of the formula. Higher ratios typically indicate greater efficiency.

Ratio	Formula	Meaning
Accounts Receivable Turnover	$\frac{\text{Net Revenue}}{\text{Average Accounts Receivable}}$	The number of times receivables are converted into cash per year.

Comments:

The ratio of net revenue (sales) to average accounts receivable measures an entity's ability to manage and collect its recorded revenue. Generally, a more rapid turnover is preferable since this might indicate more timely availability of cash, mitigating an entity's need to borrow or forgo other business opportunities as a result of a lack of cash. However, if an entity's accounts receivable is turning over too rapidly; this may indicate that the entity's credit and collections policies are too strict, and that it is losing sales to competitors whose collections policies are more lenient.

Negative trends or ratios below that of the industry suggest potential liquidity problems associated with ineffective credit and collection policies. Here corrective actions might include ensuring credit sales are made to customers who will pay (conducting credit checks before issuing credit) and employing stronger collection efforts and offering effective incentives to accelerate payment.

Ratio	Formula	Meaning
Days' Sales in Accounts Receivable	$\frac{\text{360 Days}}{\text{Accounts Receivable Turnover}}$	The average length of time from a sale to cash collection; how fast a company collects cash from customers to whom it offers credit.

Comments:

Same as those presented for the accounts receivable turnover ratio.

Days' Sales in Accounts Receivable is often referred to as Days of Sales Outstanding (DSO).

Ratio	Formula	Meaning
Inventory Turnover	Cost of Goods Sold / Average Inventory	The number of times inventory is liquidated/converted into sales during the period; indicates the resources (cash) tied up in inventory and can pinpoint whether too little or too much inventory is carried.

Comments:

The ratio of cost of goods sold to average inventory **measures how quickly an entity sells/liquidates its inventory**. Generally, a more rapid turnover is preferable because this would (typically) indicate accelerated conversion of inventory to sales and, thus, cash collections, provided there are no issues with the entity's accounts receivable turnover. However, it should be noted that inventory turning over too rapidly, may signal stock shortages and lost sales. It may also signal the company has insufficient vendor credit preventing the maintaining of more robust inventories.

Negative trends or poor experience relative to the industry suggests potential liquidity problems that may be resulting from carrying excess inventory. Analysis of disaggregated data must be performed in order to identify (a) whether overstocks, obsolescence, or both are an issue and (b) the best course of action the company should take to reduce inventory levels. Depending on this analysis, the company may need to make or buy less, sell excess or obsolete goods at reduced prices, or even scrap unsellable goods.

Ratio	Formula	Meaning
Days' Sales in Inventory	360 Days / Inventory Turnover	The number of days it takes to sell the inventory. Used in conjunction with the accounts receivable collection period to determine the operating cycle.

Comments:

Same as those presented for the inventory turnover ratio.

Days' Sales in Inventory is often referred to as Days of Inventory on Hand (DOH).

Ratio	Formula	Meaning
Accounts Payable Turnover	Cost of Goods Sold / Average Accounts Payable	The number of times purchases (typically "inventory purchases") are paid off during the period.

Comments:

The ratio of cost of sales to average accounts payable **measures an entity's ability to manage and pay for its inventory or related expense purchases**. For purposes of calculating this ratio, an implicit assumption is that the entity makes all of its purchases using credit.

Another very common way of presenting this ratio is to use "Purchases" in the numerator rather than Cost of Goods Sold. However, Cost of Goods Sold is typically used as an approximation of Purchases.

Generally, an increasing, or higher ratio relative to the industry would indicate that payables are being paid on time and the entity is taking advantage of early payment discounts being offered by its vendors. If accounts payable are turning over too rapidly, however, it might indicate that the entity is not making full use of available credit facilities and it, therefore, could improve its cash management by delaying vendor payments.

An excessively low accounts payable turnover could indicate trouble making payments on time, and/or exploitation of lenient supplier terms. This could ultimately hurt relationships with vendors, which in turn can affect vendor prices and service.

Ratio	Formula	Meaning
Accounts Payable Days Outstanding	360 Days Accounts Payable Turnover	Number of days to pay off A/P on average.

Comments:

Same as those presented for the accounts payable turnover ratio.

This ratio is sometimes referred to as “Number of Days of Payables.”

Ratio	Formula	Meaning
Asset Turnover	Net Revenue Average Total Assets	Measures an entity’s effectiveness in generating revenue from a given level of assets.

Comments:

The Asset Turnover ratio (sometimes referred to as “Total Asset Turnover” ratio) measures an entity’s overall ability to generate revenues within a given level of assets. A higher ratio typically indicates greater efficiency. Because this ratio includes both fixed and current assets, inefficient working capital management can distort overall interpretations. It is, therefore, helpful to analyze working capital and fixed-asset turnover ratios separately.

A low asset turnover ratio can be an indicator of inefficiency or of relative capital intensity of a business. For instance, if sales are stagnant or declining relative to total assets, then this is an indicator that management may not be maximizing its use of resources to generate sales. There may be “over investment” in assets as it relates to the assets’ current earnings power. Additional analysis (such as vertical “common size” analysis) can help pinpoint underperforming assets.

As discussed above, care must be taken in the interpretation of ratios that are based on total assets (or total equity) that contain historical costs not adjusted for current value or purchasing power, particularly when those ratios are making comparisons with performance-type metrics that provide measurements for a “current” period of time (i.e., sales, revenue, net income).

Ratio	Formula	Meaning
Sales to Fixed Assets	$\frac{\text{Net Revenue}}{\text{Average PP\&E}}$	Measures an entity's effectiveness in generating revenues from its investment in fixed assets.
Comments: The Sales to Fixed Assets ratio (commonly referred to as "Fixed Asset Turnover," measures how efficiently an entity generates sales or revenue from its investments in fixed assets. It is most useful in assessing businesses in industries that are very capital-intensive (versus labor-intensive). Generally, a higher sales-to-fixed-asset ratio indicates more efficient use of fixed assets in generating sales/revenues. A low ratio can indicate inefficiency, or alternatively, a new business not yet operating at full capacity, in which case the analyst will not be able to link the ratio directly to efficiency. Additionally, the ratio could be lower for an entity whose fixed assets are newer (higher carrying value), than the ratio for an entity with older assets (lower carrying value). In this type of situation, again, a higher or lower ratio cannot necessarily be linked to efficiency. The Sales to Fixed Assets ratio suffers the same "purchasing power" issues discussed previously.		

LEVERAGE RATIOS

Leverage ratios, commonly referred to as "solvency" ratios, refer to an entity's ability to fulfill its long-term debt obligations. Assessment of an entity's ability to pay its long-term obligations – make interest and principal payments – generally includes a deeper analysis of the components of the entity's financial structure. Leverage ratios provide information about the relative amount of debt in an entity's capital structure and the adequacy of earnings to cover interest expenses and other fixed charges (lease or rental payments) as they come due.

Ratio	Formula	Meaning
Debt to Total Assets	$\frac{\text{Total Debt}}{\text{Total Assets}}$	Measures the percentage of total assets financed with debt. Generally, higher debt means higher financial risk, more use of leverage, and weaker solvency.
Comments: The Debt to Assets ratio provides some indication of the degree of asset protection available for creditors. It provides users with some indication of the extent of an entity's risk, as well as its ability to sustain losses without impacting the interests of creditors. The ratio is not very useful for comparative company analysis because the asset base typically does not reflect the entity's current purchasing power or include all of the entity's assets, for example, its human resources, intellectual capital, management expertise, etc. Note: It is common practice for practitioners and other analysts to use a modified version of this ratio, which captures both current and long-term liabilities (total liabilities) in the numerator of the ratio.		

Ratio	Formula	Meaning
Debt to Equity	Total Debt / Stockholders' Equity	A measurement of the amount of debt (creditors') capital relative to equity (shareholders') capital in an entity's capital structure.

Comments:

This ratio measures the use of debt to finance operations. A high Debt to Equity ratio may be desirable if the rate of return on assets exceeds the cost of borrowing. In high growth situations, high Debt to Equity relationships are common. In slow or no growth situations, high Debt to Equity relationships may force the entity into bankruptcy. The ratio is not very useful for comparative company analysis because the asset base typically does not reflect the entity's current purchasing power or include all of the entity's assets, for example its human resources, intellectual capital, management expertise, etc.

Corrective action for solvency problems requires a longer-term approach than that taken to correct liquidity issues. When debt is perilously high compared to equity, and profits are not sufficiently large in relation to interest payments, the entity is considered a credit risk. It is also less able to survive periods of poor or low profits. Corrective action translates to increasing equity through profits or additional investment, or reducing reliance on debt by improving cash flows.

Note: It is common practice for practitioners and other analysts to use a modified version of this ratio, which captures both current and long-term liabilities (total liabilities) in the numerator of the ratio.

Ratio	Formula	Meaning
Financial Leverage	Total Assets / Stockholders' Equity	Measures the relationship between total assets and the equity capital that finances the assets.

Comments:

As equity finances fewer assets, the Financial Leverage ratio becomes greater. An entity that optimizes its capital structure by using debt responsibly will enhance its return on equity. The Financial Leverage ratio may be disaggregated into common, preferred, and retained earnings leverage to analyze how each tranche finances assets.

At the same time the risk inherent in a profitability is also greater as the leverage ratio increases. The primary risk in a highly leveraged capital structure is the risk of running out of cash during periods of adversity. An entity also loses financing flexibility as financial leverage increases.

Ratio	Formula	Meaning
Times Interest Earned	Operating Income / Interest Expense	An indicator of the number of times an entity's operating income can cover its interest payments.

Comments:

The higher the ratio, the greater protection available to creditors as it relates to an entity's ability to service its debt payments. A higher ratio is an indicator of stronger solvency.

The times interest earned ratio is sometimes referred to as "coverage": how well an entity is able to "cover" its interest payments.

The term "Operating Income" in the numerator of the Times Interest Earned ratio is often interchanged with "EBIT" or "Earnings Before Interest and Taxes."

Successful leverage occurs by simply using borrowed funds to increase return on equity beyond that of return on assets. Successful leverage will be realized so long as:

- Profits are adequate to cover interest on debt with a "reasonable" amount left for the shareholders, and
- The cost of borrowed funds after tax is less than the return on assets.

EXAMPLE

A company pays an average of 6% interest on its liabilities, including non-interest bearing payables and accruals. Assuming a 30% tax rate, the company's after-tax cost of debt is 4.2% [(1 – .30) * 6%]. Accordingly, as long as the company is "reasonably" profitable and its return on assets is greater than 4.2%, successful leverage will be realized and the company's return on equity will be greater than its return on assets.

Note: The amount of "spread" between return on assets and return on equity is a measure of how successful leverage is. Effective "management" of the Balance Sheet can help maximize this spread.

PROFITABILITY RATIOS

Profitability ratios provide a measurement for assessing an entity's ability to generate earnings for a specified period of time. These ratios provide an indication of just how profitable an entity is (or has been) and are used to compare the relative performance of companies in a given sector. Profitability ratios are typically categorized as either "Profit Margin" metrics, which measure performance in relation to sales or revenue, or "Rate of Return" metrics, which assess performance relative to the size of some investment.

Ratio	Formula	Meaning
Net Profit Margin	$\frac{\text{Net Income}}{\text{Net Revenue (Sales)}}$	Measures the percentage of net income generated by each dollar of net revenue or sales.

Comments:

Net profit margin indicates how well a company converts net revenues into profits after all expenses are subtracted.

Because industries are so different and have different cost structures, Net Profit Margin is most useful when comparing companies in similar industries. Companies that generate a greater amount of profit per dollar of sales are deemed to be more efficient. A higher Net Profit Margin indicates a more profitable company that has better control over its costs compared to its competitors. In essence, the numerator of the ratio (net income) is affected by an entity's actions to reduce expenses, and the

denominator (net revenues or sales) is affected by an entity's actions to increase net revenues or sales. Both actions will increase the Net Profit Margin. Note that it is common practice for practitioners and other analysts to use variations of the Net Profit Margin formula by substituting "Net Income" in the numerator with "Operating Income" or "Income Before Taxes" when assessing an entity's profitability.

Ratio	Formula	Meaning
Gross Profit Margin	$\frac{\text{Gross Profit}}{\text{Net Revenue (Sales)}}$	An indication of the percentage of revenue available to cover operating and other expenditures.
Comments: A higher Gross Profit Margin indicates some combination of higher product pricing and lower product costs. Changes in an entity's gross profit can have a substantial effect on net income for a period. Assuming operating expenses are relatively constant, a small percent change in gross profit could have a much larger percentage impact on net income. Gross profit is highly industry dependent. The ability to charge a higher price is often constrained by competition so Gross Profit Margin is typically affected by competition. If a product has a competitive advantage, a company is better able to charge more for it. From a cost perspective, a higher Gross Profit Margin can also indicate that a company has a competitive advantage in product costs. Both Gross and Net Profit Margins can be effectively managed by either (a) increasing sales to maximize economies of scale on fixed costs or (b) cutting costs. Horizontal and vertical analysis can help pinpoint costs that may need to be re-examined.		

Ratio	Formula	Meaning
Operating Profit Margin	$\frac{\text{Operating Income}}{\text{Net Revenue (Sales)}}$	An indication of the percentage of revenue remaining after cost of product/service delivered and cost of support.
Comments: A higher Operating Profit Margin indicates some combination of higher product pricing and lower product and support costs. Higher customer support, marketing, and future product development cost may be required for sales, and this is often reflected in high gross profit margins that "pay" for these support services. If a product has a competitive advantage, a company is better able to charge more for it, and this competitive advantage often comes from research & development. From a cost perspective, a higher Operating Profit Margin can also indicate that a company has a competitive advantage in overall cost structure. Gross, Operating, and Net Profit Margins can all be managed effectively by either (a) increasing sales to maximize economies of scale on fixed costs or (b) cutting costs. Horizontal and vertical analysis can help pinpoint costs that may need to be re-examined.		

<table>
<tr><th>Ratio</th><th>Formula</th><th>Meaning</th></tr>
<tr><td>Operating Expenses to Net Revenue</td><td>$\frac{\text{Operating Expenses}}{\text{Net Revenue (Sales)}}$</td><td>A performance measure reflecting an entity’s ability to effectively control its operating costs.</td></tr>
<tr><td colspan="3"><u>Comments</u>:

The Operating Expenses to Net Revenue ratio is often referred to as the “Operating Expense Ratio.” It is typically viewed as a measurement of management efficiency because an entity’s management is typically viewed as having greater control over operating expenses than that of revenues or sales. A lower percentage is desirable.

When reviewed over time, the Operating Expenses to Net Revenue ratio can provide information about an entity’s ability to expand operations without dramatically increasing expenses. For instance, if sales were to expand from year-to-year and the ratio of operating expenses to sales were to decline over that same period, then this would mean that sales increased, yet operating expenses declined at an even faster rate. The end result would be a positive impact on net income.</td></tr>
</table>

<table>
<tr><th>Ratio</th><th>Formula</th><th>Meaning</th></tr>
<tr><td>Revenue per Employee</td><td>$\frac{\text{Net Revenue (Sales)}}{\text{Number of Employees}}$</td><td>A performance measure reflecting effective utilization and productivity of an entity’s employee base.</td></tr>
<tr><td colspan="3"><u>Comments</u>:

Higher (or increasing) Revenue per Employee contributes to net income by spreading out the amount of revenue dollars available to cover employee-related operating costs, and increases net income as a result. However, analysis must consider whether the company utilizes outsourcing or subcontracting that might over-value the revenue per employee.</td></tr>
</table>

<table>
<tr><th>Ratio</th><th>Formula</th><th>Meaning</th></tr>
<tr><td>Net Revenue per Square Foot</td><td>$\frac{\text{Net Revenue}}{\text{Square Feet}}$</td><td>A performance measure reflecting an entity’s effectiveness in utilizing available square feet of building/retail space.</td></tr>
<tr><td colspan="3"><u>Comments</u>:

Revenue per Square Foot is an indicator of management’s effectiveness in generating revenue to cover its operating costs. This metric is used primarily in the retail and restaurant industries. Companies with low revenue or sales per square foot have less cushion to cover their expenses, and their business model may not make the best possible use of their retail space.

A higher revenue per square foot is most desirable and results in higher net income.</td></tr>
</table>

Ratio	Formula	Meaning
Return on Assets (ROA)	Net Income + After-Tax Interest / Average Total Assets	Measures the return earned by an entity on all of its assets. The second formula removes any "bias" against a company that uses liabilities versus equity to finance its assets.

Comments:

Generally, the higher the ratio, the more income generated by a given level of assets. However, as discussed above, care must be taken in the interpretation of ratios that are based on total assets (or total equity) that contain historical costs not adjusted for current value or purchasing power, particularly when those ratios are making comparisons with performance-type metrics that provide measurements for a "current" period of time (i.e., sales, revenue, net income). When purchasing power varies, ROA can overstate returns because net income (numerator of ratio) is representative of a current dollar measure, while average total assets (the denominator) can include various assets purchased in the past and held at historical costs. For ROA to be most meaningful, both net income and average total assets should be restated to reflect current purchasing power.

In financial analysis, much emphasis is placed on the ability of management to maximize utilization of an entity's resources in order to generate returns. These resources may be analyzed in the aggregate (by total assets for instance), or broken down and assessed by significant components (inventory, fixed assets, etc.).

It is important to remember that the capital invested by shareholders in an entity could have been committed elsewhere. In efficient markets, investor resources should flow to investments that will provide the highest return relative to the risks assumed.

There is a DuPont formula case example at the end of this section.

Ratio	Formula	Meaning
Return on Equity (ROE)	Net Income / Average Stockholders' Equity	Measures the return earned by an entity on its equity capital, including minority equity, preferred equity, and common equity.

Comments:

As with the rate of return on assets, a higher ROE is desirable, but with a similar caution: users must take care in the interpretation of ROE because stockholders' equity does not represent the market value of the entity. Net income, however, generally, provides a measurement of current purchasing power.

When the use of leverage is effective, the Rate of Return on Equity (ROE) will exceed the rate of return on assets (ROA).

In complex capital structures, ROE is sometimes calculated using average common stockholders' equity in its denominator.

Another profitability application:

DuPont Formula

The DuPont Formula is a quick way to understand the drivers of ROA and ROE.

$$\text{ROA} = \text{Return on Sales} \times \text{Asset Turnover} = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Avg Assets}} = \frac{\text{Net Income}}{\text{Avg Assets}}$$

$$\text{ROE} = \text{ROA} \times \text{Leverage} = \frac{\text{Net Income}}{\text{Avg Assets}} \times \frac{\text{Avg Assets}}{\text{Avg Equity}} = \frac{\text{Net Income}}{\text{Avg Equity}}$$

The DuPont Formula shows that ROA can be boosted by improving profitability (ROS) and/or by improving efficiency of asset utilization (asset turnover). ROE is boosted by taking on more debt, up to a certain point.

Note: Analysts should exercise care when using rates of return on assets or equity to develop conclusions about financial information. In many instances, total assets and total equity are based on historical amounts, not current values, and, therefore, may be "analytically" understated as a result. Moreover, many of the "resources" companies rely on for generating revenue (i.e., human resources, intellectual capital, technology advances, etc.) are not reported within the financial statements. These factors can cause rates of return on assets and equity to be overstated, although still useful if analyzed carefully.

Ratio	Formula	Meaning
Economic Value-Added (EVA)	Net Income – Opportunity Cost of all Capital Employed	Provides an estimate of an entity's economic profit – the value created in excess of the required return of the entity's shareholders.

<u>Comments</u>:

The premise behind the EVA calculation is that no "real" earnings are achieved, or "real" entity value created, until dollars earned by the entity exceed the entity's cost of financing its capital (minimum required rate of return for both shareholders and creditors).

Opportunity costs are calculated using risk-adjusted desired rate of return on capital employed, using an optimal capital structure.

A positive EVA indicates that entity value is being created, or that shareholders gain when the return from capital employed is greater than the cost of capital; a negative EVA indicates just the opposite – that "real" value is not being created because the cost of capital employed in the business exceeds the "return" being realized from that overall investment. A negative EVA destroys value, even with a positive net income.

Ratio	Formula	Meaning
Dividend Payout Ratio	$\frac{\text{Dividends Paid}}{\text{Net Income}}$	Measures the percentage of earnings that an entity pays out as dividends to shareholders.

Comments:

If stock price appreciation exceeds returns shareholders could obtain elsewhere, low Payout Ratios are generally acceptable. If, on the other hand, stock price appreciation is stagnant, shareholders would expect higher Payout Ratios.

It is also important to note that the amounts of dividends paid per share tends to be relatively fixed because any reduction in dividends has been shown to result in a disproportionately large reduction in stock price. Additionally, because dividend amounts are relatively fixed, the Payout Ratio tends to fluctuate with earnings. It is, therefore, important to assess the Payout Ratio (and the entity's payout policy) over a number of periods.

More mature companies tend to have higher Payout Ratios.

The Payout Ratio is often referred to as the "Dividend Payout Ratio." The numerator of the ratio is typically associated with "common dividends" paid, and the denominator "net income attributable to common shares," which means it would exclude preferred dividends.

Ratio	Formula	Meaning
Price-Earnings (P/E) Ratio	$\frac{\text{Market Price Per Common Share}}{\text{Diluted Earnings Per Common Share (DEPS)}}$	Expresses the relationship between the market price per common share and the amount of earnings attributable to a single common share.

Comments:

The Price-Earnings (P/E) Ratio measures the market's assessment of an entity's future earnings and expected growth potential. A high P/E Ratio indicates the market's overall confidence in an entity's future growth and earnings potential. A low P/E Ratio generally indicates uncertainty or a lack of confidence in the entity's future growth and earnings potential.

CASH FLOW RATIOS

Introduction

This section explores two aspects of cash flow-based analysis:

1. A closer examination of the cash flow statement and the "stories" it tells. Too often, this statement is regarded as an isolated step in the closing process. In many cases, it is not prepared as frequently as the balance sheet and income statement, so it is not routinely used in monitoring operations.

2. An introduction to ratio analysis that incorporates cash flow-based measurements, which can provide additional information improving the reliability, relevance, and predictive qualities of financial information.

Introducing cash flow measurements is useful for several reasons:

- They provide tools to **evaluate the quality of earnings**.
- They provide information **to help derive operating and cash management recommendations**.
- They help **monitor the adequacy of cash flows** to either meet obligations as they become due or achieve planned growth.
- They can be used to **assess financial flexibility**; i.e., the ability of an entity to weather unexpected downturns or pursue opportunities as they arise.

In many respects, cash flow ratios are a better tool for conducting **liquidity analysis** than are traditional ratios. Traditional ratios rely on amounts from the Balance Sheet, which are "static," as well as amounts from the Income Statement that are frequently distorted by estimates, arbitrary/judgmental allocations of non-cash expenses, and accounting methods. Furthermore, liquidity analysis using traditional ratios, relies on working capital metrics that are based on cash available at a prior point in time (i.e., as of the Balance Sheet date). In contrast, cash flow-based ratios incorporate cash amounts generated over a period of time and compare them to the company's obligations, resulting in a dynamic approach to measuring the resources a company can generate to satisfy its obligations.

EXAMPLE

Traditional ratio analysis relies on the current ratio as a measure of liquidity =

$$\frac{\text{Current Assets}}{\text{Current Liabilities}}$$

This static measurement of the ability to meet obligations as they become due within the next year assumes recurring current asset/current liability outcomes throughout the year. Furthermore, this measure is dependent on the entity's ability to convert noncash current assets to cash.

The actual desired source of funds to pay liabilities is operations. Therefore, a cash flow-based modification of the current ratio might be:

Cash Flows from Operations
Current Liabilities

Or, one could go a step further and replace current liabilities with some other measure of annual commitments – such as debt, leases, capital expenditures, dividends and similar obligations.

Cash Flows from Operations
Fixed Annual Commitments

This exercise demonstrates that cash flows provide dynamic rather than static measurements that are not affected by accounting methods, etc.

Cash flow-based ratios are normally classified as either quality of earnings or flexibility measurements. Ratios classified as quality of earnings, measure the quality of an entity's reported earnings, while ratios classified as those that measure flexibility, address whether the entity is in a position to take advantage of changing circumstances or new opportunities.

CASE 4 – CASH FLOWS TELL THE REAL STORY

Review the following financial statements, which are accompanied by some financial statement analysis measurements. Then review the comments concerning the Statement of Cash Flows. The Cash Flow Statement Analysis may provide additional insights into a company's performance.

WINDSIDE CO.
BALANCE SHEETS
DECEMBER 31, 20X0 AND 20X9

	20X0	20X9
Current Assets		
Cash and Temporary Investment	$ 250,000	$ 85,000
Accounts Receivable (net)	45,000	31,000
Inventories	129,000	96,000
Other Current Assets	40,000	38,000
Total Current Assets	464,000	250,000
Noncurrent Assets		
Long-term Investments	125,000	175,000
Property, Plant & Equipment (net)	465,000	600,000
Other Noncurrent Assets	32,000	41,000
Total Noncurrent Assets	622,000	816,000
Total Assets	$ 1,086,000	$1,066,000
Current Liabilities		
Note Payable	$ 50,000	$ 150,000
Accounts Payable	86,000	72,000
Accrued Liabilities	12,000	15,000
Taxes Payable	8,000	12,000
Total Current Liabilities	156,000	249,000
Noncurrent Liabilities		
Long-term Debt	200,000	225,000
Deferred Taxes	25,000	30,000
	225,000	255,000
Stockholders' Equity		
Common Stock	100,000	80,000
Additional Paid-in-Capital	300,000	200,000
Retained Earnings	305,000	282,000
	705,000	562,000
Total Liabilities & Stockholders' Equity	$ 1,086,000	$ 1,066,000

WINDSIDE CO.
STATEMENTS OF INCOME AND RETAINED EARNINGS
FOR THE YEARS ENDED DECEMBER 31, 20X0 AND 20X9

	20X0	20X9
Revenues (all sources)	$ 1,250,000	$ 1,230,000
Expenses:		
Cost of Goods Sold	880,000	845,000
Operating Expenses	275,000	300,000
Interest Expense	24,000	39,000
Income Taxes	21,000	23,000
Total Expenses	1,200,000	1,207,000
Net Income	50,000	23,000
Retained Earnings, Beginning	282,000	271,000
Dividends Declared	(27,000)	(12,000)
Retained Earnings, Ending	$ 305,000	$ 282,000

WINDSIDE CO.

Balance Sheet and Income Statement analysis provides the following selected comparative information:

	20X0	20X9	Trend
Current Ratio	2.97:1	1:0	Favorable
Cash Balance to Long-term Debt	1.25:1	0.38	Favorable
Net working Capital	$308,000	$1,000	Favorable
Net Income to Sales	4%	1.87%	Favorable
Total Liabilities to Stockholders' Equity	54%	90%	Favorable
Times Interest Earned	3.96 times	3.70 times	Favorable

WINDSIDE CO.
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 20X0 AND 20X9

	20X0	20X9
Cash Flows From Operating Activities:	$ 50,000	$ 23,000
Net Income		
Adjustments to reconcile net income to cash provided by operations:		
Depreciation	40,000	50,000
Deferred Taxes	(5,000)	5,000
Gain on Sale of Equipment	(130,000)	(25,000)
Gain on Sale of Other Noncurrent Assets	(45,000)	-
Changes in operating assets and liabilities:		
Accounts Receivable	(14,000)	(3,000)
Inventories	(33,000)	(6,000)
Other Current Assets	(2,000)	1,000
Accounts Payable	14,000	10,000
Accrued Liabilities	(3,000)	2,000
Taxes Payable	(4,000)	(2,000)
Net Cash (Used in) Provided by Operating Activities	(132,000)	55,000
Cash Flows from Investing Activities:		
Sales of Plant and Equipment	225,000	40,000
Sales of Long-term Investments	50,000	10,000
Sales of Other Noncurrent Assets	54,000	-
Net Cash Provided by Investing Activities	329,000	50,000
Cash Flows from Financing Activities:		
Repayments of Notes Payable	(100,000)	(25,000)
Repayments of Long-term Debt	(25,000)	(25,000)
Dividends	(27,000)	(12,000)
Issuance of Common Stock	120,000	-
Net Cash Used in Financing Activities	(32,000)	(62,000)
Net Increase in Cash	165,000	43,000
Cash, Beginning of the Year	85,000	42,000
Cash, End of the Year	$ 250,000	$ 85,000

The favorable results from the analysis performed could be misleading without further cash flow analysis to support or confirm these favorable results. For example, the Windside statement of cash flows identifies the following:

- The company enjoyed substantial increases in cash because they are self-liquidating
- The company used proceeds from asset sales and the issuance of stock to finance current operations
- Without the "one time" gains from the sale of long-term assets, the company would have incurred a substantial loss for 20x0.
- Cash flows from operations were negative
- Net income was a negative $125,000 ($50,000 net income less $175,000 of one-time gains)

CASE 5 – REVIEWING A SMALL BUSINESS CASH FLOW STATEMENT

The Statement of Cash Flows that follows is an actual one from the author's accounting practice. It is typical of the "small business" issues encountered on a daily basis. The company is an S Corporation.

Review the statement and answer the questions which follow, to the extent you can without the other statements and footnotes.

MORGAN MANUFACTURING CO. INC.
STATEMENT OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 20X5 AND 20X4

	20X5	20X4
Cash flows from operating activities:		
Net income (loss)	$ 37,943	$ (196,186)
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization:		
Property and equipment	21,954	20,409
Covenants not to compete	96,288	96,288
Bad debts	3,002	3,960
Gain on sale of equipment	(2,045)	(6,019)
Officers' life insurance	(8,991)	(4,208)
Noncash compensation	324,856	293,068
Increase (decrease) in cash arising from changes in assets and liabilities (exclusive of merger of affiliate):		
Accounts receivable	43,413	(63,875)
Inventories	14,275	30,725
Prepaid expenses	(10,457)	1,761
Accounts payable	(36,004)	31,235
Due to affiliate for rent and interest	(74,953)	(27,254)
Accrued expenses	2,015	536
Total adjustments	373,353	376,626
Net cash provided by operating activities	411,296	180,440
Cash flows from investing activities:		
Advances to affiliates and stockholders	-	(14,752)
Repayments from affiliates and stockholders	60,000	79,558
Cash acquired in merger of affiliate	-	15,114
Purchase of property and equipment	(51,580)	(8,593)
Proceeds from sale of property and equipment	7,620	6,019
Payments for increase in cash value of officers' life insurance	(17,063)	(7,041)
Net cash provided by (used for) investing activities	(1,023)	70,305

MORGAN MANUFACTURING CO. INC.
STATEMENT OF CASH FLOWS (continued)
FOR THE YEARS ENDED DECEMBER 31, 20X5 AND 20X4

	20X5	20X4
Cash flows from financing activities:		
Advances from affiliates and stockholders	210,000	100,000
Repayments to affiliates and stockholders	(249,112)	(150,000)
Repayment of long-term debt	(320,826)	(314,176)
Dividends paid	-	-
Net cash used for financing activities	(359,938)	(364,176)
Net increase (decrease) in cash	50,335	(113,431)
Cash, beginning of the year	155,049	268,480
Cash, end of the year	$ 205,384	$ 155,049
Supplemental cash flow information:		
Cash paid for interest	$ 60,687	$ 76,797

QUESTIONS FOR DISCUSSION

1. Summarize the 4 or 5 most significant components of cash inflows/outflows for each year.

2. a. Identify all of the line items which involve, or appear to involve, related party transactions.

b. How has the prevalence of related party transactions impacted the cash balances maintained by Morgan in the last 2 years?

3. What is management's rationale for taking large bonuses while distributing no dividends?

4. **Based solely on the limited information in the cash flow statements presented, what can you tell about how proceeds from long-term debt were used?**

5. **As this company's banker/loan officer, what specific concerns would you have about this borrower?**

6. **As this company's banker/loan officer, where is the "security" in this borrowing relationship?**

QUALITY OF EARNINGS

Earnings quality is regarded as high when reported income **represents, as closely as possible, the operating results of a company during a period of time**, using the most representative accounting policies and accounting alternatives. Companies may, at times, manipulate reported earnings (or more often, "manage" earnings to a degree), thereby reducing their quality. **Earnings management activities often take place to achieve the following goals**:

- Improve opportunities for incentive compensation rewards (bonuses, stock options);
- Obtain additional long-term borrowings;
- Maintain compliance with debt covenants;
- Reduce taxable income for cash flow or labor negotiating purposes;
- Meeting published, announced, or market expectations related to revenues or earnings.

Earnings quality can be influenced by the **accounting policies** employed by a company. The more estimates and judgments associated with reported earnings, the poorer the quality. Reported earnings should reflect operating cash flow results, but frequently do not. In other words, reported revenues and expenses that closely reflect cash collections and cash payments represent higher quality earnings than those that do not.

In some instances, **management's objectives** must also be considered when evaluating the quality of reported earnings. For example, many companies attempt to maximize reported earnings to comply with performance debt covenants or influence stock values, while other companies look to minimize reported earnings to reduce their tax liabilities.

In addition, **accounting alternatives** can impact the accuracy of reported earnings, when the amounts or the nature of reported earnings are influenced by an accounting policy, not operating results. Examples of accounting policies where alternatives are permitted include inventory costing, depreciation, revenue recognition, and customer solicitation costs.

The **stability of earnings** is another closely watched measure of a company's quality of earnings; the more earnings from recurring operating transactions, the better the quality of earnings. When nonrecurring gains and losses represent significant components of reported net income, earnings quality declines.

Many users focus on the **quality of an entity's earnings** by performing cash flow analysis to validate the amount of reported earnings. For earnings to be "earnings," operating cash flow must be available to support the amount of reported earnings. That is, net income and net operating cash flow over time should be virtually identical if the quality of earnings is high. Lower quality earnings result when:

- Cash flows cannot be sustained by the entity,

OR

- An entity uses accounting standards which permit accrual of income that is not supported by net operating cash inflows,

OR

- An entity changes its revenue recognition policies to accelerate revenues when operating cash flows will not occur until some future uncertain period.

The above qualitative aspects of earnings (estimates, judgments, objectives, alternatives, stability, recurring, and operating) are frequently assessed through the use of **cash flow ratios**. For example:

<table>
<tr><th>Ratio</th><th>Formula</th><th>Meaning</th></tr>
<tr><td>Quality of Earnings</td><td>Cash Flow from Operations
―――――
Net Income plus Depreciation and Amortization</td><td>Measures how close accrual-based earnings are to reported operating cash flows. Over time, this measure should approximate “1.” When this measure is consistently below “1,” this is an indication of poorer quality earnings.</td></tr>
<tr><td colspan="3"><u>Comments</u>:

Net income is adjusted for significant noncash revenue and expense items, such as depreciation and amortization, in order to provide a consistent measurement of income. The Quality of Earnings ratio should approximate “1” over two to three years, if reported earnings are of a high quality. In any specific year, this ratio may be higher or lower than “1” due to accrual versus cash timing differences which should reverse in the future.

If the ratio is significantly above “1” over time, this may suggest accelerated current collections or management intentionally understating net income.

While this ratio should not be used as the sole measure of an entity’s quality of earnings, it can provide a significant indication of a problem in the reported earnings of an entity.</td></tr>
</table>

<table>
<tr><th>Ratio</th><th>Formula</th><th>Meaning</th></tr>
<tr><td>Quality of Revenues</td><td>Cash Receipts
―――――
Net Revenue</td><td>Measures how close accrual-based revenues are to reported cash revenues.</td></tr>
<tr><td colspan="3"><u>Comments</u>:

A higher percentage is indicative of better earnings quality.</td></tr>
</table>

These ratios help identify the "biases" caused by accrual-based accounting and choices among GAAP alternatives. The following example illustrates a quality of earnings application:

EXAMPLE

Several years ago, Client A was preparing to buy a motel in a beach resort community. The author was asked to visit the motel and perform normal "due diligence" as it relates to the property, management, and current ownership. While performing this work, the author asked the current owners for copies of financial statements they had submitted to the mortgage holder for the prior seven years. Among other procedures performed, the author prepared a trend analysis consisting of quality of earnings ratios for the seven-year period.

The result of that analysis is presented below:

Year 1: 67%

Year 2: 81%

Year 3: 56%

Year 4: 76%

Year 5: 84%

Year 6: 78%

Year 7: 76%

... or an arithmetic average of 74%.

Since this business was primarily a cash business with limited noncash items other than depreciation, this relationship did not make sense. The author discussed these relationships with the current owner and was able to eventually determine that the hotel was overstating revenues by increasing the reported occupancy rate of the hotel to satisfy certain compliance requirements mandated by the lender and the hotel chain managing the hotel. Neither the lender, hotel chain, nor the hotel's auditor had discovered this overstatement. The hotel owner overstated revenue by debiting fixed asset acquisitions and crediting sales. Apparently, the auditor did not audit fixed assets.

There is an appealing "symmetry" to this scheme. The fictitious revenue would, of course, never be collected in cash. Over time, the fictitious assets will "conceal themselves" through non-cash depreciation charges.

CASE 6 – READING A STATEMENT OF CASH FLOWS

The 20X9 Statement of Cash Flows for Lenape Products, Inc. is presented below. Use the statement to answer the following questions:

LENAPE PRODUCTS, INC.
STATEMENT OF CASH FLOWS
FOR THE PERIOD ENDED DECEMBER 31, 20X9

Cash Flows from operating activities:		
Net income	$320,240	
Adjustments to reconcile net income to cash provided by operations:		
Depreciation	168,220	
Bad debts	11,500	
Loss on sale of equipment	17,839	
Effect on cash of changes in operating assets and liabilities:		
Accounts receivable	(27,065)	
Inventories	(39,483)	
Accounts payable	47,060	
Accrued expenses	21,956	
Income taxes payable	(29,275)	
Cash provided by operating activities		$490,992
Cash Flows used in investing activities:		
Purchases of property and equipment	(284,414)	
Sale of equipment	30,000	
Purchases of long-term investments	(32,097)	
Purchase of other assets	(21,426)	
Cash used in investing activities		($307,937)
Cash Flows used for financing activities:		
Net reduction of line of credit borrowings	(5,125)	
Repayments of long-term debt	(75,246)	
Issuance of common stock	3,292	
Dividends paid	(61,775)	
Cash used in financing activities		($138,854)
Net increase in cash		$44,201
Cash, beginning of year		243,829
Cash, end of year		$288,030
Disclosures:		
Property and equipment acquired under capital lease		$20,000
Cash paid for:		
Income taxes		$238,357
Interest		$15,210

QUESTIONS FOR DISCUSSION

1. **Explain to the CEO of Lenape the primary sources and uses of cash during 20X9. Keep the list short, as he detests discussing financial data.**

2. **Comment on quality of earnings for 20X9.**

$$\text{Quality of earnings} = \left[\frac{\text{Cash flows from operations}}{(\text{Net Income} + \text{Depreciation} + \text{Amortization})} \right]$$

3. a. **The biggest cash outflow is for the acquisition of property and equipment. How are these acquisitions being financed?**

   b. **Although the company could clearly afford these additions, what inquiry might you make about them?**

4. **Can you form any conclusions about this company's stage of development, i.e., start-up, growth, mature, or decline stage?**

CASE 7 – FINDING THE TRUTH IN THE CASH FLOW STATEMENT

ENRON CASH FLOW ANALYSIS

To further demonstrate the importance of cash flow analysis, the following financial statements are from the pre-bankruptcy years of Enron Corp. Simple quality of earnings analysis and follow up could have served as a "red flag" for potential liquidity problems at Enron months before the financial markets caught on!

Even though this is an old example, it is priceless. Enron is still discussed today as a lesson about poor disclosure, poor earnings quality, and fraudulent financial reporting.

Enron Corp. and Subsidiaries Consolidated Statement of Cash Flows

(In millions)	Year ended December 31, 2000	1999	1998
Cash Flows From Operating Activities			
Reconciliation of net income to net cash provided by operating activities			
Net income	$ 979	$ 893	$ 703
Cumulative effect of accounting changes	-	131	-
Depreciation, depletion and amortization	855	870	827
Impairment of long-lived assets (including equity investments)	326	441	-
Deferred income taxes	207	21	87
Gains on sales of non-merchant assets	(146)	(541)	(82)
Changes in components of working capital	1,769	(1,000)	(233)
Net assets from price risk management activities	(763)	(395)	350
Merchant assets and investments:			
Realized gains on sales	(104)	(756)	(628)
Proceeds from sales	1,838	2,217	1,434
Additions and unrealized gains	(1,295)	(827)	(721)
Other operating activities	1,113	174	(97)
Net Cash Provided by Operating Activities	4,779	1,228	1,640
Cash Flows From Investing Activities			
Capital expenditures	(2,381)	(2,363)	(1,905)
Equity investments	(933)	(722)	(1,659)
Proceeds from sales of non-merchant assets	494	294	239
Acquisition of subsidiary stock	(485)	-	(180)
Business acquisitions, net of cash acquired (see Note 2)	(777)	(311)	(104)
Other investing activities	(182)	(405)	(356)
Net Cash Used in Investing Activities	(4,264)	(3,507)	(3,965)
Cash Flows From Financing Activities			
Issuance of long-term debt	3,994	1,776	1,903
Repayment of long-term debt	(2,337)	(1,837)	(870)
Net increase (decrease) in short-term borrowings	(1,595)	1,565	(158)
Net issuance (redemption) of company-obligated preferred securities of subsidiaries	(96)	-	8
Issuance of common stock	307	852	867
Issuance of subsidiary equity	500	568	828
Dividends paid	(523)	(467)	(414)
Net disposition of treasury stock	327	139	13
Other financing activities	(6)	(140)	89
Net Cash Provided by Financing Activities	571	2,456	2,266
Increase (Decrease) in Cash and Cash Equivalents	1,086	177	(59)
Cash and Cash Equivalents, Beginning of Year	288	111	170
Cash and Cash Equivalents, End of Year	$ 1,374	$ 288	$ 111
Changes in Components of Working Capital			
Receivables	$(8,203)	$ (662)	$(1,055)
Inventories	1,336	(133)	(372)
Payables	7,167	(246)	433
Other	1,469	41	761
Total	$ 1,769	$(1,000)	$ (233)

The accompanying notes are an integral part of these consolidated financial statements.

Enron Corp. and Subsidiaries Consolidated Income Statement

(In millions, except per share amounts)	Year ended December 31, 2000	1999	1998
Revenues			
Natural gas and other products	$ 50,500	$19,536	$13,276
Electricity	33,823	15,238	13,939
Metals	9,234	-	-
Other	7,232	5,338	4,045
Total revenues	100,789	40,112	31,260
Costs and Expenses			
Cost of gas, electricity, metals and other products	94,517	34,761	26,381
Operating expenses	3,184	3,045	2,473
Depreciation, depletion and amortization	855	870	827
Taxes, other than income taxes	280	193	201
Impairment of long-lived assets	-	441	-
Total costs and expenses	98,836	39,310	29,882
Operating Income	1,953	802	1,378
Other Income and Deductions			
Equity in earnings of unconsolidated equity affiliates	87	309	97
Gains on sales of non-merchant assets	146	541	56
Gains on the issuance of stock by TNPC, Inc.	121	-	-
Interest income	212	162	88
Other income, net	(37)	181	(37)
Income Before Interest, Minority Interests and Income Taxes	2,482	1,995	1,582
Interest and related charges, net	838	656	550
Dividends on company-obligated preferred securities of subsidiaries	77	76	77
Minority interests	154	135	77
Income tax expense	434	104	175
Net income before cumulative effect of accounting changes	979	1,024	703
Cumulative effect of accounting changes, net of tax	-	(131)	-
Net Income	979	893	703
Preferred stock dividends	83	66	17
Earnings on Common Stock	$ 896	$ 827	$ 686
Earnings Per Share of Common Stock			
Basic			
Before cumulative effect of accounting changes	$ 1.22	$ 1.36	$ 1.07
Cumulative effect of accounting changes	-	(0.19)	-
Basic earnings per share	$ 1.22	$ 1.17	$ 1.07
Diluted			
Before cumulative effect of accounting changes	$ 1.12	$ 1.27	$ 1.01
Cumulative effect of accounting changes	-	(0.17)	-
Diluted earnings per share	$ 1.12	$ 1.10	$ 1.01
Average Number of Common Shares Used in Computation			
Basic	736	705	642
Diluted	814	769	695

Enron Corp. and Subsidiaries Consolidated Statement of Comprehensive Income

(In millions)	Year ended December 31, 2000	1999	1998
Net Income	$ 979	$ 893	$ 703
Other comprehensive income:			
Foreign currency translation adjustment and other	(307)	(579)	(14)
Total Comprehensive Income	$ 672	$ 314	$ 689

The accompanying notes are an integral part of these consolidated financial statements.

Enron Corp. and Subsidiaries Consolidated Balance Sheet

December 31, (In millions, except shares)	2000	1999
ASSETS		
Current Assets		
Cash and cash equivalents	$ 1,374	$ 288
Trade receivables (net of allowance for doubtful accounts of $133 and $40, respectively)	10,396	3,030
Other receivables	1,874	518
Assets from price risk management activities	12,018	2,205
Inventories	953	598
Deposits	2,433	81
Other	1,333	535
Total current assets	30,381	7,255
Investments and Other Assets		
Investments in and advances to unconsolidated equity affiliates	5,294	5,036
Assets from price risk management activities	8,988	2,929
Goodwill	3,638	2,799
Other	5,459	4,681
Total investments and other assets	23,379	15,445
Property, Plant and Equipment, at cost		
Natural gas transmission	6,916	6,948
Electric generation and distribution	4,766	3,552
Fiber-optic network and equipment	839	379
Construction in progress	682	1,120
Other	2,256	1,913
	15,459	13,912
Less accumulated depreciation, depletion and amortization	3,716	3,231
Property, plant and equipment, net	11,743	10,681
Total Assets	$65,503	$33,381

The accompanying notes are an integral part of these consolidated financial statements.

December 31,	2000	1999
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities		
Accounts payable	$ 9,777	$ 2,154
Liabilities from price risk management activities	10,495	1,836
Short-term debt	1,679	1,001
Customers' deposits	4,277	44
Other	2,178	1,724
Total current liabilities	28,406	6,759
Long-Term Debt	8,550	7,151
Deferred Credits and Other Liabilities		
Deferred income taxes	1,644	1,894
Liabilities from price risk management activities	9,423	2,990
Other	2,692	1,587
Total deferred credits and other liabilities	13,759	6,471
Commitments and Contingencies (Notes 13, 14 and 15)		
Minority Interests	2,414	2,430
Company-Obligated Preferred Securities of Subsidiaries	904	1,000
Shareholders' Equity		
Second preferred stock, cumulative, no par value, 1,370,000 shares authorized, 1,240,933 shares and 1,296,184 shares issued, respectively	124	130
Mandatorily Convertible Junior Preferred Stock, Series B, no par value, 250,000 shares issued	1,000	1,000
Common stock, no par value, 1,200,000,000 shares authorized, 752,205,112 shares and 716,865,081 shares issued, respectively	8,348	6,637
Retained earnings	3,226	2,698
Accumulated other comprehensive income	(1,048)	(741)
Common stock held in treasury, 577,066 shares and 1,337,714 shares, respectively	(32)	(49)
Restricted stock and other	(148)	(105)
Total shareholders' equity	11,470	9,570
Total Liabilities and Shareholders' Equity	$65,503	$33,381

QUESTIONS FOR DISCUSSION

1. **Calculate Enron's quality of earnings for 1998 and 1999. Given the trend, what would you predict the quality of earnings would be in 2000?**

2. **Calculate the 2000 quality of earnings. Review all the financial statements to understand what caused this surprising reversal. What was the major item that contributed to this reversal? Do you agree with Enron's classification of this transaction?**

Additional Quality of Earnings Considerations – Risk Indicators

Identifying the quality of a company's reported earnings enables the user to determine if earnings truly represent the operating results of a company. In addition, users can utilize the Statement of Cash Flows to identify or predict financial difficulties a company may have. The following list of cash flow relationships should be useful in determining any possible operational problems:

- Net income plus depreciation exceeding cash flow from operations
- Net income growing at a rate that exceeds operating cash flow growth
- Inventories increasing at a greater percentage than sales
- Receivables increasing at a greater percentage than sales
- Reductions in capital expenditures over time
- Negative operating cash flows over time
- Positive investing and financing cash flows with negative operating cash flows
- Selling assets to fund current operations or pay down debt

FLEXIBILITY RATIOS

These ratios are particularly helpful in analyzing the ability of an entity to take effective actions to alter amounts and timing of cash flows so it can respond to **unexpected needs and opportunities**.

Ratio	Formula	Meaning
Operating Cash Flow to Net Revenue	$\frac{\text{CFFO}}{\text{Net Revenue (Sales)}}$	Measures an entity's net cash flows generated per dollar of revenue.
Comments: When net income is creatively managed by an entity, this ratio would be more meaningful than profit margin on sales. Since payments to employees and third parties must be in cash, not earnings, this ratio provides users with a useful performance measure to analyze operating cash flow performance.		

Ratio	Formula	Meaning
Operating Cash Flow to Number of Employees	$\frac{\text{CFFO}}{\text{Number of Employees}}$	Measures the performance efficiency of the entity based on a non-financial measure.
Comments: The higher the ratio the better, since a high ratio signifies greater efficiencies being experienced within the entity (i.e., higher amounts of cash flow generated per employee).		

Ratio	Formula	Meaning
Operating Cash Flow to Total Assets	$\frac{\text{CFFO}}{\text{Average Total Assets}}$	Measures an entity's net cash flows generated from all resources.
Comments: This measure suffers from the same purchasing power criticisms described in the rate of return on assets and equity measurements.		

Ratio	Formula	Meaning
Debt Coverage	$\frac{\text{CFFO}}{\text{Total Debt}}$	Measures the amount of operating cash flow coverage for total debt at a point in time.
Comments: Greater flexibility is availed to management, and greater protection is provided to creditors as this ratio increases. This ratio expresses an entity's ability to pay its debts with operating cash flows. The higher the ratio the greater the ability to liquidate those debts.		

Ratio	Formula	Meaning
Times Interest Paid	$\frac{\text{CFFO}}{\text{Interest Paid}}$	Measures the amount of operating cash flow coverage for interest paid during a period.
Comments: The higher the ratio, the greater protection availed to creditors as it relates to an entity's ability to service its debt payments. This ratio is superior to the times interest earned ratio previously discussed because it measures the payments made, not the expense incurred.		

Ratio	Formula	Meaning
Operating Cash Flow to Current Liabilities	CFFO / Current Liabilities	Measures the amount of operating cash flow coverage for current liabilities at a point in time.
Comments: Same as debt coverage; the higher the ratio, the greater the entity's ability to liquidate current obligations. A higher ratio indicates greater management flexibility.		

Ratio	Formula	Meaning
Self-Liquidation – PP&E	Proceeds from Sale of PP&E / Average PP&E	Reflects whether an entity is selling off its asset base to finance other operations.
Comments: An increasing percentage is indicative of self-liquidation.		

EXAMPLE

Cash Flow from Investing Activities
Sears Holdings Corporation

($ Millions)

Although this is an older example, Sears's demise is well known. Today, it is difficult to find a company with consistent cash provided by investing activities.

The following is from Sears Holding Corporation's Statement of Cash Flows. This shows the full detail for Cash Flows from Investing Activities and summary information from the rest of the statement.

	2016	2015	2014
Net Cash Provided/(Used) in Operating Activities	$(1,381)	$(2,167)	$(1,387)
Proceeds from sales of property and investments	386	2,730	424
Purchases of property and equipment	(142)	(211)	(270)
De-consolidation of Sears Canada cash	-	-	(207)
Proceeds from Sears Canada rights offering	-	-	380
Net Cash Provided/(Used) by Investing Activities	$ 244	$2,519	$ 327
Net Cash Provided/(Used) by Financing Activities	$ 1,185	$ (364)	$ 285
Effect of exchange rate changes on cash	-	-	(3)
NET INCREASE/(DECREASE) IN CASH	$ 48	$ (12)	$ (778)

	2016	2015	2014
Net Cash Provided/(Used) in Operating Activities	$(1,381)	$(2,167)	$(1,387)
Proceeds from sales of property and investments	386	2,730	424
Purchases of property and equipment	(142)	(211)	(270)
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Net Cash Provided/(Used) by Financing Activities	$ 1,185	$ (364)	$ 285
Effect of exchange rate changes on cash	-	-	(3)
NET INCREASE/(DECREASE) IN CASH	$ 48	$ (12)	$ (778)

Ratio	Formula	Meaning
Free Cash Flow	CFFO (Adjusted for any non-recurring items) minus Capital Expenditures and Debt Payments and Dividends (Owner Distributions)	Measures the amount of cash flow remaining to deal with changing operating conditions and/or the ability to take advantage of new opportunities.

Comments:

In recent years, lenders and other creditors have used a cash flow approach to evaluate credit worthiness of borrowers. Increasingly, covenants in loan agreements include references to debt service coverage that compare cash flows to a definition of fixed commitments.

A concept gaining wide acceptance is that of “free cash flow,” or amounts of cash left over once fixed, required payments are satisfied. These relationships help third-parties measure the on-going flexibility of an organization to deal with changing business circumstances or take advantage of emerging opportunities. In ratio format, free cash flow is effectively cash flow from operations (adjusted for any non-recurring items) divided by recurring payments. Increasing amounts (excesses) reflect an entity’s ability to generate sustainable cash flow from operations.

Ratio	Formula	Meaning
Cash Gap	Billing Lag (if available), plus Days Sales in AR, plus Days Sales in Inventory, minus AP Days Outstanding	The cash gap reflects the equivalent number of days, on an annual basis, that an entity has to fund a timing difference between operating cash receipts and cash disbursements.
Comments: Increasing investments in accounts such as receivables and inventory have the effect of increasing interest cost to an entity and reducing the entity's flexibility in dealing with changing conditions and unexpected circumstances.		

Cash gap analysis demonstrates the cost of investing in working capital. It is useful for setting internal objectives as well as industry and competitive benchmarking.

The cash gap analysis is based on the operating cycle and the average interest cost on debt during the period. The operating cycle is calculated as follows:

Operating cycle days = Days receivable + Days inventory – Days payables

EXAMPLE

This example calculates the 2020 cash gap for three companies in the pharmaceutical industry – Pfizer, Johnson & Johnson, and Merck. The interest cost to fund the cash gap is also calculated.

For information purposes, the balance sheets and income statements for each company follow the cash gap calculations.

The cost of each company's cash gap in 2020 is calculated (in $ millions) as follows:

Pfizer	Days	Dollars	
AR Days	64	$ 7,351	
INV Days	317	$ 7,557	
AP Days	(172)	$ (4,098)	
Cash Gap in Days	209	$ 10,810	
Cash Gap in Dollars			
Average Borrowing Rate		4.1%	
Annualized Cash Gap Cost		$ 445	million

Johnson & Johnson	Days	Dollars	
AR Days	62	$ 14,029	
INV Days	118	$ 9,182	
AP Days	(116)	$ (9,025)	
Cash Gap in Days	64	$ 14,186	
Cash Gap in Dollars			
Average Borrowing Rate		2.6%	
Annualized Cash Gap Cost		$ 364	million

Merck	Days	Dollars	
AR Days	56	$ 7,315	
INV Days	145	$ 6,144	
AP Days	(98)	$ -	
Cash Gap in Days	102	$ 13,459	
Cash Gap in Dollars			
Average Borrowing Rate		2.6%	
Annualized Cash Gap Cost		$ 348	million

Cash Gap Analysis

Pfizer		$ Millions	Average	Efficiency Ratio	
Accounts Receivable	2019	$ 6,772			
	2020	$ 7,930		$ 41,908	Sales
		$ 14,702	$ 7,351	5.7	Turns
				64	Days
Inventory	2019	$ 8,046			
	2020	$ 7,068		$ 8,692	CGS
		$ 15,114	$ 7,557	1.2	Turns
				317	Days
Accounts Payable	2019	$ 4,309			
	2020	$ 3,887		$ 8,692	CGS
		$ 8,196	$ 4,098	2.1	Turns
				172	Days

Johnson & Johnson		$ Millions	Average	Efficiency Ratio	
Accounts Receivable	2019	$ 13,576			
	2020	$ 14,481		$ 82,584	Sales
		$ 28,057	$ 14,029	5.9	Turns
				62	Days
Inventory	2019	$ 9,344			
	2020	$ 9,020		$ 28,427	CGS
		$ 18,364	$ 9,182	3.1	Turns
				118	Days
Accounts Payable	2019	$ 9,505			
	2020	$ 8,544		$ 28,427	CGS
		$ 18,049	$ 9,025	3.1	Turns
				116	Days

Merck		$ Millions	Average	Efficiency Ratio	
Accounts Receivable	2019	$ 7,851			
	2020	$ 6,778		$ 47,944	Sales
		$ 14,629	$ 7,315	6.6	Turns
				56	Days
Inventory	2019	$ 6,310			
	2020	$ 5,978		$ 15,485	CGS
		$ 12,288	$ 6,144	2.5	Turns
				145	Days
Accounts Payable	2019	$ 4,594			
	2020	$ 3,738		$ 15,485	CGS
		$ 8,332	$ 4,166	3.7	Turns
				98	Days

Pfizer Inc. and Subsidiary Companies
Consolidated Statements of Income

(MILLIONS, EXCEPT PER COMMON SHARE DATA)	Year Ended December 31,		
	2020	2019	2018
Revenues	**$ 41,908**	$ 41,172	$ 40,825
Costs and expenses:			
Cost of sales[a]	**8,692**	8,251	8,987
Selling, informational and administrative expenses[a]	**11,615**	12,750	12,612
Research and development expenses[a]	**9,405**	8,394	7,760
Amortization of intangible assets	**3,436**	4,462	4,736
Restructuring charges and certain acquisition-related costs	**600**	601	1,058
(Gain) on completion of Consumer Healthcare JV transaction	**(6)**	(8,086)	—
Other (income)/deductions—net	**669**	3,314	2,077
Income from continuing operations before provision/(benefit) for taxes on income	**7,497**	11,485	3,594
Provision/(benefit) for taxes on income	**477**	618	(266)
Income from continuing operations	**7,021**	10,867	3,861
Income from discontinued operations—net of tax	**2,631**	5,435	7,328
Net income before allocation to noncontrolling interests	**9,652**	16,302	11,188
Less: Net income attributable to noncontrolling interests	**36**	29	36
Net income attributable to Pfizer Inc. common shareholders	**$ 9,616**	$ 16,273	$ 11,153
Earnings per common share—basic:			
Income from continuing operations attributable to Pfizer Inc. common shareholders	**$ 1.26**	$ 1.95	$ 0.65
Income from discontinued operations—net of tax	**0.47**	0.98	1.25
Net income attributable to Pfizer Inc. common shareholders	**$ 1.73**	$ 2.92	$ 1.90
Earnings per common share—diluted:			
Income from continuing operations attributable to Pfizer Inc. common shareholders	**$ 1.24**	$ 1.91	$ 0.64
Income from discontinued operations—net of tax	**0.47**	0.96	1.23
Net income attributable to Pfizer Inc. common shareholders	**$ 1.71**	$ 2.87	$ 1.87
Weighted-average shares—basic	**5,555**	5,569	5,872
Weighted-average shares—diluted	**5,632**	5,675	5,977

[a] Exclusive of amortization of intangible assets, except as disclosed in *Note 1L*.

JOHNSON & JOHNSON AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EARNINGS
(Dollars and Shares in Millions Except Per Share Amounts) (Note 1)

	2020	2019	2018
Sales to customers	$ 82,584	82,059	81,581
Cost of products sold	28,427	27,556	27,091
Gross profit	54,157	54,503	54,490
Selling, marketing and administrative expenses	22,084	22,178	22,540
Research and development expense	12,159	11,355	10,775
In-process research and development (Note 5)	181	890	1,126
Interest income	(111)	(357)	(611)
Interest expense, net of portion capitalized (Note 4)	201	318	1,005
Other (income) expense, net	2,899	2,525	1,405
Restructuring (Note 20)	247	266	251
Earnings before provision for taxes on income	16,497	17,328	17,999
Provision for taxes on income (Note 8)	1,783	2,209	2,702
Net earnings	**$ 14,714**	**15,119**	**15,297**
Net earnings per share (Notes 1 and 15)			
Basic	**$ 5.59**	**5.72**	**5.70**
Diluted	**$ 5.51**	**5.63**	**5.61**
Average shares outstanding (Notes 1 and 15)			
Basic	**2,632.8**	**2,645.1**	**2,681.5**
Diluted	**2,670.7**	**2,684.3**	**2,728.7**

See Notes to Consolidated Financial Statements.

JOHNSON & JOHNSON AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
At January 3, 2021 and December 29, 2019
(Dollars in Millions Except Share and Per Share Amounts) (Note 1)

		2020	2019
Assets			
Current assets			
Cash and cash equivalents (Notes 1 and 2)	$	13,985	17,305
Marketable securities (Notes 1 and 2)		11,200	1,982
Accounts receivable trade, less allowances for doubtful accounts $293 (2019, $226)		13,576	14,481
Inventories (Notes 1 and 3)		9,344	9,020
Prepaid expenses and other receivables		3,132	2,392
Assets held for sale (Note 18)		—	94
Total current assets		**51,237**	**45,274**
Property, plant and equipment, net (Notes 1 and 4)		18,766	17,658
Intangible assets, net (Notes 1 and 5)		53,402	47,643
Goodwill (Notes 1 and 5)		36,393	33,639
Deferred taxes on income (Note 8)		8,534	7,819
Other assets		6,562	5,695
Total assets	**$**	**174,894**	**157,728**
Liabilities and Shareholders' Equity			
Current liabilities			
Loans and notes payable (Note 7)	$	2,631	1,202
Accounts payable		9,505	8,544
Accrued liabilities		13,968	9,715
Accrued rebates, returns and promotions		11,513	10,883
Accrued compensation and employee related obligations		3,484	3,354
Accrued taxes on income (Note 8)		1,392	2,266
Total current liabilities		**42,493**	**35,964**
Long-term debt (Note 7)		32,635	26,494
Deferred taxes on income (Note 8)		7,214	5,958
Employee related obligations (Notes 9 and 10)		10,771	10,663
Long-term taxes payable (Note 1)		6,559	7,444
Other liabilities		11,944	11,734
Total liabilities		**111,616**	**98,257**
Commitments and Contingencies (Note 19)			
Shareholders' equity			
Preferred stock — without par value (authorized and unissued 2,000,000 shares)		—	—
Common stock — par value $1.00 per share (Note 12) (authorized 4,320,000,000 shares; issued 3,119,843,000 shares)		3,120	3,120
Accumulated other comprehensive income (loss) (Note 13)		(15,242)	(15,891)
Retained earnings		113,890	110,659
		101,768	97,888
Less: common stock held in treasury, at cost (Note 12) (487,331,000 shares and 487,336,000 shares)		38,490	38,417
Total shareholders' equity		**63,278**	**59,471**
Total liabilities and shareholders' equity	**$**	**174,894**	**157,728**

See Notes to Consolidated Financial Statements.

Item 8. Financial Statements and Supplementary Data.

(a) Financial Statements

The consolidated balance sheet of Merck & Co., Inc. and subsidiaries as of December 31, 2020 and 2019, and the related consolidated statements of income, of comprehensive income, of equity and of cash flows for each of the three years in the period ended December 31, 2020, the notes to consolidated financial statements, and the report dated February 25, 2021 of PricewaterhouseCoopers LLP, independent registered public accounting firm, are as follows:

Consolidated Statement of Income

Merck & Co, Inc. and Subsidiaries *Years Ended December 31*
($ in millions except per share amounts)

	2020	2019	2018
Sales	**$ 47,994**	$ 46,840	$ 42,294
Costs, Expenses and Other			
Cost of sales	**15,485**	14,112	13,509
Selling, general and administrative	**10,468**	10,615	10,102
Research and development	**13,558**	9,872	9,752
Restructuring costs	**578**	638	632
Other (income) expense, net	**(886)**	139	(402)
	39,203	35,376	33,593
Income Before Taxes	**8,791**	11,464	8,701
Taxes on Income	**1,709**	1,687	2,508
Net Income	**7,082**	9,777	6,193
Less: Net Income (Loss) Attributable to Noncontrolling Interests	**15**	(66)	(27)
Net Income Attributable to Merck & Co., Inc.	**$ 7,067**	$ 9,843	$ 6,220
Basic Earnings per Common Share Attributable to Merck & Co., Inc. Common Shareholders	**$ 2.79**	$ 3.84	$ 2.34
Earnings per Common Share Assuming Dilution Attributable to Merck & Co., Inc. Common Shareholders	**$ 2.78**	$ 3.81	$ 2.32

Consolidated Balance Sheet
Merck & Co., Inc. and Subsidiaries *Years ended December 31*
($ in millions except per share amounts)

	2020	2019
Assets		
Current Assets		
Cash and cash equivalents	**$ 8,062**	$ 9,676
Short-term investments	**—**	774
Accounts receivable (net of allowance for doubtful accounts of $85 in 2020 and $86 in 2019)	**7,851**	6,778
Inventories (excludes inventories of $2,197 in 2020 and $1,480 in 2019 classified in Other assets - see Note 7)	**6,310**	5,978
Other current assets	**5,541**	4,277
Total current assets	**27,764**	27,483
Investments	**785**	1,469
Property, Plant and Equipment (at cost)		
Land	**350**	343
Buildings	**12,645**	11,989
Machinery, equipment and office furnishings	**16,649**	15,394
Construction in progress	**7,324**	5,013
	36,968	32,739
Less: accumulated depreciation	**18,982**	17,686
	17,986	15,053
Goodwill	**20,238**	19,425
Other Intangibles, Net	**14,604**	14,196
Other Assets	**10,211**	6,771
	$ 91,588	$ 84,397
Liabilities and Equity		
Current Liabilities		
Loans payable and current portion of long-term debt	**$ 6,431**	$ 3,610
Trade accounts payable	**4,594**	3,738
Accrued and other current liabilities	**13,053**	12,549
Income taxes payable	**1,575**	736
Dividends payable	**1,674**	1,587
Total current liabilities	**27,327**	22,220
Long-Term Debt	**25,360**	22,736
Deferred Income Taxes	**1,015**	1,470
Other Noncurrent Liabilities	**12,482**	11,970
Merck & Co., Inc. Stockholders' Equity		
Common stock, $0.50 par value Authorized - 6,500,000,000 shares Issued - 3,577,103,522 shares in 2020 and 2019	**1,788**	1,788
Other paid-in capital	**39,588**	39,660
Retained earnings	**47,362**	46,602
Accumulated other comprehensive loss	**(6,634)**	(6,193)
	82,104	81,857
Less treasury stock, at cost: 1,046,877,695 shares in 2020 and 1,038,087,496 shares in 2019	**56,787**	55,950
Total Merck & Co., Inc. stockholders' equity	**25,317**	25,907
Noncontrolling Interests	**87**	94
Total equity	**25,404**	26,001
	$ 91,588	$ 84,397

The accompanying notes are an integral part of this consolidated financial statement.

Ratio	Formula	Meaning
EBITDA	Earnings + Interest, Taxes, Depreciation, and Amortization	Measures the amount of earnings a company generates from operations before non-operational expenses such as interest, taxes, depreciation and amortization. (EBITDA ignores changes in inventory, receivables, and capital acquisitions). This is a pro forma earnings, and many times used as a pro forma cash flow, measure.
Comments: A substitute measure for CFFO by those that believe CFFO does not provide an accurate view of an entity's ability to create value. EBITDA presents two major problems as an analysis tool: 1) It ignores too many expenses for it to be an effective substitute for GAAP earnings, and 2) it is a poor substitute for cash flow because it does not measure an entity's actual cash flows – it ignores working capital changes, debt payments, and capital expenditure payments. In other words, EBITDA is not an effective measure of cash flow because it ignores balance sheet changes.		

USE OF INDUSTRY DATA OR PEER GROUP COMPARISONS

Traditional forms of financial statement analysis – horizontal, vertical, and/or ratio analysis – are applied to a company's financial data over extended periods in order to identify trends. Trends permit the analyst to assess whether an area of interest is improving or not, and helps predict future performance.

However, reviewing trends alone is not always adequate to fully assess a company's performance. Additional measurements upon which a company can be compared to its peers or industry group is often necessary to complete the "analytical" picture. Analysts, therefore, use published industry/peer group **benchmarks** to assist in this analysis.

The availability of information is no longer an issue; rather, locating the most relevant information from the voluminous available sources is. The Internet can provide every imaginable performance measure for any publicly held company; this data is obviously useful in its current form for studying the fundamentals relevant to investment decisions. Many argue, however, that industry data or peer group benchmarks are not as useful when performing analysis on unique or small companies because:

- The data is arranged by industry codes and does not necessarily correspond to the company's central operations; and
- Public company measurements reflect different capital structures and long-term objectives.

To a large degree, these arguments are weakened for the following reasons:

- First, the explosion of available data in recent years includes information that is useful in virtually any situation; the challenge is finding it. And it may not be free.

- Second, there are publications and web services geared exclusively toward small businesses. In fact, a case that follows in this course uses data from an outside service that provides common size and ratio measurements by industry **only** for businesses with $1 million or less in assets.

- Third, general economic conditions and information from trade journals provide a good deal of useful information in analyzing operations, financial position, and cash flows.

EXAMPLE

Financial performance for a commercial real estate broker that sells and leases office space in a particular region could be measured against general economic conditions for the region (growth vs. recession, employment levels, and lending climate) and specific industry trends such as vacancy rates, rents per square foot, new construction data, and recent sales figures.

A car dealership is affected by interest rates, widely publicized data on vehicle sales and incentives, fuel costs, consumer buying trends, and the general state of the local economy.

Any analysis of a company that deals with commodity-sensitive goods or services will be significantly affected by changes in commodity prices. A wire and cable manufacturer, for instance, whose product costs are largely comprised of copper materials, can be expected to see proportional increases in its inventory, cost of goods sold, sales, accounts receivable, accounts payable, line of credit borrowings, and interest expense in periods where copper (a commodity) experiences dramatic increases. While a somewhat obvious example, this demonstrates that analysis cannot be performed "in a vacuum"; relevant industry data must be incorporated.

Sources of Industry Information

While there are infinite sources of information to obtain industry data, the following list provides a good starting point for searches:

- RMA Annual Statement Studies, RMAHQ.ORG
- Almanac of Business and Industrial Financial Ratios, CCHGROUP.COM
- Key Business Ratios, KBR.DNB.COM
- National Trade and Professional Associations of the U.S. (Through Columbia Books and Information Services: (888) 265-0600)
- ProfitCents by Sageworks (PROFITCENTS.COM), (866) 603-7029
- Shared Services Benchmarking Association (SSBENCHMARKING.ORG)
- The Benchmarking Network, Inc. (WELL.COM)
- FINANCE.YAHOO.COM
- CFO.COM
- CEOEXPRESS.COM

- HOOVERS.COM
- ACCOUNTANTSWORLD.COM
- BIZSTATS.COM
- BIZMOVE.COM
- ACCOUNTINGWEB.COM

Benchmarking Websites

- http://www.apqc.org/benchmarking
- http://asq.org/quality-resources/benchmarking

When doing an Internet search using your search engine, we suggest you consider using the following phrases to obtain related web sites:

- "Benchmarking"
- "Best practices"
- "Performance measurements"
- "Financial ratios"
- "Cash flow ratios"
- "Peer group comparisons"

ALTMAN Z-SCORE – BANKRUPTCY PREDICTION

In 1968, Dr. Ed Altman a professor at NYU, created a Z-Score formula for predicting bankruptcy. This formula combines five (four if a private non-manufacturing company) ratios weighted based on his model, that predicts bankruptcy 70% to 80% of the time. This Z-Score uses statistical techniques, developed by Dr. Altman, to predict an entity's probability of failure.

The formula for a **public company** is:

A	EBIT/Total Assets	* 3.3
B	Net Sales/Total Assets	* 0.999
C	Market Value of Equity/Total Liabilities	* 0.6
D	Working Capital/Total Assets	* 1.2
E	Retained Earnings/Total Assets	* 1.4

Z-Score = (A*3.3) + (B*0.999) + (C*0.6) + (D*1.2)+(E*1.4)

Z-Score above 2.99 – Bankruptcy not likely
Z-Score between 2.7 and 2.99 – Bankruptcy uncertain
Z-Score between 1.8 and 2.7 – Bankruptcy likely within 2 years
Z-Score less than 1.8 – Bankruptcy is likely within one year

The formula for **private manufacturing companies** is:

A	EBIT/Total Assets	* 3.107
B	Net Sales/Total Assets	* 0.998
C	Book Value of Equity/Total Liabilities	* 0.420
D	Working Capital/Total Assets	* 0.717
E	Retained Earnings/Total Assets	* 0.847

Z-Score = (A*3.107) + (B*0.998) + (C*0.420) + (D*0.717) + (E*0.847)

Z-Score above 2.9 – Bankruptcy not likely
Z-Score between 1.23 and 2.9 – Bankruptcy uncertain
Z-Score less than 1.23 – Bankruptcy is likely within one year

The formula for **private non-manufacturing companies** is:

A	EBIT/Total Assets	* 6.72
B	Book Value of Equity/Total Liabilities	* 1.05
C	Working Capital/Total Assets	* 6.56
D	Retained Earnings/Total Assets	* 3.26

Z-Score = (A*6.72) + (B*1.05) + (C*6.56) + (D*3.26)

Z-Score above 2.6 – Bankruptcy not likely
Z-Score between 1.1 and 2.6 – Bankruptcy uncertain
Z-Score less than 1.1 – Bankruptcy is likely within one year

When potential bankruptcy or significant operational changes are taking place, financial statement users may also want to utilize the Altman Z-Score as part of their analysis.

Note: Auditors and accountants should use the Altman Z-Score as a supplement to other procedures performed when assessing going concern problems.

EXAMPLE

Retailers are having difficulty competing due to COVID and also due to established online retail businesses, such as Amazon. In 2020, the Altman Z-Score calculation for Bed Bath & Beyond and Amazon are shown below.

	Amazon $000	Bed Bath & Beyond $000
EBIT	22,899	(700,064)
Total assets	321,195	7,790,515
Net sales	386,064	11,158,580
# shares outstanding	503	126,528
Market price per share	$ 3,075.00	$ 31.50
Market value of equity	1,546,725	3,985,632
Total liabilities	227,791	6,025,580
Current assets	132,733	3,826,285
CurrentlLiabilities	126,385	2,466,526
Working capital	6,348	1,359,759
Retained earnings	52,551	1,764,935
ALTMAN Z-SCORE CALCULATION		
A -> EBIT/Total Assets X 3.3	0.24	(0.30)
B -> Net Sales/Total Assets X 0.999	1.20	1.43
C -> Market Vaule of Equity/Total Liabilities X 0.6	4.07	0.40
D -> Working Capital/Total Assets X 1.2	0.02	0.21
E -> Retained Earnings/Total Assets X 1.4	0.23	0.32
	5.76	2.06

'=> Bed Bath & Beyond is at the unfavorable low end of the "bankruptcy likely within two years" category.

CASE 8 – FINANCIAL STATEMENT ANALYSIS

Following are the income statement, balance sheet, and summary statement of cash flows for Mattel and Hasbro. Both companies are in the same industry and have closely-equivalent size (by sales); however, their financial and operating performance differs substantially.

From the selected ratios below, evaluate both companies from the perspective of a financial statement user.

To simplify the case, only the current year information is included in the solution. Averages are not calculated.

What conclusions do you reach?

MATTEL, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

	December 31, 2020	December 31, 2019
	(In thousands, except share data)	
ASSETS		
Current Assets		
Cash and equivalents	$ 762,181	$ 630,028
Accounts receivable, net of allowances for credit losses of $15.9 million and $18.5 million in 2020 and 2019, respectively	1,033,966	936,359
Inventories	514,673	495,504
Prepaid expenses and other current assets	172,070	186,083
Total current assets	2,482,890	2,247,974
Noncurrent Assets		
Property, plant, and equipment, net	473,794	550,139
Right-of-use assets, net	291,601	303,187
Goodwill	1,393,834	1,390,714
Other noncurrent assets	878,970	833,212
Total Assets	$ 5,521,089	$ 5,325,226
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities		
Short-term borrowings	$ 969	$ —
Accounts payable	495,363	459,357
Accrued liabilities	831,922	769,513
Income taxes payable	27,125	48,037
Total current liabilities	1,355,379	1,276,907
Noncurrent Liabilities		
Long-term debt	2,854,664	2,846,751
Noncurrent lease liabilities	249,353	270,853
Other noncurrent liabilities	465,350	439,001
Total noncurrent liabilities	3,569,367	3,556,605
Commitments and Contingencies (See Note 12)		
Stockholders' Equity		
Common stock $1.00 par value, 1.0 billion shares authorized; 441.4 million shares issued	441,369	441,369
Additional paid-in capital	1,842,680	1,825,569
Treasury stock at cost: 93.2 million shares and 94.6 million shares in 2020 and 2019, respectively	(2,282,939)	(2,318,921)
Retained earnings	1,539,809	1,413,181
Accumulated other comprehensive loss	(944,576)	(869,484)
Total stockholders' equity	596,343	491,714
Total Liabilities and Stockholders' Equity	$ 5,521,089	$ 5,325,226

The accompanying notes are an integral part of these consolidated financial statements.

MATTEL, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	For the Year Ended		
	December 31, 2020	December 31, 2019	December 31, 2018
		(In thousands)	
Net Income (Loss)	$ 126,628	$ (213,512)	$ (533,299)
Other Comprehensive Loss, Net of Tax			
Currency translation adjustments	(32,423)	18,919	(106,651)
Employee benefit plan adjustments	(16,997)	(27,094)	450
Net unrealized gains (losses) on available-for-sale security	738	(1,713)	(3,748)
Net unrealized (losses) gains on derivative instruments:			
Unrealized holding (losses) gains	(14,037)	17,024	24,082
Amounts reclassified from accumulated other comprehensive loss	(12,373)	(17,394)	8,427
	(26,410)	(370)	32,509
Other Comprehensive Loss, Net of Tax	(75,092)	(10,258)	(77,440)
Comprehensive Income (Loss)	$ 51,536	$ (223,770)	$ (610,739)

The accompanying notes are an integral part of these consolidated financial statements.

MATTEL, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	For the Year Ended		
	December 31, 2020	December 31, 2019	December 31, 2018
		(In thousands)	
Net Income (Loss)	$ 126,628	$ (213,512)	$ (533,299)
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Comprehensive Income (Loss)	$ 51,536	$ (223,770)	$ (610,739)

The accompanying notes are an integral part of these consolidated financial statements.

MATTEL, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the Year Ended		
	December 31, 2020	December 31, 2019	December 31, 2018
		(In thousands)	
Cash Flows From Operating Activities:			
Net income (loss)	$ 126,628	$ (213,512)	$ (533,299)
Adjustments to reconcile net income (loss) to net cash flows provided by (used for) operating activities:			
Depreciation	160,973	204,406	232,837
Amortization	38,925	40,112	39,095
Share-based compensation	60,168	55,968	48,915
Bad debt expense	9,149	967	40,894
Inventory obsolescence	44,006	75,139	74,974
Asset impairments	13,006	38,729	18,203
Deferred income taxes	(2,200)	(22,625)	13,349
Indefinite reinvestment assertion and U.S. Tax Act	—	—	18,275
(Income) loss from equity method investments	(10,752)	771	2,224
Changes in assets and liabilities:			
Accounts receivable	(92,280)	41,029	72,415
Inventories	(50,562)	(26,920)	(53,840)
Prepaid expenses and other current assets	5,661	47,971	54,230
Accounts payable, accrued liabilities, and income taxes payable	11,209	(58,679)	(47,397)
Other, net	(25,429)	(2,379)	(8,192)
Net cash flows provided by (used for) operating activities	288,502	180,977	(27,317)
Cash Flows From Investing Activities:			
Purchases of tools, dies, and molds	(59,404)	(50,509)	(74,662)
Purchases of other property, plant, and equipment	(62,195)	(65,843)	(77,752)
Payments for foreign currency forward exchange contracts	(22,883)	(681)	(18,615)
Other, net	9,572	2,857	10,271
Net cash flows used for investing activities	(134,910)	(114,176)	(160,758)
Cash Flows From Financing Activities:			
Proceeds from (payments of) short-term borrowings, net	969	(4,176)	4,176
Payments of long-term borrowings	—	(607,898)	(750,000)
Proceeds from long-term borrowings, net	—	588,244	471,797
Other, net	(6,811)	(9,308)	(11,130)
Net cash flows used for financing activities	(5,842)	(33,138)	(285,157)
Effect of Currency Exchange Rate Changes on Cash	(15,597)	1,884	(11,508)
Increase (Decrease) in Cash and Equivalents	132,153	35,547	(484,740)
Cash and Equivalents at Beginning of Period	630,028	594,481	1,079,221
Cash and Equivalents at End of Period	$ 762,181	$ 630,028	$ 594,481
Supplemental Cash Flow Information:			
Cash paid during the year for:			
Income taxes, gross	$ 99,495	$ 72,647	$ 99,586
Interest	190,674	190,922	173,951

The accompanying notes are an integral part of these consolidated financial statements.

MATTEL, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Common Stock	Additional Paid-In Capital	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
			(In thousands)			
Balance, December 31, 2017	$ 441,369	$ 1,808,391	$ (2,389,877)	$ 2,179,100	$ (781,786)	$ 1,257,197
Cumulative effect of accounting change	—	—	—	(19,149)	—	(19,149)
Net loss	—	—	—	(533,299)	—	(533,299)
Other comprehensive loss, net of tax	—	—	—	—	(77,440)	(77,440)
Issuance of treasury stock for restricted stock units vesting	—	(44,547)	35,059	—	—	(9,488)
Deferred compensation	—	(77)	201	—	—	124
Share-based compensation	—	48,915	—	—	—	48,915
Dividend equivalents for restricted stock units	—	—	—	41	—	41
Balance, December 31, 2018	441,369	1,812,682	(2,354,617)	1,626,693	(859,226)	666,901
Net loss	—	—	—	(213,512)	—	(213,512)
Other comprehensive loss, net of tax	—	—	—	—	(10,258)	(10,258)
Issuance of treasury stock for restricted stock units vesting	—	(42,930)	35,420	—	—	(7,510)
Deferred compensation	—	(151)	276	—	—	125
Share-based compensation	—	55,968	—	—	—	55,968
Balance, December 31, 2019	441,369	1,825,569	(2,318,921)	1,413,181	(869,484)	491,714
Net income	—	—	—	126,628	—	126,628
Other comprehensive loss, net of tax	—	—	—	—	(75,092)	(75,092)
Issuance of treasury stock for stock option exercises	—	(41)	105	—	—	64
Issuance of treasury stock for restricted stock units vesting	—	(42,830)	35,567	—	—	(7,263)
Deferred compensation	—	(186)	310	—	—	124
Share-based compensation	—	60,168	—	—	—	60,168
Balance, December 31, 2020	$ 441,369	$ 1,842,680	$ (2,282,939)	$ 1,539,809	$ (944,576)	$ 596,343

HASBRO, INC. AND SUBSIDIARIES

Consolidated Balance Sheets
December 27, 2020 and December 29, 2019
(Thousands of Dollars Except Share Data)

	2020	2019
ASSETS		
Current assets		
Cash and cash equivalents including restricted cash of $73,200 in 2020 and $0 in 2019	$ 1,449,676	4,580,369
Accounts receivable, less allowance for credit losses of $28,100 in 2020 and $17,200 in 2019	1,391,726	1,410,597
Inventories	395,633	446,105
Prepaid expenses and other current assets	609,610	310,450
Total current assets	3,846,645	6,747,521
Property, plant and equipment, net	489,041	382,248
Other assets		
Goodwill	3,691,709	494,584
Other intangibles, net	1,530,835	646,305
Other	1,260,155	584,970
Total other assets	6,482,699	1,725,859
Total assets	$ 10,818,385	8,855,628
LIABILITIES, NONCONTROLLING INTERESTS AND SHAREHOLDERS' EQUITY		
Current liabilities		
Short-term borrowings	$ 6,642	503
Current portion of long-term debt	432,555	—
Accounts payable	425,500	343,927
Accrued liabilities	1,538,644	912,652
Total current liabilities	2,403,341	1,257,082
Long-term debt	4,660,015	4,046,457
Other liabilities	793,866	556,559
Total liabilities	7,857,222	5,860,098
Redeemable noncontrolling interests	24,426	—
Shareholders' equity		
Preference stock of $2.50 par value. Authorized 5,000,000 shares; none issued	—	—
Common stock of $0.50 par value. Authorized 600,000,000 shares; issued 220,286,736 shares as of 2020 and 2019	110,143	110,143
Additional paid-in capital	2,329,064	2,275,726
Retained earnings	4,204,184	4,354,619
Accumulated other comprehensive loss	(194,953)	(184,220)
Treasury stock, at cost, 82,979,403 shares in 2020 and 83,424,129 shares in 2019	(3,551,749)	(3,560,738)
Noncontrolling interests	40,048	—
Total shareholders' equity	2,936,737	2,995,530
Total liabilities, noncontrolling interests and shareholders' equity	$ 10,818,385	8,855,628

See accompanying notes to consolidated financial statements.

HASBRO, INC. AND SUBSIDIARIES

Consolidated Statements of Operations
Fiscal Years Ended in December
(Thousands of Dollars Except Per Share Data)

	2020	2019	2018
Net revenues	$ 5,465,443	4,720,227	4,579,646
Costs and expenses:			
Cost of sales	1,718,888	1,807,849	1,850,678
Program cost amortization	387,056	85,585	43,906
Royalties	569,981	414,549	351,660
Product development	259,522	262,156	246,165
Advertising	412,730	413,676	439,922
Amortization of intangible assets	144,746	47,259	28,703
Selling, distribution and administration	1,252,140	1,037,103	1,287,560
Acquisition and related costs	218,566	—	—
Total costs and expenses	4,963,629	4,068,177	4,248,594
Operating profit	501,814	652,050	331,052
Non-operating expense (income):			
Interest expense	201,130	101,878	90,826
Interest income	(7,424)	(30,107)	(22,357)
Other income, net	(13,954)	(13,931)	(7,819)
Total non-operating expense, net	179,752	57,840	60,650
Earnings before income taxes	322,062	594,210	270,402
Income taxes	96,621	73,756	49,968
Net earnings	225,441	520,454	220,434
Net earnings attributable to noncontrolling interests	2,922	—	—
Net earnings attributable to Hasbro, Inc.	$ 222,519	520,454	220,434
Per common share			
Net earnings attributable to Hasbro, Inc.			
Basic	$ 1.62	4.07	1.75
Diluted	$ 1.62	4.05	1.74
Cash dividends declared	$ 2.72	2.72	2.52

See accompanying notes to consolidated financial statements.

HASBRO, INC. AND SUBSIDIARIES

Consolidated Statements of Comprehensive Earnings
Fiscal Years Ended in December
(Thousands of Dollars)

	2020	2019	2018
Net earnings	$ 225,441	520,454	220,434
Other comprehensive earnings (loss):			
Foreign currency translation adjustments, net of tax	10,087	9,556	(55,524)
Unrealized holding gains (losses) on available-for-sale securities, net of tax	640	514	(2,000)
Net gains on cash flow hedging activities, net of tax	2,380	11,678	36,107
Changes in unrecognized pension amounts, net of tax	(6,609)	14,850	(23,763)
Reclassifications to earnings, net of tax:			
Net (gains) losses on cash flow hedging activities	(19,252)	(18,459)	1,929
Amortization of unrecognized pension and postretirement amounts	2,021	6,160	9,665
Settlement of U.S. defined benefit plan	—	85,995	—
Other comprehensive (loss) earnings, net of tax	(10,733)	110,294	(33,586)
Total comprehensive earnings, net of tax	214,708	630,748	186,848
Total comprehensive earnings attributable to noncontrolling Interests	2,922	—	—
Total comprehensive earnings attributable to Hasbro, Inc.	$ 211,786	630,748	186,848

See accompanying notes to consolidated financial statements.

HASBRO, INC. AND SUBSIDIARIES
Consolidated Statements of Cash Flows
Fiscal Years Ended in December
(Thousands of Dollars)

	2020	2019	2018
Cash flows from operating activities			
Net earnings	$ 225,441	520,454	220,434
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation of property, plant and equipment	120,229	133,528	139,255
Impairment of goodwill	—	—	86,253
Asset Impairments	71,540	—	31,303
Non-cash pension settlement	—	110,962	—
Amortization of intangible assets	144,746	47,259	28,703
Program cost amortization	387,056	85,585	43,906
Deferred income taxes	30,316	(14,956)	(11,094)
Stock-based compensation	49,748	28,044	27,892
Other non-cash items	7,396	(54,184)	(18,879)
Changes in operating assets and liabilities, net of acquired and disposed balances:			
Decrease (increase) in accounts receivable	210,823	(211,450)	180,113
Decrease (increase) in inventories	62,757	(4,631)	(37,211)
(Increase) decrease in prepaid expenses and other current assets	(7,470)	18,106	(11,929)
Program spend, net	(438,854)	(33,851)	(131,984)
Increase in accounts payable and accrued liabilities	49,288	62,277	107,426
Change in net deemed repatriation tax	(18,364)	(14,550)	27,027
Other	81,688	(19,532)	(35,218)
Net cash provided by operating activities	976,340	653,061	645,997
Cash flows from investing activities			
Additions to property, plant and equipment	(125,754)	(133,636)	(140,426)
Investments and acquisitions, net of cash acquired	(4,412,948)	(8,761)	(155,451)
Net gains on derivative contracts	—	79,990	—
Other	38,471	1,452	9,400
Net cash utilized by investing activities	(4,500,231)	(60,955)	(286,477)
Cash flows from financing activities			
Net proceeds from borrowings with maturity greater than three months	1,112,640	2,354,957	—
Repayments of borrowings with maturity greater than three months	(275,514)	—	—
Net repayments of other short-term borrowings	(8,617)	(8,828)	(142,357)
Purchases of common stock	—	(61,387)	(250,054)
Stock-based compensation transactions	16,592	31,786	29,999
Dividends paid	(372,652)	(336,604)	(309,258)
Payments related to tax withholding for share-based compensation	(6,040)	(13,123)	(58,344)
Redemption of equity instruments	(47,399)	—	—
Deferred acquisition payments	—	(100,000)	—
Proceeds from issuance of common stock	—	975,185	—
Debt acquisition costs	—	(26,653)	—
Other	(13,061)	(4,760)	(7,087)
Net cash provided (utilized) by financing activities	405,949	2,810,573	(737,101)
Effect of exchange rate changes on cash	(12,751)	(4,681)	(21,282)
(Decrease) increase in cash, cash equivalents and restricted cash	(3,130,693)	3,397,998	(398,863)
Cash, cash equivalents and restricted cash at beginning of year	4,580,369	1,182,371	1,581,234
Cash, cash equivalents and restricted cash at end of year	$ 1,449,676	4,580,369	1,182,371
Supplemental information			
Interest paid	$ 182,919	82,205	82,258
Income taxes paid	$ 81,573	103,149	117,854

See accompanying notes to consolidated financial statements.

HASBRO, INC. AND SUBSIDIARIES

Consolidated Statements of Shareholders' Equity and Redeemable Noncontrolling Interests
(Thousands of Dollars)

	Common Stock	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Stock	Non-controlling Interests	Total Shareholders' Equity	Redeemable Non-controlling Interests
Balance, December 31, 2017	$ 104,847	1,050,605	4,260,222	(239,425)	(3,346,292)	—	$ 1,829,957	$ —
Net earnings	—	—	220,434	—	—	—	220,434	—
Impact of adoption of ASU 2018-02	—	—	21,503	(21,503)	—	—	—	—
Issuance of shares for Saban purchase	—	198,853	—	—	81,544	—	280,397	—
Other comprehensive loss	—	—	—	(33,586)	—	—	(33,586)	—
Stock-based compensation transactions	—	(2,075)	—	—	(694)	—	(2,769)	—
Purchases of common stock	—	—	—	—	(250,054)	—	(250,054)	—
Stock-based compensation expense	—	27,676	—	—	216	—	27,892	—
Dividends declared	—	—	(317,785)	—	—	—	(317,785)	—
Balance, December 30, 2018	$ 104,847	1,275,059	4,184,374	(294,514)	(3,515,280)	—	$ 1,754,486	$ —
Net earnings	—	—	520,454	—	—	—	520,454	—
Equity issuance, net of fees	5,296	969,889	—	—	—	—	975,185	
Other comprehensive earnings	—	—	—	110,294	—	—	110,294	—
Stock-based compensation transactions	—	2,970	—	—	15,693	—	18,663	—
Purchases of common stock	—	—	—	—	(61,387)	—	(61,387)	—
Stock-based compensation expense	—	27,808	—	—	236	—	28,044	—
Dividends declared	—	—	(350,209)	—	—	—	(350,209)	—
Balance, December 29, 2019	$ 110,143	2,275,726	4,354,619	(184,220)	(3,560,738)	—	$ 2,995,530	$ —
Noncontrolling interests related to acquisition of Entertainment One Ltd.	—	—	—	—	—	43,341	43,341	26,241
Net earnings attributable to Hasbro, Inc.	—	—	222,519	—	—	—	222,519	—
Net earnings attributable to noncontrolling interests	—	—	—	—	—	2,478	2,478	444
Buyout of noncontrolling interest	—	606	—	—	—	—	606	—
Other comprehensive loss	—	—	—	(10,733)	—	—	(10,733)	—
Stock-based compensation transactions	—	1,864	—	—	8,688	—	10,552	—
Stock-based compensation expense	—	49,447	—	—	301	—	49,748	—

Additional information as of December 31, 2020.

	Mattel		Hasbro	
Earnings per share	$	0.36	$	1.62
Dividends per share	$	0	$	2.72
Stock price	$	18.29	$	97.26
Number of employees		32,100		6,822
Market cap	$	7.0B	$	13.3B

RATIO ANALYSIS

		Mattel 31-Dec-20		Hasbro 27-Dec-20
Short-term liquidity:				
Current ratio	Current Assets / Current Liabilities	________		________
Acid-test ratio (Quick ratio)	Cash + Cash Eq + AR / Current Liabilities	+ + ________		+ + ________
Efficiency:				
Days sales in AR	Accounts Receivable / Credit sales/360	________ 360	days	________ 360
AR turnover	360 / Days sales in AR	360 / -	times	360 / -
Days sales in inventory	Inventory / Cost of goods sold/360	________ 360	days	________ 360
Inventory turnover	360 / Days sales in inventory	360 / -	times	360 / -
Days payables outstanding	Accounts Payable / Cost of goods sold/360	________ 360	days	________ 360
AP turnover	360 / Days purchases in AP	360 / -	times	360 / -
Fixed assets turnover	Sales / PP&E	________	times	________

RATIO ANALYSIS

		Mattel 31-Dec-20	Hasbro 27-Dec-20
Solvency:			
Debt/Assets	Debt + Cap Lease / Assets	+ + +	+ + +
Debt/Equity	Debt + Cap Lease / Equity	+ + +	+ + +
Financial leverage	Assets / Equity		
Times interest earned	Operating Income / Interest Expense		
Profitability:			
Net profit margin	Net Income / Sales		
Gross profit margin	Gross Profit / Sales		
Operating profit margin	Operating Income / Sales		
Operating expenses to sales	Operating Expenses / Sales		
Sales/Employee	Sales / Employees		

RATIO ANALYSIS

		Mattel 31-Dec-20		Hasbro 27-Dec-20	
Profitability:					
Return on assets	NI+ Interest pretax / Assets	+			
		X			
Return on equity	NI / Equity				
Economic value added	NI - Capital Cost				
		less		less	
	Capital = equity plus interest-bearing debt	+		+	
		+		+	
		+		+	
		+		+	
	multiplied by WACC	X	15%	X	15%
Dividend payout ratio	Dividends per Share / Earnings per Share				
Price earnings ratio	Stock Price per Share / Earnings per Share				

RATIO ANALYSIS

Flexibility:

			Mattel 31-Dec-20	Hasbro 27-Dec-20
Operating Cash Flow to Net Revenue	CFFO / Net Revenue		______	______
Operating Cash Flow to No. of Employees	CFFO / Employees		______	______
Operating Cash Flow to Total Assets	CFFO / Assets		______	______
Debt Coverage	CFFO / Total Debt [Current + Long Term]		______	______
Times Interest Paid	CFFO / Interest Paid		______	______
Operating Cash Flow to Current Liabilities	CFFO / Current Liabilities		______	______
Earnings Quality	CFFO / NI + Depr + Amort		______	______
Free Cash Flow	CFFO			
	- Capital Expenditures	+		
	- Debt Payments	+		
	- Dividend Payments	+	______	______
	= Free Cash Flow			
EBITDA	Operating Income			
	+ Depr + Amort	+	______	______

YOUR CONCLUSIONS

NOTES

Case Solutions

SOLUTION TO CASE 1—INDUSTRY RATIOS

- Column 1 is a hyper market (Target). Note: small profit margin, little receivables and high inventory.
- Column 2 is a department store (Kohl's). Note: small profit margin, receivables representing its own credit card, and somewhat high operating expense to revenue.
- Column 3 is a bank (Wells Fargo). Note: high current assets/current liabilities, high receivables, high total assets, no inventory, no cost of sales and very high operating expense to revenue.
- Column 4 is an automobile manufacturer (Ford Motor). Note: high current assets (financial receivables), high PP&E, small gross profit, small profit margin and high other non-current liabilities representing primarily financial services long-term debt.
- Column 5 is an airline (Delta Air). Note: high gross profit, moderate profit margin, small inventory, and high other non-current liabilities representing airplane leases, pension liabilities, and frequent flyer deferred revenue.
- Column 6 is a hotel management company (Marriott). Note: high profit margin, no inventories, small PP&E, no cost of sales, little receivables.
- Column 7 is a pharmaceutical company (Merck). Note: high gross profit, high R&D expenses, and high inventory.
- Column 8 is a telecommunications company (AT&T). Note: high total assets, high PP&E, high gross and net profit, high long-term debt, and high other non-current liabilities representing deferred taxes and post-employment benefit obligations.
- Column 9 is an oil and gas company (Exxon/Mobil). Note: highest inventory, high PP&E, moderate profit margin, low operating expenses to sales, and high other non-current liabilities representing primarily deferred taxes and postretirement benefits.
- Column 10 is a restaurant chain (Yum Brands). Note: limited receivables and inventories, high profit margin representing significant franchise fees, and moderate operating expenses to sales.

	1	2	3	4	5	6	7	8	9	10
Balances (millions)	**Hyper Mkts**	**Dept Stores**	**Banking**	**Auto MFG**	**Airlines**	**Hotel Man Co**	**Pharm**	**Telecom**	**Oil and Gas**	**Rest**
Current Assets	$ 11,990	$ 5,247	$ 361,164	$ 115,902	$ 7,844	$ 2,747	$ 24,766	$ 79,146	$ 47,134	$ 2,507
Receivables	$ -	$ 378	$ 956,185	$ 10,599	$ 2,377	$ 1,991	$ 6,873	$ 16,522	$ 25,597	$ 400
Inventories	$ 8,309	$ 3,795	$ -	$ 10,277	$ 1,330	$ -	$ 5,096	-	$ 17,000	$ 13
Current Liabilities	$ 12,708	$ 2,974	$1,474,541	$ 94,600	$ 18,573	$ 6,010	$ 18,614	$ 81,389	$ 57,771	$ 1,512
P,P&E	$ 24,658	$ 8,103	$ 8,333	$ 35,327	$ 26,563	$ 1,793	$ 12,439	$ 125,222	$ 252,630	$ 1,697
Total Assets	$ 37,431	$ 13,574	$1,930,115	$ 99,000	$ 38,641	$ 5,936	$ 87,872	$ 444,097	$ 348,691	$ 5,311
Long-Term Debt	$ 11,031	$ 2,795	$ 255,077	$ 15,931	$ 6,592	$ 7,840	$ 21,353	$ 125,972	$ 24,406	$ 9,429
Other Non-Current Lia	$ 1,860	$ 2,628	$ -	$ 128,192	$ 14,200	$ 6,400	$ 13,400	$ 94,729	$ 72,014	$ 704
Revenue	$ 69,495	$ 18,686	$ 84,000	$ 145,653	$ 41,244	$ 5,029	$ 40,122	$ 160,546	$ 237,162	$ 5,878
Cost of Sales	$ 48,872	$ 11,944	$ -	$ 131,332	$ 16,647	$ -	$ 12,775	$ 77,379	$ 162,000	$ 3,300
S,G & A Exp	$ 13,356	$ 4,435	$ 41,000	$ 11,527	$ 17,067	$ 894	$ 9,830	$ 34,917	$ 10,956	$ 999
R&D	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,208	-	-	-
Gross Profit	$ 20,623	$ 6,742	$ -	$ 14,321	$ 24,597	$ -	$ 27,347	$ 83,167	$ 75,162	$ 2,578
Net Income	$ 2,737	$ 556	$ 20,373	$ 7,259	$ 3,577	$ 1,372	$ 2,418	$ 29,847	$ 19,710	$ 1,340
Ratios										
Current Ratio	94%	176%	24%	123%	42%	46%	133%	97%	82%	166%
AR Turnover	-	53	0.09	13.49	18.75	2.74	5.77	9.67	10.09	15.27
Num Days Sales in AR	-	7	4,029	27	19	132	63	37	36	24
Inventory Turnover	5.78	3	-	13.68	14.93	-	2.56	-	10.13	132
Num Days Sales in Inv	62.24	118	-	26.31	24.11	-	142.31	-	35.56	3
AP Turnover	6.66	9	-	6.05	5.33	-	4.32	2.34	4.70	3.51
Num Days Sales in AP	54.07	42	-	59.48	67.54	-	84.41	153.53	76.67	102.55
LT Debt to Total Assets	37%	21%	13%	16%	17%	132%	24%	28%	7%	178%
LT Debt to Equity	126%	54%	127%	46%	47%	210%	23%	89%	13%	-149%
Cos to Revenue	70%	64%	-	90%	40%	-	32%	48%	68%	56%
Gross Profit Margin	30%	36%	-	10%	60%	-	68%	52%	32%	44%
Net Profit Margin	4%	3%	24%	5%	9%	27%	6%	19%	8%	23%
Oper Exp to Revenue	19%	24%	62%	14%	41%	18%	25%	22%	5%	17%
Return on Assets	10%	4%	1%	3%	9%	21%	3%	7%	6%	25%

**** Schedule excludes from total/average assets - intangibles.

SOLUTION TO CASE 3—ECONOMIC VALUE ADDED

Calculate return on assets and economic value added to determine whether or not the Company should accept the project and make a $1 million investment.

The Board of Directors measures management performance based on return on assets (ROA) and pays management bonuses based on the size and growth of ROA. The Board's rationale behind ROA is that it incentivizes management to manage both income growth and asset efficiency.

Mark's budget for the upcoming year had the following financial summary ($000):

Pretax income	$ 3,000	Effective income tax rate		33.3%
Net income	$ 2,000	Weighted average cost of capital (WACC) equals		20.0%
Average assets	$ 3,000	Interest expense $0		
Project cost	$ 2,000	Project annual return	$ 1,000	

Mark's management is considering an incremental (unbudgeted) project that would earn $1 million per year in perpetuity on an investment of $2 million.

1. Assuming funds are available to fund this expenditure, will Mark's management accept this project?

Management will evaluate the project based on whether or not it increases ROA because that is

		Before Project			After Project		
ROA =	Net Income[1] / Avg Assets	$ 2,000 / $ 3,000	=	66.7%	($ 2,000 + $ 1,000) / ($ 3,000 + $ 2,000)	=	60.0%
		Disaggregated ROA			66.7%	50.0%	

[1] Add back after-tax interest

Management will reject the project because it lowers ROA.
This is an incorrect decision because this is clearly an attractive project with an ROA of 50.0%
It is also an incorrect decision for the reasons explained in #2 and #3 below.

2. Will the Board support management's decision?

The Board would evaluate the project's Net Present Value (NPV)

NPV = PV cash inflows - PV cash outflows

$$\frac{\text{Perpetual annual cash inflows}}{\text{WACC}} - \text{initial investment}$$

$$\frac{\$\ 1{,}000}{20.0\%} - \$\ 2{,}000$$

$$\$\ 5{,}000 - \$\ 2{,}000 = \$\ 3{,}000$$

The Board would accept the project because it has a positive net present value and because the project's ROA is greater than the WACC capital budgeting hurdle rate.

3. Does this project create entity value?

EVA shows a project that returns more than its cost of capital creates economic profit and increases entity value

					Before Project		After Project
Accounting Profit (NI)					$ 2,000		$ 3,000
- Capital Charge (Capital Investment X WACC)	$ 3,000	X	20.0%	=	(600)		
	$ 5,000	X	20.0%			=	(1,000)
= Economic Profit (EVA)					$ 1,400		$ 2,000

EVA shows the project increases entity value because the project returns more than the cost of the capital outlay. Thus, the project should be accepted.

SOLUTION TO CASE 5—REVIEWING A SMALL BUSINESS CASH FLOW STATEMENT

Questions for Discussion

1. **Summarize the 4 or 5 most significant components of cash inflows/outflows for each year.**

   20X5: The most significant items are:

   - Operating activity add-backs for amortization and noncash compensation. Operating assets and liabilities reduced cash somewhat, primarily from paying down amounts to an affiliate for rent and interest.
   - Investing cash flows are a "wash", with P&E additions offset by collections from related parties.
   - The net amount of financing cash flows consists primarily of retirement of long-term debt, plus some net repayment of amounts due to related parties.

   20X4: The most significant items are:

   - Operating cash flows are positive despite a large loss, again due to amortization and noncash compensation add-backs.
   - Investing cash flows result primarily from related party repayments.
   - Net cash flows from financing activities are again dominated by large debt repayments.

   In short, funds came from operations (only because officers took noncash compensation) and were used to pay down long-term debt.

2. a. **Identify all of the line items which involve, or appear to involve, related party transactions.**

      - Covenants (amortization)
      - Non-cash compensation (officers)
      - Due to affiliate for rent & interest
      - Advances/collections on "due from affiliates and officers"
      - Cash acquired in merger
      - Advances/repayments to affiliates and stockholders

      Not immediately apparent is that some of the long-term debt is payable to the former stockholder involved in the non-compete; as is usually the case, the debt term equals the life of the covenant.

b. **How has the prevalence of related party transactions impacted the cash balances maintained by Morgan in the last 2 years?**

This company maintains adequate cash balances only because it:

- Is subsidized by owner/managers who forego salary when cash is tight. (In fact, they took no cash pay during all of 20X5.)
- Is collecting on amounts advanced to related parties in prior years.
- Is not paying dividends.

3. What is management's rationale for taking large bonuses while distributing no dividends?

Dividends are usually structured to pay quarterly estimated taxes required because the S Corporation income is reported by the owner/managers. The most probable rationale is that the owners prefer to take a large bonus in December and apply the withholding equally to the four quarters for the year, thereby delaying payment. This is an example where small business tax objectives can impact financial reporting.

4. Based solely on the limited information in the cash flow statements presented, what can you tell about how proceeds from long-term debt were used?

The relatively small amount of depreciation suggests that proceeds were not used to finance the purchase of fixed assets. The only hint is the reference to the non-compete covenant, suggesting that debt was incurred upon the departure of a stockholder.

This means that any additional debt must have been used for purposes where the funds flowed into – and back out of – the company. This is not the best situation from the bank's point of view, and causes loan officers to monitor the debtor more closely.

Note to instructor: If participants are interested, tell them that the additional debt was used to:

a. Finance part of the purchase of an affiliate. The company borrowed the money and advanced it to the affiliate; repayments show as collections in the investing cash flows section.

b. Buy out a second stockholder who had no noncompete arrangement. His CSV insurance was inadequate to finance the buyout.

5. As this company's banker/loan officer, what specific concerns would you have about this borrower?

As their banker, I would be concerned about the company's ability to regain and sustain profitable operations, because its reliance on owners and affiliates to bankroll the company in bad times cannot go on forever. This is especially troublesome with the magnitude of long-term debt service relative to the other amounts on the statement, and the fact that loan proceeds were not spent on corporate assets that could serve as collateral.

6. **As this company's banker/loan officer, where is the "security" in this borrowing relationship?**

   The company's loan officer loses no sleep over this account because borrowings are secured by the personal guaranties of the stockholders, who have accumulated substantial wealth.

SOLUTION TO CASE 6—READING A STATEMENT OF CASH FLOWS

Questions for Discussion

1. **Explain to the CEO of Lenape the primary sources and uses of cash during 20X9. Keep the list short, as he detests discussing financial data.**

   Cash came from operations, primarily net income with noncash depreciation added back. Cash was used primarily to buy property and equipment, repay long-term debt and pay dividends. Note also the company had sufficient cash flows to spend – about $53,000 on investments and other assets.

2. **Comment on quality of earnings for 20X9.**

   Quality of earnings = $\left(\dfrac{\text{Cash flows from operations}}{\text{(Net Income + Depreciation + Amortization)}} \right)$

   Quality of earnings = $\dfrac{\$490{,}992}{\$320{,}240 + \$168{,}220} = 1.01$

   This ratio should average 1, if accrual basis earnings corresponds to operating cash flows over time. So for this year at least, quality of earnings is right on the mark.

3. a. **The biggest cash outflow is for the acquisition of property and equipment. How are these acquisitions being financed?**

   As the company reduced its debt in 20X2, these additions are being financed internally from profitable operations. Note that if long-term debt was used to finance these expenditures, the $284,414 would not be an investing cash flow, but rather a disclosure of noncash activities.

   b. **Although the company could clearly afford these additions, what inquiry might you make about them?**

   These expenditures appear large in relation to other cash flows, although we do not have the other statements to assess their materiality. The obvious question is whether the company has plans in place that justify major capital additions. Committing resources to fixed assets should provide a favorable return, just as any investment should. Consequently, the company should be buying property for a reason – planned expansion, new products, new technology, etc.

4. **Can you form any conclusions about this company's stage of development, i.e., start-up, growth, mature, or decline stage?**

   Based on the information given, the company appears to be in a growth stage. It is increasing not only its long-term asset base, but every operating asset and liability is increasing. Further, it is liquidating previous debt obligations. Despite the capital additions and debt reductions, it was able to pay dividends at 19.3% of earnings and still increase cash by over $44,000. The company is fortunate to have adequate cash flow during the growth period.

SOLUTION TO CASE 7—FINDING THE TRUTH IN THE CASH FLOW STATEMENT

Enron Cash Flow Analysis

Questions for Discussion

1. **Calculate Enron's quality of earnings for 1998 and 1999. Given the trend, what would you predict the quality of earnings would be in 2000?**

   CFFO/(Net Income + Depreciation, depletion and amortization)

   1998: 1640/(703+827) = 1.07

   1999: 1228/(893+870) = 0.70

   Trend would predict 2000 around 0.30 – 0.40.

2. **Calculate the 2000 quality of earnings. Review all the financial statements to understand what caused this surprising reversal. What was the major item that contributed to this reversal? Do you agree with Enron's classification of this transaction?**

   2000: 4779/(979+855) = 2.6 – What a turnaround! Well, not really.

   A review of Enron's 2000 cash flow statement shows a significant increase in net cash provided by operating activities from $1,228 billion in 1999 to $4,779 billion in 2000. A closer read-through of the current liability section of the balance sheet would show an increase in customer deposits of $4,233 billion which is increasing net cash provided by operating activities. These deposits represent security deposits required for new customers in California in 2000, payable to these customers after one year of service and do not, in substance, represent operating cash activities.

   If the $4,233 billion increase in customer deposits was reclassified as financing, the adjusted number would reduce operating cash flow for Enron in the year 2000 to approximately $546 million. This would represent a three-year reduction in cash flow from operations (1998 – $1.6 billion, 1999 – $1.2 billion and 2000 – $546 million) while net income is increasing for each year (1998 – $703 million, 1999 – $893 million, and in 2000 – $979 million). Wall Street's analysts did not detect this inconsistent relationship in April 2001 when the financial statements were issued and Enron stock was obviously overvalued at $60/share. Enron ultimately declared bankruptcy near the end of 2001 as the stock approached $0.

SOLUTION TO CASE 8—FINANCIAL STATEMENT ANALYSIS

RATIO ANALYSIS

		Mattel 31-Dec-20			Hasbro 27-Dec-20	
Short-term liquidity:						
Current ratio	Current Assets	$ 2,483	1.8		$ 3,847	1.6
	Current Liabilities	$ 1,355			$ 2,403	
Acid-test ratio	Cash + Cash Eq + AR	$ 762			$ 1,450	
(Quick ratio)	Current Liabilities	+ $ -	1.3		+ $ -	1.2
		+ $ 1,034			+ $ 1,392	
		$ 1,355			$ 2,403	
Efficiency:						
Days sales in AR	Accounts Receivable	$ 1,034	81.2	days	$ 1,392	91.7
	Credit sales/360	$ 4,584			$ 5,465	
		360			360	
AR turnover	360	360	4.4	times	360	3.9
	Days sales in AR	81.2			91.7	
Days sales in inventory	Inventory	$ 515	79.2	days	$ 396	82.9
	Cost of goods sold/360	$ 2,340			$ 1,719	
		360			360	
Inventory turnover	360	360	4.5	times	360	4.3
	Days sales in inventory	79.2			82.9	
Days payables outstanding	Accounts Payable	$ 495	76.2	days	$ 426	89.1
	Cost of goods sold/360	$ 2,340			$ 1,719	
		360			360	
AP turnover	360	360	4.7	times	360	4.0
	Days purchases in AP	76.2			89.1	
Fixed assets turnover	Sales	$ 4,584	9.7	times	$ 5,465	11.2
	PP&E	$ 474			$ 489	

RATIO ANALYSIS

			Mattel 31-Dec-20		Hasbro 27-Dec-20	
Solvency:						
	Debt/Assets	Debt + Cap Lease	$ 1		$ 439	
		Assets	+ $ -		+ $ -	
			+ $ 2,855	0.56	+ $ 4,660	0.47
			+ $ 249		+ $ -	
			$ 5,521		$ 10,818	
	Debt/Equity	Debt + Cap Lease	$ 1		$ 439	
		Equity	+ $ -		+ $ -	
			+ $ 2,855	5.2	+ $ 4,660	1.7
			+ $ 249		+ $ -	
			$ 596		$ 2,961	
	Financial leverage	Assets	$ 5,521	9.3	$ 10,818	3.7
		Equity	$ 596		$ 2,961	
	Times interest earned	Operating Income	$ 381	2	$ 502	2
		Interest Expense	$ 198		$ 201	
Profitability:						
	Net profit margin	Net Income	$ 127	2.8%	$ 223	4.1%
		Sales	$ 4,584		$ 5,465	
	Gross profit margin	Gross Profit	$ 2,244	48.9%	$ 3,747	68.5%
		Sales	$ 4,584		$ 5,465	
	Operating profit margin	Operating Income	$ 381	8.3%	$ 502	9.2%
		Sales	$ 4,584		$ 5,465	
	Operating expenses to sales	Operating Expenses	$ 1,863	40.6%	$ 3,245	59.4%
		Sales	$ 4,584		$ 5,465	
	Sales/Employee	Sales	$ 4,584	$ 143 K	$ 5,465	$ 801
		Employees	32,100		6,822	

RATIO ANALYSIS

			Mattel 31-Dec-20		Hasbro 27-Dec-20	
Profitability:						
Return on assets	NI+ Interest pretax		$ 127		$ 223	
	Assets	+	$ 198	4.5%	$ 97	2.7%
		X	63%		70%	
			$ 5,521		$ 10,818	
Return on equity	NI		$ 127	21.2%	$ 223	7.5%
	Equity		$ 596		$ 2,961	
Economic value added	NI - Capital Cost		$ 127		$ 223	
			less		less	
	Capital = equity plus		$ 1		$ 439	
	interest-bearing debt	+	$ -	$ (429)	+ $ -	$ (987)
		+	$ 2,855		+ $ 4,660	
		+	$ 249		+ $ -	
		+	$ 596		+ $ 2,961	
			$ 3,701		$ 8,060	
	multiplied by WACC	X	15%		X 15%	
Dividend payout ratio	Dividends per Share		$ -	0.0%	$ 2.72	167.9%
	Earnings per Share		$ 0.36		$ 1.62	
Price earnings ratio	Stock Price per Share		$ 18.29	50.8	$ 97.26	60.0
	Earnings per Share		$ 0.36		$ 1.62	

RATIO ANALYSIS

Flexibility:

	Formula	Mattel 31-Dec-20		Hasbro 27-Dec-20	
Operating Cash Flow to Net Revenue	CFFO / Net Revenue	$ 289 / $ 4,584	6.3%	$ 976 / $ 5,465	17.9%
Operating Cash Flow to No. of Employees	CFFO / Employees	$ 289 / 32,100	$ 9 K	$ 976 / 6,822	$ 143
Operating Cash Flow to Total Assets	CFFO / Assets	$ 289 / $ 5,521	5.2%	$ 976 / $ 10,818	9.0%
Debt Coverage	CFFO / Total Debt [Current + Long Term]	$ 289 / $ 3,105	9.3%	$ 976 / $ 5,099	19.1%
Times Interest Paid	CFFO / Interest Paid	$ 289 / $ 191	151.3%	$ 976 / $ 183	533.8%
Operating Cash Flow to Current Liabilities	CFFO / Current Liabilities	$ 289 / $ 1,355	21.3%	$ 976 / $ 2,403	40.6%
Earnings Quality	CFFO / NI + Depr + Amort	$ 289 / $ 327	88.4%	$ 976 / $ 487	200.3%
Free Cash Flow	CFFO	$ 289		$ 976	
	- Capital Expenditures	+ $ (122)		+ $ (126)	
	- Debt Payments	+ $ -		+ $ (284)	
	- Dividend Payments	+ $ -		+ $ (373)	
	= Free Cash Flow	$ 167		$ 194	
EBITDA	Operating Income	$ 289		$ 976	
	+ Depr + Amort	+ $ 200		+ $ 265	
		$ 488		$ 1,241	

Mattel and Hasbro – Financial Statement User Ratio Analysis Conclusions about Financial and Operating Performance

Liquidity – Mattel is slightly more liquid than Hasbro, with current ratios of 1.8 and 1.6, respectively. Mattel is further supported by Hasbro's better profitability and cash flow ratios than Mattel's.

Efficiency – Both cash operating cycles are essentially equal, with Mattel at 84.2 days and Hasbro at 85.5 days. Mattel is more efficient at managing receivables, and Hasbro is more efficient at managing payables.

Solvency – Mattel is much more leveraged than Hasbro, suggesting greater financial risk associated with Mattel than Hasbro. Both companies have low times interest earned, which will make it difficult to obtain much more debt financing.

Profitability – Hasbro at 68.5% has significantly greater gross profitability than Mattel at 48.9%; however, Hasbro loses this advantage by not controlling operating expenses. Hasbro operating expenses are 59.4% of sales versus 40.6% for Mattel. Thus, operating profits are much closer with Mattel at 8.3% and Hasbro at 9.2%.

Cash Flow – Hasbro has significantly better cash flow with cash flow from operations as a percentage of sales at 17.9% versus 6.3% for Mattel. Hasbro's quality of earnings is significantly better than Mattel's.

Conclusion – Hasbro's strategy of primarily outsourcing manufacturing has given it a competitive advantage versus Mattel. Mattel, continuing to manufacture more of its products and incur the related costs of manufacturing, is not able to compete as effectively in the toy entertainment business.

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