



# Accounting in Media and Information Firms

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## 13.1 Accounting and Media Accounting

This chapter deals with accounting in the media and digital sector. In this book, we have covered so far:

1. How firms create their product.
2. How firms harvest their product.  
We will now deal with:
3. The feedback loop: How firms identify performance and plan for the future. The present chapter is about such feedback through accounting and financial information in the media and digital sector. The reader will take out of this chapter:
  - an overview of media accounting issues;
  - a recognition of the problems and pitfalls for managers;
  - a recognition of how to analyze the financial condition of media and tech firms.

To do so, this chapter discusses:

- How companies gather and report financial information to partners, investors, regulators, and tax authorities, and the special accounting and reporting issues for media and digital companies.
- How investors and partners analyze finance reports.
- How companies use accounting information to run their business and allocate resources.

The impact of new information technology (IT) on accounting information and on management control over operations. Accounting has been around for a long time. What makes it so interesting today?

1. The rapid change in data technology: collecting, storing, aggregating, disseminating, analyzing, distributing, verifying, and acting on it.
2. The rapid changes in companies' business models, which lead to new ways of dealing with financial information. These changes include the greater importance of:
  - globalization;
  - start-ups;
  - project-based organizational structure;
  - intellectual assets;
  - institutional investors.

Media and IT companies have been at the forefront of changes in accounting:

1. as creators and adopters of new accounting approaches, services, and technologies;
2. as leaders in pushing the envelope;
3. but also in overstepping lines and violating laws and accounting practices.

## 13.1.1 The Function of Accounting in Business

### 13.1.1.1 Accounting as Science Versus Accounting as Persuasion

Accounting is the arrangement of quantitative information about an organization's operations and financial state. It has a long history. Counting and numbers emerged early as a human endeavor parallel to writing and letters. Writing skills developed into the professions of scribes, writers, and intellectuals. Counting skills gave rise to mathematicians, scientists—and accountants. Humans count heads of cattle, bushels, and barrels. They account for their activities in lists and ledgers. And they do accounting through tabulations, balances, and summaries.

Accounting has a dual nature, that of objective science and that of subjective persuasion. These two aspects of accounting differ in their goals, and they pull accounting professionals in two different directions. On the one hand, the role of accounting is to illuminate and analyze the activities of an enterprise (or even country), which is the scientific dimension. Correspondingly, modern accounting has been an early user of highly advanced information processing technologies. On the other hand, the persuasive aspect of accounting aims to convince others about the health of an enterprise.

Managers and owners need accurate and timely information on the economic condition and performance of a firm to help guide their decisions. Accounting as a science provides reasonably well-defined guidelines and processes that provide for generating such information.

Investors use accounting information to make their decisions, and it is therefore in the interest of firms to use accounting reports to make themselves look good. For managers, positive accounting information ensures continued support by owners and top management. Conversely, in a setting where profit-sharing is tied to financial results, accounting practices can be used to lower the reported profit and hence lead to lower payments to profit-sharing investors, collaborators, and partners. Skillful accounting can also lawfully reduce tax payments. Properly presented, a firm can gain favorable government treatment owing to its reported performance, whether stellar or dismal. All this is possible because, despite the rules-oriented characteristics of accounting, major decisions within the accounting process are often far from clear cut.

This tension over proper accounting is part of a struggle over the control of information among the key players: investors, managers, and the government. Company insiders have a vast informational asymmetry in their favor. They will try to part with as little negative (or, occasionally, premature

positive) information as possible. Only law and competitive pressure forces them to disclose more about the firm than they would otherwise do. Accounting as a profession is caught in the middle of this struggle.

As accounting grew to be able to serve many functions, it also became more complex. And now, this very formal structure is being applied to the digital sector. On the one hand we have more technology to do the numbers faster and better than ever. But we also have a dynamic entrepreneurial business culture which brings its business and technology creativity into a profession that has been staid almost by design. This is a never-ending tension. It is, in a way, the underlying theme of this chapter.

### 13.1.1.2 History of Accounting

The accounting process bears the image of tedious bookkeeping. Its structural elegance is often obscured, and people imagine it as confining, narrow, and lacking in imagination. Often, the cultures of “creatives” and “entrepreneurs” clash with a derided culture of “bean-counters.” Yet this perspective on accounting is highly superficial.

Accounting is one of humanity’s great intellectual constructs. The process summarizes human activities by numbers, follows transaction flows, and provides snapshots of reality. This enables analysis, control, and oversight of organizations and governments. Accounting creates a unified measuring system that allows for the integration of millions of actions by thousands of people in dozens of countries.

Based on techniques going back 500 years, accounting has evolved into a well-established profession complete with standards, self-governance, and research. Today, new technology pushes the accounting profession from the traditional historic-based reporting to real-time monitoring and control.

Accounting systems are as old as business and administration. As more transactions were performed, it became necessary to count payments, people, and food, and to “account” for activity. The earliest and most rudimentary forms of keeping track of transactions appeared in Sumeria and Egypt in 2000 BC. As the methods continued to develop, helpful tools such as the Chinese abacus were created.

A major step forward came in Renaissance Italy with the monk Luca Pacioli (1447–1517) setting forth the principles of “double entry” bookkeeping in his work *Summa de Arithmetica, Geometrica, Proportioni et Proportionalita* (1494). He pioneered the concept of debits and credits that would balance accounts. Pacioli is considered to be the father of accounting. Three centuries later, Josiah Wedgwood (1730–1795), the grandfather of Charles Darwin and an early industrialist, introduced techniques for recording managerial transactions by developing what became cost accounting. Wedgwood determined the cost of materials and labor for each of his famous pottery products and recorded their value. This provided a tool for production planning and for pricing.

By the late eighteenth century, accounting practices became more standardized, with professional “accountants” being used by many businesses in London. In 1849 and 1854

the first accounting firms of Samuel Price and of William Cooper got started. Today it is the ‘P’ and the ‘C’ in the “Big Four” accounting firm PwC.<sup>1</sup> After 1862, the auditing of companies by independent “public accountants” became mandated in Britain, allowing for a rise in their status. In Japan, Western-style accounting was introduced in 1873 by Yukichi Fukuzawa.

Modern managerial accounting was born in 1923 as General Motors President Alfred Sloan introduced major cost accounting techniques, made as calculations of return on investments and on equity, and flexible budgeting.

Thus accounting has been around for a long time. What makes it so interesting today are the rapid changes in the technology of collection and processing of information; the rapid changes in companies’ business models; and the rising importance of globalization, start-ups, project-based organizational structures, intellectual assets, and institutional investors.

### 13.1.1.3 A Company’s Accounting Function: General

The role of an accountant takes on various forms depending on company size, ownership, structure, and industry.

#### ■ Stage 1 Firm: Small Proprietorships

In small entrepreneurial firms, the owner–manager of the firm typically starts out by keeping her own financial records and books. Such firms typically retain an independent professional accountant such as a certified (or chartered) public accountant (CPA), also known as a public accountant in some countries, for the preparation of quarterly or annual financial statements and tax returns.

#### ■ Stage 2 Firms: Around 20–30 Employees

As the start-up business grows, the volume of transactions rises and with it the number of bills and invoices. The owner’s time becomes too valuable and the company hires its own bookkeeper. For labor-intensive tasks such as inventory and human resources (HR)/payroll, the company might need outside help. The firm still requires the work of an outside CPA to prepare monthly or quarterly reports, but the involvement of such a paid professional will usually be limited to about a dozen days a year. In other cases, an intensive project such as a film production may have a dedicated accountant to deal with its financial issues.<sup>2</sup>

#### ■ Stage 3 Firms: Around 100 Employees

As a firm becomes mid-sized, it will employ an internal accountant or controller. The internal controller reports back to top management and, where required, to lending banks.

1 PricewaterhouseCoopers. “History and Milestones.” Last accessed July 6, 2017. ► <http://www.pwc.com/us/en/about-us/pwc-corporate-history.jhtml>.

2 Such accountants prepare schedules and budgets for film productions, as well as managing the day-to-day accounting functions and reporting the project’s financial progress against the budgets. Usually, production accountants will have a thorough knowledge of union contracts, taxes, and relevant government regulations. These accountants usually work for a film production on a freelance basis or as part of a specialized firm.

She is responsible for overseeing accounts payable, accounts receivable, special ledger accounts, and internal cost calculation. Outside accountants may also be used at the request of banks and investors. These accountants compile, review, and audit the transactions recorded by the internal controller throughout the year. They might typically spend two or three weeks a year with a firm.

#### ■ Stage 4 Firms: Large Company

A large company retains an outside independent CPA firm to perform audits for investors and management. Special projects will also require the services of a CPA. Large companies spend tens of millions of dollars on their annual CPA bill.

Typically, the chief accounting officer or controller oversees the internal accounting process within a company, reporting to the chief financial officer (CFO).

The role of an internal accountant in this setting is to prepare and interpret data needed by management, monitor business process for compliance with the budget, and design systems to prepare payrolls, record purchases and sales, keep track of assets, and so on. The accounting department tracks the flow of money inside the company. The tasks are often divided internally between accounts receivable/payable, payroll, a credit department, and a tax department. Some tasks may be outsourced to an outside financial services provider.<sup>3</sup>

### 13.1.2 Is Accounting for Media and Technology Special?

The basics of accounting in media and technology are the same as in other industries but they must often deal with unusual circumstances.

- Many of the assets of media and media tech firms are intangibles. These include copyrights, patents, and licenses. How does one account for such items of value?
- For internet start-up companies, asset valuation is difficult owing to low or absent cash flow. They are also heavy users of stock options. They are eager to project a positive picture to potential investors.
- The pervasive role of the government in the media sector often governs rules on how to state a firm's financial performance.
- In e-commerce, firms engage in highly globalized transactions, often in real time and subject to numerous tax systems.
- In the film industries there is much profit and revenue sharing.
- In the TV and radio industries there is a heavy use of non-cash barter deals.
- For book publishing, music recordings, and patent licensing, compensation takes the form of royalties often based on revenues.

- For tech start-ups, there is often an exchange of equity for services.
- Accounting itself is an information industry, and increasingly a high tech one.

### 13.1.3 The Post-2000 Scandals in Media and Digital Sector Accounting

There have been a good number of accounting scandals in the media and the information, communications and technology (ICT) sector, and they illustrate some of the issues.

#### 13.1.3.1 Seriously Inflating Income or Understating Expenses

Several tech companies, such as WorldCom, AOL, Computer Associates, and Lucent, experienced a rapid growth in income. This growth encouraged investment. But when revenues began to slow or drop, the companies used questionable methods to boost profits in their financial reports.

The telecom upstart WorldCom achieved substantial growth while misreporting billions of dollars of ordinary operating cost as capital expenditures, that is, as investments rather than expenses, thereby disguising losses. This misstated \$11 billion and inflated WorldCom's reported profits by nearly \$4 billion. When reality caught up, WorldCom had to file for bankruptcy. Its chief executive officer (CEO) Bernard J. Ebbers was sentenced to 25 years in prison for fraud.

WorldCom's auditor was Arthur Andersen, the same "Big Eight" accounting firm that had audited the energy firm Enron which also went down spectacularly, despite showing positive conditions in its audited financial reports. These scandals led to Arthur Andersen's own collapse as clients left en masse.

One type of creative accounting was for a firm to pay for its own sales deals. Lucent Technologies was a company with 5.3 million shareholders, more than any other company in the world. Under CEO Richard McGinn, Lucent showed continuously rising revenues. But what the company actually did was to extend credit to buyers to generate sales. In other words, it gave customers the money to buy its products. It then reported these sales as income. The more it sold, the more of its income was in accounts receivable, and was of often-dubious quality. Through this method, receivables rose 49% and revenues rose 20%.<sup>4</sup> But soon, as the telecom industry hit over saturation, many customers were unable to repay Lucent's loans and the company was in the red, and tried to keep afloat by repeatedly dipping into its employee pension fund. It was later revealed that revenues had been overstated by \$700 million in one quarter alone.

Still another technique of inflating performance and raising advertising prices is to overstate the number of sales. The

3 Berton, Lee and Roy Harris. "Reel-World Accounting." *CFO* 15, no. 3 (March 1999): 34–40.

4 Magrath, Lorraine and Leonard G. Weld. "Abusive Earnings management and Early Warning Signs." *The CPA Journal* 72, no. 8 (August 2002): 50.

media companies Adelphia, Tribune, Belo, and Hollinger all padded the number of subscribers to their services in an effort to increase their advertising revenues, stock market valuation, and bond rating.

Adelphia, a large cable TV company, reported the number of subscribers in a misleading way. The company overreported the number of actual subscribers in institutions such as hospitals and hotels. This was part of a larger concealment of liabilities and misappropriations of company funds for personal expenses. As a result, the 83-year-old founder and CEO John Rigas was sentenced to 15 years in prison. His son Timothy was sentenced to 20 years. The company went bankrupt.

Another accounting gimmick was for two firms to swap a similar product with each other and then record this as a sale. Qwest and Global Crossing sold transmission services to each other in a virtual exchange and recorded the transactions as income. For this and other transaccounting and securities transgressions, CEO Joe Nacchio was convicted to six years in prison and forfeited a total of \$73 million.

In Japan, Olympus is a major camera and optics firm. Starting in the late 1980s and extending to 2011, the firm concealed more than \$1.5 billion of investment losses and questionable fees and payments. This included alleged secret payments to organized crime. The scandal eventually wiped out 75–80% of the company's stock market valuation. Eleven past or present Japanese directors, senior managers, auditors, and its bankers were arrested for alleged criminal activities or cover-up.<sup>5</sup>

Also in Japan, Takafumi Horie, CEO of Livedoor (a major internet company), was arrested in 2004 for violations of securities laws by manipulating the company's annual report. Livedoor announced a profit over the year when, in fact, there had been a loss.<sup>6</sup> Livedoor reported that a subsidiary company, Value Click Japan, had bought another company, Money Life, through a stock deal, when in actuality that investment had been paid for by Livedoor. Livedoor also overvalued Money Life. In that fashion, Horie made the company's stock price increase greatly.

In France, Jean-Marie Messier, the CEO of Vivendi, the country's largest media conglomerate, overstated the amount of cash the company had available to pay off debt. By including the earnings of partly owned subsidiaries, investors were led to believe that Vivendi was doing better than it was. Confident that the company had a solid stream of income and a strong cash position, the company's board did not curb the CEO's acquisitions. In 2002, Messier lost his position at Vivendi. That same year, the company reported a loss of €23.3 billion. Vivendi soon ran out of cash and nearly went bankrupt. Messier was convicted by a French court, nine years

later, to a genteel three-year suspended sentence and a fine of about \$200,000. Additionally, Edgar Bronfman Jr., chief executive of Warner Music Group, was accused of insider trading and profiting from private information about a potential sale of shares during his time as Vivendi's vice-chairman.<sup>7</sup> He was fined about \$6 million and handed a suspended sentence of 15 months.

In India, Ramalinga Raju, CEO of Satyam Computer Service Ltd., was arrested in 2009 for fraud. The company reported cash of \$1.1 billion and an operating profit margin of 24%. But in fact, 94% of cash deposits did not exist and the operating profit margin was only 3%.<sup>8</sup>

### 13.1.3.2 Intermingling of Personal and Business Expenses and Income

In 2007, Lord Conrad Black, the Canadian CEO of Hollinger International, a large newspaper chain, was convicted and sentenced by a US court to 78 months in prison for personally collecting payments from another company for "non-compete" agreements, which should have been made out to the company itself rather than to its main owner and chief executive.<sup>9</sup>

In 1998, the Japanese company Sony had to pay a \$1 million fine to the Securities and Exchange Commission for downplaying losses related to movie-making and mergers. Sony also had to pay \$12.5 million to the plaintiffs in a class-action lawsuit over financial reporting irregularities.<sup>10</sup>

### 13.1.3.3 Misdating Stock Options in ICT Firms

Many high-tech firms have been charged with improper or fraudulent backdating of stock options. Some of the biggest names in tech and media have been charged—including Apple, Broadcom, Dell, CNET, McAfee, Monster, Cablevision, Barnes & Noble, and Marvell. Stock option contracts are commonly used by companies as a form of compensation to their executives and employees. The practice becomes controversial when a company grants options with an exercise price that is below the market price of the stock on the date when the options are granted. Under these circumstances, the officers immediately receive "value" in the form of stock options instead of having to wait for an increase in the price of the stock at some point in the future, which is an incentive for strong performance. At Apple, CEO Steve Jobs narrowly escaped prosecution by the Securities and Exchange Commission (SEC), but his CFO and the General Counsel were charged and settled for large fines. The General Counsel lost her license to practice law.

5 Slodkowski, Antoni. "Olympus, former executives plead guilty in fraud trial." *Reuters*. September 25, 2010. Last accessed July 6, 2017. ► <http://www.reuters.com/article/us-olympus-trial-idUSBRE88001920120925>.

6 The Economist. "Livedoor: Melting Down." January 26, 2006. Last accessed June 17, 2017. ► <http://www.economist.com/node/5444987>.

7 Saltmarsh, Matthew and Eric Pfanner. "French Court Executives in Vivendi Case." *New York Times*. January 21, 2011. Last accessed July 6, 2017. ► <http://www.nytimes.com/2011/01/22/business/global/22vivendi.html>.

8 Kamiyama, Tetsuya. "Corporate governance in India and Satyam fraud case settlement." *Nomura Institute of Capital Markets Research*. September 7, 2011. Last accessed July 11, 2017. ► <http://www.nicmr.com/nicmr/report/repo/2009/2009spr47.pdf>.

9 Stern, Andrew. "No victims, no smoking gun, Conrad Black trial told." *Reuters*. June 19, 2007. Last accessed July 6, 2017. ► <http://www.reuters.com/article/bondsNews/idUSN1948838120070619>. Some of the payments had been used to purchase non-corporate assets such as original documents written by Franklin D. Roosevelt, to be used in Black's otherwise admirable biography of that President.

### 13.1.4 Case Discussion

#### Disney's Accounting -- Mickey Mouse or Cinderella?

The Walt Disney Company is the world's second largest media company.<sup>11</sup> Its Walt Disney Studios division produces films through Walt Disney Pictures, Touchstone, Hollywood Pictures, Pixar, Lucasfilm, Marvel, and, for a time, Miramax. Its film distribution arm is Buena Vista. Disney's other divisions include the TV networks ABC and the cable channel families ESPN (80% ownership) and A&E (50% ownership). In 2018 Disney announced a deal to buy major parts of 21st Century Fox, including its film and TV studio, TV and several cable networks, and the satellite broadcasters Sky and Star India. Disney also owns and/or

operates theme parks in several countries (Disneyworld); it also runs or co-owns online operations (Hulu), theaters, and retail stores. It controls the subscription streaming platform Bantech as the foundation for its online sports and entertainment future.

During 2003 and 2004, CEO Michael Eisner was harshly criticized by some shareholders and directors for the company's business performance. (This was also discussed in ► Chap. 5 Human Resource Management for Media and Information Firms) At the 2004 Annual Meeting, 43% of shareholders,<sup>12</sup> including

major institutional investors, voted against management. This is highly unusual in corporate America, especially since under Eisner the share price of Disney had risen enormously. One share bought in 1984 for \$52 would have been worth \$1334 at the end of 2004, a rise by a factor of 25.4 in 20 years. And the financial reports for 2004 were good, suggesting a further rise. This invites us to take a close look at Disney's accounts at the time. Were Disney's financial reports painting a rosy picture to take some pressure off management? Or were the critics wrong? We will return to this question throughout this chapter.

### 13.1.5 The Five Books of Accounting

There are different purposes for accounting. Since each calls for different treatment, they create different accounting summaries, and they do so in a perfectly legal manner. These different “sets of books” are those of:

- financial accounting;
- managerial accounting;
- tax accounting;
- regulatory accounting;
- profit accounting.

Financial accounting provides information to decision-makers outside a company—shareholders, bankers, financial analysts, investors, labor unions, and so on. The product of financial accounting is a set of financial statements which is often publicly disclosed. These documents are crucial to the relationship between a company's owners and managers.

Securities laws try to ensure that people managing the business do not defraud investors by providing them with false or misleading information, or by failing to disclose information that a reasonably prudent investor would want to know.<sup>13</sup>

The process tries to assure investors of the accuracy of financial reports. To assure compliance with “generally accepted” accounting rules, firms have their public financial statements examined by independent chartered or certified accountants.<sup>14</sup>

In contrast, managerial accounting is addressed to the internal management of the firm. It measures, analyzes, interprets, and communicates financial information internally.<sup>15</sup> In particular, it helps measure the cost of products, the profitability of divisions, and budget allocations. Because these reports are for internal rather than public use, they need not follow any particular set of official rules.

Tax accounting is the process for calculating an organization's tax liability, following methodologies regulated by tax authorities. The purpose is to follow governmental rules while minimizing tax liability. These documents, too, are not public.

Regulatory accounting rules are established by government agencies for a regulated industry or activity. For example, in America the Federal Communications Commission (FCC), or in India the Telecom Regulatory Authority, established financial reporting requirements and formats for the telecom industry. This process provides information to governments for measuring compliance with regulations and enables the setting of regulated prices.

Profit accounting is utilized for allocating profits. An example is the distribution of profits from a film or a music project. This type of accounting will be discussed first.

## 13.2 Profit Accounting

The following analysis focuses on profit accounting in film. But the issues are similar for all business activities where a share of profits must be paid to outsiders, such as a limited partnership in a tech venture or where patent license fees are based on a profit share.

10 Berton, Lee and Roy Harris. “Reel-World Accounting.” *CFO* 15, no. 3 (March 1999): 34–36.

11 O'Reilly, Lara. “The 30 Biggest Media Companies in the World.” *Business Insider*. May 31, 2016. Last accessed July 6, 2017. ► <http://www.businessinsider.com/the-30-biggest-media-owners-in-the-world-2016-5/#27-gannett-295-billion-in-media-revenue-4>.

12 Teather, David. “Disney shareholders force Eisner out of chairman's role.” *The Guardian*. March 4, 2004. Last accessed July 6, 2017. ► <https://www.theguardian.com/business/2004/mar/04/usnews.citynews>.

13 Litwak, Mark. “Financing independent films.” *Mark Litwak*. June 2005. Last accessed July 6, 2017. ► [http://www.marklitwak.com/uploads/2/2/1/9/22193936/financing\\_independent\\_films.pdf](http://www.marklitwak.com/uploads/2/2/1/9/22193936/financing_independent_films.pdf).

14 Stickney, Clyde and Roman Weil. *Financial Accounting: An Introduction to Concepts, Methods, and Uses*. (New York: Dryden Press, 2000), 411–450.

### 13.2.1 How to Depress Accounting Profits

Typically, the entity that must pay out has incentives to show profits that are low. David O. Selznick, the independent producer of the legendary film *Gone with the Wind*, complained that Hollywood was “built on phony accounting.” Is profit accounting Hollywood’s most creative art? Part of the issue is that the studio companies have an economic incentive to understate profits which they must share. But another part of the problem is the non-comprehension by many creatives of the concept of overhead costs. To depress profits, the distributor’s accountants will allocate high costs to overhead expenses, set a high percentage for the depreciation and amortization of assets, charge high internal transfer prices for inputs and low ones for outputs, and put high price tags on marketing expenses.

Other methods of depressing accounting profits are the exclusion of certain revenue streams (in film, for example only, part of home video sales are counted).

Film profit accounting achieved notoriety in the case of *Buchwald v. Paramount*. Art Buchwald, a famous syndicated newspaper humorist, sued Paramount for plagiarizing his script idea for the film *Coming to America*, and he won in the courts. Paramount then claimed that even though Buchwald was, by the court decision, entitled to a share of the profits, regrettably the movie had actually lost money, and nothing was therefore owed to him. This seemed strange. The movie had grossed \$350 million, had been relatively cheap to produce, yet it showed an \$18 million loss. Such a situation was not unique. Well-known films such as *Forrest Gump*, *The Untouchables*, *Fatal Attraction*, *Rain Man*, *Who Framed Roger Rabbit*, and *Batman* also reported accounting losses despite being box office blockbusters.

Another film, *Crash*, won the 2006 Oscars for Best Picture, Best Editing, and Best Original Screenplay. The film had a modest production budget of \$7.5 million and grossed \$180 million in revenues worldwide. However, for a long time, the co-writers and directors had received less than \$300,000 and the eight principal actors, with profit participation rights, (including Sandra Bullock, Matt Dillon, and Don Cheadle), had received checks for only \$19,000. Director Paul Haggis, co-producer Cathy Schuman, and co-writer Bobby Moresco thereupon sued producer Bob Yari for profits. Haggis had conceived the project based on a personal experience. To raise the money he mortgaged his home. To cut costs he used his own car in the film. In their lawsuit, they charged that Bob Yari had diverted funds to third parties, including six companies that he controlled or used. Matt Dillon alleged that Yari deliberately applied an incorrect formula for the calculation of Dillon’s contingent compensation. Five years later, a court awarded \$12 million to Haggis and several others. Additional lawsuits were subsequently settled.<sup>16</sup>

#### 13.2.1.1 Example

##### *Police Academy 4*

Usually, however, the discrepancy between revenues and profits for a content production is within the contractual agreement. An example is *Police Academy 4*. This film was released in 1987. Total receipts were \$52,573,000 and total direct production costs (“negative cost”) were \$17,325,000. Therefore, the profit seems to be \$35,248,000. But this is only the beginning of the calculations. The first major deduction against revenues is distribution cost (■ Table 13.1). This is the out-of-pocket type expenses by the distributor studio in particular for items such as making prints of the film, advertising, and taxes.

Second, there are distribution fees. These are service fees for providing managerial overhead and toward the studio’s profit. This generally amounts to either about 15% of the production budget or a percentage of “adjusted gross receipts,” which are the various revenue streams after deduction of sales taxes and similar taxes.<sup>17</sup> On adjusted gross receipts, the major studio distributors charge a fee of about 30% in North America, and slightly higher rates for international distribution.<sup>18</sup> If sub-distributors are used in some territories, then the sub-distributor will charge an “override” of an additional percentage. For foreign films distributed in the U.S., distribution fees are 30%–40%, i.e. the distributor gets to keep more. Foreign television distribution fees usually are 30–40%. Distribution fees for some ancillary rights, such as merchandising, may go to 50%.

This distribution fee is basically a wholesaler’s charge for its services as a percentage of sales revenues. Such wholesale shares exist in most industries. Moreover, in the case of films the distributor often takes a very active role in the production, marketing, and risk-taking. In other media industries,

■ Table 13.1 *Police Academy 4*—distribution cost (in ‘000 dollars)

Prints	3501
Reprints, dubbing, etc.	376
Advertising	11,419
Taxes, duties, customs	940
Trade associations	47
Freight, cartage, handling	618
Guild, union, residuals	1213
Miscellaneous	578
<b>Total Direct Distribution Cost</b>	<b>\$18,692</b>

[accountingtoday.com/news/crash-filmmakers-awarded-12m-judgment-in-hollywood-accounting-case](http://accountingtoday.com/news/crash-filmmakers-awarded-12m-judgment-in-hollywood-accounting-case).

17 Epstein, Edward Jay. *The Big Picture, The New Logic of Money and Power in Hollywood*. New York: E.J.E. Publications, Ltd., Inc., 2005. Epstein’s excellent and informative book has been a major source of information in this and several other chapters.

18 Blake, A. Brandon. “Striking a Deal in the Global Market.” *BlakeWang*. 2001. Last accessed July 6, 2017. ▶ [http://www.blakewang.com/international\\_lawyer.htm](http://www.blakewang.com/international_lawyer.htm).

15 Gillet, Phillip W. “Managerial Accounting Fundamentals Website.” *San Diego State University*. Fall 2000. Last accessed July 29, 2011. ▶ <http://acct202.tripod.com/>.

16 Cohn, Michael. “Crash’ Filmmakers Awarded \$12 M Judgment in Hollywood Accounting Case.” *Accounting Today*. December 21, 2011. Last accessed July 6, 2017. ▶ <https://www>.

Table 13.2 *Police Academy 4*: cost calculation

Production Costs	17,325
Distribution Cost (to studio)	18,692
Distribution Fee (to studio)	18,136
Interest (to studio)	4592
<b>Total Costs</b>	<b>\$58,744</b>
Total Receipts	52,573
<b>Net Profits</b>	<b>(\$6171)</b>

such as magazines, the distributor is usually a logistical operation only.

A third charge against a film's revenues is interest expenses. Studios often provide some financing for independent productions which they distribute. They typically charge a rate of 125% of prime rate interest until their financing is earned back. This also applies to the money owed by the film to pay for its distribution cost and distribution fees mentioned above. Interest begins accruing when expenses are incurred (not necessarily when they are paid), and it continues to accrue until all other expenses, including distribution fees, distribution expenses, and the interest itself, are recovered.<sup>19</sup> We now factor these various cost items into the accounting for the film *Police Academy 4* (Table 13.2).

With those deductions, the net profit for the film is now a negative \$6,171,482. The film appears to be a financial failure.

But this does not mean it is a failure for the studio distributor. One main reason is that the various cost items and overheads that are charged to the project are higher than actual costs, and thus have a profit element built in (Table 13.3).

Thus the cost elements of interest, advertising overhead, production overhead, and often others tend to include a healthy profit margin for the distributor. On top of it, the 30% of revenues of the distribution fee goes to the studio. Once this is included, the film returned to the studio an estimated \$18.3 million above the actual cost to the studio. Thus, the film may be in deficit for the overall project, and investors and the stars who participate in gross profits might be out of luck, but it has been profitable for the distributor.

Moreover, and importantly, this calculation does not take into account the studio's share of revenues from aftermarkets—home video, pay-cable, TV, and other revenue streams. These can be quite substantial to the distributor, and the incremental cost of generating them is small. In such a light, *Police Academy 4* now appears to be an economic success to the studio, justifying *Police Academy 5* in 1988, *Police Academy 6* in 1989, and *Police Academy 7* in 1994.

Table 13.3 Studio income streams (theatrical distribution)

	Charges	Cost (est.)	Net
Distribution fee	18,135	4000	14,135
Advertising overhead (10%)	1038	200	838
Production overhead (13%)	2259	500	1759
Interest	4592	3000	1592
Accounts receivable	15	15	0
<b>Total</b>	<b>26,040</b>	<b>7715</b>	<b>18,325</b>

Other income items besides the home videos that are excluded from the calculation of gross receipts are receipts from the sale or licensing and product placement of posters and still photos, and receipts for the rights to produce sequels and television series based on the original film.<sup>20</sup> Another way to lower a project's profit is the setting of low internal transfer pricing. Vertically integrated media firms are also able to sell programs between divisions at "below market" prices (below what an outside syndicator would pay).

Thus, profits can be described and defined in several very different ways. As a result, contracts with investors and others with a stake in the profits need to specify carefully how profits will be determined by the distributor (or, similarly, by a general partner (GP) in a limited partnership.)<sup>21</sup> If any other participants disagree with their profit allocations, their options, unless specified in the contract, are limited when they lack the relevant information. A character in David Mamet's play *Speed-the-Plow* sums up his learning about Hollywood financials in one sentence: "There is no net, meaning that film producers do not show profits other than to the studios."<sup>22</sup>

The two basic types of profit participation deals are "gross" and "net" participation. Participants with bargaining power, such as major film stars and other top talent, will demand a percentage of the project's gross profit, because of the many potential disputes over deductions of cost and expense items from gross profits to reach net profits. The most desirable (and rarest) variation is called "dollar one," where participants are entitled to a share of all the revenue received by the

19 Bengai, Ross and Bruce Ikana. "Where's the profit? Accounting for net profit participation in film industry." *Management Accounting* (December 1997). Conversely, when the studio receives advance payments from theaters, they are not credited to the participation statement until the film is actually exhibited. This, too, results in higher interest charges to the project.

20 Bengai, Ross and Bruce Ikana. "Where's the profit? Accounting for net profit participation in film industry." *Management Accounting* (December 1997).

21 Vogel, Harold L. "Movie Industry Accounting." In *A Concise Handbook of Media Industry Economics*. Ed. Charles Moul. New York: Cambridge University Press, 2005.

22 Epstein, Edward Jay. *The Big Picture, The New Logic of Money and Power in Hollywood*. New York: E.J.E. Publications, Ltd., Inc., 2005. On top of that, payments to all gross participant are considered a deferred production cost and are retroactively added to the budget of the film. The \$30 million payouts to Hanks and Spielberg therefore added \$60 million to the film's budget, and it therefore raised the studio's overhead and other charges that were calculated as a percentage of the budget, by another \$15 million. Taken together, all other profit participants needed the film to make an extra \$75 million to get to the "breakeven" point where their own profit participation started.

studio distributor (or limited partnership) before any deduction except those mandated by law.<sup>23</sup>

In *Saving Private Ryan*, star actor Tom Hanks and star director Steven Spielberg each received 16.75% of the revenues from the first dollar received. They both earned \$30 million from theatrical distribution alone and more from other revenues.

Other complexities in accounting for a film's cost are the various ways to compensate a star to achieve lower taxes. For example, a studio may pay a star's retinue or her special corporate entity (which may have a star's employees and family members on the payroll).

Keep in mind that most participants, whether producers, directors, or actors, are experienced in the film business, and are advised and represented by seasoned agents and lawyers,

all of whom understand these accounting practices and take them into consideration. If these accounting practices were challenged through regulation, for example, the distributors would simply require a higher formal revenue share. Ultimately, their share in the project's profit is a reflection of relative bargaining strength and the essentiality of the contribution of the studio/distributor, not of underhanded accounting.

As we have seen, the actual profitability of a film depends on how costs and revenues are accounted for. In some cases, the company will use accounting to show a deficit, as we have seen in the preceding example. In other cases it might have incentives to do the opposite, to paint a rosy picture. This will be shown in the next example.

### 13.2.2 Case Discussion

The film *Gone in 60 Seconds* was a car-theft movie starring Nicholas Cage and Angelina Jolie. It was specifically cited by Disney CEO Eisner in Disney's 2004 annual report as one of the company's hits. The film brought in a worldwide box-office gross of \$242 million, while the production (negative) cost was \$103 million, and this seemed to show a profit of \$139 million.<sup>24</sup>

This was the good news to Disney investors. But it was not as good as it sounded. How come?

To physically get the film into theaters cost Disney \$13 million for prints and \$10.2 million expense for the insurance, local taxes, customs clearances, reediting for censors, translations, and shipping fees. Advertising cost \$67.4 million, and \$12.6 million was paid to various members of guilds and unions on "residual fees." This was the distribution cost. Overhead charges to pay Disney's production, distribution, and marketing arms (distribution fee) was \$17.2 million. Interest payments were \$41.8 million. Thus, the accounted cost to make the film was about \$265.5 million.

Revenues, too, were less than they appeared. \$242 million was indeed collected at the box office, but theaters kept \$140 million, leaving Disney with \$102 million. If we subtract from that figure the

cost calculated, then there was a loss of over \$162 million on the theatrical release of the film movie, instead of the \$139 million profit.

This, however, reflects only the theatrical box office revenue. Studios collect other revenues through home video, television, cable, and online releases. Such information is not publicly available, in contrast to the box office receipts. Aftermarket incomes are non-transparent even to the investors, unless required by contract.

Home videos are not accounted for as a gross receipt, in the same way as box office receipts. They are accounted for as a royalty from the studio distributors to the project, typically 20% of the video revenues, minus various deductions that are taken to reach the "net."

In the case of *Gone in 60 Seconds*, the royalty system works like this: The Walt Disney Company distributes its home videos through its video distribution arm Buena Vista Home Entertainment International. By 2002, Buena Vista had earned \$198 million from sales and rentals of home videos of *Gone in 60 Seconds*.<sup>25</sup> Buena Vista then paid a 20% royalty to another Disney subsidiary, Walt Disney Pictures (\$39.6 million). These were the video's "gross rentals." From this, \$19.6 million was deducted: \$12.6 million (32%) for the

video-distribution fee and about \$7 million for distribution cost and other expenses (6%). This left \$18.4 million credited to the film project, which amounts to less than 10% of the home video wholesale revenues. Disney, on the other hand, retained \$179.6 million (\$198 million – \$18.4 million). Disney's expenses were about \$29 million for manufacturing, packaging, and actual returns. This results in a profit of about \$150 million.<sup>26</sup>

If Nicholas Cage, star of *Gone in 60 Seconds*, had been entitled to 10% of the video's gross rentals, he would have received \$3.96 million. If, instead, the much higher Buena Vista Home Entertainment International's gross receipts of \$198 million had been used to calculate his share, he would have received \$19.8 million. On the other hand, if his share had been based on net, it would have been only \$1.8 million.

Therefore, a star's contractual entitlement of "10% of gross home video revenues" should not be read literally. It may well be only about 2% in real terms. Was Cage being short-changed? Hardly: he is experienced in the film business, and (as mentioned above) has agents, lawyers, accountants and noted relatives to protect his interests. They all understand that "10%" means more like "2%" and negotiate accordingly.

23 Epstein, Edward Jay. *The Big Picture, The New Logic of Money and Power in Hollywood*. New York: E.J.E. Publications, Ltd., Inc., 2005. A variation of gross profit participation is for stars or investors to receive a share of the film's revenues, after the film earns a specified amount, such as breakeven.

24 All figures in this case segment are from Epstein, Edward Jay. *The Big Picture, The New Logic of Money and Power in Hollywood*. New York: E.J.E. Publications, Ltd., Inc., 2005.

25 Epstein, Edward Jay. *The Big Picture, The New Logic of Money and Power in Hollywood*. New York: E.J.E. Publications, Ltd., Inc., 2005.

26 Epstein, Edward Jay. *The Big Picture, The New Logic of Money and Power in Hollywood*. New York: E.J.E. Publications, Ltd., Inc., 2005.

### 13.2.3 Royalties for Books and Music

For books, the royalty calculation to the author is based on the cover price: If the cover price of a hardcover book is \$20 and royalty rate is 10% of the cover price, the royalty is \$2 per book. An alternative system is based on revenues received.<sup>27</sup> If the book gets discounted by, say, 50%, the royalty is now 10% of \$10, not of \$20, and the author's take is \$1 per book.<sup>28</sup> Publishers issue a periodic royalty statement and check. Publishing contracts typically contain a clause entitling authors to inspect and audit the relevant records, but often only within two years.

Similar issues of defining profits exist in the music industry. Is it true, as often stated, that 80% of records do not make any money? This depends on the method of accounting and cost allocation, usually specified by contract. Accounting issues within the recording industry include "recoupment," royalty accounting, audits, and contract structure.<sup>29</sup> Many of the major costs of a recording are "recouped," that is subtracted, from the artists' royalties against prior payments known as advances. An artist is responsible for part of the recording costs, equipment and personnel, costs of live performances, and at least half of promotional costs such as music videos. Royalties are only paid out after the advances have been covered. But the label assumes the risk if the recording does not generate enough revenues for deduction.

#### Example: The Economics of a Gold Record

A "gold record" means that 500,000 copies were sold in the USA. (in China 20,000; in France 50,000; in the UK, Germany, India, and Japan 100,000.) It is a mark of success. One would therefore assume that a Gold Record is a financial bonanza for the artist. But the reality can easily be different.

Suppose that a band signs a contract that stipulates a royalty rate of 14%, and the CD sells 500,000 copies at \$14 each, for a total of \$7 million. One would therefore expect the band to receive \$980,000. But this does not account for the many deductions. For example, the CD royalty rate applies only to 85% of the CDs. The band recorded the album on a \$300,000 budget, the producer receives a standard 3% of the royalty, and there may be contractual discounts for breakage (even though CDs do not break like vinyl or shellac did), "free goods" for promotions, and packaging (Table 13.4).<sup>30</sup>

Thus, under this example, the band would actually end up owing \$247,800, which would have to be covered from subsequent sales and future recordings.

Table 13.4 Gold Record Economics

Nominal royalty = 500,000 CDs x \$14 CD retail price x 14% royalty rate	\$980,000
Real royalty	
(a) Less 15% free goods (copies given away to radio stations and reviewers and for quantity and sales discounts	
(b) Less CD-rate discount 15%	
(c) Less breakage allowance 10%	
(d) Less packaging discount 20%	
(e) Share of royalties to producer = 3%	
Together, these deductions add up to 60%.	
Total royalties before deductions: 500,000 × 40% × remainder × 11%	\$308,000
(f) Less payments to agent and manager 10% =	(−\$30,800)
(g) Less recording costs	(−\$300,000)
(h) Less 50% of independent promotion	(−\$100,000)
(i) Less 50% of video costs	(−\$75,000)
(j) Less tour support	(−\$50,000)
(k) Total =	(−\$247,800)

### 13.2.4 Profit Accounting in Limited Partnerships

In limited partnerships, the share of the general partners (GP) depends on investment contributions, required management effort, and so on. The share of the limited partners depends on the size of their investment and other considerations that established by contract. In limited partnerships (LLPs) of hedge funds the GP typically takes 2% of fund assets per year, plus 20% of profits, often limited to those above a hurdle rate such as an 8% return.

GPs often have incentives to minimize profits they must share. They can do so by:

- increasing salaries of managers, including that of the GP;
- setting high bonuses for managers and classify them as expenses rather than as partial profit;
- deducting expenditures such as travel, dinner, meetings;
- creating reserves for future contingencies;
- allocating general overheads against fund profits;
- setting high transfer prices for intra-company transactions of purchases and low ones for sales;
- using high rates of depreciation and amortization.

### 13.2.5 How Profit Participants Can Protect Themselves

Companies' accounting practices are often non-transparent when it comes to royalties and profit shares.<sup>31</sup> Contracts often

27 Ellenberg, Ethan. "All About Royalties." *The Ethan Ellenberg Literacy Agency*. July 1999. Last accessed July 6, 2017. ► <http://ethanellenberg.com/all-about-royalties/>.

28 There is a "Reserve for Returns" Books are fully returnable and publishers therefore keep a permanent accounting reserve as a percentage of gross shipments.

29 Holzman, Keith. "Manage for Success: Royalty Accounting." *Holzman Solutions*. August 2002. Last accessed July 6, 2017. ► <http://www.holzmansolutions.com/articles/16-aug02.html>;

Gunderson, Edna. "Bye, bye, a piece of the pie." *USA Today*. June 11, 2004. Last accessed July 6, 2017. ► [http://www.usatoday.com/life/music/news/2004-05-16-royalties-main\\_x.htm](http://www.usatoday.com/life/music/news/2004-05-16-royalties-main_x.htm);

Passman, Donald S. *All You Need to Know About the Music Business*. New York: Simon & Schuster, 2000.

30 Based on Passman, Donald S. *All You Need to Know About the Music Business*. New York: Simon & Schuster, 2000.

31 Wasserman, Jim. "Calif., N.Y. Weight Regulation: Recording Industry in for New Fight." *Associated Press*. April 4, 2003. Last accessed June 17, 2017. ► <https://www.newspapers.com/newspage/221055721/>.

prevent the auditing of ledgers and accounts to accurately determine the amount of royalties or payments owed.<sup>32</sup> In 2003, BMG, Universal, and Warner Music announced reforms in their accounting practices. BMG took the lead by eliminating packaging and promotional deductions and calculating royalties based on wholesale price rather than discounted retail price.<sup>33</sup> It adopted what it described as a “fairer and more transparent” royalty system that shrank a standard contract from 100 pages to 12 pages.<sup>34</sup> Universal Music Group agreed to give auditors access to previously denied financial records.

These reforms reduced conflicts but did not end them. In 2009, the singer and film star Cher sued Warner Music and Universal for royalties owed to her for two compilation albums. She claimed, unsuccessfully, that the companies paid out royalties based on a lower rate than the contract-specified amount. Cher also claimed that Warner Music UK was using a subsidiary business to hide revenue from sales of these albums in the UK.<sup>35</sup>

In order to raise confidence and hence facilitate transactions, investors—whether in content production or technology ventures—need to protect themselves by some of the following measures:

1. Require a collection account manager, an independent third party who is protecting the interests of investors.
  2. Due diligence check on the producer/GP/entrepreneur to determine their track record.<sup>36</sup>
  3. Understand the parameters of the deal, and whether it compensates for inflation and so on.
  4. Obtain all promises in writing and in contracts.
  5. Establish an arbitration clause, with the prevailing party entitled to reimbursement of legal fees and costs.
  6. Participate actively outside direct management site visits, progress reports, briefings, feedback.
  7. Participate in the monitoring of the project, for example making sure that the funds are spent on the agreed upon project rather than new ones, unless further agreed.
  8. Obtain an experienced advisor where expertise, time, or local presence are lacking.
  9. Make sure that the contract is clear on all the terms, such as the definitions of net profit and receipts.<sup>37</sup>
  10. The amount and types of overhead charged to the project should be clearly spelled out.
11. Insist on reasonable controls and limitations on claims for expenses.<sup>38</sup>
  12. Understand that the profit participation reports are prepared on a cash basis for revenue and on an accrual basis for expenses.
  13. Define the dates and frequency of financial reporting.
  14. Include the right to audit.
  15. Require errors and omissions insurance—this helps ensure completion.
  16. Require recoupment of net profits to be scheduled prior to financial contributions to certain other payees.

## 13.3 Public Financial Accounting

### 13.3.1 Major Financial Documents for Investors

Financial accounting is used to prepare financial information for stockholders, banks, suppliers, and regulators. All publicly traded companies are required to publish financial statements and must follow general procedures known as Generally Accepted Accounting Principles (GAAP) in the USA,<sup>39</sup> similar national principles in many other countries, or global principles known as the International Financial Reporting Standards (IFRS).

#### 13.3.1.1 Balance Sheet

The first major document of financial accounting is the balance sheet. This reports a company's assets, liabilities and stockholders' equity. The value of a company's assets, by definition, balances with the sum of liabilities and the equity. Assets are typically reported in terms of net book value—the original cost of the asset minus the depreciation on the asset.

#### 13.3.1.2 Income Statement

The income statement, also known as the P&L (profit and loss) statement, presents the operating activities of a firm. Expenses are subtracted from revenues, revealing how much money a company made (or lost) within an accounting period.

#### 13.3.1.3 Cash Flow Statement

The statement of cash flows can be thought of as a business's checking account. It is a company's summary of cash transactions during an accounting period. The statement shows where money comes from, how it is spent, and how much is at hand. These transactions are divided into three categories—operating, financing, and investing—which enables investors to better see how money flows into and out of the company.

32 Future of Music Coalition. “California State Assembly Hearing on Major Label Accounting Practices.” Last accessed June 17, 2017. ► <https://futureofmusic.org/filing/california-state-assembly-hearing-major-label-accounting-practices>.

33 Holloway, Lynette. “BMG Plans to Simplify Royalty Deductions.” *The New York Times*. November 21, 2002. Last accessed July 6, 2017. ► <http://www.nytimes.com/2002/11/21/business/bmg-plans-to-simplify-royalty-deductions.html>.

34 Holzman, Keith. “Manage for Success: Royalty Accounting.” *Holzman Solutions*. August 2002. Last accessed July 6, 2017. ► <http://www.holzmansolutions.com/articles/16-aug02.html>; Gunderson, Edna. “Bye, bye, a piece of the pie.” *USA Today*. June 11, 2004. Last accessed July 6, 2017. ► [http://www.usatoday.com/life/music/news/2004-05-16-royalties-main\\_x.htm](http://www.usatoday.com/life/music/news/2004-05-16-royalties-main_x.htm).

35 Belloni, Matthew. “Cher, Bono Heirs Sue Universal Music over Royalties.” *Reuters*. June 2, 2009. Last accessed July 6, 2017. ► <http://www.reuters.com/article/2009/06/03/industry-us-cher-idUSTRES520MT20090603>.

36 Alberstat, Philip. *The Insider's Guide to Film Finance*. Waltham, MA: Focal Press, 2004.

37 Shindler, Marty. “Understand before you sign.” *The Shindler Perspective, Inc.* Last accessed July 6, 2017. ► <http://www.ishindler.com/articles/TSPUnderstandBeforeYouSign.htm>.

38 Jones, Cones. *The Feature Film Distribution Deal: A Critical Analysis of the Single Most Important Film Industry Agreement*. Carbondale, IL: Southern Illinois University Press, 2006.

39 Accounting.com. “What is GAAP?” Last accessed June 17, 2017. ► <http://www.accounting.com/resources/gaap/>.

### 13.3.1.4 Pro Forma Financial Statements

Companies often also report with separate financial statements, called “pro formas.” These have no defined meaning or formal requirements.<sup>40</sup>

The pro forma statement, being without clear rules, can be based on estimates and projections.

The basic idea behind pro forma is that a firm facing exceptional gains or losses in a year can indicate the one-time nature of these events and adjust its profit and loss (P&L) to provide investors with a more realistic picture. For example, it can adjust for:

- major gain from sale of division or asset;
- major loss from isolated legal action.

We will discuss all four types of public financial accounting statements, starting with pro formas.

Problems arise when pro forma statements are used to prettify or disguise the true financial condition.<sup>41</sup> In 2002, Nokia, the Finnish wireless technology company, reported a third quarter pretax profit of €1.1 billion with pro forma statements. Without the pro forma adjustments Nokia’s pretax profit was at a much lower €281 million.<sup>42</sup>

## Case Discussion

### Pro Formas

In its 2001 Annual Report under CEO Eisner, Disney used a pro forma presentation to maintain the appearance of stability in its earnings per share (EPS). Consider the following excerpt from the Annual Report (Table 13.5), which transforms Disney’s loss (common stock per share as-reported) into pro forma profit. It does so by the cumulative effect of accounting changes, excluding restructuring and impairment charges and gains on the sale of businesses.<sup>44</sup> Disney reported in its formal P&L statement—which followed the GAAP guidelines—a \$0.02 loss per share. This is identified in the top line of Table 13.5. But the bottom line of that pro forma “Financial Highlights” statement showed a \$0.72 pro forma gain per share. The company reported a loss of \$158 million; therefore, each \$0.01 per share that the company was to lose or gain is equivalent to \$79 million. A \$0.74 net difference per share is hence about a \$5.8 billion difference in economic performance.

Disney reached this result through several pro forma items:

Disney reported in its pro-forma statement certain transactions or events differently from the way they must be reported according to GAAP rules. It did disclose these adjustments, yet a layperson would have trouble understanding them. Basically, it excluded from its earnings several items which it considers “one-time events.” These include the sale of Fairchild Publications (its magazine subsidiary) in the preceding year, the acquisition of the search engine Infoseek, the conversion of Internet Group common stock to Disney common stock, the closure of the Go.com portal, and the adoption of different accounting standards.

- A \$0.06 (per share) negative adjustment is made to attribute 100% of Internet Group operating results to Disney common stock. In 2001, Disney stopped reporting for the Internet Group independently, and integrated it into the

Disney stock. This adjustment aims to show how the company has done based on its current structure, rather than the structure used during the previous reporting period. This adjustment depresses earnings.

- Disney incurred one-time expenses in closing down its portal Go.com. If it excluding this one-time event from the P&L, earnings improve by \$0.09 per share.
- Disney incurred one-time \$1.5 billion in restructuring and impairment fees, related to Go.com. Disney excludes this from its pro forma, as it did not view it as a usual expense. This adjustment improved earnings by \$0.41 per share.
- A \$0.13 adjustment is made to exclude the cumulative effect of accounting changes. In 2000–2001, Disney adopted accounting procedures spelled out in the American Institute SOP 00–2, and SFAS 133, 138 and

In another example, the major mainframe software firm Computer Associates (CA) used in 2001, a pro forma statement to disguise reality. CA reported 42 cents pro forma earnings for the quarter, while in reality it had a 59 cents loss under GAAP rules. In the several quarters of financial year (FY) 2000, CA inflated its revenue by approximately 25%, 53%, 46%, and 22% by including prematurely recognized revenue of \$2.2 billion in 2000 and 2001.<sup>43</sup> As a US government official described it, “Like a team that plays on after the final whistle has blown, Computer Associates kept scoring until it had all the points it needed to make every quarter look like a win.” CA kept its accounts open for additional days to create the illusion of increased revenue, leading to a 35-day month.

After CA was forced to stop recognizing revenue prematurely, its stock price dropped over 43% in just one day. CEO Sanjay Kumar was charged with securities fraud and sentenced to 15 years in prison. The Head of Worldwide Sales, Stephen Richards, was sentenced to seven years in prison and the General Counsel and Senior Vice-President, Stephen Woghin, was sentenced to two years. The company also had to pay \$225 million to harmed shareholders.

40 US Securities and Exchange Commission. “Cautionary Advice Regarding the Use of ‘Pro Forma’ Financial Information in Earnings Releases.” December 4, 2001. Last accessed July 29, 2011. ► <http://www.sec.gov/rules/other/33-8039.htm>.

41 US Securities and Exchange Commission. “Cautionary Advice Regarding the Use of ‘Pro Forma’ Financial Information in Earnings Releases.” December 4, 2001. Last accessed July 29, 2011. ► <http://www.sec.gov/rules/other/33-8039.htm>.

42 Manuel, Gren. “European Interest Grows in Pro Forma Accounting.” *Wall Street Journal*. January 8, 2002. Last accessed June 22, 2011. ► <http://search.proquest.com/docview/398962008?accountid=10226>.

43 US Securities and Exchange Commission. “SEC Files Securities Fraud Charges Against Computer Associates International, Inc., Former CEO Sanjay Kumar, and Two Other Former Company Executives.” September 22, 2004. Last accessed June 19, 2007. ► <http://www.sec.gov/news/press/2004-134.htm>.

44 Walt Disney Company. “2001 Annual Report.” November 7, 2001. Last accessed July 10, 2017. ► <https://ditm-twdc-us.storage.googleapis.com/2015/10/2001-Annual-Report.pdf>.

141–4. These standards affected various accounting principles, ranging from how certain revenues and costs should be recognized to how derivatives, good will, intangible assets, and long-lived assets should be accounted for. The pro forma earnings exclude these charges.

A further \$0.17 is added in the table below as an adjustment to exclude still other restructuring and adjustment charges.

In order to make them more comparable to the preceding year, Disney then uses these pro forma results to create comparable financial highlights for 2000 and 2001. And the bottom line is now identical for both years: \$0.72 per share, a result that suggests consistency in performance, thus giving investors an assurance of predictability, even if some of it was achieved by accountants.

Disney properly qualifies these results in a footnote. Its pro forma permits a better

comparison of the two years 2000 and 2001. However, in many cases the classification of something as being a “one-time event” is to make earnings look better. The definition of a one-time event is subjective. In theory, many of Disney’s earnings could be clarified as “one-time events” because every movie is unique. Exclusion or inclusion is also not used consistently. The exclusion of the Go.com restructuring, which produces a gain of \$0.41 per share, does not get partially attributed to 2000. All of this is perfectly legal and Disney discloses it. However, interpreting it requires a sophisticated reading of the report.

Another example for the use of pro formas by Disney is in its acquisition of the huge TV network and station group ABC/Capital Cities in 1995. Disney had added earnings and acquisitions before the mergers had formally taken place. The company presented to the investors two sets of numbers: pro forma and as reported. The pro forma set was compiled showing what the 1995 financials would

look like had the companies already merged.<sup>45</sup>

The pro forma numbers showed a growth in earnings. To reach this result required some fancy accounting. In 1995 Disney had reported a net income of \$2.60 a share, whereas in 1996 it was, in the pro forma calculation, only \$2.23 a share. How then could the company show an earnings rise for 1996? It accomplished this by revising retroactively the 1995 pro forma earnings down to \$1.94 a share by writing down a part of the assets it had acquired when it had bought Capital Cities/ABC.

Moreover, Disney did not include all debt, leaving some of them “off balance sheet”. Specifically, Disney had agreed to purchase various broadcasting rights for sport events from the NFL, NBA, NASCAR, and others. If these contractual obligations (which could not be cancelled) were capitalized as a liability, instead of being expensed each year, it would more than double the company’s debt.

Table 13.5 Disney pro forma adjustments

(unaudited)	2001	2000
<b>As-reported (loss) income per share attributed to Disney Common Stock</b>	<b>\$(0.02)</b>	<b>\$0.57</b>
Adjustment to attribute 100% of Internet Group operating results to Disney common stock (72% included in as-reported amounts from the period from November 18, 1999 through January 28, 2001)	\$(0.06)	\$(0.13)
Adjustment to exclude pre-closure GO.com portal operating results and amortization of intangible assets	\$0.09	\$0.35
Adjustment to exclude the cumulative effect of accounting changes	\$0.13	–
Adjustment to exclude GO.com restructuring and impairment charges	\$0.41	–
Adjustment to include a pre-acquisition Infoseek operating results	–	(\$0.04)
Adjustment to reflect the impact of the new Film Accounting rules	–	(\$0.03)
<b>Diluted earnings per share before the cumulative effect of accounting changes, excluding restructuring and impairment charges and gain on the sale of business</b>	<b>\$0.72</b>	<b>\$0.72</b>

### 13.3.1.5 Investor Red Flags<sup>46</sup>

— Companies with relatively high debt ratios—to be discussed below—are usually an immediate red flag for an investor. But it could also be a sign of aggressive forward motion. An investor should compare

a company’s debt with industry averages and peer-companies.<sup>47</sup>

— The cash flow statement is a good gauge of the direction of the company. If cash from operations is lower than what the company is investing, then the company is most likely increasing its debt burden.

45 Gubernick, Lisa. “Mickey Mouse, CPA.” *Forbes*. March 10, 1997. Last accessed July 29, 2011. <http://www.forbes.com/forbes/1997/0310/5905042a.html> 03.10.1997.

46 McGrahan, Kathleen and Gordon Shillingaw. *Accounting: A Management Approach*. Homewood, IL: Irwin, 1993.

47 National Association of Online Investors. “Special Report from NAOI: Investors: Read Financial Statements with a Critical Eye.” 2009. Last accessed July 29, 2011. [www.naoi.org/pressroom/flags.htm](http://www.naoi.org/pressroom/flags.htm).

- Investors should also analyze changes in the balance sheet of at least the past three years. Things to look out for are large increases in accounts receivable, large increases in the inventory account, and large decreases in the reserve account.
- A change in auditors might also be a warning signal, because the previous auditor may have been more critical and tough.
- Large “sales to related parties” in the income statement
- High compensation and stock option to top managers in proxy statements.
- High allowance for uncollectable accounts (a sign that revenues were stated prematurely).<sup>48</sup>

### 13.3.2 Auditing

Given the potential for problems, how can the accuracy of financial information be protected?

An audit of a firm’s financial statement means that an independent expert reviews the company’s books for compliance with accounting principles. It is also a review of the ability of a firm’s accounting system to deal with transactional data properly and effectively, such as through checking a random sample of transactions.

Another layer of financial control is the audit committee of the board of directors, whose task it is to ensure the integrity of the company’s financial reporting. This committee generally oversees internal and external reporting and audit processes. This audit committee comprises independent (i.e. non-officer) directors. The actual process is delegated to internal employees of the firm or to external consultants or auditing firms.<sup>49</sup>

In the USA, the 2001 Sarbanes-Oxley Act created in 2002 strict rules of responsibility for accurate financial reports. Auditing firms had to divest themselves of all non-accounting activities. The law established an Oversight Board to review the audits of public companies and to set guidelines for accounting firms.

Auditors must be certified (chartered). In order to become a CPA or a chartered accountant one must generally have a bachelor’s degree in accounting and one year of specialized instruction. Candidates must then pass a special exam,<sup>50</sup> and gain several years of work experience.

CPAs can work outside a company for an auditing firm or financial services company, or on the inside as a controller, financial analyst, or in internal audit services.<sup>51</sup> CPAs can also establish their own practice, working with both individuals and businesses, generally small or medium-sized firms. They provide clients with tax return services, auditing, tax planning, retirement planning, and budgeting. CPAs also handle payroll services for clients and consult with companies and individuals on incorporation and corporate structuring.

#### 13.3.2.1 The “Big Four” Accounting Firms

There used to be a “Big Eight” of accounting firms, dominating worldwide public accounting. They became the “Big Four” through mergers since the late 1980s and the collapse of Arthur Andersen in 2002. The remaining four firms audit 78% of all publicly traded companies in the USA by numbers count and 99% by annual sales. The same firms dominate the international market for big-firm audit services.

##### PricewaterhouseCoopers (PwC)

PwC is the world’s largest professional services firm with 236,000 employees and \$37.7 billion in revenue in 2017.<sup>52</sup> The firm audits 45% of the companies listed in the *Fortune 1000*. The firm originated in London in 1849 under the direction of Samuel Price. Another accountant, William Cooper, founded his own firm in 1854. The two successor firms, Price Waterhouse and Coopers & Lybrand, merged in 1998 to form PricewaterhouseCoopers, headquartered in London. In 2002, PwC sold most of its consulting business (which was especially active in electronic management systems) to IBM for \$3.9 billion. PwC’s clients include the Academy of Motion Pictures, CBS, Thomson, Viacom, Disney, and Nintendo in the media sector; IBM, Yahoo, Cisco, Corning, Dell, Ericsson, Nokia, Qualcomm, Samsung, Kyocera, LG Corporate in the media-tech sector; and KDDI, TeliaSonera, BT, DT, KPN, NTT, and Saudi Telecom in telecoms.

##### Deloitte Touche Tohmatsu

Deloitte Touche Tohmatsu in 2017 employed over 295,000 people and reported revenues of \$38.8 billion.<sup>53</sup> The company was formed in 1989 with the merger of Deloitte Haskins & Sells with Touche Ross (which had earlier merged with Tohmatsu of Japan). The Touche firm was founded in New York City in 1900. The merged global headquarters is located in Wilton, Connecticut. Deloitte Touche Tohmatsu’s major clients include WPP, Bloomberg, Comcast, and Cox in the media sector, Microsoft in the technology sector; and Vodafone in the telecom sector. Deloitte Consulting is the independent consulting operation, among the world’s largest consultancies.

##### Ernst & Young

Ernst & Young, too, was created through a series of mergers. The oldest of these component companies was founded in London in 1849. In 1903 the firm Ernst & Ernst was formed in Cleveland, Ohio and in 1906 Arthur Young & Co. was founded in Chicago, Illinois. The two firms merged in 1989 to become Ernst & Young, and in 2002 was joined by many former operations of Arthur Andersen. The company divested its consulting activities to the French firm Capgemini in 2002 for \$11 billion. The company in 2017 employed 250,000

48 Magrath, Lorraine and Leonard G. Weld. “Abusive Earnings management and Early Warning Signs.” *The CPA Journal* 72, no. 8 (August 2002): 50.

49 Burke, Frank M. *Audit Committees: A Guide for Directors, Management, and Consultants*, 3rd ed. (New York: Aspen Publishers, 2004), 1–220.

50 AICPA. “Become a CPA.” Last accessed July 21, 2011. ▶ <http://www.cpa-exam.org/>.

51 AICPA. “CPAs: Keeping Every Industry on Track.” Last accessed June 17, 2017. ▶ <http://www.startheregoplaces.com/todayscpas/careeroptions/careerpaths/?SSID=E285F5688FA C44F8BF2CA45C8AB2C7AB#public>.

52 PricewaterhouseCoopers. Global Annual Review 2017. 2017. Last accessed June 27, 2018. ▶ <https://www.pwc.com/gx/en/about/global-annual-review-2017.html>.

53 Deloitte. “Deloitte announces record revenue of US\$38.8 billion.” September 14, 2017. Last accessed June 27, 2018.

people and reported revenues of \$31.4 billion.<sup>54</sup> Ernst & Young's clients include EMI, News Corp, NTL/Telewest, Time Warner, Warner Music and Vivendi in the media sector; Amazon.com, AMD, Google, HP, Intel, Oracle, Philips, and RIM in the technology sector; and AT&T, FT, Global Crossing, Orange, Telefonica, Telnor, Telstra, and Verizon in the telecom sector. Its headquarters is located in London.

## KPMG

The earliest predecessor of KPMG (Klynved Peat Marwick Goerdeler) was the William Peat firm established in London in 1870. The company eventually merged into KMG in 1979, creating a large European international firm. The KPMG of today was formed with a merger in 1987 and in 2001 it divested its consulting business, mostly to BearingPoint Inc. That company filed for bankruptcy in North America but operates in Europe. In 2015 KPMG employed 173,965 people and reported revenues of \$24.4 billion.<sup>55</sup> KPMG's clients include BBC, Bertelsmann, National Geographic, NBC Universal, RH Donnelly, Real Networks, Sony Music, WoltersKluwer, CNET, and TiVO in the media sector; Dolby, Electronic Arts, Ericsson, and Motorola in the technology sector; and Sprint and Qwest in the telecom sector.

## Case Discussion

### Auditing

Unlike its rivals Vivendi Universal and Time Warner, Disney avoided accounting scandals in the period under CEO Eisner. Its external auditors, PwC, received \$8.7 million for auditing Disney in 2001. That same year, Disney also paid PwC \$43 million for consulting and other services, such as the design of a provided financial information system and its implementation.

Already prior to the enactment of the Sarbanes-Oxley Act that outlawed this type of conflict of interest,<sup>56</sup> shareholders asked that management drop PwC in either their capacity as auditors or consultants. The Disney board then voted to do so. This cut annual fees paid to PwC by 75%. Disney became the first major company to make such a move to separate auditing and consulting.

### 13.3.2.2 Internal Audits

Less formal internal audits are conducted by the company itself, as a way to check on proper internal handling of transactions and resources, and to prevent fraud and embellishment of performance. In a large business, there is usually an auditing group within the larger accounting division.

To ensure the accuracy of financial statements, firms often put into place a system that allows employees to anonymously report to the audit department inconsistencies or possible wrongdoings.<sup>57</sup>

Another aspect of internal audits is not to find wrongdoing but to check on operations. Has the division or product reached the firm's goals or projections? This prevents subunits from being tempted to make their performance look better, or to gloss over problems.<sup>58</sup>

Internal auditors make recommendations. They are typically accountants who attempt to examine the same data and use similar steps as the external auditors, so that they can catch and fix any problems before the external auditors.<sup>59</sup>

## Case Discussion

### Internal Audits

An internal audit of Disney revealed that Harvey Weinstein, the co-chairman of Miramax, (a medium-sized studio which Disney bought in 1993), strategically scheduled release dates of certain film projects in order to paint overly positive pictures of Miramax's finances. Weinstein had, fully within his legal rights, exploited a loophole in the Miramax-Disney contract. It offered the Weinstein brothers a performance-based bonus, roughly a third of profits from their films. However, the deal calculated profits within the year of their release, not in the year of their acquisition. The release of big budget films (which were less likely to be large profit winners) could therefore be pushed to later years when they would not affect the Weinsteins' high bonuses.

## 13.3.3 Regulation of Accounting

### 13.3.3.1 Government Regulation

Government rules exist for the public and correct disclosure of financial information by companies whose stock is publicly offered. Accounting manipulations by some companies can discredit the entire economic system and reduce investor confidence, resulting in less investment and costlier private safeguards.

In the USA, the SEC was created in 1934 to ensure the disclosure of important financial information from publicly traded companies. The act was passed in response to the Great Depression; generally, the public distrusted the reliability of a company's accounting information, and laws were therefore enacted that required companies to publish accurate information in their financial statements. The SEC has the authority to establish standards, but has historically delegated the details to self-regulatory accounting bodies.<sup>60</sup>

54 EY. "EY reports strong global revenue growth in 2017." September 5, 2017. Last accessed June 27, 2018. ► <https://www2.deloitte.com/global/en/pages/about-deloitte/articles/global-revenue-announcement.html>.

55 KPMG. 2015 KPMG International Annual Review. 2015. Last accessed June 17, 2017. ► <https://home.kpmg.com/xx/en/home/about/international-annual-review-2015.html>.

56 Wall Street Journal. "Auditors Still Perform Nonaudit Services." April 3, 2002, C1.

57 Burke, Frank M. *Audit Committees: A Guide for Directors, Management, and Consultants*. 3rd Ed. (New York: Aspen Publishers, 2004), 1–220.

58 Wright, Wilmer. *Management Accounting Simplified*. (New York: McGraw Hill, 1980), 99–100.

59 Cornell University Audit Office. "University Audit Office." Last accessed July 6, 2017. ► [www.audit.cornell.edu/](http://www.audit.cornell.edu/).

60 Financial Accounting Standards Board. "Facts about FASB." Last accessed July 29, 2011. ► <http://www.fasb.org/facts/index.shtml>.

- Other countries have similar agencies and procedures.
- Japan: the SESC was established in 1992 to approve fair trade in financial futures and securities;
- France: Autorité des Marchés Financiers (AMF);
- UK: Prudential Regulation Authority,<sup>61</sup> Financial Conduct Authority;
- Germany: Federal Financial Supervisory Authority (BaFin—Bundesanstalt für Finanzdienstleistungsaufsicht);
- Korea: Financial Services Commission (FSC).

Governments compel companies to provide extensive basic information relevant to their performance. Some of it is confidential, such as income tax information. Other information is public, such as a license renewal application by a TV station.

There are also several industry-specific accounting regulations. In the USA, the Federal Communications Commission established the Uniform System of Accounts (USOA) for telecommunications companies to separate regulated from unregulated activities. The USOA rules are used to determine a variety of telecom-to-telecom interconnection prices, subsidies etc. USOA balance sheets differ from non-regulated industries in their classification of assets and liabilities. They also have different rules on depreciation.

### 13.3.3.2 Self-Regulation of Accounting

#### GAAP

In the USA, the Financial FASB, an independent, private sector organization, sets accounting standards. The FASB, the SEC, and the American Institute of Certified Public Accountants (AICPA) have established the GAAP, which is a common set of authoritative standards, principles, and procedures.<sup>62</sup>

GAAP has four basic principles:

1. The historical cost principle: companies are required to account and report based on past acquisition costs rather than current fair market value for most assets and liabilities.
2. The revenue recognition principle: firms are required to record revenue when it is realized and earned, not necessarily when the cash is received. This is called accrual basis accounting.
3. The matching principle: a firm's expenses have to be matched with revenue as long as it is reasonable to do so.
4. The full disclosure principle: information disclosed should be enough for an investor to make a judgment, while keeping costs of disclosure reasonable.

Investors and journalists often believe that GAAP-based financial results, being based on established principles, are an accurate measure of the performance of a company. This

is not so. GAAP allows a variety of treatments of reserves, depreciation, and non-recurring expenses. These are picked by a company's management. Another problem with GAAP financial statements is that they are cost based. This means that intangibles such as copyrights and patents—very important in the media and tech sector—are inadequately covered, as is discussed below. GAAP financial statements should therefore be supplemented by other data, such as cash flow data and discounted cash flow analysis.<sup>63</sup>

#### International Accounting Standards

Most countries have their own rules similar to the American GAAP. The UK's accounting standards are governed by a collective known as the Accounting Regulatory Bodies (Institute of Chartered Accountants, Association of Chartered Certified Accountants, Chartered Institute of Public Finance and Accountancy, and Chartered Institute of Management Accountants).<sup>64</sup> These organizations are self-governed by their members.

Going beyond national standards many countries have moved to International Financial Reporting Standards (IFRS).<sup>65</sup> The IFRS are a set of accounting standards developed by the International Accounting Standards Board (IASB).<sup>66</sup> Over 120 jurisdictions permit or require IFRS for domestic listed companies. The European Union (EU) requires it for companies incorporated in its member states whose securities are listed on an EU-regulated stock exchange.

The IFRS are typically more detailed than the national standards they replace and require more financial disclosure.<sup>67</sup> In the media sectors, IFRS, because it depends on a cost-based system, often does not accurately reflect intangibles, just as GAAP does not. IFRS uses similar basic principles to GAAP in the USA, but with several differences. IFRS guidelines regarding revenue recognition are less extensive and less industry-specific than GAAP.<sup>68</sup> For example, under GAAP there are specific rules for the recognition of software revenue and sales of real estate, but not in the IFRS.<sup>69</sup> The detailed US rules also often contain exceptions for particular types of transactions, whereas IFRS contains general principles. Other differences exist for the treatment of leases and financial instruments. Efforts are underway to overcome these differences and converge the two systems.

63 Litan, Robert E. and Peter J. Wallison. "Beyond GAAP." *Regulation* 26, no. 3 (Fall 2003): 50–55.

64 Business Accounting Basic. "Accounting Regulatory Bodies." Last accessed Jun 22, 2011.

▶ <http://www.businessaccountingbasics.co.uk/accounting-regulatory-bodies.html>.

65 AICPA IFRS Resources. "International Financial Reporting Standards." Last accessed July 6, 2017.

▶ [http://www.ifrs.com/updates/aicpa/ifrs\\_faq.html](http://www.ifrs.com/updates/aicpa/ifrs_faq.html).

66 International Financial Reporting Standards. "IFRS." Last accessed July 6, 2017. ▶ [http://www.ifrs.com/pdf/IFRSUpdate\\_V8.pdf](http://www.ifrs.com/pdf/IFRSUpdate_V8.pdf).

67 Palea, Vera. "IAS/IFRS and financial reporting quality: Lessons from the European experience." *China Journal of Accounting Research* 6, no. 4 (December 2013): 247–263.

68 International Financial Reporting Standards. *International Financial Reporting Standards (IFRS) – an AICPA Background*. Durham: American Institute of CPAs, 2011.

69 Ernst & Young. "US GAAP versus IFRS: The Basics." November 2013. Last accessed July 6, 2017. ▶ [http://www.ey.com/Publication/vwLUAssets/EY-US-GAAP-vs-IFRS-the-basics-2013/\\$FILE/EY-US-GAAP-vs-IFRS-the-basics-2013.pdf](http://www.ey.com/Publication/vwLUAssets/EY-US-GAAP-vs-IFRS-the-basics-2013/$FILE/EY-US-GAAP-vs-IFRS-the-basics-2013.pdf).

61 Bank of England. Last accessed July 6, 2017. ▶ <http://www.bankofengland.co.uk/pr/Pages/default.aspx>.

62 AICPA. "American Institute of CPAs." Last accessed July 21, 2011. ▶ <http://www.aicpa.org/index.htm>.

### 13.4 Analyzing Financial Statements and Valuation of Media Firms

Now that we have the four major financial documents before us, based on established principles and verified by independent accountants, how do we use and interpret them?

Securities analysis uses data from public financial accounting, plus projection into the future and other factors. Securities analysts ask two basic questions when looking at a company. Is the firm financially sound? Is it earning an adequate rate of return? The answers are needed by investors to interpret financial statements and to understand whether the company is a good investment.

Securities analysis values a company from the perspective of an outsider using publicly available information. It is typically performed by outside services, whereas corporate finance is usually conducted by insiders, such as a financial manager. Securities analysis begins with the collection and analysis of public financial data. That data is then projected into the future and other factors are applied.

One methodology of securities analysis is the technical<sup>70</sup> or chart analysis. It uses past stock prices to predict the future rise and fall of securities. This does not take into account the financial health of a particular company, but looks at past patterns and trends to estimate future movements. Technical analysts believe that investors as a whole repeat past behavior and use this information to predict future stock prices. In contrast, fundamental analysis or quantitative analysis use financial statements to value securities. Public information such as assets, debt, equity, and liabilities are used to value investments. Simple calculations are then used to derive a variety of different indicators that give insight into a corporation's strengths, weaknesses, and overall health. In 1934 Prof. Benjamin Graham of Columbia University and David Dodd published the book *Security Analysis*,<sup>70</sup> which laid down the framework for value investing. Value investing uses a fundamental analysis based on a company's financial statements to

measure a company's current condition. Billionaire Warren Buffett has been the most famous of Graham and Dodd's students and disciples.

One study has shown that accounting statements explain about 63% of stock price changes: of this, balance sheets explain 41% and income statements explain 22%.<sup>71</sup> The explanatory value of income statements has declined over time, while balance sheet contributions have increased. (Even so, just about every financial discussion in the press leads with the income statement.) For high-tech firms, the earnings information has a same explanatory weight (23%) as it does for low-tech firms. But balance sheet information for high-tech firms has a weight of 36% versus 43% for low-tech firms.

How important are different accounting statements to an evaluation of a stock? A study of that question differentiates between four stages of analysis: familiarization, exploration, scanning, and reasoning. Familiarization refers to getting to know the company. Exploration refers to directed and targeted search behavior. Scanning is when a person goes through data without looking for anything in particular. The main goal in this type of search is to find something unusual. An example would be going through a company's financial report and finding that a high debt level stands out, raising concerns about the ability to invest and grow. The last concept, reasoning, is reviewing and analyzing information to reach an opinion.<sup>72</sup>

■ Table 13.6 shows the weight given to accounting information by analysts during the evaluation of a stock:

Financial statements are thus especially important during the early stage of familiarization and later for scanning. Ratios seem to be used for a quick selection or exclusion of stocks in the early stage of narrowing the field, but not later. For non-GAAP information, the pattern is the opposite, because obtaining and digesting such information is harder and would be applied toward final decision about an investment.

■ Table 13.6 Contribution of financial information to stock analysts' evaluation

	Familiarizing	Exploring	Scanning	Reasoning
Financial statements	46%	38%	48%	27%
Financial ratios	24%	13%	8%	11%
Non-GAAP information	30%	49%	44%	62%
	100%	100%	100%	100%

Bouwman, Marinus and Paul Frishkoff. "The Relevance of GAAP-based information." *Accounting Horizons* 9, no. 4 (December 1995): 22–26

70 Graham, Benjamin and David Dodd. *Security Analysis*. New York: McGraw-Hill Professional, 2008.

71 Francis, Jennifer, and K. Schipper. "Have Financial Statements Lost Their Relevance." *Journal of Accounting Research* 37, no. 2 (1999): 319–352; Lev, Baruch and Paul Zarowin. "The Boundaries of Financial Reporting and How to Extend Them." *Journal of Accounting Research* 37, no. 2 (1999): 353–385.

72 Bouwman, Marinus and Paul Frishkoff. "The Relevance of GAAP-based information." *Accounting Horizons* 9, no. 4 (December 1995): 22–26.

### 13.4.1 Ratios and Metrics

Analysts use equations and ratios to compare a firm's performance over time and in comparison with others. Such ratios are published in many financial databases. For example, average ratios for industries are found in *Risk Management Association's Annual Statement Studies*. That report compares data that comes directly from the financial statements of 150,000 small to mid-size companies across 600 industries.

Several ways exist to use ratios:

- comparisons among industries;
- comparisons within industries to other companies;
- comparisons among years, for the same company;
- comparison with target.

There are several basic categories of ratios, and within such categories there are several types. They are:

1. liquidity ratios;
2. leverage ratios;
3. financial ratios;
4. performance ratios;
5. growth rates;
6. customer measures;
7. marketing effectiveness ratios;
8. measures of innovation;
9. social accounting measures.

They will now be discussed.

#### 13.4.1.1 Liquidity Ratios

Liquidity ratios are used to measure a company's ability to pay current liabilities with current assets. A company's ability to convert short-term assets into cash to cover debts is important. Bills need to be paid. A commonly used liquidity ratio is the current ratio.

It is defined as:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The lower the ratio, the less likely a company is to be able to pay its debt obligations.<sup>73</sup> Generally, this ratio should be above 1.5.

In 2001, Microsoft had \$39.6 billion in cash and short-term investments (current assets). Compare this with the company's debt: Microsoft has no long term debt and its short-hand term (current) liabilities equaled \$11.1 billion.<sup>74</sup> Microsoft's current ratio was hence  $\$39.6/\$11.1 = 3.3$ . A ratio over 3 would normally indicate too much cash. Microsoft's balance sheet shows over three times the amount of cash necessary to pay off current liabilities and long term debt. Why isn't Microsoft putting this money to work? Unless it is saving

resources in order to launch new products, build new production facilities, or make major corporate acquisitions, a current ratio this high usually shows that management is not using cash very efficiently.

Liquidity ratios such as the current ratios should be monitored for changes, but it is usually only in periods of very low or very high ratios that these numbers can signal major problems for a firm.<sup>75</sup> One scenario is that the firm faces a slump in the general business cycle, and liquid assets are low while liabilities are high.

### Case Discussion

#### Liquidity Ratios

Disney's current ratio for 2004 was 0.89.<sup>76</sup> In comparison, its peer company Time Warner's current ratio was 0.98.<sup>77</sup> The industry average ratio for that year was 1.0. Disney's current ratio was thus below the industry average, suggesting a below average ability to meet its short term debts. Below a ratio of about 1, a company likely faces some difficulty in meeting its debt obligations for the short term (one year or less). Disney was slightly below that line.

### Leverage and Solvency Ratios

Solvency and leverage ratios are used to measure a company's ability to pay its long-term debt and thus avoid bankruptcy. These metrics determine if a company has overextended itself through an excess of debt.

Leverage ratios measure how much of the company's financing is supplied by the owners and how much by the creditors.

Two of the most common measures are the debt to equity ratio, and the interest coverage ratio.

#### Debt to Equity Ratio (Debt Load)

A company's relative debt load is measured, in particular, by the Debt/Equity ratio:

$$\text{Debt To Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Total Equity}}$$

A related measure is the Debt to Capitalization Ratio

$$\text{Debt / Capitalization Ratio} = \frac{\text{Long Term Debt}}{\text{Long Term Debt} + \text{Shareholders Equity}}$$

73 Labyrinth Inc. "How do we interpret our financial statements?" 2005. Last accessed July 29, 2011. ► [www.labyrinthinc.com/SharedContent/SingleFaq.asp?faqid=58](http://www.labyrinthinc.com/SharedContent/SingleFaq.asp?faqid=58).

74 Kennon, Joshua. "Analyzing a Balance Sheet." *About*. 2002. Last accessed July 29, 2011. ► <http://beginnersinvest.about.com/library/lessons/nlesson3.htm>.

75 University of Notre Dame. "Financial Ratio Explanations." Last accessed July 18, 2011. ► <http://www.nd.edu/~mgrecon/simulations/micromaticweb/financialratios.html>.

76 YCharts. "Walt Disney Current Ratio (DIS)." Last accessed July 6, 2017. ► [https://ycharts.com/companies/DIS/chart/#/?format=real&units=&maxPoints=720&securityId=include:tr ue;id:DIS,&endDate=&displayTicker=false&quotes=&correlations=&securitylistSecurityId =&calcs=include:true;id:current\\_ratio,&zoom=&startDate=&recessions=false&chartView= &splitType=single&scaleType=linear&securitylistName=&securityGroup=](https://ycharts.com/companies/DIS/chart/#/?format=real&units=&maxPoints=720&securityId=include:tr ue;id:DIS,&endDate=&displayTicker=false&quotes=&correlations=&securitylistSecurityId =&calcs=include:true;id:current_ratio,&zoom=&startDate=&recessions=false&chartView= &splitType=single&scaleType=linear&securitylistName=&securityGroup=)

77 YCharts. "Time Warner Current Ratio (TWX)." Last accessed June 9, 2011. ► [http://ycharts.com/companies/TWX/current\\_ratio](http://ycharts.com/companies/TWX/current_ratio).

A ratio of 1.0 would mean 100% of the assets are financed by debt.<sup>78</sup>

The company's total debt, both short and long term, is divided by the amount of owner's equity. The ratio is known as the company's leverage. If the ratio is below 1.0, the firm owns more than it owes. Generally, a company with a debt to equity ratio of over 0.4 or 0.5 is highly leveraged.<sup>79</sup>

The debt to equity ratio helps give investors an idea as to whether a company can service their debt. If a company has a high debt to equity ratio within an industry this should raise a red flag, especially if interest rates are on the rise or if the company's cash flow shows volatility.

## Case Discussion

### Disney Debt Load

Disney's debt to equity ratio in 2004 was 0.27.<sup>80</sup> In 2016 it was a much higher 0.47. In comparison, Time Warner's debt to equity ratio in 2004 was 0.37. The media industry's average ratio in 2004 was 0.35, somewhat higher than Disney's. But for the overall corporate economy debt was much higher. For the Standard & Poor (S&P) 500 index companies, the average debt to equity ratio was 0.85 in 2004. In comparison, Disney was not highly leveraged in that year.

## Interest Coverage Ratio

The interest coverage ratio is a measurement of the number of times a company could make its interest payments with its earnings before interest and taxes (EBIT). The lower the ratio is, the higher the company's debt burden. The interest coverage ratio is calculated by dividing EBIT by the total interest expense.<sup>81</sup>

$$\text{Interest Coverage Ratio} = \frac{\text{EBIT}}{\text{Interest Expense}}$$

The lower the proportion, the more the company is weighed down by debt expense. An interest coverage ratio below 1.0 indicates that the business does not generate the cash necessary to pay its interest obligations. A ratio below 1.5 is considered risky.

## Case Discussion

### Leverage and Solvency Ratios

For the 2004 fiscal year, Disney's EBIT was \$4.4 billion,<sup>82</sup> and interest expenses were \$624 million.<sup>83</sup>

$$\text{Interest Coverage Ratio} = \frac{4.4 \text{ billion}}{624 \text{ million}} = 7.1x.$$

Disney has a strong interest coverage ratio of 7.1, indicating ease in servicing its debt. This ratio is higher than the 4.9 average for the media entertainment industry and for the S&P 500 average. This ratio means that Disney can pay its interest roughly seven times over with its earnings in one year.

## 13.4.1.2 Financial Measures

### Cash Flow

Conceptually, most companies are initially analyzed in terms of what a buyer might be willing to pay for the right to obtain access to the cash flow of an enterprise.<sup>84</sup> The cash flow is represented by cash receipts minus cash disbursements for a given period. Operating cash flow (OCF) is the difference of revenues minus operating expenses. A firm may have positive earnings but a negative cash flow. This could be due to high debt payments, which offsets the positive results of operation. It could also be due to aggressive accounting of earnings and depreciation.

The free cash flow (FCF) is the OCF minus capital expenditures. A firm may have a negative FCF but still do well if it is making productive investments.

Average Revenue per User Metrics similar to cash flow that are used to analyze media companies include the average revenue per user (ARPU).

$$\text{ARPU} = \frac{\text{Overall Revenue}}{\text{Subscriber Count}}$$

In the analysis of a mobile telecom company, for example, the company's ARPU is compared with the industry average.

### The P/E Ratio

The price/earnings ratio (P/E ratio) is the ratio of the company's current market value to its annual earnings (profits after tax and preferred dividends).

$$\text{P/E} = \frac{\text{Market Value Per Share}}{\text{Earnings Per Share}}$$

78 Herrick, Dennis. *Media Management in the Age of Giants*, 2nd ed. Albuquerque: University of New Mexico Press, 2012.

79 Kennon, Joshua. "Analyzing a Balance Sheet." *About*. 2002. Last accessed July 29, 2011. ► <http://beginnersinvest.about.com/library/lessons/nlesson3.htm>.

80 Wikinvest. "Walt Disney Company." 2004. Last accessed July 6, 2017. ► [http://www.wikinvest.com/stock/Walt\\_Disney\\_Company\\_\(DIS\)/Data/Debt\\_to\\_Equity/2004](http://www.wikinvest.com/stock/Walt_Disney_Company_(DIS)/Data/Debt_to_Equity/2004).

81 Kennon, Joshua. "Analyzing an Income Statement." *About*. 2002. Last accessed July 29, 2011. ► <http://beginnersinvest.about.com/library/lessons/nlesson4.htm>.

82 YCharts. "Disney Financial Data." Last accessed July 6, 2017. ► [https://ycharts.com/financials/DIS/income\\_statement/annual/2](https://ycharts.com/financials/DIS/income_statement/annual/2).

83 Walt Disney Company. 2004 Disney Annual Report. December 9, 2004. Last accessed July 6, 2017. ► [https://ditm-twdc-us.storage.googleapis.com/ar\\_2004.pdf](https://ditm-twdc-us.storage.googleapis.com/ar_2004.pdf).

84 Stickney, Clyde and Roman Weil. *Financial Accounting: An Introduction to Concepts Methods and Uses*. New York: Dryden Press, 2000.

The P/E ratio measures the company's current market value per share relative to annual earnings (profits after taxes per share). This is a key valuation tool. However, while P/E ratios are available for traded companies whose stock price can be readily sold, they do not exist for untraded privately held companies, such as internet start-ups which have no market price P.<sup>85,86</sup>

The P/E ratio reflects the value the market has placed on a common stock. A high P/E, of 25 or above, means the market places a high expectation of future growth in the company's earnings. From 1996 to 2007, Disney had much higher average annual P/E ratios than the average S&P (Standard & Poor's 500 stock index companies) P/E ratio, which was around 26.3 over that period. In 2014, Disney had a P/E ratio of 22.3, lower than rival Time Warner (26.8) and the media industry average (26.3). For the years 1989–2007, Disney's P/E ratios ranged from 6.1 (1990) to 46.0 (2000), dropping to 17.8 (2007) and 16.4 (2018).

A high P/E ratio may also mean that the market is overvaluing the stock, or stocks in general. But it is also possible that earnings have dipped briefly owing to factors which the investors believe are temporary. A P/E can be high if the expected annual growth rate of profits is high, for example if the firm operates in a market niche with strong growth potential.

Similarly, a low P/E ratio may mean that a company is being undervalued, or that future prospects for a company are not promising and are affecting market confidence in the stock. A P/E ratio can be high if the expected annual growth rate of profits is high, for example if the firm operates in a market niche with strong growth potential.

Many mature industries, such as utilities, will have lower P/E ratios than new tech companies, which may have very high P/E ratios owing to future performance expectations. It is therefore important that P/E ratios be compared across the same industries.

To estimate the value of an untraded company for which no stock prices exist, one can take the expected earnings and multiply them by the P/E ratio of a comparable company or others from the same industry that are traded.

And what if there are also no earnings at all for the company, as is typical for dot-com companies? With neither an "E" or a "P," a P/E ratio does not exist. Thus, valuation must be based on metrics that are not dependent on earnings. These methods include the use of other ratios, such as the

- debt/contributed capital;
- debt/subscriber
- debt/net capital expenditures.

## Market/Book Value Ratio

Price/book (P/B) ratios compare a stock's market value to its book value.

$$\text{Market to Book Value} = \frac{\text{Market Price Per Share}}{\text{Book Value Per Share}}$$

The book value is the net amount of assets shown in the firm's balance sheet—total assets minus total liabilities. A low P/B ratio could mean that the stock is undervalued by the market relative to its assets. A higher P/B ratio implies that investors expect management to create more value from a given set of assets. It may also mean that the market value of the firm's assets is significantly higher than their accounting value. It may also mean that the assets were acquired a long time ago, and their value today is much higher.

The book value has less relevance to the evaluation of many media firms since much of earnings power is down to intangibles such as copyrights and patents that were created and booked as expenses rather than capital assets. If shown as assets, the company's book value would show a much greater value, and the ratio would be higher.

## Case Discussion

### Financial Ratios

In 2000, with the stock market booming, Disney's M/B value ratio was at its peak with a ratio of 3.36. In FY 2004 it dropped to 2.11, and to 1.85 in 2005. (Book value per share \$13.18, market value per share \$27.88.) In 2016, it was 3.69. Disney has a high P/B ratio in its industry. In 2004 Time Warner's ratio was 1.4 Viacom's was 4.0, and the industry P/B ratio was 1.56.<sup>87</sup> Thus Disney's market value was over twice the book value, and well above the industry average. One reason was that the company's book value does not include most of its intangible assets. Another reason is that investors must believe that its future earnings will be above the industry average (assuming a similar composition of assets.)

### 13.4.1.3 Performance Ratios

If investors in Disney stock want to calculate the opportunity costs of investment, they would select a set of peer stocks and compare the performance of Disney.

## Operating Ratio

The operating ratio shows a company's efficiency by comparing net sales to operating expenses. It is calculated as:

$$\text{Operating Ratio} = \frac{\text{Operating Expenses}}{\text{Operating Revenues}}$$

This ratio measures the company's effectiveness in using resources to run the company's operations. The smaller the

85 There are variations of a P/E ratio. The trailing P/E or TTM (trailing 12 months) P/E ratio uses historical data of the most recent 12 months. Projected P/E or FFO (forward four quarters) P/E ratio uses estimates for the next four quarters of a company's performance for a ratio. A third is a mixture of the senior two, combining the performance of the company for the past two quarters and the estimated performance of the upcoming two quarters to come up with a ratio.

86 Investopedia. "P/E Ratio: Conclusion." Last accessed July 18, 2011. ► <http://www.investopedia.com/university/peratio/peratio5.asp>.

87 Damodaran, Aswath. "Price to Book Ratio by Sector." *New York University*. January 2005. Last accessed July 6, 2017. ► [https://web.archive.org/web/20050305181937/http://pages.stern.nyu.edu/~adamodar/New\\_Home\\_Page/datafile/pbvdata.html](https://web.archive.org/web/20050305181937/http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/pbvdata.html).

rate, the greater the ability to create profits. However, the ratio does not take into account repayment of debt, which is not part of operating expenses. A firm may be efficient by this ratio but still fail if its debt is too high for repayment.<sup>88</sup>

### Operating Margin

Operating margin measures profitability, and shows how much of each dollar of revenue is left over after costs of goods sold and operating expenses are subtracted.

$$\text{Operating Margin} = \frac{\text{Operating Income}}{\text{Net Sales}}$$

Operating income in this equation is revenues from sales minus the cost of the goods sold and operating expenses.

$$\begin{aligned} \text{Operating Income} \\ = \frac{\text{Revenue from Sales} - (\text{Cost of Goods Sold} + \text{Operating Expenses})}{\text{Net Sales}} \end{aligned}$$

For example, if a firm's operating margin is 15% (0.15), it is earning 15 cents on each dollar of sales. Note that this performance does not include interest payments, taxes, or one-off special events.

### Total Assets Turnover Ratio

The total assets turnover ratio measures a firm's ability to generate sales from its assets. It is defined as:

$$\text{Total Assets Turnover Ratio} = \frac{\text{Sales}}{\text{Total Assets}}$$

#### 13.4.1.4 Profitability Ratios

##### Profit Categories

Profitability ratios show how successful a company is returning profits on its investment. Profit margin =  $\frac{\text{Profit}}{\text{Revenue}}$ .

Before delving into the profitability ratios, it is useful to define the different categories of profits. Generally, the terms income, earnings, and profits are used synonymously.

Profitability "margins" are the several profit definitions, which are in monetary units, expressed as a percentage of revenues. They show a firm's ability to produce earnings during that period, and are an important benchmark against other companies in the industry. Depending on the definition of profit these measures are either gross margin, operating profit margin, pretax margin, or net profit margin. The latter—arguably the most meaningful measure—is also described as profit margin.

##### Profit Categories

- Revenues (net sales, aka the "top line")
  - minus cost of goods sold (materials and labor for production)
- = Gross profit
  - minus selling, general, and administrative (SG&A) expenses, that is, the costs of operating the company)
  - minus R&D
- = EBITDA (earnings before interest, taxes, depreciation, and amortization<sup>89</sup>)
  - minus depreciation and amortization
- = operating profit (aka EBIT)<sup>90</sup>
  - minus interest expense
- = pretax profit (EBT)
  - minus tax
- = net profit (earnings after tax, EAT, aka the "bottom line")

### Case Discussion

#### Profit Margins: Disney Versus Time Warner

The figures in Table 13.7 show that Disney outperformed, based on net profits, its rival Time Warner. However, Disney was even with the industry and slightly trailed behind the S&P 500.<sup>91</sup> Over the five-year average of net profit margin, Disney significantly outperformed its rival Time Warner as well as the industry (both of which had negative averages). But the S&P 500 outperformed Disney (slightly) and the industry (greatly). This suggests problems in the media industry relative to the rest of the economy. It also indicates a strong profit performance by Disney.

#### 13.4.1.5 Return on Assets, Investment, and Equity

Whereas the preceding section looked at a firm's performance relative to its sales—profit per dollar of sales—a firm's success ultimately lies in its profitability relative to its assets, or its investment, or of the capital contributed by investors.

##### Return on Assets

The ROA is net income divided by average total assets.

$$\text{Return on assets (ROA)} = \frac{\text{Net Income}}{\text{Total Assets}}$$

It shows profit for each dollar in assets and relates the operating performance to investments of a firm, independent of the financing used in the acquisition of assets (i.e. whether

88 Stickney, Clyde and Roman Weil. *Financial Accounting: An Introduction to Concepts Methods and Uses*. New York: Dryden Press, 2000.

89 A new measure is ACSOI "adjusted consolidated segment operating income," which treats a company's marketing-related expenses as an investment which is being amortized over several years. It therefore deducts only a portion of such expenses, and is hence higher than EBITDA. This is discussed further below.

90 Assumes no investment income.

91 Disney's gross profit margins are lower than those of its peers and of the S&P companies, which might be due to its relatively high cost of goods sold owing to an expensing of some activities rather than capitalizing and depreciating them over time.

Table 13.7 Profit margins of Disney in comparison (2004)

	Disney	Time Warner	Industry	S&P 500
Gross Margin	13.2%	42.0%	37.0%	49.3%
Pretax Margin	13.1%	11.6%	11.9%	12.8%
Net Profit Margin	8.3%	7.9%	8.3%	10.0%
Operating Margin	12.9%	14.3%	14.9%	13.2%
5-Year Average Gross Margin (2005–2009)	16.0	54.8	41.4	47.1
5-Year Average Pretax Margin (2005–2009)	9.6	–16.9	–5.3	9.8
5-Year Average Net Profit Margin (2005–2009)	5.4	–19.9	–9.4	6.3
5-Year Average Operating Margin	16.2%	9.3%	16.1%	12.5%

Table compiled using company information obtained at YCharts. “Walt Disney Company (DIS).” Last accessed July 6, 2017. ▶ <https://ycharts.com/companies/DIS>; YCharts. “Time Warner (TWX).” Last accessed July 6, 2017. ▶ <https://ycharts.com/companies/TWX>. Industry and S&P 500 information obtained from CSI Market. “Industry Profitability Ratio.” Last accessed July 6, 2017. ▶ [http://csimarket.com/Industry/industry\\_Profitability\\_Ratios.php?ind=902](http://csimarket.com/Industry/industry_Profitability_Ratios.php?ind=902); CSI Market. “Industry Growth Rates.” Last accessed July 6, 2017. ▶ [http://csimarket.com/Industry/industry\\_growth\\_rates.php?rev&](http://csimarket.com/Industry/industry_growth_rates.php?rev&).

equity or debt).<sup>92</sup> The ROA also shows the asset-intensity of a business.

However, a high percentage of a media or tech company’s assets is intangibles, much of uncertain value. Thus, in the case of Disney or Time Warner where maybe 80% of assets are intangibles, looking at such metrics as ROA and ROI will not provide good information. In these situations, it would be more useful to look at the company’s cash flows, subscriber numbers, or other “hard” measures to get a better idea of performance.

### Return on Investment

A firm’s ROI is a measure to compare the profitability of a firm’s specific business project, or of an investor’s return for her investment. It is basically the profit rate for the investment, the “bang for the buck.” It measures the efficiency of the investment in terms of profits relative to investment.

$$\text{Return on Investment (ROI)} = \frac{\left( \frac{\text{Net Income} + \text{Interest Expense}}{\text{Total Assets}} \right)}{\text{Total Assets}}$$

### Return on Equity

Return on equity (ROE) is the ratio of net income to the book value of the shareholders’ equity in the company. Shareholder’s equity is equal to total assets minus total liabilities. The ROE represents how well the company has done for its shareholders, and how effectively shareholders’ investment is being used.

$$\text{ROE} = \frac{\text{Net Income}}{\text{Shareholders' Equity}}$$

For most of the twentieth century the return on equity for the stocks in the S&P 500 index was 10–15%, but in the 1990s that percentage jumped to 20%.<sup>93</sup> With the financial downturn in 2007/2008 things changed again. From 2007 to 2016 the return on equity in the S&P 500 was 8.75%.<sup>94</sup>

### Case Discussion

#### ROE, ROA

Table 13.8 displays the investment returns for Disney in FY 2004 and compares them with those of Time Warner, the industry, and the S&P 500.

Disney performed well when compared with its competitor Time Warner and with the media industry as a whole, in both ROA and ROE. It underperformed, however, when compared to the S&P 500. The media industry, the data shows, has a lower return on equity and on assets than other components of the S&P 500.

#### 13.4.1.6 Growth Trends

Balance sheets are a snapshot in time. In contrast, P&L statements are the results for a period of time—typically a year or a quarter. What investors are often looking for is a trend. This has two dimensions: a growth rate and its volatility.

92 Stickney, Clyde and Roman Weil. *Financial Accounting: An Introduction to Concepts Methods and Uses*. New York: Dryden Press, 2000.

93 Morningstar. “Walt Disney Co.” Last accessed July 6, 2017. ▶ <http://financials.morningstar.com/income-statement/is.html?t=DIS>.

94 YCharts. “S&P 500 Total Return.” Last accessed July 6, 2017. ▶ [https://ycharts.com/indicators/sandp\\_500\\_total\\_return\\_annual](https://ycharts.com/indicators/sandp_500_total_return_annual).

Table 13.8 Returns of Disney in comparison

Investment Returns %	Disney	Time Warner	Industry	S&P 500
Return On Equity	8.9%	5.2%	3.2%	12.2%
Return On Assets	4.2%	2.4%	2.9%	2.8%
5-Year Average Return On Equity	4.4%	−15.9%	0.1%	13.8%
5-Year Average Return On Assets	2.1%	−9.9%	−3.7%	7.5%

Table compiled using company information obtained at YCharts. “Walt Disney Company (DIS).” Last accessed July 6, 2017. ► <https://ycharts.com/companies/DIS>; YCharts. “Time Warner (TWX).” Last accessed July 6, 2017. ► <https://ycharts.com/companies/TWX>. Industry and S&P 500 information obtained from CSI Market. “Industry Profitability Ratio.” Last accessed July 6, 2017. ► [http://csimarket.com/Industry/industry\\_Profitability\\_Ratios.php?ind=902](http://csimarket.com/Industry/industry_Profitability_Ratios.php?ind=902); CSI Market. “Industry Growth Rates.” Last accessed July 6, 2017. ► [http://csimarket.com/Industry/industry\\_growth\\_rates.php?rev&](http://csimarket.com/Industry/industry_growth_rates.php?rev&)

Companies, especially publicly traded companies, seek a decent-sized growth rate but also that it be stable. Meeting the expectations of investors and analysts helps ensure a favorable stock price by lowering the riskiness of a stock. To maintain this stable income and growth rate over several time periods, companies use an “accounting cushion” in which they overstate liabilities in strong years and then overstate the income in a weak period.

## Case Discussion

### Growth Rates

Disney’s sales growth (Table 13.9) over the year preceding the confrontation over CEO Eisner was about even with Time Warner’s (3.8% versus 3.7%), and much better than the industry average of −4.5%, but it was lower than the S&P 500 companies (13.0%). More importantly, Disney’s net income (profits) rose by 8.0% whereas Time Warner’s dropped by 13.6%. Disney’s annual average five-year growth (2001–2005) rate in net income was very high at 35.1% and should have made its shareholders happy with management. To put this in perspective, however, S&P performance was even higher, which can be explained by the year 2001 being a recession year and hence a low base for any subsequent income growth calculation.

### 13.4.1.7 Subscriber Count Measures

An evaluation of a company can be based on the number of its subscribers or customers multiplied by a “rule of thumb” or benchmark multiplier used in that industry for the value of such a subscriber. In the cable industry the subscriber count is an important metric, partly because it is simple. For that reason, companies such as Adelphia or AOL inflated subscriber counts to look better to investors. AOL sold internet service to large organizations at a “bulk program” for as little as \$1 a month. These companies then offered such subscriptions to their employees as a benefit. AOL reported these transactions as fee subscriptions, even though many of these subscriptions were never activated, and if they were

used they did not generate profits. Such transactions added 830,000 “subscribers” to AOL’s count in 2001 and 2002.<sup>95</sup>

Newspapers and magazines use circulation count for the prices they charge advertisers. This, in turn, affects revenues and investors assessments of the publishing firms. To prevent overstating subscriber counts, newspapers and magazines established a circulation auditing system,<sup>96</sup> known generically as an Audit Bureau of Circulation (ABC), to verify the self-reported circulation of magazines and newspapers. But even with such an auditing system, some newspapers inflated their claimed circulation counts. In the telecom field, too, the number of subscribers carries much weight and carriers exaggerated. In 2004, the US government asked the major US telecom companies to explain their methodology for counting access lines and subscribers. The goal was to provide guidance on how to standardize customer count—considered a crucial business metric.<sup>97</sup> Under two weeks later, Verizon reported that it had overstated its number of long-distance lines by 1.5 million, attributing the overestimation to a database issue unrelated to the inquiry.<sup>98</sup>

In 2010, the Hong Kong based conglomerate and mobile telecom owner Hutchison admitted to the Irish government’s Commission for Communications Regulation that it had been overstating its subscriber base since 2006.<sup>99</sup> Hutchison had reported its subscriber base as 554,000 but only 56% of these were actually “active.”<sup>100</sup>

95 Teather, David. “AOL Accounting Inquiry Widened.” *The Guardian*. July 30, 2003. Last accessed July 6, 2017. ► <https://www.theguardian.com/technology/2003/jul/31/business.onlinesupplement>.

96 Steinberg, Jacques. “Newspapers Create New Safeguards After Circulation Scandals.” *New York Times*. October 25, 2004. Last accessed July 6, 2017. ► <http://www.nytimes.com/2004/10/25/business/media/newspapers-create-new-safeguards-after-circulation-scandals.html>.

97 Fitchard, Kevin. “SEC Opens Inquiry into Carrier Math.” *Connected Planet*. July 12, 2004. Last accessed February 18, 2011. ► [http://connectedplanetonline.com/broadband/print/telecom\\_sec\\_opens\\_inquiry\\_2/](http://connectedplanetonline.com/broadband/print/telecom_sec_opens_inquiry_2/).

98 Stern, Christopher. “SEC Examines Telecom Firms’ Calculations of Total Customers.” *The Washington Post*. July 3, 2004. Last accessed October 31, 2011. ► <http://www.washingtonpost.com/ac2/wp-dyn/A24592-2004Jul2>.

99 Commission for Communications Regulation. “Quarterly Key Data Report Information Notice.” August 19, 2010. Last accessed July 6, 2017. ► [http://www.comreg.ie/fileupload/publications/ComReg\\_1065.pdf](http://www.comreg.ie/fileupload/publications/ComReg_1065.pdf).

100 Mansfield, Ian. “Hutchison 3G Ireland Overstating Subscriber Base.” *Cellular News*. August 24, 2010. Last accessed June 22, 2011. ► <http://www.cellular-news.com/story/44997.php>.

Table 13.9 Disney growth rates

Growth Rates % (2005 versus 2004)	Disney <sup>a</sup>	Time Warner <sup>b</sup>	Industry <sup>c</sup>	S&P 500 <sup>d</sup>
Sales (2005 versus 2004)	3.8%	3.7%	−4.5%	13.0%
Net Income	8.0%	−13.6%	209.2%	32.0%
Sales (5-Year Annual)	4.9%	16.3% (14.7% after AOL merger)	0.4	19.4%
Net Income (5-Year Annual)	35.1%	30.4%	N/A	48.3%
Dividends (5-Year Annual)	2.9%	(0.0%) Not Offered	−1.92	8.4%

<sup>a</sup>YCharts. “Walt Disney Company (DIS).” Last accessed July 6, 2017. ► <https://ycharts.com/companies/DIS>

<sup>b</sup>YCharts. “Time Warner (TWX).” Last accessed July 6, 2017. ► [https://ycharts.com/companies/TWX/net\\_income\\_ttm](https://ycharts.com/companies/TWX/net_income_ttm)

<sup>c</sup>CSI Market. “Broadcasting Media & Cable TV Industry.” Last accessed July 6, 2017. ► [http://csimarket.com/Industry/industry\\_growth\\_rates.php?net&ind=902](http://csimarket.com/Industry/industry_growth_rates.php?net&ind=902)

<sup>d</sup>CSI Market. “S&P 500 Net Income Growth.” Last accessed July 6, 2017. ► [http://csimarket.com/Industry/industry\\_growth\\_rates.php?net&](http://csimarket.com/Industry/industry_growth_rates.php?net&)

The online environment is full of numbers that purport to measure subscribers, users, clicks, visitors, and so on. Such numbers and their trends greatly affect investors’ evaluation of these companies. In some cases, the numbers are based on third-party measuring services such as ComScore or Experian Hitwise, using large panels in “user-based” methodologies. But in many instances the numbers are self-reported in “site-based” counts of often dubious quality. That is even more the case for subscriptions. Here, even the definition is quite flexible. For additional detail, see ► Chap. 9 Demand and Market Research for Media and Information Products.

### 13.4.1.8 Non-Financial Business Metrics

Not all metrics to judge a firm’s performance are financial in nature. Non-financial information about a company can be used along with income and cash flows to provide a better picture of a company’s performance. Non-financial measures include:

- customer churn;
- return rate of products and defect rate;
- customer reorder rate;
- the quit rate of the workforce;
- new patents;
- the share of sales from new products;
- the ratio of patents to research and development (R&D) expenses;
- average time to present the product into the market;
- the conversion rate from solicitations to sales;
- cost of acquisition per new customer acquired.<sup>101</sup>

These non-financial measures are not often used. Companies are reluctant to report some of this data. Even when it is favorable, they fear being locked into the future release of

unfavorable data, or to become liable for erroneous numbers, or to reveal information to competitors and negotiating partners. However, there is a push to disclose such information to investors, coupled with a “safe harbor” shield against liability resulting from the disclosure of non-traditional information.

### 13.4.1.9 Social Accounting

Social accounting—also known as social auditing, social reporting, ethical accounting, or triple-bottom line—is a way of measuring and reporting on an organization’s social, environmental and ethical performance.<sup>102</sup> Social accounting aims to bring quantitative measures to socially beneficial activities, based on the concept that “if you can’t measure it, you can’t manage it.”<sup>103</sup>

There are many different techniques for looking at the social impact of an organization. Some are quantitative, some use benchmarking, and others are more in the nature of inspired—or inspiring—story-telling, and still others are a public relations effort.

The steps to conduct social accounts are:

1. identify the firm’s stakeholders;
2. establish indicators, information, benchmarks, and targets
3. put into place data gathering systems;
4. analyze and interpret results;
5. use an external verification process;
6. disclose information;
7. act on the results.

None of these steps is simple in concept, definition, data availability, or valuation. Yet the process may help a company’s

<sup>102</sup> Social Audit Network. “What is social accounting and audit?” Last accessed July 6, 2017. ► <http://www.socialauditnetwork.org.uk/getting-started/what-is-social-accounting-and-audit/>.

<sup>103</sup> Norman, Wayne and Chris MacDonald. “Getting to the Bottom of ‘Triple Bottom Line.’” *Business Ethics Quarterly* 14, no. 2 (April 2004): 243–262.

**Table 13.10** Social Accounting Targets

Commitments	Metrics
Corporate philanthropy goals	Amount of money given; Hours volunteered
Environmental sustainability principles	Tons of solid waste going to landfill; Carbon emissions
Code of ethics	Number of ethics complaints
Commitment to open communication with stakeholders	Performance records of interaction with major stockholders
Diversity	Employee and management diversity; Vendor diversity; Number of complaints and safeguards

image, marketing, and investor relations. It may also help management in its decision process.

Some items that might be reported in a social accounting are<sup>104</sup>. Listed in [Table 13.10](#).

For example, the Australian bank Westpac developed a set of trends and metrics to measure its non-financial

performance, and briefs analysts to provide a more holistic picture of the company's performance. At the time of its annual report, the bank also issued an extended performance statement of its social, environmental, and workplace performance,<sup>105</sup> to be read in parallel to the traditional financial numbers.

Another banking firm, Citigroup, publishes an annual Citizenship Report, focusing on the three areas—microfinance, financial education, and responsibility to the environment—where the company believes it has made the most progress outside its traditional business.

The number of such social audits has grown but are the exception nevertheless. Even companies with a strong sense of corporate responsibility are reluctant to issue social audits because they fear that this can expose them to unwanted negative media coverage and criticism from stakeholder groups.<sup>106</sup> Another reason is that many of the dimensions of social accounting are hard to define, measure, quantify, and value. But as information technology spreads into all aspects of economic and social life, it will become easier to track the impacts of a company's activities in new ways, both by the company itself and by outside groups and governments.

A related approach, more modest in scope, is environmental/full cost accounting (FCA). This is a system that capture environmental costs. FCA can be applied on the level of an individual, a product, a division, a facility, or an entire company.

## Case Discussion

### Excerpts from Disney's Citizenship Report

"Message from Our CFO  
Dear Stakeholders:

In addition to overseeing the Company's finances the Chief Financial Officer of The Walt Disney Company is also responsible for leading our citizenship efforts, because corporate citizenship is embedded into our everyday actions and decisions. It allows us to integrate our work in citizenship with the financial strength of the Company, ultimately driving greater shareholder value.

I am happy to report that 2012 was not only another year of record financial results for Disney, it was also a banner year for our citizenship performance. We became the first major media company to build upon our landmark nutrition guidelines, and introduced food advertising standards for kids. We reduced our net direct and indirect greenhouse gas emissions, achieving our targets for the year and taking another major step forward in our efforts to reduce

the Company's impact on climate change. We also implemented new policies to reduce the risk for workers and families along our extended supply chain.

We are proud of the progress we have made against these targets. The following [Table 13.11](#) and [Fig. 13.1](#)<sup>107</sup> outlines our 2012 performance on the 65 citizenship targets:

- Examples of these projects include:
- A groundbreaking, play-based curriculum that transforms unstructured recess time into engaging learning time for **179,000 kids** across the USA.
  - A new creative learning program in China serving more than 68,000 rural children in grades 3–5.
  - A creativity lab themed in virtual worlds reaching 450 kids in the USA and around the world.
  - A theater program that brings Disney licensed musicals into underserved

schools in Nashville, TN, allowing 305 kids, their teachers, and their families to participate in all aspects of production.

- A hands-on afterschool learning laboratory for more than 300 kids from disadvantaged populations in Los Angeles, CA.<sup>108</sup>

In conclusion, it can be seen that Disney's *Citizenship Report* shows a substantial effort to identify, structure, and monitor the company's social performance. In addition to being a sign of social responsibility as a company value, the effort also helps the company to buttress a wholesome family-oriented image. As one can expect in a document driven by that goal, the positive dimensions of Disney social contributions are listed while negatives are mostly left out. That said, Disney's report is impressive and stands out among large corporations.

104 Zadek, Simon. "Social Auditing." *The New Economics*. June 1995. Last accessed July 29, 2011. <http://www.fpm.com/script/UK/Jun95/social.htm>.

105 Kukec, Sonja. "Accounting for the Non-tangibles." *Charter*. Feb 2007. Last accessed July 29, 2011. <http://proquest.umi.com/pqdweb?index=0&did=1230208461&SrchMode=1&sid=1&Fmt=4&Inst=PROD&VType=POD&RQT=309&VName=PQD&TS=1175789598&clientid=15403>.

106 Zadek, Simon. "Social Auditing." *The New Economics*. June 1995. Last accessed July 29, 2011. <http://www.fpm.com/script/UK/Jun95/social.htm>.

107 Disney FY12 Citizenship Report. Retrieved from [https://ditm-twdc-us.storage.googleapis.com/FY12DisneyCitizenshipSummary\\_FINAL\\_0.pdf](https://ditm-twdc-us.storage.googleapis.com/FY12DisneyCitizenshipSummary_FINAL_0.pdf).

108 Disney FY12 Citizenship Report. Retrieved from [https://ditm-twdc-us.storage.googleapis.com/FY12DisneyCitizenshipSummary\\_FINAL\\_0.pdf](https://ditm-twdc-us.storage.googleapis.com/FY12DisneyCitizenshipSummary_FINAL_0.pdf).

Table 13.11 Disney social accounting report<sup>a</sup>

Status	Completed	On Track	Getting Started	Did Not Achieve
Total	15	43	5	2
Target		Status	Summary	
By 2020, contribute more than 5 million hours of employee community service through the Disney VoluntEARS program			In 2012, Disney employees volunteered more than 586,000 hours through the Disney VoluntEARS program.	
By 2014, set a baseline for the percentage of employees who volunteer at least one hour of service annually in the VoluntEARS program			We identified a system to help track participation that will be implemented by 2014.	
By 2020, positively impact the lives of 10 million children and families in need			In 2012, we reached over 563,000 kids and families in need through a variety of efforts.	
By 2014, donate 18 million books to organizations that provide new books to children in need			In 2012, we donated more than 8 million books.	
By 2012, engage over 4 million players through online games to raise awareness of, and encourage participation in, giving to people and the planet			In 2012, we engaged more than 2.4 million players through our Pixie Hollow and club Penguin properties, but we did not achieve this target.	

<sup>a</sup>Disney FY12 Citizenship Report. Retrieved from ► [https://ditm-twdc-us.storage.googleapis.com/FY12DisneyCitizenshipSummary\\_FINAL\\_0.pdf](https://ditm-twdc-us.storage.googleapis.com/FY12DisneyCitizenshipSummary_FINAL_0.pdf)

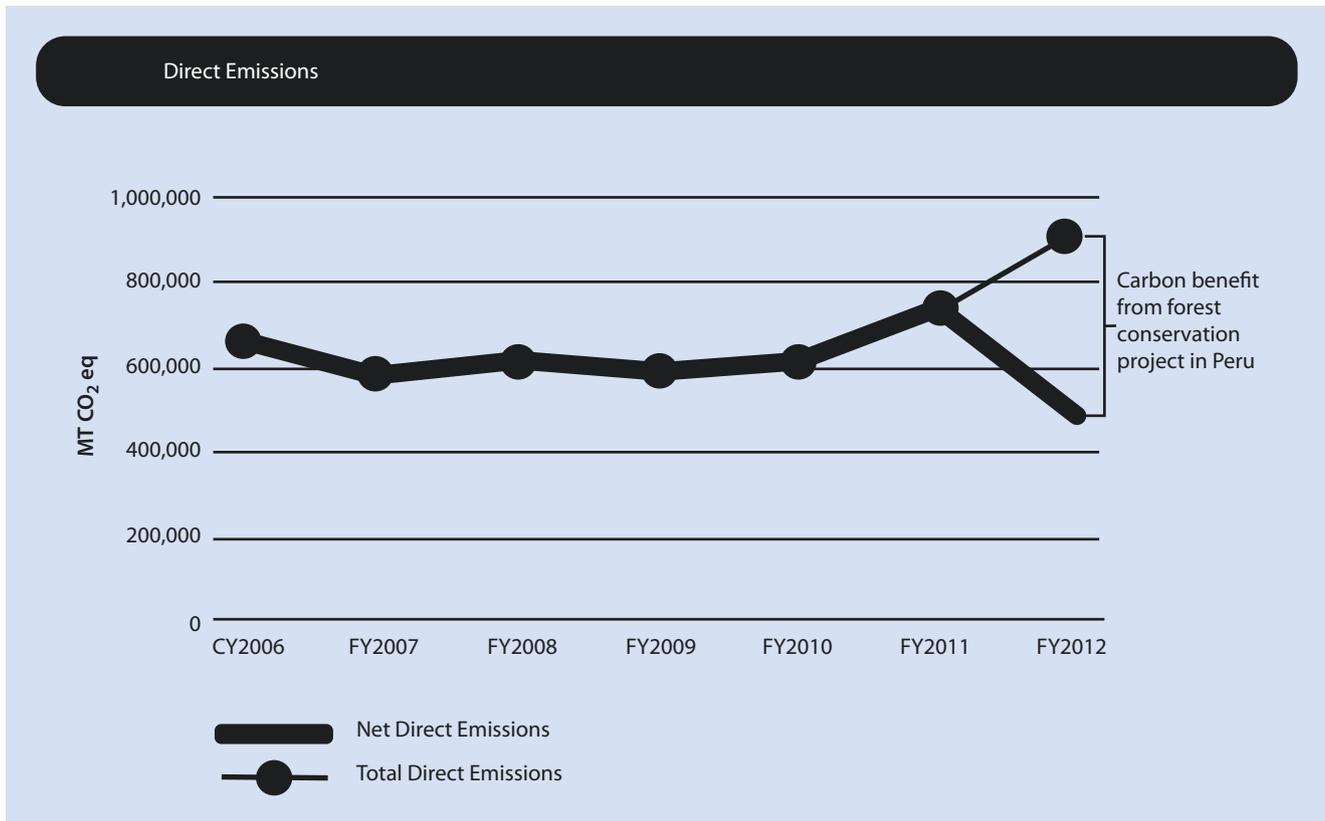


Fig. 13.1 Disney social accounting—carbon footprint

## 13.5 The Valuation of Media Properties

Investment guru Warren Buffett once said: “If I were teaching an MBA class on finance, the final exam would be one question: how do you value an internet company? Anyone who turned in an answer would fail the exam.”<sup>109</sup>

How, in general, are companies valued? To investors this is a critical question. There are several techniques. They include:

- historic cost;
- book value;
- replacement cost;
- discounted cash flow;
- market price (comparable transactions);
- comparable company value;
- multiples of revenues and earnings;
- stock price history;
- option value of investment.

Some of these approaches will now be discussed.

### 13.5.1 Cost Approaches

Cost approaches include book value or historic cost, with the value of a company computed as the sum total of its past investments in assets minus depreciation. Another approach is that of replacement cost—the value of the assets at the price of replacing them today.

There are several disadvantages to the cost approach, including inadequate correlation of cost with value. For example, not all development costs lead to successful inventions or products. But some successful developments are worth a lot more than the cost of creating them.<sup>110</sup> The advantages are that the historic numbers are available to accountants and have a certain “hardness,” and are thus less susceptible to manipulation. (This does not apply to the replacement cost methodology.)

### 13.5.2 Income Approaches

In economic terms, a company can be valued by the income streams that it generates. That, after all, is what most investors seek. Technically, the incomes are discounted so as to include future earnings in a present valuation. Discounting also incorporates the risk factor. The measure of value is the asset’s earnings as related to the imponderables inherent in the business situation. This includes risks of economic, technology, and politics. Such overall risk is reflected in the discount rate of the asset.

The formula for discounted present value is  $NPV = \sum_{t=1}^T \frac{CF_t}{(1+r)^t} - CF_0$ , where T equals the life of the asset,  $CF_t$  equals the cash flow in period t, and r is the discount rate, the investor’s required rate of return, for investments with comparable risk.  $CF_0$  is the investment in period zero itself.

The income approach is suited for intangible assets too. It can be used in for the appraisal of contracts, licenses, royalty agreements, patents, trademarks, copyrights, and franchises.<sup>111</sup>

### 13.5.3 Multiples Approach

One could compare a company whose value is being sought to one whose value is known. In real estate, the value of a house is often based on “comps”—comparable properties that have sold. But what are comparable companies? One way to deal with this question is to make use of the accounting ratios that were described earlier. One takes the financial ratios, and so on, for other companies that are traded in the stock market and hence have a known value based on the collective wisdom of the market, and extrapolates to compute the value of a non-traded firm. Examples of these metrics include the P/E ratio, the ROI, value per subscriber, cash flow multiples, ARPU (average revenue per user) multiples, revenue multiples, and so on. For example, suppose one wants to estimate the value of Company A in Industry X. A is not traded in the stock market. A has earned, on average over the past three years, \$25 per share per year. The average P/E ratio R in the industry X is 10. Then a share of A should be worth, *Ceteris Paribus*,  $P = E \times R = 25 \times 10 = 250$ .

A similar approach can be used for an extrapolation of revenues, subscribers, or ARPU.

Other methodologies include that of looking at the share price of a company over a longer period, and using this as the yardstick for valuation of such a company. This would be most useful where some external shocks or speculation have left that share price temporarily at an atypical level, either very low or very high, for reasons that have little to do with the company itself. Another valuation approach is that of options pricing. That approach is discussed in ► Chap. 4 Technology Management in Media and Information Firms and ► Chap. 7 Intellectual Asset Management.

## 13.6 The Balance Sheet

The balance sheet consists of three main parts: assets, which includes anything of value to the company; liabilities, which include bank loans, mortgages, and bonds the company has issued; and shareholders’ equity.

109 De Figueiredo, John M. “Finding Sustainable Profitability in the E-commerce Continuum.” *Massachusetts Institute of Technology*. July 15, 2000. Last accessed July 7, 2017. ► <http://sloanreview.mit.edu/article/finding-sustainable-profitability-in-electronic-commerce/>.

110 World Intellectual Property Organization. “WIPO National Workshops on Assessment and Valuation of Inventions and Research Results for Technology Transfer and Commercialization.” August 1997. Last accessed July 6, 2017. ► [http://www.wipo.int/edocs/mdocs/innovation/en/wipo\\_avi\\_ph\\_97/wipo\\_avi\\_ph\\_97\\_5.pdf](http://www.wipo.int/edocs/mdocs/innovation/en/wipo_avi_ph_97/wipo_avi_ph_97_5.pdf).

111 World Intellectual Property Organization. “WIPO National Workshops on Assessment and Valuation of Inventions and Research Results for Technology Transfer and Commercialization.” August 1997. Last accessed July 6, 2017. ► [http://www.wipo.int/edocs/mdocs/innovation/en/wipo\\_avi\\_ph\\_97/wipo\\_avi\\_ph\\_97\\_5.pdf](http://www.wipo.int/edocs/mdocs/innovation/en/wipo_avi_ph_97/wipo_avi_ph_97_5.pdf).

Every balance sheet must balance, by definition. The total value of all assets must be equal to the value of all liabilities plus shareholder equity.<sup>112</sup> Equity has two sources: cash contributed by investors in return for stock issued by the company, and retained earnings, which are profits not paid to shareholders as dividends. The company's "book value" is the value of assets minus depreciation minus all intangible items such as intellectual assets and goodwill, and minus all liabilities.

For not-for-profit organizations, the "statement of financial position" is analogous to the corporate balance sheet. The document identifies net asset value instead of stockholder's equities.<sup>113</sup>

Thus the balance sheet shows how much the company owns, how much it owes, and what stockholders own. This report is presented in the annual report to shareholders and in the reports filed with regulatory agencies—in the USA as part of the well-known Form 10(k). The information is made available through the company itself or through financial information databases such as ► [www.SEC.gov](http://www.SEC.gov),<sup>114</sup> ► [www.finance.yahoo.com](http://www.finance.yahoo.com), ► [www.thestreet.com](http://www.thestreet.com), and ► [www.bloomberg.com](http://www.bloomberg.com).

► Table 13.12 provides an example of a balance sheet. The company's total assets, at the end of the year 2016, were \$15,557,000, composed of total fixed assets of \$1,600,000, total current assets of \$6,072,000, and cash in hand of \$7,885,000 (mostly accounts receivable, that is payment owed to the firm). Liabilities consist of current liabilities of \$11,137,000, mostly unearned revenues (basically prepaid services such as subscriptions that must now be performed or delivered by the firm). Also considered a liability is the paid-in capital, including capital reserves. The deficit line (retained losses or earnings) serves to balance total assets with total liabilities (including capital). Where liabilities otherwise exceed assets, this line is negative, and where assets exceed liabilities this line is in surplus and positive (retained earnings). As can be seen, the firm had an accumulated deficit of \$2,693,000.

A balance sheet is only a snapshot of a company's financial condition at a particular moment, and it comes with many imperfections and judgment calls that are described below.

One year later, the company was in a similar position. There was a drop of 20% in cash on hand. The amount of current liabilities fell sharply by 36%, mostly from a reduction in "unearned revenues," which are prepaid sales where the product must still be delivered by the company. Also, the invested equity capital declined, suggesting a distribution by the company to shareholders. In consequence, the accumulated deficit had now become an accumulated profit of \$1,058,000.

► Table 13.12 Example of balance sheet (in \$000)

Assets	December 2017	December 2016
<i>Fixed Assets</i>		
Computers	\$732	\$977
Infrastructure	\$625	\$569
Office equipment	\$243	\$118
<b>Total fixed assets</b>	\$1600	\$1664
<i>Current Assets</i>		
Accounts receivable	\$5347	\$5472
VAT	-\$20	\$15
Miscellaneous receivables	\$745	\$455
<b>Total current assets</b>	\$6072	\$5942
<i>Cash in hand</i>	\$7885	\$6328
<b>Total assets</b>	\$15,557	\$13,934
<b>Liabilities</b>		
<i>Capital</i>		
Reserves	\$507	\$507
Invested equity capital	\$6420	\$5038
Deficit	-\$2693	\$1058
<b>Total capital</b>	\$4234	\$6603
<i>Current Liabilities</i>		
Creditors	\$63	\$268
Wage taxes and social securities	\$98	\$155
Unearned revenues	\$9791	\$6204
Personnel fund	\$438	-\$210
Miscellaneous payables	\$747	\$728
<b>Total current liabilities</b>	\$11,137	\$7145
<b>Total liabilities</b>	\$15,371	\$13,748

Table based on Ripe Network Coordination Center. "2002 Balance Sheet." Last accessed July 6, 2017. ► <http://web.archive.org/web/20101128052610/http://www.ripe.net/ripe/docs/ar2002/balance-sheet.jpg>

To be most useful, balance sheets must be compared with previous ones for the same company, with the methodology held constant, and, also compared, with those of other companies.

### 13.6.1 Assets

Assets are things that a business owns, for example a building, or has the right to use, for example copyrights. It also includes acquisitions. There are two classes, monetary assets and non-monetary assets.

112 Kennon, Joshua. "Analyzing a Balance Sheet." *About*. 2002. Last accessed July 29, 2011.

► <http://beginnersinvest.about.com/library/lessons/nlesson3.htm>.

113 Smith, Gordon V. and Russell L. Parr. *Valuation of Intellectual Property and Intangible Assets*, 3rd ed. (New York: John Wiley & Sons, 2000), 515–544.

114 The SEC's EDGAR (Electronic Data Gathering, Analysis, and Retrieval) system provides automated collection, indexing, forwarding, and so on of submissions by companies and others who are required to file forms with the SEC.

Assets that can be converted into cash quickly—such as government bonds, receivables, money owed short term, inventories, and prepaid expenses (such as advertising time bought in advance of a season)—are classified as current assets.

Non-monetary assets are much more difficult to report. They include tangible assets—inventory, land, buildings, equipment, and other items. All of these may have fluctuating and/or unknown value.<sup>115</sup> They also include intangible assets that present still greater valuation issues—trademarks, patents, licenses, franchises, copyrights, brand value, and goodwill.

Assets are typically valued according to *historical cost*, that is, acquisition costs. Acquisition costs are certain, in contrast to fair market values, which are often quite unknown.<sup>116</sup> According to a study of 3500 US companies over a period of two decades, there has been an increase in the gap between book value (acquisition cost minus depreciation) and market value. In 2010, book value was 28% of the market value, while back in 1978, it had been 95%.<sup>117</sup>

The gap is even wider for media and tech companies. Intangible assets can make up 80% or more of a media company's value. But traditional accounting methods do not capture the true value of these intangibles. Balance sheets report only 15% of the true value of such companies.<sup>118</sup>

Entertainment companies themselves (as well as stock analysts) do not rely on their own balance sheet, but rely much more on P&L measures. If a company develops a new software product, costs of development—such as the salaries of the product's creators—are written off as an expense against current revenues rather than capitalized as an asset. When the product starts to be sold, it becomes an income stream without a corresponding asset on the balance sheet. Since there is no asset, there is also no depreciation. Furthermore, development cost is not booked as an asset. These factors cause the market to book value ratio to be higher than if there were assets recorded instead of expenditure. Income is initially lower, since the development cost is an expense; later, it is higher, since there is no depreciation, which would be written off against revenue.<sup>119</sup>

The reason for this restrictive principle of expensing rather than capitalization lies in history. Before the Great Depression, companies could report assets in balance sheets at their perceived value, but when the market crashed there was a general perception that they had “put water” in the balance sheet. This led to an 80-year policy that prevented such accounting in order to protect investors. Beyond investor protection, there was also a conceptual argument made by the leading “fundamental analyst” of the time, Benjamin

Graham of Columbia University. Graham advocated this principle: separate fact from speculation. The accountants should report what they know and leave speculative interpretation about values to analysts. For the fundamentalist, accounting serves to value firms and stock prices. It should be developed independently of stock prices, not inferred from them.<sup>120</sup> In the go-go years of the 1990s, traditional accounting was derided as unsuitable for the information age, when much of a company's value came from intangible assets. Accounting authorities resisted this pressure, and when the bubble burst their caution proved right.

There has been much pressure to add intangible assets to the balance sheet, and the prime argument is that the balance sheet is misleading. However, omitting intangible assets such as copyrights and patents from the balance sheet is not necessarily flawed in terms of assessing a firm's value: there is also an income statement, and the value of intangible assets can be ascertained from it.<sup>121</sup> For example, in 2008, Microsoft traded at \$25 per share or \$228,775 million market capitalization, yet its book value was \$36,286 million. Thus, \$192,489 million was “missing” from the balance sheet (the P/B ratio was 6.3). Similarly, the computer maker Dell had a market capitalization of \$41,200 million at the time, yet the book value was only \$3735 million (a P/B ratio of 11). These discrepancies seem to render the balance sheet useless as an information tool. Yet if one also uses the income statement, one could gain a much better picture: Microsoft's reported a net income of \$17,681. When such an income stream is transformed into net present value (NPV), that is capitalized from earnings, it results in a valuation that is more similar to that of market capitalization.<sup>122</sup> Thus the missing value of the intangible asset can often be captured through the income statement.

The expensing of R&D rather than its capitalization/amortization makes less of a difference than often thought as long as there is no growth in R&D expenditure. In steady state, recording R&D investment in the balance sheet and amortizing it, or instead expensing it immediately, has the same effect on earnings.<sup>123</sup> There is a difference when R&D is growing, and then earnings are depressed if the R&D expenditure is expensed. The same is true for other intangibles such as the treatment of the cost of creating copyrights and patents.

There are several economics methodologies for the valuation of intangibles utilizing accounting based information, including cost, market, capitalization, real options, and the residual earnings approach. (These are discussed in ► Chap. 7 Intellectual Asset Management) The cost method will rarely correctly estimate the value of an asset. In many cases, the

115 McGrahan, Kathleen and Gordon Shillingaw. *Accounting: A Management Approach*. Homewood, IL: Irwin, 1993.

116 Encyclopedia4u. “US Generally Accepted Accounting Principles.” March 30, 2004. Last accessed July 29, 2011. ► <http://www.encyclopedia4u.com/u/us-generally-accepted-accounting-principles.html>.

117 McClure, Ben. “Intangible Assets Provide Real Value to Stocks.” *Investopedia*. 2009. Last accessed July 14, 2010. ► <http://www.investopedia.com/articles/03/010603.asp>.

118 Baukney, Heather. “Intangible Assets: an interview with Baruch Lev.” *ITworld*. April 3, 2001. Last accessed July 6, 2017. ► <http://www.itworld.com/article/279427/enterprise-software/intangible-assets--an-interview-with-baruch-lev.html>.

119 Litan, Robert E. and Peter J. Wallison. “Beyond GAAP?” *Regulation* 26, no. 3 (Fall 2003): 51.

120 Penman, Stephen H. “Accounting for Intangible Assets: There is Also an Income Statement.” *Abacus* 45, no. 3 (September 2009): 358–371.

121 Penman, Stephen H. “Accounting for Intangible Assets: There is Also an Income Statement.” *Abacus* 45, no. 3 (September 2009): 358–371.

122 Penman, Stephen H. “Accounting for Intangible Assets: There is Also an Income Statement.” *Abacus* 45, no. 3 (September 2009): 358–371.

123 Penman, Stephen H. “Accounting for Intangible Assets: There is Also an Income Statement.” *Abacus* 45, no. 3 (September 2009): 358–371.

development will be unsuccessful and the value of the “asset” is zero. In other cases, however, the development will yield nice profits, creating a value far beyond the R&D cost, and it would not be reflected in the cost-based value.

The second approach for the valuation of intangibles is market valuation. For how much is the asset bought and sold in the open market? But to use the market-based valuation approach several conditions need to be met: there must be an active public market, an exchange of comparable products, arm’s-length transactions, and transaction information available. Since these elements rarely exist, the market approach is not often used for intangible assets.<sup>124</sup> It may exist for commoditized TV series such as game shows, or for general-purpose business software.<sup>125</sup>

The third valuation approach is NPV, which is based on discounted cash flows. A securitization can be used as a technique to capitalize an intangible asset’s income stream. Banks and investors may lend against a future stream of cash flows rather than tangible collateral assets, as in the case of music royalties, projected movie revenues, and “hard” long-term telecom traffic agreements. In these examples the future income stream are relatively predictable, rather than “soft” estimates.

A well-known example, mentioned before, was the singer David Bowie signing a deal under which he received \$55 million upfront to be paid off by his future royalties. Thus, the value of these royalties was at least \$55 million.

The fourth type of valuation is the real options valuation. This method, which is a variation of discounted cash flow, analyzes investment opportunities as options. It also addresses risks, including the right to invest, the upside potential, and the downside risk. It requires, however, to know or estimate several variables that are not easy to come by for an asset, and are outside of traditional accounting-based information.

The fifth approach to the valuation of intangibles is the residual earnings approach, where residual earnings are capitalized. Residual earnings are the funds left over after the expected return from a business’s financial and tangible assets has been removed. These are then attributed to intangibles, and the capitalized value of these intangibles can then be calculated. This approach has the advantage of being less subjective than some alternatives. For publicly traded companies, it can be implemented by using publicly available data.

Further decomposing of residual earnings could help to determine what proportion is attributable to different types of intangibles—people, brands, patents—providing an additional degree of precision that would help isolate the earnings contribution of human capital.

An illustration for the residual earnings (also known as the calculated intangible value) method follows. Intel is the example.<sup>126</sup>

- **Step 1:** determine average pretax earnings over three years. For Intel, that average value was \$8 billion.
- **Step 2:** identify from the balance sheet the average year-end *tangible* assets over the same period. For Intel, that value is \$34.7 billion.
- **Step 3:** for the same period, identify the average ROA for the industry, from various financial databases. The average for the semiconductor industry was around 13%.
- **Step 4:** calculate the earnings attributable to tangible assets by multiplying the industry average ROA (13%) by the company’s tangible assets (\$34.7 billion). Result: \$4.5 billion.
- **Step 5:** subtract this figure from the pretax earnings of Step 1 (\$8 billion). For Intel, the excess is \$3.5 billion. This figure shows how much Intel earns above the average semiconductor firm.
- **Step 6:** subtract taxes. Multiply the income tax rate by the excess return. Subtract the result from the excess return to come up with an after-tax number. This number is the premium earnings that is attributable to intangible assets. For Intel, it is \$2.5 billion.
- **Step 7:** calculate the NPV of this premium, by dividing the premium by an appropriate discount rate, for example the company’s cost of capital. Using a discount rate of 10% yields a NPV of \$25 billion.<sup>127</sup> This would be the estimated value of Intel intangible assets.<sup>128</sup>

### 13.6.2 Accounting for Corporate Acquisitions of Assets and Liabilities

There are two basic ways to account for mergers and acquisitions:

1. Merger (or pooling) accounting: adding together the book value of the assets and equities of the combined firms.
2. Acquisition (or purchase) accounting: adding the acquired company’s assets at the acquisition price, which is typically higher than book value. Subsequent amortization expenses are then usually larger (and reported income is therefore smaller) than for a pooling of interest. In order to prevent discrepancies between merger methods in the USA, it is now required (FASB Statement No. 141) for all mergers to be accounted for by the purchase method.

124 World Intellectual Property Organization. “WIPO National Workshops on Assessment and Valuation of Inventions and Research Results for Technology Transfer and Commercialization.” August 1997. Last accessed July 6, 2017. ► [http://www.wipo.int/edocs/mdocs/innovation/en/wipo\\_avi\\_ph\\_97/wipo\\_avi\\_ph\\_97\\_5.pdf](http://www.wipo.int/edocs/mdocs/innovation/en/wipo_avi_ph_97/wipo_avi_ph_97_5.pdf).

125 Lev, Baruch. “Intangible Assets: Concepts and Measurements.” *Encyclopedia of Social Measurement 2*, (2005): 299–305.

126 McClure, Ben. “Intangible Assets Provide Real Value to Stocks.” *Investopedia*. 2009. Last accessed July 14, 2010. ► <http://www.investopedia.com/articles/03/010603.asp>.

127 McClure, Ben. “Intangible Assets Provide Real Value to Stocks.” *Investopedia*. 2009. Last accessed July 14, 2010. ► <http://www.investopedia.com/articles/03/010603.asp>.

128 This methodology implicitly assumes that the other semiconductor companies have no intangibles in their own ROA, while Intel does. Thus, further adjustments would be required.

### 13.6.3 Advertising

Advertising expenditures create probable future economic benefits to the firm and thus meet the economic definition of an asset. But the benefits from advertising are uncertain. As a result, advertising costs are expensed in the periods in which the costs are incurred or when the advertising first takes place. For accounting purposes it is not recognized as an investment. The same goes for marketing promotions. Cable television companies, for example, must report the direct selling costs for acquisition of new subscribers as expenses when incurred.<sup>129</sup> Later in this chapter, we will encounter the use of adjusted consolidated segment operating income (ACSOI) accounting to circumvent this problem.

#### 13.6.3.1 Special Assets in Media

Long-term contracts keep artists, athletes, teams, leagues, or TV stations tied up for years to one company or network. This kind of contract is an asset, and is recorded as an asset valued at the cost of its creation, for example, at the cost of a sign-up bonus. Companies buy and sell such contracts and record them according to the purchase price.

### 13.6.4 Case Discussion

#### Valuation of Intangibles<sup>132</sup>

Disney's assets include trademarks, licenses, copyrights, patents, and goodwill. These intangible assets were listed as \$2815 million in 2004. As a share of all assets, this was just 5.2% in 2004 (total assets were \$53,902 million). The reason for this low figure was discussed before, namely the GAAP principle that intellectual creations had to be expensed rather than capitalized, unless they were acquired by purchase.

When Disney acquired the major TV network and station group Cap Cities/

ABC, its accountants wrote down ABC's assets and increased ABC's liabilities.<sup>133</sup> This reduced the amount of net assets that was added to Disney's balance sheet. Traditionally, broadcast networks such as ABC did not book the network's commitments to acquire future shows from a producer as a liability. But Disney did so upon its acquisition, and used ABC's \$4.1 billion programming commitment to raise liabilities, and to create a loss reserve for the CapCities/ABC acquisition of approximately \$2.5 billion.

The company could use this loss reserve account to pay post-merger expenses for a while without affecting its bottom line.<sup>134</sup> This raised Disney's earnings and also made them more stable and predictable.

The writedown of ABC's intangible assets and the increase of ABC's contractual liabilities at the time of the merger also generated tax advantages. Disney subsequently gained a \$1.2 billion tax benefit when the writedowns and increase in liabilities became tax-deductible business expenses.<sup>135</sup>

### 13.6.5 Depreciation and Amortization of Assets

A key issue in accounting is determining if the costs are investments or expenses. Classifying the cost as an investment, which is referred to as a capitalization, distributes the expense over the lifetime of the asset, which reduces annual cost and raises profit. It results in more assets relative to debt. In contrast, an expensing of the cost immediately will lower profits for that year, lowers taxes in that year, but raises them in subsequent years.

Brands, too, are assets, and for many companies it is their main one. The term "brand value" is similar, for marketing purposes, to what accountants call "goodwill."<sup>130</sup> Goodwill is the price paid by a buyer for a company beyond its book value. Goodwill is the value imputed to a strong brand name, good customer and labor relations, intellectual assets, and proprietary technology. Most companies take the costs of creating and expanding a brand value as a marketing expense, and only a few record it as a capital asset and amortize such brand value. In 1989, the London Stock Exchange endorsed the concept of brand valuation. This led to major branded companies to recognize the value of the brands as intangible assets on their balance sheet.<sup>131</sup> When companies acquire other brands they can record the purchase price minus the other assets as an asset on their balance sheet.

How to value a brand? Here, too, one approach is to capitalize residual earnings, which are the funds left over after the expected return from a business's financial and physical assets have been removed. After they have been capitalized, these residual earnings are then attributed to intangibles as brand value.

Amortization is the spreading of the cost of an asset over a period of time, usually several years. Depreciation is a type of amortization, accounting the decrease in the value

129 Kreuze, Jerry G. and Joseph G. Pung. "Advertising Expenditures Can Be Capitalized ... Well at Least Sometimes." *The National Public Accountant*. October 1, 1997. Last accessed July 6, 2017. ► <https://www.highbeam.com/doc/1G1-20224486.html>.

130 Tollington, Tony. "The brand accounting side-show." *Journal of Product & Brand Management* 8, no. 3 (1999): 204–218.

131 Clifton, Rita. "The Financial Value of Brands." In *Brands and Branding*. Ed. Jan Lindemann. New York: Bloomberg Press, 2009.

132 Disneydreaming. "The Walt Disney Company Logo." February 12, 2010. Last accessed July 21, 2011. ► <http://www.disneydreaming.com/2010/02/12/the-walt-disney-company-had-flat-2010-quarter-1-profits/>.

133 Briloff, Abraham. "Disney's Real Magic." *Barron's*. March 23, 1998. Last accessed July 6, 2017. ► <http://www.barrons.com/articles/SB890453320857699000>.

134 Walker, Ken. "Disney's Glowing Profits Questioned by Barron's." *Baptist Press*. May 29, 1998. Last accessed June 12, 2012. ► <http://www.bpnews.net/bpnews.asp?id=2188>.

135 Walker, Ken. "Disney's Glowing Profits Questioned by Barron's." *Baptist Press*. May 29, 1998. Last accessed June 12, 2012. ► <http://www.bpnews.net/bpnews.asp?id=2188>.

of an asset over time.<sup>136</sup> There are several ways to calculate the depreciation on an asset. Straight-line depreciation spreads the depreciation expense evenly over the years of the asset.

$$\text{Annual depreciation} = \frac{\text{Cost} - \text{Salvage value}}{\text{Estimated Life}}$$

The production method of depreciation can be deployed when the rate of usage varies over time. An accelerated depreciation can be used when the earning power of an asset declines as it ages, but more rapidly at first. There are therefore larger depreciation charges in the early years of the asset's life. A declining balance method sets a fixed depreciation rate (as a percentage of the remaining asset value) to write off the cost.

Tax authorities provide a table of acceptable lives for goods and property that are to be used with the corresponding depreciation method.

The method of depreciation affects the bottom-line of a company. A public company's P&L statement filing therefore contains information on the depreciation rates and method.<sup>137</sup>

### 13.6.5.1 Amortization of R&D, Intellectual Assets, and Networks

As far as accounting is concerned, R&D activities do not create assets but only expenses. Accounting rules require the immediate expensing of R&D. The justification is that the future benefits of most R&D are too uncertain for them to be called an asset (capitalization). This pushes start-ups, in particular, into the red since they show only expenses and no assets in return.<sup>138</sup> (It should be noted, however, that finance research shows that for publicly traded companies even if the R&D is expensed it adds stock value to the company. The investor market implicitly treats R&D expenses as if they were a capital investment.)<sup>139</sup>

However, when a patent is actually bought from a patent holder, it is then treated as an asset (at the acquisition price plus transaction costs) and can be amortized over its legal or economically useful life—which ever is shorter.

In the USA, the rules, are set in FASB Statement No. 142, which decrees that patents, copyrights, and trademarks with finite lives are amortized over their useful lives, and for not more than 40 years.<sup>140</sup> Thus, although copyrights are granted to the author of a work for the life of the creator plus 70 years—which could easily exceed 100 years—according to the FASB rules the cost of the copyright is amortized for only up to 40 years. Similarly, the cost of creating or acquiring trademarks must be amortized over the period of the benefit, not to exceed 40 years.

The depreciation periods for IT, telecoms, and internet networks are based on the estimated economic useful life of the asset. Domain names have a depreciation period of two to ten years and website development has a period of three to five years.<sup>141</sup> Accounting procedures for the depreciation of IT systems follow the Modified Accelerated Cost Recovery System, where the lifetime of IT investments is five years. The rapid drops in prices of IT equipment leads often to an accelerated depreciation method.<sup>142</sup>

For telecom and cable network companies, the physical plant is a very large asset. It must be carried at original or acquisition cost.<sup>143</sup> It is interesting to note that under a rate-of-return regulation of telecom networks there is often be an incentive for the firm to underdepreciate. This is called the Averch-Johnson effect,<sup>144</sup> and it occurs when the rate of return on invested capital set by regulators exceeds the cost of that capital. This also leads to over-investment, also known as “gold-plating.”

For spectrum licenses, which can be very costly but have a finite life, the license cost is amortized over its period (often 20 years).<sup>145</sup>

136 McGrahan, Kathleen and Gordon Shillingaw. *Accounting: A Management Approach*. Homewood, IL: Irwin, 1993.

137 Kennon, Joshua. “How to Calculate Return on Assets or ROA.” *The Balance*. Last updated December 30, 2016. ► <https://www.thebalance.com/return-on-assets-roa-357592>.

138 Stickney, Clyde and Roman Weil. *Financial Accounting: An Introduction to Concepts Methods and Uses*. (New York: Dryden Press, 2000), 437.

139 Green, J. Peter, Andrew W. Stark, and Hardy M. Thomas. “UK Evidence on the market Valuation of Research and Development Expenditures.” *Journal of Business Finance & Accounting* 23, no. 2 (March 1996): 191–216; Akbar, Saeed and Andrew W. Stark. “Deflators, net shareholder cash flows, dividends, capital contributions and estimated models of corporate valuation.” *Journal of Business Finance and Accounting* 30, no. 9–10 (December 2003): 1211–1233.

140 In contrast, intangible assets whose lives are indefinite are not amortized but are tested yearly for impairment. Federal Accounting Standards Board. “FASB Codification.” *FASB*. Last accessed July 20, 2011. ► <http://www.fasb.org/home>.

141 EY. “Internet Accounting Issues: A Summary.” May 2001. Last accessed July 6, 2017. ► <https://www2.bc.edu/peter-dicarlo/MAY%20Summary%20of%20Internet%20Acctg%20Issues%205-2001.htm>.

142 Besaw, Brian. “Depreciating PCs: Learn why accounting methods make a difference.” *Tech Republic*. February 21, 2001. Last accessed July 29, 2011. ► <http://techrepublic.com/5100-6314-1032118.html>.

143 Fako, J. “Public Utility Accounting: Is It Really Different? In *Public Utility Finance and Accounting: A Reader*. Ed. J. Berk. (Tenafly, NJ: Financial Accounting Institute, 1986), 15–16.

144 H. Averch and L. Johnson. “The Behavior of the Firm Under Regulatory Constraint.” *American Economic Review*. December 1962. Last accessed July 29, 2011. ► <http://www.clt.astate.edu/crbrown/averch.ppt>.

145 This amortization, which reduces future earnings and taxes, is usually not mentioned in government announcements of the financial benefits brought to the treasury through spectrum auctions.

## Case Discussion

### Disney Amortization and Depreciation

Disney amortizes the cost of television and film production, as well as multiyear sports rights, over each asset's useful life, by dividing the current period's gross revenues of that asset into the estimated overall revenue that film will generate. Disney takes the cost of the project and amortizes the cost over a ten year period, in a ratio comparable to the amount of profits received during the period. For that ten-year period, Disney will estimate box office receipts, distribution deals, home video sales, cable deals, and other revenue streams. If the film receives 40% of its lifetime revenue in Year 1, Disney will amortize 40% of the production cost in that year.<sup>146</sup>

For television series, gross revenues are estimated as receipts that will be earned within ten years of the delivery of the first

episode. As the series continues to run successfully, the number is calculated as revenues to be earned within five years of the delivery of the most recent episode.

In 2005, approximately 42% of Disney's completed and unamortized film and television costs were amortized during that year, which suggests a rapid and accelerated amortization, as well as the short economic life span of the content. Approximately 73% of these costs (excluding acquired film libraries) were expected by the company to be amortized during three years.<sup>147</sup>

In 1996, as mentioned, Disney acquired the major TV network and station group Capital Cities/ABC for \$19 billion. The company capitalized the entire acquisition price as goodwill, to be amortized

over the next 40 years, at approximately \$120 million per quarter using the straight line method of depreciation. According to Disney, the ABC acquisition was expected to hold its value and produce earnings indefinitely, and this method allowed the company to depreciate at the slowest rate allowed by GAAP. By using a slow depreciation rate, Disney would avoid getting a large expense hit on its annual income statements, which could have depressed its stock price.

Even though this was legal and within GAAP, some financial analysts and accounting professors argued that a different accounting treatment of this transaction should have been used and that Disney should have amortized at a much higher annual rate, thus reducing its earnings.

### 13.6.5.2 Impairment, Write-Offs, and Write-Downs

Often the value of an asset drops, and accounting reports need to deal with this to maintain a realistic description of the company. Impairment is the reduction of asset value carried in the books when the market value of that asset drops below book value.<sup>148</sup> In contrast, a write-off is used to treat uncollectable accounts, such as an insolvent debtor's obligations; and a write-down charges the asset's cost to expense and is generally used for non-recurring items.

For instance, in 2002, AOL Time Warner was forced to recognize an impairment of \$54 billion, attributed mostly to the AOL acquisition. Sprint, the wireless and wireline company, posted a \$1.9 billion net loss in 2004.<sup>149</sup> It analyzed long-distance business trends and then took a \$3.5 billion impairment charge on these assets. Sprint also took a \$1.2 billion write-down on its spectrum for use for its Multichannel Distribution Service, a form of microwave video distribution.

Clear Channel Communications, the largest private radio company, in the world, took a write-down of \$4.9 billion in 2005. Viacom, the number two radio company, wrote down \$18 billion that same year.<sup>150</sup> The telecom firm Qwest wrote

down \$20 billion in 2002. WorldCom took a \$15 to \$20 billion write-down, partly to cover its previous misstatement that put CEO Bernard Ebbers in prison. Sony took a \$1 billion write-down in 2017 for its movie division. A similar amount was taken by Seven West in Australia in 2015 for the value of its television licenses.

## Case Discussion

### Write-Offs and Write-Downs

Compared with its peers, Disney has had a low use of write-downs. Industry write-downs in 2002–2004 included AOL Time Warner with \$99 billion, Viacom with \$20 billion, and News Corp. with \$10 billion. In contrast, Disney's 2004 impairment write-down was just \$64 million.

There were several large Disney write-downs in other years, though not of the same order of magnitude. In 2001, the company recorded restructuring and impairment charges totaling about \$1 billion, related to the closure of internet portal GO.com and of approximately 70 Disney stores.

### 13.6.5.3 Inventory

A company's inventory is the items held for sale or for the production for such a sale. For example, books are produced in large batches for sale over a longer period of time. This means that large inventories are held by publishers, wholesalers, and retailers. Since books can be returned by retailers to the publisher, there is an incentive for retailers to have a good-sized inventory, since they are not stuck with excess books but can send them back for full refund.<sup>151</sup>

146 Walt Disney Company. 2005 Annual Report. December 5, 2005. Last accessed July 10, 2017. ► <https://ditm-twdc-us.storage.googleapis.com/ar-2005.pdf>.

147 Walt Disney Company. 2005 Annual Report. December 5, 2005. Last accessed July 10, 2017. ► <https://ditm-twdc-us.storage.googleapis.com/ar-2005.pdf>.

148 FASB. "Statement of Financial Accounting Standards No. 53- Financial Reporting by Producers and Distributors of Motion Picture Films." December 1981. Last accessed July 10, 2017. ► <http://www.fasb.org/summary/stsum53.shtml>.

149 Gross, Grant. "Sprint Records \$1.9 billion loss on impairment charge." *IDG News Service*. October 19, 2004. Last accessed July 29, 2011. ► <http://www.networkworld.com/news/2004/1019sprinrecor.html>.

150 In part, these write-downs were initiated due to new SEC reporting guidelines. Viacom. "2006 Annual Report." March 1, 2007. Last accessed July 10, 2017. ► <http://ir.viacom.com/secfiling.cfm?filingID=1193125-07-43859&CIK=1339947>.

151 Nairn, Andrew. *Valuing Publisher's Stocks: the Accounting Problem*. London: Accountancy, 1979.

### 13.7 • Liabilities

One goal of inventory accounting is to match inventory costs with the revenues received from the sale of goods from that inventory, so that one can calculate profit.<sup>152</sup> This is complicated because the prices of the goods vary over time. Often the cost of inventory increases over time owing to inflation. There are several methods to deal with this issue: specific identification, average cost, first in, first out (FIFO), and last in, first out (LIFO). Different methods can have different effects on the balance sheet, income statement, and taxes. A company must choose one method and stick to it.<sup>153</sup> If a firm uses the FIFO method in an inflationary period, it will sell the inventory that was bought or produced early, before prices rose. This makes a company look more attractive to an investor or a bank because the company's asset value is relatively higher.

If a company uses LIFO it will first sell the inventory it produced or bought last at the higher prices. The advantage of this is the tax benefits of paying lower taxes since income will be lower.<sup>154</sup> LIFO can result in lower taxes but also reduce a company's value, since its reported income is lower. The reverse is true for products subject to a price deflation, which may often be the case for electronic devices and components. FIFO will reduce asset value, while LIFO will raise reported income and tax obligations.

It is also useful for investors to look at the percentage of inventory in current assets. For example, if 70% of current assets are in inventory, it may indicate excessive or obsolete inventory, and that a write-down is needed.

## 13.7 Liabilities

Liabilities are a company's obligations to its creditors. Liabilities include accounts payable (amount due for goods and services purchased by the company), bank loans, notes and bonds payable, and wages and salaries due. Current liabilities are short-term debts which have to be paid within one year. Long-term debt includes mortgages and business loans.

Problematic issues of accounting liabilities in the media and information sector include stock options, pension plans, and off-balance sheet financing.

### 13.7.1 Stock Options

A popular method of providing tax-favored compensation to employees in the high-tech and new media industries is the granting of stock options.

There are two types of stock option: incentive stock options (ISOs) and employee stock purchase plan (ESOs).<sup>155</sup> ESOs are designed mainly to benefit rank and file and middle employees, by allowing all eligible employees to purchase the company's stock at a discount over market price, for example 15%. An employee is not subject to income tax on the benefit of the discount until the stock is sold off, at which point the proceeds are considered a capital gain, but taxed at a lower rate than ordinary income. In contrast, ISOs are created to attract high-ranking executives and key employees. Companies issue stock options to employees to raise productivity or to attract new talent by giving them a chance to get in on the ground floor.<sup>156</sup> In companies where cash is scarce, options are a good way to keep employees invested in the company. There are tax incentives to ISOs and ESOs. The rise in share value is considered a capital gain and is therefore taxed at a much lower rate than regular income. For example, in 2016 the capital gain would be taxed in the USA at a maximum rate of 20%, while ordinary income would be taxed at up to almost 40%.

Typically, a company treats employees' compensation such as wages as an expense item. But when high-tech companies extended stock options as a form of compensation they typically did not expense them. This reduced their reported compensation and made them look more profitable. For example, the expensing of stock options would have reduced reported earnings in the semiconductor manufacturing industry in one year by an average of 40%.<sup>157</sup> Cisco received a tax benefit of nearly \$2.5 billion from its use of ESOs. As a result the company paid little or no federal income taxes, while reporting \$2.67 billion in profits on its financial statements. There is a tax benefit at the time the option is executed. Basically, the company can claim as an expense for tax purposes the higher value when the options are redeemed, not the value at the time they were issued. But they need not report the higher value in their P&L statement. For example, suppose the radio satellite firm Sirius XM granted in 2009 its CEO stock options of 1 million shares at \$0.30 a share (the price at the time) to vest in 2015. When the CEO redeems them at the 2015 market price of \$2.00, Sirius XM can claim a \$2 million "compensation" on its tax return as an expense, even though it did not actually spend \$2 million. However, the company does not have to put the \$2 million into expenses in its financial report but rather only \$300,000 in 2009, so the company looks more profitable and it also gets a tax break.<sup>158</sup>

This became a controversial issue. Opponents of high compensation for top management regard this practice as

152 Carmichael, D. R., O. R. Whittington, and Lynford Graham. *Accountants' Handbook*, 11th ed. Vol. 1. (Hoboken, NJ: John Wiley & Sons, Inc., 2007), 20.2–20.36.

153 The specific identification method means that each item sold from the inventory must be specifically identified and recorded. This system is usually used by businesses that deal with large ticket items such as automobiles, works of art, or custom-built items. For companies that deal with large inventories, administering this system is too costly. The average cost method treats the cost of all similar items in the inventory in the period and averages it.

154 Dopuch, Nicholas and Morton Pincus. "Evidence of the Choice of Inventory Accounting Methods: LIFO vs. FIFO." *Journal of Accounting Research* 26, no.1 (Spring 1988): 28–59.

155 Cavitch, Zolman. "Business Organization with Tax Planning (10–133), Part 21 Taxation of Executive Compensation, 10–133 Business Organizations with Tax Planning §133.01 Appeal and Limitations of Stock Options." New York: Matthew Bender & Company, Inc., 2004.

156 Glassman, James K. "Running an Option." *National Review Online*. Nov. 7, 2003. Last accessed July 10, 2017. ► <http://www.nationalreview.com/article/208523/running-option-james-k-glassman>.

157 Morgenson, Gretchen. "Litmus Test for Ethics: Options." *New York Times*, March 21, 2004. Last accessed July 10, 2017. ► <http://www.nytimes.com/2004/03/21/business/market-watch-litmus-test-for-ethics-options.html>.

158 Kocieniewski, David. "Tax Benefits from Options a Windfall for Business." *New York Times*. December 29, 2011. Last accessed July 10, 2017. ► <http://www.nytimes.com/2011/12/30/business/tax-breaks-from-options-a-windfall-for-businesses.html>.

a way to transfer much wealth to top executives without it showing up as an expense, and for these managers to avoid paying their fair share of income taxes.

In America, the FASB rules now require companies to treat options as an immediate expense, which reduces reported profits. However, it is difficult to value stock options accurately in order to expense them when there is no market price.

Another variable of stock option compensation involves their backdating. Companies select favorable dates on which to base the options price. Backdating options involves granting an employee a stock option that is dated prior to the actual date that the company has granted them. This is advantageous to the recipient when stock prices drop, because the

future capital gain will look lower. When stock prices are rising, a main reason why companies engage in backdating is to reduce the amount of deductions against the company's earnings, by deducting the earlier, lower price. The act of backdating, in itself, is not illegal. But altering dates on the financial statements and reports is illegal.<sup>159</sup> In 2007, nearly 170 high-tech companies were investigated for "backdating" options. The investigations included Jim Balsillie (RIM, maker of the BlackBerry). The CFO of Comverse pleaded guilty to securities-fraud charge. Several top executives at Monster, an employment website, were charged with securities fraud after it was discovered that they were granted options dated at highly favorable times.<sup>160</sup>

### 13.7.1.1 Case Discussion

#### Stock Options

Disney provided stock options worth more than half a billion dollars between 1995 and 2000. If this company had counted these payouts as executive compensation it would have significantly reduced its reported earnings.<sup>161</sup> Between 1991 and 1995, Disney CEO Michael Eisner earned \$234 million. In 1998 his overall compensation had increased to \$570 million, mostly through stock options that were awarded early in his tenure that had become exercisable. Overall between 1998 and 2000, Eisner earned more than \$680 million from the exercise of stock options.<sup>162</sup>

Disney did not count the stock options it granted executives as an expense, claiming that they were not executive compensation but merely rearrangements of the corporate financial structure.

Disney was not charged with improper backdating of stock options, but when it bought Pixar in 2006 it also acquired Pixar's backdating problems. That company had granted its employees backdated options after 1997, totaling \$323 million. Disney, as Pixar's new owner, was liable for \$33.5 million. Steve Jobs, Pixar's CEO and subsequently Disney's largest shareholder,

had granted these backdated options to other employees and claimed that he did not know the legal and accounting ramifications. Jobs himself received such options at his other CEO job at Apple. For those transactions, he got off the hook without being charged for securities law violation, but Apple's CFO Fred Anderson and in particular General Counsel Nancy Heinen were charged with falsification of documents, pleaded guilty, and were convicted.

13

### 13.7.2 Pension Plans

According to accounting rules, employers must consider the cost of retirement benefits as an expense in determining company net income. However, the question is when to recognize these expenses: while employees still work or when they actually get their benefits. If the company operates on the matching revenue principle, it should recognize these costs during the employee's working years because it is the labor service in those years that generates revenue.<sup>163</sup> When this is not done but is deferred, pension obligations can be ticking time bombs for some companies. Large scale layoffs or longer life expectancies have led to some companies not being able to meet their pension requirements.

When Lucent Technologies, for many years the world's largest telecom hardware maker, fired 54,000 employees

between 2001 and 2002, it used \$800 million in the assets that had been set aside for pensions, in order to pay the termination benefits instead. The Lucent pension plan went from having \$5.5 billion more funds than was legally required in 2001 to being \$1.7 billion underfunded in 2002. Lucent also withdrew \$1.2 billion from its pension assets to pay for retirees' medical expenses.<sup>164</sup>

The risk exposure of a firm is much higher when pension plans have defined benefits, which pay out benefits based on a preset formula rather than on the performance of investments. Usually the formula is based on the employee's salary at the time of retirement. Given the uncertainty of defined pension plans, companies have been restructuring their plans to avoid being overextended and end up unable to pay for their employees' benefits. They have therefore shifted to defined contribution plans in which they contribute to a pension fund or match the employee's contribution.

Investors and creditors need to be able to check on a firm's pension liabilities, and be cautious if a firm does not report the funding status of its pension and benefit plans on its balance sheets.

159 Regan, Keith. "Take-Two in SEC Crosshairs." *E-Commerce Times*. April 5, 2007. Last accessed July 29, 2011. ► <http://www.technewsworld.com/story/gaming/56727.html>.

160 Bandler, James and Mark Maremont. "Monster's Founder Quits Board Amid Options Probe." *Wall Street Journal*. October 31, 2006. Last accessed July 29, 2011. ► <https://www.wsj.com/articles/SB116221682918507772>.

161 Epstein, Edward Jay. *The Big Picture, The New Logic of Money and Power in Hollywood*. New York: E.J.E. Publications, Ltd., Inc., 2005.

162 Hodgson, Paul. "Incentivizing Michael Eisner." *Forbes*. April 1, 2004. Last accessed July 10, 2017. ► [http://www.forbes.com/2004/04/01/cz\\_ph\\_0401opiniondisney.html](http://www.forbes.com/2004/04/01/cz_ph_0401opiniondisney.html).

163 Stickney, Clyde and Roman Weil. *Financial Accounting: An Introduction to Concepts Methods and Uses*. (New York: Dryden Press, 2000), 411–450.

164 Schultz, Ellen. "Firms had a hand in Pension Plight." *Wall Street Journal*. July 10, 2003. Last accessed July 29, 2011. ► <http://www.globalaging.org/pension/us/private/plight.htm>.

### 13.7.2.1 Case Discussion

#### Pension Plans

In 2001, Disney listed \$2.45 billion in pension plan assets and \$2.13 billion in pension fund obligations.<sup>165</sup> The pension asset value had dropped from 2000 by over \$300 million owing to a dismal year in the stock market. In 2004 Disney's pension plan was somewhat underfunded. It had assets of \$2.4 billion and obligations of \$2.8 billion.<sup>166</sup> Disney explained this deficit by pointing to temporarily depressed stock prices in 2002 and 2003. Seen in that light, Disney's pension plan is roughly balanced. The actual benefits paid in 2004 were \$96

million, which constitutes only 3% of total plan assets.

In some cases firms acquire other companies and are now responsible for an extra set of employees and pension plans. When Disney acquired ABC in 1997, it kept separate the pension plans for its old employees and the new employees it acquired through ABC. It took until 2012 for these two programs to be consolidated. There was also a difference in the treatment of existing and new hires employees. New employees were no longer entitled

to a defined-benefit retirement plan. Instead, the new employees were part of a defined-benefit contribution with a matching program. These actions aimed to lower pension costs or at least make them predictable. Disney's CFO told investors after the announcement of these changes that the company hoped to cut costs to its pension plan by 25–30%, or nearly \$400 million, over five years. He claimed that this would not really reduce benefits to Disney's employees but rather curb the inefficiencies associated with its pension plan.

### 13.7.3 Off Balance Sheet Financing

Off balance sheet financing is a way for companies to raise money that does not appear on the balance sheet as a liability, unlike loans, debt, and equity.<sup>167</sup> For example, off balance sheet liabilities can occur when a company engages in joint ventures and partnerships with other companies. It may commit itself to the full debt of the partnership even if it is only one of several partners.

It can also occur when a parent company has a minority stake in a subsidiary which it controls otherwise. Loans that are guaranteed by the parent firm can also be used as off balance sheet financing. For example, Williams Energy Co. (an oil and pipeline firm) created a subsidiary named Williams Communications in order to enter the telecommunications business. It spun off the new company with its substantial debt, but guaranteed that debt. With off balance sheet accounting, parent firms can transfer risk and finance a

new venture without diluting existing shareholders' stakes or adding debt. GAAP allows these off balance sheet entities to be excluded from the parent's financial statements, but typically they must be described in footnotes.<sup>168</sup>

One off balance sheet technique is leasing. Many companies lease their equipment rather than buying it on credit and incurring a liability. This allows them to save in capital investments and keep pace with technology. There are also accounting advantages. Lease payments do not show up as debt on the balance sheet, and thus the company's obligations seem smaller, which enables it to borrow more.

Another advantage is that companies can transfer risk to companies that are able to bear them more cheaply. It is also possible to transfer tax benefits from highly taxed to lighter taxed parties. Some such companies are just corporate "shells," legally domiciled in countries with lower taxes, better accounting rules, and more advantageous qualifications for government subsidies.

#### 13.7.3.1 Case Discussion

##### Off Balance Sheet Liabilities

Disney was able to co-finance many of its capital-intensive projects such as specific film projects, new theme parks, or hotels with the aid of separate corporations. These firms financed projects and borrowed from banks, but the debt did not appear on Disney's balance sheet.

Guaranteeing loans on behalf of special purpose entities allowed Disney to borrow money without having to disclose the liability. In 1998, one of Disney's ventures used this kind of financing to create Spyglass Entertainment. Disney guaranteed the line

of credit for the enterprise, and promised to distribute and market 20–25 of its movies over five years via Buena Vista Distribution, a subsidiary of Disney.

Disney also used foreign accounting rules to take negative figures off its corporate books. Its theme park subsidiary Euro-Disney in France was over \$2 billion in deficit, with \$2.5 billion in debt and only \$69 million of shareholder equity. But through a spin-off of the subsidiary, Disney was in the black for the venture, with a debt of only \$1 billion and shareholder equity of \$1.1 billion.

Disney also purchased various non-cancellable and very expensive broadcasting sports rights. If Disney had "bought" these rights upfront, they would qualify as assets, and whatever they had to borrow to pay for them would be debt on the balance sheet. Instead, it expensed them as annual payments on a contract.

In conclusion, Disney used a variety of off balance financing. However, its practices were more conservative than those of other major Hollywood firms.

165 Walt Disney Company. "2001 Annual Report." November 7, 2001. Last accessed July 10, 2017. ► <https://ditm-twdc-us.storage.googleapis.com/2015/10/2001-Annual-Report.pdf>.

166 Walt Disney Company. "2004 Annual Report." December 9, 2004. Last accessed July 10, 2017. ► [https://ditm-twdc-us.storage.googleapis.com/ar\\_2004.pdf](https://ditm-twdc-us.storage.googleapis.com/ar_2004.pdf).

167 Smith, Lisa. "Off Balance Sheet Entities: The Good, The Bad, and The Ugly." *Investopedia*. Last accessed July 10, 2017. ► <http://www.investopedia.com/articles/analyst/022002.asp>.

168 Smith, Lisa. "Off Balance Sheet Entities: The Good, The Bad, and The Ugly." *Investopedia*. Last accessed July 10, 2017. ► <http://www.investopedia.com/articles/analyst/022002.asp>.

## 13.8 Income and Profit Statements

### 13.8.1 Profits

The income statement is also referred to as the P&L Statement or as the earnings statement.<sup>169</sup> It may well be the most important financial statement a company issues. P&L is important because it gives an investor or observer an idea how profitable the company is overall. Via P&L one can also look at the company's margins and other financial and operating ratios to see how well it does in terms of generating profit, and compare this to other players in the industry (■ Table 13.13).

We must understand that the concept of income can be expressed in a variety of ways. The most common ones are, as described earlier:

- revenues (sales);
- gross profit (and margin);
- EBITDA;
- operating income (and margin);
- net profit.

We will now look at these components.

The first line on any income statement is total revenues (total sales). Companies often break up revenue into different categories according to divisions, or activities, or geography. For start-up companies, investors turn to revenue and its growth as an indication for future potential.

*Gross profit* is the total revenue generated minus the cost of creating that revenue, typically subtracting the cost of goods sold. COGS includes inputs and production expenses but not expenses such as salaries, taxes, and distribution cost.

Gross profit is used to calculate gross margin, which can be found by dividing gross profit by sales revenue. It is a measure of a company's efficiency.

*Operating income* measures the money generated from its operations (without income from investments in other businesses).

*Operating margin* is the ratio of operating income and total operating revenue. It can be used to compare the quality of a company's operations to that of its competitors.

*Net income* is the total profit made by a business for the period. The net profit margin is the profit that a firm generates from every dollar it earns.

*Earnings per share* (EPS) is the profit gained on every share. It is calculated by dividing net income by the shares outstanding.

■ Table 13.13 Profits, sales, and margins of major media and media-tech companies (2016)

	Net Profit (in millions)	Gross Sales (in millions)	Net Profit Margin %
AT&T	12,976	163,790	7.9%
Comcast	8695	80,403	10.8%
Disney	9391	55,632	16.9%
E.W. Scripps	67	943	6.7%
Facebook	10,445	27,638	36.7%
Gannett	61	3047	2.1%
General Electric	8812	119,690	7.0%
Google	19,478	90,270	21.6%
Intel	10,316	59,380	17%
Lee Enterprises	36	600	6.0%
McClatchy	-34	977	-14.4%
Meredith Corp.	96	1701	5.8%
Microsoft	16,768	85,680	19.5%
New York Times	29	1555	1.6%
News Corp	-363	8198	-18.3%
Oracle	8820	37,232	23.5%
Time Warner	3926	29,318	13.2%
Verizon	13,127	125,980	10.3%
Viacom	1438	12,488	11.5%

169 Kennon, Joshua. "How to Calculate Return on Assets or ROA." *The Balance*. Last updated December 30, 2016. ▶ <https://www.thebalance.com/return-on-assets-roa-357592>.

The number of outstanding shares can vary since the company can increase the number of shares through the issuance of stock options, convertible bonds, or secondary stock offerings. Therefore a related measure for profits, diluted EPS, shows EPS if all diluted shares outstanding (converted stock, stock options, etc.) were included.

Financial statements of not-for-profit organizations are similar to the income statements of for-profit companies. Instead of profit, they might show an excess of income over activity expenditures. Such surplus must be retained within the organization or spent on its purposes. It cannot be paid out as a dividend to the nominal owners such as trustees.

To calculate income, companies have two basic accounting methods available: the cash method or the accrual method. The cash method recognizes income and expenses when money is actually received or paid. But for financial reporting, the GAAP principles require firms to use accrual based accounting, where revenue is recorded when it is earned, not when the money is actually received. The tax code requires companies to use this method of accounting for tax filings.

### 13.8.2 Non-Cash Revenues

One question is how to value revenues if they are not received in cash but in kind, or in other services, or in stock. In such situations, income may be determined on some rational basis such as comparable marketplace prices or transactions.<sup>170</sup> But this still leaves a lot to discretion. For example, the cable company Adelphia received stock in companies whose interactive services it carried. This was a common practice in the industry. It booked the share value as income. But when the shares dropped in value when the dot-com bubble burst after 2000, Adelphia still booked the original value of the shares as revenue received.

Some companies boosted their revenue by swapping network capacity with each other. Company A sold network capacity to Company B, and Company B sold some capacity to A. This could have been for the same route. This swap was booked as revenue on each company's financial statements, making both companies' sales look good. To prevent this, GAAP has rules against exchanging non-monetary assets, which preclude such "round tripping" of reciprocating sales. Yet, as mentioned, in 2000, \$660 million out of \$15 billion of the revenue of telecom company Qwest and 20% of the revenues of Global Crossing, another carrier, came from swapping telecom capacity with each other.<sup>171</sup> The SEC imposed a hefty \$250 million fine on Qwest. TV stations often compensate the suppliers of a syndicated TV program by taking

the program with already inserted advertising time slots and then broadcasting them. This is known as barter syndication." Such swapping of advertising airtime for products or programs is accounted for according to rules on non-monetary transactions.<sup>172</sup> The revenue is recognized at fair value. Fair value is determined by evaluating historical records that show how much money was received for similar advertising from unrelated buyers.<sup>173</sup>

In the internet industry, similarly, many companies swap online ads for equity, investment, or equipment. Such compensations are counted as sales revenue by a company since it typically wants to show rising revenues. These trades are complex and it is difficult to assess their true value as income.<sup>174</sup> For example, during the dot-com boom, the then giant internet service provider, AOL, gave advertising space and promotion on its portal to internet start-ups in exchange for shares in these companies. When these deals were announced, the shares of the smaller start-ups would soar owing to the halo-effect of AOL, and thus also the value of the shares held by AOL. The value of these shares was recorded as income. However, income from these agreements was not recurring, and the value of most of these shares soon collapsed in the dot-com bust. AOL repeatedly came under government investigations for misleading investors by not accounting for this income properly.<sup>175</sup>

### 13.8.3 Long-Term Contracts

When should income be recognized if a firm is engaged in a long-term contract? Front-loading all of a contract's promised future income means booking all of the expected revenue upfront, which would make the company look good in the short run but raise its tax obligation. In several accounting scandals during the 2000s, companies estimated expected future revenue and credited it to the earlier reporting period. These scandals forced the accounting profession to create standards for revenue recognition. Usually a sale is recognized as revenue when the customer pays. But reporting revenue only when the contract is finished and payment is received, while the firm incurs cost for the activity that results in that income later, makes performance look in worse shape than it really is. Intermediate approaches are to allocate revenue by the percentage of completed cost, or by the percentage of completion of the job, or by time period. For example, if a firm expects \$500 million in earnings from a specific project, when the project is 50% complete the firm

170 EY. "Internet Accounting Issues: A Summary." May 2001. Last accessed July 6, 2017. <https://www2.bc.edu/peter-dicarlo/MAY%20Summary%20of%20Internet%20Acctg%20Issues%205-2001.htm>.

171 Kahn, Jeremy. "How telecom's bad boy did it." *Fortune*. March 4, 2002. Last accessed July 10, 2017. [http://archive.fortune.com/magazines/fortune/fortune\\_archive/2002/03/04/319116/index.htm](http://archive.fortune.com/magazines/fortune/fortune_archive/2002/03/04/319116/index.htm).

172 Federal Accounting Standards Board. "FASB Codification." Last accessed July 20, 2011. <http://www.fasb.org/home>.

173 EY. "Internet Accounting Issues: A Summary." May 2001. Last accessed July 6, 2017. <https://www2.bc.edu/peter-dicarlo/MAY%20Summary%20of%20Internet%20Acctg%20Issues%205-2001.htm>.

174 Kirkpatrick, David. "AOL's Inventive Barter Deals Draw Scrutiny of Investigators." *New York Times*. August 12, 2002. Last accessed July 10, 2010. <http://www.nytimes.com/2002/08/12/business/aol-s-inventive-barter-deals-draw-scrutiny-of-investigators.html>.

175 Lieberman, D. and M. McCarthy. "AOL's Deals with Monster, Vivendi Under Scrutiny." *USA Today*. April 23, 2002.

can assess \$250 million of earnings in that year. But the revenue projection for this method can be highly subjective.<sup>176</sup> For those reasons many companies use accrual accounting and only record sales revenue when it is actually earned.

For films and television programs, income can be calculated for each taxable period by using the formula

$$\text{Forecasted Income} = \text{Cost of Property} \\ \times \frac{\text{Current Year's Income from Property}}{\text{Total income anticipated from property (10 years)}}$$

So if a film costs \$100 million and the current year's net income is \$150 million, with a total anticipated income of \$500 million, then it is \$100 million  $\times$  0.3 = \$30 million.<sup>177</sup>

### 13.8.4 Income Smoothing

The goal of income smoothing is to dampen variations in the firm's earnings. It might be tempting for a firm to show a stellar year, but if the next year is merely good, investors and the press will be disappointed. Investors and creditors generally perceive the business to be riskier if its income is volatile. They like predictable dividend payments. Income smoothing may also lower tax burden.

Company income can be smoothed by various means<sup>178</sup>:

- Depreciation and amortization—changing the method of depreciation/amortization, the average age of asset, the period of amortization, and/or the estimated salvage value.
- Treatment of uncollectible accounts, loans receivable, and so on.
- Classifying expenses as extraordinary or non-recurring. Companies have some discretion about how to classify good news and bad news. They can classify good news as stemming from continuing operations, while bad news is classified as being the result of discontinued operations or extraordinary items.
- Write down of assets and inventories.
- Deferral or delay of income tax payments where possible.
- Using reserves. A firm might create a reserve balance in good years for negative contingencies, for sales returns, litigation costs, and product warranty costs, for example.
- Selling products with price discounts in order to generate sales during the desired period.
- Non-matching of cost and revenues of a transaction in a given period. Companies book revenues in one year but shift some of the cost to another.

- Switching accounting methods,<sup>179</sup> for example from the accrual method of income recognition to that of the cash method.
- Creating a “big bath” in one year, and taking for that year a big write down of assets, inventory, and accounts receivable. This gets rid of a lot of negative numbers in one year, and makes it easier subsequently to be on a smoother course. Such an accounting action might be taken in a year that is bad for the entire economy, thus downplaying management's responsibility.

### 13.8.5 EBITDA and Other Profit Definitions

There are other metrics for earnings performance. EBITDA stands for “earnings before interest, taxes, depreciation, and amortization.” It reports how much a company would have made if it did not have to pay interest on its debt, pay taxes, or did not take depreciation and amortization charges.<sup>180</sup> EBITDA is a popular but controversial measure because it can make unsuccessful firms look good. It does so by omitting these often substantial elements of cost. The legendary investor Warren Buffett summed it up, “EBITDA would only make sense if capital expenditures are funded by the tooth fairy.”<sup>181</sup> (EBITDA is also not well suited for TV or internet companies which use barter for part of their transactions, as this may not show up as income.)

However, EBITDA can provide a relatively good “apples-to-apples” comparison between companies and between time periods because it eliminates the accounting decisions that are somewhat within management discretion, tax payments that are based on a variety of income and expense statements and whose timing can be somewhat juggled, and depreciation that can be treated in a variety of ways, such as being accelerated or front loaded. EBITDA can be, in particular, a useful measure for firms with low or long-lasting capital equipment. In such a situation, depreciation and amortization is fairly steady.<sup>182</sup> But EBITDA is a poor measure for firms in an industry with big technological change, where capital assets are large but short-lived, or where significant upgrade investments are needed to stay up to date. In these cases, EBITDA would project a rosier picture than reality.

The cable TV company Cablevision had an EBITDA of \$5.7 billion in 2002 while it spent \$3.8 billion on upgrades and \$1.6 billion on interest. Incorporating these items into the calculation would have wiped out earnings. Presenting

176 Jensen, Bob. “Electronic Commerce Issues Dealt With by the Emerging Issues Task Force (EITF).” 2003 Trinity University. March 29, 2004. Last accessed August 1, 2011. ► <http://www.trinity.edu/rjensen/e-commerce/eitf01.htm#Introduction>.

177 IRS. “Overview of Depreciation.” Last accessed July 10, 2017. ► <https://www.irs.gov/publications/p946/ch01.html>.

178 White, Gerald, et al. *The Analysis and Use of Financial Statements*, 3rd ed. Hoboken, NJ: John Wiley & Sons, Inc., 2003.

179 White, Gerald, et al. *The Analysis and Use of Financial Statements*, 3rd ed. Hoboken, NJ: John Wiley & Sons, Inc., 2003.

180 Kennon, Joshua. “How to Calculate Return on Assets or ROA.” *The Balance*. December 30, 2016. Last accessed July 10, 2017. ► <https://www.thebalance.com/return-on-assets-roa-357592>.

181 MacDonald, Elizabeth. “The Ebitda Folly.” *Forbes*. March 17, 2003. Last accessed July 10, 2017. ► <https://www.forbes.com/global/2003/0317/024.html>.

182 McDonnell, Sharon. “EBITDA ComputerWorld.” *ComputerWorld*. January 8, 2011. Last accessed July 29, 2011. ► <http://www.computerworld.com/s/article/55895/EBITDA>.

the company's performance in the EBITDA way is perfectly legal, and potential investors and business journalists thus needed to analyze income beyond EBITDA. Once they did and realized that the company's FCF was dwindling as it was spending on upgrades and interest, Cablevision's stock dropped 78%.<sup>183</sup>

For the first quarter of 2011, Telecom Italia's EBITDA was €2.9 billion, up 3.6% from the first quarter 2010, which seemed a strong performance. However, approximately €2.4 billion was spent on taxes, depreciation, and amortization for normal business operations. Therefore, net profit was actually only €549 million, a much more modest figure.

The French media conglomerate Vivendi Universal reported \$7.9 billion in profit for the three years ending 2002, not accounting for interest and related expenses. If those had been included, its income would have been negative by \$6.5 billion.<sup>184</sup> Getting nervous, Vivendi's board called in the investment bank Goldman Sachs to go over the company's financials. According to media mogul Barry Diller, "When Goldman came out with its report, the board members all said, 'Oh my God.'" The board had been focused on the increase of EBITDA and did not realize the full income picture, or so its members later claimed.

A still more aggressive way to report earnings in such a way is ACSOI (adjusted consolidated segment operating income), a relatively new metric.<sup>185</sup> It measures operating profits, but it treats a company's marketing and acquisition expenses as an investment in an asset which is being amortized over several years. Such capitalization reduces the deduction against earnings and hence makes them look larger. This is not acceptable under GAAP which calls for a full expensing in the year they are incurred, not spread over

several years. The companies argue that gaining customers and market share through marketing is an investment that will bear fruit long into the future and should be treated just as investment in machinery or buildings. Groupon, a large online coupon firm, recommended in its 2011 initial public offering filing that investors use ACSOI to determine its performance. With ACSOI, Groupon showed a profit of \$60 million for 2010, and of \$81 million for Q1 2011. The company then faced criticism by the investor community and dropped ACSOI, with the result that it showed losses of \$420 and \$117 million.<sup>186</sup>

The company Demand Media went one step further and created a measure called "Adjusted OIBDA," standing for operating income before depreciation, and amortization. It excludes stock-based compensation (i.e. options), as well as the financial impact of acquisition and realignment costs, and any gains or losses on certain asset sales or dispositions. Here, too, the results make the company look better than it would with these items included in costs.

Driving these creative ways of reporting is the equally creative business energy of start-up entrepreneurs, who feel that traditional stodgy accounting conventions are just another establishment obstacle they must overcome with new ways. And they are not entirely wrong. Gaining a customer whose subscription will be generating income for years is an investment and asset. And why should R&D be expensed rather than amortized as an asset? But the problem is that such adjustments are not balanced in both directions; they pick and choose among the weaknesses of conventional accounting, and their net result, and indeed goal, is to make the company look good. Though the companies argue that they are just trying to be transparent, the result is actually often the opposite, namely obfuscation.<sup>187</sup>

### 13.8.6 Case Discussion

#### Disney Income Statement

This income statement for 2004 shows Disney's performance (Main headings are bolded) (Table 13.14). Its revenue from all of its operations total was \$30.8 billion, or about \$31 billion when including revenue from investments. This was offset by the cost

of operations and other items such as taxes, which totaled \$28.8 billion. Its net income after taxes was \$2.345 billion, but Disney's EBITDA was \$5.5 billion, more than twice as high. It omits the impact on earnings of depreciation costs of its hotels, theme parks,

copyrighted films, satellite transponders, and so on. Compared with the preceding year, 2003, Disney's net income rose from \$1.3 billion to \$2.3 billion, an increase of 85%. EPS was \$1.12 in 2004 versus \$0.65 in 2003, almost a doubling.

183 Wayman, Rick. "EBITDA: The Good, The Bad, And The Ugly." *Investopedia*. February 6, 2002. Last accessed July 10, 2017. ► <http://www.cs.uml.edu/~pkrolak/InvestmentTool/020602.asp.htm>;

MacDonald, Elizabeth. "The Ebitda Folly." *Forbes*. March 17, 2003. Last accessed July 10, 2017. ► <https://www.forbes.com/global/2003/0317/024.html>.

184 MacDonald, Elizabeth. "The Ebitda Folly." *Forbes*. March 17, 2003. Last accessed July 10, 2017. ► <https://www.forbes.com/global/2003/0317/024.html>.

185 De La Merced, Michael J. "Abracadabra! Magic Trumps Math at Web Start-Ups." *New York Times*. June 17, 2011. Last accessed July 10, 2017. ► <https://dealbook.nytimes.com/2011/06/17/abracadabra-for-internet-start-ups-magic-trumps-math/>.

186 De La Merced, Michael J. "Abracadabra! Magic Trumps Math at Web Start-Ups." *New York Times*. June 17, 2011. Last accessed July 10, 2017. ► <https://dealbook.nytimes.com/2011/06/17/abracadabra-for-internet-start-ups-magic-trumps-math/>.

187 Catanach, Anthony and Edward Ketz. "The 'Beauty' of Internet Company Accounting." *Grumpy Old Accountants*. April 9, 2012. Last Accessed July 10, 2017. ► <http://accounting.smartpros.com/x73610.xml>.

**Table 13.14** Disney incomes (2004)

<b>Revenue from media networks</b>	<b>\$11,778</b>
Revenue from parks and resorts	\$7750
Revenue from studio entertainment	\$8713
Revenue from consumer products	\$2511
Equity investment income	\$372
<b>Total Revenues</b>	<b>\$31,124</b>
Cost and expenses for media network	-\$9600
Cost and expenses for parks and resorts	-\$7066
Cost and expenses for studio entertainment	-\$8038
Cost and expenses for consumer products	-\$2000
Minority interests <sup>a</sup>	-\$197
<b>Total Costs and Expenses</b>	<b>-\$26,901</b>
Net income	\$4223
Depreciation	+\$1198
Amortization of intangible assets	+\$12
Interest paid	+\$624
Income taxes paid	+\$1349
EBITDA	\$5528

<sup>a</sup>(Payments due to others from the income of subsidiaries that are majority-owned by Disney, but not 100% owned. Disney is required to include their full revenue, and then has to break out the amount owed to the minority owners, such as, to Hearst for its share of ESPN)

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### 13.8.7 The Cash Flow Statement

A company's reported earnings uses somewhat arbitrary accounting treatments, such as when to recognize revenues or how fast to depreciate. It is difficult for a potential investor to look beyond those numbers and evaluate the company's true performance. An alternative way to look at a company's health is to go past the reported earnings and analyze instead the cash flow. The cash flow statement reports the incoming and outgoing money flow over a time period. This is different from its earning. As mentioned, it is like a company's checking account because it tracks the inflow and outflow of its funds. It does not include non-cash items such as depreciation, which are less relevant for determining the short-term viability of a company than its ability to pay its bills and debts. Whereas reported earnings can be overstated, a company cannot easily overstate its cash balance. "Cash is a fact, profit is an opinion."<sup>188</sup> This is important for start-up companies with limited liquid assets. These companies are vulnerable to short-term cash shortages, even when accounts receivable suggest long-term financial health.

<sup>188</sup> Rappaport, Alfred. "Creating Shareholder Value: A Guide For Managers And Investors." The Free Press, 1998.

Many analysts despair of earnings as a measure of company performance since this can be treated with substantial latitude by the company. Alfred Rappaport, a professor at Northwestern University, argued against evaluating a business's success by profit measures such as price to earnings ratios and earnings per share.<sup>189</sup> Instead, he argued that corporate performance must be evaluated on the basis of the monetary returns it generates for shareholders. This means the cash flow minus the cost of capital.

The importance of cash flow management can be seen from the experience of two film studios that went out of business because they ran out of money. Orion Pictures was a medium-sized and well-respected film studio that produced such hits as *Silence of the Lambs* and *Dances with Wolves* in the late 1980s.<sup>190</sup> Carolco Studio had huge successes with *Total Recall* and *Terminator 2*. However, the worldwide profit from those hits and other films was slow in coming while the movies' budget costs were huge. Both Carolco and Orion went out of business. The cause was poor cash flow management. By the time the substantial profits from these films were made, the companies were already insolvent.

### 13.8.8 Cost and Expenses

There are several types of costs.

- Cost of goods sold. The expenses a company incurs in order to create and manufacture a product. This includes inputs and materials purchased from others, as well as the wages paid toward production.
- Operating Expenses. The costs that occur over the regular course of a business's life. It includes salaries paid to employees, R&D costs, and other operating charges.
- Capital expenses. These are investments in assets used for production or marketing.

#### 13.8.8.1 When Cost is Recognized: Expensing Versus Capitalization

One of the key issues in accounting is how to treat a cost item. We have already encountered this issue repeatedly. Should the cost be considered an *investment* in an asset? (This is known as capitalization.) Or is it a one-time expense? (This is known as an "expensing.") If the cost is capitalized, it would be proper to distribute the cost of such an investment over its lifetime. This reduces annual expenses and raises profit. By identifying the item as an asset rather than expense, it also raises the asset/debt ratio, which tends to be a good thing for a company to show. In contrast, an "expensing" means writing off a cost right away, which lowers profits, but also reduces tax payments due. Within rules and accepted practices, firms

<sup>189</sup> Rappaport, Alfred. "Creating Shareholder Value: A Guide For Managers And Investors." The Free Press, 1998.

<sup>190</sup> Boxoffice Mojo. "The Silence of the Lambs." Last accessed July 10, 2017. ► <http://www.boxoffice Mojo.com/movies/?id=silenceofthelambs.htm>; Boxoffice Mojo. "Dances with Wolves." Last accessed July 10, 2017. ► <http://www.boxoffice Mojo.com/movies/?id=danceswithwolves.htm>.

have to decide on how to treat their costs, either as investments or as expenses.<sup>191</sup>

In economic and managerial terms, the decision of how to treat the expense should be based on when the benefit from the expense will be realized and for how long. If the benefit of an outlay is reaped entirely in the same period, it should be expensed. But if the outlay is likely to generate benefits in the future, it should be capitalized, and then “amortized”, over time.

An example of capitalization is the huge investment by the US telecom firm Verizon in a fiber infrastructure. It used capitalization methods to spread out the expenses evenly in line with the long-term generation of revenues by the new assets, with the added benefit of making its bottom line look better.<sup>192</sup>

An example of the problem is the aggressive building up of its customer base by AOL, the internet and outline service provider, in the 1990s by sending out free diskettes. The costs that AOL incurred for these diskettes were treated as investment expenditures in generating a subscriber base. Consequently, the expenses were amortized as capital assets. This reduced the early cost of this marketing campaign. Without such treatment AOL would not have shown profits from 1994 to 1996. The SEC disagreed with this treatment and forced AOL to restate its balance sheet for that period, including expensing the marketing costs, which resulted in AOL showing a loss.<sup>193</sup>

In film and other media, production costs are often expensed. Why should this be the case? After all, if production costs are expensed all at once, it would create a big drop to the production company’s P&L statement. Later, as revenues start to flow in, the company would show a radical recovery. This kind of erratic income volatility seems to provide erroneous economic information. And yet the immediate expensing of production costs is quite common around the world. One reason is the tax angle. The immediate expensing of a film creates a great potential for tax shelters to investors by creating big loss for tax purposes. Under tax codes in many countries, investors are able to rapidly write off the film production cost as expenses, which allows them to offset their income right away while only receiving taxable revenue from the film later. In the USA, the tax reform of 1986 eliminated this tax shelter. But many other countries still have these tax deals in place, to provide incentive for rich taxpayers to invest in films. In Germany, for example, movie investors are permitted to immediately deduct the full amount they invested in the film from their tax payment. This allows Germans who are in the top tax bracket to invest in a movie an amount equal to their total other earnings and pay no tax on it. When they are repaid sometime in the future, the profit is considered “capital gain,” which is taxed at a lower rate.<sup>194</sup>

For the cable TV industry, the treatment of outlays as investment versus expenses can vary over the life cycle of a business. Accounting practices in the USA change over the life cycle stages of cable infrastructure construction.<sup>195</sup> During the start-up stage, when upfront investments are very high, the costs of construction, labor, interest, and so on are capitalized.<sup>196</sup> In the pre-maturity period a cable television system is still partially under construction, but already offers service, and subscriber revenue begins to appear. New plant costs continue to be capitalized,<sup>197</sup> but subscriber-related costs and general and administrative expenses must be expensed as same-period costs. Costs for programming (and other items that do not vary regardless of subscriber size) are allocated between current expense and future operations (capitalization). System costs may be partly capitalized and partly expensed. The relative shares depend on the ratio of current number of subscribers to the expected number of subscribers when the system becomes mature. The smaller the relative share of current subscribers is, the greater the share of capitalization. Subscription revenues are recorded as current income. Subscriber installation fees can be expensed only up to the direct selling costs, and the remainder must be capitalized over the estimated average period that subscribers are expected to remain connected to the system. Finally, in the maturity phase, system costs are partly capitalized and partly expensed, and subscription revenues are recorded as income.<sup>198</sup>

Website and software development costs are treated similarly. For websites, during the development stage infrastructure outlays are generally capitalized. But once the website is in the operating stage, costs must be expensed. New functionalities and upgrades, however, are capitalized. Practically speaking, it is often hard to differentiate between the two. The cost of initial graphics, which includes the design and layout of each page, is capitalized.<sup>199</sup> The cost for gaining subscriptions is viewed as an expense.

### 13.8.8.2 Telecom Cost Accounting

While most private firms try to paint a favorable picture of profitability, it is often in the interest of a regulated firm, in contrast, to overstate its expenses and understate its revenues. This way it can ask for a more favorable regulatory treatment, for example on prices. One of the functions of government is to keep prices below monopoly levels. This can be accomplished by keeping the price of the service regulated. But at what level? This leads to major regulatory battles over accounting. Regulators allow prices that result

191 McGrahan, Kathleen and Gordon Shillingaw. *Accounting: A Management Approach*. Homewood, IL: Irwin, 1993.

192 Rosenbush, Steve. “Verizon’s Gutsy Bet”. *Business Week*. August 4, 2003. Last accessed July 10, 2017. ► <https://www.bloomberg.com/news/articles/2003-08-03/verizons-gutsy-bet>.

193 Litan, Robert E. and Peter Wallison. “Beyond GAAP.” *Regulation* 26, no. 3 (2003): 52.

194 Epstein, Edward Jay. *The Big Picture, The New Logic of Money and Power in Hollywood*. New York: E.J.E. Publications, Ltd., Inc., 2005.

195 Set by FASB Statement 51

196 Obringer, Lee Ann. “How Start-up Capital Works.” *Howstuffworks*. January 1, 2003. Last accessed July 10, 2017. ► <http://www.howstuffworks.com/startup-capital.htm/printable>.

197 Federal Accounting Standards Board. “FASB Codification.” Last accessed July 29, 2011. ► <https://asc.fasb.org/>.

198 Federal Accounting Standards Board. “FASB Codification.” Last accessed July 29, 2011. ► <https://asc.fasb.org/>.

199 EY. “Internet Accounting Issues: A Summary.” May 2001. Last accessed July 6, 2017. ► <https://www2.bc.edu/peter-dicarlo/MAY%20Summary%20of%20Internet%20Acctg%20Issues%205-2001.htm>.

in a “fair” return on the net investment (the rate base) after covering legitimate operating expense. This was discussed in ► Chap. 8 Managing Law and Regulation and ► Chap. 11 Pricing of Media and Information.

Any regulatory system that deals with prices or revenues requires consistent definitions and accounting treatment. In 1987, the US government, through the FCC regulatory agency, created the Automated Reporting Management Information System (ARMIS) for standardizing and collecting financial, operating, service quality, and network infrastructure information from the larger phone companies.<sup>200</sup>

## 13.9 Managerial Accounting

### 13.9.1 The Role of Managerial Accounting

The standard financial statements that are provided by companies listed on the stock market to the public give only aggregates. In contrast, the company’s managers require much more information to operate effectively.<sup>201</sup> A system of managerial accounting therefore serves managers in their decision-making, policy setting, and internal communication. It is often also called cost accounting, though that term is generally considered a sub-category, focused on analyzing costing and pricing.<sup>202</sup>

On the most obvious level, every company must generate proper records of financial and operational information, and internal controls exist to ensure that the data is correct and timely. Controls include procedures for authorizing transactions and for the recording of separate operations. Typically, financial authorization is separated from the accounts payable department.

Beyond the recording function, managerial accountant must recognize emerging financial problems. For example, if they observe a high debt ratio, it must lead to a close look at imminent loan repayment dates, cash flow, and late payments from buyers. With such information, management can initiate changes to the expense budget, adjust profit/loss projections, cut costs, and perhaps adjust marketing strategies.

Large companies with a typically decentralized structure require a strong monitoring of performance across divisions.<sup>203</sup> For such performance evaluation and for control over cost and revenues, a company creates a number of internal financial reporting levels. This is more complicated than it sounds, because there is a lot of intermingling: divisions and sub-units regularly use corporate-level and group-level overhead functions and products.

Another problem is the global spread of company activities. Multinational companies often have divisions and global

locations with different accounting practices. They must coordinate to combine in a company-wide system, yet comply with local laws and practices. Local subsidiaries must keep financial accounting systems that follow local regulations as well as company policies. Another dimension of aggregating financial information is across specific customers, often across national boundaries and product lines. To that purpose companies have implemented forms of global account management, which has proved to be difficult because it involves data flows from numerous subunits of a company.<sup>204</sup>

The system of internal reporting depends on a company’s organizational and regional structure. For example, McGraw-Hill, a major publisher of professional and educational books, operates on multiple levels. The business units, such as McGraw-Hill Education Group School (textbooks, etc.), report to a higher management level, where the information is aggregated and reported to the next level (McGraw-Hill Education), and from there to the corporate level CFO and ultimately to the board of directors.<sup>205</sup> The information can be aggregated along several dimensions—division, product line, geography, or customers.

### 13.9.2 Responsibility Center and Profit Centers

To evaluate the performance of a company’s division or project it is segregated financially as a responsibility center. There are three varieties.<sup>206</sup>

*Expense centers* measure the inputs but not the outputs. An example is the legal department. Costs are the inputs and they are measured to determine the efficiency of the department. Managers might compare the numbers with those of operations elsewhere, and look at the trends over time.

*Investment centers* calculate an operation’s profitability by looking at the assets and the profit they achieve. This requires an allocation of common assets to various operations, which is often difficult.

*Profit centers* measure both inputs and outputs. As is the case for investment centers, the revenues also include internal contributions by other departments through the allocation of transfer payments, but the internal transfer prices could be arbitrary and affect the results.

### 13.9.3 Overhead and Indirect Cost

The internal accounting process is complicated by overhead functions that are indivisible and hard to allocate.

200 In 2000, the FCC simplified ARMIS somewhat and consolidated from 296 account categories to 164.

201 Roehl-Anderson, Janice and Steven Bragg. *The Controller’s Function: The Work of the Managerial Accountant*, 3rd ed. (Hoboken: John Wiley & Sons, Inc. 2005), 340–365.

202 Webster, William H. *Accounting For Managers*. New York: McGraw-Hill, 2003.

203 McGrahan, Kathleen and Gordon Shillingaw. *Accounting: A Management Approach*. Homewood, IL: Irwin, 1993.

204 Arnold, David, Julian Birkinshaw, and Omar Toulan. “Implementing Global Account Management in Multinational Corporations.” *Marketing Science Institute*. 2000. Last accessed July 10, 2017. ► <http://www.msi.org/reports/implementing-global-account-management-in-multinational-corporations/>.

205 McGraw-Hill Publishing. “McGraw Hill Investor Relations.” Last accessed July 10, 2017. ► <http://investors.mheducation.com/home/default.aspx>.

206 Anthony, Robert N. *Fundamentals of Management Accounting*. Homewood, IL: Richard D. Irwin Inc., 1985.

Examples are interest cost or taxes incurred at the corporate level but attributable to divisional income-producing activities.<sup>207</sup>

The allocation of overhead is important in the measuring of the profitability of projects. To allocate cost, a firm separates project-related costs (direct costs) from non-project-related costs (indirect costs). Direct costs might include the cost of people and materials specifically used for the project. Indirect costs is the overhead, and include costs not directly associated with projects, such as taxes, IT, and maintenance. For a film production, the fixed cost of the studio that is not directly chargeable to a specific film is considered overhead, such as taxes, the salaries of management, or maintenance staff. The studios estimate a film's overhead by using a percentage of a film's overall budget.

### 13.9.4 Transfer Pricing

When goods or services are supplied by one division or profit center to another within the same firm, the price used as revenue (to the supplying unit) or cost (to the receiving unit) is called a transfer price.<sup>208</sup> Examples would be how much the pay-TV channel HBO, owned by Time Warner Media, would pay the Warner Brothers film studio, also owned by Time Warner, for a TV series which it produced; and similarly, how much one of Bertelsmann's TV channels would pay its Random House book publishing division for the rights to make a film script from one of Random House's books.

A company's top management must set on a policy for transfer prices in varying circumstances.<sup>209</sup> There are several ways to set transfer prices. One is cost based. Others are market based, arm's-length, or regulated by top management. This is discussed in ► Chap. 11 Pricing of Media and Information.

A special problem for media companies, in particular, is that intangible assets often have no defined market value. This allows companies to set prices for their assets to reduce taxable assets in countries with high tax rates.<sup>210</sup>

There can be significant tax consequence to transfer prices, since they can be used to shift profits to low-tax countries. Because of various abuses, the USA has instituted, for tax purposes, a "formula apportionment" (FA) method making it harder for a company to manipulate its international tax status. It requires a company to combine the income of all its subsidiaries into a single taxable income. Income is then

apportioned by a formula to the different countries. As a result of this, transfer pricing methods between subsidiaries then ceases to be a factor influenced by taxation. The FA method only works if all the involved parties cooperate. For example, in the United States, an FA system can apportion state taxes, and reduce competition among states to attract transfer pricing of income. But internationally the cooperation by some other countries is often weak. The USA and Canada use the FA method, and the EU has been considering FA.

In addition to using transfer prices to squeeze competitors or to lower taxes, they can also be set up to reward and motivate managers of a division by bonuses based on divisional performance.<sup>211</sup> For this a company must create a fair internal pricing system.<sup>212</sup>

Methods a company can use are to allocate profits to the different subsidiaries proportionally to the revenues generated, to the cost expended, or to the value-added (net of the cost of its contribution).

As an example, suppose a company's Subsidiary A manufactures a DVD for \$6. Subsidiary B obtains it at that cost, \$6, from A and adds marketing/advertising at a cost of \$4. Subsidiary B then sells the DVD to a retailer at a cost of \$30.<sup>213</sup>

The total profit on this product is \$20. How should the profit be allocated among the two divisions? If the profits are allocated proportionally to the cost expended (i.e. 60:40), Subsidiary A makes a profit of \$12 and Subsidiary B makes a profit of \$8. But if the proportions of value added are used, then A gets credited nothing as profit (\$6 minus \$6), whereas B gets credited with a profit of \$20. And if revenues are the base for profit allocations A would receive 1/6 of \$36, since its revenue share is 6/(6+30) of overall profits (\$20), that is \$3.33, while B gets 5/6, that is \$16.67.

If transfer prices are too high, they may result in inefficient use of resources. Suppose Company C, a telecom network provider, has created a global network where national subsidiaries were charging each other to use their particular territorial networks. If they were higher than those of third-party service providers, the subsidiaries would buy the services externally. As a result, C's network would be underutilized.<sup>214</sup>

Leaving the negotiations over transfer price to divisions to haggle over also creates problems. Suppose Company D has encouraged all its subsidiaries to negotiate prices between themselves. As a result a lot of management time was spent on internal discussions over pricing. Large subsidiaries, strong personalities, and those with skills of internal politics might be able to get better terms. To avoid this leads companies to create objective pricing formulas. Yet these too have problems.

211 Hyde, C. and C. Choe. "Keeping Two Sets of Books: The Relationship Between Tax and Incentive Transfer Prices". *Journal of Economics and Management Strategy* 14, no.1 (Spring 2005): 165–186.

212 In one survey, 89% of companies reported that they used the same transfer prices for both tax and incentive purposes. However, studies have shown that companies are often creating two different transfer prices. Hyde, C. and C. Choe. "Keeping Two Sets of Books: The Relationship Between Tax and Incentive Transfer Prices". *Journal of Economics and Management Strategy* 14, no.1 (Spring 2005): 165–186.

213 Feinschreiber, Robert. "Transfer Pricing Methods." (Hoboken: John Wiley & Sons, Inc., 2004), 1–61.

214 KPMG. "Transfer Pricing for the Telecommunications Industry." 2006. Last accessed June 20, 2007. ► <http://www.kpmg.ca/en/industries/ice/documents/TransferPricingForTelecomIndustry.pdf>.

207 Mellman, Martin, Joseph Kerstein, and Steven B. Lilien. *Accounting for Effective Decision Making*. (New York: Irwin, 1995), 298–322.

208 Anthony, Robert N. *Fundamentals of Management Accounting*. Homewood, IL: Richard D. Irwin Inc., 1985.

209 Anthony, Robert N. *Fundamentals of Management Accounting*. Homewood, IL: Richard D. Irwin Inc., 1985.

210 Kind, H., K. Midelfart and G. Schjelderup. "Corporate Tax Systems, Multinational Enterprises, and Economic Integration". *Journal of International Economics* 65, no.2 (March 2005): 507–521.

A problem exists when simplistic formulas are used. Suppose Company E has a transfer pricing policy where services sold by one division to another division should be sold at cost, plus a 10% markup. Suppose that its Division 1 sold the service to Division 2, which, after adding items, sold it on to Subsidiary 3, and so on. Each subsidiary added 10% when passing it on. Consequently end prices finish up well above cost plus, which push that division into losses when it tries to compete.

### 13.9.4.1 Case Discussion

#### Internal Transactions

Disney uses internal pricing between its TV production companies and its broadcasting and cable arms by adjusting the terms of advertising and distribution pricing contracts between subsidiaries. ABC networks distributes Disney productions. Content is provided to the broadcasting company in return for a number of advertising time slots and other payments. Their value is internally priced as a transfer price. Disney also created an insurance company to insure its own businesses. By adjusting the rates and premiums it charged itself, it could shift profits and revenues from a division or project to the insurance subsidiary or to the overall company.<sup>215</sup>

### 13.9.5 Tracking Costs

A company must be able to track its costs. This enables the company to compare planned (“budgeted”) and “actual” costs, and to determine whether corrective action must be taken.<sup>216</sup> The techniques of cost tracking depend on the nature of a firm’s product. Where the product is diverse and discrete, such as a movie, a job (project) costing approach is used, in which direct costs such as materials and labor (plus a share of overhead and indirect costs) are attributed to each project.<sup>217</sup> In contrast, firms with repetitive production of uniform goods use a process costing in which the total cost is divided by the number of units to obtain a unit cost. An example is a cable TV service.

Standard costing is often used to enable rapid feedback on cost. Costs are estimated (standard costs) and are periodically compared with actual costs. Where there are major discrepancies they are flagged for attention and action. This kind of system is used for film production.

For a film project, a production accounting firm is hired by a producer, which puts together a team to work with that production, typically through a limited company (LLC) created solely for that particular production’s accounts. A payroll company is hired by the LLC. The accounting company, in theory, is there to represent everything fairly to everybody involved.

It is the production accountant’s job to track costs for the project. Daily cost overviews look at the amount spent that day,

the accomplished principal photography, and compare them to the amount budgeted for each day, and then determines whether the production is on schedule and on budget.<sup>218</sup> There are a number of software packages to keep track of cost. Such a program lets an accountant enter many detail transactions at the bottom level, and all accounts are totaled to the top level.<sup>219</sup>

There are two types of costs when it comes to films. Above-the-line costs are for actors, writers, directors, and producers, the creative talent. Below-the-line refers to costs of crew, sets, costumes, and food, that is the crafts personnel and the operating costs.<sup>220</sup>

Production managers divide scripts into acts and scenes and determine the number of work days required from each actor and support personnel. Each scene is measured by its page count (measured in eighths of a page).<sup>221</sup> For each scene, the required components are defined, such as whether it is day or night, interior or exterior, or location. Similarly, the required cast, props, wardrobe, extras, stunts, visual and special effects, animals, and vehicles are listed. For an example of the daily cost overview, see ► Chap. 3 Production of Media and Information.

The cost per minute is obtained by dividing the total production cost by the duration of the finished film or TV series. For example, for the last season of the TV sitcom *Friends*, the production cost was \$10 million per episode and the episode length was 23–24 minutes. This equates to approximately \$417,000 per minute.<sup>222</sup> For major theatrical motion pictures this figure is even higher. *Avatar* cost \$237 million to produce, or \$1.47 million per minute.

The cost per viewer is calculated by dividing production costs by the anticipated audience. The production cost for the final episode of *Friends* was \$10 million and the audience was approximately 50 million, so the production cost per network TV viewer was 20 cents, or about 0.9 cents per viewer per minute. Of course, there are also reruns, syndications, and foreign licensing on top of that with very little extra production cost.

### 13.10 Capital Accounting and Budgeting

Capital budgeting is the process of selecting and monitoring capital expenditures.<sup>223</sup> It is the planning process a firm uses to estimate and calculate its long-term capital investments. Such investments may include asset purchase, infrastructure and plant, R&D projects, advertising campaigns, and other projects that require capital expenditure and whose cash inflows are in the future.

215 Epstein, Edward Jay. *The Big Picture, The New Logic of Money and Power in Hollywood*. New York: E.J.E. Publications, Ltd., Inc., 2005.

216 Schroeder, Roger G. *Operations Management*. (New York: McGraw Hill, 1981), 339.

217 Wild, Ray. *Production and Operations Management*. (Andover, U.K.: Cengage Learning, 1989), 93.

218 Honthaner, Eve Light. *The Complete Film Production Handbook*. (Boston: Focal Press, 2001), 27–34.

219 2020 Software. “Compare software to find the best fit for your business needs.” Last accessed August 2, 2011. ► <http://www.2020software.com/software/search.asp>.

220 Susman, Gary. “We call it Martian Accounting.” *The Guardian*. August 31, 2001. Last accessed July 6, 2017.

221 Honthaner, Eve Light. *The Complete Film Production Handbook*. (Boston: Focal Press, 2001), 55–57.

222 Cyber College. “Costing out a Production.” January 29, 2017. Last accessed July 10, 2017. ► <http://www.cybercollege.com/tp007.htm>.

223 Garrison, Sharon. “Capital Budgeting.” *Self-Paced Overview*. Last accessed July 10, 2017. ► <http://www.studyfinance.com/lessons/capbudget/?page=01>.

Several interrelated evaluation techniques are used in capital budgeting in order to select projects for investment:<sup>224</sup>

- NPV;
- internal rate of return (IRR);
- return on investment (ROI);
- hurdle rate;
- payback period;
- discounted payback period;
- price/earnings multiples;
- real options.

We discuss these approaches in other chapters, in particular ► Chap. 4 Technology Management in Media and Information Firms, ► Chap. 6 Financing Media, Information, and Communications, and ► Chap. 14 Strategy Planning in Media and Information Firms.

## 13.11 Tax and Regulatory Accounting

### 13.11.1 Tax Accounting

Companies use tax accountants and tax lawyers to prepare their taxes in a way to legally minimize the company's tax payments. These professionals research the relevant questions of fact and law, generate preliminary conclusions, and finalize tax forms and returns.<sup>225</sup> Large companies usually have a department to handle their tax issues, and there are often sub-departments for the different categories of taxes.

What is the difference between financial reports and tax reports? Tax accountants typically make several types of changes to their company's financial book figures. First, they adjust for those incomes that are tax exempt or where tax credits are received. When it comes to film, for example, many localities and countries offer substantial tax incentives to attract production.<sup>226</sup> Second and conversely, certain incomes may not be recorded in financial reports but must be included as taxable incomes. For example, in music "swap-outs" or TV "barter syndication," advertisers and syndicators provide broadcast stations with content and in-kind benefits such as concert tickets. These types of compensation need to be reported as income in tax returns but not in financial reports.

Third, tax accountants might adjust the timing of losses or profits. Under financial reporting principles, a company may time its earnings either by backdating or waiting to recognize earnings and losses. For example, it may create a reserve. But in the tax returns, the earnings and losses need to be reported for the exact fiscal period in which they are incurred.

Fourth, and the greatest difference, is the treatment of the cost base of assets. This includes differences in depreciation rates or bases, the valuation of inventory, and the recognition as capital expenditures of certain expenses such as maintenance and repair.<sup>227</sup> Thus a company may use, in its financial accounting aimed at investors, a depreciation rate of 15%, but the tax rules may require the use of an 8% rate. For its tax return, the company must therefore recalculate the value of its assets at the allowed depreciation rate.

Tax issues may require specialized tax lawyers. This is particularly true where international transactions are involved with offshore locations that offer lower tax rates if transactions are properly structured. Other issues for a tax lawyer are the structure of an operation: whether to establish a new venture as a separate subsidiary, and whether the company should buy or lease an asset.

Tax lawyers might also be able to negotiate special tax rates or tax cuts with a government that want to encourage investments and employment.<sup>228</sup>

### 13.11.2 Case Discussion

#### Disney Tax Reductions

Disney was able, with the help of its lawyers, to negotiate a Florida tax break worth about \$680,000 in the year 2000 alone.<sup>229</sup> Officially, this was for creating jobs in Florida. Along the way, Disney made a \$350,000 donation to Enterprise Florida, a non-governmental organization, that recommends which companies should receive breaks. In 2012, it obtained a special tax break in Florida as an economic development tool. In 2010 it got \$110 million benefit through a federal tax credit.<sup>230</sup> In, 2011 Michigan paid \$40 million to Disney to support the production of *Oz, the Great and Powerful*.

## 13.12 Information Technology in Accounting

### 13.12.1 Management Information Systems

Corporate accounting was always at the leading edge of business application of computer technology. This makes sense: there are lots and lots of transactions, major number crunching; fairly well-structured procedures. The major accounting firm Arthur Andersen computerized the payroll of a client, a GE plant, using a UNIVAC I mainframe computer. Thus started the age of business information systems.<sup>231</sup>

The large accounting firms used big mainframe computers to assist their clients. Soon they discovered that such

224 Garrison, Sharon. "Capital Budgeting." *Self-Paced Overview*. Last accessed July 10, 2017.

► <http://www.studyfinance.com/lessons/capbudget/?page=01>.

225 Vault. "A Day in the Life: Tax Staff Professional (Big Four Firm)." Last accessed July 10, 2017.

► [http://www.vault.com/tax-staff-professional-\(big-four-firm\)/day-in-a-life](http://www.vault.com/tax-staff-professional-(big-four-firm)/day-in-a-life).

226 Australia Department of Communications, Information Technology, and the Arts. "Fact sheet: Refundable film tax offset for screen production in Australia." Canberra, Australia. March 2007. Last accessed June 17, 2011. ► <https://www.arts.gov.au/sites/default/files/pdfs/location-pdv-offset-fact-sheet.pdf>.

227 Roehl-Anderson, Janice and Steven Bragg. *The Controller's Function: The Work of the Managerial Accountant*, 3rd ed. (Hoboken: John Wiley & Sons, Inc. 2005), 366–375.

228 Chown, John F. *Taxation and Multinational Enterprise*. (London: Longman Group Ltd., 1974), 1–20.

229 Freedberg, Sydney and Connie Humburg. "Deal Me In." *St. Petersburg Times*. August 27, 2006. Last accessed July 5, 2007. ► [http://www.sptimes.com/2006/08/27/State/Deal\\_me\\_in.shtml](http://www.sptimes.com/2006/08/27/State/Deal_me_in.shtml).

230 Ossowski, Yael. "How Walt Disney Cashes in on Corporate Welfare." *Reason*. January 6, 2013. Last accessed July 10, 2017. ► <http://reason.com/archives/2013/01/06/how-walt-disney-cashes-in-on-corporate-w>.

231 Kee, Robert. "Data Processing Technology and Accounting: A Historical Perspective." *The Accounting Historians Journal* 20, no. 2 (December 1993): 187–216.

services and the associated IT consulting were a highly profitable additional service to their auditing clients. As mentioned, after 2003, in the face of mounting public and government outcry, they had to divest their consulting business from the public accounting services provided to the same companies.

Initially, accounting software focused on automating routine financial transactions such as payroll. Soon it added managerial elements. It became management information systems (MIS). It enabled speedy data collection, aggregation, and the distribution of financial information, which led to faster and better informed decisions.

Global firms can use accounting software that can adapt to national (e.g. France or Germany) standards and requirements, which often vary widely. Many companies are incorporating real-time enterprise software into their information systems.

A major advance in the use of IT to accounting was the introduction of spreadsheet software. Early versions of spreadsheets were written for IBM main frames. VisiCalc software for personal computers was founded in 1979 by Dan Bricklin, a Harvard MBA student with an MIT computer science degree who wanted to simplify the accounting calculation process. Lotus 1–2–3 was created by Mitchell Kapor and Jonathan Sachs in 1981. They added integrated charting and plotting capacity, and database manager (hence the 1–2–3 name). It allowed users to name cells. It quickly became the preferred program, even at the steep price of \$495, and it became a “killer app” for the early IBM personal computer.<sup>232</sup> New competitors entered, especially Microsoft with its Excel program.<sup>233</sup> Excel rapidly dominated the market and has faced very little competition since 1992.<sup>234</sup> Lotus was bought by IBM in 1995.

### 13.12.2 Enterprise Resource Planning Systems

Enterprise resource planning (ERP) software packages integrate business functions. These include accounting for financial transactions (including accounts payable, accounts receivable, cash receipts and disbursements, funds transfer and general ledger functions) inventory control (including material requirement planning (MRP), HR and job cost analysis, and manufacturing control modules of the functions it plans). ERP software offers many options: just-in-time inventory control; job cost analysis; electronic fund transfer (EFT); electronic data interchange (EDI); decision support systems (DSS); executive information system (EIS); data mining; early warning systems; production planning; quality management; and many more.

To meet these goals, ERP integrates the computer functions across a company. Instead of each department having its own

software and database, one piece of data (and software) is capable of using a shared data system across many departments.<sup>235</sup>

For example, MGM studios use software from Real Software Systems (RSS) to account to profit participants and royalty recipients. Previously, this took many spreadsheets and many people. MGM also uses SAP, a German company, to manage and handle inventory at major customers such as Wal-Mart in real time, to ensure continuous adequate supply.<sup>236</sup>

To fully implement ERP takes a company between one and three years. This is not only an engineering issue. A company needs to be careful in managing this change, to avoid system and employee confusion, and to integrate proprietary software with the ERP.<sup>237</sup> There are several problems with ERP. It is difficult to modify data that is scattered among different applications. The probability of faults and system failure rises with the number of interacting modules. Also, the wide scope conflicts with the traditional concept of “separation of duties” which helps in the supervision of financial security, integrity, and confidentiality.

The cost of implementing a full ERP system by a large company can easily exceed \$100 million.<sup>238</sup> As with all financial system reengineering, the transition is costly beyond direct system cost. A Deloitte Consulting survey indicated that 64 out of the Fortune 500 companies responded that their performance actually decreased after implementing ERP. This may be because of inadequate training or a resistance to change among the employees at those companies. The exact cost of an ERP implementation is hard to calculate, but a rule of thumb is that switching to company-wide ERP totals the cost of the software license plus six times the cost of the license for implementation. This is optimistic.

After the initial implementation, there are also costs for maintenance, upgrading, and so on. One study tried to identify the total cost of ownership (TCO). Of the 63 companies analyzed, the average TCO was \$15 million, ranging from \$300 million to \$400,000. While the size of the company made a difference, the study found a different metric. For every person in a company that used the ERP system often and effectively, the TCO was \$53,320.<sup>239</sup> The same study found that the average savings were \$1.6 million of direct resources, noticeable eight months after the ERP system was fully in place and 31 months after the start of implementation.<sup>240</sup> The main benefits were better and faster decision-making, not the direct savings in the accounting department.

Problems also arise when consolidating systems results in data summarization. With data becoming more removed from

232 Liebowitz, Stan. “Major Markets-Word Processors and Spreadsheets.” In *Re-thinking the Networked Economy: The True Forces Driving the Digital Marketplace*. Ed. Stan Liebowitz. New York: Amacom Books, 2002.

233 Margolis, Stephen and Stan Liebowitz. *Winners, Losers, & Microsoft: Competition and Antitrust in High Technology*. Washington, D.C.: Independent Institute, 1999.

234 Power, D. J. “A Brief History of Spreadsheets.” *DSSResources*. August 30, 2004. Last accessed July 10, 2017. ► <https://www.cs.umd.edu/class/spring2002/cmssc434-0101/MUlseum/applications/spreadsheethistory1.html>.

235 Koch, Christopher. “ABC: An Introduction to ERP.” *Enterprise Resource Planning Research Center on Cio*. January 10, 2006. Last accessed July 10, 2017. ► <https://www.scribd.com/document/41999156/ABC-An-Introduction-to-ERP>.

236 Sweat, Jeff. “Hollywood’s New Star Is IT.” *Information Week*. Last Accessed June 28, 2007. ► <http://informationweek.com/809/hollywood.htm>.

237 Koch, Christopher. “ABC: An Introduction to ERP.” *Enterprise Resource Planning Research Center on Cio*. January 10, 2006. Last accessed July 10, 2017. ► <https://www.scribd.com/document/41999156/ABC-An-Introduction-to-ERP>.

238 Koch, Christopher. “ABC: An Introduction to ERP.” *Enterprise Resource Planning Research Center on Cio*. January 10, 2006. Last accessed July 10, 2017. ► <https://www.scribd.com/document/41999156/ABC-An-Introduction-to-ERP>.

239 Study by the Meta Group. See Koch, Christopher. “ABC: An Introduction to ERP.” *Enterprise Resource Planning Research Center on Cio.Com*. January 10, 2006. Last accessed June 29, 2011. ► [http://www.cio.com/article/40323/ABC\\_An\\_Introduction\\_to\\_ERP](http://www.cio.com/article/40323/ABC_An_Introduction_to_ERP).

240 Koch, Christopher. “ABC: An Introduction to ERP.” *Enterprise Resource Planning Research Center on Cio.Com*. January 10, 2006. Last accessed June 29, 2011. ► [http://www.cio.com/article/40323/ABC\\_An\\_Introduction\\_to\\_ERP](http://www.cio.com/article/40323/ABC_An_Introduction_to_ERP).

its originating sources verification becomes harder.<sup>241</sup> In other cases, data definitions are incompatible, and inconsistent between different applications, departments, and divisions. Integration of financial data is therefore more than a technical issue.

ERP has been important for data operations within firms. It has also been a step toward the standardization of data collection within and formats across different firms.<sup>242</sup> This started with electronic data interchange (EDI) for the exchange of financial data and documents between computers of different organizations according to standardized rules. EDI permits the exchange of a large volume of data, reducing the paperwork or repetitive inputting of data. It facilitates, for example, export–import transactions that tend to be document intensive.

EDI also simplifies the supply-chain. It helps reduce inventory, which is 5–10% of net tangible assets in the USA, speed up supply, smooth production runs, and lower procurement prices.

Traditional EDI was based on closed networks set up and controlled by large companies with its suppliers and dealers, or by industry groups. It focused on highly repetitive business-to-business transactions. The various EDI systems were incompatible both within an industry and across industries. In time, however, integration took place. EDI specifications were set more broadly by industry associations and key companies for their suppliers/dealers. The main standards are EDIFACT in Europe and ANSI X.12 in the USA.

As an example, automotive EDI was initially company-specific, but in 1998 Daimler, Chrysler, Ford, and GM standardized it, and other automobile firms joined.

General Electric moved 1400 of its suppliers to its procurement network, and claimed that this reduced cycle times up to 50%, procurement cost by 30%, and material costs by

20%. Despite these savings, it also improved relationships with suppliers.

Soon, EDI migrated to the internet, with low-price EDI software packages available.

A further step was the emergence of Extensible Business Reporting Language (XBRL), a web-based universal business data reporting system and format that allows users to extract financial information. Its uniform format permits the easy exchange of financial information within company and suppliers, buyers, and other parties. XBRL was created in 1999 by Charlie Hoffman and introduced to the financial community by AICPA.<sup>243</sup> In 2008, the US securities regulatory agency SEC released rules requiring the use of XBRL by financial institutions.<sup>244</sup> It emerged as the global standard for business and financial data communications.<sup>245</sup> Governmental bodies, such as in China, Italy, Japan, Singapore, and the United States, require companies to submit their business and financial reports in XBRL format. Organizations embed XBRL within their internal processes. Because organizations often have externally (and internally) different transactional and reporting systems. XBRL is helpful to communicate financial and business information seamlessly in a commonly agreed manner. This also helps small businesses. The use of XBRL reduces the costs of compliance by lowering the number of different reporting formats.

XBRL has wide applicability to various software, and it is a collaboratively developed open standard. Contributors have been computer professionals from different fields who aim to establish universal online business reporting. For example, Fujitsu used XBRL to organize data collected by 63 separate reporting systems in an internal reporting center.

### 13.12.2.1 Case Discussion

#### Use of ERP

Disney utilizes ERP software to improve its business operations. In 2001, it hired PwC to consolidate its finance, HR, and payroll services onto a single SAP software platform.<sup>246</sup> Tomorrowland was that software project, aiming to put together more than 400 back-end systems on one SAP platform.<sup>247</sup> One year later, IBM bought PwC's consulting arm. In 2005, Disney outsourced all its IT activities to IBM and Affiliated Computer Services (ACS). It signed a seven-year, \$730 million IT

services contract with IBM and a seven-year, \$610 million IT outsourcing contract with ACS. IBM took over the responsibility for the ongoing development and support of key Disney software, including its SAP implementation and nearly 100 legacy applications at Disney theme parks and resorts.<sup>248</sup>

One of Disney's projects was the consolidation of its global merchandising operations into a single ERP system in 2011.<sup>249</sup> This involved the creation of a new data warehouse

and a new analytics system. Disney improved its inventory management, sales analysis, and demand forecasts. It reported a strong ROI for this newly established ERP.<sup>250</sup> It can upgrade and consolidate its office business systems globally for \$440 million, with the aim to deliver \$140 million a year in ongoing savings.<sup>251</sup> Thus the project would be at breakeven after three years. Its ROI would be about 195%, assuming a ten-year investment horizon (10 years x \$140 million) and a 10% discount rate.

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242 Drury, Colin. *Management Accounting for Business*. London: Thomson, 2005.

243 AICPA. "Background of XBRL." Last accessed July 10, 2017. ► <https://www.aicpa.org/InterestAreas/FRC/AccountingFinancialReporting/XBRL/Pages/BackgroundofXBRL.aspx>.

244 SEC. "Office of Structured Disclosure." Last accessed July 10, 2017. ► <http://xbrl.sec.gov/>.

245 Willis, Mike. "Corporate Reporting Enters the Information Age." *Regulation Magazine*. (Fall 2003): 56–60.

246 Gilbert, Jack. "Disney utilising ERP software to improve business operations." *Codestone*. April 27, 2013. Last accessed July 10, 2017. ► <http://mousepad.mouseplanet.com/showthread.php?167016-Disney-utilising-ERP-software-to-improve-business-operations-Codestone>.

247 Simons, Mike. "Disney keeps global SAP roll-out on track by making local executives responsible." *Computer Weekly*. June 2003. Last accessed July 10, 2017. ► <http://www.computerweekly.com/feature/Disney-keeps-global-SAP-roll-out-on-track-by-making-local-executives-responsible>.

248 Rosencrance, Linda. "IBM sings \$730 M IT services deal with Disney." *Computerworld*. June 14, 2005. Last accessed July 10, 2017. ► [http://www.computerworld.com/s/article/102483/IBM\\_signs\\_730M\\_IT\\_services\\_deal\\_with\\_Disney](http://www.computerworld.com/s/article/102483/IBM_signs_730M_IT_services_deal_with_Disney).

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250 Gingold, Josh. "Mickey Mouse Gets ERP?" *Toolbox*. December 3, 2012. Last accessed July 10, 2017. ► <http://it.toolbox.com/blogs/ziff-davis-research-report/mickey-mouse-gets-erp-54125>.

251 Simons, Mike. "Disney keeps global SAP roll-out on track by making local executives responsible." *Computer Weekly*. June 2003. Last accessed July 10, 2017. ► <http://www.computerweekly.com/feature/Disney-keeps-global-SAP-roll-out-on-track-by-making-local-executives-responsible>.

### 13.12.3 Real-Time Accounting

Traditional paper-based systems could produce reports only on a periodic basis—quarterly or yearly. It was too costly and unwieldy otherwise. Electronic systems could provide more frequent snapshots. Taking a further step takes us to real-time accounting (RTA), which is now economically feasible and provides up-to-the minute information along several dimensions. RTA can track and match revenues and costs at the time they are incurred and enables faster monitoring of business activities and performance such as production and inventory. RTA allows management to quickly adapt to opportunities and address problems. However, one must not succumb to hype. Some business processes can be easily monitored in real time but other processes cannot, because they have longer cycles such as big orders and special transactions. Certain cost items are periodic and not in real time.<sup>252</sup> Examples are corporate income taxes.

RTA involves continuous updating of the entire set of accounts such as sub ledgers, the P&L statement, the balance sheet, bank accounts, and customer/supplier accounts. It can also continuously adjust accounts for changes in the currency exchange rates.

It can also enable continuous auditing and serve as an early alarm for internal and external auditors. Another challenge for the linking of a real-time financial picture with

real-time managerial responses is that to do so efficiently requires a firm to bring on board and connect its suppliers, partners, and major customers. This requires the creation of trust, alignment of goals, incentives for adoption, and the educating of partners, customers, and suppliers, all of whom may have different systems in place.<sup>253</sup> As part of such cooperation, a large company might provide its smaller partners with RTA services.

Yahoo and NetLedger Inc. combined forces to offer RTA information to Yahoo's merchant customers. Yahoo integrated NetLedger's small-business accounting software with Yahoo Store, providing small merchants with the ability to get a real-time snapshot of their sales information. The services also enabled these merchants to view their invoices and other information about their accounts.<sup>254</sup>

RTA often displays its information in “dashboards” on computer screens. A dashboard is a visual interface that shows a company's major performance indicators in real time. A dashboard displays present, past, and trend predictions. It depicts information in visual and intuitive ways, which helps analytic research and managerial decisions.<sup>255</sup> Its displays include pie-charts, bar-charts, graphs, gauges, and maps. For example, a dashboard may show the effectiveness of different marketing types (e.g. the ROI of a website, direct mail, and discount coupon approaches) and the revenue for different marketing campaigns.

#### 13.12.3.1 Case Discussion

##### Real-Time Accounting

At Disney, RTA is used to monitor project costs and production schedules. It helps manage inventory, allowing the company to respond to store-by-store profitability trends and disparities. Disney retail stores saved time by using the system and avoiding time that was spent on closing weekly

or quarterly numbers. It enabled Disney's finance staff to work more closely with operations staff.

Disney theme parks use RTA for revenue accounting, ticket control, and cash control. The benefits of deployment include continuous monitoring of internal

control. This also ensures security.<sup>256</sup>

The use of RTA helps Disney to improve activities that are profitable or consume the most resources. However, RTA also carries a high cost of implementation, and does not properly recognize some major cost items in real time such as depreciation.

### 13.12.4 Cloud-Based Accounting Systems

In cloud accounting, also known as online accounting, the advanced accounting software, operations, and data storage move from the user to the servers of specialized companies that are at some distance, in the “cloud.” Connection may be over the public internet or through more secure private systems. This enables a company to access its business financials from anywhere and using any device. There are many benefits to cloud accounting. In addition to the flexibility of accessing data from anywhere, the firm need not install and support software on any device. The benefits include quick implementation by experts, 24/7 access, lower upfront and

maintenance costs, and frequent updates.<sup>257</sup> There is no need for in-house technology infrastructure to buy and maintain. Moreover, security might be better than small businesses and employee laptops can provide. Cloud accounting providers are one of the application service providers who provide software as a service.

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253 Sawhney, Mohanbir. “Net Gains- Real-Time Reality Check.” *CIO Magazine*. March 1, 2003. Last accessed July 10, 2017. ► [http://www.cio.com/article/31744/Net\\_Gains\\_Real\\_Time\\_Reality\\_Check](http://www.cio.com/article/31744/Net_Gains_Real_Time_Reality_Check).

254 Davis, Jessica. “Yahoo Adds Business APP.” *ComputerWorld*. September 9, 2000. Last accessed July 10, 2017. ► [http://www.computerworld.com.au/article/80091/yahoo\\_adds\\_business\\_app/](http://www.computerworld.com.au/article/80091/yahoo_adds_business_app/).

255 Dundas Data Visualization Inc. “The Dashboard Demystified.” 2012. Last accessed June 21, 2012. ► [http://www.dundas.com/dashboard/resources/articles/dashboard\\_demystified.aspx](http://www.dundas.com/dashboard/resources/articles/dashboard_demystified.aspx).

256 Infor. “Infor Risk & Compliance.” Last accessed July 6, 2017. ► <http://www.infor.com/product-summary/efm/risk-and-compliance/>.

257 DeFelice, Alexandra. “Cloud Computing: What Accountants Need to Know.” *Journal of Accounting*. October 1, 2010. Last accessed July 10, 2017. ► <http://www.journalofaccountancy.com/issues/2010/oct/20102519.html>.

## 13.13 · Conclusion

The applications include just about anything that can be done in-house—tax preparation, bill management, enterprise resource planning payroll, sales tax, and full ERP systems.

But there are issues deserving caution. Can an outside vendor be trusted in terms of security and reliability? What

happens if a provider suddenly goes out of business? Or if there is a serious billing dispute and the ASP cuts off access by the client company to its own data?<sup>258</sup>

## 13.13 Conclusion

### 13.13.1 Case Discussion

#### Conclusion on Disney's Accounting Practices

How does our review of Disney's accounting practices add up? Did Disney really do as well financially as management reported? Or did it try to make a beleaguered leadership team look good? Do we find misstatements or major manipulative methodologies that are illegal? Did Disney operate its accounting within industry practices?

Disney engaged in accounting practices vis-à-vis its project investors and participants that could confuse an inexperienced author or actor. But in such deals experience by all partners is expected.

Disney's pro forma statements were trying to point a more positive picture than GAAP-based financial accounting, by almost \$6 billion. This was mostly based on a series of one-time events. Interpreting the pro forma would have been difficult for a normal investor.

Disney handled its auditors PwC correctly by severing its non-auditing

earlier than most companies. No major disagreements with PwC have been reported. Disney has not been subject to an accounting scandal, like many other media firms, did not engage in a major write-down of assets in the way that other major media companies such as Time Warner, Viacom, and News Corporation had to. Disney was not directly involved in improper backdating stock options, though its largest shareholder, Steve Jobs, and its acquired company, Pixar, were found to be in violation.

Disney shifted some of its debt off its balance sheet, in particular for theme park subsidiaries, film production projects, and broadcasting rights. This debt was not transparent to regular investors but was within the law and industry practices.

Disney deployed managerial accounting in its operations. It uses budgets and financial forecasts to plan costs and allocate resources. Operations are

controlled by a variety of qualitative and quantitative metrics, including financial ones, that provide feedback on efficiency and performance.

Disney publishes an excellent annual social accounting report with quantified targets and performance and substantiations.

Legal, but in the category of "accounting to persuade," were the treatments of reserve and amortization of its acquisition of the ABC network the debt of partly owned subsidiaries, and the recapitalization of future earnings.

In conclusion, the accounting figures show Disney performed successfully in financial terms in the period under CEO Eisner, in contrast to its performance in HR management, as detailed in ► Chap. 5 Human Resource Management for Media and Information Firms. Disney's problem was people management, not financial management.

### 13.13.2 Conclusions on Accounting in Media

In this chapter we have covered:

- how media and media tech companies gather and report financial information to partners, investors, and governments;
- how investors and partners need to analyze financial reports;
- how companies use accounting information to run their business;
- the impact of new IT technology on accounting information and on management control over operations.

The monitoring of economic performance for information products has been especially difficult in the past because of unclear cost, uncertain revenues, disconnect of cost/price, and frequent regulation.

Media managers can use accounting techniques for strategic and planning purposes, and for performance evaluation. They can use it for cost control, for evaluating productivity and overhead, and to allocate compensation and profit.

Accounting is an amazing tool for measuring the state of a complex organization (with numerous operations, people, suppliers, and customers). There is nothing like it. It enables companies to develop new models for their organization, such as expansion, decentralization of operations, and also centralization of control and real-time control.

At the same time, it also enables new models of supervision, surveillance, and control by governmental regulation, using the same tools or requiring access to them. Accounting as a "science" is being strengthened as a result of technological tools (MIS, RTA, etc.), as well as by the increased needs for internal control in complex organizations, by the political pressure fueled by recurring scandals, and by the rising demands for information by institutional investors. Owing to new technology tools, new organizational forms become possible. This raises the role of accounting as a science and puts pressure on accounting as persuasion. The tension is weakest where the activity is steady, predictable, and transparent, such as in water utilities, for example. It is strongest where the

258 DeFelicce, Alexandra. "Cloud Computing: What Accountants Need to Know." *Journal of Accounting*. October 1, 2010. Last accessed July 10, 2017. ► <http://www.journalofaccountancy.com/issues/2010/oct/20102519.html>.

activity is dynamic, volatile, risky, and non-transparent, such as in the film and music industry.

When RTA information is readily available to managers, can it be denied in the long run to investors? When more information on the financial performance and stats of a firm, a division, or a project becomes instantly accessible to managers but is reported only on a highly aggregated basis at long intervals to investors, will such knowledge remain internal? And when information technology is pervading the economy and society at large, companies can measure, and will be measured, by the outside world along dimensions that are not only narrowly financial.

Thus the gap between financial accounting and managerial accounting will narrow, as will the difference between conventional accounting and social accounting. There will be more transparency and the accounting profession will be its guardians and fiduciaries. To reconcile such transparency with effective management is the challenge for managers.

### 13.14 Review Materials

#### Issues Covered

In this chapter we have covered the following issues:

- How accounting has developed over the years.
- What function accounting has for companies of different size.
- How the special circumstances of the media and technology sector affect the basics of accounting, and vice versa.
- What the five sets of accounting books are.
- How to define profit.
- How to depress profits by accounting procedures.
- How to apply royalty calculations to books and music.
- How to manage profit participation for limited partnerships.
- How profit participants can protect themselves.
- How to interpret pro forma elements of business results.
- What the role of auditing is.
- How accounting is regulated by the government.
- What the differences between GAAP and IFRS are.
- How to use and read financial documents.
- How to measure a company's ability to pay long-term debts.
- How to use of ratios and metrics to analyze a company.
- How to use non-financial metrics to evaluate company performance.
- How to apply social accounting.
- How to approach valuation of media properties.
- How to read a balance sheet.
- How to evaluate and treat intangibles in accounting.
- How to amortize and depreciate intangible assets.
- How to deal with write-offs.
- How to treat R&D expenditure.
- How to treat stock options.

- What the role of the income and profit statement is.
- How EBITDA and other profit measures are defined.
- How to interpret cash flow statements.
- When to expense and when to capitalize.
- How to apply managerial accounting.
- What the roles and limits of information technology are in accounting.
- How information technology is used in accounting.
- What ARPU is and how it is being used.
- Why start-ups like to use ACSOI.
- The categories of accounting irregularities that have been experienced in media companies.

#### Tools Covered

We used these tools:

- Balance sheet analysis.
- Income statement analysis.
- Cash flow analysis.
- Liquidity ratios.
- Solvency analysis.
- Royalty calculation and profit participation.
- GAAP and IFRS accounting principles.
- Pro forma statements.
- Investor protection tools and red flags.
- Leverage ratio.
- P/E ratio.
- Operating ratio and operating margin.
- ROA.
- ROI.
- Rate of return methodology.
- Operating ratio and operating margin.
- Social accounting.
- Stock options.
- Valuation of assets.
- Valuation of intangibles.
- Capitalization versus expensing.
- Write-offs and write-downs.
- Depreciation and amortization.
- Depressing of accounting profits.
- Profit accounting.
- P&L statement.
- EBITDA.
- Responsibility and profit centers.
- Overhead allocations.
- Transfer pricing.
- Cost tracking.
- Capital accounting and budgeting.
- MIS, ERP, RTA, XBRL.
- Inventory accounting.
- Accounting for pension obligations.
- Off balance sheet accounting.
- Forward-looking incremental cost models.
- Breakeven analysis.
- The ACSOI approach.

### 13.14.1 Questions for Discussion

1. How can one value a cable television company?
2. Artists and film studios often argue about profit participation. What are the main accounting issues at stake? What are alternative solutions?
3. XYZ, a TV network, has produced a hit TV show, *My Brother and I*, that it wants to put into syndication. How does the network account for this show? How does it amortize costs?
4. Discuss the pros and cons for using EBITDA to value a film company.
5. Describe the co-ordinating stage of a media company's capital budgeting process.
6. If the tax authority IRS were to end its practice of not charging tax on earnings for which tax has already been paid in other countries, but instead treated such tax as a business expense, what would the effect on media companies be?
7. If it is known that a very high percentage of a company's assets are intangible, what would be the best approach to valuing the company?
8. Compare the LIFO and FIFO approaches to inventory accounting. What would the practical ramifications of a media company using each of them?
9. What factors need to be taken into account in calculating a media companies pension plan costs? Explain how a change in these factors can significantly affect the company.
10. Given Disney's 2007 liquidity ratios below, what can shareholders conclude about the company's management?
11. Explain why some companies, such as Disney, have a high P/E ratio.
12. Discuss the ways media and technology companies differ from other industries in how they amortize their major assets.
13. How would a General Partner in a limited partnership go about depressing its earnings to decrease profit payout? What can the limited partners or profit participants do to protect their interests?

### 13.14.2 Quiz

1. What is the inventory ratio of a book publisher?
  - A. Sales/average accounts receivable;
  - B. Sales/average inventory;
  - C. Cost of goods sold/average inventory;
  - D. Sales/average fixed assets.
2. What is XBRL?
  - A. Web-based format that allows users to easily extract financial information;
  - B. Computer language companies use to report errors;
  - C. Specialized modification of JAVA;
  - D. Language used by FASB while they audit companies.
3. Where can you find depreciation in the cash flow statement of a company?
  - A. Operating activities;
  - B. Investing activities;
  - C. Financing activities;
  - D. None of the above.
4. Which method calls for a media company to combine the income of all of their subsidiaries into a single measure of taxable income?
  - A. Separate accounting;
  - B. International consolidated accounting;
  - C. Formula apportionment;
  - D. World co-operative apportionment.
5. How do a company's employee stock options affect a worker's productivity?
  - A. They decrease productivity;
  - B. They increase productivity;
  - C. They increase and decreases productivity;
  - D. They do not affect productivity.
6. What is/are the advantage(s) of using leases?
  - A. Selling and then leasing back an asset to gain working capital;
  - B. Lease payments do not show up as debt;
  - C. Lease payments are tax deductible expenses;
  - D. All of the above.
7. Why do net profit participants of films often not receive any royalties?
  - A. Studios spend all profits paying for failed movies;
  - B. Gross profit participants push up the breakeven point;
  - C. Few movies generate profit in general.

- 13
8. Which responsibility center is best for decentralizing the organization?
    - A. Expense center;
    - B. Profit center;
    - C. Investment center;
    - D. All of the above.
  9. What is a pro forma?
    - A. A company's statement of cash reserves and credit;
    - B. A company's P&L statement;
    - C. A company's balance sheet;
    - D. A modified balance sheet intended to highlight the positive developments that the company has made in the past quarter;
    - E. A modified balance sheet intended to portray the company's real condition by excluding unusual and non-recurring transactions.
  10. Intangible assets include:
    - A. The firm's reputation;
    - B. A firm's borrowing capacity;
    - C. Depreciated capital assets;
    - D. Manufacturing facilities.
  11. The difference between a company's book value and market value is:
    - A. Debt;
    - B. Long-term assets;
    - C. Goodwill;
    - D. Shareholders' equity.
  12. Some features of ERP include:
    - A. Materials management;
    - B. Sales and distribution;
    - C. Production planning;
    - D. All of the above.
  13. Which of these would not be included in a market-based evaluation of intangible assets?
    - A. An active public market;
    - B. Arm's-length transactions;
    - C. An exchange of comparable products;
    - D. The market index of all assets within the industry.
  14. Which of these would not be included in a media company's capital budgeting process?
    - A. Monitoring reports of the company's current financial health;
    - B. Preparing reports for investors of the company's cash flows;
    - C. Co-ordinating interdepartmental budgeting;
    - D. Evaluating the viability of a new network infrastructure.
  15. What is/are the special aspects of media accounting?
    - A. Huge capital investments and depreciation;
    - B. Rapid obsolescence and price decline of assets;
    - C. Highly regulated;
    - D. All of the above.
  16. Which of the following is not one of the GAAP's and IFRS's basic principles?
    - A. The historical cost principle;
    - B. The matching principle;
    - C. The full disclosure principle;
    - D. The profit ratio principle.
  17. It is not always advantageous to employ real-time accounting because:
    - A. It becomes harder to monitor business activities;
    - B. It is economically unfeasible to maintain;
    - C. Certain processes have longer cycles;
    - D. It does not give investors sufficient warning.
  18. Amortization of cost paid for wireless spectrum licenses usually lasts about:
    - A. 5 years;
    - B. 10 years;
    - C. 20 years;
    - D. 50 years.
  19. Which cost would not be counted as recoupment that artists have to pay studios?
    - A. Equipment rental;
    - B. Money advances;
    - C. Concert promotion;
    - D. All of the above.
  20. Disney is considering making a new Hannah Montana CD. Disney determines that the fixed cost to produce the CDs is \$400,000 and that it can produce the CDs for \$2. It also concludes that a reasonable price for the CD is \$10 each. How many CDs must Disney sell in order to break even?
    - A. 10,000;
    - B. 50,000;
    - C. 15,000;
    - D. 100,000;
    - E. Disney cannot break even with this venture.
  21. One of the reasons why a company would use both FIFO and LIFO is that even when prices of the inventory change, both measures yield almost the same values.
    - A. True;
    - B. False.

## 13.14 · Review Materials

22. What is the purpose of managerial accounting?
- A. Provide information for decision makers outside of the company;
  - B. Provide information for internal management;
  - C. Calculate a firm's tax liability;
  - D. Distribution of profits.
23. What of the following is not a measure of media companies to understate profits?
- A. Exclusion of revenue streams;
  - B. Allocate high costs to overhead expenses;
  - C. Set a low percentage for depreciation;
  - D. Charge high internal transfer prices.
24. Which term is not usually used to express "profit"?
- A. Income;
  - B. ROI earnings;
  - C. Margin;
  - D. All of the above.
25. How are assets typically valued?
- A. Acquisition cost;
  - B. Appraisal;
  - C. Fair market value;
  - D. Comparative pricing with similar assets.
26. What is a type of responsibility center that aims to calculate an operation's profitability based on inputs?
- A. Expense center;
  - B. Investment center;
  - C. Profit center;
  - D. Revenue center.
27. Which ratio is used to measure a company's ability to pay current liabilities with current assets?
- A. Debt to Equity Ratio;
  - B. Current Ratio;
  - C. P/E Ratio;
  - D. Operating Ratio.
28. How can profit participants protect themselves from being undercompensated?
- A. Make sure that all contract terms are clearly defined;
  - B. Conduct sufficient due diligence on the counterparty;
  - C. Obtain all promises in writing and in contracts;
  - D. All of the above;
  - E. A and C only.

### Quiz Answers

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- ✓ 1. A
- ✓ 2. D
- ✓ 3. C
- ✓ 4. C
- ✓ 5. D
- ✓ 6. D
- ✓ 7. B
- ✓ 8. D
- ✓ 9. E
- ✓ 10. A
- ✓ 11. D
- ✓ 12. C
- ✓ 13. D
- ✓ 14. B
- ✓ 15. C
- ✓ 16. D
- ✓ 17. C
- ✓ 18. B
- ✓ 19. C
- ✓ 20. B
- ✓ 21. B
- ✓ 22. B
- ✓ 23. C
- ✓ 24. D
- ✓ 25. A
- ✓ 26. A
- ✓ 27. B
- ✓ 28. D