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Before We Get Started – Introduction

Welcome to Training The Street's (TTS) *Fundamentals of Financial Accounting & Analysis*, authored by Stephen H. Bryan, Ph.D. This self-study Handbook discusses common accounting, reporting and financial analysis issues encountered by professionals required to understand and analyze financial information—from investment bankers and financial analysts to corporate managers and executives.

Chances are that the corporate finance and accounting principles you learned in the classroom had a theoretical twist. They probably lacked the practical emphasis that professionals give these concepts as they use them every day. At TTS we have had years of experience in not only teaching the principles of accounting, but also using these foundational tools in a broad spectrum of financial statement analysis, corporate valuation and financial modeling situations. This Handbook is a compact distillation of most of the practical knowledge you will need to begin analyzing financial statements.

While TTS had beginners and those in need of a refresher in mind with this Handbook, TTS is especially excited about this unique approach because it also includes several intermediate and advanced topics often found in higher level texts. These more complex topics are delivered with the author's intuitive and seamless style such that the reader is unaware that they have just tackled a more difficult area.

Our aim is to teach accounting and financial statement analysis as if you were required to understand and analyze real financial statements for the real world shortly after completing the Handbook. In a lucid, practical way, we lay out the applied components of what you would obtain in a university class, without shortchanging you on any of their most important conceptual underpinnings. As you go through this practical material, however, bear in mind that learning is not about formula memorization, computational manipulation, or mechanical success in reaching the right answer. It is about understanding the underlying concepts, and why you are doing what you are doing. This Handbook and the companion book, *Real World Analysis & Exercises*, each contain a box of razor-sharp tools, and also sets up each tool within the practical contexts in which they are used.

Chapter 1: Introduction to Financial Accounting: The Language of Business

Chapter 2: Additional Terminology, Concepts and Methodology

Chapter 3: A Practical Look at Theoretical Issues

Chapter 4: Working Capital

Chapter 5: Investments and Long-lived Assets

Chapter 6: Liabilities and Owners' Equity

Chapter 7: The Statement of Cash Flows Revisited

Chapter 8: Introduction to Basic Ratios and Analysis

Companion Book Real World Analysis & Exercises:

- 1) Real World Analysis Case Study
- 2) Practice Exercises and Solutions

Please check our website at www.trainingthestreet.com for other self-study products and live instruction alternatives such as Corporate Valuation, Financial Modeling, Excel Best Practices and more.

SPECIAL FEATURES – How to Use This Handbook



Hotwords You will come across **◀hotwords▶** throughout the Handbook. These words, bolded and bracketed in solid arrowheads, are terms widely used in financial analysis, corporate finance and M&A work. They can be looked up in the Hotword Glossary at the end of the Handbook.



Key Formulas To accelerate learning, we have also identified key formulas we regard as especially critical to performing analysis and understanding relationships essential for financial modeling. You will recognize them by the “key” icon next to them.

Practice Exercises For each chapter of the Handbook please check out the companion book, *Real World Analysis & Exercises*, where we’ve delivered over 150 practice exercises and knowledge checks to complement the Handbook lessons and solidify your learning experience. Once you’ve challenged yourself, check and see if you got the correct answers!

Text Boxes Finally, throughout the Handbook there are sidebars, mini-case studies, and text boxes that address commonly asked questions, explain unfamiliar phrases, and offer useful tips and fill-ins. Throughout the chapters, you will find the following:

Ask the Accounting Guru boxes present questions to which we have invited TTS experts to respond and share their thoughts. Because we train thousands of finance professionals every year, we have an experienced viewpoint in addressing the questions that puzzle students and practitioners alike. We have drawn on this reservoir of experience to frame and answer some of the most commonly posed questions.

Tips of the Trade and a Bit of Perspective sidebars provide you with practical suggestions, calculation assistance, shortcut tools, how-to tips, and commonly encountered pitfalls and errors you should watch out for.

A Word on Terminology and Words to Know boxes offer you quick or alternative definitions of difficult terms.

A final word of advice before we jump into the thick of things: try to view this Handbook, not as a “textbook,” but rather as a practical guide that offers you a framework for the kinds of items that will be interpreted when analyzing a firm. Above all, we hope it will help demystify the whole topic of accounting and financial statement analysis by laying out in a clear, down-to-earth way the types of analytics a variety of professionals use every day when they go to work.

Have fun!

About the Author Stephen H. Bryan, Ph. D.

Dr. Bryan has a Ph.D. in Accounting from New York University's Stern School of Business, as well as M.B.A. and B.S. degrees from Baruch College (City University of New York) and from the University of North Carolina-Chapel Hill, respectively. He is currently on the faculty at Fordham University Schools of Business in New York. Prior tenured faculty positions include Wake Forest University (Winston-Salem, North Carolina), and Baruch College. While at Wake Forest, Dr. Bryan led numerous summer business study trips to Central and Eastern Europe. He has designed accounting and finance curricula for financial institutions, law firms, and multinational corporations. He has also had visiting positions on faculties in Vienna, Austria and Frankfurt, Germany.

Dr. Bryan's research interests focus on corporate disclosures and corporate governance, and his research has been published in some of the leading academic and professional journals, including the *Journal of Corporate Finance*, the *Accounting Review*, the *Journal of Business*, *Harvard Business Review*, *Financial Management*, *The Accountants' Handbook*, and the *Journal of Accounting, Auditing, and Finance*. His teaching has been recognized with several awards, including the Kienzle award (from Wake Forest University), which alumni award to the faculty member who most benefited their careers. He is founder and principal of The Accounting Oasis, LLC, which designs and produces curricular materials on accounting issues currently confronting the analyst community and other user groups. Dr. Bryan also delivers live seminars as an instructor for TTS. He can be reached at ***Stephen.Bryan@TheAccountingOasis.com***.

This Handbook, *Fundamentals of Financial Accounting & Analysis*, and its companion book, *Real World Analysis & Exercises*, are compilations of topics selected by TTS and Dr. Bryan to get readers up to speed quickly. For the expanded and complete versions of these books, please visit Dr. Bryan's website ***www.theaccountingoasis.com***.

Chapter 1: Introduction to Financial Accounting: The Language of Business

THE PURPOSE OF FINANCIAL ACCOUNTING

Financial Accounting is the language of business. Its purpose is to communicate financial information to interested parties. The information includes disclosures about a firm's profits, cash flows, assets, and obligations. The interested parties are numerous and include employees, customers, the government, communities, lenders, and investors.

 In the United States, Financial Accounting is overseen by a governmental commission, called the **Securities and Exchange Commission (SEC)**, located in Washington, D.C. The SEC's role is to ensure that a firm communicates relevant information via Financial Accounting, as it states below:

The laws and rules that govern the securities industry in the United States derive from a simple and straightforward concept: all investors, whether large institutions or private individuals, should have access to certain basic facts about an investment prior to buying it. (from: www.sec.gov)

In this book, we will focus on the information needs of lenders and investors. Lenders and investors need financial information to assess a firm's past results and to make predictions about future results. They make these assessments and predictions in order to decide whether to lend to, or invest in, a firm. **Lenders** are also called debtholders, bondholders, or more generally, creditors. **Investors** are also called stockholders, shareholders, equity holders, or more generally, owners.



What do lenders and investors want in return for their loans and investments? Lenders want to be paid back the amount loaned, plus interest, and investors want their investments to increase in value and possibly to receive a **dividend**.



Why do firms need the cash from these outside sources? Firms need the cash, especially as they are just getting started, in order to fund their businesses. Firms need to buy buildings, supplies, and inventory. They need to hire employees. They must advertise their products and services to customers. All of these require cash.

Lenders and investors are providers of "private capital," as opposed to "public capital," which is cash from the government (or taxpayers). Providers of private capital seek investment opportunities for economic reasons, meaning that they try to identify those firms that are expected to provide the returns that the lenders and investors require. Private capital identifies firms that are likely to create, invent, and produce products and services that people want to buy. True, private capital can make mistakes, but Financial Accounting provides information that helps assess the risks and rewards before making a lending or investing decision. When private capital makes a bad decision, it suffers the consequences.

A WORD ON TERMINOLOGY

Broadly speaking, “capital” is how firms fund the business. New capital is typically an injection of cash into the firm.

Lenders and investors monitor firms’ decisions, and they try to protect their interests. Lenders can include restrictions on firms in their lending contracts. That is, lenders can limit what firms do with the borrowed money. Similarly, because investors have the right to vote, they can vote for new managers and directors, if they so choose. These actions provide powerful incentives and discipline on corporate behavior. Arguably, public capital will not keep the same disciplinary focus on firms because the lending and investing decisions are made for political reasons, and politicians may have different goals in mind, rather than the goals of earning sufficient returns on loans and investments.

Part of the SEC’s charge, in addition to making sure that firms provide relevant financial information, is to regulate the markets and impose fines on firms who “break the rules.” In the extreme, when managers intentionally mislead suppliers of capital, they commit fraud, which is a crime. For instance, a firm may intentionally misreport financial results in order to keep the stock price high. Managers, who may own some of the stock, could sell their shares before the fraud comes to light. The temptation to undertake actions that benefit certain constituencies at the expense of others is an ongoing problem that must constantly be monitored, regardless of whether the main suppliers of capital are public or private.

The U.S. Congress passed a law in 2002, known as the Sarbanes-Oxley Act (or “SOX” for short), that requires the Chief Executive Officer and the Chief Financial Officer to certify the firm’s Financial Statements. The certification states that the Financial Statements, based on the chief officers’ knowledge, do “not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements...not misleading” (excerpted from Lowe’s Companies, Inc., 2014 financial report). The wave of corporate frauds in the early 2000s was of such magnitude that the U.S. Congress enacted this and other laws to give the SEC more tools to protect private capital. If private capital loses faith in the

integrity of the financial reports, it will not provide the capital that firms need to run their businesses. Thus, Financial Accounting is a critical part of the economy. Major decisions are made on “the numbers,” which come from the accounting process.

ASK THE ACCOUNTING GURU

The U.S. government designed SOX, in part, to make Financial Statements more transparent and reliable to the users of the information.

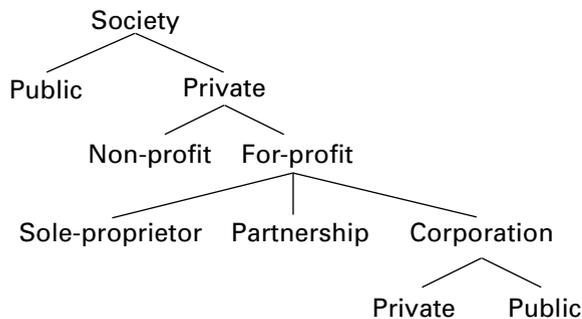
After firms receive outside capital, they convert it to other assets, such as inventory. Then, they execute their business plan by selling the inventory, and they collect cash from customers. Cash from customers is “internally generated capital” from the firm’s operations. Firms must sell their products and services at selling prices that are (on average) higher than the cost of the product or service. This will allow firms not only to pay employees and outside sources of capital, but also to have enough left over to re-invest in the business to create new and improved products and services and to make the business more efficient. If firms do not continuously improve, they will lose to competition.

FINANCIAL ACCOUNTING FOR PRIVATE SECTOR, FOR-PROFIT, PUBLICLY TRADED CORPORATIONS



This book relates primarily to Financial Accounting for publicly traded firms, which are firms whose stock and debt are publicly traded on a public securities exchange, such as the **◀New York Stock Exchange▶**. These are the firms whose lenders and investors the SEC has the charge to protect.

Below we provide a broader context. Just about any society can be dichotomized into public and private sectors. The “public sector” pertains to governmental activities, which are undertaken for society at large. “Governmental accounting” is a separate branch of accounting that measures and discloses the activities of governments, which are funded through taxes. We do not cover governmental accounting.



The “private sector” can be split between non-profit and for-profit. Non-profit organizations typically exist for specific humanitarian, educational, or medical purposes. Examples include the Salvation Army and the Rockefeller Foundation. Non-profit accounting measures and discloses the activities of non-profit organizations, which rely mainly on donations. We do not cover non-profit accounting.

For-profit enterprises include sole-proprietorships, partnerships, and corporations. Sole-proprietorships and partnerships have single and multiple owners, respectively. These two types of enterprises are widespread throughout the economy. They are easy to organize, and they allow the owners to maintain control over their businesses. However, they rarely grow very large because it is difficult for them to access the large amounts of private capital that is often necessary to expand. This is due in part because the owners are often personally liable for the obligations of these businesses. However,

certain limited liability protections are granted to Limited Liability Companies (LLC) and so-called “S-Corporations.” S-Corporations are so-named because the tax requirements fall under Sub-Chapter S of Chapter 1 of the U.S. Internal Revenue Code. Although LLCs and S-Corporations have certain benefits that are not granted to sole-proprietorships, their ownership structures have limits that prevent massive accumulation of capital, thereby typically limiting their size. By comparison, corporations can grow to be quite large as they are able to attract large amounts of capital.

Corporations can be either public or private. As mentioned above, public corporations have stock or debt that is publicly traded on a securities exchange. Private corporations are not publicly traded but are owned by private investors, often referred to as “private equity.”

Owners, creditors, employees, and governments want the for-profit firms to earn profits. Profits allow firms to pay higher salaries to employees. Profits allow firms to continue to grow by hiring more employees and investing in new infrastructure and technology. Profits affect stock prices, and investors in public companies want the stock price to rise. Profits also provide the potential to pay dividends to investors. In sum, profits attract private capital.

In conclusion, this book is primarily about corporations. The focus on this select group is driven by the fact that these organizations create significant amounts of wealth that can affect large portions of the economy, government, and society in general. Indeed, the stock market “crash” of 1929, and the Enron and Worldcom debacles of the early 2000s, all pointed out the need for transparent reporting of financial information that is measured and recognized according to well-understood accounting standards. Firms must communicate to their constituencies what they have been doing with “other people’s money,” and how they have performed. As we will see shortly, the accounting model that we use to measure and report firms’ financial position is a stewardship model. The assets of the firm are entrusted to managers to manage on behalf of others. Therefore, the managers must report to these various “stakeholders” on a periodic

basis, according to agreed-upon accounting rules, what they have been doing as stewards.

STANDARD SETTERS AND AUDITORS



In the U.S., the accounting rules are written by the **Financial Accounting Standards Board (FASB)**, located in Norwalk, Connecticut. This organization is under the jurisdiction of the SEC. The SEC has authorized FASB to write the accounting rules that publicly traded corporations must use. The rules of the FASB constitute **GAAP**, which is an acronym that stands for “Generally Accepted Accounting Principles.” Publicly traded firms must file financial reports with the SEC on a periodic basis. By law, the Financial Statements must follow GAAP, and they must be audited by an independent audit firm.



The primary audit firms in the U.S. are referred to as the “Big 4.” The Big 4 are Deloitte, EY, KPMG, and PwC. The next tier of audit firms includes CohnReznick, RSM, Grant Thornton, and BDO, among others. Public accounting firms have to follow professional auditing standards in conducting their audits of publicly held firms. The standards are written by the Public Company Accounting Oversight Board, known as the PCAOB. Their audits of firms will conclude with an “audit opinion,” which states that the Financial Statements are the responsibility of management, and that the auditors are responsible for rendering an opinion about whether the Financial Statements “present fairly,” in accordance with GAAP, the financial position and results of the firm.



Other nations have their own GAAPs that contrast in varying degrees with U.S. GAAP. A movement is underway to create a single, global accounting language. In particular, the **International Accounting Standards Board (IASB)** has been working to draft a set of rules that will be used transnationally in order to facilitate comparisons between and among firms in different countries. Many nations have already adopted IASB GAAP, and the U.S. may one day also adopt these standards.

TIPS OF THE TRADE

IASB GAAP is commonly referred to as International Financial Reporting Standards (IFRS). There are many GAAPs in the world – IASB and U.S. GAAP are the two most common GAAPs for publicly traded firms.

As we go through the text, we will see some accounting rules that do not seem to make sense. It is good to remind ourselves that standard setting follows a “due process.” Anyone can participate in the process by letting his or her opinions be known. For instance, the FASB will issue an “Exposure Draft” of a proposed new rule and ask for comments during a “comment period.” The FASB will then deliberate and take under consideration the various comments. The final standard therefore may reflect the varied interests of many different constituencies that would be affected by the new standard. Thus, some rules just will not make sense, unless we consider how the rules became rules and read the comment letters. We sometimes say that our standards do not come down from a “mountaintop,” but rather from Connecticut, meaning that our standards were written by mortals, doing the best that they (we) can under current circumstances and practical constraints. When rules do not make sense, users of financial information are free to adjust the Financial Statements to suit their own purposes. We will introduce a few of these techniques at appropriate points in the text.

BASIC TERMINOLOGY AND METHODOLOGY

The Fundamental Accounting Equation

The equation below is called the “fundamental accounting equation:”

$$\text{Assets} = \text{Liabilities} + \text{Owners' Equity}$$

The equation shows the Assets that a firm has, and it shows the sources of the Assets. Assets include, for example, cash, inventory, and buildings. The capital required to purchase assets comes from creditors and owners. Stated alternatively, Liabilities and Owners' Equity represent, respectively, creditor and investor claims on the assets.

Understanding accounting allows us to understand more clearly the economics of a firm, namely how a firm has employed scarce resources (including financial capital) and whether it was successful in doing so. Accounting also helps us predict what firms will do next, how they will perform in the future, and how risky they will be. The fundamental accounting equation is central to the assessments of past performance, as well as predictions of future performance and risk.

Even though accounting facilitates understanding the economics of a firm, virtually all accounting systems fail in some measure to capture a firm's total economic picture. For example, arguably, firms' most valuable assets are their employees, yet accounting systems rarely measure the value of people and classify their value as assets. As another example, certain debt arrangements are not included among the liabilities of a firm, even though they represent real economic liabilities.

Accounting falls short for a number of reasons, which we will discuss at various points in the text, and we will show what adjustments are commonly made to overcome these shortcomings. Also, the SEC, aware of these deficiencies, constantly pushes the FASB to improve accounting standards. However, while the FASB deliberates and goes through the due process of adopting new standards, the SEC often requires disclosures in other ways to let lenders and investors have the relevant information, even though it may not be captured in the fundamental accounting equation. Disclosures not captured in the fundamental accounting equation are called **note disclosures**.

A WORD ON TERMINOLOGY

Besides “note disclosures,” other names that you may run across are: footnotes, notes, details, supporting information and disclosures.

Managers undertake actions that change their firms' fundamental equation. We will record the changes directly in the equation by simply writing pluses (+) and minuses (-) in the appropriate columns, as illustrated below.

Let's record a series of numbered transactions for a firm that is just getting started. Assume that the firm decides to borrow \$100 in cash from a bank. This would be recorded as follows.

1. Borrow \$100 cash.

Assets	Liabilities	Owners' Equity
100 Cash	100 Note Payable	

Assets increase by \$100 and liabilities increase by \$100. The asset account involved in the transaction is Cash and the liability account is “Note Payable.” The names of accounts are generally not standardized. For instance, instead of “Note Payable,” firms may use “Bank Debt,” or some other similarly descriptive account title.

Assume that the firm needs more cash, and it decides to sell stock to investors, rather than borrow from the bank. The first sale of stock to public investors is called the **Initial Public Offering (or IPO)**. Later, if it decides to sell more stock publicly, these subsequent sales are called **Seasoned Equity Offerings (or SEO)**. Suppose the firm sells stock valued at \$100. This would be recorded as follows:

2. Sell stock to investors for \$100 cash.

Assets	Liabilities	Owners' Equity
100 Cash		100 Stock

In this case, the \$100 of cash is shown as coming from investors.

So, the firm has \$200 in cash, half from debt and half from equity. Managers are not hired to obtain cash and stuff it under the mattress. Rather, they must make a decision about what to do with the cash in order to generate returns for the providers of capital. This decision will be based upon a business plan, a strategy, a vision, etc. Let's say the firm decides

initially to use \$80 of its cash to buy a building. We would write the following:

3. Buy a building for \$80 cash.

Assets	Liabilities	Owners' Equity
(80) Cash		
80 Building		

Cash is reduced by \$80. Building (an asset) replaces the cash.

Now, let's assume that management decides to use \$40 of its cash to buy inventory. This would be recorded, or "booked," as follows.

4. Buy inventory for \$40 cash.

Assets	Liabilities	Owners' Equity
(40) Cash		
40 Inventory		

Cash is reduced by \$40, and inventory (an asset) is increased by \$40.



Journal Entries

The four panels above are journal entries. Journal entries give changes (+ and -) in the fundamental accounting equation. They record both sides of a transaction; thus, they always have at least two parts. This system is called the double-entry system, developed in 1494 in Venice by an Italian monk, Friar Luca Pacioli, a friend of Leonardo da Vinci. His work, *Summa de Arithmetica, Geometria, Proportioni et Proportionalita*, although perhaps not a best seller, has certainly had staying-power. We still use the double-entry system centuries later.

TIPS OF THE TRADE

When balancing the fundamental accounting equation, try to think to yourself "what is the offset" to make the equation come back into parity. In other words, what must be added / subtracted as an "offset" to make the equation balance.

Journal entries are recorded in the "journal," which is a sort of financial diary. The journal is also called the "book of original entry." The journal contains the data about the transactions that eventually "roll up" to the Financial Statements that are presented to lenders and investors.

The above types of journal entries are intuitive, showing the main effects of accounting events on the

fundamental accounting equation. Journal entries can be written in an alternative way, using "debits" and "credits." This latter method is conventional. In an upcoming section, we will compare the two methods.

The Ledger



The data from the journal entries are "posted" to individual accounts (Cash, Debt, Stock, etc.) to accumulate the account balances. The account balances are stored in the ledger. The table below is our ledger for this firm at this point in time.

Assets		Cash	Inventory	Building	Total Assets	Liabilities	Note Payable	Owners' Equity	Stock	Total Liabilities & Owners' Equity
Begin		0	0	0	0		0		0	0
Event Numbers	1	100					100			
	2	100							100	
	3	(80)		80						
	4	(40)	40							
End		80	40	80	200		100		100	200

The beginning balances are in the top row, increases and decreases to the balances are in the rows numbered 1-4, and then the ending balances are in the last row. In this example, the beginning balances are all zero, because the firm is just commencing its business.

Balance Sheet



The Balance Sheet is a listing of the balances from the ledger. As the name suggests, it shows the balances at a point in time. The "Begin" and "End" rows above (in the ledger) would represent this firm's consecutive Balance Sheets.

Now assume that the firm sells half of its inventory (\$20) for \$80 in cash. In this transaction, we have two pairs of accounts to track. In fact, all sales of inventory have this characteristic. One pair of accounts shows the sale and the inflow of cash. The other shows the cost of the products sold and the outflow of inventory. The events would be recorded as follows, with explanation below.

5. Sell half of the inventory for \$80 cash.

Assets	Liabilities	Owners' Equity
80 Cash (20) Inventory		80 Revenues (20) Cost of Goods Sold



Notice how **◀Revenues▶** (also called Sales) are recorded as increases in Owners' Equity and that **◀Cost of Goods Sold▶** is recorded as a reduction in Owners' Equity. Cost of Goods Sold is an expense. It corresponds to the reduction in inventory that was necessary to generate the revenue. Without the inventory, there would have been no sale. (Cost of Goods Sold is usually abbreviated CGS or COGS.)

More generally, expenses are necessary to generate revenues. Expenses generate, either directly or indirectly, a sale, and they must be recognized during the period when the sale is recognized. We are reminded of the expression, "You have to spend money to make money." In fact, in accounting, if a firm is booking sales, it must be booking any related expenses. A firm cannot show sales without showing expenses.

A WORD ON TERMINOLOGY

"Booking" is the act of recording any event or transaction in the firm's financial system.

Revenues are credited to the owners of the firm, and expenses are charged to the owners. This is why we put the revenues and expense in the Owners' Equity column. Also, revenues and expenses are reflected in a firm's **◀Income Statement▶**. As we will see, the Income Statement becomes part of Owners' Equity.



The difference between Revenues and Cost of Goods Sold is the profit on the sale (\$60). More commonly, this amount is called **◀Gross Profit▶**.



Now let's assume that the firm pays wages to its employees. Assume it pays \$10 cash. This would be recorded in the following way:

6. Pay wages of \$10 cash.

Assets	Liabilities	Owners' Equity
(10) Cash		(10) Wage Expense

Wage Expense is also necessary to generate sales. The firm needs employees to serve customers and without the service, there may not have been a sale. Both Cost of Goods Sold and Wage Expense are

expenses and will be deducted from revenues in order to measure the firm's **◀Net Income▶**.

In sum, revenues are credited to the owners by adding them to Owners' Equity, and expenses are charged against the owners by subtracting them from Owners' Equity. Alternatively stated, Net Income, which combines all revenues and expenses, accrues to the owners of the firm.



A BIT OF PERSPECTIVE

Net Income is a calculation over a period of time and is shown on the Income Statement.

Let's consider a few more expenses, and then we'll measure Net Income.

Earlier the firm bought a building. The firm recorded the building as an asset. However, as the firm uses the building, it must **◀depreciate▶** the building. This means that the building account is reduced systematically over its expected life. Assume the expected life is four years. Thus, the firm will "expense" one-fourth of the building, or \$20. This would be recorded as follows:



7. Depreciate the building by \$20.

Assets	Liabilities	Owners' Equity
(20) Building		(20) Depreciation Expense

Depreciation Expense is another expense. The building is necessary to conduct business (to make sales), so part of the building is reduced and "expensed" each period over which the firm receives benefits from using it.

Earlier the firm borrowed money from the bank. The fee charged by the bank for the use of the borrowed funds is interest, and it must be recognized as Interest Expense in the periods during which the firm used the borrowed money. Assume that it owes the bank \$10 in interest on the amount borrowed. Assume, however, that it does not have to pay the bank on this date, but rather, it will pay the interest in the future. The journal entry would look like this:

8. Book \$10 of interest expense to be paid later.

Assets	Liabilities	Owners' Equity
	10 Interest Payable	(10) Interest Expense

The expense must be booked in the current period because the firm had the borrowed money (and benefitted from having it during the current period), regardless of the fact that the firm does not pay cash for the interest in the current period. Thus, to balance the entry, the firm records “Interest Payable,” indicating that it owes \$10 to the bank and that it will pay it in the future.

Finally, the firm has to calculate what it owes the government for taxes. Taxes are calculated as a percentage of taxable income. The percentage is called the tax rate. In the U.S., the tax rate on corporations is currently 35%. Let’s calculate taxable income by assuming that the above sale and all the expenses correspond exactly to what the government has determined through its tax law to be taxable items and deductible items, respectively. Tax Expense, calculated below, is another expense of doing business.

Tax Expense = Pre-Tax Income x Tax Rate

Revenues.....	\$80
Cost of Goods Sold.....	(20)
Wage Expense	(10)
Depreciation Expense.....	(20)
Interest Expense	(10)
<hr/>	
Pre-Tax Income	20
Tax Expense (35% x \$20)	(7)

Let’s assume that the firm is not going to pay the tax on this date, but rather at some future time. The firm would book Tax Expense in the following way.

9. Book \$7 of Tax Expense to be paid later.

Assets	Liabilities	Owners’ Equity
	7 Taxes Payable	(7) Tax Expense

After booking tax expense, the firm then knows its Net Income, which is the difference between its revenues and all of its expenses. The revenues and expenses are listed on the Income Statement, shown below:

Income Statement

Revenues.....	\$80
Cost of Goods Sold.....	(20)
Wage Expense	(10)
Depreciation Expense.....	(20)
Interest Expense	(10)
<hr/>	
Pre-Tax Income	20
Tax Expense	(7)
<hr/>	
Net Income.....	\$13

A WORD ON TERMINOLOGY

Besides “Revenues,” other names you may come across in Financial Statements are “Sales” and “Turnover.” Outside of Financial Statements in more casual discussions, “Revenues” are often referred to as the “top line” (referring to the top line on the Income Statement) and are a common reference to the size of a firm. For example, “a three-billion firm” had three billion in Revenues for the most recent year—a three-billion “top line.”

Now we are ready to take another picture of this company and show the updated account balances in the ledger. We also have a few new accounts to add to the ledger, namely Interest Payable, Taxes Payable, and Retained Earnings. (See Exhibit 1.1)

EXHIBIT 1.1

		Assets				Liabilities				Owners' Equity			
		Cash	Inventory	Building	Total Assets	Note Payable	Interest Payable	Taxes Payable	Total Liabilities	Stock	Retained Earnings	Total Owners' Equity	Total Liabilities & Owners' Equity
Begin		0	0	0	0	0	0	0	0	0	0	0	0
Event Numbers	1	100				100							
	2	100								100			
	3	(80)		80									
	4	(40)	40										
	5	80									80		
	5		(20)								(20)		
	6	(10)									(10)		
	7			(20)							(20)		
	8						10				(10)		
9							7			(7)			
End		150	20	60	230	100	10	7	117	100	13	113	230

The fundamental equation (Assets = Liabilities + Owners' Equity) balances: $230 = 117 + 113$.

Let's now describe one of the new accounts that appears above.

firm decides to pay a dividend to its owners, Retained Earnings are reduced. This is why it is called Retained Earnings. These are the cumulative earnings of the firm that are not paid out as dividends to owners.



◀Retained Earnings▶

Retained Earnings is an account on the Balance Sheet that collects all of the revenues and expenses of the firm. In the journal entries, we simply put revenues and expenses in the Owners' Equity column, but they end up in Retained Earnings, as we can see above. Next year, the firm will add the revenues and expenses for that year to the above balance of Retained Earnings. Thus, Retained Earnings is the cumulative amount of Net Income that the firm has earned since its inception. Since this is the first year of operations for this firm, the balance in Retained Earnings (\$13) exactly equals the Net Income for this year. All of the changes in the Retained Earnings account (+ 80 - 20 - 10 - 20 - 10 - 7) correspond to the individual items on the Income Statement.

Later, we will introduce one more adjustment to Retained Earnings, namely dividends. Whenever a

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The Balance Sheet, Income Statement and Statement of Cash Flows are a firm's primary statements. Another statement that you may see is the Statement of Owners' Equity. These statements, when combined with the firm's note disclosures, are collectively referred to as the firm's "Financial Statements."