More Than a Numbers Game

A Brief History of Accounting

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To Yvonne, Amanda, Alex, and Emily

CONTENTS

ABOUT THE COVER

The U.S. Postal Service and predecessor Post Office Department have released four thousand stamps to remember key people, places, and events in U.S. history. Stamps offer tiny windows into America's past. Six examples, presented from upper left to lower right on this book's cover, commemorate events discussed in this book.

Scott #1920. Issued September 21, 1987, to honor the 100th anniversary of the founding of the trade group that would become the American Institute of Certified Public Accountants. 22c; multicolored. Pen tip and ledger book, designed by Lou Nolan.

Scott #2361. Issued June 16, 1981, to observe the 100th anniversary of the founding of the Wharton School of Business. 18c; blue and black. Portrait of Joseph Wharton, designed by Rudolph de Harak.

Source: Scott Specialized Catalogue of US Stamps & Covers. Sidney, OH: Scott Publishing Company, 2000.

Scott #3184o. Issued May 28, 1998, as a pane of 15 stamps in the *Celebrate the Century* series' 1920s collection. Stock market crash of 1929. 32c; multicolored. Torn stock certificate, designed by Carl Herrman. Printed by Ashton-Potter (USA) Ltd.

Scott #922. Issued May 10, 1944, to celebrate the 75th anniversary of the completion of the first transcontinental railroad. 3c; violet. Based on *Golden Spike Ceremony*, painted by John McQuarrie.

Scott #1380. Issued September 22, 1969, to observe the 150th anniversary of the Dartmouth College case, where alumnus Daniel Webster argued before the Supreme Court that the government could not impair private contracts. 6c; green. Daniel Webster and Dartmouth Hall, designed by John R. Scotford Jr.

Scott #2630. Issued May 17, 1992, to honor the 200th anniversary of the founding of the market that became the New York Stock Exchange. 29c; green, red, and black. Stylized stock certificate, designed by Richard Sheaff. Printed by the Jeffries Bank Note Company for the American Bank Note Company.

PREFACE

The world suffers no shortage of accounting texts. The many I've read over the past 25 years have helped me audit, prepare, use, and explain corporate financial statements. Missing in this lettered journey has been a work that provides context for accounting's six divisive issues: inflation, volatility, intangibles, debt, options, and earnings. A brief history of accounting can fill this void.

Students and practitioners study textbooks designed to explain the how's of accounting. Readers consequently learn the mechanics of, say, calculating earnings per share without understanding that statement preparers and users often work at cross-purposes to cope with nonrecurring items and costs of equity-based compensation. This short book's contribution is to discuss the major why's of accounting practice.

More Than a Numbers Game was inspired by Arthur Levitt's landmark 1998 speech delivered at New York University. The Securities and Exchange Commission chairman described the too-little-challenged custom of earnings management and presaged the breakdown in U.S. corporate accounting three years later. Somehow, over a hundred-year period, accounting morphed

from a tool used by American railroad managers to communicate with absent British investors into an enabler of corporate fraud. How this happened makes for a good story.

This book is not another description of accounting scandals but rather a history of ideas. Each chapter covers a controversial topic that emerged over the past century. Historical background and discussion of people involved give relevance to these concepts. I show how economics, finance, law, and business custom contributed to accounting's development. Use of anecdote, example, and light humor make *More Than a Numbers Game* easy to read.

Thoughts presented come from a career spent working with accounting information. I have designed and used cost accounting systems in manufacturing and service settings, argued with tax and regulatory authorities, and participated in design of compensation systems. Experience has shown me how numbers on paper influence careers, projects, and business prospects.

My credentials include tours of duty in financial statement auditing (auditor at a Big Eight accounting firm), preparation (corporate controller of a Fortune 500 firm), use (general manager with profit and loss responsibility at a corporation plus board member of a nonprofit), and explanation (accounting teacher and investor relations officer). Perhaps most significantly, I witnessed a major audit failure.

Accounting viewed from these perspectives taught me that the so-called language of business is best understood as a collection of dialects. Most accounting books spend too much time on financial reporting. Consideration of the purposes and limitations of cost, tax, and regulatory accounting makes the field more understandable to the informed layperson.

The reader who sticks with the text will be rewarded with a thorough grounding in accounting's major issues. By the final chapter, he or she should be able to engage in accounting debate on almost any topic. Accounting can be both a vocation and an avocation. It's fun. Really.

Book prefaces, where authors thank others, seemed vacuous until I tried to put thoughts to paper. This book would not have been possible without generous support offered by colleagues. Marion Brakefield endured endless requests to modify charts. John Burchard and Scott Gould tracked down arcane articles and cases. Jeff Basch, Don Chew, and Tom Forrester provided helpful comments to improve presentation. John Wiley & Sons' Stacey Farkas, Bill Falloon, Pamela van Giessen, and Laura Walsh coached me with patience as I learned about the world of publishing. Their copyeditors possess a deft touch.

Thanks also to my father, who encouraged an accounting career. I hated my first job but slowly learned to appreciate accounting's hidden beauty. My grandfather exposed me to the craft of history and taught there are only three ways to know something: you experience it directly, someone tells you, or you figure it out. He also pressed the importance of active voice, strong verbs, and few prepositions.

The Ohio Library and Information Network, which delivered volumes from Ohio's college and university book collections to our neighborhood public library branch, made research possible in light of concurrent work and family commitments. Finally, my superiors chose not to fire me as I devoted increasing amounts of company time to complete this effort, a further illustration of Michael Jensen's agency costs.

Opinions and conclusions expressed herein represent personal views. No practitioner, academic, or regulator will agree with all points made in subsequent pages. I took liberties condensing ideas and events to keep this work brief. Responsibility for resulting errors and omissions rests with me.

Chagrin Falls, Ohio
November 2005

1

DOUBLE-ENTRY

What advantage does he derive from the system of bookkeeping by double-entry! It is among the finest inventions of the human mind.

—Johann Wolfgang von Goethe,
Wilhelm Meister, 1824

On Sunday, April 8, 1984, the phone rang in my Hoboken apartment. A Big Eight audit manager, my boss' boss, shared in a raspy voice that we had an accounting crisis.

Accounting crisis? Jumbo shrimp, gunboat diplomacy, gourmet pizza, and other snappy phrases came to mind. *Hey, let's book another entry.*

The manager had learned that a client had amassed a sizable bond position and sustained adverse interest rate changes. Financial statements recently filed with the Securities and Exchange Commission (SEC) made no mention of the investment or holding loss. One could argue that investors relying on the statements had been misled.

My first accounting professor, New York University's George Sorter, taught there was no such thing as an accounting mistake.

Estimates used to make timely journal entries create inevitable misstatement. Errors reverse as more information comes to light. Nothing goes wrong over the infinite life of the firm. Consistent with Dr. Sorter's teachings, the client's estimates were indeed corrected.

In addition, the firm reshuffled management, filed restated balances, weathered unflattering publicity, and sustained an SEC investigation. My employer paid a sizable malpractice settlement. And I learned that sterile accounting numbers could make all the difference in the world.

Two decades later, accounting scandal rocked American business. In just 12 months industry giants Enron, Global Crossing, and WorldCom imploded. Arthur Andersen & Company—their auditor, my old employer, and once the planet's mightiest certified public accountant (CPA) firm—ceased to exist. And Congress enacted the most sweeping securities law since the Great Depression. This spectacular meltdown sparked the following effort to chronicle American corporate accounting's history from the age of railroads to Sarbanes-Oxley legislation.

History tells a story, and no story can ever be complete. Historians must select from an infinite ocean of facts those few deemed significant. Selections become fact only by virtue of significance attached by authors.[1] These pages present my views of the significant facts that created one of the largest business scandals in U.S. history.

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Corporate financial reporting emerged in nineteenth-century America when professionals applied quantitative methods to qualitative endeavors. Academics blended philosophy with mathematics to create symbolic logic. Alfred Marshall's *Principles of Economics* (1890) organized economic thought into a mathematical framework. Emile Durkheim's *Suicide* (1897) used statistics to describe individual behavior.[2] Sociologist Max Weber considered probability in causal explanation. Bookkeepers expressed transactions in dollar values.

Even though accounting serves proprietorships, partnerships, governments, and nonprofits, this book focuses on its use to U.S. corporations. Indefinite life, divisible ownership, and limited liability allowed corporations to dominate American business by the 1890s.[3] The corporate form was so effective in meeting society's commercial needs that venerable organizations like Lloyd's of London and Goldman Sachs chose to incorporate.[4]

Healthy corporations require protected property rights and liquid capital markets. An 1819 U.S. Supreme Court decision capped the government's power to interfere with private agreements. King George III had granted a 1769 charter to Dartmouth College, the last college formed before the American Revolution. Forty-six years later the New Hampshire legislature sought to turn the private college into a state university.

Alumnus Daniel Webster, a future congressman and secretary of state, successfully argued before Chief Justice John Marshall's Supreme Court that a state government had no right to modify or impair private contracts (U.S. Constitution, Article 1, Section 10, Clause 1). Webster's speech included the famous phrase that Dartmouth is a small college but there are those who love it. Marshall's decision affirmed that a private organization could go about its business without state interference.

In the 1790s a collection of merchants formed an exchange in lower Manhattan to trade government bonds. In March 1817, as the *Dartmouth* case was litigated, members drafted a constitution and named the group the New York Stock & Exchange Board. The organization later shortened its title to the New York Stock Exchange (NYSE). Synonymous with Wall Street, the NYSE evolved into the world's largest, most liquid stock market. Concentrating buyers and sellers provided efficient pricing and reduced ownership risk for equity securities.

Property rights and capital markets require a buffer from fraud. Numbers offer some protection. Quantitative discussion curbs management's ability to talk its way out of problems. An executive I knew controlled evasive subordinates by limiting their

responses to yes, no, or a number. The U.S. government offered body counts as quantitative—and presumably more believable—evidence of progress in the Vietnam War. Computer makers spew statistics to suggest product superiority.

Accounting quantifies business communication. Financial accounting, the primary dialect, allows lenders and investors to assess the amount, timing, and certainty of a corporation's future cash flows. Creditors want to know if they'll get their money back; stock investors care about whether they can expect substantial future dividends. Financial accounting principles emerged to match revenues with expenses and determine a corporation's ability to pay interest or dividends from business activity in a given period.

With passage of U.S. income tax law, the federal government embraced accounting to measure taxable income. Tax accounting mutated into a system designed to determine when a taxpayer had the obligation and ability to pay tax bills. Companies then needed two sets of books.

Scale-sensitive enterprises like steel producers and car manufacturers developed enormous infrastructures to reduce unit costs. Massive, indirect costs could not be easily traced to individual products. Sophisticated companies developed allocation systems to ensure product prices recovered all resources consumed in production. Healthy manufacturing firms learned to keep a third set of books to refine cost accounting methods.

Some regulated companies then had to file reports demonstrating solvency or compliance with government rules. These lucky banks, insurers, utilities, and transportation firms required a fourth set of books to maintain business licenses. The language of business became the province of experts.

Accounting rules trace to bookkeeping practices. Master taught apprentice, and custom became precedent. Rules agreed upon in the United States coalesced into generally accepted accounting principles (GAAP). Not until the Great Depression did formal

bodies document and propose revisions to GAAP. No one has successfully codified this amorphous rule set.

These grass roots lent financial reporting a practical bias. The organization to emerge as the leading force for accounting standards was the trade group representing independent auditors, the American Institute of Certified Public Accountants (AICPA). Ideas put forth by accounting educators and financial statement preparers carried less weight. Economists, who developed insight into the nature of capital markets, financial securities, and asset valuation, garnered little respect from the auditing profession and its clients.

What did resonate was summarization. Financial accounting proved brilliant at condensing myriad transactions into a single statistic, earnings per share (EPS), which could be shared among thousands of investors. The discipline emerged as the primary tool to communicate corporate position and performance to absentee investors and lenders. As the U.S. economy developed over the twentieth century, accounting matured to summarize increasingly complex transactions in simple terms.

Three events tainted this maturation. First, the need to collect income taxes and product costing information created dialects. No one stepped forward to harmonize record keeping practices among accounting's branches. The resulting lack of conformance, especially with tax accounting and the rise of pro forma earnings figures, validated a *Rashomon*-like belief that there was no negative consequence for reporting the same event in varied ways.

Second, the growth of services aggregating analyst earnings estimates led to a game where analysts and investors evaluated the quality of a firm's reported results by determining whether the company met or missed consensus earnings figures. Some management teams bowed to increasing pressure and reported a few additional pennies per share each accounting period to demonstrate mastery of business operations. Jimmying the books created bigger problems.

Finally, statement preparers ignored advancements in economics. University researchers developed tools to understand consequences of business transactions and reporting principles. Practitioners brushed off this work and developed misguided judgments about market behavior.

When certain firms' stock prices became overvalued in the 1990s, these three forces combined to create pathological fear among statement preparers of reporting volatile earnings and showing debt on the balance sheet. Resulting actions created a train wreck in 2002.

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Accounting begins with the balance sheet, a two-sided chart presenting assets used to accomplish a firm's objectives together with claims outsiders hold on those assets. Double-entry bookkeeping, a term eluding satisfactory definition, developed to show that changes in assets influence claims on those assets. German philosopher Oswald Spengler wrote in *The Decline of the West* (1928) that the invention of double-entry bookkeeping was the decisive event in European economic history.

Double-entry bookkeeping does not affirm symmetry of the universe. The tool simply emerged as a practical way to keep track of an organization's resources. Entering transactions twice provides a check to ensure computational accuracy and allows managers to track asset ownership. Entrepreneurs use other means to track businesses. An accounting professor even demonstrated feasibility of a triple-entry bookkeeping system.

In a double-entry world, assets must equal the sum of liabilities and shareholders' equity. What we have equals what we owe plus what we own. Equity represents owners' interests in assets after satisfaction of all outside claims. In liquidation, a firm would sell assets, pay liabilities, and distribute any remainder to owners. Figure 1.1 illustrates this accounting identity.

Accounting principles turn on three concepts: recognition, valuation, and classification. Recognition determines when a tool or claim should be recorded on the books. Valuation ascribes a

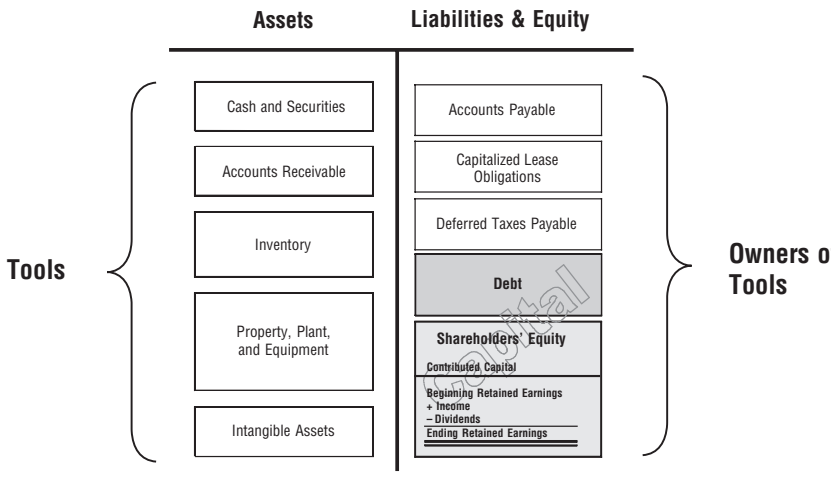

Figure 1.1 Balance Sheet Displays Claims on a Firm's Assets

dollar measurement to that tool or claim. Classification places the item somewhere in the geography of the balance sheet.

Assets generally appear on the balance sheet when a firm obtains rights to tools as a consequence of previous transactions. Accounting principles value most assets at historical cost with a downward revision, if appropriate, to cover deterioration or impairment. The cost convention arose from the need to place a monetary value on a future benefit with some degree of certainty.

Any veteran of garage sales recognizes the range of opinion associated with asset values. Accountants turned to historical cost, the cash used to buy the asset, as a solution. This sum represents what a willing buyer and seller agreed upon in an actual transaction. Auditors could verify this balance easily. Valuation of financial instruments, whose prices could be easily observed in security markets, began to be adjusted from acquisition cost to market quote.

Since 1894 the U.S. convention has been to classify assets in descending order of liquidity in order to make balance sheets more useful to creditors.[5] Assets that could not be easily converted into

cash appeared further down the balance sheet's left-hand side. Suppliers, banks, and bondholders looked for liquid assets as potential collateral to secure loans to corporations.

Liabilities, the balances appearing on the top right-hand side of the balance sheet, represent obligations owed to outsiders. Accountants recognize liabilities when corporations receive something of value in exchange for a promise to pay money or provide goods or services.

Accountants value long-term financial obligations with predictable disbursements, such as bonds and lease contracts, as the sum of discounted future payments. As with assets, accountants classify liabilities in decreasing order of liquidity: Payables due within 30 days appear near the top while long-term bonds appear near the bottom.

Shareholders' equity, representing the difference between assets and liabilities, appears in U.S. balance sheets' lower right-hand corner and constitutes owners' residual claim on assets. An early classification issue was apportioning equity between investors' original capital contributions and retained earnings from subsequent operations. Firms generally could pay dividends only out of retained earnings.

Debt and shareholders' equity, collectively known as capital, make up a firm's long-term financing. Bondholders and stock investors trade divisible pieces of these balances in capital markets.

Railroads, heavy users of debt financing in the late 1800s, were the first American firms to issue balance sheets to absentee creditors. Balance sheets served as a tool to let bondholders evaluate stewardship and determine whether management stole or misused corporate assets.

Financial accounting's second major deliverable is the income statement. Revenue and expense accounts represent temporary extensions of the retained earnings section of shareholders' equity. Revenue shows increases and expenses show decreases in re-

tained earnings within an accounting period.[6] Revenues arise from transactions that increase a company's assets. Expenses represent consumption of assets to bring in revenue. Any excess of revenues over expenses plus distributions to owners adds to retained earnings.

Just as historical cost represents the bedrock of asset valuation, matching is the foundation of the income statement. Instead of comparing inflows and outflows of cash, accountants use accruals to align efforts and accomplishments over an accounting period. Management estimates used to match revenues and expenses (e.g., provisions for bad debt, obsolete inventory, or future income taxes) convey information valuable to investors and creditors.

Perhaps the most important accounting decision a bookkeeper can make is determining whether resources consumed today will generate revenue in future accounting periods. If the answer is yes, then the charge should be *capitalized* and classified on the balance sheet as an asset. If not, then the balance should be *expensed*, flow through the income statement, and accumulate as a reduction in retained earnings. This issue will reappear in subsequent chapters.

The stylized income statement shown in Table 1.1 shows how revenues and expenses influence the retained earnings account in successive balance sheets. The excess of inflows over outflows provides a measure of income for one accounting period and attempts to identify the cash a firm can expect to realize from transactions reported in that period. No accounting theorist or practitioner has yet developed a widely accepted definition for *income* or *bottom line*.

With increasing stock ownership in the 1920s, the income statement displaced the balance sheet as the primary financial statement. Lenders want to know if they will get their money back. Balance sheets show potential collateral and existence of other claims. Shareholders care about a corporation's ability to pay future dividends through growth and improved margins. Whereas balance sheets supported creditor evaluation of management

Table 1.1 Income Statement Characterizes Changes in Retained Earnings

Retained earnings, beginning of accounting period		$50,000
Sales revenue	$100,000	
Cost of goods sold	(60,000)	
Gross margin	40,000	
Selling and administrative expenses	(25,000)	
Pretax income	15,000	
Income taxes	(5,000)	
Income from continuing operations	**10,000**	
Nonrecurring income, net of taxes	2,000	
Net income	12,000	
Dividend declared to shareholders	(5,000)	
Increase in retained earnings	$7,000	7,000
Retained earnings, end of accounting period		$57,000

stewardship, income statements published by corporations in the early twentieth century allowed equity investors to value company shares.

Wall Street gravitated toward income from continuing operations, also frequently labeled with the non-GAAP term *operating income*—the $10,000 figure in Table 1.1—as the chief indicator of future earnings power and dividend capacity. Balance sheets came to be viewed as holding tanks of unallocated debits and credits yet to flow through future income statements. By the mid-twentieth century, U.S. corporate accounting's primary purpose was computation of earnings to facilitate stock valuation. Many investors multiplied current earnings by some valuation factor to arrive at an indicated share price. The relationship between accounting earnings and stock prices became the single most important association in U.S. security analysis.

During this time financial accounting began to serve a third purpose. In the most cited journal article in the history of finance, "Theory of the Firm," Michael Jensen and William Meck-