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Second Edition

FAIR VALUE MEASUREMENT

Practical Guidance and Implementation

MARK L. ZYLA

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To my wife, Jo Ann, and my son, Jack.
You make this all possible . . .
And to my dad, Larry Zyla,
Thank you . . . for everything.

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Preface

FAIR VALUE MEASUREMENT continues to evolve since the first edition of *Fair Value Measurements: Practical Guidance and Implementation* was published at the end of 2009. Since then, the Financial Accounting Standards Board (FASB) has issued several additional standards and other clarifications of fair value accounting. Additionally, the accounting and valuation professions continue to develop best practices in measuring fair value. This second edition provides more detailed information and comprehensive examples about various aspects of measuring fair value, including the new standards and best practices.

The FASB and the International Accounting Standards Board (IASB) recently completed their convergence of fair value accounting standards through the FASB's introduction of ASU 2011-04 *Fair Value Measurement (Topic 820) Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRs*. The IFRS has issued a very similar companion statement IFRS 13 *Fair Value Measurement*. The purpose of these standards is to "develop common requirements for measuring fair value and for disclosing information about fair value measurements." This second edition explains nuances created by these statements that impact fair value measurements. I also note that through convergence, a very minor change is that the FASB and IASB now agree to refer to fair value measurement in the singular. Consequently, this second edition's title was modified slightly to refer to *measurement* in the singular to be consistent with the FASB and IASB new standard(s). Also the FASB has recently issued several new Accounting Standards Updates (ASUs) that are intended to clarify measurement issues, including ASU 2009-05, *Measuring Liabilities at Fair Value*, ASU 2009-12 *Investments in Certain Entities that Calculate Net Asset Value per Share*, and ASU 2010-06, *Improving Disclosures about Fair Value*. One of the more practical clarifications was the FASB's introduction of qualitative testing for goodwill and other intangible assets through ASU 2011-08, *Intangibles—Goodwill and Other (Topic 350)*.

The second edition of *Fair Value Measurement: Practical Guidance and Implementation* is organized as follows, which includes substantial new discussion material and many new comprehensive examples:

Chapter 1: "The History and Evolution of Fair Value Accounting"

- Provides a historical look at the development of fair value concepts and accounting standards.
- Includes milestones related to the development of fair value for financial instruments and fair value measurement of non-financial assets and liabilities.
- Explains how the economic crisis shaped fair value measurement and how the crisis led to the refinement of several accounting standards.
- Discusses how the convergence of U.S. GAAP with IFRS has shaped fair value measurement concepts.
- Introduces trends that are likely to continue to affect fair value measurement, including different levels of disclosures for public and privately held entities.

Chapter 2: "Fair Value Measurement Standards and Concepts"

- Presents an overview of fair value measurement in U.S. GAAP and with cross references to FASB ASC 820, *Fair Value Measurement*.
- Examines important fair value framework concepts such as the principal or most advantageous market, market participants, the highest and best use for non-financial assets, inputs to fair value measurements and the fair value hierarchy.
- Discussed the application of FASB ASC 825, *Financial Instruments* which provides the fair value option for financial instruments.
- Provides an example of calibration for the measurement of fair value in subsequent periods, which is a concept that gained more prominence as a result of convergence with IFRS.

Chapter 3: "Business Combinations"

- Discusses the role merger and acquisition transactions play in our economy, including trends and pitfalls.
- Discusses the development of accounting standards for business combinations.
- Covers the requirements of ASC 805, *Business Combinations*.
- Provides comprehensive examples.

Chapter 4: "The Nature of Goodwill and Intangible Assets"

- Provides a brief overview of intangible assets and intellectual property, including the increasingly prominent role these assets contribute to the overall business enterprise value.
- Touches on the criteria for recognizing goodwill and intangible assets in financial reporting and for estimating their useful lives.
- Provides the classification and examples of intangible assets from FASB ASC 805, *Business Combination,* as well as many other examples.

Chapter 5: "Impairment"

- Discusses the magnitude of goodwill impairment in recent years resulting from the economic crisis.
- Covers the new qualitative goodwill impairment test as well as the two-step quantitative impairment test.
- Discusses the applicable guidance for testing goodwill, intangible assets, and long-lived assets for impairment and the order of testing.
- Provides insight into the debate about whether goodwill impairment testing should be at the equity or enterprise level.
- Includes an appendix with a comprehensive example of a valuation specialist's report prepared for a qualitative goodwill impairment analysis.

Chapter 6: "The Cost Approach"

- Discusses the cost approach to fair value measurement, including the economic basis for the cost approach, the role of expected economic benefits, and economic obsolescence.
- Distinguishes between reproduction cost and replacement cost
- Provides examples for applying the cost approach using historical trending, the unit cost method, and the unit of cost method.
- Addresses how taxes and other factors may impact the application of the cost approach.

Chapter 7: "The Market Approach"

- Covers measuring the fair value of an entity using a market approach such as the guideline public company method or the guideline transaction method.

- Provides insight to control premiums and synergies under this method.
- Discusses the development and application of equity and invested capital multiples.
- Covers the application of the market approach to measure the fair value of intangible assets.

Chapter 8: "The Income Approach"

- Examines the workhorse of valuation methods, the discounted cash flow method, including single period and multi period variations.
- Provides an in-depth look at the multiperiod excess earnings method, including market participant assumptions in projected financial information and the role of contributory assets and their required returns.
- Provides examples of other income approach methods used in business combinations such as the profit split method and the "with and without" method.
- Addresses the weighted average cost of capital and its calculation under the build-up method and the capital asset pricing model.

Chapter 9: "Advanced Valuation Methods for Measuring the Fair Value of Intangible Assets"

- Introduces advanced valuation techniques such as the option-pricing methods, Monte Carlo simulation, and decision tree analysis.
- Discusses real options derived from the ownership rights of intangible assets and how to measure their fair value.

Chapter 10: "The Remaining Useful Life of Intangible Assets"

- Distinguishes between finite-lived assets and indefinite-lived assets.
- Provides factors to consider when measuring the useful lives of intangible assets, including the legal, contractual, and useful lives.

Chapter 11: "Fair Value Measurement of Alternative Investments"

- Discusses authoritative guidance for determining the fair value measurement of alternative investments.
- Addresses the practical expedient for investments that calculate net asset value per share.

- Distinguishes initial due diligence features of an alternative investment from on-going monitoring features

Chapter 12: "Contingent Consideration"

- This new chapter discusses the accounting recognition of earn-outs and other contingent consideration in business combinations.
- Discusses the common ways that earn-out clauses are used to resolve price differences between buyers and sellers in a business combination.
- Provides examples of measuring the fair value of contingent consideration using a probability weighted expected return method, the Black-Scholes option pricing model, and Monte Carlo simulation.
- An appendix to Chapter 12 explains how to measure the fair value of a loan guarantee using the Black-Scholes option pricing model and includes a case study example to illustrate the concepts.

Chapter 13: "Auditing Fair Value Measurement"

- Discusses the updated guidance for auditing fair value measurements in AU 328.
- Includes important topics from PCAOB Alert No. 2, including auditing fair value measurements, classification within the fair value hierarchy, and using the work of a valuation specialist or a pricing service.
- Discusses the newly issued PCAOB Alert No. 9, *Assessing and Responding to Risk in the Current Economic Environment.*
- Appendix A and B provide examples of issues auditors may consider when auditing business combinations and step 1 and step 2 goodwill impairment tests.
- Appendix C examines the results of PCAOB inspection reports in Acuitas, Inc.'s Survey of Fair Value Audit Deficiencies.

Chapter 14: "Fair Value Measurement Case Study"

- Provides a new stream-lined comprehensive business combination case study with valuation models illustrating the measurement of fair value for intangible assets.
- Covers important topics such as the acquisition price, contingent consideration, business enterprise value, the weighted average cost of capital,

identifying intangible assets, goodwill, a bargain purchase, and subsequent testing for impairment of goodwill.
- Highlights important case study concepts through a question and answer format with suggested solutions.

As I noted in the preface of the first edition, critics have cited the difficulties associated with measuring fair value. Fair value measurement does require a certain amount of judgment and expertise. Clearly, there are some challenges. Hopefully this second edition will continue to help with those challenges.

MARK L. ZYLA
Atlanta, Georgia
September 2012

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These individuals' comments, as well as those of many others, were invaluable in my preparation of this book. Any errors, however, are my own.

Fair Value Measurement

CHAPTER ONE

The History and Evolution of Fair Value Accounting

FAIR VALUE ACCOUNTING has changed the way financial information is presented. Where once financial statements were based primarily on historical costs, now under certain circumstances, fair value is often the basis of measurement for reporting for both financial and nonfinancial assets and liabilities. Measuring fair value often requires experience and judgment. A trend toward increasing the amount of financial statement information presented or disclosed at fair value persists under U.S. generally accepted accounting principles (GAAP) and International Financial Reporting Standards (IFRS). The trend away from historical costs, which has been the bedrock of traditional accounting, toward fair value accounting has been challenging for preparers, auditors, standards setters, and regulators.

Fair value accounting is a financial reporting approach that requires or permits entities to measure and report assets at the price assets would sell and liabilities at the estimated price that a holder would have to pay in order to discharge the liability. The term *fair value accounting* not only refers to the initial measurement but can also refer to subsequent changes in fair value from period to period and the treatment of unrealized gains and losses in the financial statements. Therefore, fair value accounting affects the reported amounts for assets and liabilities in the balance sheet and affects the reported amounts for unrealized gains or losses shown in the income statement or in the other comprehensive income section of shareholders' equity. In financial reporting, fair value accounting is often applied to financial instruments such as investments in stocks, bonds, an entity's own debt obligations, and derivative instruments like options, swaps, and futures. When unadjusted or adjusted market prices are the basis for fair value estimates of financial assets and liabilities, the process is often called mark-to-market accounting.

Fair value accounting is applicable to nonfinancial assets and liabilities as well, but in more limited circumstances. For instance, when an entity is acquired in a business combination, all balance sheet assets and liabilities are recorded at fair value. Subsequent to the acquisition date, fair value is the basis for testing acquired goodwill for impairment. Likewise, fair value is the benchmark when testing property, plant and equipment, and amortizable intangible assets for impairment.

Fair value measurement is the process for determining the fair value of financial and nonfinancial assets and liabilities when fair value accounting is required or permitted. Therefore, fair value measurement is broader than mark-to-market accounting. It encompasses estimating fair value based on market prices as well as estimating fair value using valuation models. The Financial Accounting Standards Boards (FASB) Accounting Standards Codification (ASC) 820, *Fair Value Measurement*, provides authoritative guidance for measuring the fair value of assets, liabilities, and equity interests when fair value accounting is required or permitted in other accounting standards.

Advocates of fair value accounting believe that fair value best represents the financial position of the entity and provides more relevant information to the users of the financial information. Detractors believe that fair values are unreliable because they are difficult to estimate. Critics also believe that reporting temporary losses is misleading when they are likely to reverse, and they believe that reported losses adversely affect market prices and market risk.[1] In spite of the criticism, fair value accounting has become more prominent in financial statement presentation and will continue to be a fundamental basis for accounting in the future.

WHY THE TREND TOWARD FAIR VALUE ACCOUNTING?

In recent years, there has been an increasing trend toward the use of fair value accounting in financial reporting. Even when this is not required and financial statements are prepared using some other measurement basis, there is a likelihood that related disclosures will require the presentation of fair value information. Several factors are influencing the trend toward fair value accounting: the growing economic importance of intellectual property, globalization, and investors' desire for financial statements that are more relevant and transparent.

The Changing Economy

The economy in the United States has undergone tremendous changes over the past quarter century due to a rapid rate of technological innovation. The explosion in the use of personal computers and digital media has created whole industries that did not previously exist. One product of technological innovation that contributed to economic change is the commercialization of the Internet, which resulted in what some call the *information revolution*. The result of this technological and economic change is that a significant portion of the U.S. economy shifted from bricks-and-mortar businesses to information-based businesses.

This economic change has led to a growing recognition that the value driver of many business entities lies within their intellectual property, not just in their inventory, plant, and equipment. Financial statement users also recognize that intellectual property has not been effectively measured under traditional cost-based accounting practices. The reason is that existing accounting principles require internally created intellectual property to be expensed as research and development.

Ocean Tomo, an intellectual capital merchant banking firm, produces an Annual Study of Intangible Asset Market Value that breaks down the Standard & Poor's S&P 500's equity market value into an implied intangible asset value and tangible asset value. In 2010, tangible and financial assets generated approximately 20 percent of the S&P 500's market value. While tangible and financial assets are reflected on company balance sheets, the remaining 80 percent of value attributable to intangible assets is often not recognized at all.[2] This value gap has become more important in recent years.

Exhibit 1.1 illustrates the growing percentage of the S&P 500's market capitalization attributable to intangible assets, as compiled by Ocean Tomo. Intangible assets comprised only 17 percent of the market capitalization of the S&P 500 in 1975. By 2010 this percentage had increased to 80 percent.

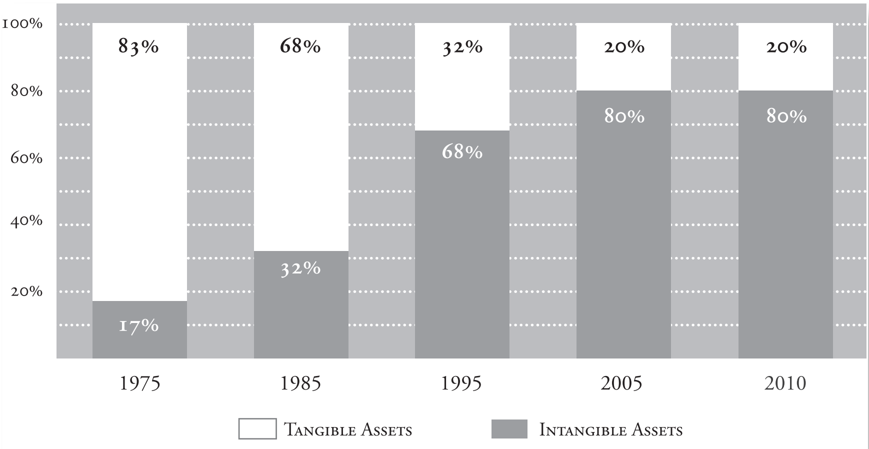

EXHIBIT 1.1 Components of S&P 500 Market Value

Source: Ocean Tomo.

Globalization

The International Monetary Fund defines *economic globalization* as "a historical process; the result of human innovation and technological process. It refers to the increasing integration of economies around the world, particularly through the movement of goods, services and capital across borders." Globalization has accelerated since the 1980s as a result of technological advances that made international financial and trading transactions easier and quicker.[3] This increasing globalization of business has created a need for consistent accounting standards across national boundaries.

The FASB and the International Accounting Standards Board (IASB) recognize that users of financial statements would benefit from having one set of international accounting standards that could be used for domestic and international, cross-border financial reporting. As a result, both organizations have been working for several years to jointly create accounting standards and to converge U.S. GAAP with international accounting standards (IAS). According to the FASB, *convergence* refers to both the goal of establishing a single set of high-quality international accounting standards and the path taken to reach that goal, which includes the collaborative efforts "to improve existing U.S. GAAP and International Financial Standards and eliminate the differences between them."[4] Historically, IAS have been more principal based, requiring more fair value measurement than U.S. GAAP, which are considered more rules based, requiring more cost-based measurement. As the accounting standards converge, U.S. GAAP is requiring more fair value accounting measures.

The history and evolution of fair value measurement encompasses the recent convergence of U.S. GAAP and IAS pertaining to fair value measurement. The five-year joint FASB and IASB project was undertaken to improve and align fair value measurement and disclosure requirements and to respond to the global financial crisis.[5] As originally promulgated, the FASB's Statement of Financial Accounting Standards (SFAS) 157, *Fair Value Measurements and Disclosures,* influenced the development of International Financial Reporting Standard (IFRS) 13, *Fair Value Measurement.* Convergence has shaped U.S. accounting standards through updates to FASB ASC 820. The FASB's Accounting Standards Update (ASU) 2011-04, *Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRS,* which was issued in May 2011, eliminated most of the significant remaining differences between U.S. and international accounting standards for measuring fair value. Convergence will be covered in greater detail in this chapter.

Relevance and Transparency

An important characteristic of efficient capital markets is that prices are the result of the market's correct assessment of all available information. The FASB recognizes that better financial reporting leads to stronger capital markets by helping investors make informed decisions. One of the FASB's stated goals is "to set accounting standards that produce financial information useful in helping investors decide whether to provide resources to a company, and whether the management of that company has made good use of the resources it already has."[6]

In an effort to make financial reporting more relevant to investors, the FASB has encouraged investors to participate in the accounting standards process by providing comments on discussion papers and exposure drafts that are issued at various stages of the FASB's projects. The FASB has asked interested investors to provide expert advice to the FASB's designated "investor liaison" staff members in conjunction with FASB projects. The goal is to improve the relevance of accounting standards for investors in a cost-effective manner.

Two other investor advisory groups provide input to the FASB from the investor perspective, the Investors Technical Advisory Committee (ITAC) and the Investor Task Force (ITF). The ITAC is focused on providing technical accounting advice and increasing investor participation in a standard setting.[7]

The ITF is made up of institutional asset managers who analyze various sectors of the economy. The ITF provides advice to the FASB about the impact of various accounting standards proposals on specific industry sectors.[8]

The Securities and Exchange Commission (SEC) is equally committed to advancing high quality accounting standards that are responsive to investors' needs. In testimony before a Congressional subcommittee, SEC Director John M. White said:

> An open process that allows standards setters to seek and thoughtfully consider the views of market participants is critical to establishing, maintaining, and continually improving financial accounting and reporting standards. We are committed to high quality accounting standards and a transparent financial reporting system that meets the needs of investors and other market participants.[9]

Transparency in financial reporting is the unbiased, clear, complete presentation of a company's financial position. Information in the management discussion and analysis (MD&A) section of the financial statements about existing risk and uncertainty and about the likely future impact of risk and uncertainty on the company's prospects further promotes transparency. When financial reporting is transparent, investors are better able to make decisions and avoid surprises. On a macroeconomic scale, transparency leads to more efficient allocation of capital and stronger capital markets. In the aftermath of the economic crisis, there was a debate about whether fair value accounting promoted financial statement transparency or whether it caused the meltdown. In a 2008 report to Congress, the SEC found that "investors generally believe that fair value accounting increases financial reporting transparency and facilitates better investment decision-making."[10] The CFA Institute Centre for Financial Market Integrity concurs with the SEC's view. It supports fair value as "the most transparent measurement for investors to analyze financial statements," and it said that "fair value is being used as a scapegoat by corporations who have made poor decisions or were not in compliance with accounting standards."[11]

The financial crisis has presented a challenge and an opportunity for the SEC and the FASB to reaffirm their missions and assess their success in achieving their goals. The SEC's mission is to "protect investors, provide for efficient markets, and facilitate capital formation."[12] The FASB's mission is "to establish and improve standards of financial accounting and reporting that foster financial reporting by nongovernmental entities that provides decision-useful information to investors and other users of financial reports."[13] The SEC and the FASB have renewed their efforts to ensure greater transparency in financial