



FAIR VALUE ACCOUNTING AND THE MANAGEMENT OF THE FIRM

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The development of accounting standards reveals that the *historical cost* accounting (HCA) is being replaced by the *fair value* accounting (FVA) paradigm. FVA, in contrast to HCA that hides the real financial position and income, is more value relevance. The relevance of financial reports should be measured, in addition to association between market and accounting returns, in terms of its contribution to the stewardship function, reduction of agency costs, enhancement of management efficiency, and providing relevant information to stakeholders and workers in their social conflict. FVA-based reports call the attention of shareholders to the value of their equity and enhance the function of stewardship. Managers will be asked to guard the value of shareholders' equity and to account for their efforts. This will cause a basic change in managers' perceptions of their duties. The FVA provides also a complete *full disclosure* and it is compatible with *transparency*.

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Introduction

An analysis of the development of accounting standards reveals an interesting phenomenon. Along with new financial reporting innovations in sporadic areas, there is a steady process of change of a basic accounting paradigm. The old *historical cost* accounting (HCA) is being replaced by the new *fair value* accounting (FVA) paradigm. These changes reflect the needs of users of financial accounting and the efforts of accounting standards setting bodies to reverse the pattern of declining relevance of financial information (Francis & Schipper, 1999; Lev & Zarowin, 1999). Whatever the reasons, the incorporation of FVA into the inventory of generally accepted accounting principles (GAAP) has deep meaning to the field of accounting and to management philosophy. This process has intensified with the expansion of global economy and the rapid growth of information technology (IT), two major factors that have created an impressive infrastructure for the evolution of an international efficient market mechanism.

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Received 15 October 2001; accepted 20 April 2002

HCA-based financial statements obscure real financial position and the results of operations of a firm and provide ample room for manipulation. Often the historical book value of assets and liabilities has only a remote association with market values. This situation permits management to manipulate reported earnings and to hide their lack of real accomplishment.

FVA, in contrast to HCA, measures and discloses the current value of assets and liabilities and is more value relevance. Empirical evidence indicates that fair value rather than historical cost numbers are more highly associated with stock returns. The academic literature provides consistent evidence suggesting that fair values of certain financial instruments should be included in the balance sheet and that changes in the fair values of these instruments should be included in the income statement (AAA's [Financial Accounting Standards Committee, 1998](#)).

Nonetheless, the value of financial reports does not depend on the statistical association between accounting and market returns ([Francis & Schipper, 1999](#)). The value should be measured in terms of its contribution to the stewardship function, reduction of agency costs, and enhancement of management efficiency. It ought to be assessed, also, in its providing relevant information to stakeholders and workers in their social conflict¹.

Reporting the fair value of assets and liabilities in the balance sheet calls the attention of shareholders to the value of their equity and to periodic changes in this value, as is reflected by the market mechanism, that determines the price of assets and liabilities. This, in turn, increases the importance of the function of stewardship. Managers will be asked to guard and maintain the value of shareholders' equity and to account for their efforts. Moreover, shareholders will be in a position to distinguish between two tasks of management: maintaining equity and generating a return on equity. Consequently, they will be able to judge management activities as well as their abstain from acting where needed (i.e. hedging), more effectively. The FVA model affects, thus, the effective management of the firm. It decreases principal-agent conflicts and agency costs, and increases the efficiency with which the firm is managed.

The new outlook on the tasks of management causes a basic and a substantial change in manager's perception of their duties to shareholders. Managers who understand the duality of their duty must also apply methods of risk management to assist them in achieving these goals simultaneously, be aware of the local and global business arena, and utilize hedging activities (including the use of derivatives). The expansion in the objectives and methods of management will bring a cognitive change in the management of organizations.

We may expect a change in the perception of financial statements by shareholders. In preparing HCA-based financial statements, managers have a dominant power over the process. They are able to manage income and to "window-dress" the statement of financial position. Hence, the "manager's voice" is clearly heard and is highly reflected. Shareholders must, therefore, be tuned to the "manager's voice." The FVA paradigm reduces the "manager's voice" in favor of the "market's voice" in an economic setting of perfect and complete markets the "market's voice" takes its power from the measurement, valuation and reporting of assets, liabilities and consequently, income, at fair values, which are independent of the manager's influence. In a more realistic situation, the fair value of many accounting items is not well defined.

This situation gives rise to problems of implementing the fair value paradigm, but in no way, as discussed latter, nullifies its use. Hence, when analyzing FVA financial statements, stockholders should be sensitive to the “market’s voice.”

The limitations of HCA have generated the requirement of *full disclosure*. This concept was the basic precept on which the US securities laws are based and was supported by the SEC. The concept means that firms should supply along with their financial statements material information that may affect investors’ decisions. With the passage of time, the notes to the financial statements have become synonym to the concept of *full disclosure*. The paradigm of FVA provides a more complete *full disclosure* and it is compatible with *transparency*. *Accounting transparency* means that the financial statements provide true, accurate, and complete information about the business activities and the financial position of a firm. Financial statements based on the FVA supply *transparent* information, since the income statement would reflect real economic value of business activities and the balance sheet mirrors assets, liabilities and equity measured at *fair value*.

The significance of the *fair value* paradigm to accounting lies in its possible effect on current reporting modes. It is likely that management will be required to supply an additional statement of operations that focuses on equity maintenance.

Organization of the paper

In the section “Some Shortcomings of the HCA Paradigm” of the paper, we review the shortcomings of the HCA. We focus on the value relevance of HCA information and its potential effect on the management of the firm and the principal-agent conflict. In the section “The Development of the FVA Paradigm,” we survey the development of the paradigm of *fair value*. We stress that this development has followed a logical rather than a random pattern. In the section “FVA and the Management of the Firm,” we examine the effect of FVA on the management of the firm. The new paradigm calls attention to the stewardship function, provides information to stakeholders and employees, and reveals the outcome of management activities. We show that FVA increases the efficiency of management and decreases the principal-agent conflict. In the section “FVA and the Accounting System,” we consider the significance of the FVA paradigm to accounting. We describe the growth in the relevance of financial statements for management purposes and the potential shift in number and content of financial reports. In the section “Some Problems and Perspectives of Implementation of FVA,” we discuss some problems of implementation of the FVA, and stress the existence of a spectrum of potential solutions to these problems that crystallize over time. In the last section, we summarize the paper.

Some Shortcomings of the HCA Paradigm

Reliability and relevance of HCA

HCA is a source of irrelevant accounting data which obscure financial statements. This results from accountants preferring *reliability* to *relevance* and applying the

convention of *conservatism*. The concept of *reliability* rests on the concept of *representational faithfulness* and *verifiability*, which are basic qualities of accounting information (FASB, 1980b, paragraphs 58–90). *Representational faithfulness* in accounting means correspondence between book and economic value of assets and liabilities. Book value represents the initial economic value at transactions, but not their economic values at later date. *Verifiability* means consensus among professional accountants in measuring the numbers that record the monetary values of actual transactions, documented and recorded in the books of accounts, such that they may be “substantially duplicated by independent measurers” (APB, 1970b, paragraph 90). *Conservatism* is another convention closely associated with HCA. With reference to the income statement, *conservatism* means “anticipate no profits but anticipate all losses” (FASB, 1980b, paragraphs 91–97). In connection to the balance sheet, it denotes the preference of a lower asset value to a higher one, and a higher liability value to a lower one.

Much of the criticism of HCA paradigm has been associated with its distortion of financial statements. This is due, among other issues, to changes in level and structure of prices and of interest rates that are not being considered and to application of conservative, though reliable, accounting principles.

Movements in general price level are ignored in the HCA model and deform its information. These distortions were corrected only briefly, when general price level accounting (GPLA) was employed. In 1979, the FASB initiated a GPLA procedure (FASB, 1979). In 1984, “the Board has concluded that further supplementary disclosure [of GPLA] should be encouraged, but not required” (FASB, 1984a, paragraph 1). Many reasons were provided for this decision. They include the fact that “analysts have developed their own methods for making those assessments” (FASB, 1984a, paragraph 114) and the decline in inflation rate (Hendriksen & van Breda, 1992, p. 405). (A short history of inflation accounting may be found in Rosefield (1981), Most (1982), and Hendriksen and van Breda (1992).) Needless to stress, that FVA provides a more useful method than that of GPLA.

Movements in the supply of and the demand for assets change the structure of prices. A price decline of a permanent nature is being handled by GAAP. The asset must be marked to market and holding loss must be recognized. A price decline of a temporary nature and a price increase are being ignored. HCA disregards also the effects of changes in interest rates on the value of debt, in particular on the long-term debt (e.g. bonds). The book value of liabilities does not represent their fair value, and unrealized losses or gains are not recognized.

Costs allocated to research and development (R&D) are, generally, expensed and only rarely capitalized as intangibles (under US GAAP). This accounting procedure assures verifiability of expenses but distorts the balance sheet numbers. Depreciation and amortization of property, plant and equipment (PPE) and intangibles, respectively, follows the same conservative pattern. These expenses are usually overstated in earlier periods and understated in latter periods, and rarely reflect user costs. The same is true for the process of determining the cost of manufactured inventory that relies on reliable historical figures, but ignores market values and opportunity costs. (An extensive analysis of the shortcomings of HCA, may be found in Benston (1982) and Bourn (1969).)

As an outcome of the above, the balance sheet contains undervalued, as well as overvalued, assets and liabilities. Consequently, the shareholders' equity is deformed.

The income statement, that in the double-entry model complements the balance sheet, is distorted too. Its components as well as reported income misrepresent real figures. The HCA paradigm thus, casts doubts on the value relevance and the usefulness of reported figures and turns financial statement analysis into a cumbersome and difficult task.

Traditional financial statement analysis

The objectives of financial statements are to represent the results of past operations and the financial position of an accounting entity. They are mainly used, however, for forecasting. Numerous techniques (e.g. statistical, time-series) and various tools (e.g. standardization, indexing) are used in the process of statement analysis. The major method of analysis, though, is comparison. Comparability bases include past performance, target, similar firm, and industry average. Accounting information is used to analyze (a) liquidity, (b) solvency, (c) profitability, (d) efficiency, (e) dividend policy, and (f) business policy. (A comprehensive analysis may be found in [Rees \(1995\)](#) and [White et al. \(1998\)](#).) The HCA model distorts many items in the income statement and the balance sheet and diminishes the value of the analysis². Accounting purports to be an instrumental tool for decisions and to report value relevance information. The accounting profession, however, preferred *reliability* to *relevance*, used HCA, and failed to perform this task. A survey of hundreds institutional investors and analysts in 14 countries that was conducted in 1997 and 1998 reveals that only 19% of the investors and 24% of the analysts have found that financial reports are very useful in communicating the true value of companies. The companies themselves agree ([Eccles et al., 2001](#), p. 4).

The Development of the FVA Paradigm

Definition of fair value

The FASB has defined the concept of *fair value* a few times³. An early definition appears in FAS 13 ([FASB, 1976](#)), *Accounting for Leases*.

Fair value: The price for which a property could be sold in an arm's-length transaction between unrelated parties. (paragraph 5c)

In FAS 67 ([FASB, 1982](#)), a broader definition is given.

Fair value: The amount in cash or cash equivalent value of other consideration that a real estate parcel would yield in a current sale between a willing buyer and a willing seller (i.e. selling price), that is, other than in a forced or liquidation sale. (paragraph 28)

In FAS 87 ([FASB, 1985](#)), the FASB repeated the above definition, with minor modifications to tailor it to the specific situation, indicating full agreement with its previous approach. In FAS 107 (1991), the FASB expanded the term to include "market prices"

and estimates of market prices based on the present value of estimated future cash flows, on option-pricing models, etc. The relevant paragraph in this statements reads as follows:

Quoted market prices, if available, are the best evidence of the fair value of financial instruments. If quoted market prices are not available, management's best estimate of fair value may be based on the quoted market price of a financial instrument with similar characteristics or on valuation techniques (for example, the present value of estimated future cash flows using a discount rate commensurate with the risks involved, option pricing models, or matrix pricing models). (paragraph 11)

Appendix A of that Standard contains examples of procedures for estimating fair value. In FAS 115 (FASB, 1993b), the board stated its decision to use the term *fair value* also for *market value*. This is done to avoid confusion and to maintain consistency with the terminology in FAS 107 (FASB, 1991) and in the pronouncements of the International Accounting Standards Committee (IASC) and the Canadian Institute of Chartered Accountants that deal with financial instruments (FASB, 1993b, paragraph 109).

The development of the FVA paradigm

A review of the development of the FVA paradigm may take a number of avenues. It may assume an historical approach, and follow "mile stones" of accounting standards and/or academic writings. It may adopt a sociological approach and center on an analysis of the power struggle between "role players" in accountancy. It may take an economic viewpoint, and analyze the demand for and supply of accounting principles. In this paper, we survey the major steps towards FVA taken by the accounting profession and the standard setting bodies.

Prior to 1938, banks and other financial institutions were required to report their loans and financial holdings at market values. During the economic recession the market values of these assets have dropped. Banks had to mark down their holdings, report losses and reduce their capital. In order to maintain the legally required minimum capital adequacy ratio, banks had to curtail their loans. This act negatively affected business activities and intensified the economic crisis. Latter, the market value method of valuation in the financial industry was replaced by the HCA method. In July 1947, the Committee on Accounting Procedure (CAP, 1953) introduced the term *market* to non-financial assets in its Accounting Research Bulletin No. 29 *Inventory Pricing*⁴. This bulletin prescribes that inventory be valued at "lower of cost or market" (LCM). The term *market* was defined to mean "current replacement cost (by purchase or production)." The expression has been bounded by upper and lower limits. Both limits introduce and use, for the first time in the history of financial reporting, the term *selling price* to report the value of assets on the balance sheet. The Bulletin states that the "Market [value] should not exceed the net realizable value (i.e. estimated selling price in the ordinary course of business less reasonably predictable cost of completion and disposal)" (paragraph 8). In spite of many arguments that *selling price* may not be objectively determined, for the purpose of *conservatism*, the CAP preferred *relevance* to *objectivity* and *reliability*.

The introduction of the concept of *selling price* to financial reporting has been asymmetrical. It was allowed only in cases where the book value turned to be higher than replacement value of inventory. Goods in process do not have readily determinable price. Thus, the use of selling price in this case reflects also on the potential valuation of operational assets. More striking is the readiness of the accounting profession to deviate from the conventional HCA. Limitations on the use of the term *fair value* included in FAS 115 (FASB, 1993b) may enforce this point. The Standard justifies the use of *fair value* of equity securities only in cases where it is readily available (paragraph 3a).

In 1959, the American Institute of Certified Public Accountants (AICPA) established its Accounting Principles Board (APB), which assumed the responsibilities of its predecessor, the CAP. In addition, the AICPA undertook a research project, whose purpose was to increase the knowledge of professional accountants and other interested parties in current accounting issues and to promote better solutions to accounting problems. Moonitz (1961) established a basis for financial measurement and reporting, and introduced the concept of "market value" in Accounting Research Study (ARS) No. 1, the first output of the project. Sprouse and Moonitz (1962) continued this project, introduced the concept of *market price* and suggested that marketable securities be valued at market price, in ARS No. 3 (APB, 1962). The APB adhered to its conservative stand and objected these recommendations made by Moonitz (1961), and Sprouse and Moonitz (1962) that called to alter the paradigm of HCA. In rejecting the recommendations of the two academics, the APB warned that their recommendations would materially reduce the value of financial statements. They explain, "The Board is, therefore, treating these two studies as conscientious attempts by the accounting research staff to resolve major accounting issues which, however, contain inferences and recommendations in part of a speculative and tentative nature. . . . The Board believes, however, that while these studies are a valuable contribution to accounting thinking, they are too radically different from present GAAP for acceptance at this time" (APB, 1962). The Board also commissioned a study aimed at compiling and documenting the existing principles of accounting. In ARS No. 7, Grady (1965) compiled the existing GAAP, and was able to show, incidentally, that neither the concept of *market value* nor that of *fair value* is among current GAAP.

The FASB, a judicial-like standards setting body (in contrast to the pseudo representative nature of the APB), that was established in 1973, has taken a fresh look at financial measurement and reporting problems. After a few years of operation, it considered the concept of *fair value*. In several cases, the FASB has initiated the use of the concept for non-financial assets and liabilities. For example, in FAS 13 (FASB, 1976) that deals with leases, the Board defines the concept of *fair value* and describes situations where this value must be used (paragraphs 26 and 28). In FAS 35 (FASB, 1980a), it discusses the holdings of pension funds and requires the use of fair value. The Board suggests that "the use of independent experts who are qualified to estimate fair value may be necessary for certain investments" (paragraph 104).

In May 1986, the FASB added a project dealing with accounting for financial instruments and off-balance-sheet financing to its agenda. The intent of the project was "to develop broad standards to aid in resolving existing financial accounting and

reporting issues and other issues likely to arise in the future about various financial instruments and related transactions" (FASB, 1990, paragraph 1). FAS 105 (FASB, 1990) focuses on off-balance-sheet risk. It is the first disclosure phase in this project.

Many studies in support of market value accounting were published in the accounting and financial literature. The writings of Edwards and Bell (1961), Chambers (1966) and Sterling (1970) are "landmarks" in the development of FVA. The ideas of these academics preceded the APB's commissioned works of Moonitz (1961) and Sprouse and Moonitz (1962). Chambers (1966, p. 91) stressed that "There are many prices which may be assigned to any non-monetary object. . . . But at any *present* time all past prices are simply a matter of history. Only present prices have any bearing on the choice of an action." Chambers noted that if we exclude all past prices there are two prices which could be used "to measure the monetary equivalent of any non-monetary good in possession, the buying price and the selling price" (p. 92). Chambers preferred the selling price "which is uniformly relevant at a point of time for all possible future actions in markets." Chambers described "selling price" or "realizable price" as *current cash equivalent*. Chambers summarized this point as follows:

4.32 Prices are measurements, made in the market, of the numerosity of monetary units, paid or payable, and received or receivable.

4.33 In relation to financial position the prices assigned to means in possession are realizable prices or current cash equivalents and the prices assigned to obligations are current cash equivalents. (p. 101)⁵

A Statement of Basic Accounting Theory (ASOBAT) (AAA, 1966) is among the most important contributions. ASOBAT discusses the objectives of accounting and recommends four basic standards for accounting: relevance, verifiability, freedom from bias, and quantification. Thereafter, it analyzes the needs of external and of internal users of accounting information and concludes with recommendations. For internal users "past data as the basic input . . . supplemented by current valuations" (p. 56) and for external users "multiple measurements of economic and financial data" including current cost data (p. 73).

The crisis of the Savings and Loan Associations (S&L) which had not been anticipated, due to their accounting rules of reporting, intensified this trend. Benston (1989) claimed, on the basis of a cost–benefit analysis, that market value accounting would have been beneficial to the banking sector, and particularly to bank regulators. Wyatt (1991) favored the use of current cost for financial institutions and Kirk (1991), the chairman of the FASB 1973–1986, supported current cost accounting for its value relevance information. Those and many other writers noticed the internal weaknesses of HCA and their possible effects and supported market value accounting either on a partial or a complete basis.

In 1990, Douglas Breeden, then the chairman of the SEC, declared that the fair value is the only relevant measure and suggested that all financial institutions should be required to report all of their financial investments at market values. This statement was referred to as "most significant initiative in accounting principles development in over 50 years" (Hendriksen & van Breda, 1992, p. 575).

The new attitude of the SEC propelled the FASB to study the feasibility of introducing the *fair value* concept to accounting. In 1991, the FASB issued FAS 107, the second phase in its 1986 project. The standard “considers disclosures about fair value of all financial instruments, both assets and liabilities recognized and not recognized in the statement of financial position” (paragraph 2). Thereafter, the concept of *fair value* was referred to at an extended pace. FAS 114 (FASB, 1993a), FAS 115 (FASB, 1993b), FAS 119 (FASB, 1994), FAS 121 (FASB, 1995a), FAS 123 (FASB, 1995b) and FAS 133 (FASB, 1998), all use the concept of *fair value*.

Initiation of the FVA paradigm was not a smooth or easy one. The case of FAS 123 (FASB, 1995b) that replaced Opinion 25 (APB, 1972) may serve as an example. Opinion 25 (APB, 1972) prescribes *the intrinsic value method* for stock issued to employees in compensatory plans. According to this method, consideration for stock issued through employee stock option plan equals “the quoted market price of the stock at the measurement date less the amount, if any, that the employee is required to pay” (paragraph 10). The measurement date is the first date on which the following two are known: (1) the number of shares that an employee is entitled to and (2) the option or purchase price (paragraph 11). For that reason, in many stock option plans, where the option price equals the current share price at date of grant, reported compensation is zero. This is inconsistent with economic reality as manifested by the market value of equivalent options.

In 1993, the FASB issued an Exposure Draft on accounting for stock-based compensation. The Exposure Draft adopted the fair value approach and suggested an FVA to all equity instruments issued to employees. This treatment would have resulted in internally consistent accounting for stock-based compensation that is consistent also with accounting for all other forms of compensation (FASB, 1995b, paragraph 57). The Exposure Draft was extraordinarily controversial. The central issue of contention was whether a compensation cost should be recognized for stock options with fixed terms (i.e. the measurement date is on granting day), where the exercise price equals the current price of the underlying stock. Opponents to the recognition procedure suggested expressed concerns about “whether the fair value of employee stock options at the grant date can be estimated with sufficient reliability” (paragraph 59).

The debate on accounting for stock-based compensation “became so divisive that it threatened the Board’s future working relationship with some of its constituents. Eventually, the nature of the debate threatened the future of accounting standards setting in the private sector” (paragraph 60). The Board continued to believe that financial statements would be more relevant and representationally faithful, if stock options granted to employees were valued at their fair value. However, the intense controversy and its potential outcomes have motivated the Board to allow both the HCA (*intrinsic value based*) and the FVA method in FAS 123 (1995b).

The extended definition of the *fair value* concept that appears in FAS 116 (FASB, 1993c) and FAS 125 (FASB, 1996) is noteworthy. FAS 116 states:

Measurement at fair value:

19. Quoted market prices, if available, are the best evidence of the fair value of monetary and non-monetary assets, including services. If quoted market prices are not available, fair

value may be estimated based on quoted market prices for similar assets, independent appraisals, or valuation techniques, such as the present value of estimated future cash flows. Contribution of services that create or enhance non-financial assets may be measured by referring to either the fair value of the services received or the fair value of the asset or of the asset enhancement resulting from the services. A major uncertainty about the existence of value may indicate that an item received or given should not be recognized.

20. The present value of estimated future cash flows using a discount rate commensurate with the risk involved is an appropriate measure of fair value of unconditional promises to give cash.

FAS 125 (FASB, 1996) expands on the procedures for determining the fair value of assets in circumstances where quoted market prices are not available. The Standard also considers valuation techniques such as “option-pricing models, matrix pricing, option-adjusted spread models, and fundamental analysis” (paragraph 43). These procedures are important, since they specify the tools and provide a sound background for the use of FVA in measurement and reporting all of the firm’s assets and liabilities.

The pronouncement of FAS 133 (FASB, 1998) is a major phase in the promotion of the FVA. The Standard is among the most consequential accounting standards issued in recent years. It prescribes a comprehensive framework of accounting that standardizes accounting for derivatives and hedging activities. FAS 133 states that derivatives must be carried on the balance sheet at fair value and that changes in their fair value, with the exception of those related to certain hedging activities, must be recognized in the income statement when occur.

The Statement of Financial Accounting Concepts No. 7 (FASB, 2000) whose purpose is to furnish relevant information in financial reports is an additional contribution. The concept states that

To provide relevant information in financial reporting, present value must represent some observable measurement attribute of assets or liabilities. In the absence of observed transaction prices, accounting measurements at initial recognition and fresh-start measurement should attempt to capture the elements that taken together would compromise a market price if one existed, that is, fair value. (FASB, 2000, highlights)

The importance of this concept is far-reaching. It supplies directions for determining the fair value of assets and liabilities in the absence of an observable market price. The concept supplies a mechanism for generalizing the *fair value* paradigm and instituting its use for all assets and liabilities and in all financial reports.

The IASC attitude towards FVA

The IASC has worked along the same lines of the FASB with regards to FVA. The efforts of the Committee brought the two most influential accounting standards setting bodies to work together for achieving the goal of value relevance accounting statements. The accounting pronouncements of the FASB and the IASC affect all industrial countries, global and local capital and money markets, stock exchanges and most of the worldly large companies⁶. The fact that the FVA paradigm is being introduced simultaneously in many countries and by many firms whose securities are traded in the major exchanges contribute to its acceptance. Whereas much of

the IASC efforts have been in line with those of the FASB and centered on financial instruments (IASC, 1998b), the Committee assumed two additional innovative steps: recommending FVA for investment property (IASC, 2000a) and in agriculture (IASC, 2000b).

IAS 40 (IASC, 2000a) prescribes the accounting for investment property “property (land or building) held (by the owner or lessee in a finance lease) to earn rentals or for capital appreciation or both” (paragraph 3). The Standard permits an enterprise to choose either a fair value model or a cost model. Nonetheless, an enterprise that chooses the cost model must disclose the fair value of its investment property. IAS 40 is the first accounting standard that applies FVA to non-financial assets. It expands the frontiers of FVA and promotes its implementation to additional non-financial assets.

Prior to IAS 40 the IASC had issued an Exposure Draft E64 (IASC, 1999), in which it had only commended FVA. Opponents of the fair value model claimed that an active market for investment property is rarely available. Hence, the fair value of an investment property often cannot be determined on a reliable basis. They also argued that applying the fair value model for investment property is too costly relative to the benefits to users of financial statements (IASC, 1999, paragraph B46). These arguments drew the IASC to consent to the use of either fair value or historical cost. The Committee, however, prefers the fair value model. This is apparent from the requirement to report this figure in the notes to the financial statements and from the barriers the Standard imposes on switching back from FVA to HCA.

IAS 41 (IASC, 2000b) is the second creative move towards a comprehensive FVA system. The standard requires that the FVA model be implemented by all enterprises that undertake agricultural activity. *Agricultural activity* is defined as “the management by an enterprise of the biological transformation of biological assets into agricultural produce for sale, processing or consumption or into additional biological assets” (paragraph 9). These assets should be measured at their fair value (less estimated point-of-sale costs) and changes thereof should be reported in the income statement as profits or losses for the period. The application of the fair value model to agriculture supports the replacement of HCA with FVA.

Value relevance research and FVA

Relevance and *reliability* are two fundamental criteria of defined measurable items that should be recognized and included in an entity’s financial statements (FASB, 1984b, paragraph 63). The FASB use these criteria to choose among competing accounting alternatives. It considers an accounting item to be *relevant* if “the information about it is capable of making a difference in user decisions” (FASB, 1984b, paragraph 3).

The value relevance accounting research assessed how well published accounting figures reflect information used by equity investors. The results of these studies purported, among other objectives, to furnish information and help accounting standard setters in shaping standards. The relevance of the value relevance research was questioned by Holthausen and Watts (HW) (2001). HW argued that the value relevance research offered little, if any, insight to standard setters, due to the fact that

it centers on equity holders and ignored other important users of financial statement information. [Barth et al. \(BBL\) \(2001\)](#), disputed HW and concluded that this literature provided “fruitful insights for standard setting” (p. 78). BBL derived its conclusion from value relevance studies. The question whether investors perceive pension liabilities and their related assets, and post-retirement obligations, is one example. The results of the studies that focused on this issue indicated that they do ([Landsman, 1986](#); [Amir, 1993](#)). [Barth \(1991\)](#) found that the fair value of pension assets measures the pension asset implicit in share prices more reliably than the book value.

Value relevance studies that focused on debt and equity securities added to this literature. The findings of such studies indicate that investors perceive the fair value estimates of debt and equity securities to be more relevant than historical cost figures. The findings hold for banks, insurance companies and closed-end mutual funds ([Barth, 1994a, 1994b](#); [Ahmed & Takeda, 1995](#); [Bernard et al., 1995](#); [Petroni & Wahlen, 1995](#); [Barth et al., 1996](#); [Eccher et al., 1996](#); [Nelson, 1996](#); [Barth & Clinch, 1998](#); [Carroll et al., 2002](#)).

[Barth et al. \(1996\)](#) found also that investors perceive the estimates of the fair value of bank loans more relevant than historical cost amounts. Other studies show that investors perceive estimates of the fair value of derivatives to reflect more accurately than the notional amounts of the derivatives, the underlying economic value (e.g. [Venkatachalam, 1996](#)).

Value relevance studies investigated also whether investors perceive the fair value of intangible assets. These studies utilized data of assets’ revaluation performed under UK and Australia GAAP and fair value estimates by brand valuation experts (e.g. [Barth et al., 1998](#); [Barth & Clinch, 1998](#); [Higson, 1998](#); [Kallapur & Kwan, 1998](#); [Muller, 1999](#)). These studies found that fair value estimates of intangible assets reflect the assessed values of the intangibles as assessed by investors.

Other studies, utilized revaluation figures to assess whether, the fair value estimates of tangible long-lived assets are perceived by investors (e.g. [Brown et al., 1992](#); [Whittred & Chan, 1992](#); [Cotter, 1997](#); [Barth & Clinch, 1998](#); [Lin & Peasnell, 2000](#); [Aboody et al., 1999](#)). These studies found that the revalued figures are reflected in stock prices and thus, are value relevance.

Special committees and FVA

Treadway Commission

In 1987, the Treadway Commission⁷ issued a major report on “fraudulent financial reporting” ([NCFRR, 1987](#)). The recommendations of the Commission covered a number of areas: The Public Company, The Independent Public Accountant, The SEC and other Regulatory Bodies and Education. In respect to The Public Company “The Commission’s studies revealed that fraudulent financial reporting usually occurs as the result of certain environmental, institutional, or individual forces and opportunities.” The Commission also noted that, “A frequent incentive for fraudulent financial reporting that improves the company’s financial appearance is the desire to obtain a higher price from a stock or debt offering or to meet the expectations of investors.” The Commission also stated that, “Opportunities for fraudulent financial reporting are present when the fraud is easier to commit and when detection

is less likely.” Situations like this are created, among others, by unusual or complex transactions and accounting estimates requiring significant subjective judgment by company management (NCFRR, 1987, chapter 1, III).

Needless to stress that in an ideal system of FVA, where markets exist for every asset and liability, the use of assessments in the process of preparation of financial statements is minimal and fraudulent financial statements are not easy to achieve. The application of FVA in a more realistic economic situation involves estimations. However, since FVA figures are more relevant for most financial decisions, users of financial reports have a motive to monitor the process of fair value estimations.

It is interesting to note that the Commission dealt with ad hoc technical issues and did not struggle with essential problems of the HCA paradigm.

The Jenkins Committee

The Jenkins Committee⁸ completed its work and published its final report in 1994. Its recommendations regarding financial reporting are of special interest in the context of FVA. Of the seven recommendations related to financial reporting, five dealt with improving disclosure (business segments, financial instruments, off-balance-sheet financing arrangements, uncertain assets and liabilities and quarterly reports), and one with eliminating “less relevant disclosures.” Only the recommendation that suggested reporting separately the effects of core and non-core activities favored the use of FVA. Even in this case, the use of FVA was limited to assets and liabilities related to non-core activities.

The Committee recognized that “users are deeply concerned about the relevance, reliability, and comparability of information” (Special Committee on Financial Reporting, 1994, chapter 3). Despite this fact, The Committee concluded that “Users do not favor replacing the current historical-cost-based accounting model to a market value accounting model,” and that “users oppose a market value accounting model” (Special Committee on Financial Reporting, 1994, appendices 3–4).

This attitude is diametrically opposed to normative models and empirical studies reflecting on the value relevance of FVA figures. This report constituted an obstacle in the process of development of FVA. Nonetheless, the process itself, as is evident from the accounting standards issued after 1994 was not stalled. It was, probably, decelerated for a short period.

The panel on audit effectiveness

The Panel on Audit Effectiveness⁹ studied the issue of “Earnings Management and Fraud” and concluded that *earnings management* involves “legitimate” and “illegitimate” activities. The Panel dealt with the issue of “illegitimate” earnings management and accepted the existence of “legitimate earnings management” since the latter “are accounted for in conformity with GAAP” (Panel on Audit Effectiveness, 2002, chapter 3, 3.15). We are not aware of statistics of the relative importance of the two types of earnings management. We claim, however, that the so-called “legitimate” earnings management is in fact illegitimate too, since its objective is not the welfare of the firm’s stakeholders. Its “legitimacy” rests on a given set of GAAP. Only under HCA system, a firm may “legitimately” manipulate its earnings

by disposing of asset whose fair value differs from its book value. Thus, a major issue that was not discussed by The Panel is the adequacy of the current GAAP that allows earnings management. It is clear that under an FVA system it is quite more difficult for a firm to manage earnings “legitimately.”

FVA and the Management of the Firm

The relevance of accounting numbers

In Concept No. 2 (FASB, 1980b), the FASB adopted a broad definition of the concept of *relevance*:

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

This definition is not limited to investors but it rather refers to all users of financial reports. It covers also the function of *stewardship* that relates assessment of managers by directors, decisions to hire and then fire them, and determine their compensation. The function of stewardship is at the root of accounting. A balance sheet was prepared for partners in joint ventures and partnerships in order to maintain control over their assets and their partners' activities. The corporation has originated a keen division between owners (shareholders) and managers, and has driven shareholders (principals) to focus on the stewardship function of accounting. Shareholders, cognizant of possible conflicts with managers, have been using the accounting reporting system to execute control over the executives. In early periods, when shareholders preference was on stewardship rather than performance, the HCA was sufficient.

The expansion of financial markets, investment space, and financial instruments forced a reshape of the rules of investment and the financial attitude of investors. New participants in capital markets include the wealthy and the not so wealthy. Stocks and bonds became their main investment instruments and the optimization of a securities portfolio their main target. In order to reach this goal they needed information about investment opportunities, and earnings performance and its potential growth. In due course, the income statement became the important financial statement.

Later, with the progress in the field of finance, it became apparent that the income statement does not reflect on the quality of earnings and is insufficient for investment decision making. The statement of cash flows (SCF) received much attention and became a dominant statement (FASB, 1984b, 1987; IASC, 1992). Empirical studies, however, show that the information content of the SCF is insignificant (Livnat & Zarowin, 1990). The fact that the SCF is prepared on the basis of two consecutive balance sheets, an income statement, and the notes to the financial statements that include information about ledger accounts (e.g. PPE and long-term liabilities) may explain these findings. More so, the use of cash flow from operations in valuation models is fraught with difficulties (White *et al.*, 1998, p. 1057).

The relevance of the balance sheet and of the income statement to investment decision making is not impressive and has been deteriorating over recent years (Lev & Zarowin, 1999). In the case of the balance sheet, the HCA paradigm is a major cause of irrelevancy (a situation that intensifies during inflationary periods). As for statement of operations, the economic concept of income differs materially from that of the HCA. Thus, its relevancy for predicting future returns is meager (Lev, 1989).

Investors are looking constantly for financial statements that furnish useful input for their investment decisions¹⁰. This search is compatible with the quest of shareholders for more control over the managers' activities. Accordingly, the move toward the *fair value* paradigm stems from both goals.

Accounting transparency and FVA

HCA-based financial statements conceal information on current values of many assets and liabilities and distorts income figures. These features are inherent in the HCA model and are well known. The SEC (1976), in an effort to equip investors with relevant information that enhances investment decisions and capital market efficiency, supported the requirement of *full disclosure*. Firms have been required to report any material information, not included in the financial statement that might affect investment decisions. With the passage of time, notes that accompany the financial statements became synonym to *full disclosure*.

In an effort to enhance *market discipline* that may lead to lower cost of capital greater liquidity and more efficient markets the SEC has required that investors be provided with transparent financial information. "In order to have transparency, financial reporting must be of high quality and must report and reflect economic reality" (SEC, 2001). The FVA model provides the necessary grounds for accounting transparency, that is, true, accurate, and complete information. The FVA, thus, bring managers closer to the goal of adopting "a philosophy of complete transparency," that is, to report to the market on *all* the measures used internally to manage (Eccles *et al.*, 2001, p. 5).

The function of "stewardship" and FVA

The new FVA paradigm contributes value relevance figures to financial accounting, increases management efficiency and decreases the principal-agent conflict. By revealing fair value of assets, the attention of shareholders is directed to the value of assets placed in the hands of the firm's managers. Naturally, shareholders count on managers to preserve and to earn return on their equity. Managers, in turn, have to fulfill these expectations. It is conceivable to safeguard the value of assets through insurance procedures. However, insuring assets for value loss is a complicated procedure, and the recovery of such a loss is even more so. A practical course of protecting the value of assets is, though, through hedging procedures.

The value of an asset is determined by the future cash flows it generates. Securing the anticipated future cash flows from an asset is, therefore, an effective way

to protect the asset's value. The introduction of FVA has taken four steps: (1) application to financial instruments (e.g. [FASB, 1998](#)), (2) to investment property (e.g. [IASB, 2000a](#)), (3) to agriculture (e.g. [IASB, 2000b](#)), and (4) devising cash flows and present value techniques (e.g. [FASB, 2000](#)). The order of these steps follows the ease of implementation. Application to financial instruments is motivated by the fact that there exist highly developed financial markets, from which it is quite easy and convenient to derive market quotations. Property investment is the next, because it is feasible to estimate future cash flows there, which permit calculation of the value of these assets. Application to agriculture is due to the existence of a highly developed future market for commodities, in which agricultural products are traded actively. It is possible to sell, at the beginning of a year, the expected harvest and to defend the existing market price of the product. Concept 7 ([FASB, 2000](#)) furnishes methods and techniques for assessing the fair value of fixed assets, which contribute to future income by way of participation in production.

Principal-agent conflict, HCA and FVA

The principal-agent conflict is enhanced by HCA. The HCA obscures real economic values and generates *hidden-reserves* ([Kohler, 1957](#); [IASB, 1994](#), paragraph 7a). During certain periods, *hidden-reserves* had been favorably accepted by managers and by financial analysts, since the concept of *reserves* is *conservatism* taken to an extreme. Bankers and lenders considered "understatement of assets" a desirable feature of financial statement, since "the greater the understatement of assets the greater the margin of safety the assets provided as security for loans or other debts" ([FASB, 1980b](#), paragraph 93). On the other hand, equity holders who are residual claimants, regard "obscurity" and "hidden reserves" as disadvantages of financial statements.

A manager who has to report a decline in the firm's net income may find that his/her job is jeopardized. He/she may take advantage of the conservative characteristic of HCA and select one or more of the following avenues to manage income and correct the damaging effect. He can (a) initiate an accounting change in depreciation (amortization) of operating (intangible) assets, (b) restate assets that are reported in the balance sheet at lower than their cost net of depreciation, (c) change the estimation of doubtful debts, and (d) sell undervalued assets. Whereas the first three actions involve only a "cosmetic" change, the fourth involves a real and costly act that may be in contrast with the shareholders' basic goals (e.g. timing the occurrence of an event ([Ronen & Sadan, 1981](#))).

ROA and on ROE serves shareholders in evaluating management. The first index is used to assess the level of efficiency at which the operation manager has utilized the firm's assets. The second is used for appraising the performance of the chief executive officer, whose responsibility is for total activities including the capital structure. Under the paradigm of HCA, both indexes give biased results. Managers are able to manipulate both indexes through income management ([Ronen & Sadan, 1981](#)).

FVA reveals the current values, prevents obscurity, and decreases costs of the principal-agent conflict. Consider the following example. The CFO of a firm invests

the firm's liquid funds in marketable securities in order to secure liquidity and return. The CFO selects US treasury bills (TB). Assume the following information:

On January 1, 19X1 the firm buys TB for \$1000.

On December 31, 19X1 the price of the TB is \$1300.

On December 31, 19X2 the price of the TB is \$1100.

According to FAS 12 (FASB, 1975), which was in effect through 1993, the TB are recorded in the balance sheet at *cost* and their *book value* is being maintained thereafter. The TB's year-end *fair value* is not recognized and does not affect income. The firm does not recognize a gain in the first year or a loss in the second. Needless to stress that this form of reporting gives room for manipulation. The manager may sell the securities at the end of the second year and generate profits. No indication is given to the fact that the manager gave up a chance of making money. FAS 115 (FASB, 1993b), which superseded FAS 12 (FASB, 1975), requires the firm to report a gain of \$300 in the first year and a loss of \$200 in the second. This reporting calls attention to the manager's financial activities and forces him to be aware of and to safeguard the financial assets' value.

Does the difference in the framework of reporting affects the behavior of the CFO? Probably yes. Reports prepared along the lines prescribed by FAS 12 (FASB, 1975) hide the economic consequences of the CFO operations, whereas the reports prepared in accordance with FAS 115 (1993b) reveal the success and the failure of the CFO. Thus, it may be expected that a manager who operates under current GAAP will incorporate in his management strategy the potential fluctuations in the prices of securities.

ROE and ROA, as well as other profitability indexes are based on accounting information. HCA obscures the real return. This may be easily seen when we extend the above example to measure ROE and ROA. Moreover, since HCA overlooks increases in the value of assets managers may hide behind profitability measure that looks quite good, but in fact, it is quite poor. It also hides the level of managers' efficiency and increases the principal-agent conflict.

FVA allows shareholders to evaluate the outcome of their managers' decisions regarding (a) selection of assets and liabilities for current operations, (b) selection of assets and liabilities for hedging, (c) operational activities, and (d) hedging activities. Needless to stress, these new evaluation horizons may require new analytical tools and a complete FVA system, where hedging instruments as well as the hedged assets are stated at market values.

Corporate stakeholders

Coase's (1937) deep understanding, that firms exist to increase efficiency and save costly resources in performing business transactions, is the basis of modern theory of the firm. Other works that include Alchian and Demsetz (1972), Jensen and Meckling (1976), Fama and Jensen (1983a, 1983b, 1985) extended the boundary of the theory of the firm in specifying the set of interrelated contracts among suppliers of input factors and buyers of the firm's output. From this perspective, the firm's claimants include, in addition to shareholders and bondholders, suppliers of

raw materials and of other complementary materials and services, employees, distributors and customers.

Contractual claims that firms issue to non-investors stakeholders (e.g. employees and customers) are of two types: explicit and implicit (Cornell & Shapiro, 1987). Explicit claims, such as wage contracts and product warranties, have priority over the claims of investor stakeholders. Thus, as long as the probability of a firm's bankruptcy is remote, they may be viewed as risk-free or of low probability of default. Their impact on the firm's financial management is therefore minimal (Cornell & Shapiro, 1987, p. 6). Implicit contractual claims, such as working conditions and job security for employees and specified quality of performance and continuing availability of parts and services, have little, if any, legal standing. Nonetheless, implicit contractual claims are valuable for both the firms and the stakeholders. The value of these claims is exhibited by "the term of trade" that a firm is able to negotiate with its stakeholders, that is, wages and severance of employment agreements for employees, and prices and payment terms for customers. The terms of trade depend on the reputation of the firm for fulfilling its implied implicit contractual claims (Bowen *et al.*, 1995). Default on implicit contractual claims, thus, would bring about a loss of reputation, and deterioration in the terms of trade from the firm's perspective. This is a costly action but it rarely forces a firm into a bankrupt situation. A decision whether to default on implicit contractual claims depends on the value of the firm's reputation. Where the present value of the firm's reputation, as reflected in the terms of trade with stakeholders, is greater than the present value of the cost of breaking the implied commitments, the implicit contractual claims are self-enforcing (Bowen *et al.*, 1995, p. 258).

Cornell and Shapiro (1987) argue that "since the payouts of these implicit claims are not set, the prices stakeholders pay for such claims depend on the condition of the firm, including its financial policy" (p. 13). The latter are reflected in the firm's financial statements and affected by its accounting policy. Thus, management has a keen interest in selecting an accounting policy that shapes best the firm's reputation. Bowen *et al.* (BDS) (1995) documented theoretical support "for the relation between a firm's terms of trade and its reputation for fulfilling implicit claims with stakeholders" (p. 256). They provided also anecdotal evidence regarding managers' belief that they may well influence stakeholders' assessment of the firm's reputation. BDS argued and provided empirical evidences that the existence of implicit contractual claims to stakeholders create incentives for management to choose long-run income-increasing accounting methods.

Liberty and Zimmerman (1986) examined "the hypothesis that managers reduce reported earnings during labor union contract negotiations relative to earnings released before and after contracts are negotiated" (p. 692). Whereas managements' motives are clear, the study did not provide sound evidence for such performance. This was explained by the economic conditions that prevailed during the period of inquiry (1968–1981).

The question, which of the motives is stronger, that of increasing or that of reducing reported earnings figures, is unresolved. It requires additional empirical research. Nonetheless, there is no doubt that employees, among other stakeholders, have keen interest in a firm's financial position and in its financial reports.

It is our claim that the HCA system provides management with an ample of opportunities to manipulate reported accounting figures. In contrast, an FVA system characterized by more disclosure and better transparency contributes power to stakeholders. Consequently, there is improvement in the balance of power of stakeholders vis-à-vis managers. This is so, since managers do not need the transparency supplied by financial reports.

Creditors and FVA

Creditors, whether long term (bondholders) or short term (banks, suppliers) are concerned with the firm's ability to repay their debts as promised. Their analysis often seems easier than that of shareholders, but, in fact, both are interested in the same issues and apply similar analyses. The main difference in their approaches is in the emphasis. Creditors, in general, focus on credit analysis that takes a number of steps, including distress prediction. Some of the steps involve extensive use of accounting data. For example, lenders use financial statements to analyze the economic strength of the borrower, its level of risk, its profitability, and efficiency of operations. Such an analysis is designed to reveal the borrower's ability to pay its service charges and repay its debt. The accounting procedures involved in this analysis are, in some respect, similar to those executed by shareholders. Reliance on HCA figures prevents lenders to reach relevant answers. For example, the measure "interest coverage ratio" [(income from continuing operations plus interest expense plus income tax expense) divided by interest expense] is highly affected by the depreciation charges and cost of goods sold. Since HCA distorts these figures, the index cannot serve its purpose. Measures of long-term solvency such as "long-term debt ratio" [long-term debt divided by (long-term debt plus shareholders equity)] or "debt–equity ratio" [long-term debt divided by shareholders equity] are highly distorted under HCA methods. The book value of equity, as well as that of long-term debt, does not reflect their fair value since assets and liabilities are not adjusted to reflect changes in their market value.

In contrast, where FVA is applied, accounting figures provide information that serves the purpose of evaluating potential payments and the risk of default. The fair value of working capital, for example, reflects on potential short-term cash flow. Measures of risk and return that are based on fair or market value indicate real profitability. Noteworthy are numerous theoretical and empirical studies, that focus on risk and return and use market value of equity and debt to reach more meaningful results (White *et al.* (1998) and Palepu *et al.* (1996)).

Social conflict and FVA

Tinker (1985) claimed that accounting has a much greater impact on our lives than the narrow focus suggested by traditional financial statement analysis.

Members of society are interconnected through their economic and social interdependencies: employees to investors, to consumers to taxpayers to mothers to welfare recipients to students to insomniacs. Accounting information is not merely a manifestation of this myriad of interdependencies; it is a social scheme for adjudicating these relationships. We are all

costs and revenues to each other; everyone is potentially a benefactor and a victim in the accounting nexus of social decision.

Accounting has an important social context, as a supplier of data that affect the work-life of employees. It is possible to develop a strong normative case for disclosure of financial information to employees and trade unions. Factors that motivate such a disclosure include accountability, collective bargaining, human relations, industrial democracy, management of change and political motivation (Coopers & Rees, 1995, pp. 326–354).

The role of the information provided to employees and trade unions by the existing accounting system has resulted in a valuable body of research. Nonetheless, there is still a need for a unifying and underlying theory of social value to situate the research in an overall context of social conflict. Tinker *et al.* (1982) claim that “The importance of giving due weight to the social context of accounting becomes even more apparent if we recognize that, to date, when accounting has affected the work-lives of employees, it has done so overwhelmingly on behalf of corporations and employers” (pp. 191–192).

Employees have a keen interest in financial information provided by the current accounting system. Despite the fact that often an employee, whether a blue or white collar, is not equipped with the necessary tools to analyze financial statements, the following are a few reasons why he is interested in the information they confer.

An employee, and especially a newly hired employee, who ties his life with the future of his employer, would like to find out its survival expectancy. This is due not only to the cost of transfer (physical as well as mental) but also to the risk of unemployment at an olden age. He would like to learn about the firm’s management policy, its attitude towards risk, and towards technological changes. An employee would like to evaluate the potency of the firm’s earnings growth, to get some knowledge of its past relationship with salaries, and to have some notion about the potency of the progress in his pecuniary as well as non-pecuniary remuneration. He would like to learn about the employer’s profit-sharing policy and his stock-based employee compensation plans. An employee is interested in his firm’s policy of pensions and post-retirement benefits. He would like to find out, in cases where the employer offers a defined benefit pension plan, whether the firm adheres to its plan commitments, how well the pension funds are managed, etc. All of the above may affect the employee’s well being in the short as well as the long term.

The HCA paradigm allows the management of the firm to conceal information and to manipulate figures presented to employees, far more than in the case of shareholders. This is due to the fact that a single employee has no legal right to demand financial information. Bryer (1999) has emphasized “that only objective accounts could allow investors to judge management’s behavior, to punish or reward them for their stewardship of capital.” He has also added that “While in its heart the FASB would like the accounts to judge management’s stewardship of economic value—reveal management’s contribution to economic value—it accepts they cannot usually hold management accountable in this sense” (p. 684).

The FVA paradigm improves largely this situation. Published information regarding risk and return, income, gains and losses reflects reality. Management policies regarding profit sharing schemes and stock option policies, pension and post-retirement benefits, are more clearly measured and presented and the potential of managing and manipulating this information is much lower under the FVA paradigm.

Impact of FVA on the management of the firm

FVA, as mentioned before, attracts the attention of shareholders to the efficiency at which managers are employing their assets and protecting the value of their equity, and causes managers to account for variations in the value of assets as they do for income. The analysis of the source of changes in the value of assets is of importance to shareholders. A sale or a purchase of assets can be examined in relation to the business policy. A lower value of assets may indicate that the manager did not utilize available means of protection. A higher value may satisfy shareholders in the short run, but may also imply that managers expose the firm to risks.

The crux of the issue is that a firm that intends to perform business in one sector should not be exposed to risks in another. Managers are noted for their adverse attitude toward risk, since they jeopardize their positions and reputation in cases of failure. They will look for a mechanism of securing the value of the assets they manage. Consequently, a new management culture, in which managers utilize derivatives and other techniques to protect the value of assets, may evolve because of the FVA paradigm. Dynamic business environment, which characterizes today's local and global markets, increases the risk inherent in the strategic profile of a business entity. Managers are required to prepare and to conduct their activities in accordance with a comprehensive strategic planning that takes hedging into consideration. This progression necessitates a new mechanism for making decisions within the firm that integrates risk reckoning. Hence, reasons for relying on the FVA.

The FVA paradigm will influence the course of management. Managers will learn to examine their assignments and to look at the business arena differently. They will have to take into account the economic environment and trends in their own country and internationally. They will have to understand derivatives and option-pricing models, the structure of interest rates and their meaning to options and future cash flows. A growth in the utilization of derivatives to protect the fair value of the firm's equity may be expected to follow the advancement of FVA. The more complete is the FVA system the more hedging activities.

In summary, the FVA intensifies and sharpens the manager's cognition that he acts in open economic systems. This means that he faces almost unlimited markets for the firm's products and that he may refer to global capital and money markets for financing the firm's assets and working capital requirements. In these markets, the manager can shop for the most attractive loans (with regards to their amount and the other terms). Moreover, even if the managed firm is relatively small, it often operates in a global environment and the manager must listen to and identify the various voices and their trends. Under the FVA, the manager must pay a close attention to local and global economic conditions beyond that called by the HCA paradigm.

FVA and the Accounting System

A comprehensive versus a partial FVA system

The FASB made, by now, a few steps of incorporating the FVA paradigm into the current accounting framework. Most of these are related to financial instruments. The inventory of American GAAP became much richer with the additions of FAS 107 (FASB, 1991), FAS 115 (FASB, 1993b) and FAS 133 (FASB, 1998), that require disclosure, measurement and reporting of certain financial and derivative instruments at fair value. Furthermore, the FASB superseded a major part of the economically wrong procedure engendered by FAS 15 (FASB, 1977) that permitted creditors to overlook losses linked to impairments of loans where the parties agreed on restructuring the troubled debt. The Standard allowed covering up real damages using a “cosmetic” gimmick. The procedure called for calculating the internal rate of return (IRR) of the restructured debt. Where this IRR is positive no accounting losses are realized, despite the existence of economic losses, due to the gap between the original and the restructured IRR. In FAS 114, the FASB (1993a) corrected this procedure and replaced it with a more realistic one that uses the present value technique and agrees with the concept of FVA. Recently, the FASB (2001a) decided to exclude from GAAP the economically wrong method of “pooling of interests” that has been applied to certain business combinations since 1970 (APB, 1970a). The method prescribed in Opinion 16 (APB, 1970a), refers to a case where a firm acquires another by an issuance of shares. The “pooling of interests” approach dictates the use of the book value of the acquired firm as a basis for valuing the acquired stock. It disregards the real value that was given up, that is, the fair value of the shares issued, in the transaction. The method depicts a transaction of business integration in a distorted method far remote from economic reality (Briloff, 1972, chapter 3).

Reporting the results of the stewardship function

The FVA generates a need to report on the results of the stewardship function, in addition to the common report on the results of operations. Tracing costs for insurance, derivatives, swaps and similar costs is a feasible task. It is also feasible to analyze and record the shifts in the fair value of assets and liabilities and in owners' equity. Hence, reporting the results of the custodianship activities is feasible too.

It is possible to generate a new report that centers on the stewardship function. This report will contain information on changes in the fair value of assets, liabilities, and equity and information on expenses required for performing the stewardship function (i.e. hedging costs). It is possible to integrate this data into a comprehensive income statement. Since this report will include unrealized as well as realized gains and losses, it is only natural that it will be incorporated into the comprehensive income statement (FASB, 1997)¹¹.

A dual reporting system

Although the advantages of financial statements based on FVA are overwhelming, HCA figures are still needed for various purposes. For example, the Internal Revenue

Service (IRS) may adhere to its formulation of taxable income and require HCA statements. Consequently, a dual system of reporting that incorporates FVA and HCA may evolve.

A dual system of reporting already exists and there is some experience with the treatment of two types of reports simultaneously. The conventional (FASB, 1984b) and the comprehensive income statement (FASB, 1997) are one example. Israel, where an “adjusted for inflation” and a “nominal” balance sheet are reported, is another example. Noteworthy are the recommendations of ASOBAT (AAA, 1966). The ASOBAT states that “the objectives of accounting are to provide information for the following purposes: (1) Making decisions concerning the use of limited resources . . . (2) Maintaining and reporting on the custodianship of resources” (AAA, 1966, 4). On the basis of these and other objectives a basic accounting theory that favors a multi-value reporting system has been developed. The ASOBAT contains an impressive set of illustrative dual financial statements: historical and current cost based (AAA, 1966, appendix B).

Political cost and FVA

Adaptation of FVA system may generate some political costs. It is possible, for example, that the IRS will modify its formulation of income and will tax unrealized gains. It is also possible that, due to the transparency nature of FVA, some authorities will initiate tighter controls over the level or risk assumed and of business activities of reporting entities. Such regulations often hinder the manager’s activities and impose high costs on business firms.

Some Problems and Perspectives of Implementation of FVA

The analysis we have presented up to this point takes a macro outlook, that is, it centers on forces, processes and direction of development. Thus, we avoided the discussion of acute problems of implementing the FVA. Choosing this approach does not mean that implementing the FVA is an easy task. The opposite is true. We recognize the many barriers to and difficulties of implementation. In the long run, however, the processes portrayed before are unavoidable, thus the macro emphasis we adopted. Nonetheless, it is appropriate to present a few of the problems and difficulties involved. For a number of problems, a solution is offered, but others remain unresolved. It is our belief that the process of implementation of FVA is quite strong and that it will create the necessary solutions in due time.

Barth and Landsman (BL) (1995) discussed fundamental issues related to the implementation of FVA. They analyzed two scenarios: One that is equivalent to perfect and complete market and another that is more realistic. In the first, fair value figures are available for all assets and all liabilities. In such a case, “FVA-based balance sheet reflects all value-relevant information, the income statement is redundant, income realization is not valuation-relevant, and intangible assets relating to management skill, asset synergies, or options are reflected fully in the balance sheet” (p. 97). This case is similar to the model that underlies our analysis. In the

more realistic case “fair value” is not well defined, and it may take one of the following: “entry price,” “exit price” or “value-in-use”¹² (see, [Edwards & Bell, 1961](#); [Chambers, 1966](#); [Sterling, 1970](#); [Beaver & Demski, 1979](#); [Beaver, 1981](#); [Beaver & Landsman, 1983](#)). Each of these concepts provides different information about the firm’s assets.

At the time of an asset’s acquisition, its “value-in-use” is equal or larger than its “entry value.” Nonetheless, often this figure differs from one firm to another. “Exit value” may be either smaller or larger than “entry value” or “value-in-use” since it is determined by others. Of the three concepts, neither one is readily observable. Thus, the choice of one of the three constructs depends on the valuation objective and on their estimation error. For example, where the objective is the firm’s total value, “value-in-use” is the most suitable concept. However, if its estimation error is high, its information content is low, and “exit value” or even “entry value” may supply more value relevance information.

It is our claim that there is a dynamic process in a direction towards the scenario of a complete FAV system.

“Mark to model” financial instruments

In many cases financial instruments, say derivatives, do not have market values. Thus, a “mark to model” process must be assumed. When substantially different values are obtained within the bounds of reasonable changes in the model’s parameter, a right figure must be selected.

Using models for determining the fair value of financial instruments is not a new issue in financial accounting. This issue was addressed by a number of financial accounting statements. FAS 123 ([FASB, 1995b](#)) defines “a *fair value-based method* of accounting for an employee stock option.” The fair value of the stock option is to be determined by an option-pricing model (e.g. the Black–Scholes or a binomial model). Such a model takes into account the stock price at the grant date, the exercise price, the expected life of the option, the price volatility of the underlying stock, the expected dividend and the risk free interest rate. Needless to stress that changes in some of the parameters may cause a wide variation in the calculated price. Despite this issue, the FASB has favored the fair value method over the “intrinsic value” method recommended in Opinion 25 ([APB, 1972](#)).

Securities held to maturity (HTM)

FAS 115 ([FASB, 1993b](#)) specifies a “conservative” accounting treatment for HTM securities, in contrast to the FVA method that it adopts for Trading Securities and Available for Sale (AFS) Securities. FAS 115 requires HTM securities to be presented on the balance sheet at amortized cost (i.e. cost plus amortization of discount or premium) and that interest received or accrued plus the amortization of discount or premium be recorded in the income statement. The IASC has adopted a similar approach in IAS 39 ([IASC, 1998b](#)).

This approach may be explained by the attitude of the standard setting bodies towards “management’s intent.” Interim unrealized gain or loss, calculated on the

basis of FVA, may be reserved till maturity. "Management's intent" is irrelevant. The securities are worth whatever their market value is. Keeping the securities to maturity is equivalent of selling and buying them back with no transaction costs.

A decision to hold securities to maturity is a long-term investment decision. An adherence to this policy is similar to signing a contract that takes away options of improving the firm's position and the shareholders' wealth. Information regarding this decision must be present to shareholders. The FVA fulfils this requirement.

It is interesting to note that FAS 115 was not approved unanimously. Two members of the Board, Messrs Sampson and Swieringa, disagreed with a number of issues in the Statement, including its approach to "accounting based on intent" and dissented on the following grounds. "The notion of intent to hold to maturity (a) is subjective at best, (b) is not likely to be consistently applied, (c) is not likely to be descriptive of actual transactions and events, and (d) disregards the best available information about the present value of expected future cash flows from a readily marketable debt securities." They also stressed that an effective management of financial activities requires a flexible approach to assets and liabilities that is inconsistent with a notion of "held to maturity" (FASB, 1993b).

PPE

Quite often used PPE do not have a ready market from which quoted prices may be secured for financial reporting. In a case like this, assessments of the asset's value, based on present value of future cash flows or on professional appraisals, may be utilized instead. Estimation of the net present value (NPV) of an asset is a cumbersome task. It requires projection of earnings, the cash flows they produce and an assessment of an appropriate discount rate. This process is subject to management's judgment and to manipulation. Appraisals are notoriously difficult to verify and can easily be manipulated. This may cause some difficulties in the process of implementing FVA, but in no way may it stall the process.

Electronic markets for certain used PPE already exist in the Internet and for others are being developed. Thus, "market price" of some used PPE will probably be available in the future. Until that time, assessments may be used. Concept 7 (FASB, 2000) presents new tools and methods for calculating "fair value" using cash flow information¹³.

Often a specific asset does not have independent cash flows. A similar issue is addressed by FAS 121 (FASB, 1995a) and IAS 36 (IASB, 1998a), which deal with impairment of assets. FAS 121 (FASB, 1995a) suggests that where "the asset being tested for recoverability does not have identifiable cash flows that are largely independent" the test of impairment should be based on the entity level (FASB, 1995a, paragraph 10). IAS 36 (IASB, 1998a) has adapted the same approach. The Standard provides that "If there is any indication that an asset may be impaired, recoverable amount should be estimated for the individual asset. If it is not possible to estimate the recoverable amount of the individual asset, an enterprise should determine the recoverable amount of the cash-generating unit to which the asset belongs (the asset's cash-generating unit)" (paragraph 65). A practical method is thus offered in this case too.

Goodwill and other intangible assets

The recent developments in the accounting for “Business Combinations” (FASB, 2001a)¹⁴ and for “Goodwill and Other Intangible Assets” (FASB, 2001b) provide examples for the implementation of the FVA paradigm. They indicate that the use of FVA is feasible, even in a controversial and complicated area such as goodwill and other intangibles.

SFAS 141 (FASB, 2001a) requires that the purchase price paid by an acquiring firm for an acquired firm will be allocated as follows:

1. Intangible assets, defined as “assets which arise from contractual or other legal rights” or that are “capable of being separated or divided from the acquired entity and sold, transferred, licensed, rented, or exchanged,” shall be recognized (paragraph 39).
2. The cost of acquiring an entity must be allocated to the assets acquired and liabilities assumed “based on their estimated fair values at date of acquisition” (paragraph 35).
3. “The excess of the cost of an acquired entity over the net of the amounts assigned to assets acquired and liabilities assumed shall be recognized as an asset referred to as goodwill” (paragraph 43).

SFAS 142 (FASB, 2001b) prescribes that goodwill should not be amortized. Nonetheless, the goodwill should be tested on a yearly basis for impairment (paragraphs 18 and 19). Other Intangibles should be amortized over their useful life. These intangibles must also be subject to a review for impairment in accordance with SFAS 121 (FASB, 1995a).

The impairment test, especially the one related to goodwill, despite the fact that it originated in *conservatism*, is an important case of the application of FVA procedures to a real situation. The impairment test procedure involves two steps. The first is used to identify potential impairment of goodwill and is based on a comparison of “the fair value of a reporting unit with its carrying amount, including goodwill” (paragraph 19). The second step compares the “implied fair value of reporting unit goodwill with the carrying amount of that goodwill” (paragraph 20). The entire process, including that of determining “implied fair value of goodwill” (paragraph 21), is based on estimation of the fair value of assets and liabilities. Paragraphs 23, 24, and 25 describe the procedure of determining fair value of an asset and liability. This process relies on the guidelines established by concept 7 (FASB, 2000). The Standard reflects and stresses the following:

1. “Quoted market prices in active markets are the best evidence of fair value and shall be used as the basis for the measurement, if available” (FASB, 2000, paragraph 23).
2. “If quoted market prices are not available, the estimate of fair value shall be based on the best information available, including prices for similar assets and liabilities and the results of using other valuation techniques. A present value technique is often the best available technique with which to estimate

the fair value of a group of net assets (such as a reporting unit)" (FASB, 2000, paragraph 24).

The importance of concept 7 is evident from the referral to its procedures in FASB Standards 141 and 142 and from the following citation. "Concepts statement 7 discusses the essential elements of a present value measurement (paragraph 23), provides examples of circumstances in which an entity's cash flows might differ from the market cash flows (paragraph 32), and discusses the use of present value techniques in measuring the fair value of an asset or a liability (paragraphs 39–54 and 75–88)" (FASB, 2001b, paragraph 24).

FVA, earnings volatility and earnings management

During the public hearings, which preceded the pronouncement of SFAS 115 (FASB, 1993b), representatives of the banking industry raised objections to the FVA concept. They claimed, among other issues, that banks' earning figures based on fair values for investment securities are likely to be more volatile than those based on historical costs. The increased volatility that does not reflect an increased economic or banks' operation volatility, may cause inefficient capital allocation within the economy. It may also increase the likelihood that banks violate capital requirement regulations.

Barth *et al.* (BLW) (1995) examined the validity of the above-mentioned claims. BLW found that, banks' earnings, calculated on the basis of fair value estimates of investment securities, are more volatile than those based on HCA. This incremental volatility, however, is not reflected in the banks' share prices. BLW also found that the increase in earnings volatility is likely to cause banks to violate capital requirement regulations more often. Nonetheless, share prices do not reflect the potential risk of a greater and stricter banks' regulation (p. 580).

These findings suggest that FVA information is value relevance.

Summary and Conclusions

This paper focuses on the process of development of the paradigm of FVA and on the potential impact of FVA on management philosophy in general and on a firm's management strategy in particular. The first argument of the paper is that the process of development of the paradigm of FVA is a natural one. It reflects the processes of globalization and international economic integration. Thus, this process might not be stalled or stopped. Nonetheless, it may be delayed. The second argument of the paper is that FVA, due to the time and value relevance information it supplies, might bring about a change in management philosophy and in the strategy of management of the firm. Financial statements prepared in accordance with the paradigm of FVA present to interested parties, up-to-date fair or market values of assets, liabilities and owners equity. FVA-based financial statements put the shareholders' equity at the focus of interest. Guarding the value of shareholders' equity and reporting the results of their efforts will become a tacit goal. In response, a new management philosophy that combines value maintenance, profitability and efficiency will emerge. A new management strategy, one that utilizes the new techniques of hedging will evolve.

Risk management will be an integral part of business management and will involve consistent investigation of local as well as global market trend and the use of new methods of hedging.

FVA may have also an impact on financial reporting. Given the situation in which GAAP provide shareholders with information that allows them to trace managers' activities, a need for a detailed reports that account for the managers actions is inevitable. A dual system of reporting, in which HCA be given along the main FVA figures, is a most promising avenue. A comprehensive income statement may be an alternative or an addendum to a dual system of reporting. These ideas are not new in accounting and could be easily implemented. Eventually, FVA will have an effect on many more aspect of accounting, including auditing and international accounting harmonization.

Notes

1. The value relevance may be analyzed also in terms of the information supplied to creditors (i.e. projections of cash flow and of default risk), stakeholders and employees. In this paper, we focus mainly on the function of stewardship and of management efficiency.
2. The current ratio, for example, is distorted due to miss-measurement of receivables, inventory and current liabilities. The debt–equity ratio, the return on assets (ROA) and return on equity (ROE) are distorted since they are based on historical cost values of debt and of equity.
3. "It is interesting to note that the term *fair value* has been used primarily in the public utility field to refer to the total amount on which the investors are entitled to earn a fair return" [Hendriksen and van Breda \(1992, p. 496\)](#).
4. This bulletin was latter incorporated as chapter 4, *Inventory Pricing* in ARB No. 43 (1953).
5. A comprehensive description and analysis of the development of valuation concepts can be found in Most (1982).
6. Members of IASC are professional accountancy bodies. As of December 2000, there were 153 member bodies in 112 countries. Members agree to support the mission of IASC and to use their best endeavors to implement the standards issued by the IASC in their countries.
7. The National Commission on Fraudulent Financial Reporting (NCFRR), known as the "Treadway Commission" after its Chairman James C. Treadway, Jr., was established in 1985 as a private-sector initiative. The Commission was jointly sponsored by five major American accounting-oriented organizations (the American Accounting Association (AAA), the American Institute of CPAs (AICPA), the Financial Executive Institute (FEI), the Institute of Internal Auditors (IIA) and the National Association of Accountants (NAA)). The major objective of the Treadway Commission was to "identify casual factors that can lead to fraudulent financial reporting and steps to reduce its incidence" (NCFRR, 1987, Introduction).
8. In April 1991, the AICPA formed the "Special Committee on Financial Reporting." The Committee, known as "The Jenkins Committee" after its Chairperson, was assigned to recommend on the following two issues. "(1) The nature and extent of information that should be made available to others by management, and (2) the extent to which auditors should report on the various elements of that information" ([Special Committee on Financial Reporting, 1994](#), appendix IV).
Prior to the establishment of The Jenkins Committee, the accounting profession was subject to significant criticism by the profession itself, by academics and by regulatory bodies, regarding the relevance and reliability of business financial reporting.
9. In 1988, the Public Oversight Board (POB) appointed, at the request of the Securities and Exchange Commission's Chairman Arthur Levitt, Jr., The Panel on Audit Effectiveness. The objective of The Panel was "to assess whether independent audits of the financial statements of public companies adequately serve and protect the interests of investors" ([Panel on Audit Effectiveness, 2002](#), Introduction).
10. It is interesting to note the monumental works of [Paton and Littleton \(1963, pp. 81–88\)](#) and of [Littleton \(1977, pp. 211–213\)](#) who have analyzed the issue of current cost depreciation and assets valuation.

11. The idea of a comprehensive income is not new in accounting. It dates back to the fifties and earlier. The issue at stakes was whether the concept of “all inclusive income” is superior to the concept of “net operating income.” The AICPA and most of the professional accounting bodies over the world favored the “all inclusive concept of income” and integrated it to GAAP.
12. “Entry value” is an asset’s acquisition price or where the structure of relative prices changed, it is an asset’s replacement cost. “Exit value” is the price for which an asset may be sold or liquidated. “Value-in-use” is the incremental firm’s value that is attributed to a specific asset (Beaver, 1981; Beaver & Landsman, 1983).
13. Concept 7 (FASB, 2000) provides “a framework for using future cash flows as the basis for accounting measurements It provides [also] general principles that govern the use of present value, especially when the amount of future cash flows, their timing, or both are uncertain” (highlights). The Concept introduces the expected cash flow approach, that explicitly incorporates a range of possible outcomes in the calculation of NPV, and that may reduce the level of estimation error and the level of subjectivity.
14. Business combination is propelled by economic gain to the acquiring firm or to the merging firms. Possible sources of economic gain in business combination depend on the type of combination, whether it is horizontal, vertical or conglomerate. The sources of economic gain may be (1) monopolistic power, (2) economies of scale (in production, advertising, distribution, research and management), (3) cost savings (due to technology, transaction costs and coordination activities), and (4) cost of financing. These sources of economic gain present a sound justification for business mergers and acquisitions. Moreover, they explain why an acquiring firm is willing to pay a premium over the market value of the acquired firm. (An alternative approach to accounting for business combination may be found in, Benzion Barlev, “Business Combination and the Creation of Goodwill” *Accounting and Business Research* (1973, pp. 304–308)).

Acknowledgements

We would like to thank Prof. G. J. Benston for his constructive comments. Thank are due also to Profs. P. De-hange, H. Levy, J. Livnat, D. Cooper (editor), T. Tinker (editor) and three anonymous referees for valuable comments. We alone are responsible for any remaining error. The first author would like to acknowledge financial support from the Krueger Center for Finance at the Hebrew University of Jerusalem, Israel.

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