

COMMENTARY

# Financial Analysts Need Sharper Accounting Tools

David Mosso

**SYNOPSIS:** This paper explores the implications of a wealth accounting model on comparability for several key aspects of financial analysis such as restraining, accounting manipulation, and unifying merger and acquisition accounting. The paper extends the analysis of wealth accounting for individual companies to explore the implications for the capital markets at large, suggesting, for one thing, that wealth accounting financial statements would emit early warning signals of approaching financial crises. And, suggesting for another, that wealth accounting statements would serve as rolling stress tests to help the markets self-regulate, reducing the need for government regulation and at the same time helping regulators formulate more effective regulatory policies.

These proposals are revolutionary and would generate fierce opposition from the corporate financial reporting community. The paper explores the current political scene and concludes that the time may be ripe for a concerted effort to convince the Securities and Exchange Commission and the Financial Accounting Standards Board to elevate the interests of investors and creditors above the interests of corporate financial statement preparers that they now seem to favor, in fact if not by intent. The paper suggests that financial analysts and academic accountants should join forces to lead a reform effort.

## INTRODUCTION

The accounting model known as U.S. Generally Accepted Accounting Principles, or GAAP, is obsolete and needs to be updated to meet the needs of fast-changing modern economies. I have proposed a new accounting model built around the two-pronged objective of measuring a company's wealth and diagnosing its financial health.<sup>1,2</sup> In developing the model, I

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*David Mosso is retired. He was Vice Chairman of the Financial Accounting Standards Board, Chairman of the Federal Accounting Standards Advisory Board, and Fiscal Assistant Secretary of the United States Treasury.*

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Corresponding author: David Mosso

Email: [ossomd@hotmail.com](mailto:ossomd@hotmail.com)

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<sup>1</sup> See Mosso (2009a, 2009b, 2010).

<sup>2</sup> My model is drawn from experience as an accounting standard-setter. That experience included exposure to scholars who influenced my views on the use of market value accounting, including colleagues of mine at the FASB, George Staubus (1977) and Robert Sterling (1979), a correspondent with me on the subject, Phillip Bell (Edwards and Bell 1961), and one often cited by FASB staff, Raymond Chambers (1966). There are others I will be sorry not to have mentioned.

focused on the contrast between the proposed wealth model and the GAAP model with emphasis on technical accounting issues. In this paper I focus on two less technical matters that I have not fully developed heretofore; first, the implications of the wealth accounting model for the practice of financial analysis and, second, the politics of accounting reform for which financial analysts and academic accountants should play major roles.

The core of the proposed wealth accounting model and its relation to financial analysis is the following: All of a company's assets and liabilities would be put on its balance sheet and measured at fair value or, as some prefer to say, marked-to-market. The model would be universally applicable to all companies regardless of industry. The balance sheet would measure a company's total wealth—its economic net worth. The income statement would measure a company's total income—the change in total wealth excluding owners' capital contributions. The primary purpose of the model is to facilitate the diagnosis of a company's financial health. Diagnosis of financial health is a shared professional responsibility of certified public accountants (CPAs) and chartered financial analysts (CFAs)—accountants to design, prepare, and audit financial statements that present the basic components of financial health and analysts to interpret the information in the financial statements, to relate it to information from other sources, and to reach an opinion about financial health.

The underlying rationale for the proposed model is that the role of business in society is the production of wealth. A business enterprise strives to use present wealth to produce a surplus of future wealth for the benefit of its owners. Business success or failure is determined by a company's ability to manage inflows and outflows of wealth in ways that optimize profitability and maintain the company's financial health. To monitor the efficacy of the management of the wealth they have committed to a company, owners of the company, along with their company's creditors and financial analysts, need to know in a timely way how well the company is doing. To that end, the proposed accounting model measures a company's total wealth and components of wealth, at each financial reporting date, and its total income and components of income, from one date to another.

A thumbnail comparison of the wealth model with the GAAP model it would replace goes like this: every individual asset and liability has an entry market value and an exit market value; and the difference between the two values is the profit or loss realized on that particular item. The two models agree on that. They differ on what happens between entry and exit. The wealth model estimates the fair value of every balance sheet asset and liability on each reporting date. The sum of the wealth model asset and liability values represents the company's economic net worth, that is, owners' equity. The GAAP model allocates entry values from the balance sheet to the income statement as assets and liabilities are used up or liquidated. The sum of the GAAP asset and liability amounts represents the total of entry values yet to be allocated to the income statement. That sum represents GAAP equity.

## **PART I: WEALTH ACCOUNTING AND FINANCIAL ANALYSIS OF INDIVIDUAL COMPANIES**

In this part I examine how the wealth accounting model would sharpen the tools of financial analysis. Capital markets are motivated by wealth and powered by information. Information underlies decision making by capital providers on one side of the market equation and capital users on the other. The function of financial analysis is to filter and evaluate the vast amount of information that might be relevant to the diagnosis of a company's financial health and to reach a diagnostic opinion for use by capital market decision makers.

Chartered Financial Analysts (CFAs) are professional analysts who are credentialed by the CFA Institute much as CPAs are credentialed by state CPA societies in conjunction with the American Institute of Certified Public Accountants (AICPA). CFAs provide a lot of the diagnostic

opinions used by both providers and users of capital. However, financial analysis is widely practiced by many others, including company managements, auditors, economists, regulators, rating agencies, news media, consumer advocates, financial planners, and investors and creditors of all kinds. This paper is addressed to all who make capital market decisions or use financial statements for other purposes; however, my view on what financial analysts need from accountants is based in large part on a CFA Institute monograph issued in 2007.<sup>3</sup> The monograph advocated greater use of wealth measures in financial statements. Wealth measurement was discussed under the caption “Fair value information is the most relevant information for financial decision making.”

### **Financial Statements: The Organizing Tools of Financial Analysis**

Financial statements are the tools for organizing information into components suitable for financial analysis. By design they present an economic profile of a company that gives insights into a company’s financial health. Far beyond that, however, they provide a framework for relationship analysis—relationships between line items of a company’s statements, relationships between one company and others, relationships between accounting data and data from other sources. In this paper, I consider only the balance sheet and income statement. Cash flow and special purpose statements add other dimensions to financial analysis.

Financial statements prepared from the wealth accounting model would look much like GAAP statements in overall format, but there are a few critical differences in content and display that would have major effects on financial analysis.

### ***The Underlying Methodology of Wealth Accounting***

The Financial Accounting Standards Board has a fair value, mark-to-market measurement methodology (designated FAS 157 when it was adopted) that applies whenever the FASB decides to convert a historical-cost-based item to a fair-value basis. The proposed wealth accounting model would adopt that methodology, with one significant change, and apply it universally to all assets and liabilities at every reporting date. The change to FAS 157 would be to add information on entry values (replacement costs) to those on exit values with entry values used in the primary financial statements and both entry and exit values used in supplemental analyses of market depth and volatility. Both entry and exit values are wealth measures, roughly interchangeable for some purposes but nuanced for others. The primary reasons for the change are: (1) to provide for an earnings measure of company operating performance (current revenues less current costs) and (2) along with exit values to shed light on buy-sell price spreads in different markets as a supplement to FAS 157’s three tiers of data inputs for estimating fair value based on their relative ease of observation in the market.

The wealth accounting model would also have a wealth recognition methodology, similar in detail to the FAS 157 measurement methodology. I have dealt with the key features of that methodology elsewhere (Mosso 2009a). Its importance for financial analysis is twofold: (1) to ensure that all wealth, and nothing but wealth, is captured on the balance sheet and (2) to accelerate the process of accounting standard-setting.<sup>4</sup>

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<sup>3</sup> See CFA Institute (2007, 24).

<sup>4</sup> I have dealt with the standard-setting problem in depth in the publications cited in footnote 1. In short, the excessive delays in adopting accounting improvements are caused by the absence of a clear GAAP objective and the fragile nature of the FASB mandate, which in combination turn the standard-setting process into a debate-and-delay marathon. If the wealth accounting model is adopted as proposed, the standard-setting process could be restructured from a legislative debate model to an economic measurement model based on fact rather than opinion.

### ***The Income Statement***

The bottom line of the wealth accounting income statement would be total income measured as the change in a company's total wealth, excluding owners' capital contributions. That is similar in concept to the FASB's comprehensive income and the CFA Institute's *Statement of Changes in Net Assets Available to Common Shareholders* (CFA 2007) except—a big exception—that it would be comprehensively measured in units of wealth rather than in GAAP's mixed attributes.

The income statement would have two primary segments: one segment for unrealized gains and losses, and another segment, the earnings segment, for realized income consisting of a section for current revenues less current costs and a section for realized gains and losses. The two sections of the earnings segment are separated because they have different implications for diagnosing financial health. Each of the sections could be further subdivided for financial analysis purposes.

The earnings segment of the income statement could be delineated much like a GAAP income statement. However, a new accounting model would open the possibility for a more analyst-friendly format, for example, with a subtotal for earnings before interest, taxes, depreciation, and amortization (EBITDA), which is used by many analysts.

The interplay of realized, unrealized, and total income can be illustrated with some examples. In the first example, a company hedges a future period's forecasted revenues by purchasing a derivative financial instrument with a maturity date in that future period. Until the maturity date, the market price of the derivative might well fluctuate. Those price fluctuations would fall into the unrealized gain and loss segment of the income statement with an impact on total income. When the derivative instrument matured, the accumulated gain or loss would be transferred to the earnings segment of the income statement, thereby completing the hedge by offsetting the target revenues. The transfer transaction would have no effect on total income, but it would affect the unrealized gain-loss segment and the earnings segment of the income statement in equal and opposite amounts.

As a second example, a change in the market value of a capital asset could represent a mixture of price change (replacement cost of the whole asset) and depreciation. The replacement cost of the depreciation component would go to the current revenues-current costs section of earnings immediately. The price change component would go initially to the unrealized gain-loss segment of the income statement, to be transferred to the earnings segment in connection with future asset usage or disposition.

One more example, the change in value of a long-term fixed rate financial instrument could represent a mixture of current period interest accrual, periodic movement to the shorter maturity end of the yield curve, change in the slope or level of the original yield curve, and change in credit quality. All of those sources of value change except interest accruals are initially unrealized gains and losses with no immediate effect on earnings. Unrealized gains and losses would flow to earnings upon settlement of the instrument at more or less than its entry value. If not settled before maturity, then periodically marking the instrument to market would contribute to the diagnosis of financial health at each reporting date.

### ***The Balance Sheet***

The wealth accounting balance sheet would differ from a GAAP balance sheet in four ways that are highly significant for financial analysis.

First, all of a company's assets and liabilities would be on its balance sheet marked-to-market at replacement cost. Special purpose entities and financial instruments with strings attached (e.g., repurchase agreements) could not be given off-balance sheet treatment as long as they had any continuing ties to the sponsoring company. An asset securitization could be counted as a sale only if the transfer of assets was made without recourse to the sponsor and also if the servicing agent for

the securitization pool was required to issue audited financial statements to certificate holders and the investing public on a wealth accounting basis. Those requirements address the two problems with securitizations that greatly contributed to the financial crisis beginning in 2007, namely, the failure to differentiate sharply between a sale and a secured borrowing and the failure to provide a means for investors to monitor the condition of the pooled assets represented by certificates traded on over the counter markets. Those two requirements would make securitization pools the equivalent of exchange-traded funds.

Second, netting assets against liabilities would not be permitted except for interdependent asset and liability promises within a single contract such as call or prepayment options. However, some interdependent assets and liabilities, such as the two sides of a swap, might need to be split apart. More study is needed for that.

Third, the definitions of assets, liabilities, and owners' equity would be changed from the GAAP definitions so that they comport with the objective of accounting for wealth. Assets and liabilities are defined as items of wealth with observable market value or, alternatively, things with specifically identified and company-controlled potential cash or cash equivalent flows (that definition excludes goodwill). Owners' equity is defined as unencumbered net worth controlled by owners for their own benefit. Owners are defined as voting shareholders. Liabilities are binding promises by a company to non-owners (that includes promises embodied in preferred stock and equity stock options).

Fourth, similar to GAAP, owners' equity would have separate categories for owners' net contributed capital, unrealized net gains and losses, and retained earnings. But unlike GAAP, those categories would be kept clean, first, by the new asset, liability, and owners' equity definition and, second, by requiring all equity-share transactions to be recorded at market value to prevent unstated rights and obligations from being shunted away from retained earnings.

### **Relationship Comparisons: The Operating Tools of Financial Analysis**

Whereas financial statement design is the information-organizing tool, comparison of related components of financial statements and comparison of financial statement information with information from other sources is the operating tool of everyday financial statement analysis.

### ***Comparability: The Equalizing Effect of Wealth Accounting***

To diagnose financial health, analysts need data that can be compared from item to item and from company to company with confidence that the numbers are substantively comparable, that is, apples to apples. That is not the case in the current GAAP model. GAAP financial statements are a mixture of dollar amounts derived from a variety of cost-allocation methods that are not comparable with one another and are not comparable with fair value measures in the same statements. GAAP is an apples and oranges world.

To expand on that last point, the GAAP model is grounded in a mix of different historical cost allocation methods, with a few fair value measures mixed in. It is called a "mixed attribute" model. The historical cost of a balance sheet asset or liability is its original entry value reduced by an amount determined by formula to approximate the expiration of its useful life, or by an estimate of its future recoverable, realizable, or settlement amount. The initial selection of an allocation formula—the ongoing estimates and re-estimates of useful lives and recoverable, realizable, and settlement amounts—is all a matter of management choice. More choices are available for putting assets and liabilities on or off the balance sheet and for moving financial instruments between historical cost and fair value categories.

The result of all these choices is that the amount of cost that stays on a particular company's balance sheet and the amount that flows to its income statement are determined by company

management within broad limits. Each company picks its own way through the available GAAP choices, so no two companies' financial statements represent the same mix of methods. GAAP has no overall objective to guide the choice-making and, as a result, GAAP financial statements in general do not represent anything that is definable as a whole. Historical values are not reliably representative of current market values—some may be greater, some less—so they are not indicative of a company's present wealth or of its present financial health.

The wealth accounting model equalizes the disparate GAAP numbers, making them comparable by re-weighting them up or down to a common level, that is, to units of market value. In the wealth model, every item on every entity's balance sheet is an item of wealth measured as of the reporting date. Any item is comparable to any other item in terms of the common measuring rod of wealth. Owners' equity is the measure of each entity's total wealth, its economic net worth. The income statement measures flows of wealth in a way that is comparable on a nominal dollar basis from period to period. The income statement provides three summary measures with analytic significance: total net income, which is a wealth maintenance performance measure; net earnings, which is an operating performance measure; and net unrealized gains and losses, which is a price effect measure and a foreshadowing of potential future earnings. The earnings segment would have revenue as the top line, followed by expenses and realized gains-losses much like GAAP except that expenses would be on a replacement-cost basis. The unrealized gain-loss segment would capture the effects of price volatility. Volatility, which is a major concern of corporate financial statement preparers, would affect total income but not earnings.

Ratios for a single entity take on new dimensions and new validity in the wealth accounting model. The debt-equity ratio, for example, would change dramatically. As compared to data from a current GAAP balance sheet, the liability part of the ratio would be increased by grossing up previously netted liabilities, by consolidating off-balance sheet liabilities, and by reclassifying to the liability class those items of GAAP equity that do not represent ownership shares (e.g., preferred stock and equity share options). The owners' equity part of the ratio would be reduced by any liabilities reclassified from equity and by any goodwill removed from assets. Further, owners' equity would be increased by any assets brought back from special purpose entities. After those reclassifications, fair value measurement of all assets and liabilities would change the components of the ratio still further. After all those structural and measurement changes, the debt-equity ratio would be an apples-to-apples ratio. For the first time, the debt-equity ratios of different entities would be comparable within the fairly narrow limits of estimation variances.

Comparing the before-and-after effects of wealth accounting on the financial statements can easily lead to the conclusion that GAAP-based ratios now widely used in the capital markets like debt-equity, return on capital, book value per share, and price-earnings are bordering on being statistical jokes. Individual line items of a GAAP financial statement may be useful, but totals of assets, liabilities, owners' equity, and earnings are essentially hash totals.

Two other kinds of comparison would take on much greater validity and much easier computation under the wealth accounting model, namely, comparing a U.S. company with a foreign company as of any given reporting date and comparing any one company with itself over a span of time on an inflation-adjusted basis. In comparing U.S. and foreign companies, GAAP numbers that are not comparable internally for a U.S. company are juxtaposed with GAAP or similar numbers that are also not comparable internally for a foreign company. In comparing a company over time under GAAP, an analyst can make inflation adjustments only with access to the company's internal accounting records and even then only with intensive effort. In contrast to the internal noncomparability of GAAP financial statements, wealth accounting financial statements would be comparable internally in their home currency at any given date. A simple exchange-rate translation would make them comparable across country lines. A simple inflation index adjustment

would make them comparable across time periods. Exchange rates and inflation indexes are publicly available, so an analyst has ready access to the necessary tools for these types of comparison.

There is a caveat, however, about the comparability of items of wealth that needs to be considered. Fair value estimates are subject to a range of error depending primarily on the liquidity and volatility of the markets for the items measured. Thus, the validity of any measure of wealth, and any comparison of two or more items of wealth, is diluted to some degree. Wealth does not stand still to be counted. It ebbs and flows as buyers and sellers evaluate their alternative opportunities. Therefore, estimating a single point to represent wealth for reporting in financial statements is not a precise science. In extremely illiquid markets, the range of potential error can be large. However, as imprecise as a point estimate may be in extreme circumstances, it is kept within reasonable bounds by a prescribed rigorous estimating methodology (that will become more rigorous over time) and by independent observers using publicly available market data.

The latter point is often overlooked by fair value critics. The wealth accounting model would bring all financial statement measures into the open, at fair value, where they would be scrutinized by independent auditors with the ability to review company estimation methods in light of their own observations of market activity. Wealth measures would be further scrutinized by competitors with knowledge from their own estimates of comparable assets and liabilities, and by outside reviewers such as financial analysts, regulators, and investors with the ability to compare wealth information from different companies in light of the reviewers' independent observations of market activity. A further constraint is that a wealth measure has to be re-estimated every reporting date and is thus subject to repeated scrutiny by independent parties.

All of that is in sharp contrast to GAAP numbers that, to a large degree, are crafted by insiders using methods that outsiders cannot benchmark against a common cost allocation objective or method.

Concerns about the range of error in fair value estimates need to be kept in perspective. The objective of financial analysis in the wealth accounting model is to diagnose a company's present financial health, including the sustainability of its operations. Financial health is a function of present wealth, not past entry values. So, a serious effort to diagnose health is better served by a best estimate of fair value, even within a wide range of potential error, than a GAAP historical entry value that is, at best, only marginally and randomly relevant to financial health.

A further observation is that whatever is lost by lack of precision in a wealth estimate is compensated by the insights gained from a serious estimation effort. On that point, it may well be that the process of estimating fair value is more beneficial than the resulting point estimate because the estimation process forces consideration of all the factors that determine value and therefore provides management and analysts with useful insights that would be overlooked in a formulaic approach for determining historical cost allocations.

### ***Comparability: The Restraining Effect of Wealth Accounting on Financial Statement Manipulation***

Not only do GAAP mixed attribute methods introduce an inherent comparability problem for financial analysts, but also these comparability concerns are magnified by the manipulation of GAAP accounting results by companies seeking to make their financial position look better than it really is. Wealth accounting is a restraining force on financial statement manipulation.

The motives for manipulating accounting results (euphemistically called window dressing or earnings management) are varied. Smoothing income to make the company look more stable over time is one motive that is often cited. Smoothing income can also serve to park losses on the balance sheet for more timely recognition from the management's viewpoint or to park gains for

building up rainy day reserves. Reducing the debt-equity ratio to make the company look more credit worthy is another prominent motive, the prime mover for off-balance sheet financing schemes. Other motives include reducing interim regulatory capital balances to conform to month end requirements (as in the Repo 505 transactions at Lehman Brothers), keeping the components of loan covenants within limits to avoid violations, inflating income to increase the pay-off under executive compensation agreements.

To generalize, bad news and the ability to cover it up, soften it, or postpone its revelation is the motivator for accounting manipulation. The temptation to manipulate increases with the degree of financial stress a company is feeling.

Nothing will stop entities from dressing up financial statements when they can. But the wealth accounting model takes away virtually all of the traditional GAAP gaming devices. Manipulation through tinkering with historical cost numbers would no longer be possible because of the exclusive mark-to-market accounting aspect of the wealth accounting model. Manipulation through off-balance sheet entities would no longer be possible because of the all-on balance sheet aspect of wealth accounting. So, any legal manipulation would have to be done by tinkering with the wealth accounting model itself.

Because of the external scrutiny of wealth measures, some degree of manipulation is possible but not easy. Indeed, estimates based on FAS 157's Level 3 inputs (the lowest level, with little or no market activity) are the most vulnerable to manipulation. However, even level 3 inputs are derived from a broad market context that is observable by all interested parties and, hence, acts as a constraint on off-the-wall estimates. Levels 1 and 2 inputs (which are observable in the market) have little room for manipulation except that a company can pick the most favorable edge of a relatively narrow range of reasonable values for a particular item.

The independent auditor's role in restraining manipulation is worth special mention. Even though auditors have access to a company's computations, they cannot successfully challenge a historical cost allocation method or an off-balance sheet stratagem if the method or stratagem can be rationalized within the elastic boundaries of GAAP. That fact has given rise to "opinion shopping" whereby a company whose auditing firm will not accept the company's desired accounting method shops around to hire another auditing firm that will accept it. Opinion shopping became so rampant in the early 1980s that the FASB established an Emerging Issues Task Force to try to slow it down. The EITF is still in business. Although opinion shopping may have been dampened, manipulation of GAAP financial statements continues. The wealth accounting model gives the auditor two new tools to strengthen resistance to manipulation: One is a firm and unyielding objective—measure wealth as defined by market value. The other one is a rigorous market value estimation methodology that a company must follow. Those tools provide explicit benchmarks for an auditor to challenge perceived deviations.

Auditors often get blamed for companies' financial failure, but some of that blame should be put on accounting standards. Auditors do not have a coherent model to audit. The audit opinion is expressed on "the financial statements taken as a whole." But as previously noted GAAP financial statements have no definable "whole." Virtually every number in GAAP statements has its own rulebook with no firm objective to tie them all together.

To sum up this manipulation discussion, it is clear that both the wealth and GAAP models can be twisted by a determined management. But the wealth model imposes major restraints in the form of a clear objective of measurement, market value, a prescribed rigorous estimating methodology with disclosures about its application, independent audit bolstered by observation of markets, and independent review by competitors, financial analysts, regulators, and investors. The GAAP model, on the other hand, is based on company-specific management opinions about how to make GAAP choices. Management opinions can be audited, but there is no objective standard for auditors to evaluate the sensibleness of those opinions. Likewise, there are few benchmarks to guide financial



analysts in their judgments about the appropriateness of cost allocations and little ability to convert GAAP amounts to fair values with information from independent sources.

### ***Comparability: The Unifying Effect of Wealth Accounting on Merger and Acquisition Results***

Many financial analysts remove acquired goodwill from the financial statements for analysis purposes because they think goodwill is inconsistent with the economic reality they are trying to uncover. The wealth accounting model would do that for them. Wealth accounting unifies goodwill accounting, putting acquisition goodwill on the same footing as internally generated goodwill—neither is booked as an asset. The wealth model also unifies purchase-pooling accounting.

In accounting for the acquisition of a company, the GAAP model calls for any excess of the purchase price over the fair value of the acquired assets and liabilities to be booked as an asset, goodwill. That does not work if the objective of accounting is to measure an entity's wealth. Goodwill is not an item of wealth. It has no individual identity and no identifiable cash flows. It has no market value in and of itself. So, in the proposed wealth accounting model, the goodwill premium becomes a charge against owners' equity, an expense. The goodwill premium, like startup costs, represents highly uncertain future benefits wrapped in hopes and expectations but lacking an identifiable and controllable cash flow stream. The logic of an expense charge can be demonstrated as follows.

When goodwill is booked as an asset, the acquiring company's acquisition decision is undercut immediately by diluting the reported rate of return on capital. To illustrate, consider an acquisition with a goodwill premium financed entirely by a new equity offering. The sum of the separate companies' assets and equity, after the acquisition has been booked but before consolidation adjustments, are increased by the amount of goodwill but the sum of the separate earnings remains the same. So the instant after the acquisition—before any operational integration has begun—the rate of return on capital on a trailing earnings basis is less for the combined companies than it was for the sum of the separate companies an instant before. That is counterintuitive. To downgrade the reported rate of return before anything has happened throws doubt on the wisdom of the acquisition decision and puts a burden on reported earnings and return on capital that lasts as long as goodwill is carried as an asset.

When goodwill is booked as an expense, on the other hand, return on capital starts clean. The expense charge for the goodwill premium offsets an equal amount of the new equity issuance so at the instant after the acquisition, the rate of return on capital on a trailing earnings basis is the same as it was an instant before, again assuming the sums of the separate companies are computed after the acquisition has been booked but before consolidation adjustments. All acquisitions are based on expectations of future increased earnings per share, so charging the goodwill premium to expense allows return on capital on a forward earnings basis to reflect that expectation immediately without dilution by goodwill charges (due to subsequent impairment).

In addition to rationalizing and unifying goodwill accounting, the wealth accounting model resolves another long-running merger-and-acquisition accounting controversy, purchase versus pooling. That issue has consumed huge chunks of standard-setter and financial analyst time over the years. Since in the wealth accounting model both merging entities are measured at fair value in the normal course of operations, and since any goodwill premium is charged to owners' equity, every merger is like a pooling. Book values are fair values so no accounting revaluation is necessary.

By rationalizing and unifying merger and acquisition accounting, the wealth accounting model eliminates a major source of noncomparability that exists in the GAAP model. The non-asset goodwill and its inflating effect on the GAAP computation of owners' equity invalidate, to some degree, all GAAP ratios and other comparative measures that involve total assets, owners' equity, or earnings. Further noncomparability in the GAAP model is caused by the fact that companies

differ greatly in terms of their merger-and-acquisition activity with some companies having large goodwill amounts others little or none.

### ***Comparability: The Holistic Effect of Tobin's "q"***

Most analytic comparisons are between parts of a company's financial statements such as debt-to-equity. This section suggests an analytic measure of an entire company that can be used as a tool for diagnosing a company's overall financial health and for trend analysis of the company and comparison to other companies.

The wealth accounting model brings into play a relationship that is obscured by the GAAP model. It is the relationship between the market value of a company as measured by the market value of its assets and liabilities, or *owners' equity*, and the market value of the company as measured by the market value of its equity shares, or *market capitalization*. Those two market values have different time perspectives and different market participants, one based on the markets for and the finite lives of the company's individual assets and liabilities, the other based on the market for an indefinite life of the company as a whole. The same equity shares represent both measures, but the measures diverge and the amount and direction of divergence is an indicator worthy of examination.

Except for exchange-traded funds and similar entities, the market value of a company's assets and liabilities is not normally available to financial analysts in the GAAP model. But in the wealth accounting model those values are routinely reported for all kinds of companies. Consequently, the relationship between the two kinds of market value can be employed as a working tool of everyday financial analysis.

Economist James Tobin developed a theory for predicting whether capital investment in the economy would increase or decrease (Tobin 1969). The theory was expressed by the ratio of market value to replacement cost of an asset. He called the ratio "q." Tobin's theory was that if the market value of an asset is less than its replacement cost, that is, "q" is less than 1, then new investment in similar assets would not be profitable. If that condition were widely prevalent in the economy, then aggregate investment would fall.

Tobin's "q" is adaptable to investment in business entities, with market value represented by a company's market capitalization and replacement cost represented by the company's economic net worth, or owners' equity. So a "q" ratio can be calculated for every company at each reporting date. A "q" less than 1 would indicate a market consensus that a company had better get a turnaround underway or get out of the business. Conversely, a "q" greater than 1 would indicate a market consensus that some level of profit potential existed. Unlike a ratio of market capitalization to GAAP book value, the "q" is a wealth-to-wealth measure, comparable across all entities and therefore an analytic tool of potentially significant power.

There is a symbiotic relationship between the two company market values. Investors in the equity share market look to a company's accounting results, summarized in owners' equity, as part of their evaluation of the entity's profit prospects. At the same time, the company's management looks to share price as part of its formulation of strategic and operating policies. The "q" captures the effects of all of the accounting and nonaccounting factors that influence both sets of markets. The markets for a company's assets and liabilities are brought together with the market for its equity shares in a single all-inclusive ratio.

The "q" is a holistic indicator of financial health. There is an illustration in the next section.

### ***Comparability: The Deadbeat Effect in Wealth Accounting***

When a company's credit-quality rating is lowered, either by a rating agency's downgrade or by market perception, the market value of its debt will normally fall. Marking that debt to market

reduces the value of the company's debt and that creates a gain in the income statement. Critics of fair value accounting find that result to be counterintuitive—how can a company's income increase as a direct result of a negative event like a downgrade of credit quality? Someone coined the term “deadbeat gain” to describe the phenomenon. (It should be noted that an increase in general interest rates has the same effect on the market value of a particular loan as a degradation of credit quality. Both cause an income credit in a mark-to-market model.)

In the GAAP model, for those liabilities that are marked-to-market, the gain from a credit-quality downgrade goes directly to earnings. In the wealth model, the gain would go initially to the unrealized gain-loss segment of the income statement. Then, if the debt were not defaulted, one of two things would happen. Either, the debt would be bought in at the written-down price and the gain realized that way, with a transfer to the realized gain-loss sub-segment of earnings. Or, the debt would be carried to and liquidated at maturity, in which case, marking to market would bring the value back up to the entry value of the debt. In the latter case, there would be periodic unrealized losses equal in total to the original unrealized gain, with no earnings effect at all—the deadbeat gain would have been negated within the unrealized gain-loss segment of the income statement. That might seem like much ado about nothing, but marking to market throughout that period to maturity is essential because analysts would be assessing the company's ongoing financial health looking for possible default or other scenarios.

If the debt were defaulted, then, again, one of two things would happen: either the debt would be restructured and the company would continue with the same owners, or the debt would be restructured in bankruptcy and new owners would take over. In the first event, old owners continue, a restructuring involves cancellation of part of the debt and that is unequivocally income. I think no one disputes that a gift is income—a company is clearly better off after a debt is restructured than before. In that case, the initial deadbeat gain could be seen in retrospect as the first installment on the ultimate gain realized from restructuring. In the second event, bankruptcy, the deadbeat gain gets buried in the bankruptcy windup, more than offset by losses.

To summarize, two of the foregoing scenarios turn the unrealized deadbeat gain into realized income, one brings the unrealized gain back to zero with offsetting unrealized losses, and the last, bankruptcy, buries the unrealized gain in realized losses that wipe out all shareholder value and most or all of debtholder value. Tobin's “q” offers a way to look at the deadbeat gain.

It is a mistake to view the deadbeat gain in isolation. Both before and after a credit-quality downgrade, other things would be happening either as causes or results of the downgrade—asset impairments, customer loss, increased borrowing costs, operating losses, covenant violations, natural catastrophes, all interrelated. Some would have accounting effects captured in equity. Some would have nonaccounting effects reflected in share price.

Assume, for a simple illustration, that a credit-quality downgrade that leads to a fall in the market value of a company's debt, a gain, concurrently leads to a fall in the company's share price. The gain alone would increase owners' equity, the denominator of the “q.” Falling share price would decrease market capitalization, the numerator of the “q.” A smaller numerator and larger denominator give the “q” a double whack, capturing all of the effects of a credit downgrade in a single ratio showing a negative result on a before-and-after basis. That negative result shows the deadbeat gain as one part of a larger credit quality and financial health puzzle that a financial analyst needs to work through. The “q” would throw off alarm signals long before bankruptcy if that were the outcome.

## PART II: WEALTH ACCOUNTING AND THE CAPITAL MARKETS AT LARGE

Sharpening the tools of financial analysis would make for better diagnosis of the financial health of individual companies. Those diagnoses in turn would benefit the overall market. One of those broader benefits is *early warning* of financial crises with the consequence of preventing or

softening the severity of the crises. Another is the *regulatory power* of information about wealth and financial health with the consequence of enabling markets to self-regulate more effectively with reduced need for government regulation. A third is the *common language* that wealth provides with the consequence that all market participants, including individual investors, can talk to one another with greatly enhanced mutual understanding. A discussion of those benefits follows.

### Early Warning of Financial Crises

FAS 157 became effective in November 2007 just when the national financial crisis was spinning out of control. The standard caused huge write-downs of the financial assets at the center of the crisis. The timing of FAS 157 was unfortunate in one sense because it created a backlash against mark-to-market accounting. But the write-downs it caused demonstrate the point I want to make in this section. The losses in economic value that precipitated those huge so-called “paper” losses did not occur suddenly. They had been building for some time. Had the wealth measurement model been in effect for several years before November 2007, the capital markets would have been warned early of the building crisis and would have been sorting out potential winners and losers through stock prices and borrowing costs.

The same is true of the Savings and Loan crisis in the late 1980s. One of the many problems then was the failure of historical cost accounting to recognize the market potency of the simple prepayment option. The wealth measurement model, with its rigorous fair value methodology, would have smoked that out early-on along with abusive practices like accounting for origination fees, “points,” and “flipping” properties.

In both of those national financial crises, company managements covered up real losses with the aid of the many choices that enable legal manipulation of GAAP financial statements. They were aided by the substantial paralysis of standard-setters (I was one of them), ensnared in their exhaustive due process. Had the assets at issue been marked-to-market under the wealth accounting model, total income and economic net worth would have been shrinking from period to period and unrealized losses would have been piling up in the unrealized gain-loss section of the balance sheet. That is how wealth accounting emits signals about impending financial crises. Historical costs omit those signals.

A price change by itself signals potential cash consequences. A company’s total income in the wealth accounting model summarizes all price changes affecting the entity. Nothing would incite market action quicker than financial statements showing down-trending total income and shrinking owners’ equity. Nothing would motivate management corrective action quicker than falling stock price and lowered credit rating.

GAAP financial statements are always late to the insolvency party. By their nature they omit price changes of historical cost items. That omission makes the statements, at their best, a trailing indicator of financial stress. When the statements are dressed up to hide losses and other bad news, they trail even further. Consequently, GAAP financial statements exacerbate financial crises by withholding early warning signals and thus failing to show the need for corrective action until it is too late to head off a crisis.

Reinforcing the early warning features of the wealth measurement model is the quick response standard-setting process referenced in footnote 4. That proposed process, enabled by wealth accounting, puts a high priority on prompt resolution of emerging accounting problems. Quick response standard-setting would keep dubious accounting practices from ricocheting throughout an industry while the standard-setters wrestle with industry lobbyists.

### A Rolling Stress Test: The Regulatory Power of Wealth Information

Following every major financial crisis, the regulatory structure is shaken up, new regulations are issued, and new regulatory reporting requirements are imposed. Sometimes there are changes in

the accounting methods that are perceived to have been particularly involved, but never is the GAAP model as a whole called into question as does this paper.

The capital markets are powerful disciplinarians if they have good information. The wealth accounting model is designed to provide information about financial health that the markets have never had except in the fragmentary and manipulated bits and pieces that emerge from the GAAP model. Wealth accounting financial statements by themselves, including their disclosures about measurement assumptions and particularly with sensitivity tests on key assumptions, would effectively be rolling stress tests, updated every reporting date. Thus, the wealth accounting model would give capital markets the information tools the markets need to spot financial crises in the making at the company level and to maintain financial discipline throughout the markets by way of stock prices and differential borrowing rates. At the company level, those information tools would let markets substitute their regulatory power in large measure for that of government regulators. At the regulatory policy level, those same information tools would enable government regulators to establish more effective regulatory policies and to spot developing industry-wide financial crises sooner.

As to that last point, the most recent national financial crisis, ongoing at this writing, has generated much discussion about early warning signals, stress tests, capital adequacy standards, and systemic risk controls. Wealth accounting would contribute to solving all of those problems. The model addresses all four of those areas of concern to some extent and is susceptible to supplementation by regulators.

First, early warning signals are a major feature of the wealth accounting model as discussed in the preceding section of this paper. Wealth accounting financial statements could be the pre-eminent early warning vehicle. The most reliable early warning signal of a company's stress would be shrinking economic net worth. The most reliable early warning signal of industry-wide stress would be a growing number of stressed companies. Regulators could add others.

Second, stress testing is usually done as a special, one-time study. However, as just noted, wealth accounting financial statements are basically rolling stress tests. Regulators could easily increase the scope and stringency of the tests by building on the information already in the financial statements, but the force and regularity of wealth-based financial statements would make it easy to monitor companies continuously, lessening the need for special tests.

Third, regulatory capital adequacy standards are not a matter for a business accounting model, per se. However, economic net worth from the wealth accounting model, owners' equity, should be the bedrock foundation of regulatory capital. That is because owners' equity, measured as real wealth, is the primary cushion against company failure. Real owners' equity, economic net worth, is a market-determined value, not a fudged GAAP number. As noted above, in a stressful environment, GAAP equity is typically overstated because of the built-in delay in reporting losses. And the more stressed a company is, the more overstated GAAP equity is likely to be because of the manipulation potential. For capital adequacy purposes, regulators could add preferred stock and other kinds of liability to economic net worth as additional buffers for taxpayer protection, but buffer securities would not adequately substitute for a substantial level of economic net worth in preventing company failures. The conjunction of GAAP and regulatory requirements has a long and uneasy history<sup>5</sup>—a wealth foundation would put both in touch with the primary determinant of a company's financial health.

Fourth, systemic risk control is concerned with the interconnections among a few large companies that, in turn, connect to many smaller companies and ultimately to the entire financial system. The nature of systemic risk controls has not yet been developed to my knowledge, but I

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<sup>5</sup> Herz (2009).

doubt that the wealth accounting model has any special relevance for systemic risk controls except that wealth accounting would provide far better information on all companies' financial health than does any combination of GAAP statements and regulatory statistics. Additional disclosures about intercompany connections could be provided in wealth accounting financial statements if regulators wanted to use those statements as a vehicle.

### A Common Language

Everyone from the street corner beggar to the richest billionaire understands what wealth is. Only a few experts understand what GAAP is. Wealth is a universal language. GAAP is a geek language.

Because wealth is widely understood, the wealth accounting model provides a means of communication among all market participants—managers, financial analysts, investors, auditors, regulators, media commentators, and the public at large. The proposed model would help accounting shed its mystique—a mystique that underlies a common fear that accounting is too complex and arcane for ordinary people to understand. Fear of GAAP causes most nonaccountants to recoil from any discussion of accounting matters beyond the “sue the auditors” epidemic that follows any business failure. Fear of GAAP causes people to accept financial statements at face value without questioning what the numbers mean, or whether the numbers are comparable, or whether the statements might be covering up bad news, or whether the whole GAAP model is seriously flawed. It is a fear exhibited even by regulators and legislators. If financial statements presented nothing but measures of wealth, then most of the mystique of accounting would disappear and a vast increase in general understanding of financial activity would follow.

Fear of GAAP is a serious malady because in crisis after crisis, both national and corporate, no one seems to notice that the GAAP accounting model is to a greater or less degree a *cause* of the crisis. There is criticism of particularly egregious accounting methods that are highlighted by the particular crisis, but *the context that permitted those egregious methods to be adopted in the first place goes unnoticed*. Consequently, those persons charged with making sure that “this never happens again” do not understand that accounting reform might be a way to prevent future crises and to achieve regulatory reform through market action rather than through more government regulations.

## PART III: THE POLITICS OF ACCOUNTING REFORM

Now the question: How to overcome the inevitable resistance to accounting reform?

Throughout its conceptual framework, the FASB emphasizes that financial statements are primarily for the benefit of investors and creditors. That is to say, standard-setting is aimed at helping the external users of financial statements, not corporate internal users. But the FASB's history shows that its due process is dominated by corporate lobbyists. And those issues that have exploded outside the FASB's control into the congressional arena were pushed there by corporate lobbyists.

The corporate interest has always been to preserve the ability to manage earnings. Despite their rhetoric about the subjectivity and volatility of fair value measurements (both moderated by the design of the wealth accounting model), the corporate resistance to fair value accounting is founded on the recognition that fair value accounting limits the ability to manipulate earnings. The wealth accounting model would limit manipulation to fudging fair value measures and, unlike historical cost allocations, those measures are subject to independent scrutiny using publicly available information. That being the case, financial reporting companies will not accept adoption of the wealth accounting model without a political fight that runs all the way to the Congress and the White House.

Nonetheless, conditions are ripe for change. All of Washington is concerned about financial regulatory reform. The Senate and the House have passed a major reform law. The Treasury, the Federal Reserve, and the Federal Deposit Insurance Corporation are all working hard to develop regulations to carry out that law. The reform law leaves many things to regulatory discretion, so things like establishing regulatory capital standards, determining how big is too big to fail, and how to measure systemic risk are still up for resolution. The Financial Crisis Inquiry Commission, the Congressional Oversight Panel, many academics, and others are looking for answers about what caused the financial crisis and how a recurrence can be prevented. The reform law adds another standing regulatory body, the Financial Stability Oversight Council, as an expression of continuing anxiety about future financial crises. In addition to institutional concerns, corporate bailouts have strengthened public resistance to corporate lobbying for any self-serving cause.

Moreover, opposition to fair value has waned a bit. In the past, bank regulators have staunchly supported banks in opposition to fair value accounting, but their response to the introduction of FAS 157 was muted and there was even a glimmer of support from the Secretary of the Treasury. In the face of challenges from the corporate community, both the FASB and the SEC have shown resolve to retain the fair value measurements now in place and the FASB is working on additional applications. Their resolve unfortunately is within the context of the current standard-setting process. If the current process is followed, it will take decades—and who knows how many financial crises—to reach a comprehensive wealth accounting conclusion.

Complacency dominates the GAAP system. For example, the SEC set up a committee in 2007 to “increase the usefulness of financial information to investors, while reducing the complexity of the financial reporting system (SEC 2008, ii). The Advisory Committee on Improvements to Financial Reporting deliberated throughout the depth of the financial crisis and came up with bland recommendations that did nothing but tinker with the *status quo*. The Committee essentially endorsed the mixed attribute accounting model—thus endorsing earnings management and all of the ills embedded in GAAP. The Committee suggested a “*judicious approach* to further expansions of fair value” (SEC 2008, 5; emphasis added), unmistakably telling the FASB to back off its current fair value initiatives—another bow to the corporate community and earnings management. The Committee recommended adding a layer or two of complexity to the standard-setting process, including a *de rigueur* recommendation for still another standing advisory committee and more pre- and post-standard reviews—thus putting more arrows in the corporate delay quiver. The Committee did not mention the CFA Institute’s monograph *Comprehensive Business Reporting Model*, with its emphasis on wealth measurement, even though the monograph was fresh off the press when the Committee started its work and the CEO of the CFA Institute was a member of the Committee (and offered no objection to the Committee’s negative comment on fair value that I could find in the report).

There is a need to break through this business-as-usual complacency. There is a need to hold the SEC accountable to its statutory mandate of investor protection and to hold the FASB accountable to its stated policy of investor and creditor primacy. Those two institutions need to break the corporate dominance of the GAAP standard-setting process that serves to resist and delay all accounting change. In short, there is need for an accounting revolution.

The political goal must be to convince the SEC and the FASB, as well as the bank regulators and the Congress, that GAAP is outdated and not up to the financial information needs of the twenty-first century economy. They need to understand that GAAP contributed to the most recent, and earlier, financial crises by its basic design, that is, by lagging the market in reporting losses, by permitting legal manipulation of financial statements to hide losses, and by misrepresenting the depth of financial stress reported in financial statements. The regulators must be convinced that accounting reform is essential to preventing future crises. More broadly, regulators must be convinced that accounting reform is essential to providing financial analysts with the kinds of

financial statements they need to assess the risks and prospects of individual entities and to inform investors and creditors accordingly.

Past major changes in the standard-setting process cannot be called revolutionary, but they have one thing in common: they were all pressured from outside the accounting profession. This one is not likely to be an exception.

Unless regulators initiate action in the interests of their respective regulatory responsibilities, highly unlikely I believe, professional financial analysts, CFAs, are the ones most likely to stir the pot successfully. They know the problems with GAAP and the benefits of wealth measurement. They have influence with the SEC and the FASB, although they have exercised it with an extremely large measure of restraint—they need to put some muscle into it. No one can match the financial analysts' analytic prowess and investor perspective for appealing to the SEC with its mission of investor protection, to the FASB with its investor-creditor orientation, to the Congress and the financial regulators with their responsibility for financial regulatory reform and prevention of future crises. The CFA Monograph and its emphasis on fair value and wealth is an excellent foundation. The CFA Institute needs to get forcefully behind its own proposals. The Institute needs to convince the accounting regulators that the front line of investor protection is capital markets fed with good information about risk and reward and about wealth and financial health.

Finally, the academic accounting constituency should step up to these issues. Unlike their economist brethren, academic accountants have not shown much inclination to mix it up in the political arena or in the financial news media. If they did, they could bring intellectual firepower to the political process along with the credibility of independence. They could take to the press and public forums to help spread the message that accounting matters to the healthy functioning of capital markets, that flawed accounting lets bad things happen, and that delayed correction of obvious flaws lets bad things happen over and over again. More than that, they could help cure the fear-of-GAAP pandemic that causes the public, investors, and policymakers to keep accounting at arm's length, not noticing or probing its repeated failures to warn of financial crises at the company and national levels.

## CONCLUSION

My examination of financial analysis and its relation to financial statements leads me to conclude that financial analysts, and the capital markets, are seriously handicapped by the misinformation they get from GAAP financial statements and are more seriously handicapped by the information they do not get. GAAP financial statements exacerbate financial crises at both the company and national levels by failure to reveal accumulating losses, by understating leverage and risk through use of off-balance sheet mechanisms, and by other legal manipulations that hide bad news and thwart valid comparative analysis.

Financial analysts provide the capital markets with professional opinions about the financial health of public companies. To do that well, analysts need information that is susceptible to analysis by mathematical comparison techniques—simple techniques like ratio analysis and complex techniques like option pricing. Valid results from that kind of analysis depend upon information that is comparable from one part of an equation to another. To be comparable, everything must be measured in a unit of measure that supports analysts' opinions about financial health. In the collective professional judgment of financial analyst members of the CFA Institute, that measurement unit is economic value, or wealth. That judgment reinforces my own conclusion that measuring wealth for the purpose of diagnosing financial health should be adopted by the SEC and the FASB as the objective of financial accounting.

The FASB has a reputation for integrity and professional expertise. But its careful cultivation of that reputation has led to complacency throughout the financial community. Two national



financial crises and many individual company failures that were exacerbated by flawed accounting practices, practices that were legal under GAAP, have not led the FASB or the SEC—or the Congress—to question the viability of the GAAP model. Regulators do not change things unless they are forced to do so by the outrage of their constituents or by the outrage of their overseers. This leads to my suggestion for how to bring about accounting reform.

I suggest that the CFA Institute, representing financial analysts, and the American Accounting Association, representing academic accountants, join forces to express the constituency outrage that this topic deserves. Join forces to help convince the SEC and the FASB to shift their focus away from stroking their corporate constituents toward providing timely and understandable information to their investor and creditor constituents and to the capital market at large. Both accountants and analysts have professional interests in good accounting. Both groups understand the shortcomings of the GAAP model. Both groups are largely independent of corporate financial statement preparers. Both groups are respected by the FASB, the SEC, and the financial committees of the Congress.

It will not be easy. Neither group is used to the rough-and-tumble tactics of politics and they will be taking on the country's most skilled and lavishly bankrolled political infighters, corporate lobbyists. The bankroll will begin flowing into Congressional campaign coffers the instant the joint effort is announced. But there are some in Congress who are upset by the financial crises and some who have voting constituents who are upset with Wall Street, big banks, and what they see as corporate greed in many forms. The financial press will weigh in on both sides, but that will serve to fuel public and Congressional interest. Most importantly, there is an attractively simple message: Wealth.

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