

Does FASB Statement No. 157 Provide “The Most Relevant Information for Financial Decision Making”?

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Draft. Comments welcome.

January 2008

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In its July 2007 publication entitled *A Comprehensive Business Model: Financial Reporting for Investors*, the CFA Institute (“Institute”) endorsed the basic objectives of accounting, which the FASB set forth as follows:

“The objectives ... focus on matters of wealth. Investors and creditors seek to maximize their wealth (within the parameter of the risks that they are willing to bear). Likewise, business entities also seek to maximize their wealth. *It follows, then, that information about the wealth of those entities and the changes in it is relevant to investors and creditors that are seeking to maximize their wealth by investing in or lending to those entities.*”[emphasis supplied]¹

Among the Institute’s numerous recommendations for improvements in financial reporting, and arguably the most critical, is that fair value measurements in accordance with FAS 157² (i.e., measurements based on “exit prices”) become the basis of accounting for all assets and liabilities. The Institute’s stated premise for the recommendation is that “fair value information is the most relevant information for financial decision making.”³ Since no analysis or evidence is cited in support of the premise, it may be fair to assume that it is a reflection of conventional wisdom evolving from the savings and loan crisis of the 1980s and the FASB’s own long-term promotion of the concept in accounting pronouncements and projects culminating in FAS 157.

The purpose of this paper is to challenge the conventional wisdom through construction and analysis of a simple example, demonstrating that measurements based on replacement cost are more consistent with the FASB’s stated objectives, and are of greater relevance and value to investors.

A Simple Example

This simple example takes place in a world in which there is only one consumption good, beer.

Ignatz Schicker brews beer for his personal consumption and for sale. The accounting period is two days long, and at the beginning of the period (BOP) Schicker had in his possession 1 keg of beer

¹ The FASB Report, No. 263-D (28 December 2004), pp. 1 – 2.

² Financial Accounting Standards Board (FASB), *Fair Value Measurements*, Statement of Financial Accounting Standards No. 157, Norwalk, CT, 2006.

³ CFA Institute, *A Comprehensive Business Reporting Model: Financial Reporting for Investors*, July 2007, Charlottesville, VA, available at <http://www.cfapubs.org/doi/pdf/10.2469/ccb.v2007.n6.4818>.

and \$72. He estimated that it would cost him \$12 per keg to brew more beer (i.e., ‘replacement cost’ or ‘entry price’), and that he could sell beer (‘fair value’, or ‘exit price’) for \$20.

On the first day of the period, Schicker produces 5 kegs of beer for \$12 per keg. He sells 2 kegs and drinks 1 keg.

On the second day of the period, the replacement cost and selling prices of beer increase to \$16 and \$25, respectively.

Hicks has defined economic income as the amount of consumption that could take place during the period without reducing wealth.⁴ If ‘wealth’ is defined as command over goods and services⁵ (in this case, beer) Schicker’s economic income can be calculated as follows:

	Kegs	\$
Wealth, BOP:		
Cash	6.00	
Kegs	1.00	
Total	7.00	
Wealth, EOP:		
Cash	3.25	
Kegs	3.00	
Total	6.25	
Change in wealth	(0.75)	
Consumption	1.00	
Economic income	0.25	
Replacement cost per keg		\$ 16.00
Economic income		\$ 4.00

Table 1 presents comparative balance sheets, income statements, and changes in equity for the period under the following four bases of accounting:

1. Historic costs of non-cash assets and nominal dollars for cash (N\$) — presented to compare the other bases of accounting illustrated to current U.S. Generally Accepted Accounting Principles (GAAP).
2. Fair value and N\$ — corresponds to the approach endorsed by the CFA Institute, and is consistent with the examples provided in *A Comprehensive Business Model*.
3. Fair value of non-cash assets and cash adjusted for changes in purchasing power of consumption goods — amounts in Column 2 are adjusted to maintain so-called ‘constant dollars,’ (C\$). This set of financial statements is

⁴ Hicks, J., *Value and Capital*, Oxford University Press, 1939, p. 176.

⁵ See, for example, Friedman, Milton, *The Optimum Quantity of Money*, Chapter 3, Aldine Transaction, 1969. Also, see Whittington, Geoffrey, *Inflation Accounting: An Introduction to the Debate*, page 10, Cambridge University Press, 1983.

provided to control for the possibility that fair value accounting is not reflective of economic income solely due to the manner in which cash is measured.

4. Replacement cost of real assets and C\$.

Table 1
Financial Statements Under Four Bases of Accounting

	(1)		(2)		(3)		(4)	
	Current GAAP		Institute-Endorsed		Fair Value, Constant		Principles-Based	
	(Historic Cost, Nominal Dollars)		(Fair Value, Nominal Dollars)		Dollars		(Replacement Cost, Constant Dollars)	
	BOP	EOP	BOP	EOP	BOP	EOP	BOP	EOP
Cash	\$ 72.00	\$ 52.00	\$ 72.00	\$ 52.00	\$ 96.00	\$ 52.00	\$ 96.00	\$ 52.00
Kege of beer	12.00	36.00	20.00	75.00	26.67	75.00	16.00	48.00
Total assets	84.00	88.00	92.00	127.00	122.67	127.00	112.00	100.00
Total equities	\$ 84.00	\$ 88.00	\$ 92.00	\$ 127.00	\$ 122.67	\$ 127.00	\$ 112.00	\$ 100.00
Sales (Note 1)		\$ 40.00		\$ 40.00		\$ 53.33		\$ 53.33
Cost of goods sold (Note 2)		(24.00)		(40.00)		(53.33)		(32.00)
Net production value (Note 3)				40.00		53.33		
Operating income		16.00		40.00		53.33		21.33
Effect of changing prices on cash (Note 4)						(17.33)		(17.33)
Unrealized holding gain (Note 5)				15.00		(5.00)		
Net income		\$ 16.00		\$ 55.00		\$ 31.00		\$ 4.00
Beer consumption (Note 6)		(12.00)		(20.00)		(26.67)		(16.00)
Change in equity		\$ 4.00		\$ 35.00		\$ 4.33		\$ (12.00)
Owners' equity, BOP		84.00		92.00		122.67		112.00
Owners' equity, EOP		\$ 88.00		\$ 127.00		\$ 127.00		\$ 100.00

Notes:

- $(2 \times \$20.00) \times (\$16.00/\$12.00) = \53.33
- $-(2 \times \$12.00) \times (\$16.00/\$12.00) = -\32.00 ; $-(2 \times \$20.00) \times (\$16.00/\$12.00) = -\53.33
- $(2 \times \$20.00) \times (\$16.00/\$12.00) = \53.33
- $-\$52.00 \times (\$16.00/\$12.00 - 1) = -\17.33
- $3 \times (\$25.00 - \$20.00) = \$15.00$; $3 \times (\$25.00 - \$16.00/\$12.00 \times \$20.00) = -\$5.00$
- $-(1 \times \$12.00) \times (\$16.00/\$12.00) = -\16.00 ; $-(1 \times \$20.00) \times (\$16.00/\$12.00) = -\26.67

Comparing Replacement Cost to Fair Value and FAS 157

Schipper (a former FASB board member) and Vincent⁶ argue that the quality of reported accounting earnings should be evaluated by its correspondence to Hicksian income—in this case, \$4.00. Accepting the foregoing definitions for income and wealth as foundational principles, the only basis of accounting displayed in Table 1 that has accurately reported economic income is constant-dollar replacement cost. Therefore, replacement cost accounting is the only approach that can be said to be consistent with the principle of Hicksian income, and therefore consistent with the FASB's stated objectives of reporting wealth and changes in wealth.

An accounting pronouncement, if not based on principles, can only be regarded as rules-based. Therefore, another unavoidable conclusion, absent additional principles or objectives, is that fair value accounting must be rules-based. By not being principles-based, it should come as no surprise that FAS 157, the FASB's main fair value accounting pronouncement, consists of numerous complex and internally inconsistent rules that can only yield results inconsistent with the definitions of economic income and wealth used herein. Following is a selection of these items, having in common that each can be simplified and result in more relevant and reliable financial reporting, by applying replacement cost accounting principles.

Timing of income recognition—A comprehensive extension of SFAS 157 to all assets and liabilities (as recommended by the Institute) would result in reporting income at the moment of production, resulting in zero income recognized when sales are made to customers. This is demonstrated in columns 2 and 3 of Table 1 where the effect of sales are reflected in the financial statements as mere transfers of assets without any contribution to equity (the accounting counterpart to economic wealth).

Setting aside any arguments for or against this result based on economic theory, the practical effect of extending fair value accounting to inventories held for sale and other non-financial assets (especially those for which quoted market prices do not exist) creates a new playing field for earnings management. This is likely a reason why inventories subject to measurement under ARB 43 (Chapter 4) are excluded from the scope of FAS 157. Yet, without measurement of inventories at fair value, the Institute's goal for the FASB to establish a system of comprehensive fair value accounting cannot be attained.

Transaction and transportation costs — Under FAS 157, transaction costs may not be capitalized as part of a fair value measurement, thereby creating the glaring anomaly of recognizing expenses before the first dollar of benefit from investment in an asset can be realized. Transportation costs, on the other hand, are deemed to be inputs to fair value measurement (§ 9).

⁶ Schipper, Katherine and Vincent, Linda, "Earnings Quality", *Accounting Horizons*, Supplement 2003, pp. 97-110.

In addition, and again setting aside a debate over economic theory, fair value accounting per FAS 157 entails practical difficulties of having to develop separate estimates of transaction and transportation costs, even though business practice may cause these to be implicit in transaction prices for goods and services. Under replacement cost accounting, if transaction and transportation costs are embedded in the prices for goods and services, there is no need to estimate them separately and break them out. If they are not embedded in prices, replacement cost accounting does require they be estimated, but replacement cost accounting is no worse than fair value accounting, which also demands the estimation of transportation costs.

Unit of account — A threshold issue in measuring fair value is determining the object that is the subject of measurement, or ‘unit of account.’ For example, is a fair value the sum of a vehicle’s components, the entire vehicle, a fleet of vehicles, or should the vehicle be combined with other dissimilar assets? In general, FAS 157 does not prescribe the unit of account to be used but defers to other applicable GAAP (¶ 6), which can range from being highly prescriptive, or provide a range of free choices.

The only unit of account issue specifically addressed by FAS 157 is ‘block discounts,’ which are reductions to exit prices intended to reflect the inability to trade a block of securities without adversely affecting the quoted market price. SFAS 157 prohibits consideration of block discounts when basing fair value measurements on quoted market prices (so-called ‘Level 1’ inputs), presumably to prevent earnings manipulation effected merely by a statement of intent. (¶¶ 27, C71–C80) However, consideration of block discounts is inconsistently permitted under other acceptable fair value measurement methods.

Unit of account considerations are more straightforwardly resolved under replacement cost accounting. The unit of account would logically be the asset grouping that minimizes total replacement costs, rendering unnecessary specific rules over the treatment of block discounts to force consistency, or prevent abuses by manipulating the unit of account.

Principal market – FAS 157 introduces an artificial accounting concept dubbed ‘principal market,’ which is to be determined when more than one market exists for the sale of an asset. (¶ 8) For example, an entity that provides vehicles to its sales personnel could sell used vehicles directly to end-users, or to intermediaries such as auction houses. Determining which of these two markets is the principal market requires judgment. However, replacement cost as a measure of economic wealth again dictates that only the least costly way to obtain the asset is relevant. The newly-coined rule of ‘principal market’ in FAS 157 would not be necessary.

Orderly markets—FAS 157 imposes the artificial constraint that fair value is to be based on inputs from markets that allow usual and customary marketing activity (¶ 7), which again, injects an element of judgment that poses questions of relevance, reliability and cost. Accounting practices based on the concept of replacement costs have not

required an orderly markets condition to be workable. The principal and most durable example is inventory impairment.

Inventory impairment under ARB 43, Chapter 4—known generally as the rule of lower-of-cost-or-market (LOCOM)—has been based on replacement cost to measure “market” since 1947 (ARB 43, Appendix A). “The term market is ... to be interpreted as indicating utility on the inventory date and may be thought of in terms of the equivalent expenditure which would have to be made in the ordinary course at that date to procure corresponding utility.” (ARB 43, ¶ 9) The rule contains no provision that markets be orderly, and to the contrary, the “ordinary course” provision logically dictates that the replacement cost estimate be made based on the characteristics of the entity’s current business environment, and not on the characteristics of a particular market.

All manner of complex impairment tests have been promulgated in the past 60 years subsequent to the inventory impairment standard; and so much has changed about accounting during that time that it is difficult to name many things that have remained as stable and uncontroversial as LOCOM for inventory. The longevity of the accounting standard strongly suggests that there exists no good reason to abandon or modify its replacement-cost-based principles. In fact, SFAS 157 excludes inventory from its scope (¶ 3); implicitly acknowledging that the SFAS 157 rules would be a step backward from the time-tested approach of ARB 43.

Marking to model — FAS 157 requires the use of unobservable (so-called ‘Level 3’) inputs such as discount rates and estimates of future cash flows if quoted market prices or other observable inputs are not available. (¶¶ 22 - 30) This generally results in some form of mark-to-model estimation of fair value, and triggers the most extensive disclosure requirements, as it is seen to be the approach to fair value measurement with the lowest level of reliability, and most susceptible to earnings management.⁷ It must be said, however, that replacement cost accounting could also require Level 3 inputs. For example, the utility of assets having uneconomic replacement costs such as obsolete or slow-moving inventory is not measurable by replacement cost. It is for this reason that application of LOCOM to inventory under ARB 43 does not permit replacement cost to exceed ‘net realizable value’ (Statement 6), being in such circumstances the functional equivalent of a Level 3 input.

Whether usage of Level 3 inputs would be less pervasive and more reliable under replacement cost accounting is an empirical question. However, when the nature of the assets in a unit of account is diverse, two negative effects on earnings quality are likely. First, under both fair value and replacement cost, Level 3 inputs are needed. Second, Level 3 inputs needed under fair value would be less reliable than those needed under replacement cost.

⁷ See for example, Weil, Jonathan, “Wells Fargo gorges on Mark-to-Make-Believe Gains”, *Bloomberg.com*, August 22, 2007, available at <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aY8mOnta94GA>.

To illustrate these two negative effects, consider fair value versus replacement cost for a brewery operation. The unit of account for fair value is, of necessity, the entire operation. Consequently, fair value will depend on, among other things, estimates of future sales prices, economic lives, discount rates, etc. Replacement cost accounting, on the other hand, would likely result in multiple, less heterogeneous units of account. Consequently, the nature of the estimate, being simply replacement cost, would be much more straightforward, likely resulting in higher reliability.

Conclusion

Why has the FASB focused on fair value instead of replacement cost as the future comprehensive measurement basis? Why was there no consideration of replacement cost accounting in the Institute's report? As the simple example shows, replacement cost accounting, being consistent with the Hicksian definition of income, is principles-based; FAS 157, not being similarly principles-based, must be rules-based. Moreover, FAS 157 is highly and needlessly complex, which is a common characteristic of rules-based standards.

Perhaps the answers to these questions have less to do with the information needs of investors, and more to do with the politics of accounting standard setting and the influence of establishment thought on conventional wisdom. It is beyond the scope of this short paper to address these considerations, but the Institute should further consider whether fair value really best meets the information needs of investors, or is the outgrowth of other forces. While fair value may be more useful for investors than historic cost, it may be that replacement cost accounting is the alternative most deserving of the Institute's support on behalf of investors. At the very least, it merits rigorous debate.