



Fair Values and Financial Reporting

**2007 Deloitte/Federation of Schools
of Accountancy Faculty Consortium
May 17, 2007**

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Overview

- **Definition of fair value (in financial reporting)**
- **Statement 157, *Fair Value Measurements***
- **Measurement: One Perspective**
- **Fair value and FASB's Conceptual Framework**
 - **Relevance**
 - **Comparability**
 - **Reliability (representational faithfulness)**
- **Questions and answers**



Fair value definition

Definition: Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Key attributes:

- Does not require an actual transaction
- Does not require that a market exist
- Based on information that is current at the measurement date, including information about the dispersion of possible outcomes
- Not intended to capture the most likely ultimate settlement amount; therefore, not consistent with SFAS 5, which defers recognition until a probability threshold is met, and then (per Interpretation 14) records the most likely settlement amount



Statement 157

Fair Value Measurements

- **Reasons for Statement**
 - Explain measurement objective when the measurement attribute is fair value
 - Increase the consistency and comparability of fair value measurements
 - Increase the usefulness of disclosures about measurements
- **Standard does not propose extending the use of fair value measurements. Decisions about measurement attributes will continue to be made within each standard**
- **Effective date: Fiscal years beginning after November 15, 2007**



Statement 157

Fair Value Measurements

Framework for measuring fair value from the perspective of the reporting entity:

- a.** Identify the particular asset or liability; consider level at which the asset or liability is aggregated or not (unit of accounting).
- b.** Identify *Highest and Best Use* for an asset or *Lowest Price to transfer (not settle) a liability*.
- c.** Based on b., identify the *Valuation Premise* (either in-use or in-exchange) to determine whether the asset or liability should be valued individually or within larger group.
- d.** Determine the principal market (or if that is not known the most advantageous market) for the exchange of the asset or liability considering a, b and c.
- e.** Determine the valuation technique(s) (market, income or cost approach) that market participants would use to determine a price (consider availability of inputs).



Statement 157

Fair Value Measurements

- d.** Exclude transaction costs.
- e.** Use observable inputs (Level I and II) to the extent possible.
- f.** Determine unobservable inputs (Level III) about assumptions market participants would use based on the best information available; including assumptions about *Risk Premiums*, highest and best use (if asset) and nonperformance risk (if liability).
- g.** Inputs based on the reporting entity's data, if that is the best information available, shall be adjusted if there is data available without undue cost and effort indicating that market participants would use different inputs.



Statement 157

Fair Value Measurements

Disclosures about Fair Value:

- a.** Provide information about *Level* of inputs used to make recurring and nonrecurring fair value measurements in the financial statements.
- b.** Provide information in annual financial statements, about valuation technique(s) used.
- c.** For measurements based on Level III inputs, provide more information about amounts of reported numbers subject to potentially greater measurement error.



Fair Value Disclosures

- Fair value measurements by level in the fair value hierarchy

<u>Description</u>	<u>Fair Value at Reporting Date</u>			
	<u>12/31/XX</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Trading securities	\$ 115	\$ 105	\$ 10	
Available-for-sale securities	75	75		
Derivatives	60	25	15	\$ 20
Venture capital investments	10			10
Total	<u>\$ 260</u>	<u>\$ 205</u>	<u>\$ 25</u>	<u>\$ 30</u>



Fair Value Disclosures

- For recurring fair value measurements using significant unobservable inputs (Level 3), a reconciliation of beginning and ending balances

(\$ in 000's)

Level 3 Fair Value Measurements

	<u>Derivatives</u>	<u>Venture Capital Investments</u>	<u>Total</u>
Beginning balance	\$14	\$11	\$25
Total gains and losses (realized/unrealized)			
Included in earnings	11	(3)	8
Included in OCI	4		4
Purchases, issuances, and settlements	(7)	2	(5)
Transfers in/out of Level 3	(2)	0	(2)
Ending balance	<u>\$20</u>	<u>\$10</u>	<u>\$30</u>
 Change in unrealized gains or losses in earnings relating to assets still held	 <u>\$ 7</u>	 <u>\$ 2</u>	 <u>\$ 9</u>



Statement 157

Fair Value Measurements

- **Goal: use observed prices if available; otherwise, use techniques, models and assumptions that market participants would use**

Observations:

- **Fair value measurement is based on an economic measurement objective (exit price); allocated transaction amounts have no similar economic foundation**
- **Fair value estimation errors can be assessed against economic facts and economic conditions in ways that allocation errors cannot**
- **Discipline for choosing techniques and inputs is provided by the requirement to use techniques and assumptions that market participants would use**



Measurement: One Perspective

- **Net income = Cash +/- accruals/deferrals +/- estimates +/- fair value changes**
- **SEC enforcement actions demonstrate that vast majority of accounting manipulations are in accruals/deferrals and estimates**
- **Fair values also subject to manipulation if prices cannot be observed**
- **Each type of manipulation has caused market problems**
 - **Types sometimes differ in up and down markets**
- **Accounting manipulation can not be focused or blamed on one type**
- **The issue needs to be addressed within broader context of attempting to provide (imperfect) financial information that best facilitates business and capital market allocations**
 - **Will involve tradeoff between relevance, comparability and reliability**
 - **Best accounting will differ depending on circumstances**



Fair Value and the Conceptual Framework

- The FASB's Conceptual Framework provides definitions and characteristics for recognized and disclosed information in the financial statements
- Basic characteristics for any recognized or disclosed financial statement item:
 - Relevance:
 - Can a recognized or disclosed item improve financial-statement users' decisions?
 - Comparability
 - Are similar events and transactions accounted for the same way?
 - Reliability:
 - Is the measure of the recognized or disclosed item verifiable and representationally faithful?



Fair value measures—Relevance

- Intent of using the fair value measurement attribute in financial reporting is to increase the relevance of reported numbers
 - Fair value is the only measurement attribute for certain items, including certain derivatives
 - *Example:* Interest rate swap
 - Fair value is the most relevant attribute for (many) incomplete exchange transactions
 - *Example:* Marketable securities
 - Fair value measurement is based on current economic conditions, including current information about the dispersion of possible outcomes
 - Aggregates and summarizes more information
 - Timely (relative to awaiting the ultimate settlement)



Fair value measures—Relevance

- The alternatives to fair value do not necessarily provide more relevant measures
- One alternative: Allocations of transaction amounts
 - Example: EITF 00-21 (revenue recognition)
 - Observations:
 - Allocations require their own estimations (which may be based on fair values). Those estimations may require extensive judgment.
 - Allocations of transaction amounts are not necessarily more reliable than fair value measures
- Another alternative: Wait until the economic changes which drive fair values appear as realizations of income or expense
 - Example: reduce fixed asset carrying value to fair value versus wait until the asset produces less income
 - Observation: this approach does not produce timely information



Fair value measures—Relevance

- **Some arguments against fair value as the most relevant measurement attribute include specific claims**
 - **Claim #1: Fair value is inconsistent with management’s intent to hold an asset (or owe a liability) to maturity**
 - Held to maturity debt securities
 - Loans the entity will repay in full at maturity
 - Performance obligations the entity will discharge by its own performance
 - Operating assets the entity will continue to use
 - **Claim #2: If an entity’s own (financial) liabilities are measured at fair value, the gains from a decline in an entity’s own credit quality are illusory because they could not be realized**



Fair value measures—Relevance

Claim #1: Fair value misrepresents management's intent

- Claim: Fair value reflects hypothetical transactions in which the entity will not participate
- Claim: Changes in fair value are unrealized and accounting should show the effects of those changes as they are realized
 - Argument made particularly for assets with fixed contractual cash flows, negligible credit risk and no prepayment possibility. Changes in fair value will “reverse” over time if the asset is held to maturity

Observations:

- Fair value allows users of financial reports to evaluate the effects of a decision to hold an asset or owe a liability
- Holding to maturity a financial asset that pays a below-market rate subjects the entity to an opportunity loss (which is recognized by fair value measurement)



Fair value measures—Relevance

Claim #2: Fair value for an entity's own liabilities will result in illusory gains

- Declining credit quality => increasing borrowing costs => decreasing fair value => gain

Observations:

- The entity gains by having incurred debt at a rate that is favorable, relative to its current borrowing circumstances. If it owes the obligation to maturity, the gain is realized over time in the form of lower borrowing costs
- Credit quality is clearly of concern to the counterparty, who has a loss when credit quality declines
- Credit quality is a factor in determining the measured amount at inception of the arrangement; why not reflect changes in credit quality as they occur?
- Gain arises because of impairment in value of firm's assets
 - Accounting problem primarily arises if asset impairments not recognized currently



Fair value measures-Comparability

Comparability => similar events and transactions are accounted for the same way

A fair value balance sheet would present the entity's net assets (wealth position) using a measurement attribute that places all entities on the same basis

- No path dependency on how the entity got to its current wealth position
- Facilitates relative performance evaluation



Fair value measures—Reliability

- **Claim: Fair value measurement in the absence of observed prices introduces an intolerable amount of measurement error**
 - What is the actual reliability of fair value measures?
 - Sometimes very reliable when based on observed prices
 - How reliable are fair value measures compared to other reported numbers that are based on estimates and judgments?
 - Examples of fair value estimates that are believed to be highly reliable include interest rate swaps and the LOCOM measures of servicing rights
 - What are the causes of unreliable measures?



Fair value measures—Reliability

Reliability: Users of financial reports can depend on the reported numbers to represent the economic conditions (events, transactions) they purport to represent

- **Representational faithfulness:** Correspondence between the measure and the phenomenon being measured
- **Neutrality:** Absence of bias intended to attain a predetermined result or induce a particular mode of behavior
 - Implication: Key concern of financial reporting is decision usefulness, not the impact of a standard on a particular interest
- **Verifiability:** Consensus among measurers of the same item
 - Implies low dispersion of independent measurements. While vouching or confirming is one way to verify, verifiability does not *require* that the measure can be vouched or confirmed to a separate source
 - **Key issue:** Can this verifiability construct be made operational for auditors?



Fair value measures—Reliability

Issues in obtaining reliable fair value measures

- Lack of markets means no observable transaction amounts that can be used for vouching or confirming
- Measurement tools (models) produce intrinsic error
- Accountants lack expertise in using tools and models
- Estimates are produced by management, so they include purposeful “management-induced” error
 - Is conservatism the solution to management-induced errors?



Issues in obtaining reliable measures

Lack of markets means no observable transaction amounts

- Illiquid and/or inefficient markets for financial instruments
 - e.g., certain derivatives
- Lack of markets for many physical items
 - e.g., used assets
- Lack of markets for intangible items
 - e.g., licenses, landing rights, patents
- Lack of market for individual components of multiple element arrangements
 - e.g., product and service revenue bundles

Observations:

- Accountants are, or should be, accustomed to making judgments and estimates that cannot be directly confirmed by (vouched to) observable amounts in separate sources
 - Examples: Allowance for uncollectible accounts; asset service lives
- Estimates will be subject to measurement error and may require arbitrary allocations
 - Query: How does this measurement error compare to alternatives?²⁹



Issues in obtaining reliable measures

Intrinsic error in the measurement tools (models)

- Valuation models and techniques are based on assumptions, which simplify the valuation task and make it tractable.
 - These simplifying assumptions introduce measurement error
 - Researchers and others can and should attempt to develop improved measurement tools
- Valuation models require estimated inputs, some of which are forecasts and expectations. These inputs are almost certain to contain some error

Observations:

- Improvements in information systems and valuation techniques will alleviate some difficulties
- Measurement error is inherent in estimation (both fair value and other estimations). The goal is to reduce it far as practicable and to eliminate bias



Issues in obtaining reliable measures

Accountants lack expertise in using tools

- **Unreliable measures (inadvertent noncompliance) because of a lack of understanding**
 - Subject matter knowledge
 - Specific skills
- **Historically, education of accountants has tended to focus on allocation of transaction amounts, not measurement techniques. Those allocations sometimes (perhaps often) require significant judgment and estimation.**

Observations:

- **Fair value measurement is a form of estimation**
- **Accountants have long experience with estimation, not necessarily in a fair value context**
- **Verifiability *requires* that the measurers have similar expertise**
- **Failure to gain fair value measurement expertise will result in narrowing the professional scope of accounting**



Issues in obtaining reliable measures

Purposeful, management-induced error

- **Bias**—the purposeful introduction of fair value measures (inputs, models, techniques) that:
 - Are not the inputs, models and techniques that marketplace participants would use
 - Are used to achieve a desired financial reporting outcome that is not representationally faithful and not transparent
- **Fraud**—the purposeful introduction of fair value measures that do not comply with GAAP

Observations:

- Management-induced error is due to defective incentives and to failures of internal control, oversight, governance, auditing and enforcement. It is therefore (in principle) under the collective control of participants in the financial reporting system
- Is it appropriate to choose a measurement attribute based (mostly) on concerns about management-induced error? Such a measure would likely be biased



Issues in obtaining reliable measures

Is conservatism the solution to management-induced error?

From APB Statement 4: conservatism is induced by a general preference that measurement errors be in the direction of understating net assets and income (a unidirectional bias in reported numbers)

Observations:

- **Is biased reporting the *low cost* solution to a governance problem?**
 - **An alternative: Could lenders protect themselves by writing conservative contracts, without requiring biased reporting that potentially affects decision usefulness for equity investors?**
 - **Also could system shift management's incentives by reducing benefits (or increasing cost) of introducing error?**
- **Conservatism in accrual/deferral model primarily introduced through impairments**
 - **However, impairments often are discretionary**
 - **Fair value remeasurements in down markets may result in more conservative accounting by requiring writedowns**



Use of Estimates Generally in Financial Reports

SEC requirement to discuss critical accounting policies

- Requiring difficult, complex or subjective judgments/estimates
 - Number of items to be estimated may be large
 - Time period covered may be extensive
- Important to the portrayal of results and to understanding uncertainties in reported numbers



Use of Estimates Generally in Financial Reports

Lucent's 2005 annual report lists the following "more important" estimates and assumptions that affect financial condition and results of operations

- Revenue recognition
- Pension and postretirement benefits
- Income taxes
- Legal contingencies
- Intangible assets
- Receivables and customer financing
- Inventories
- Restructuring
- Warranties

Question to consider: Is the magnitude of potential reliability concerns that *different* for fair value versus other (historical cost based) estimates?



Fair Values – Recent FASB Activities

- **Extensions of fair value measurements**
 - **SFAS 155 (issued Feb 2006) permits free choice between fair value measurement of financial instruments with embedded derivatives and application of SFAS 133**
 - **Hybrids with embedded derivatives that would otherwise require bifurcation are eligible to be carried at fair value, with changes included in income**
 - **The choice is made instrument-by-instrument**
 - **Eases implementation, because of complexities associated with identifying and bifurcating embedded derivatives**
 - **SFAS 156 (issued March 2006) allows entities to (re)measure servicing rights at fair value.**
 - **Prior GAAP treatment is amortization and LOCOM, so this change would allow entities to apply fair value measures when fair value > original carrying value**
 - **The choice would be made by class of servicing rights**



Fair Values – Recent FASB Activities

- SFAS 159 (issued Feb 2007) permits entities to elect (on a instrument-by-instrument basis) to account for financial (and certain selected nonfinancial) instruments at fair value with changes in fair values recorded in income
 - Intent is to alleviate the most problematic outcomes associated with a mixed attribute measurement model
 - Could create different problems (e.g., reporting less volatility in financial statements than actual)?
- Effective date: Fiscal years beginning after November 15, 2006. Election to apply the Option will require adoption of the Fair Value Measurements Standard as of that date

Question to consider: This treatment alternative would increase noncomparability, as do the treatment alternatives on previous slide. What is best way to mitigate the problems associated with noncomparability? *Potential answer:* Fair value all financial instruments



Closing

- **Questions and Answers**
- **Thanks for your attention!**