

## FAIR VALUATION OF ILLIQUID ASSETS

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Companies have traditionally reported their financial positions at historical costs; however, current business models and requirements for timely, current and relevant information have played significant roles in effecting changes in financial reporting. Unlike in the years past, corporations now report certain financial and non-financial assets and liabilities at fair market value. Fair value measurements are important components of risk management, economic capital calculations and provide key inputs needed by regulators to carry out their supervisory responsibilities. Fair valuation practices also have accounting implications and influence the business decisions of a wide range of stakeholders.

The recent financial crisis and the protracted recession that followed however, are sad reminders that downward swings in macro-economic variables can make hitherto liquid assets difficult to sell. Equally worrisome is the fact that market prices are hard to determine for illiquid and hard-to-value assets. In this paper, we introduce the concept of fair value accounting and briefly explain the accounting guidance on the topic. We then discuss some methodologies for fair valuing illiquid assets and their limitations. Finally, we discuss strategies that companies can use to enhance their fair valuation practices.

**CHANGES IN THE REGULATORY** landscape, new risk management practices, improvements in technology and increasing complexities of financial instruments have all resulted in greater demands for timely and relevant information. The demand for current information has also been exacerbated by globalization - companies now operate in far-flung locations and this has resulted in new demands for a set of standards to benchmark the performance of companies across geographical boundaries. Historical basis of accounting, which met the reporting demands of the industrial age, no longer foots the bill. As a result, fair value and fair value accounting were introduced to reshape traditional reporting.

Though, with a clear set of advantages over historical basis of accounting, fair value accounting has been met with severe implementation difficulties.

The recent financial crisis has also revealed the shortcomings of fair valuation practices. Actually, a lot of experts blame the 2008 financial meltdown partly on fair value accounting. Other critics of the practice have called for reversion to historical accounting - but this is a touchy subject.

Consequently, new debates have developed around mark-to-market accounting and policy setters have issued new guidelines on the subject. In addition, there have been calls for industry-wide guidance on valuation of illiquid and hard-to-value assets and liabilities.

### What is Fair Value Accounting ?

Before we delve into the implementation difficulties of fair valuing illiquid assets and some strategies that can be used to overcome these limita-

## SPECIAL TOPIC

tions, it is essential to provide a cursory overview of fair value and fair value accounting. To do this, we will briefly discuss the key definitions and guidelines documented in Statement of Financial Accounting Standard 157 (SFAS 157) now codified in Accounting Standards Codification 820 (ASC 820). A working knowledge of this standard is vital because it explains the framework within which U.S. corporations build their valuation practices. While companies outside the United States may be subject to other fair valuation standards such as International Accounting Standards 39 (IAS 39), the discussions in this paper is limited to the provisions in SFAS 157. The key provisions of SFAS 157 that are relevant to our discussions are as follows:

### (i) Definition of Fair Value:

SFAS 157 defines fair value as 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. This definition assumes that the transaction to sell the asset or transfer the liability occurs in the principal or most advantageous market.

### (ii) Fair Valuation Techniques:

SFAS 157 identifies three valuation techniques namely;

- **Market Approach** – This approach uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities.
- **Income Approach** – This approach uses valuation techniques to convert future amounts (cash flows or earnings) to a single present discounted amount.
- **Cost Approach** – The cost approach is based on the amount that currently would be required to replace the service capacity of an asset (often referred to as current replacement cost).

### (iii) Fair Valuation Inputs:

To ensure consistency and comparability in fair value measurements and related disclosures, SFAS 157 categorizes inputs into the different valuation techniques into three levels namely:

- **Level 1 Inputs** – are quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.
- **Level 2 Inputs** – are prices other than quoted prices that are observable for the asset or liability (for example, interest rates and yield curves observable at commonly quoted intervals).
- **Level 3 Inputs** – are unobservable inputs for assets and liabilities and therefore based on the reporting entity's own assumptions.

It is important to point out that SFAS 157 fair value hierarchy gives the highest priority to Level 1 inputs and the least priority to Level 3 inputs.

The core of our discussions in this paper are therefore assets and liabilities that require Level 3 inputs because there are no active markets for either the assets being valued or market data for comparable assets.

## Why Are Some Assets Hard to Value ?

The question often arises why some assets are difficult to value. Difficulty in fair valuation can arise either due to complexity or due to lack of an active market for items being valued. Based on our research, the general consensus is that illiquidity is the main challenge in fair valuing assets. The truth is that an asset can be valued if there are available market or reference data however complex it is.

Fair valuation of items with unobservable market data often require extensive modeling based on a set of assumptions that maybe tilted by an entity's bias or a set of assumptions that are not up-

dated frequently enough to reflect current economic realities. For instance, growth assumptions that are valid under certain economic cycle can become quickly obsolete when macro-economic variables or the socio-political environment change.

There is no gainsaying that mathematical models are mere idealization of reality and are at best estimates – therefore, valuation methodologies that require modeling are susceptible to modeling errors. In addition, these techniques dwell too much on quantitative factors and often ignore plausible qualitative information. There is also the issue of reproducibility and consistency - no two experts can come up with the same valuation numbers for identical items regardless of how well qualified they are. Modeling techniques also often require simulated inputs because of lack of observable data – resulting in higher demand in computing capabilities on the part of the entities doing the valuations. The following are examples of hard-to-value asset:

- An investment by a hedge fund in a politically unstable developing nation with absolutely no observable market data such as sovereign rating or corporate rating.
- Highly structured transactions that are specifically tailored to the unique needs of a company
- Collateralized Debt Obligations backed by sub-prime loans in a distressed market.

### Methodologies for Fair Valuing Illiquid Assets:

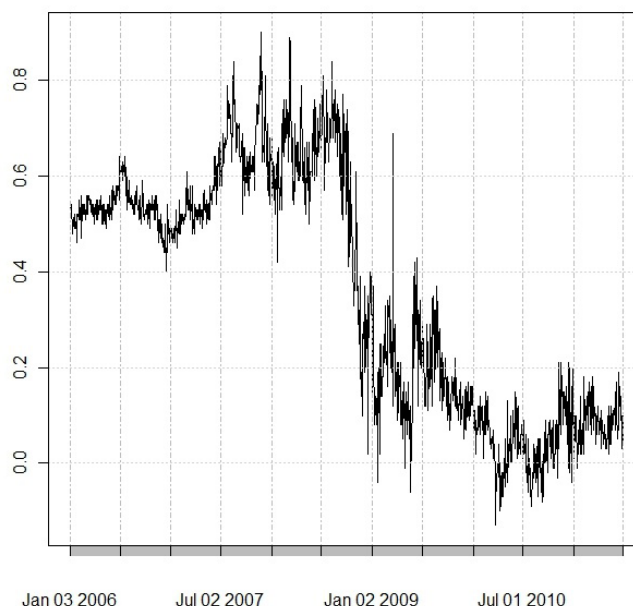
Before we discuss some methodologies for valuing illiquid assets, it is imperative to categorize illiquid assets into two main buckets. The first category relates to assets that are generally liquid when the economy is buoyant but become illiquid when the economy tanks. The second category relates to items that are illiquid regardless of whether the economy is in a boom or a recession.

#### (a) First Category – Fair Valuation of Illiquid Assets in an Inactive Market:

New guidelines have emerged to address the fair valuation of assets that become hard to sell as a result of changes in market conditions. Specifically, the Financial Accounting Standards Board (FASB) issued an exposure draft, Statement of Financial Accounting Standard 157E (SFAS 157E), that organizations can use to determine whether the decline in the value of an asset was caused by an inactive market. Recall that we mentioned earlier that SFAS 157 fair value hierarchy prioritizes market input (Level 1) over inputs based on an entities own assumptions.

However, the decline in the value of a previously marketable asset may occur as a result of changes in market volatilities that lead into an inactive market. Under SFAS 157E, an entity can mark its assets to model even when there is market information because it believes that the decline in the value of an asset was caused by an inactive market. This is especially so if the decline in fair market value is not backed by business fundamentals and the company expects to hold such assets beyond the anticipated timeframe of the distressed market. It should be noted that accounting for assets under SFAS 157E is not a given – the onus is on entities wishing to adopt the guidance to prove that the

Swap Spread Between 2005 and 2011



## SPECIAL TOPIC

market is not active and that transactions are not distressed.

Another practice that is developing is the use of the Overnight Index Swap (OIS) rate to discount swaps at the short-end of the yield curve. The objective of this practice is to account for market and liquidity problems at the short-end of the valuation period.

### (b) Second Category – Fair Valuation of Generally Illiquid Assets.

Following are some approaches for fair valuing illiquid assets:

**(a) Illiquidity Discount:** This methodology simply calculates a liquidity discount (say 100 basis point) and applies it to the discounting factors used to generate the present value of future earnings from the asset. Cash flows from longer-term period carry a higher liquidity penalty than cash flows from shorter-term periods. The effect of this approach is to effectively reduce the fair value of the illiquid assets by an amount that the entity deem sufficient to account for the difficulty of selling the asset. The table below shows a hypothetical, albeit simple illustration of this methodology.

**(b) Blockage Discount:** This methodology applies a haircut or a blockage discount, say 30%, to the fair value calculated in order to account for the hardship an entity may encounter in realizing the asset. The major counter argument against this technique is that often times, the blockage discount

applied is arbitrary.

**(c) Equilibrium Valuation Model:** This approach uses economic and mathematical formulae to determine the fair value of assets using a search and matching simulation approach.

Because the categories of illiquid assets are as wide as there are financial instruments, it is very difficult to prescribe a one size fit all approach to valuing illiquid assets. Therefore, instead of being prescriptive and focusing on specific valuation methodologies, a better approach is to discuss the strategies that organizations can use to enhance their fair valuation practices in general.

### Strategies for Enhancing Fair Valuation Practices:

Organizations can use the following strategies to develop sound valuation practices whether relating to liquid or illiquid assets:

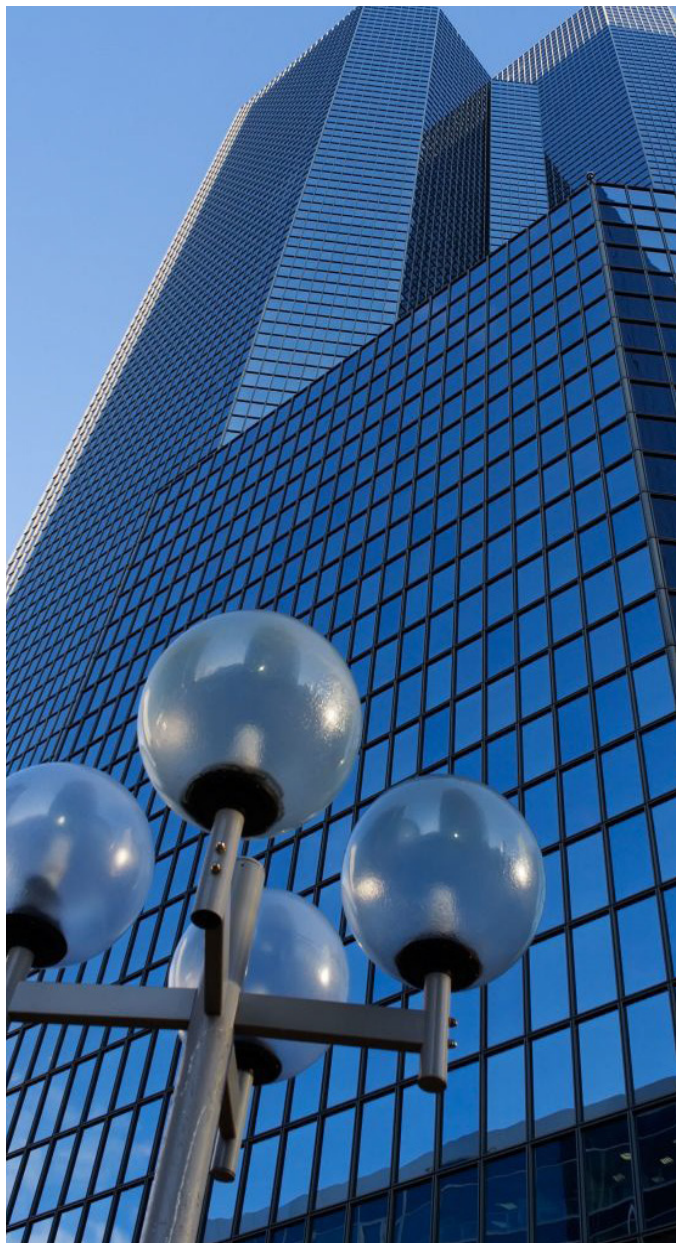
- Assumptions: Build a practice around the development of assumptions for fair valuing illiquid assets.
- Development of sound internal valuation frameworks including the setting up of a valuation committee that will assist the Board in ensuring that adequate valuation infrastructures are in place because ultimately the responsibilities for the valuation of an entity's asset lies with the Board.

### Illiquidity Discount Approach

Maturity - A	Rate - B	Illiquidity Discount - C	Adjusted Rate - D	Cash Flow - E	PV - F
1	4%	0.05%	4.05%	100	96.11
2	4.25%	0.06%	4.31%	120	110.29
3	4.50%	0.07%	4.57%	106	=E3/(1+D3)^A3
4	4.25%	0.08%	4.33%	90	75.96
5	4.20%	0.08%	4.28%	45	36.49
				Value	<b>432.542</b>

**SPECIAL TOPIC**

- **Procedures, Processes & Systems:** There should be adequate segregation of duties between valuation department and accounting. Organizations should also ensure that they have capable systems and personnel to carry out the fair valuation exercises.



- **Risk Management & Internal Audit groups** should be involved.
- **Valuation specialist** should be consulted in cases where highly complex assets need to be valued
- **Models, Methods and Methodology:** Where possible, multiple valuation methodologies should be used to verify the value of assets.
- **Organizations** should involve their external auditors where possible and appropriate because the ultimate treatment of financial transactions is an agreement between a company and its auditors.
- **Independent validation, benchmarking, data integrity checks and back-testing.**

**Conclusion:**

There is no set of universally available magic wand tools that can be used to value illiquid assets. The valuation techniques used by a company to value illiquid assets depend on the nature, structure and type of assets being valued. Developing a fair valuation framework will go a long way in alleviating the challenges faced by organizations in valuing their assets.

New practices and guidelines are being developed by industry experts, regulators and standard setting bodies to address fair value implementation problems. Organizations are therefore encouraged to keep abreast of these developments and inculcate them into their fair valuation practices. ■

- **Transparency:** Organizations should ensure that relevant information regarding their fair valuation methodologies are properly disclosed in the financial statements.