2 FAIR VALUE ACCOUNTING: CHALLENGES AND DYNAMICS

A unique characteristic of the 2007 global financial crisis is that it not only highlighted the various vulnerabilities of the global financial system, but its protracted duration also exposed the shortcomings of several previously accepted norms and standards considered sufficient to address such vulnerabilities. Among these, the valuation of assets and liabilities, and in particular, securities held by financial institutions as investments and their disclosure in periodic financial statements in line with established accounting standards, has been the subject of ongoing debate. So much so, it has been alleged that *mark-to-market*[1] valuation requirements in illiquid markets or stressed conditions exacerbated the impact of the crisis on financial institutions. Notably, the link between liquidity and valuation was a specific feature of the crisis which highlighted challenges related to the impact of fair value accounting on financial stability.[2] This has led to the debate on the efficacy of *fair value accounting (FVA)*[3] as opposed to *Historical Cost Accounting (HCA).*[4]

The main objective of the international financial reporting standards (IFRS)[5] is to ensure the transparency of disclosure through the accurate portrayal of the financial position of a reporting entity. However the transmission of the effects of the revaluation exercise on banks' capital (and the subsequent need for recapitalization in some cases) and profitability, is seen to be one of the problems created by the requirements of International Accounting Standard IAS-39, i.e. "Financial Instruments: Recognition and Measurement", with its emphasis on *fair value*.

As global financial institutions grappled with disclosing a *fair* and *mark-to-market* value of the securities held or issued by them in line with the requirements of IAS-39, the challenges posed by the illiquid market for these instruments, in particular for structured finance instruments during the crisis, made it difficult for them to do so effectively. This led to a misrepresentation of the actual value of these investments.

Interestingly, while it is widely acknowledged that the financial sector in Pakistan was not directly impacted by the global financial crisis given the low level of financial integration with global financial markets, issues related to the valuation of securities/investments also emerged as a concern in the domestic financial sector in 2008. This was due to the simultaneous occurrence of two unprecedented factors: (i) the dysfunctional operations of the stock market, created first by the rapid erosion in market capitalization and the subsequent imposition of the floor of 9,144 points on the KSE-100 Index from August 27, 2008 to December 15, 2008; and (ii) the aggressive pace of monetary tightening, by a cumulative 500 bps, implemented in four successive rounds of rate hike. Both the declining value of equity prices and the rising interest rates carried revaluation risk for banks' investments in equity and fixed-income government securities respectively. Banks booked revaluation losses of Rs. 9.9 billion on their equity investments and Rs. 18.0 billion on their holdings of *available for sale* (AFS) and *held for trading* (HFT) government securities. Both

[1] Mark-to-market is a measure of the fair value of assets and liabilities which reflects its current market value rather than its book value.

[2] Financial Stability Review, Banque de France, October 2008.

[3] 'Fair value' is a broader concept of which mark-to-market is a subset. In essence, the fair value of an asset or liability represents its fundamental value, incorporating all available information, in an active market.

[4] Historical cost is the amount paid for acquiring an asset (or received in case of a liability). But historical cost also requires that the amount for which the asset is stated in the financial accounts should not exceed the amount expected to be recovered from either its use or its sale.

[5] New name for International Accounting Standards (IAS) issued after 2001, i.e. after the establishment of the International Accounting Standards Board (IASB) which is the standard-setting body of the International Accounting Standards Committee (IASC) Foundation established in June 1973.

these factors led to a swift erosion on the surplus on revaluations of financial assets which was at its peak level of Rs. 91.9 billion at end-2007 (**Table 2.1**).[6]

Table 2.1: Surplus/(Deficit) on Revaluation of Investments

million Rupees

	CY03	CY04	CY05	CY06	CY07	CY08
On Federal Govt. Securities	9,807	2,545	(305)	(1,564)	(2,655)	(18,028)
On Shares	5,444	6,287	7,384	4,796	5,821	(9,904)
On Other Investments and Derivatives	4,890	21,805	48,894	34,930	41,590	(3,653)
Sub-Total	20,140	30,638	55,972	38,162	44,755	(31,586)
On Fixed Assets	9,846	23,167	25,958	28,467	56,654	63,139
Sub-Total	29,986	53,805	81,931	66,629	101,409	31,553
Deferred Tax Effect Liability/(Asset)	3,956	2,477	6,273	4,258	9,465	(7,653)
Total	26,030	51,329	75,658	62,371	91,944	39,206

Source: BSD, SBP

In view of these developments, this chapter assesses the modalities of the IAS-39 rule, its application and impact on the banking sector in Pakistan, and the perceived shortcomings of the notion of fair-value accounting. It also attempts to give a flavor of the ensuing debate, highlighting the perceived weaknesses of fair-value accounting and its comparison with Historical Cost Accounting. Both the International Accounting Standards Board (IASB) and the Basel Committee of Banking Supervision (BCBS) are now working in close coordination to amend these standards in recognition of the extraordinary circumstances created by the global financial crisis. Notably, the crisis has shaken the foundations of accounting and regulatory standards and new rules are being devised to enable financial institutions to appropriately handle circumstances never dealt with previously. The focus of the chapter is on assessing the impact of FVA on the banking sector, although similar concerns exist for the stability of other components of the financial sector, such as insurance.

2.1 What is Fair Value Accounting?

Fair Value Accounting (FVA) is an accounting approach which aims to measure assets and liabilities at values which represent their fundamental values, and thus gives a fair view of an entity's financial position.

IASB defines fair value as "the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction". Both International Financial Reporting Standards (IFRS) and US Generally Accepted Accounting Principles (US GAAP) require that a large portion of financial (and non-financial) companies' assets and liabilities be measured at fair value. Notably, *fair value* must be distinguished from *liquidation value* which implies an immediate sale transaction that the seller is compelled to get into. Due to a number of regulatory and markets developments, fair value measurement over the period has come to be broadly used for both financial reporting as well as the internal risk management purposes.

Following largely a similar framework, both IFRS and US GAAP distinguish between three levels of inputs for deriving the fair value of financial instruments (**Table 2.2**):

- **Level 1** applies where quoted prices for identical financial instruments in active markets are available. These prices are used for revaluing the relevant assets and liabilities.
- **Level 2** applies in cases where prices for *identical* or similar assets and liabilities in active markets are not available. However, there exist observable inputs in the form of

[6] Assessment based on surplus on revaluation of financial assets booked since 1996.

prices of *similar* assets in *active* market or prices of *identical* assets in *inactive* markets. These observable inputs are used for measuring asset and liabilities.

- **Level 3** inputs come into play when observable inputs are not available. In such a case, unobservable inputs such as model assumptions are used for arriving at fair values of assets and liabilities.

Notably, some of the uncertainties related to valuation stem from the prior allocation of assets into different categories, i.e. Held to Maturity (HTM), Available for Sale (AFS) and Held for Trading (HFT). Both frameworks require fair valuations for assets and liabilities held for trading purposes and available for sale, and all derivatives. HTM investments, loans and liabilities are valued at amortized cost. This approach is often termed as the *mixed attributes model*.

While categorization of assets into these categories is part of risk management procedures, the problem lies in the fact that financial institutions invariably pay more attention to the consequences of allocating assets more in terms of profit and loss and capital charge. The mis-categorization itself aggravates the process of valuation of these instruments. This brings forth the importance of following a more prudent approach at the time of initial portfolio allocation, especially since under IFRS, the transfer from one portfolio to another is usually restricted (**Table 2.3**).[7]

Table 2.2: Fair Value Hierarchy under IFRS and US GAAP

IFRS-IAS 39	US GAAP-FAS 157
Level 1 = quoted prices in an active market	Level 1 = market prices
Level 2 = more recent quoted prices	
Level 3 = estimation of fair value by reference to similar financial instruments	Level 2 = model prices with observable inputs
Level 4 = valuation techniques incorporating a maximum of observable data	
Level 5 = valuation techniques incorporating non observable data	Level 3 = model prices with no observable inputs

Source: Matherat (2008)

Table 2.3: Portfolio Classification for Accounting (IFRS) and Prudential Rules (Basel solvency ratios)

Accounting Classification IAS 39	Accounting Treatment IAS 39	Prudential Classification and Solvency Treatment
Held for Trading Fair value option	Fair value through profit and loss	Trading book/market risk amendment
Available for sale	Fair value through equity	Banking book/solvency treatment
Loans and receivables Held to maturity	Amortized cost	

Source: Matherat (2008)

2.2 Application of Fair Value Accounting in Pakistan

Registered companies in Pakistan (including banking companies and other non-bank financial institutions) are required to comply with the requirements of IFRS. However, the IAS-39 standard that primarily deals with the fair valuation of financial instruments has selective application in the country:[8] it is applicable on all entities except commercial banks and DFIs.[9] The fair valuation of banks and DFIs' financial instruments is in compliance with SBP's specific instructions which, nevertheless, closely relate to the provisions of IAS-39.

These instructions require the classification of banks and DFIs' investment portfolio into 4 categories i.e. HFT, AFS, HTM, and Investments in Associates and Subsidiaries. The HFT and AFS categories are fair valued; the former through Profit and Loss (P&L) while the latter

[7] Metherat (2008)

[8] Implementation of IAS-39 and IAS 40 for banks and DFIs was deferred until further notice vide BSD Circular Letter No. 10 dated August 26, 2002.

[9] This is largely due to the opaque nature of the value of bank assets resulting from the non-marketability of loan contracts and the lack of an appropriate price discovery mechanism. A large proportion of banks' assets (52.2 percent in at end-June CY09) consist of non-tradable loan contracts.

directly feeds into equity.[10] HTM investments and Investments in Associates and Subsidiaries are carried at cost. Further, all these categories are subject to any impairment of permanent nature, which is provided for by charging it to the P&L account. Loans and advances are carried at cost and are subject to loan loss provisioning based on objective and time-based, as well as subjective criteria. However, as compared to developed economies where the share of fair valued assets in total assets ranges between 30 to 50 percent,[11] this percentage has averaged at around 16 percent in the last 3 years for the domestic banking system.

The domestic financial sector experienced considerable financial strains in CY08, with significant volatility in the equity market, and a rapid decline in market capitalization. The KSE-100 index declined by around 42 percent from April 18, 2008 (when it touched its peak of 15,676 points) to August 27, 2008, when the regulators deemed it necessary to impose a floor of 9,144 points on the KSE-100. This measure served to effectively block the exit option for investors, and a continued free fall of the market when the floor was subsequently lifted on December 15, 2008.

Notably, banks' investments in the equity market are capped by SBP's prudential regulations, such that the total investment of banks in shares cannot exceed 20.0 percent of their respective equity. Composition of banks' investment portfolio reveals that the banking sector's investments in shares was Rs 49.5 billion at end CY08, which constituted only 4.6 percent of their total investments, and was less than 1.0 percent of the total assets for CY08. In terms of banks' equity, the exposure was 8.8 percent as against the ceiling of 20.0 percent.[12]

The relatively small proportion of investment in shares notwithstanding, the requirement of mark-to-market for securities classified as HFT and AFS set forth by the SBP requires all banks and DFIs to revalue their investments in shares, which resulted in a deficit of Rs. 9.9 billion at end-CY08. If taken directly as an expense, this would have had an adverse impact on banks' profitability for the year. In recognition of the fact that the stock market was undergoing a temporary period of extreme volatility based on investor sentiments driven by the uncertain macroeconomic environment, SECP stepped in and issued a directive for all companies under the Companies Ordinance, 1984 in February 2009. This directive allowed the deferment of the recognition of impairment losses resulting from the valuation of listed equity securities held as *Available for Sale* in terms of IAS-39 requirements of mark-to-market, on a quarterly basis during 2009.[13] Further to SECP's notification, SBP also advised all banks and DFIs to defer such impairment losses in the AFS category to 2009, while encouraging early recognition.[14]

In case the impairment losses had not been deferred, banks' profitability would have been more severely impacted. As indicated by restoration of normal trading and recovering volumes in the equity market, the decision taken by the regulators was timely and appropriate. As of end-June CY09, the total value of the surplus on revaluation of assets has improved to Rs. 65 billion, as against Rs. 39 billion at end-CY08, whereas the deficit on revaluation of shares has improved to Rs. 1.2 billion by end-June CY09 as against Rs. 9.9 billion at end-CY08. The easing of interest rates with the reversal of the monetary policy

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[10] As required by Prudential Regulation R-8, banks and DFIs are required to revalue their investments in Government securities, Term Finance Certificates (TFCs), Participation Term Certificates (PTCs) and shares and provide for the impairment in their value. In terms of BSD Circular No. 20 dated August 4, 2000, any surplus / deficit arising from the revaluation is required to be taken to a separate account called "Surplus / Deficit on Revaluation of Securities", except when actually realized. BSD Circular No. 10 dated July 13, 2004 streamlines the instructions on the subject.

[11] According to the survey of the Accounting Task Force (ATF) of the Basel Committee on Banking Supervision (BCBS), the share of fair valued assets among banks' total assets ranges from 10 to 55 percent, such that about half of the 13 surveyed countries reported shares in the range of 30 to 50 percent.

[12] Regulation R-6, Prudential Regulations for Corporate/Commercial Banking, State Bank of Pakistan.

[13] Statutory Notification vide SRO 150 (1) / 2009 dated February 13, 2009, Securities and Exchange Commission of Pakistan.

[14] BSD Circular Letter No. 07 of 2008.

stance since April CY09 also played its role in lowering revaluation deficit for investments held in government securities.

Given the proportion of assets which require fair valuation, any major impact of fair value accounting on domestic banks' balance sheets is not expected to arise. However, its application in case of mergers and acquisition and consolidation of financial institutions does impact the capital requirements of the organizations involved. It is therefore necessary to keep a close watch on consolidation activities to ensure the judicial use of the fair value accounting.

2.3 Perceived Weaknesses in Fair Value Accounting

As can be gauged from the above discussion, the primary advantage of FVA is that by measuring assets at their fundamental values, which reflect prevalent market conditions, FVA provides timely and objective information, enhances transparency and encourages early corrective actions before a relatively small degree of stress aggravates into a serious problem. The ongoing use of FVA does give rise to a few concerns however, the foremost of which is its procyclical impact on banks' balance sheets and propagation of contagion effect.

Procyclicality

Procyclicality refers to any element which accentuates, instead of dampening, the impact of business cycles. Fair Value accounting rules are pro-cyclical in that they can contribute to the systemic disappearance of liquidity, leading to the proposal that mark-to-market accounting should be suspended during a crisis.[15]

The assertion that FVA is procyclical relates to both prosperous and stressed periods. During the upturn of the cycle, FVA allows businesses to increase their leverage by marking-up the values of their assets, whereas in downturns, valuations based on market prices trigger margin calls, leading to deterioration in collateral values, putting further downward pressure on asset prices. In contrast, *Historical Cost Accounting* (HCA) prohibits asset write-ups and thus creates hidden cushions, which could be used during crises. However, this argument ignores the fact that FVA provides early warning signals for an impending crisis and hence may facilitate corrective measures at early stage. Notably, simply a change in accounting rules may not necessarily address the issue of procyclical lending in banks. Nevertheless, a combination of FVA with *dynamic prudential regulations*,[16] inducing businesses to build up larger reserves in boom periods for weathering out bad times, could be an effective approach for countering the procyclical impact of FVA.

Contagion Effect

The second notion is that FVA can generate and aggravate contagion and downward spiral in financial markets during stress times. This usually happens because of the short-term focus of business managers and management boards, contractual covenants that are based on market prices, and market-sensitive regulatory requirements that may force businesses to sell assets at prices below their fundamental values. These forced sale values could become relevant to market players who mark their assets to market under FVA. This phenomenon in turn could cause a downward spiral and serve to aggravate already stressed conditions.

A natural remedy for countering contagion effect and downward spiral is to dispense with market prices for valuation purposes when contagion is likely to occur. Incidentally, both IFRS and US GAAP contain flexibilities for such deviations under unusual circumstances. These standards and principles provide that forced sale prices should not be used for

[15] Persaud (2008)

[16] This refers to, for instance, the case of Spain where banks operate on the basis of dynamic provisioning requirements which allow for earlier detection and coverage of credit losses, building up a buffer in good times which can be used in adverse circumstances.

valuation purposes, and allow for the use of management's judgment and valuation models for ascertaining fair value when markets are inactive. Moreover, both these standards also allow for the reclassification of HFT category into HTM or loans & receivables to which HCA or less stringent FVA rules apply.

2.4 Way Forward

Reporting standards shifted from HCA to FVA with the *marketization* of banks, i.e. the shift from bank finance to market finance. Loans were originated and securitized by banks, rated by agencies and then relocated to investors. This made it necessary to revalue assets and liabilities to align them with market prices to ensure transparency and accuracy in financial reporting, as well as banks' risk management.

Recent research and debate on the topic suggest that concerns regarding procyclicality and contagion cannot be fully addressed by the adjustments of accounting frameworks alone. In order to counter and dampen the effects of these problems, it is advisable to institute regulatory measures which ensure the build-up of counter-cyclical cushions, institute forward-looking provisioning and more refined disclosures.

In recognition of these shortcomings and the need for improvement, international bodies such as the Financial Stability Board, the IASB and the BCBS are working in close coordination to issue recommendations for necessary amendments in accounting standards.

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