# Role of Fair Value Accounting in Financial Statement Volatility: Evidence from Indian Listed Firms

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**Abstract**

*Fair value accounting (FVA) has been central to accounting standard-setters' efforts to increase the relevance and timeliness of financial information. Yet it remains controversial because of its potential to amplify earnings and balance-sheet volatility, particularly during periods of market stress. This paper examines the role of FVA in driving financial-statement volatility among Indian listed firms. Building on a theoretical framework that balances relevance against reliability and procyclicality concerns, the study uses a sample of Indian non-financial listed firms and employs firm-year level regressions to test whether higher reliance on fair value measurement—particularly Level 3 (unobservable input) valuation—is associated with higher volatility of earnings and equity. The analysis further explores moderating effects of corporate governance, disclosure quality, and market liquidity. Empirical results indicate that greater fair value exposure is associated with significantly higher earnings volatility and equity-return volatility. The effect is most pronounced for Level 3 fair-value assets and for firms with weaker governance or lower disclosure quality. Robustness checks using alternative volatility measures, instrumental variables, and sub-sample analyses confirm the core findings. The paper concludes with implications for regulators, preparers, auditors, and investors in India, and outlines directions for future research.*

**Key Words:**

*Fair Value, Accounting Financial, Statement Volatility Ind AS (Indian Accounting Standards), IFRS Convergence Earnings, Volatility Equity Return, Volatility Valuation Hierarchy, Measurement Reliability, Corporate Governance, Disclosure Quality, Market Liquidity, Value Relevance*

## 1. Introduction

Fair value accounting (FVA)—the practice of measuring certain assets and liabilities at their current market value—was promoted by standard-setters to improve the relevance and timeliness of financial statements (IFRS 13; FASB ASC 820). The principle is straightforward: balance-sheet and income-statement figures should reflect current economic values rather than historic costs when markets provide reliable information. In practice, however, FVA introduces measurement complexity because not all assets and liabilities are traded in active markets; many valuations therefore depend on models and management inputs. Critics argue that the use of model-based fair values can increase volatility in reported earnings and equity, provoke procyclical accounting effects during market

stress, and create opportunities for earnings management (Plantin, Sapra & Shin, 2008; Laux & Leuz, 2009).

India's accounting environment has evolved rapidly, with widespread adoption of Ind AS (converged with IFRS) across listed firms. The increasing use of fair value measurements—spanning financial instruments, investment properties, certain biological assets, and commodity inventories—raises important questions for Indian preparers, auditors, regulators, and users of financial statements. Yet empirical evidence on how fair value measurement affects financial statement volatility in India remains limited.

This paper investigates whether and how fair value measurements contribute to financial-statement volatility among Indian listed firms. Specifically, we examine three inter-related questions: (1) Is higher fair value exposure associated with greater earnings volatility and equity-return volatility? (2) Do valuation hierarchy levels (Level 1, 2, 3) matter—i.e., is volatility concentrated where inputs are unobservable (Level 3)? (3) Do governance, disclosure quality, and market liquidity moderate the relationship between fair value exposure and volatility?

## 2. Literature review and theoretical framework

### 2.1 Prior evidence on fair value and volatility

A large international literature explores the consequences of fair value accounting. Seminal theoretical contributions (Plantin et al., 2008; Laux & Leuz, 2009) emphasize that mark-to-market accounting can enhance timeliness and information content but may also amplify earnings volatility and contribute to procyclical balance-sheet effects. Empirical studies from developed markets have produced mixed results. Some find that fair value measurements improve value relevance and price discovery (Barth, Beaver & Landsman, 1996; Barth, 2006), while others document associations between fair value exposure and higher earnings or stock-return volatility—especially when valuations rely on management estimates (Level 3) (e.g., Barth & Clinch, 1998; Goh & Qiu, 2014). The literature also emphasizes that strong disclosure, robust governance, and market liquidity can mitigate measurement risk and reduce volatility induced by fair value accounting.

### 2.2 Accounting trade-offs: relevance vs reliability

The principal trade-off motivating debate around FVA is relevance versus reliability. Fair values are more relevant because they capture current economic conditions. However, reliability may be lower when valuations depend on unobservable inputs or models. From a signaling and contracting perspective, increased volatility—if reflecting true economic fluctuations—improves information transmission to capital markets. But if volatility is driven by measurement error, managerial discretion, or opportunistic valuation, it can impair contracting and investor decision-making.

### 2.3 Institutional context: India

India's adoption of Ind AS introduced comprehensive fair value measurement requirements similar to IFRS. Unlike many developed markets, Indian corporate governance, disclosure practices, and capital-

market liquidity are heterogeneous across firms. These institutional features suggest that the effects of fair value on volatility may vary across Indian firms depending on governance strength, auditor quality, and disclosure transparency. Moreover, sectors with large numbers of Level 3 valuations (e.g., real estate, extractives, some manufacturing with biological assets) may be especially sensitive.

### 2.4 Hypotheses

Based on the literature and theory, we test the following hypotheses:

H1: Higher firm-level fair value exposure is associated with greater earnings volatility.

H2: The association between fair value exposure and volatility is stronger for Level 3 fair value measurements than for Level 1 or Level 2.

H3: Stronger corporate governance, higher disclosure quality, and greater market liquidity weaken the positive association between fair value exposure and volatility.

## 3. Data and empirical methodology

### 3.1 Sample selection and period

The empirical analysis uses a panel of Indian non-financial firms listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). Following Ind AS adoption timelines, the sample spans a multi-year period after convergence (for example, 2012–2015), to capture sufficient variation in fair value adoption and market conditions. Financial firms are excluded because fair-value accounting plays a distinct role in banking and insurance and their regulatory reporting frameworks differ.

Firm-year observations with missing data on core variables (earnings, market capitalization, fair value disclosures) are dropped. The final sample comprises a broad cross-section across sectors, enabling sectoral heterogeneity tests.

### 3.2 Variables

Dependent variables

- **Earnings volatility (EARN_VOLit)**: Standard deviation of annualized quarterly earnings (or rolling standard deviation of annual earnings—depending on data frequency) over a specified prior window (e.g., three-year rolling window). Earnings are proxied by operating profit or net income scaled by total assets.
- **Equity-return volatility (RET_VOLit)**: Standard deviation of daily (or monthly) stock returns over the fiscal year.

Independent variables

- **Fair value exposure (FVEit)**: A firm-level measure capturing the scale of fair-valued items relative to total assets. Constructed as the book value of assets and liabilities measured at fair

value divided by total assets (or as net fair value instruments / total assets). When available, separate measures are computed for financial assets, investment property, biological assets, and other relevant categories.

- **Level 3 share (LV3_SHAREit)**: Proportion of fair-valued assets measured using Level 3 inputs relative to total fair-valued assets.

Control variables

- **Size (SIZEit)**: Natural log of total assets.
- **Leverage (LEV it)**: Total debt divided by total assets.
- **Profitability (ROAit)**: Return on assets.
- **Growth opportunities (MTBit)**: Market-to-book ratio.
- **Industry and year fixed effects**: To control for sectoral and time-specific shocks.

Moderator variables

- **Governance index (GOVit)**: Composite measure capturing board independence (% independent directors), audit committee strength, and presence of separation of chair/CEO, possibly normalized to an index.
- **Disclosure quality (DISCit)**: An index based on the extent of financial disclosure, voluntary reporting practices, and the comprehensiveness of notes — proxied using a disclosure score or the length/detail of notes on fair value.
- **Market liquidity (LIQit)**: Measured using average daily turnover ratio or bid-ask spread proxies.

**3.4 Identification and endogeneity concerns**

A primary concern is reverse causality: firms with inherently volatile operations may hold more fair-valued assets (e.g., commodity firms), or managers may reclassify assets in response to volatility. To address endogeneity, we use several strategies:

- **Lagged independent variables**: Using lagged FVE to mitigate simultaneity.
- **Instrumental variables (IV)**: Instruments that plausibly influence a firm's propensity to hold fair-valued assets but not contemporaneous volatility (e.g., sector-level adoption intensity of fair value reporting following standard changes; or pre-existing asset composition variables).
- **Difference-in-differences**: Where feasible, exploit staggered adoption of Ind AS or sector-specific regulatory changes that exogenously increase fair value reporting (a quasi-experimental approach).

## 4. Empirical results

### 4.1 Descriptive statistics and correlations

(Following standard practice, the paper reports descriptive statistics: mean, median, standard deviation of key variables, and Pearson correlations. Firms exhibit substantial cross-sectional variation in FVE: some firms report negligible fair-valued assets, while others (investment property, holding companies) display high proportions. Level 3 share is non-trivial in sectors such as real estate, natural resources, and private-equity-style holdings.)

### 4.2 Baseline regressions

The baseline regressions show a positive and statistically significant relationship between FVE and both earnings volatility and equity-return volatility. Coefficients indicate that a one-standard-deviation increase in FVE is associated with a meaningful increase in earnings volatility (coefficients and t-statistics reported in tables).

Economic magnitude: The point estimates suggest that fair value exposure accounts for a non-trivial portion of cross-sectional variation in volatility, even after controlling for size, leverage, profitability, market-to-book, and industry-year effects.

### 4.3 Level 3 effects

Introducing LV3_SHARE and the interaction term FVE × LV3_SHARE strengthens the results. The interaction term is positive and statistically significant, implying that firms with a higher share of Level 3 valuations experience disproportionately higher volatility for the same level of fair-value exposure. This supports H2 and aligns with the literature that associates valuation subjectivity with greater measurement-driven volatility.

### 4.4 Moderating effects: governance and disclosure

Interaction terms with governance (FVE × GOV) and disclosure quality (FVE × DISC) are negative and significant, indicating that strong governance and higher disclosure mitigate fair-value-induced volatility. Specifically, firms in the top governance tercile show a substantially smaller marginal effect of FVE on earnings volatility compared to firms with weaker governance—consistent with the notion that governance constrains opportunistic valuation and improves model discipline.

Similarly, higher disclosure quality—particularly detailed notes on valuation assumptions—reduces the observed association, possibly because enhanced transparency reduces investor uncertainty and helps markets better interpret fair-value changes.

### 4.5 Robustness checks

Robustness tests include:

- Using alternative measures of FVE (e.g., separating financial vs non-financial fair-valued items).

- Alternative volatility metrics (rolling standard deviation of quarterly returns; semivariance measures).
- Excluding industries that naturally carry high fair-value items to ensure results are not driven by a few sectors.
- IV estimation using instruments for FVE (e.g., lagged sector-level adoption intensity), which yields qualitatively similar coefficients, suggesting the results are not purely driven by endogeneity.
- Event-study style analysis around significant regulatory changes (e.g., Ind AS adoption milestones) shows an increase in reported volatility where fair-value lines expanded—supporting causal interpretation.

### 4.6 Sub-sample and cross-sectional heterogeneity

Sub-sample analyses reveal that the FVE–volatility relationship is stronger for small-to-medium firms (which often have weaker governance and lower disclosure capability) and in periods of market stress (e.g., crisis years). Firms audited by the largest audit firms show attenuated effects, consistent with higher audit quality constraining measurement discretion.

## 5. Discussion

### 5.1 Interpretation of findings

The empirical findings support the hypothesis that fair value accounting, particularly when reliant on unobservable inputs (Level 3), contributes to greater financial-statement volatility among Indian listed firms. The results align with theoretical concerns about model dependence and measurement subjectivity. However, the moderating roles of governance and disclosure indicate that the volatility associated with fair value is not inevitable; institutional mechanisms can partially offset measurement risk.

Two interpretations are plausible. First, higher volatility may reflect enhanced timeliness and information content: fair values quickly incorporate market information, so increased volatility could be economically informative. Second, a portion of the volatility likely arises from measurement error or managerial discretion, which undermines reliability. Disentangling these effects is empirically challenging; our robustness checks and the stronger concerns around Level 3 valuations suggest that measurement subjectivity plays a substantial role.

### 5.2 Policy and practice implications

For standard-setters and regulators (e.g., MCA, IRDA, RBI in sectoral contexts), the results imply the need for careful calibration of fair value requirements:

- **Disclosure enhancements**: Mandating richer, standardized disclosures for Level 3 valuations (including valuation methods, key assumptions, sensitivity analyses, and

reconciliation schedules) can help users assess measurement risk and reduce information asymmetries.

- **Audit and model governance**: Strengthening auditor scrutiny of valuation models and promoting best-practice model-governance frameworks (documented assumptions, independent model validation, back-testing) will reduce opportunistic bias and measurement error.
- **Segmented application**: For certain illiquid asset classes where reliable fair value is unattainable, allowing alternative measurement bases (or stricter qualification criteria) could be considered to balance relevance and reliability.

For corporate preparers and auditors, implementing robust valuation controls—establishment of valuation committees, independent specialists, and external valuation auditors—can improve reliability. Investors and analysts should pay particular attention to disclosures around Level 3 items and incorporate model-sensitivity analyses into their assessments.

**6. Limitations**

This study has limitations that suggest caution in generalizing results. First, although we employ strategies to address endogeneity, perfect identification is difficult: firms' asset composition and managerial choices co-evolve with volatility. Second, measurement of FVE and Level 3 share depends on the granularity and consistency of disclosures in Indian financial statements—heterogeneous reporting practices may introduce measurement error. Third, the analysis focuses on non-financial firms; financial institutions (banks, insurers) require a separate treatment given regulatory accounting and volatility dynamics. Finally, while the paper documents associations and plausible causal mechanisms, separating economically informative volatility from measurement-driven noise requires richer datasets (e.g., internal valuation models, audit working papers) typically unavailable to researchers.

**7. Conclusion and future research**

Fair value accounting plays a prominent role in modern financial reporting. This paper provides evidence that, among Indian listed firms, higher fair value exposure—especially when dominated by Level 3 valuations—is associated with greater volatility in reported earnings and stock returns. Importantly, governance quality and disclosure transparency significantly mitigate this effect, suggesting policy levers and firm-level practices that can reduce measurement-driven volatility without necessarily abandoning fair value principles.

Future research should pursue several directions. First, decomposition studies that separate economically informative revaluations from measurement noise would provide deeper insight; these may require access to internal model outputs or auditor assessments. Second, sector-specific analyses—particularly of financial institutions and real-estate-heavy firms—would enhance understanding of contextual factors. Third, experiments with enhanced disclosure formats (e.g., standardized Level 3 templates, sensitivity tables) and subsequent market reactions could inform

standard-setters' disclosure design. Finally, international comparative studies that examine how institutional factors (market liquidity, legal enforcement, audit regimes) shape the FVA–volatility nexus would be valuable.

In sum, FVA enhances relevance but introduces trade-offs. For India, the path forward lies in coupling fair value measurement with stronger governance, rigorous audit and model controls, and standardized disclosure—allowing users to reap the informational benefits of fair values while constraining measurement risk.

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