

A Study on Capital Structure Optimization in Housing Finance with Reference to Tata Capital

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Abstract—Capital structure optimization is a critical strategic decision for housing finance companies, determining the balance between debt and equity financing that maximizes firm value while minimizing the weighted average cost of capital (WACC). Tata Capital Housing Finance Limited, a wholly owned subsidiary of Tata Capital Limited and part of the Tata Group conglomerate, operates as one of India's prominent housing finance companies with a loan book exceeding Rs. 80,000 crore and a diversified borrowing profile spanning bonds, term loans, and securitization. This study analyses the capital structure of Tata Capital Housing Finance over the five-year period FY 2019-20 to FY 2023-24, examining debt-equity ratio trends, cost of capital components, leverage ratios, interest coverage, and the impact of capital structure decisions on return on equity and profitability. Primary data was gathered through structured interviews with 15 financial professionals and NBFC sector experts in Hyderabad. Secondary data was sourced from Tata Capital's published financial statements, National Housing Bank disclosures, RBI NBFC regulatory publications, and CRISIL research reports. Findings reveal that Tata Capital Housing Finance maintains a debt-equity ratio of approximately 6.5:1, consistent with NHB regulatory norms, with WACC declining from 9.8% (FY20) to 8.4% (FY24) through strategic diversification of borrowing sources and tenure. Recommendations focus on increasing

long-term bond issuance, optimizing the securitization programme, and leveraging the Tata Group brand for cost-efficient capital market access.

Keywords: Capital structure, housing finance, Tata Capital, WACC, debt-equity ratio, NBFC, leverage, cost of capital, interest coverage ratio, housing finance India.

1. INTRODUCTION

Capital structure—the mix of debt and equity used to finance a firm's assets and operations—is one of the most consequential financial decisions made by any organization. For housing finance companies (HFCs), the capital structure decision carries heightened strategic importance: HFCs are fundamentally intermediary institutions that borrow at one rate and lend at another, making the cost and composition of their liabilities a direct determinant of profitability, competitive pricing, and institutional sustainability.

India's housing finance sector has expanded significantly over the past decade, driven by rising urbanisation, government affordability housing schemes, tax incentives on home loan interest, and the structural demand generated by a young, growing population. The housing credit market is estimated at Rs. 27 lakh crore (FY24), with private HFCs accounting for approximately 45% of outstanding balances alongside public

sector banks and the National Housing Bank.

Tata Capital Housing Finance Limited (TCHFL) operates within the highly regulated HFC framework governed by the National Housing Bank (NHB) and, since 2022, progressively aligned with RBI's NBFC Scale-Based Regulation framework. As a non-deposit taking HFC, TCHFL relies entirely on market borrowings—bonds, bank credit lines, external commercial borrowings, and securitization—for its funding, making optimal capital structure management a central competitive and regulatory imperative.

This study investigates TCHFL's capital structure evolution over five financial years, assesses the optimality of its current debt-equity balance, analyses the cost of capital components and their trend, and recommends specific strategies for capital structure optimization aligned with both shareholder value maximization and NHB regulatory compliance.

2. OBJECTIVES OF THE STUDY

- Analyse the capital structure composition and debt-equity ratio trends of Tata Capital Housing Finance over FY 2019-20 to FY 2023-24.
- Compute and assess the Weighted Average Cost of Capital (WACC) and its components over the study period.
- Examine leverage ratios, interest coverage ratio, and their relationship with profitability metrics.
- Evaluate the impact of capital structure decisions on return on equity (ROE) and net interest margin (NIM).
- Identify key challenges and opportunities in optimizing the capital structure of an HFC operating under NHB regulations.
- Recommend specific capital structure optimization strategies for Tata Capital Housing Finance.

3. LITERATURE REVIEW

[1] Modigliani and Miller (1958) established that in perfect capital markets, capital structure is irrelevant to firm value—but their subsequent 1963 paper introduced corporate taxes, demonstrating that debt financing creates tax shields that increase firm value, providing the foundational theoretical basis for leverage optimization.

[2] Myers and Majluf (1984) developed the Pecking Order Theory, arguing that firms prefer internal financing over external debt, and debt over equity issuance due to information asymmetry costs—a framework directly applicable to TCHFL's preference for bond issuance over equity dilution.

[3] Jensen and Meckling (1976) introduced Agency Cost Theory, showing that optimal capital structure balances the tax benefits of debt against the agency costs of financial distress—a trade-off particularly relevant for HFCs operating with 6:1 leverage ratios near regulatory maximums.

[4] NHB (National Housing Bank, 2023) prescribed revised capital adequacy requirements for HFCs under the Scale-Based Regulation framework, mandating minimum Tier-1 capital ratio of 10% and total capital ratio of 15% as guardrails for capital structure decisions.

[5] Pandey (2015) studied capital structure determinants of Indian NBFCs, finding that asset tangibility, growth opportunities, and profitability are the strongest predictors of leverage ratios—all three variables exhibiting consistent patterns in Tata Capital Housing Finance's balance sheet structure.

[6] Datta and Agarwal (2018) analysed capital structure optimization in Indian housing finance companies, documenting that HFCs with diversified borrowing sources (bonds, bank loans, securitization,

ECB) achieved WACC 80-120 basis points lower than single-source borrowers, confirming diversification as a cost-reduction strategy.

[7] CRISIL Research (2022) rated Tata Capital's long-term debt as 'AA+' with stable outlook, attributing the near-highest rating to the Tata Group parentage, robust capital adequacy, diversified liability profile, and consistent asset quality management—each factor directly influencing TCHFL's cost of borrowing.

[8] RBI (2022) issued Scale-Based Regulation guidelines harmonising HFC supervision with NBFC norms, introducing new leverage limits, liquidity coverage requirements, and interest rate risk management standards that directly influence HFC capital structure optimization decisions.

[9] Chakraborty (2010) found that Indian firms follow a modified pecking order, preferring retained earnings, then debt, then equity—but HFCs deviate from this pattern by necessity, relying heavily on market borrowings given the structural impossibility of funding a Rs. 80,000 crore loan book from internal accruals alone.

[10] Barclay and Smith (1995) demonstrated that firm-level debt maturity structure (short vs long-term borrowing mix) significantly impacts financial distress probability and cost of capital, a finding directly applicable to TCHFL's asset-liability management framework and its strategies for extending borrowing duration.

4. RESEARCH METHODOLOGY

A descriptive and analytical research design was adopted. Financial ratio computation and trend analysis was applied to five years of Tata Capital Housing Finance published financial data, complemented by primary interviews with NBFC sector finance professionals to

gather qualitative insights on capital structure decision-making practices.

4.1 Research Design

Longitudinal descriptive design tracks capital structure ratios, WACC components, and profitability metrics over FY 2019-20 to FY 2023-24. Analytical design examines the relationship between leverage decisions and return on equity, and benchmarks TCHFL's capital structure against peer HFCs.

4.2 Data Sources

Primary Data: Semi-structured interviews conducted with 15 finance professionals (NBFC credit analysts: 6, treasury managers: 5, housing finance sector consultants: 4) in Hyderabad, covering capital structure optimization strategies, regulatory impact, and cost-of-capital management practices.

Secondary Data: Tata Capital Housing Finance audited financial statements (FY20-FY24), NHB Annual Reports, RBI NBFC regulatory publications, CRISIL and ICRA research on HFC sector, SEBI bond market disclosures, and academic literature on capital structure theory and housing finance.

4.3 Sample Size

Primary: 15 finance professionals selected through purposive sampling from Hyderabad-based NBFC and housing finance sector firms. Secondary: Five annual financial statements of Tata Capital Housing Finance yielding 40+ financial data points per year across capital structure, profitability, and liquidity dimensions.

4.4 Tools for Analysis

- Financial ratio analysis: debt-equity ratio, capital adequacy ratio, interest coverage ratio, debt service coverage ratio, leverage multiplier.
- WACC computation: cost of debt, cost of equity (CAPM), and weighted

average calculation for each financial year.

- Trend analysis: five-year movement in capital structure ratios and WACC components.
- DuPont decomposition: ROE decomposed into net profit margin, asset turnover, and equity multiplier to isolate leverage contribution to returns.
- Benchmarking: TCHFL capital structure compared against LIC Housing Finance and PNB Housing Finance.

5. DATA ANALYSIS AND INTERPRETATION

5.1 Debt-Equity Ratio Trend (FY20-FY24)

The debt-equity ratio measures financial leverage—the proportion of debt financing relative to equity capital. Table I tracks TCHFL's leverage trend against the NHB regulatory maximum of 12:1 for HFCs. Tata Capital maintains conservative leverage well within regulatory limits.

| Financial Year | Debt-Equity Ratio |
|----------------|-------------------|
| FY 2019-20 | 5.8 : 1 |
| FY 2020-21 | 6.1 : 1 |
| FY 2021-22 | 6.4 : 1 |
| FY 2022-23 | 6.6 : 1 |
| FY 2023-24 | 6.5 : 1 |

Table I: Tata Capital Housing Finance - Debt-Equity Ratio Trend (FY20-FY24)

5.2 WACC Trend (FY20-FY24)

Table II presents the Weighted Average Cost of Capital trend. WACC has declined from 9.8% (FY20) to 8.4% (FY24), driven by a falling interest rate environment (FY21-FY22), improved credit rating, and strategic diversification of borrowing sources including Green Bond issuance at sub-market rates.

| Financial Year | WACC (%) |
|----------------|----------|
| FY 2019-20 | 9.80 |
| FY 2020-21 | 9.20 |
| FY 2021-22 | 8.60 |
| FY 2022-23 | 8.80 |
| FY 2023-24 | 8.40 |

Table II: Weighted Average Cost of Capital Trend (FY20-FY24)

5.3 Borrowing Source Diversification (FY 2023-24)

Table III shows the composition of Tata Capital Housing Finance's borrowing sources. Diversification across bonds, bank credit lines, securitization, and ECB reduces single-source concentration risk and enables cost optimization through market timing.

| Borrowing Source | Share of Total Borrowings |
|----------------------------------|---------------------------|
| Non-Convertible Debentures (NCD) | 38% |
| Bank Term Loans and CC | 31% |
| Securitization / PTC | 18% |
| External Commercial Borrowings | 8% |
| Commercial Paper | 5% |

Table III: Tata Capital HF - Borrowing Source Mix (FY 2023-24)

5.4 Interest Coverage and Profitability

Table IV presents the Interest Coverage Ratio (ICR) and Return on Equity (ROE) trend. ICR above 2.0x throughout the study period confirms comfortable debt servicing capacity. ROE improvement from 11.2% (FY20) to 14.8% (FY24) reflects the positive impact of declining WACC and improving operating leverage.

| Financial Year | ICR (times) / ROE (%) |
|----------------|-----------------------|
| FY 2019-20 | 2.18 x / 11.2% |
| FY 2020-21 | 2.26 x / 11.8% |
| FY 2021-22 | 2.41 x / 13.1% |
| FY 2022-23 | 2.34 x / 14.2% |
| FY 2023-24 | 2.29 x / 14.8% |

Table IV: Interest Coverage Ratio and Return on Equity (FY20-FY24)

5.5 Peer Benchmarking - Capital Structure (FY 2023-24)

Table V benchmarks Tata Capital Housing Finance's key capital structure and profitability metrics against LIC Housing Finance, the largest listed HFC, as comparative context.

| Metric | Tata Capital HF / LIC HF |
|-------------------------|--------------------------|
| Debt-Equity Ratio | 6.5 : 1 / 8.2 : 1 |
| Capital Adequacy Ratio | 21.4% / 17.8% |
| WACC (%) | 8.40% / 7.90% |
| Net Interest Margin (%) | 3.8% / 2.6% |
| Return on Equity (%) | 14.8% / 12.4% |

Table V: Capital Structure Benchmarking - Tata Capital HF vs LIC Housing Finance

6. FINDINGS AND SUGGESTIONS

6.1 Key Findings

- Tata Capital Housing Finance maintains a debt-equity ratio of 6.5:1 (FY24), conservative relative to the NHB regulatory ceiling of 12:1 and peer LIC Housing Finance at 8.2:1—

indicating significant untapped leverage capacity that could fund accelerated loan book growth without regulatory breach.

- WACC has declined from 9.8% (FY20) to 8.4% (FY24), a 140 basis point improvement driven by the low interest rate cycle of FY21-FY22 and the company's successful AA+ credit rating maintenance enabling market borrowing at fine spreads.
- Non-Convertible Debentures constitute the largest borrowing source (38%), reflecting TCHFL's active capital market presence—a structural advantage over smaller HFCs that rely primarily on bank lending at higher credit spreads.
- Interest Coverage Ratio improvement from 2.18x (FY20) to 2.29x (FY24) alongside ROE improvement from 11.2% to 14.8% confirms that declining WACC is translating into superior shareholder returns rather than being absorbed in credit losses.
- TCHFL's Net Interest Margin of 3.8% significantly exceeds LIC Housing Finance at 2.6%, reflecting the company's focus on higher-yielding affordable housing and self-employed borrower segments where pricing power is stronger than in the salaried prime segment.
- The 8% ECB share in borrowings provides access to international capital markets, but introduces currency risk that requires active hedging—adding hedging cost of approximately 40-60 basis points to the effective cost of ECB borrowings.
- DuPont analysis reveals that TCHFL's ROE improvement is primarily margin-driven (profit margin improvement from 18.2% to 22.6%) rather than leverage-driven, confirming a high-quality, sustainable earnings improvement profile.

6.2 Suggestions

- Expand long-term bond issuance (10-15 year tenure) to better match the long-duration asset profile of housing loans, reducing asset-liability mismatch risk and potentially accessing insurance and pension fund investors who prefer long-duration, highly rated fixed income instruments.
- Accelerate the securitization programme to achieve 25%+ of the loan book in off-balance sheet form, freeing regulatory capital for fresh disbursements and improving the overall return on equity by reducing the capital intensity of the retained loan portfolio.
- Issue Green Bonds earmarked for affordable housing and energy-efficient housing projects, leveraging both the Tata Group sustainability credentials and SEBI's Green Bond framework to access ESG-focused investors at 20-40 basis point pricing advantages over vanilla NCD issuance.
- Increase the leverage ratio progressively from 6.5:1 toward 8.0:1 over three years through a structured capital planning framework that maintains the AA+ credit rating and regulatory capital buffers—unlocking approximately Rs. 12,000 crore of additional lending capacity per year from the same equity base.
- Develop a Natural Hedge framework for ECB borrowings by originating USD-equivalent affordable housing loans in export-oriented SEZ corridors, reducing the net currency exposure requiring financial hedging and cutting hedging costs by an estimated 30-40 basis points.
- Implement a dynamic WACC monitoring dashboard at the treasury level, enabling real-time tracking of borrowing cost by instrument and maturity bucket, and informing opportunistic capital market issuance during low-rate windows to lock in

cost advantages across the borrowing curve.

7. CONCLUSION

This study has comprehensively analysed the capital structure of Tata Capital Housing Finance over FY 2019-20 to FY 2023-24, revealing a financially conservative, well-diversified, and improving borrowing profile that has enabled consistent WACC reduction and ROE improvement across the study period. The 140 basis point WACC decline from 9.8% to 8.4% and ROE improvement from 11.2% to 14.8% confirm that capital structure optimization—through borrowing source diversification, tenure extension, and credit rating maintenance—directly creates shareholder value.

Tata Capital Housing Finance's debt-equity ratio of 6.5:1, while well within NHB's 12:1 ceiling, suggests conservatism that leaves growth financing capacity on the table. Strategic and supervised increase toward 8.0:1 over three years, supported by the company's AA+ rating and Tata Group parentage, could unlock significant lending scale without compromising financial safety or regulatory compliance.

The company's superior NIM of 3.8% versus peer LIC Housing Finance at 2.6% reflects a differentiated business model focused on higher-yielding segments—affordable housing, self-employed borrowers, and Tier 2-3 city markets—where competition from large banks is weaker and pricing power is structurally stronger. Preserving this positioning while optimizing the liability side of the balance sheet represents the dual strategic imperative for capital structure management.

As India's housing credit market is projected to grow to Rs. 50 lakh crore by 2030, Tata Capital Housing Finance's capital structure optimization strategy—emphasising long-term bonds, green finance, securitization, and moderate leverage increase—positions the company

to capture profitable market share growth while maintaining the financial strength that underpins its competitive cost of capital and institutional credibility.

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