

# The Ultimate Guide on Financial Modelling in India — 2026 —

A Practitioner's Guide for Analysts,  
Founders, CFOs, Investors &  
Finance Professionals



**Three-Statement Model**  
Integrated P&L, Balance Sheet  
and Cash Flow



**DCF Valuation**  
Forecasting Free Cash  
Flows & Discounting



**Comparable Analysis**  
Market Multiples &  
Benchmarking



**M&A / Accretion-Dilution**  
Transaction Analysis &  
Synergies



**LBO Model**  
Debt Structures &  
Returns Analysis



**Sensitivity Analysis**  
Scenario Testing &  
Key Assumptions

BY

**SAGAR SHAH**

CA | CS | IBBI Registered Valuer | All India Rank Holder | Ex-EY

First Edition | 2026

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Sagar Shah is a leading transaction advisory, valuation, and financial modelling specialist with over 15 years of hands-on experience building and reviewing financial models for some of India's most complex M&A, private equity, infrastructure, and restructuring transactions. He spent 9 years at Ernst & Young (EY) in the Transaction Advisory Services practice, where he built and stress-tested financial models across every major industry consumer, FMCG, technology, pharmaceuticals, infrastructure, real estate, and financial services.

At Elite Valuation, the practice builds financial models for M&A transactions, PE fund entry and exit valuations, fairness opinions, business plans, project finance, debt structuring, and litigation support. Every model is built to institutional quality auditable, stress-tested, and documented for presentation to boards, investment committees, regulators, and lenders. This guide distils 15 years of practical financial modelling experience into a step-by-step, formula-level reference for Indian finance professionals.

## Core Financial Modelling Expertise

- Integrated three-statement financial models linking P&L, Balance Sheet, and Cash Flow with complete circular references and error checks
- DCF valuation models driver-based revenue forecasts, WACC computation, terminal value, and sensitivity/scenario analysis
- Comparable company analysis (CCA) and precedent transaction analysis spreading and normalising Indian listed company financials
- M&A accretion/dilution models purchase price allocation, financing structure, and pro forma EPS analysis
- Leveraged Buyout (LBO) models debt waterfall, PIK instruments, sponsor returns, and IRR/MoIC analysis
- Project finance models DSCR, sculpted debt repayment, IRR, and lender covenant testing
- Restructuring and distressed models going concern versus liquidation, debt-equity swap analysis
- Excel VBA, Power Query, and dynamic model architecture automated scenario managers, dynamic charts, and presentation-ready outputs

# ELITE VALUATION

## Financial Modelling & Transaction Advisory Practice

Pan-India Services | [www.EliteValuation.in](http://www.EliteValuation.in)

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### Our Financial Modelling Services

**Transaction Financial Modelling** Building buyer-side and seller-side financial models for M&A transactions including three-statement integration, purchase price sensitivity, accretion/dilution analysis, and pro forma combined entity projections.

**DCF and Business Valuation Models** Driver-based three-statement models linked to DCF valuations WACC computation, terminal value derivation, sensitivity analysis, and scenario manager for board and investment committee presentations.

**LBO Model Development** Full leveraged buyout models for PE fund mandates debt structuring, interest and amortisation schedules, PIK toggle instruments, management incentive plans, and sponsor IRR/MoIC analysis.

**Comparable Company Analysis (CCA) Spreading** Systematic spreading of Indian listed company financials normalisation for non-recurring items, calculation of trading multiples, and construction of peer group benchmarking tables.

**Project Finance Models** Infrastructure and real estate project finance models revenue waterfall, construction cost phasing, debt service coverage ratio (DSCR), IRR analysis, and lender covenant testing.

**Model Review and Audit** Independent review of financial models prepared by internal teams, investment banks, or other advisers formula audit, circular reference testing, assumption challenge, and sign-off for board or regulatory purposes.

**Financial Modelling Training** Customised financial modelling training programmes for CA firms, investment banks, PE funds, corporate finance teams, and SEBI-registered intermediaries from Excel fundamentals to complex LBO and restructuring models.

**Restructuring and Turnaround Models** Going concern, liquidation, and restructuring scenario models for stressed and distressed situations debt capacity analysis, haircut computation, and recovery waterfall for lenders and resolution professionals.

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*"A financial model is not a spreadsheet. It is a structured hypothesis about how a business creates value and every formula in it is an opinion about the future. Build it with discipline, stress-test it with scepticism, and present it with humility."*

Sagar Shah, CA | CS | Registered Valuer

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*Valuer. Excel model templates referenced in this guide are self-contained illustrations; working template files are available separately upon request at [sagarrvshah@elitevaluation.in](mailto:sagarrvshah@elitevaluation.in).*

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**PART I: FOUNDATIONS**

# Chapter 1: Financial Modelling Philosophy Architecture, Best Practices & Structure

A financial model is the most powerful analytical tool in the finance professional's toolkit. It forces you to translate qualitative business understanding into quantitative assumptions, test the sensitivity of your conclusions to those assumptions, and communicate complex financial relationships in a format that decision-makers can interrogate and challenge. But a financial model is only as good as its structure and the most common source of model failure in professional practice is not wrong assumptions, it is bad architecture.

This chapter establishes the philosophical and structural foundation that every subsequent chapter in this guide builds upon. Mastering these principles will make the difference between a model that is trusted and relied upon and one that is doubted, refactored, or quietly discarded.

## 1.1 The Three Golden Rules of Financial Modelling

Every experienced financial modeller works by three inviolable rules that prevent the most common and most costly model errors:

1. Never hardcode a number inside a formula. If a number might change, it belongs in an input cell not embedded in a calculation. The formula `=B5*1.05` is always wrong; the formula `=B5*(1+G3)` where G3 contains 5% is always right.
2. Every sheet must balance. A model that does not balance where total assets do not equal total liabilities plus equity in every period contains an error. Balancing is not optional; it is the fundamental integrity test of a financial model.
3. Build for the reviewer, not for the builder. The model will be reviewed by someone who did not build it an investment committee member, an auditor, a regulator, or a future version of yourself. Every formula, every assumption, and every sheet must be self-explanatory to that reviewer.

| Principle                       | What It Means                              | How to Apply It   |
|---------------------------------|--|---|
| Inputs → Calculations → Outputs | Never hardcode a number in a calculation   | Blue font for inputs; black for formulas; green for outputs |
| One Direction Only              | Data flows left-to-right and top-to-bottom | Avoid backward references that cause circulars              |
| Single Source of Truth          | Each assumption lives in                   | All references point back to that                           |

| Principle                  | What It Means                                 | How to Apply It                              |
|----------------------------|---|--|
|                            | exactly one cell                              | one cell                                     |
| Auditability               | Any formula can be traced to its source       | F2 to edit; Ctrl+[ to trace precedents       |
| Stress-Test Everything     | Every output should be tested at extremes     | Build sensitivity tables before presenting   |
| Separate Inputs from Logic | One tab for assumptions; one for calculations | INPUT tab + MODEL tab + OUTPUT tab structure |

Table 1.1: The Six Core Financial Modelling Principles

## 1.2 The Standard Model Architecture

A well-structured financial model uses a consistent sheet architecture. The standard structure for an Indian corporate financial model is:

**COVER:** Title, purpose, date, version number, author, and confidentiality classification. Every model must have a cover.

**INSTRUCTIONS:** Brief guide to model navigation, colour conventions, key outputs, and toggle locations.

**INPUTS / ASSUMPTIONS:** All hardcoded inputs in one place blue font, clearly labelled, with source references.

**HISTORICALS:** Actual financial statements (P&L, Balance Sheet, Cash Flow) for 3–5 years used for ratio analysis and base year calibration.

**INCOME STATEMENT:** Projected P&L revenue through PAT.

**BALANCE SHEET:** Projected Balance Sheet assets, liabilities, equity must balance every period.

**CASH FLOW STATEMENT:** Indirect method Cash Flow operating, investing, financing activities.

**SCHEDULES:** Supporting schedules for Working Capital, Capex, Depreciation, Debt, Tax, and Equity.

**VALUATION:** DCF, terminal value, WACC computation, bridge from EV to equity value.

**COMPS:** Comparable company analysis trading multiples peer group.

**SCENARIOS:** Scenario manager, sensitivity tables, and tornado chart.

**OUTPUT / DASHBOARD:** Key outputs for presentation charts, summary tables, KPIs.

### 1.3 Colour Coding Convention

Colour coding is the language of financial models. Every professional model uses a consistent colour convention to communicate the nature of each cell at a glance. The standard convention used at Elite Valuation and by leading investment banks globally is:

| Cell Convention                         | Meaning                           |
|---|-----------------------------------|
| BLUE FONT on WHITE background           | Hardcoded input; may be changed   |
| BLACK FONT on WHITE background          | Formula cell; do not overwrite    |
| GREEN FONT on WHITE background          | Linked formula from another sheet |
| DARK BLUE FONT on LIGHT BLUE background | Key output / KPI cell             |
| RED FONT on WHITE background            | Error check; should return zero   |
| GREY background                         | Section header; not a data cell   |

#### KEY INSIGHT

*We have reviewed hundreds of financial models over 15 years of transaction advisory work. The single most common structural error we encounter is the 'input scattered' model where hardcoded assumptions are embedded inside formulas throughout the workbook, making it impossible to run scenarios without hunting for every instance of a changed assumption. The investment banker who builds a model with a dedicated INPUT sheet and colour-coded cells spends 20 minutes changing a scenario; the one who hardcodes assumptions spends 4 hours. Build the INPUT structure on Day 1, before you write a single formula.*

### 1.4 Version Control and Model Documentation

Financial models for transactions should always be version-controlled. The standard practice is to save incremental versions as: ModelName\_v1.0\_DDMMYYYY.xlsx. Never overwrite the previous version disk space is cheap; lost model history is not. Maintain a change log on the COVER sheet documenting what changed in each version, who made the change, and when.

#### PRO TIP

*At the end of every working session, freeze the model by saving a version copy even if the session was brief. In transaction situations, it is common to need to revert to a version from 3 hours ago because a client instruction changed the deal structure. The modeller who has version copies can do this in 30 seconds. The modeller who saved over the previous version must rebuild from memory.*

**PART I: FOUNDATIONS**

# Chapter 2: Excel Mastery for Modellers

## Functions, Shortcuts & Dynamic Controls

Excel is the primary tool of financial modelling for the vast majority of Indian finance professionals and mastery of Excel's functions, shortcuts, and dynamic features is not a 'nice to have'; it is a core competency. A modeller who uses the mouse where the keyboard will do, who writes IF statements where INDEX/MATCH will do, and who builds static models where dynamic controls will do is leaving significant productivity and quality on the table.

This chapter covers the essential Excel toolkit for financial modelling: the functions that every modeller must know by heart, the keyboard shortcuts that eliminate mouse dependency, and the dynamic model controls drop-downs, scenario selectors, and data tables that transform a static spreadsheet into an interactive decision-support tool.

### 2.1 Essential Functions The Financial Modeller's Core Library

#### SUMIFS and COUNTIFS Conditional Aggregation

**SUMIFS Sum with Multiple Conditions**

Syntax: =SUMIFS(sum\_range, criteria\_range1, criteria1, [criteria\_range2, criteria2], ...)

Example: Sum revenue for Product = 'Software' AND Region = 'North'  
=SUMIFS(Revenue, ProductCol, "Software", RegionCol, "North")

Indian Context: Sum invoices where State = 'Maharashtra' AND Quarter = 'Q3'  
=SUMIFS(InvoiceAmt, StateCol, "Maharashtra", QtrCol, "Q3")

#### INDEX / MATCH The Superior Lookup

**INDEX / MATCH Replace VLOOKUP Permanently**

Syntax: =INDEX(return\_range, MATCH(lookup\_value, lookup\_range, 0))

Example: Look up revenue for Company 'Reliance' from a peer table  
=INDEX(RevenueCol, MATCH("Reliance", CompanyCol, 0))

Two-way lookup find multiple at intersection of row and column:

```
=INDEX(DataRange, MATCH(RowLabel, RowHeaders, 0), MATCH(ColLabel, ColHeaders, 0))
```

Why INDEX/MATCH over VLOOKUP:

- Works left-to-right AND right-to-left
- Column position does not break when columns are inserted
- Faster on large datasets

## IFERROR Clean Error Handling

**IFERROR Suppress Errors Professionally**

```
=IFERROR(formula, value_if_error)
```

Example: Show blank instead of #DIV/0! when denominator is zero

```
=IFERROR(B5/C5, "-")
```

Example: Show zero when a lookup returns #N/A

```
=IFERROR(INDEX(Range, MATCH(A1, Labels, 0)), 0)
```

## CHOOSE Scenario Selector

**CHOOSE Build a Scenario Toggle**

```
=CHOOSE(scenario_number, value1, value2, value3)
```

Setup: Put scenario selector in cell B2 (1 = Base, 2 = Bull, 3 = Bear)

Revenue growth formula pointing to scenario selector:

```
=CHOOSE($B$2, 12%, 18%, 5%)
```

Entire model changes by changing ONE cell (B2) from 1 to 2 to 3.

No VBA needed. No copy-paste required.

| Shortcut              | Function                        | When to Use                             |
|-----------------------|---------------------------------|---|
| Ctrl + Shift + Enter  | Array formula (CSE)             | Multi-condition SUMPRODUCT alternatives |
| Ctrl + [              | Trace precedents (go to source) | Audit formula inputs                    |
| Ctrl + ]              | Trace dependents (go to users)  | Understand what uses this cell          |
| F5 → Special → Blanks | Select all blank cells          | Identify missing data in a range        |
| Alt + =               | AutoSum                         | Quick sum of a selected range           |
| Ctrl + Shift + L      | Toggle AutoFilter               | Filter large data tables quickly        |
| Ctrl + 1              | Format Cells dialog             | Apply number formats instantly          |
| F4                    | Lock reference / repeat last    | Toggle \$A\$1, A\$1, \$A1, A1 in        |

| Shortcut         | Function                    | When to Use                     |
|------------------|-----------------------------|---------------------------------|
|                  | action                      | formulas                        |
| Ctrl + Shift + ~ | Apply General number format | Remove all formatting instantly |
| Alt + H + O + I  | AutoFit column width        | Clean up column widths fast     |

Table 2.1: Essential Excel Keyboard Shortcuts for Financial Modellers

## 2.2 Dynamic Model Controls Drop-Downs and Scenario Selectors

Dynamic controls transform a static model into an interactive tool. The three most important dynamic controls for financial models are: Data Validation drop-downs (for scenario selection and toggle controls); Spin Buttons (Form Controls for adjusting single assumption values by increments); and Named Ranges (for making formulas readable and maintainable across large models).

### Data Validation Drop-Down Scenario Selector Setup

Step 1: Select the scenario selector cell (e.g., B2)

Step 2: Data → Data Validation → Allow: List

Step 3: Source: Type the options: Base Case, Bull Case, Bear Case

Step 4: In model formulas, use: =CHOOSE(MATCH(B2, {"Base Case", "Bull Case", "Bear Case"}, 0), ...)

Result: User selects from drop-down; entire model recalculates instantly.

### COMMON ERROR

**Error:** Using hardcoded scenario numbers (1, 2, 3) as drop-down inputs instead of text labels.

**Fix:** Use text labels ('Base Case', 'Bull Case', 'Bear Case') for drop-downs. Wrap the CHOOSE function with MATCH to convert text to index numbers. Text labels prevent the error of accidentally typing an invalid number.

## 2.3 OFFSET and INDIRECT Dynamic Range References

### OFFSET Build a Rolling Window Model

=OFFSET(reference, rows\_to\_offset, cols\_to\_offset, [height], [width])

Example: Last 4 quarters of revenue (rolling average)

=AVERAGE(OFFSET(B5, 0, -3, 1, 4)) -- average of 4 columns ending at B5

Example: Trailing twelve months (TTM) revenue from monthly data

=SUM(OFFSET(B5, 0, -11, 1, 12)) -- sum of 12 months ending at current

**column****KEY INSIGHT**

*We always teach modellers that the three functions that separate intermediate from advanced modellers are: OFFSET (dynamic ranges), SUMPRODUCT (array logic without Ctrl+Shift+Enter), and CHOOSE (scenario management). A modeller fluent in these three functions can build dynamic, scenario-driven models that update instantly when any assumption changes without any VBA, without any manual recalculation, and without any copy-paste errors. Learn these three functions before any others.*

**PRO TIP**

*Turn on 'Iterative Calculation' in Excel Options (File → Options → Formulas → Enable Iterative Calculation, Max Iterations = 100, Max Change = 0.001) before building any financial model with a cash flow sweep or circular reference for tax on interest income. Without this setting, Excel will return a #REF! error for any circular reference even intentional, well-designed ones. Every professional financial model template should have this setting turned on by default.*

**PART II: THE THREE-STATEMENT MODEL**

# Chapter 3: Historical Financial Analysis

## Spreading, Normalising & Ratio Framework

Every financial model begins with history. Before you project a single future number, you must deeply understand what the business has done in the past – how revenue has grown, how margins have evolved, how working capital has behaved, and how capital has been deployed and returned. This historical analysis has two purposes: it calibrates your future assumptions against demonstrated performance, and it reveals anomalies, non-recurring items, and structural changes that must be normalised before your historical data can serve as a reliable base.

### 3.1 Spreading Financial Statements – The Data Entry Discipline

'Spreading' refers to the process of entering a company's historical financial statements into your model in a standardised, disaggregated format. Spreading is not simply copying numbers from the annual report – it requires reclassifying line items into your model's standard structure, ensuring year-over-year consistency, and flagging items that require normalisation.

The standard spreading structure for an Indian company follows the Schedule III of the Companies Act, 2013 format, adapted for modelling purposes:

| <b>INCOME STATEMENT MODEL SPREADING FORMAT (Rs. Crore)</b> |                |
|--|----------------|
| Revenue from Operations (Net)                              | 2,450.0        |
| Other Operating Income                                     | 32.0           |
| <b>Total Net Revenue</b>                                   | <b>2,482.0</b> |
| Raw Material Consumed                                      | (1,102.0)      |
| Employee Benefit Expense                                   | (298.0)        |
| Other Manufacturing Expenses                               | (185.0)        |
| <b>Gross Profit</b>  | <b>897.0</b>   |
| <b>Gross Margin %</b>                                      | <b>36.1%</b>   |
| SG&A and Administrative Expenses                           | (142.0)        |
| <b>EBITDA</b>  | <b>755.0</b>   |

|                                  |              |
|----------------------------------|--------------|
| <b>EBITDA Margin %</b>           | <b>30.4%</b> |
|                                  |              |
| Depreciation and Amortisation    | (95.0)       |
| <b>EBIT</b>                      | <b>660.0</b> |
| Finance Costs (Interest)         | (55.0)       |
| Other Income (non-operating)     | 18.0         |
| <b>PBT</b>                       | <b>623.0</b> |
| Tax Expense (Current + Deferred) | (156.0)      |
| <b>PAT (Profit After Tax)</b>    | <b>467.0</b> |
| <b>PAT Margin %</b>              | <b>18.8%</b> |

### 3.2 Normalisation Stripping Out the Noise

Normalisation adjusts the reported financials to remove items that do not represent the recurring, core performance of the business. Non-recurring items inflate or deflate margins in specific years and will mislead every forward-looking analysis if not removed. The four main categories of normalisation in Indian company financials are:

**One-time Income:** Profit on sale of assets, exceptional insurance claims, write-back of provisions, one-time government grants. Remove from EBITDA for the affected year.

**One-time Expenses:** VRS costs, asset write-offs, litigation settlements, impairment charges, restructuring costs. Add back for the affected year.

**Related-Party Distortions:** Management fees, rent, and service charges to promoter entities at above-market rates. Adjust to market rate equivalents.

**Accounting Policy Changes:** Changes in depreciation method, revenue recognition, inventory valuation. Restate prior years on consistent basis.

#### NORMALISATION WALKTHROUGH FY2024 EBITDA

Reported EBITDA (from Annual Report): Rs. 755.0 Cr

##### Normalisation Adjustments:

|   |               |
|---|---------------|
| + Add back: One-time VRS cost (exceptional) | Rs. 42.0 Cr   |
| + Add back: Asset write-off (non-recurring) | Rs. 18.0 Cr   |
| - Remove: Profit on land sale (one-time)    | Rs. (65.0) Cr |
| - Remove: Insurance claim receipt (one-off) | Rs. (28.0) Cr |
| + Adjust: Related-party rent (above mkt)    | Rs. 12.0 Cr   |

► **Normalised EBITDA:** Rs. 734.0 Cr  
 ► **Normalised EBITDA Margin:** 29.6%

Impact: Reported margin overstates by ~85 bps vs. normalised

| Ratio                      | Formula                         | What It Measures                           | Typical Indian Mfg. Range  |
|----------------------------|---------------------------------|--|----------------------------|
| Revenue Growth %           | $(Rev_t / Rev_{t-1}) - 1$       | Top-line momentum                          | 8%–20% (depends on sector) |
| Gross Margin %             | Gross Profit / Revenue          | Pricing power + direct cost efficiency     | 25%–65%                    |
| EBITDA Margin %            | EBITDA / Revenue                | Operating cash profitability               | 12%–25% for mfg.           |
| EBIT Margin %              | EBIT / Revenue                  | Operating profitability after depreciation | 8%–20% for mfg.            |
| PAT Margin %               | PAT / Revenue                   | Net profitability after all charges        | 5%–15%                     |
| Return on Equity (ROE)     | PAT / Average Equity            | Profitability on shareholders' funds       | 12%–25%                    |
| Return on Capital Employed | EBIT / Average Capital Employed | Efficiency of total capital deployment     | 10%–20%                    |
| Asset Turnover             | Revenue / Average Total Assets  | Revenue generated per rupee of assets      | 0.8x–2.0x                  |

Table 3.1: Key Financial Ratios Formulas and Indian Manufacturing Benchmarks

### 3.3 DuPont Decomposition Understanding ROE Drivers

The DuPont framework decomposes Return on Equity (ROE) into its three components, revealing the source of profitability whether the business earns high returns through margin, asset efficiency, or leverage.

#### THREE-FACTOR DUPONT DECOMPOSITION

$ROE = \text{Net Profit Margin} \times \text{Asset Turnover} \times \text{Financial Leverage}$

$ROE = (PAT / \text{Revenue}) \times (\text{Revenue} / \text{Assets}) \times (\text{Assets} / \text{Equity})$

Example TechCo India FY2024:

PAT Margin: 18.8% (Rs. 467 Cr / Rs. 2,482 Cr)

Asset Turnover: 1.42x (Rs. 2,482 Cr / Rs. 1,748 Cr avg assets)

Leverage: 1.65x (Rs. 1,748 Cr / Rs. 1,059 Cr avg equity)

►  $ROE = 18.8\% \times 1.42 \times 1.65 = 44.0\%$

Insight: High ROE driven primarily by margin (18.8%) not leverage  
=> **Asset-light, high-quality business profile**

#### KEY INSIGHT

*We consistently find that the modellers who skip thorough historical analysis and jump straight to forecasting build the weakest models. Ratios like DSO, DIO, DPO, and gross margin have natural mean-reversion tendencies for most businesses they move within a band around a structural average. A modeller who projects a company's DSO at 42 days when the 5-year historical average is 68 days is building an unrealistic model. Always calculate 5 years of historical ratios before touching the forecast. The historical data is the constraint on your forward assumptions.*

**PRO TIP**

*Build a 'ratio roll-forward' table at the bottom of your Historicals sheet showing every key ratio (EBITDA margin, gross margin, working capital days, capex-to-revenue, D&A-to-revenue) for every historical year in a single horizontal table. This table becomes your key reference when building forecasts: every forward assumption should be explicitly justified relative to this historical average. If your forecast EBITDA margin is higher than historical, document why pricing power improvement, operating leverage, or cost initiatives. Assumptions without justification are not assumptions; they are guesses.*

**PART II: THE THREE-STATEMENT MODEL**

# Chapter 4: Revenue & Cost Modelling

## Driver-Based Forecasting for Indian Businesses

The revenue forecast is the most important and most difficult projection in any financial model. It drives every downstream line costs, working capital, capex, debt capacity, and ultimately enterprise value. A naive top-line growth rate assumption (e.g., 'revenue grows at 15% per year') is rarely defensible because it provides no insight into the mechanisms by which growth will be achieved. A driver-based revenue model one that explicitly models the business's actual value-creation levers is both more accurate and more analytically useful.

### 4.1 Driver-Based Revenue Modelling The Right Way

| Revenue Driver Type     | Description                                   | Best For                              | Example Formula Structure             |
|-------------------------|---|---------------------------------------|---------------------------------------|
| Volume × Price          | Units sold × average selling price            | Manufacturing, FMCG, pharma           | =Units * ASP * (1+ASP_Growth)         |
| Capacity Utilisation    | Installed capacity × utilisation rate × price | Capital-intensive industries          | =Capacity * Utilisation * NSR         |
| Market Size × Share     | TAM × market share %                          | Consumer, telecom, financial services | =TAM * (1+TAM_Growth) * Share         |
| Subscriber / User Based | Active users × ARPU (avg. revenue per user)   | OTT, telecom, SaaS                    | =Subscribers * ARPU * 12 months       |
| Order Book / Pipeline   | Opening backlog + new orders - executed       | EPC, IT services, project cos.        | =Opening_Backlog + Orders - Execution |
| Store Count × SSSG      | Store count × same-store-sales growth         | Retail, QSR, restaurant chains        | =Stores * AvgStoreRev * (1+SSSG)      |

Table 4.1: Revenue Driver Frameworks by Business Model

#### VOLUME × PRICE REVENUE MODEL COMPLETE BUILD

INPUT ASSUMPTIONS (one row per year, FY24–FY28):

|                     |      |      |      |      |      |
|---------------------|------|------|------|------|------|
| Volume Growth %:    | 8%   | 10%  | 12%  | 12%  | 10%  |
| ASP Growth %:       | 4%   | 4%   | 3%   | 3%   | 3%   |
| Realisation Factor: | 0.98 | 0.98 | 0.98 | 0.99 | 0.99 |

CALCULATED ROWS:

Volumes (Units, Cr): =FY23\_Vol\*(1+Vol\_Growth)

ASP (Rs./Unit): =FY23\_ASP\*(1+ASP\_Growth)  
 Gross Revenue: =Volumes \* ASP  
 Net Revenue: =Gross\_Revenue \* Realisation\_Factor

Year-specific net revenue (cell formula for FY24 in column E):  
 =E\_Volumes \* E\_ASP \* E\_RealisationFactor

## 4.2 The P&L Waterfall Building Line by Line

Once the revenue model is built, the cost structure is modelled top-down from revenue. The key principle: model costs as a percentage of revenue for variable costs, and as absolute amounts for fixed costs. This captures the operating leverage of the business the extent to which incremental revenue drops through to EBITDA.

### P&L WATERFALL BUILD FY2028 PROJECTION (Rs. Crore)

Net Revenue Rs. 3,852.0 100.0%

Variable Costs (% of Revenue):

Raw Materials: 44.4% x 3,852 = Rs. 1,710.3 44.4%

Power & Fuel: 3.2% x 3,852 = Rs. 123.3 3.2%

Gross Profit: Rs. 2,018.4 52.4%

Semi-Fixed Costs:

Employee Costs (base + 8% pa growth): Rs. 398.0 10.3%

Other Mfg. Costs (% rev 6.2%): Rs. 238.8 6.2%

► **EBITDA:** Rs. 1,381.6 35.9%

EBITDA margin expansion: +545 bps vs FY24 exact margin (30.419%)

Driver: Operating leverage on fixed cost base

## 4.3 Modelling EBITDA Margin Expansion Operating Leverage

Operating leverage is the single most powerful concept in earnings forecasting. It explains why EBITDA margins expand as revenue grows because fixed costs are spread over a larger revenue base, while variable costs maintain their revenue percentage. Modelling operating leverage correctly requires explicitly separating fixed and variable cost components.

### OPERATING LEVERAGE FORMULA

EBITDA Margin (%) = Gross Margin (%) - [Fixed Costs / Revenue]

As Revenue grows and Fixed Costs stay constant:

Fixed Cost / Revenue ratio declines

=> **EBITDA Margin expands automatically**

Example Fixed cost base = Rs. 400 Cr:

At Revenue Rs. 2,000 Cr: Fixed Cost burden = 20.0% of rev

At Revenue Rs. 3,000 Cr: Fixed Cost burden = 13.3% of rev

At Revenue Rs. 4,000 Cr: Fixed Cost burden = 10.0% of rev

Operating Leverage Ratio = % change in EBIT / % change in Revenue

High leverage (>2x): significant fixed cost base

#### KEY INSIGHT

*We have reviewed financial models for PE fund investment memos where EBITDA margin expansion of 400–600 bps over 5 years was projected with no explicit explanation of the mechanism. When we asked the deal team to decompose the margin expansion into its drivers gross margin improvement, operating leverage on fixed costs, or cost reduction initiatives they could not. Margin expansion that cannot be explained at the driver level is not a forecast; it is a hope. Every basis point of projected EBITDA margin expansion must be justified by a specific, identifiable mechanism.*

## 4.4 Working Backwards The Sanity Check

After building your revenue and cost projections forward, always cross-check them using two backward-looking tests: (1) compare your projected margins to the historical margin band any projection outside the 5-year range requires an explicit justification; and (2) compare your projected revenue growth to the industry's addressable market growth a company cannot sustainably grow faster than its total addressable market unless it is taking share from competitors, which must be separately modelled.

#### PRO TIP

*Use the CAGR formula to translate growth rate assumptions into 5-year implied revenue, then ask yourself: 'Is this market big enough to support this revenue level, and does our market share assumption make sense?' The formula:  $\text{=(FY\_End\_Revenue / FY\_Base\_Revenue)}^{(1/5)} - 1$  gives you the implied CAGR. (Note: brackets around the division are essential without them, Excel operator precedence computes the wrong result.) For many Indian companies, a modeller who projects 18% revenue CAGR over 5 years is effectively projecting that the company's revenue will 2.3x. Always state this in the model so reviewers can assess the ambition relative to market size.*

**PART II: THE THREE-STATEMENT MODEL**

# Chapter 5: Working Capital, Capex & Debt Schedules The Complete Build

The working capital, capital expenditure, and debt schedules are the engine room of the three-statement model. They link the income statement to the balance sheet, drive the cash flow statement, and determine the company's net debt position and financing requirements. These schedules must be built with precision – an error in the DSO calculation, a missed debt repayment, or an incorrect depreciation schedule will cause the balance sheet to fail to balance, which means every output of the model is wrong.

## 5.1 The Working Capital Schedule The Three Days

Working capital is driven by three key metrics: Days Sales Outstanding (DSO), Days Inventory Outstanding (DIO), and Days Payables Outstanding (DPO). These three ratios determine how much cash is locked up in the operating cycle of the business and how that cash requirement changes as the business grows.

### WORKING CAPITAL DAYS CALCULATION AND FORMULA

DSO (Debtor Days) = (Trade Receivables / Revenue) × 365

Formula in Excel: =(Receivables / Revenue) \* 365

DIO (Inventory Days) = (Inventories / COGS) × 365

Formula in Excel: =(Inventory / COGS) \* 365

DPO (Creditor Days) = (Trade Payables / COGS) × 365

Formula in Excel: =(Payables / COGS) \* 365

Cash Conversion Cycle (CCC) = DSO + DIO - DPO

Example InfraFab Ltd FY2024:

Receivables: Rs. 285 Cr | Revenue: Rs. 2,482 Cr

DSO = (285 / 2,482) × 365 = 41.9 days

Inventory: Rs. 340 Cr | COGS: Rs. 1,585 Cr

DIO = (340 / 1,585) × 365 = 78.3 days

Payables: Rs. 210 Cr | COGS: Rs. 1,585 Cr

DPO = (210 / 1,585) × 365 = 48.4 days

► **CCC = 41.9 + 78.3 - 48.4 = 71.8 days**

## 5.2 Working Capital Schedule Balance Sheet Build

Once you have historical working capital days, project forward using the stabilised or target working capital ratio. The balance sheet working capital items are then computed by reversing the formula: if DSO is the projected number of days, the trade receivables balance is computed as:

### WORKING CAPITAL BALANCE SHEET FORECAST FORMULAS

Projected Trade Receivables =  $(DSO / 365) \times \text{Revenue}$   
 Excel:  $=(\text{DSO\_assumption} / 365) * \text{Revenue\_forecast}$

Projected Inventory =  $(DIO / 365) \times \text{COGS}$   
 Excel:  $=(\text{DIO\_assumption} / 365) * \text{COGS\_forecast}$

Projected Trade Payables =  $(DPO / 365) \times \text{COGS}$   
 Excel:  $=(\text{DPO\_assumption} / 365) * \text{COGS\_forecast}$

Net Working Capital = Receivables + Inventory - Payables + Other WC

Change in NWC =  $\text{NWC}_t - \text{NWC}_{t-1}$   
 (Increase in NWC = CASH OUTFLOW negative in Cash Flow Statement)  
 (Decrease in NWC = CASH INFLOW positive in Cash Flow Statement)

## 5.3 The Depreciation and Capex Schedule

The capex and depreciation schedule maintains the gross fixed asset and net fixed asset positions on the balance sheet, and generates the depreciation charge that feeds the income statement and the capex line that feeds the cash flow statement.

| CAPEX AND DEPRECIATION SCHEDULE FORMAT (Rs. Crore) |                |
|--|----------------|
| <b>GROSS BLOCK</b>                                 | <b>FY24</b>    |
| Opening Gross Block                                | 1,850.0        |
| + Additions (Capex during year)                    | 185.0          |
| - Disposals (Cost of assets sold)                  | (22.0)         |
| <b>Closing Gross Block</b>                         | <b>2,013.0</b> |
| <b>ACCUMULATED DEPRECIATION</b>                    |                |
| Opening Accumulated Depreciation                   | 782.0          |
| + Depreciation for the year                        | 95.0           |
| - Depreciation on disposals                        | (18.0)         |
| <b>Closing Accumulated Depreciation</b>            | <b>859.0</b>   |

|  |                |
|--|----------------|
| <b>NET BLOCK (= Gross - Accum. Dep.)</b>         | <b>1,154.0</b> |
| <i>Depreciation Rate (Dep / Avg Gross Block)</i> | 5.0%           |
| <i>Capex as % of Revenue</i>                     | 7.5%           |

**DEPRECIATION FORECAST STRAIGHT LINE METHOD**

Depreciation Rate = Historical D&A / Average Gross Block

$$= \text{Rs. } 95 \text{ Cr} / [(\text{Rs. } 1,850 + \text{Rs. } 2,013) / 2]$$

$$= \text{Rs. } 95 \text{ Cr} / \text{Rs. } 1,932 \text{ Cr} = 4.9\% \text{ (round to } 5.0\%)$$

Projected Depreciation = Depreciation Rate × Average Gross Block

$$\text{Excel: } =\text{Dep\_Rate} * \text{AVERAGE}(\text{Opening\_Gross\_Block}, \text{Closing\_Gross\_Block})$$

Projected Closing Net Block:

$$=\text{Opening Net Block} + \text{Capex} - \text{Depreciation}$$

Capex Assumption = % of Revenue × Projected Revenue

$$\text{Excel: } =\text{Capex\_pct\_of\_Rev} * \text{Revenue\_Forecast}$$

**5.4 The Debt Schedule Tracking Borrowings**

The debt schedule tracks all debt facilities term loans, revolving credit lines, working capital loans, non-convertible debentures (NCDs), and external commercial borrowings (ECBs). For each facility, the schedule computes the opening balance, any new drawdowns, mandatory repayments (as per the loan agreement amortisation schedule), and the closing balance. The closing balance feeds the balance sheet; the interest expense feeds the income statement.

**DEBT SCHEDULE TERM LOAN TEMPLATE**

|                               |               |
|-------------------------------|---------------|
| Opening Debt Balance (FY24):  | Rs. 580.0 Cr  |
| + New Borrowings (Drawdowns): | Rs. 80.0 Cr   |
| - Mandatory Repayments:       | Rs. (95.0) Cr |
| - Optional Prepayments:       | Rs. (25.0) Cr |
| Closing Debt Balance (FY24):  | Rs. 540.0 Cr  |

Interest Expense Formula:

$$= \text{AVERAGE}(\text{Opening Balance}, \text{Closing Balance}) \times \text{Interest Rate}$$

$$= \text{AVERAGE}(580, 540) \times 9.5\%$$

$$= \text{Rs. } 560.0 \text{ Cr} \times 9.5\% = \text{Rs. } 53.2 \text{ Cr}$$

$$\text{Excel: } =\text{AVERAGE}(\text{Opening\_Debt}, \text{Closing\_Debt}) * \text{Interest\_Rate}$$

Cash Flow Impact:

$$\text{Interest Paid: Rs. } 53.2 \text{ Cr} \rightarrow \text{Financing Cash Flow}$$

|                |              |                       |
|----------------|--------------|-----------------------|
| Repayments:    | Rs. 120.0 Cr | → Financing Cash Flow |
| New Drawdowns: | Rs. 80.0 Cr  | → Financing Cash Flow |

**KEY INSIGHT**

*We have seen models where interest expense is calculated on the closing balance rather than the average balance for the period. This overstates interest expense when debt is being repaid during the year because the loan balance was declining throughout the year, not at the closing level for the whole year. The correct formula uses the average of opening and closing balances. For highly leveraged companies where interest expense is a large number, this error can misstate PAT by Rs. 5–15 Crore per year a material error in a formal transaction model.*

**PRO TIP**

*For a company with multiple debt facilities at different rates, build separate rows in the debt schedule for each facility do not blend them into one. The blended interest rate obscures the true cost of each facility and makes it impossible to model the impact of refinancing one facility while keeping others in place. A separate row per facility takes 15 minutes more to build but saves hours of confusion when the deal structure changes.*

**PART II: THE THREE-STATEMENT MODEL**

# Chapter 6: Integrating the Three Statements Linking P&L, Balance Sheet & Cash Flow

The three-statement model is the backbone of all financial modelling. When correctly integrated, it is a closed, self-consistent system: every change in the income statement flows through the balance sheet and cash flow statement in a mathematically precise way. The model 'balances' when total assets equal total liabilities plus equity in every projected period and when the cash flow statement's ending cash balance equals the cash balance on the balance sheet.

This chapter shows exactly how the three statements are linked step by step, formula by formula using a complete illustrative example for an Indian manufacturing company.

## 6.1 The Linkage Map How the Three Statements Connect

| P&L Item           | Flows To                                 | Via                      | Formula Direction   |
|--------------------|--|--------------------------|---|
| Revenue            | Balance Sheet Receivables                | Working Capital Schedule | BS Receivables = $DSO/365 \times \text{Revenue}$                              |
| COGS               | Balance Sheet Inventory, Payables        | Working Capital Schedule | BS Inv = $DIO/365 \times \text{COGS}$ ; BS Pay = $DPO/365 \times \text{COGS}$ |
| Depreciation       | Balance Sheet Net Block                  | Capex Schedule           | Closing Net Block = $\text{Opening} + \text{Capex} - \text{D\&A}$             |
| Interest Expense   | Balance Sheet Debt                       | Debt Schedule            | Interest = $\text{Avg Debt} \times \text{Rate}$ (circular ref)                |
| Tax Expense        | Balance Sheet Tax Payable / Deferred Tax | Tax Schedule             | Current tax payable; deferred tax movements                                   |
| PAT                | Balance Sheet Retained Earnings          | Equity Schedule          | Retained Earnings = $\text{Opening} + \text{PAT} - \text{Dividends}$          |
| Capex              | Cash Flow Investing Activities           | Capex Schedule           | CFI: Capex = negative cash outflow  |
| Change in NWC      | Cash Flow Operating Activities           | WC Schedule              | CFO: Increase in NWC = negative (uses cash)                                   |
| Net Debt Repayment | Cash Flow Financing Activities           | Debt Schedule            | CFF: Repayment - new drawdown   |

Table 6.1: Three-Statement Linkage Map How Every Line Connects

## 6.2 The Cash Flow Statement Indirect Method Build

| <b>CASH FLOW STATEMENT INDIRECT METHOD (Rs. Crore, FY2024)</b> |                |
|--|----------------|
| <b>A. OPERATING CASH FLOW</b>                                  |                |
| PAT (from P&L)   | 467.0          |
| + Depreciation and Amortisation (non-cash)                     | 95.0           |
| + Finance Costs (interest reclassified)                        | 55.0           |
| - Other Income (non-operating reclassified)                    | (18.0)         |
| + Tax Expense (Current + Deferred — added back)                | 156.0          |
| <b>EBITDA (operating profit pre-WC)</b>                        | <b>755.0</b>   |
| Changes in Working Capital:                                    |                |
| (Increase) / Decrease in Trade Receivables                     | (38.0)         |
| (Increase) / Decrease in Inventories                           | (22.0)         |
| Increase / (Decrease) in Trade Payables                        | 15.0           |
| Other WC movements (net)                                       | (8.0)          |
| <b>Cash from Operations (before tax)</b>                       | <b>702.0</b>   |
| Income Tax Paid  | (148.0)        |
| <b>NET OPERATING CASH FLOW (A)</b>                             | <b>554.0</b>   |
| <b>B. INVESTING CASH FLOW</b>                                  |                |
| Purchase of Fixed Assets (Capex)                               | (185.0)        |
| Proceeds from asset disposals                                  | 8.0            |
| Interest received (from investments)                           | 18.0           |
| <b>NET INVESTING CASH FLOW (B)</b>                             | <b>(159.0)</b> |
| <b>C. FINANCING CASH FLOW</b>                                  |                |
| New Borrowings (term loan drawdown)                            | 80.0           |
| Repayment of Borrowings  | (120.0)        |
| Interest Paid  | (55.0)         |
| Dividends Paid   | (35.0)         |
| <b>NET FINANCING CASH FLOW (C)</b>                             | <b>(130.0)</b> |
| <b>Net Change in Cash (A + B + C)</b>                          | <b>265.0</b>   |

|  |                |
|--|----------------|
| Opening Cash Balance                   | 182.0          |
| <b>CLOSING CASH BALANCE</b>            | <b>447.0</b>   |
| <b>Balance Sheet Cash (must match)</b> | <b>447.0 ✓</b> |

### 6.3 The Balance Sheet Check The Plug

The balance sheet must balance in every period. The 'plug' in the balance sheet is the cash line cash is the last item calculated and is derived as the difference between total liabilities plus equity and all other asset items. When the model is correctly built, this derived cash balance should exactly equal the closing cash balance from the cash flow statement.

#### THE BALANCE SHEET BALANCE CHECK CRITICAL FORMULA

CASH (Plug) = Total Equity + Total Liabilities - Fixed Assets - WC Assets - Other Assets

In Excel (cell D50 = Cash on Balance Sheet):

=Total\_Equity + Total\_Debt + Total\_Other\_Liabilities  
- Net\_Block - Receivables - Inventory - Other\_Assets

BALANCE CHECK (must equal ZERO flag in RED if not):

=Cash\_on\_Balance\_Sheet - Closing\_Cash\_from\_CFS

If this check shows a non-zero number, the model has an error.

Common causes:

1. A P&L item not flowing to Balance Sheet (missing link)
2. Depreciation or interest not updated consistently
3. A working capital item double-counted
4. Retained earnings formula missing PAT or dividends

#### COMMON ERROR

**Error:** Model 'balances' only because a hardcoded number was added to make it balance (a 'fudge factor').

**Fix:** Never hardcode a number to force balance. Every balance sheet line must have a formula. If the model doesn't balance, find the source of the error by checking: (1) PAT flows to retained earnings, (2) D&A flows to net block, (3) WC items linked to schedules, (4) Tax payable and deferred tax correctly computed.

#### KEY INSIGHT

*We have reviewed models in investment bank and PE fund data rooms where the balance sheet appeared to balance but contained a hardcoded number buried in 'Other Liabilities' or 'Other Assets' the classic sign of a model that was forced to balance rather than genuinely balancing. We always run a full formula audit on every cell in the balance sheet of any model*

*we receive. The formula trace (Ctrl + [ in Excel) reveals immediately whether a cell contains a genuine formula or a hardcoded fudge. Never submit a model that balances through a fudge it will be found, and it destroys your credibility instantly.*

## PART III: VALUATION MODELS

# Chapter 7: DCF Valuation Model WACC, Terminal Value & Sensitivity Analysis

The Discounted Cash Flow (DCF) model is the most important valuation tool in financial modelling and the most abused. A DCF that is built with disciplined assumptions, a rigorous WACC computation, a defensible terminal value, and comprehensive sensitivity analysis is one of the most powerful analytical outputs a finance professional can produce. A DCF that reverse-engineers a predetermined valuation through assumption manipulation is spreadsheet theatre.

This chapter builds a complete DCF model from scratch FCFE computation, WACC derivation, terminal value, equity bridge, and sensitivity table with every formula shown explicitly.

## 7.1 Free Cash Flow to Firm (FCFF) The Correct Derivation

### FCFF DERIVATION COMPLETE BUILD (Rs. Crore, FY2025E)

Starting Point: EBIT (Earnings Before Interest and Tax)

EBIT (from P&L): Rs. 785.0

Step 1: Tax-affect EBIT (NOPAT)

Tax Rate (effective): 25.2%

NOPAT = EBIT × (1 - Tax Rate)

= Rs. 785.0 × (1 - 25.2%) Rs. 587.2

Step 2: Add back non-cash charges

+ Depreciation & Amortisation: Rs. 110.0

Gross Operating Cash Flow: Rs. 697.2

Step 3: Subtract investment in operations

- Change in Net Working Capital: Rs. (62.0)

- Capital Expenditure: Rs. (195.0)

► **FREE CASH FLOW TO FIRM (FCFF): Rs. 440.2**

Excel formula: =EBIT\*(1-Tax\_Rate) + DA - Delta\_NWC - Capex

## 7.2 WACC Computation Step by Step

### WACC COMPUTATION INDIAN COMPANY EXAMPLE

COMPONENT 1: COST OF EQUITY (Ke) Using CAPM + Size Premium

Risk-Free Rate (Rf): 10-yr GoI G-Sec (Jun-26) 6.80%  
 Equity Risk Premium (illustrative India MRP): 9.80%  
 Beta (Relevered): 0.95  
 Size Premium (for mid-cap): 1.50%

$$\begin{aligned} K_e &= R_f + \text{Beta} \times \text{ERP} + \text{Size Premium} \\ &= 6.80\% + 0.95 \times 9.80\% + 1.50\% \\ &= 6.80\% + 9.31\% + 1.50\% \end{aligned}$$

► **Ke = 17.61%**

#### COMPONENT 2: COST OF DEBT (Kd)

Gross Kd (weighted avg interest rate): 9.50%  
 Tax Rate: 25.20%  
 After-Tax Kd = 9.50% × (1 - 25.20%)

► **After-Tax Kd = 7.11% (broadly close to Rf in this illustration)**

#### COMPONENT 3: CAPITAL STRUCTURE (Market Value Weights)

**Market Cap (Equity): Rs. 4,200 Cr => 84.0%**  
**Net Debt: Rs. 800 Cr => 16.0%**  
**Total Capital: Rs. 5,000 Cr => 100.0%**

$$\begin{aligned} \text{WACC} &= K_e \times E/(E+D) + K_d(\text{post-tax}) \times D/(E+D) \\ &= 17.61\% \times 84.0\% + 7.11\% \times 16.0\% \\ &= 14.79\% + 1.14\% \end{aligned}$$

► **WACC = 15.93% (use 16.0% for this illustration)**

## 7.3 Terminal Value Two Methods

### TERMINAL VALUE GORDON GROWTH MODEL

$$TV = \text{FCFF}_{\{n+1\}} / (\text{WACC} - g)$$

Where:

$$\begin{aligned} \text{FCFF}_{\{n+1\}} &= \text{Final year FCFF} \times (1 + g) = \text{Rs. } 440.2 \times (1 + 5.5\%) \\ &= \text{Rs. } 464.4 \text{ Cr} \end{aligned}$$

$$\text{WACC} = 16.0\%$$

g (terminal growth rate) = 5.5% (conservative long-run rate, below India's ~10% nominal GDP)

$$\begin{aligned} TV &= \text{Rs. } 464.4 / (16.0\% - 5.5\%) \\ &= \text{Rs. } 464.4 / 10.5\% \\ &= \text{Rs. } 4,423.0 \text{ Cr} \end{aligned}$$

$$\begin{aligned} \text{PV of Terminal Value} &= TV / (1 + \text{WACC})^n \\ &= \text{Rs. } 4,423.0 / (1.16)^5 = \text{Rs. } 2,106.0 \text{ Cr} \end{aligned}$$

CHECK: TV as % of total DCF EV should be 60%-75% [Note: (1.16)<sup>5</sup> = 2.1003]

## 7.4 EV to Equity Bridge

| <b>ENTERPRISE VALUE TO EQUITY VALUE BRIDGE (Rs. Crore)</b> |                |
|--|----------------|
| PV of Forecast Period FCFs (FY25E–FY29E)                   | 1,612.0        |
| PV of Terminal Value                                       | 2,106.0        |
| <b>ENTERPRISE VALUE (EV)</b>                               | <b>3,718.0</b> |
| - Net Debt (Debt less Cash)                                | (800.0)        |
| - Minority Interest (at fair value)                        | (45.0)         |
| - Contingent Liabilities (discounted)                      | (28.0)         |
| + Investments (non-operating assets)                       | 120.0          |
| + Surplus Real Estate (non-operating)                      | 55.0           |
| <b>EQUITY VALUE (100%)</b>                                 | <b>3,020.0</b> |
| Shares Outstanding (Crore)                                 | 12.0           |
| <b>INTRINSIC VALUE PER SHARE (Rs.)</b>                     | <b>251.7</b>   |

### KEY INSIGHT

*We always present DCF results as a range, not a single number. The WACC and terminal growth rate are the two most sensitive inputs and the most uncertain. A DCF that shows a single-point value of Rs. 252 per share is false precision. The honest output is: 'At WACC ranging from 14.5%–17.5% and terminal growth of 4.5%–6.5%, the intrinsic value range is Rs. 195–330 per share.' The sensitivity table converts a misleadingly precise number into a range that communicates uncertainty honestly. Always build the sensitivity table before presenting the DCF.*

### PRO TIP

*Use 5.5% as your base case terminal growth rate for well-managed Indian mid-cap companies in 2026. India's nominal GDP growth assumption is around 10% based on FY2026-27 Budget assumptions and should be refreshed at the valuation date. The 5.5% terminal growth rate is a deliberately conservative long-run assumption, well below current nominal GDP, reflecting mean reversion and the principle that no company can grow at full nominal GDP in perpetuity. Companies with pricing power may sustain near-GDP growth in the near term, but terminal value assumptions must reflect a sustainable steady-state rate. Keep terminal growth well below long-run nominal GDP. 7% is a sensible conservative ceiling; a terminal g at or above nominal GDP would imply the firm eventually becomes the entire economy, which is impossible in perpetuity. If your DCF only 'works' at a terminal growth above 7%, the deal is overpriced.*

**PART III: VALUATION MODELS**

# Chapter 8: Comparable Company Analysis Spreading Multiples & Building the Comps Table

Comparable Company Analysis (CCA), or 'trading comps,' is the most frequently used valuation methodology in Indian investment banking and M&A practice. It grounds the valuation in observed market prices – what investors are actually paying for similar businesses today – providing a real-time market benchmark that is independent of forecasting assumptions.

## 8.1 Key Trading Multiples and Their Formulas

| Multiple     | Formula              | Best Used For                  | Indian Norms (Mid-Cap Mfg.) |
|--------------|----------------------|--------------------------------|-----------------------------|
| EV / Revenue | EV / LTM Revenue     | Pre-profit or high-growth cos. | 1.0x – 3.0x                 |
| EV / EBITDA  | EV / LTM EBITDA      | Capital-intensive businesses   | 8x – 16x                    |
| EV / EBIT    | EV / LTM EBIT        | Capex-heavy; D&A is real cost  | 10x – 20x                   |
| P / E        | Mkt Cap / LTM PAT    | Stable, mature businesses      | 18x – 35x                   |
| P / BV       | Mkt Cap / Book Value | Financial services, asset cos. | 1.5x – 5.0x                 |
| EV / FCFE    | EV / LTM FCFE        | Cash-generative, low-capex     | 15x – 30x                   |

*Table 8.1: Comparable Company Trading Multiples Formulas and Indian Benchmarks. Indicative ranges based on observed market data; actual multiples vary by sector, cycle, and market conditions. Verify against current peer data before use.*

## 8.2 Building the Comps Table Step by Step

The comps table is the output of the comparable company analysis. It must be built systematically and consistently – every peer's financials must be spread in exactly the same format so that the multiples are genuinely comparable. The steps are:

1. Identify 6–10 comparable companies (same sector, similar size, similar business model). Screen by revenue within 0.5x–2.0x of target, same primary industry classification.

2. Collect financial data: Pull market capitalisation from BSE/NSE; pull last 12 months (LTM) and forward estimates from the company's latest quarterly results and analyst consensus estimates.
3. Compute Enterprise Value:  $EV = \text{Market Cap} + \text{Total Debt} - \text{Cash} + \text{Minority Interest} - \text{Associates}$ .
4. Normalise financials: Remove one-time items, exceptional charges, and non-recurring income. Use normalised EBITDA, not reported EBITDA.
5. Calculate multiples: For each peer, compute EV/Revenue, EV/EBITDA, EV/EBIT, P/E.
6. Calculate descriptive statistics: Mean, median, 25th percentile, 75th percentile across the peer set.
7. Apply to target: Apply the median multiple to the target's normalised LTM or NTM metric.

**ENTERPRISE VALUE COMPUTATION PEER COMPANY EXAMPLE**

Company: ABC Industries Ltd (BSE: 500123)

Market Capitalisation: Rs. 3,850 Cr  
 (= Share Price Rs. 385 × Shares 10 Cr)

+ Total Debt (from Balance Sheet): Rs. 720 Cr  
 - Cash and Cash Equivalents: Rs. (185) Cr  
 + Minority Interest (at book): Rs. 65 Cr  
 - Investment in Associates: Rs. (120) Cr

ENTERPRISE VALUE: Rs. 4,330 Cr

LTM EBITDA (Normalised): Rs. 380 Cr  
 LTM Revenue: Rs. 2,150 Cr

EV / EBITDA Multiple:  $\text{Rs. } 4,330 / \text{Rs. } 380 = 11.4x$

EV / Revenue Multiple:  $\text{Rs. } 4,330 / \text{Rs. } 2,150 = 2.0x$

**8.3 The Comps Table Format and Presentation**

| Company        | Mkt Cap (Cr) | EV (Cr) | Rev (Cr) | EBITDA (Cr) | EV/Rev | EV/EBITDA | P/E   |
|----------------|--------------|---------|----------|-------------|--------|-----------|-------|
| ABC Industries | 3,850        | 4,330   | 2,150    | 380         | 2.0x   | 11.4x     | 22.5x |
| XYZ Chemicals  | 2,920        | 3,410   | 1,680    | 310         | 2.0x   | 11.0x     | 19.8x |
| PQR Specialty  | 5,200        | 5,850   | 2,900    | 540         | 2.0x   | 10.8x     | 24.1x |
| LMN Polymers   | 1,850        | 2,280   | 1,250    | 195         | 1.8x   | 11.7x     | 21.3x |
| RST Materials  | 4,600        | 5,100   | 2,700    | 510         | 1.9x   | 10.0x     | 18.9x |

| Company                          | Mkt Cap (Cr) | EV (Cr) | Rev (Cr) | EBITDA (Cr) | EV/Rev | EV/EBITDA | P/E   |
|----------------------------------|--------------|---------|----------|-------------|--------|-----------|-------|
| UVW Coatings                     | 3,100        | 3,620   | 1,950    | 345         | 1.9x   | 10.5x     | 20.5x |
| MEAN (multiples only)            |              |         |          |             | 1.9x   | 10.9x     | 21.2x |
| MEDIAN (multiples only)          |              |         |          |             | 2.0x   | 10.9x     | 20.9x |
| 25th Percentile (multiples only) |              |         |          |             | 1.9x   | 10.6x     | 20.0x |
| 75th Percentile (multiples only) |              |         |          |             | 2.0x   | 11.3x     | 22.2x |

Table 8.2: Illustrative Comparable Company Trading Multiples Indian Specialty Chemicals. Indicative ranges; percentiles use PERCENTILE.INC. Actual multiples vary by sector cycle and market conditions. Verify against current peer data before use.

## 8.4 Applying Multiples to the Target

### COMPS-BASED VALUATION TARGET COMPANY

TARGET: TechFab Specialty Chemicals Ltd

LTM Normalised EBITDA: Rs. 420 Cr

LTM Revenue: Rs. 2,250 Cr

Apply MEDIAN multiples from comps table:

**EV/EBITDA: 10.9x × Rs. 420 Cr ⇒ EV = Rs. 4,578 Cr**

**EV/Revenue: 2.0x × Rs. 2,250 Cr ⇒ EV = Rs. 4,500 Cr**

Implied EV Range: Rs. 4,500 – Rs. 4,578 Cr

Midpoint EV: Rs. 4,539 Cr

Less: Net Debt: Rs. (620) Cr

EQUITY VALUE (Comps-based): Rs. 3,919 Cr

Per Share (10 Cr shares): Rs. 392 per share

Cross-check vs. DCF: Rs. 195 – Rs. 330 per share

Comps at upper end check if target deserves premium

### PRO TIP

When comps give a higher value than DCF, investigate why before concluding that the market is overvaluing peers. Common reasons: the comps set is growing faster than the target (unwarranted comparison); the comps set includes recent M&A targets trading on acquisition premium; or the target has a structural disadvantage (higher leverage, weaker margins) that warrants a discount to the median. Never just average DCF and comps reconcile the difference analytically first.

## PART IV: DEAL MODELS

# Chapter 9: M&A Accretion / Dilution

## Model Merger Mechanics & Pro Forma Analysis

The M&A accretion/dilution model answers one fundamental question for an acquiring company: if we buy this target at this price with this financing mix, does our EPS go up (accretive) or down (dilutive) after the deal closes? It is the deal team's primary quick-screening tool and the investment committee's standard first ask.

### 9.1 Accretion / Dilution The Core Concept

#### ACCRETION / DILUTION MECHANICS ILLUSTRATED

##### BEFORE DEAL ACQUIRER STANDALONE:

|                     |                    |
|---------------------|--------------------|
| PAT:                | Rs. 450 Cr         |
| Shares Outstanding: | 15.0 Cr            |
| EPS (Pre-Deal):     | Rs. 30.0 per share |

##### DEAL TERMS:

|                                 |   |
|---------------------------------|---|
| Acquisition Price (Equity):     | Rs. 1,200 Cr                                |
| Financing: 50% Cash + 50% Stock |   |
| Cash portion:                   | Rs. 600 Cr @ 8.5% interest cost             |
| Stock portion:                  | Rs. 600 Cr @ Rs. 300/share (acquirer price) |
| New shares issued:              | Rs. 600 / Rs. 300 = 2.0 Cr new shares       |

##### AFTER DEAL PRO FORMA ANALYSIS:

|                                   |                                  |
|-----------------------------------|----------------------------------|
| Acquirer PAT (standalone):        | Rs. 450.0 Cr                     |
| + Target PAT (standalone):        | Rs. 85.0 Cr                      |
| - Interest on Acquisition Debt:   | Rs. (51.0) Cr [Rs.600 Cr × 8.5%] |
| - PPA Amortisation (Intangibles): | Rs. (28.0) Cr                    |
| + Tax Shield on Interest:         | Rs. 12.9 Cr [Rs.51 × 25.2%]      |
| <b>= PRO FORMA COMBINED PAT:</b>  | <b>Rs. 468.9 Cr</b>              |

|                   |                                       |
|-------------------|---------------------------------------|
| Pro Forma Shares: | 15.0 + 2.0 new = 17.0 Cr shares       |
| Pro Forma EPS:    | Rs. 468.9 / 17.0 = Rs. 27.6 per share |

|               |   |
|---------------|---|
| Pre-Deal EPS: | Rs. 30.0 per share                        |
| EPS Change:   | Rs. 27.6 - Rs. 30.0 = Rs. (2.4) per share |
|               | = (8.0)% DILUTIVE                         |

To break even (accretion/dilution = 0), need synergies of:

Rs. 2.4 (rounded) × 17.0 Cr shares / (1 - 25.2% tax rate) = Rs. 54.5 Cr pre-tax

## 9.2 Key Drivers of Accretion / Dilution

| Factor                        | Makes Deal More Accretive                       | Makes Deal More Dilutive                            |
|-------------------------------|---|---|
| Target's Earnings Yield       | High P/E target = low earnings yield dilutive   | Low P/E target = high earnings yield accretive      |
| Acquirer's P/E vs. Target P/E | Acquirer P/E > Target P/E = typically accretive | Acquirer P/E < Target P/E = typically dilutive      |
| Financing Mix                 | More cash = less share dilution from new stock  | More stock = more share dilution if stock cheap     |
| Cost of Debt                  | Lower interest rate = less interest drag        | Higher cost of debt = more P&L drag                 |
| Synergies                     | Revenue + cost synergies increase pro forma PAT | Absence of synergies with high premium = dilutive   |
| PPA Amortisation              | Fewer intangibles = lower amortisation drag     | Large intangible step-up = high annual amortisation |

Table 9.1: Key Drivers of Accretion / Dilution in M&A Transactions

## 9.3 The Break-Even Synergy Analysis

The break-even synergy is the minimum level of pre-tax synergies required to make the deal EPS-neutral. This is one of the most important outputs of the M&A model because it tells the deal team: 'How much synergy do you need to justify this acquisition premium?'

### BREAK-EVEN SYNERGY FORMULA

Break-Even Synergy (Pre-Tax) =  $\text{EPS Dilution} \times \text{Pro Forma Shares} / (1 - \text{Tax Rate})$

From our example above:

EPS Dilution: Rs. 2.4 per share (rounded)  
 Pro Forma Shares: 17.0 Crore  
 Tax Rate: 25.2%

Break-Even =  $\text{Rs. } 2.4 \times 17.0 / (1 - 25.2\%)$   
 =  $\text{Rs. } 40.8 / 0.748$   
 =  $\text{Rs. } 54.5$  Crore pre-tax synergies

Question for deal team: Can we realistically achieve Rs. 54.5 Crore of annual cost and revenue synergies?  
 If No => price is too high or deal structure must change.

### KEY INSIGHT

*We prepare M&A accretion/dilution models for every acquisition advisory mandate, and the break-even synergy analysis is invariably the slide that receives the most attention from the target board's financial adviser. A deal that requires Rs. 55 Crore of synergies to break even*

*where the acquirer's internal synergy estimate is Rs. 80 Crore has adequate cushion. A deal where the break-even synergy equals 90% of the best-case synergy estimate has almost no margin for error. We flag this explicitly in every deal model, with a synergy scenario table showing accretion/dilution at 0%, 25%, 50%, 75%, and 100% of projected synergies.*

**PRO TIP**

*In Indian M&A models, always include PPA amortisation as a separate, explicit line item in the accretion/dilution analysis. Many deal teams skip PPA because it is a non-cash charge but it directly reduces reported EPS and affects management compensation targets, debt covenants based on PAT, and analyst expectations. A deal that appears 3% accretive before PPA may be 5% dilutive after PPA amortisation on a large intangible step-up. Always show both the pre-PPA and post-PPA EPS impact.*

**PART IV: DEAL MODELS**

# Chapter 10: Leveraged Buyout (LBO)

## Model Debt Structure, Returns & IRR Analysis

A Leveraged Buyout (LBO) model answers the PE fund's investment committee question: 'If we buy this business at this price with this debt structure and sell it in 5 years at this multiple, what is our return?' The LBO model is built around three interconnected mechanics: the sources and uses of funds at acquisition; the debt repayment and interest schedule during the hold period; and the exit proceeds and sponsor returns at the end of the hold.

### 10.1 Sources and Uses of Funds The Entry Point

| <b>SOURCES AND USES OF FUNDS LBO ENTRY (Rs. Crore)</b> |                |
|--|----------------|
| <b>USES OF FUNDS</b>                                   |                |
| Equity Purchase Price (to existing shareholders)       | 2,400.0        |
| Acquisition-Related Fees and Expenses                  | 48.0           |
| Refinancing of Existing Debt                           | 320.0          |
| Transaction Costs (legal, advisory)                    | 32.0           |
| <b>TOTAL USES</b>                                      | <b>2,800.0</b> |
| <b>SOURCES OF FUNDS</b>                                |                |
| Senior Secured Term Loan (3.5x EBITDA)                 | 1,050.0        |
| Senior Unsecured NCDs (1.5x EBITDA)                    | 450.0          |
| Mezzanine / Subordinated Debt (0.5x EBITDA)            | 150.0          |
| Sponsor Equity (PE Fund)                               | 1,050.0        |
| Management Co-Investment                               | 100.0          |
| <b>TOTAL SOURCES</b>                                   | <b>2,800.0</b> |
| <b>Entry EBITDA (LTM Normalised)</b>                   | <b>300.0</b>   |
| <b>Total Uses / EBITDA Multiple</b>                    | <b>9.3x</b>    |
| <b>Total Debt / Entry EBITDA</b>                       | <b>5.5x</b>    |
| <b>Equity Contribution %</b>                           | <b>41.1%</b>   |

## 10.2 The Debt Waterfall Interest and Repayment Priority

In an LBO, multiple tranches of debt sit in a priority waterfall. Senior secured lenders are repaid first (first lien), followed by senior unsecured (second lien / NCDs), followed by mezzanine / subordinated debt. The free cash flow of the business is swept to repay debt in this priority order a 'cash sweep' mechanism.

### DEBT REPAYMENT SCHEDULE YEAR 1 WALKTHROUGH

Opening Total Debt: Rs. 1,650 Cr (1,050 + 450 + 150)

YEAR 1 EBITDA: Rs. 330 Cr (10% growth from entry Rs.300 Cr)  
 - Interest (blended): Rs. (148.5) Cr [blended rate ~9%]  
 - Taxes: Rs. (45.4) Cr  
 - Capex (maintenance): Rs. (33.0) Cr  
 - Change in NWC: Rs. (12.0) Cr  
**= FREE CASH FLOW: Rs. 91.1 Cr**

Cash Sweep repay Senior Secured first:

Mandatory repayment (5% pa of original): Rs. (52.5) Cr  
 Optional sweep (100% excess cash): Rs. (38.6) Cr  
 Total Senior Secured Repayment: Rs. (91.1) Cr

Closing Debt Year 1:

Senior Secured: Rs. 1,050 - Rs. 91.1 = Rs. 958.9 Cr  
 NCDs: Rs. 450.0 Cr (no repayment until Y3)  
 Mezz: Rs. 171.0 Cr (PIK @ 14% pa; 150 × 1.14)  
 TOTAL DEBT: Rs. 1,579.9 Cr

Net Leverage: Rs.1,579.9 / Rs.330 EBITDA = 4.8x (down from 5.5x)

## 10.3 Exit Analysis and Sponsor Returns

### LBO EXIT ANALYSIS YEAR 5 RETURNS

Year 5 EBITDA (assuming 12% CAGR): Rs. 528.7 Cr  
 Exit Multiple (EV/EBITDA): 9.0x (vs 9.3x uses multiple)  
 Exit Enterprise Value: Rs. 4,758.3 Cr

Less: Net Debt at Exit (after sweeps):

Senior Secured: fully repaid (Rs. 0 Cr)  
 NCDs: Rs. 250.0 Cr remaining  
 Mezz (PIK balance @ 14% pa): Rs. 288.8 Cr [150 × (1.14)<sup>5</sup>]  
 Total Net Debt: Rs. (538.8) Cr

EXIT EQUITY VALUE: Rs. 4,758.3 - Rs. 538.8 = Rs. 4,219.5 Cr

SPONSOR RETURNS:

Sponsor Equity Invested: Rs. 1,050 Cr  
 Sponsor Exit Proceeds (85% share): Rs. 3,586.6 Cr

Money-on-Invested-Capital (MoIC):  
= Rs. 3,586.6 / Rs. 1,050 = 3.42x

IRR (5-year holding period):  
=  $(3.42)^{(1/5)} - 1 = 27.9\%$

Excel Formula: =IRR({-1050, 0, 0, 0, 0, 3586.6})

#### KEY INSIGHT

*We build LBO models for every PE buyout advisory mandate at Elite Valuation. The most instructive exercise we do after building the base case is the 'downside floor' what happens if EBITDA growth is 0% (flat) over the hold period and the exit multiple contracts by 1.5x? This scenario tests whether the deal economics are structurally sound or entirely dependent on growth and multiple expansion. A PE deal that only generates a 2x MoIC in the downside is not adequately priced for the risk. We require PE clients to articulate their downside floor explicitly before recommending an entry price.*

#### PRO TIP

*Build your LBO model with a 'returns bridge' a waterfall chart that decomposes the sponsor's total return into three components: (1) EBITDA growth contribution (how much of the MoIC comes from earnings growth), (2) multiple expansion contribution (how much from paying 9.3x and selling at higher or lower multiple / total uses multiple), and (3) leverage paydown contribution (how much from debt repayment increasing equity value). This decomposition is the most powerful communication tool in an LBO it tells the investment committee exactly where the return is coming from and which assumptions are most critical to the investment thesis.*

**PART V: ADVANCED TOPICS**

# Chapter 11: Scenario & Sensitivity Analysis

## Data Tables, Tornado Charts & Monte Carlo

A model that outputs a single number is not a professional analytical tool it is a false claim of certainty. Every financial model must communicate the range of outcomes across different assumptions, and the relative importance of each assumption to the final output. Scenario analysis, sensitivity tables, and tornado charts are the standard tools for this communication. They transform a model from a point estimate into a decision-support framework.

### 11.1 Scenario Analysis Three-Case Structure

The standard three-case scenario structure provides a bear case, base case, and bull case. Each case is a self-consistent set of assumptions not simply a mechanical adjustment to a single variable.

| Assumption                  | Bear Case | Base Case | Bull Case |
|-----------------------------|-----------|-----------|-----------|
| Revenue Growth (CAGR, 5yr)  | 8%        | 14%       | 20%       |
| EBITDA Margin (stabilised)  | 22%       | 28%       | 34%       |
| Capex / Revenue (%)         | 9%        | 7%        | 5%        |
| Working Capital Days (CCC)  | 85 days   | 72 days   | 60 days   |
| Terminal Growth Rate (g)    | 4.5%      | 5.5%      | 6.5%      |
| WACC                        | 17.5%     | 16.0%     | 14.5%     |
| Implied DCF Value per Share | Rs. 148   | Rs. 252   | Rs. 412   |

Table 11.1: Three-Case Scenario Assumptions DCF Valuation Example

#### SCENARIO SELECTOR CHOOSE FUNCTION IMPLEMENTATION

Setup: Cell B2 = Scenario Toggle (1=Bear, 2=Base, 3=Bull)

Revenue Growth assumption (cell):

=CHOOSE(\$B\$2, 8%, 14%, 20%)

EBITDA Margin assumption (cell):

=CHOOSE(\$B\$2, 22%, 28%, 34%)

WACC (cell):

=CHOOSE(\$B\$2, 17.5%, 16.0%, 14.5%)

Result: Change B2 from 1→2→3 to switch between all scenarios.  
Every formula in the model that references these assumption cells automatically recalculates for the selected scenario.

## 11.2 Two-Variable Sensitivity Table Data Table

### TWO-VARIABLE DATA TABLE SETUP IN EXCEL

Purpose: Show DCF value at all combinations of WACC and terminal growth (g)

STEP 1: In a blank area, set up the table header:

- Row headers: WACC values (13%, 14%, 15%, 16%, 17%, 18%)
- Column headers: g values (4.0%, 4.5%, 5.0%, 5.5%, 6.0%, 6.5%)
- Top-left cell of the table: =DCF\_EV\_per\_share (link to model output)

STEP 2: Select the entire table (headers + data area)

STEP 3: Data → What-If Analysis → Data Table

Row Input Cell: = WACC assumption cell in model

Column Input Cell: = Terminal growth rate cell in model

STEP 4: Click OK. Excel fills the table automatically.

STEP 5: Apply conditional formatting (colour scale) to data area:

Green = highest values; Red = lowest values

Highlight the base case cell with a border

## 11.3 Sample Sensitivity Table Output

| WACC → | 4.0% g | 4.5% g | 5.0% g | 5.5% g | 6.0% g | 6.5% g |
|--------|--------|--------|--------|--------|--------|--------|
| 14.0%  | 305    | 322    | 342    | 366    | 394    | 428    |
| 14.5%  | 280    | 295    | 312    | 332    | 356    | 385    |
| 15.0%  | 258    | 271    | 286    | 303    | 323    | 347    |
| 15.5%  | 238    | 249    | 263    | 278    | 295    | 315    |
| 16.0%  | 220    | 230    | 242    | 252    | 270    | 288    |
| 16.5%  | 204    | 213    | 224    | 236    | 249    | 264    |
| 17.0%  | 190    | 198    | 207    | 218    | 229    | 242    |

Table 11.2: DCF Value per Share (Rs.) WACC vs. Terminal Growth Rate Sensitivity

## 11.4 The Tornado Chart Ranking Assumption Sensitivity

The tornado chart ranks each input assumption by its impact on the output showing which assumptions matter most and deserve the most scrutiny. It is built by varying each assumption one at a time between its downside and upside value, holding all others at their base case, and measuring the impact on the key output (e.g., EV per share).

| Input                      | Downside | Upside | EV at Downside (Rs.) | EV at Upside (Rs.) | Range (Rs.) | Rank |
|----------------------------|----------|--------|----------------------|--------------------|-------------|------|
| Terminal Growth Rate       | 4.0%     | 6.5%   | 220                  | 369                | 149         | 3    |
| WACC                       | 18.0%    | 14.0%  | 194                  | 366                | 172         | 1    |
| EBITDA Margin (stabilised) | 22%      | 34%    | 185                  | 338                | 153         | 2    |
| Revenue CAGR (5yr)         | 8%       | 20%    | 198                  | 312                | 114         | 4    |
| Capex / Revenue            | 9%       | 5%     | 222                  | 278                | 56          | 5    |
| Working Capital (CCC days) | 85d      | 60d    | 236                  | 265                | 29          | 6    |

Table 11.3: Tornado Chart Inputs Ranking Assumptions by Value Impact

### KEY INSIGHT

*We build sensitivity tables and tornado charts on every DCF model we present to investment committees. The most consistent finding is that WACC and terminal growth rate are the two largest single drivers of value uncertainty more than revenue growth and margin assumptions combined. This tells you something important: the biggest risk in DCF valuation is not the operating forecast, it is the discount rate and terminal value assumptions. Investors who focus exclusively on revenue growth are missing the most important source of uncertainty.*

### PRO TIP

*Apply conditional colour formatting to your sensitivity table to make the output immediately readable: use a green-to-red colour gradient (green at high values, red at low values) on the data cells. Also draw a bold border around the base case cell so reviewers can immediately locate the central estimate within the range. A sensitivity table without colour*

*coding requires the reader to process numbers; one with colour coding communicates the distribution of outcomes at a glance. Visual clarity is part of analytical communication.*

**PART V: ADVANCED TOPICS**

# Chapter 12: Model Audit, Error-Proofing & Professional Presentation

A financial model that produces incorrect outputs is worse than no model because it creates false confidence. Model errors in transaction situations have resulted in mispriced deals, incorrect regulatory filings, and significant financial losses. The audit and error-proofing process is not a bureaucratic formality; it is the quality control step that stands between the model and the decisions that will be made based on it.

## 12.1 The Pre-Submission Audit Checklist

| Audit Check              | What to Test                                   | How to Test in Excel                           | Red Flag                         |
|--------------------------|--|--|----------------------------------|
| Balance Sheet Balancing  | Assets = Liabilities + Equity each period      | BS Check row = Assets - (Liab + Equity)        | Any non-zero value               |
| Cash Flow Reconciliation | CFS closing cash = BS cash balance             | =BS_Cash - CFS_Closing_Cash                    | Any non-zero value               |
| No Hardcoded Formulas    | No numbers embedded in calc cells              | Ctrl+' to show formulas; review every calc row | Any numeric literal in a formula |
| No Broken Links          | All external links resolved or removed         | Edit → Links → Check Status                    | Error or 'source not found'      |
| No REF or NAME Errors    | All cell references valid                      | Ctrl+F → Find: #REF, #NAME, #DIV               | Any formula error remaining      |
| Interest Circularity     | Circular reference is intentional and stable   | Enable iterative calc; check convergence       | Model shows #VALUE or oscillates |
| Scenario Consistency     | Bear/Base/Bull scenarios all run without error | Toggle CHOOSE selector 1→2→3                   | Any error in any scenario        |
| Rounding Consistency     | All outputs rounded consistently               | Check units mix of Crore and Lakh?             | Inconsistent units across sheets |

Table 12.1: Model Audit Checklist Eight Critical Tests Before Any Submission

## 12.2 Building Error Checks Into the Model

The most effective approach to model error prevention is building automatic error checks directly into the model formulas that calculate to zero when the model is correct and produce a visible non-zero flag when something is wrong. These checks should be consolidated on a dedicated ERROR CHECKS sheet and colour-coded red when triggered.

**STANDARD ERROR CHECK FORMULAS**

1. BALANCE SHEET CHECK (must = 0 every period):  
`=SUM(All_Assets) - SUM(All_Liabilities) - SUM(Equity)`  
`=IF(BS_Check=0, "OK", "ERROR BS DOES NOT BALANCE")`
2. CASH RECONCILIATION CHECK (must = 0):  
`=BS_Cash_Balance - CFS_Closing_Cash`  
`=IF(Cash_Check=0, "OK", "ERROR CASH MISMATCH")`
3. REVENUE DRIVER CONSISTENCY:  
`=IF(ABS(Modelled_Revenue - Driver_Revenue)/Modelled_Revenue > 1%,  
"WARNING Revenue drivers don't sum to total", "OK")`
4. DEPRECIATION REASONABLENESS:  
`=IF(Dep_Rate > 15%, "WARNING Dep rate seems high", "OK")`
5. LEVERAGE COVENANT CHECK:  
`=IF(Net_Debt/EBITDA > Debt_Covenant, "COVENANT BREACH", "OK")`

**12.3 Handling Circular References Interest on Cash**

Financial models legitimately contain circular references when: interest expense depends on debt balance, which depends on cash sweep, which depends on free cash flow, which depends on interest expense. This is mathematically circular but economically correct. Excel resolves it through iterative calculation.

**COMMON ERROR**

**Error:** Model shows #VALUE! error after enabling circular reference. Excel is not converging on the circular calculation.

**Fix:** Check that File → Options → Formulas → Enable Iterative Calculation is ON with Max Iterations = 100 and Max Change = 0.001. If the model still doesn't converge, add a 'prior period' reference to break the circular loop: use Opening Balance for interest calculation rather than Average(Opening, Closing), then refine iteratively.

**12.4 Professional Model Presentation The Output Dashboard**

The output dashboard is the face of the model the first sheet a reviewer sees and the last one they remember. A well-designed dashboard communicates the key outputs at a glance, provides the scenario toggle for interactive analysis, and signals professional quality through consistent formatting, aligned numbers, and purposeful chart design.

The standard output dashboard for an Indian corporate financial model contains: a three-scenario summary table (Bear/Base/Bull KPIs side by side); a valuation summary showing DCF range, comps range, and implied current share price premium/discount; a 5-year P&L

summary chart; an EBITDA margin trajectory chart; a debt paydown chart (for leveraged situations); and the balance sheet balancing check prominently displayed.

| Dashboard Section | What to Show                             | Chart Type                         | Key Design Rule                             |
|-------------------|--|------------------------------------|---|
| Valuation Summary | DCF range, comps range, current price    | Football field (bar chart)         | Mark current share price with vertical line |
| Scenario KPIs     | Revenue, EBITDA, PAT, EPS across 3 cases | Side-by-side table                 | Colour-code Bear/Base/Bull columns          |
| P&L Trajectory    | Revenue and EBITDA over 7 years (H+F)    | Clustered bar + line combo         | Use two Y-axes for revenue and margin %     |
| Debt Waterfall    | Opening debt → repayments → closing      | Stacked waterfall chart            | Separate mandatory vs. optional prepayment  |
| Returns Summary   | IRR, MoIC by scenario (for PE models)    | Simple table with bold output      | Highlight base case IRR with colour         |
| Balance Check     | BS check and Cash check must be 0        | Traffic light: Green=OK, Red=Error | Place prominently never bury this           |

Table 12.2: Output Dashboard Content and Design Guidelines

#### KEY INSIGHT

*We have reviewed models submitted by investment banks in M&A data rooms where the output dashboard was the weakest element tables with misaligned numbers, inconsistent decimal places, missing chart labels, and no scenario toggle. The analysis may have been excellent, but the presentation undermined confidence. We treat the output dashboard as a client deliverable in its own right every number formatted consistently, every chart labelled clearly, and the scenario selector prominently positioned so that reviewers can stress-test the model themselves during the meeting. A model that can be stress-tested live in the meeting room is worth twice the credibility of one that requires the builder to operate it.*

#### PRO TIP

*Before sending any financial model, run the 'Stranger Test': give the model to a colleague who did not build it and ask them to find the key output (the equity value per share) within 60 seconds, change the WACC assumption by 1%, and understand what the three scenarios represent. If they cannot do all three within 5 minutes without your help, the model is not sufficiently self-explanatory for professional use. Fix navigation, labelling, and the assumption structure before submitting. The stranger test is the most effective quality check in financial modelling.*

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**CONCLUSION**

# Conclusion: Building a Career in Financial Modelling

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Financial modelling is one of the most valuable and most portable skills in modern finance. A modeller who can build a complete three-statement model, construct a rigorous DCF, run a comps analysis, and structure an M&A or LBO model is equipped to contribute meaningfully in investment banking, private equity, corporate development, consulting, credit analysis, and financial advisory across every industry and every deal type.

This guide has walked through the complete financial modelling toolkit from first principles: the architectural discipline that makes models trustworthy; the Excel functions that make models efficient; the historical analysis that grounds forecasts in reality; the driver-based forecasting that makes projections defensible; the three-statement integration that makes models self-consistent; the DCF, comps, M&A, and LBO models that power transactions; and the scenario analysis and audit practices that make models professional.

## The Path from Competent to Expert

Technical competence in financial modelling knowing the functions, understanding the architecture, being able to build a three-statement model is the foundation. But the transition from competent to expert modeller requires something that no guide can fully teach: business intuition. The expert modeller asks questions that the competent modeller doesn't: Why is this company's DSO 30 days higher than its peers? Why has the gross margin been compressing for 3 years? Why does the DCF value imply a growth rate that the industry cannot support? These questions come from deep engagement with the business and the market not from spreadsheet skill alone.

The path to financial modelling expertise has four stages: (1) technical foundation learn every formula, build every model type from scratch at least five times; (2) sector depth develop specialist knowledge in one or two industry sectors where you can interpret ratios, challenge assumptions, and benchmark performance from memory; (3) transaction experience apply your models to live transactions where the assumptions are debated, the outputs are challenged, and the deal price depends on your analysis; and (4) mentorship both receiving it from senior practitioners and providing it to junior analysts, which forces you to articulate and systematise your knowledge.

## Building Good Modelling Habits The Daily Practice

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- Build one complete model from scratch every month different company, different industry. The repetition builds speed and catches the assumptions you make unconsciously.
- Audit two models you did not build every quarter. Nothing improves your own model quality faster than finding errors in someone else's work and understanding how they got there.
- Read one set of annual results per week not just the headline numbers, but the segment breakdown, the management commentary, and the footnotes. Annual reports are the raw material of financial modelling.
- For every modelling assumption you make, ask: 'What is the evidence for this number?' If the only evidence is 'it seemed reasonable,' the assumption needs more work.
- Learn one new Excel feature or function per week. Excel is a deep tool most financial modellers use less than 20% of its analytical capability. Dynamic Arrays, Power Query, and LAMBDA functions have transformed model building for those who have invested in learning them.

## How Elite Valuation Can Help

- Transaction financial modelling buyer/seller models, accretion/dilution, pro forma analysis, and deal structure optimisation for M&A transactions
- Independent model review and audit formula audit, assumption challenge, scenario stress-testing, and sign-off for board or regulatory purposes
- DCF and business valuation models driver-based three-statement models integrated with DCF valuation, sensitivity analysis, and comps benchmarking
- LBO and private equity return models debt structuring, cash sweep mechanics, management incentive plan modelling, and IRR/MoIC analysis
- Financial modelling training customised programmes for CA firms, investment banks, PE funds, and corporate finance teams at every skill level
- Project finance models infrastructure and real estate project models with DSCR computation, debt sculpting, IRR analysis, and lender covenant testing

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