Pre-Session Learning Resource

Comparable / Precedent Transactions Method (PTM)

---

1. Introduction and Learning Objectives

1.1 Purpose of This Learning Resource

This learning resource is designed to prepare students for working with an Excel-based valuation model built using the **Precedent Transactions Method (PTM)**. It must be studied **before** attending classroom or lab sessions.

The document is **fully self-contained** and does not require any external reading. It equips students with:

- Conceptual understanding of PTM

- Economic intuition behind transaction-based valuation

- Ability to translate concepts into Excel formulas

- Confidence to interpret valuation outputs critically

The focus is **not** on complex modeling, but on **valuation logic, judgment, and disciplined Excel implementation**.

1.2 Learning Outcomes

After completing this material, students should be able to:

- Explain what PTM measures and when it is appropriate

- Distinguish between control and minority transactions

- Understand why Enterprise Value is used in PTM

- Normalize partial stake transactions correctly

- Use Average and Median multiples appropriately

- Build and interpret a one-sheet PTM Excel model

- Defend deal inclusion and exclusion decisions

---

2. Conceptual Foundations of PTM

2.1 What Is the Precedent Transactions Method?

PTM is a **market-based valuation approach** that estimates the value of a target company by examining **prices paid in past acquisitions of similar companies**.

The underlying logic is:

- Acquisitions represent **real money paid by informed buyers**

- Prices incorporate strategic value, synergies, and control

- Observed transaction multiples provide valuation benchmarks

PTM is widely used in:

- Mergers & acquisitions

- Fairness opinions

- Strategic investment analysis

2.2 Control Premium and Its Importance

Most precedent transactions involve **control**, meaning the acquirer:

- Gains voting rights

- Controls strategy and cash flows

- Can restructure operations

As a result, buyers often pay a **control premium** over prevailing market prices.

Key **implication:**
Transaction multiples derived from PTM generally reflect **control value**, not minority value.

This is why PTM valuations often differ from trading-based comparable company valuations.

2.3 Why Enterprise Value (EV) Is the Valuation Base

PTM uses **Enterprise Value (EV)** rather than equity value because:

- Companies have different capital structures

- Debt levels vary across firms

- Equity prices alone are not comparable

Enterprise Value represents the value of the entire operating business, independent of financing.

Conceptual identity:

Enterprise Value = Equity Value + Net Debt

This ensures valuation comparability across transactions.

2.4 Why EV / EBITDA Is the Core Multiple

EV / EBITDA is preferred because:

- EBITDA approximates operating cash flow
- It excludes financing and tax effects
- It allows comparison across firms and industries

EV / EBITDA answers the question:

"How much did the acquirer pay for each unit of operating earnings?"

Other multiples (P/E, EBIT, book value) are **intentionally excluded** to maintain conceptual clarity.

---

3. Model Logic and Structure

3.1 One-Sheet Model Design Philosophy

Each PTM case is implemented as:

- One Excel worksheet
- One complete valuation model

This design ensures:

- No navigation confusion
- Clear top-to-bottom logic
- Easy auditing and grading

Students   can   visually   trace:
Inputs → Calculations → Outputs

3.2 Logical Flow of the Model

The PTM model follows a disciplined sequence:

1. Enter transaction data

2. Evaluate transaction characteristics

3. Decide deal inclusion or exclusion

4. Normalize equity values

5. Compute Enterprise Value

6. Calculate transaction multiples

7. Derive benchmark multiples

8. Value the target company

Each step builds logically on the previous one.

---

4. Transaction Characteristics and Deal Selection

4.1 Why Deal Screening Is Necessary

Not all transactions are economically comparable. Differences may arise due to:

- Minority investments

- Leveraged buyouts

- Distressed sales

- Pending or incomplete deals

Including such transactions mechanically can distort valuation results.

Therefore, **qualitative judgment** is essential in PTM.

4.2 Binary Deal Selection Mechanism (Include = 0 / 1)

Each transaction is assigned a binary control variable:

Value Interpretation

1   Deal is included in valuation

0   Deal is excluded

This variable directly controls whether a deal affects:

- Equity value calculations

- EV calculations

- Multiples
- Summary statistics

This structure forces students to **explicitly apply judgment**, rather than relying on formulas alone.

---

5. Normalising Partial Stake Transactions

5.1 Why Normalisation Is Required

When a transaction involves less than 100% ownership, the reported deal value reflects only a **fraction of total equity value**.

To ensure comparability:

- All transactions must be expressed on a **100% ownership basis**

5.2 Conceptual Normalisation Formula

Equity Value (100%) = Deal Value ÷ Stake Acquired

For example:

- If 60% stake costs ₹600 crore
- Implied 100% equity value = ₹600 ÷ 0.60 = ₹1,000 crore

This adjustment is applied **only to included deals**.

---

6. Core Excel Calculations and Functions

6.1 Equity Value at 100%

Purpose:
Convert observed deal values into full-ownership equivalents.

Conceptual logic:

- If Include = 1 → compute equity value
- If Include = 0 → ignore the deal entirely

This prevents excluded deals from influencing valuation.

6.2 Enterprise Value Calculation

Enterprise Value is calculated as:

EV = Equity Value + Net Debt

This step ensures that:

- Debt differences are neutralized

- Operating assets are valued consistently

6.3 Transaction Multiples

Two multiples are computed:

- EV / Revenue

- EV / EBITDA

Among these, **EV / EBITDA** is the primary valuation multiple.

All multiples are automatically suppressed for excluded deals.

7. Descriptive Statistics: Average vs Median

7.1 Why Summary Statistics Matter

Transaction multiples often vary due to:

- Strategic premiums

- Competitive bidding

- Growth expectations

Summarizing these multiples requires careful statistical judgment.

7.2 Average Multiple

- Arithmetic mean of selected multiples

- Sensitive to extreme values

- Reflects overall pricing level

7.3 Median Multiple

- Middle value of selected multiples

- Less influenced by outliers

- Often preferred in professional valuation

Key **insight:**
Average and Median can lead to **very different valuations**, especially in the presence of outliers.

---

8. Target Company Valuation Logic

8.1 Target Inputs Required

Only three inputs are required:

- Target EBITDA

- Target Net Debt

- Shares Outstanding

This reinforces that PTM is a **simple but judgment-driven** method.

8.2 Valuation Using Benchmark Multiples

For both Average and Median multiples:

1. Implied Enterprise Value

2. Implied Equity Value

3. Price per Share

Unit consistency ensures:

₹ crore ÷ crore shares = ₹ per share

Final outputs are highlighted clearly.

---

9. Conceptual Checks and Validation

9.1 Minimum Comparable Requirement

At least **three included transactions** are required for:

- Statistical credibility

- Meaningful benchmarking

9.2 Logical Consistency Checks

Students must verify:

- No division-by-zero errors

- Valid stake percentages

- Reasonable multiples

Models failing checks must not be accepted.

---

10. Interpretation and Professional Judgment

10.1 PTM Is Judgment-Driven

PTM outcomes depend critically on:

- Deal selection

- Treatment of partial stakes

- Handling of outliers

There is **no single correct valuation number**.

10.2 What Students Must Be Able to Explain

Students should clearly articulate:

- Why certain deals were excluded

- Why median differs from average

- Why EV is used instead of equity

- How judgment affects valuation

---

11. Common Errors to Avoid

- Hard-coding values in formulas

- Mixing inputs and calculations

- Ignoring transaction characteristics

- Blindly accepting statistical outputs

---

12. Summary

This learning resource ensures that students enter the classroom with:

- Strong conceptual grounding

- Excel readiness

- Valuation judgment capability

Classroom time can then focus on **discussion, interpretation, and decision-making**, rather than mechanical explanation.

End of Pre-Session Learning Resource