



B.Com Honours

Semester VI

Calicut University

FINANCIAL DERIVATIVES

Course Code: COM6EJ301 • Module 4 Notes

Module IV: Swaps Contracts, Applications, & Types

Covers swap contract definition, terminologies, comparison of futures vs swaps, plain vanilla interest rate swaps (IRS), currency swaps, credit default swaps (CDS), commodity swaps, and equity swaps.

Unit 20: Swaps Definition, Features, & Futures Comparison

Swap Contract: Over-the-counter (OTC) agreement between two counterparties to exchange streams of cash flows over specified future period based on predetermined underlying asset/rate. Comparison: Futures (Exchange-traded, single cash settlement date) vs Swaps (OTC, series of cash flow exchanges).

Unit 21: Interest Rate Swaps (IRS) & Applications

Plain Vanilla Interest Rate Swap: Company A pays Fixed Rate & receives Floating Rate (SOFR/MIBOR); Company B pays Floating Rate & receives Fixed Rate on Notional Principal Amount (\$N\$).

Unit 22: Currency Swaps & Credit Default Swaps (CDS)

Currency Swap: Exchange of principal & interest payments in different currencies (e.g. USD vs INR).
Credit Default Swap (CDS): Financial derivative instrument transferring credit risk of reference entity (bond default protection).

Unit 23: Commodity Swaps & Equity Swaps

Commodity Swaps (Floating commodity price exchanged for fixed price stream) & Equity Swaps (Exchange of equity index returns against fixed/floating interest rate).

Practical Solved Problem 1 (Plain Vanilla Interest Rate Swap IRS Cash Settlement): Notional Principal \$ N = ₹10,00,00,000 \$ (₹10 Crore). Company X agrees to pay Fixed Rate 7.5% p.a. and receive Floating Rate MIBOR to Company Y semi-annually.
At end of 6 months, MIBOR rate is fixed at 8.2% p.a. Calculate net cash flow settlement.

$$\text{Net Settlement} = N * (\text{Floating Rate} - \text{Fixed Rate}) * (6 / 12)$$

Step-by-step Solution:

- Fixed Interest Payment by X = \$ 10,00,00,000 \times 7.5\% \times 0.5 = \textbf{₹37,50,000} \$.
- Floating Interest Receipt by X = \$ 10,00,00,000 \times 8.2\% \times 0.5 = \textbf{₹41,00,000} \$.
- Net Settlement Amount** = \$ 41,00,000 - 37,50,000 = \textbf{₹3,50,000} \$.
- Result: Company X receives net cash payout of ₹3,50,000 from Company Y at end of 6 months.

Practical Case Framework 2 (Types of Swap Contracts Classification Matrix): Compare swap type, underlying cash flow exchanged, primary hedging utility, and risk exposure.

Swaps Classification & Applications Table:

Swap Type	Cash Flow Streams Exchanged	Primary Corporate Hedging Utility
Interest Rate Swap (IRS)	Fixed Interest Rate vs Floating Rate (MIBOR/SOFR)	Hedge against interest rate fluctuations on debt
Currency Swap	Principal & Interest in Currency A vs Currency B	Hedge foreign currency debt & exchange rate risk
Credit Default Swap (CDS)	Premium Payments vs Default Loss Compensation	Transfer corporate bond credit default risk

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