

NISM Series X-A: Investment Adviser Level 1

Understanding Derivatives

LEARNING OBJECTIVES: Basics & Concepts • Forwards • Futures • Options • Swaps • Hedging / Speculation / Arbitrage • Equity, Currency & Commodity Derivatives

1 Overview — What is a Derivative?

A **derivative** is a contract whose value is **derived** from the value of an underlying asset. Underlying assets can be metals (gold, silver), energy (oil, gas), agricultural commodities (wheat, coffee) or financial assets (shares, bonds, currencies, interest rates). Trading of derivatives is governed by the regulatory framework under the **SC(R)A 1956**.

Zero Sum Game One party profits only at expense of other. Net P&L of both = zero.	Underlying Asset Asset from which derivative derives value: stocks, FX, bonds, commodities	Settlement Cash (price differential) or physical delivery of underlying asset
Margin / Collateral Deposited before trading. Initial margin + Premium margin for options.	Open Interest Total outstanding contracts not yet settled. Rising OI = new money in.	SPAN Margin CME-developed risk software; covers 99% of loss scenarios.

2 Types of Derivative Products — Forward, Futures, Options, Swaps

Product	Obligation	Exchange Traded?	Counterparty Risk	Key Feature
Forward	Both parties obligated	No — OTC bilateral	HIGH — no guarantor	Customised terms; illiquid; counterparty may default
Futures	Both parties obligated	Yes — exchange listed	LOW — clearing corp guarantees	Standardised; daily MTM; margins required by both sides
Call Option	Buyer has RIGHT; seller OBLIGATED	Yes — exchange listed	LOW	Buyer pays premium; right to BUY at strike price
Put Option	Buyer has RIGHT; seller OBLIGATED	Yes — exchange listed	LOW	Buyer pays premium; right to SELL at strike price
Swap (IRS)	Both parties obligated	No — mostly OTC	MEDIUM — ISDA/FIMMDA norms	Fixed vs floating interest exchange; notional never exchanged

■ Forward Contract — Bilateral OTC

Forward: Agreement to buy/sell asset at a future date at a price decided today. No money changes hands at inception — only at expiry. Both parties are **obligated** regardless of the market price on delivery date. Key limitations: **Liquidity Risk** (not exchange listed; hard to exit) and **Counterparty Risk** (either party may default if price moves unfavourably).

■ REAL-WORLD EXAMPLE — Forward Contract (Gold)

March 9: You agree to buy 10g gold at Rs.30,450 after 1 month. Spot price = Rs.30,425.
 No money changes hands on March 9. After 1 month: you pay Rs.30,450, collect gold.
 Both parties OBLIGATED regardless of what gold trades at on the delivery date.

■ Options — In-The-Money / At-The-Money / Out-of-The-Money

Option Status	Condition (Call Option)	Intrinsic Value	Time Value
In-The-Money (ITM)	Market Price > Strike Price	Positive — profit by exercising	Positive
At-The-Money (ATM)	Market Price = Strike Price	Zero	Positive
Out-of-The-Money (OTM)	Market Price < Strike Price	Zero — no benefit to exercise	Positive but declining

Interest Rate Swap — Worked Example

REAL-WORLD EXAMPLE — Interest Rate Swap (IRS)

Borrower has floating rate debt (T-Bill + spread). Prefers certainty of fixed rate.

IRS arrangement: → Pays FIXED rate to swap dealer each quarter

→ Receives T-Bill + spread FROM swap dealer each quarter

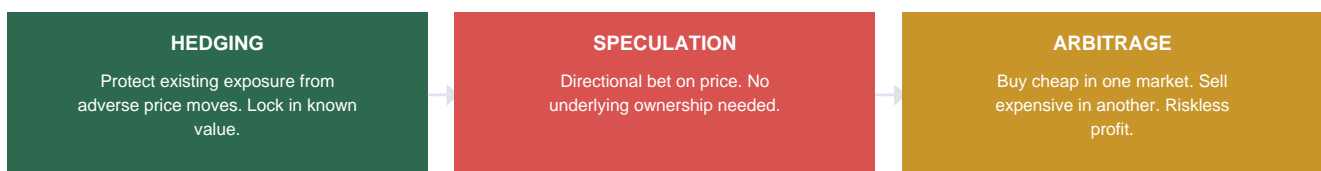
Net effect: Floating obligation cancelled. Borrower now pays only fixed rate.

3 Structure of Derivative Markets — OTC vs Exchange Traded

Dimension	OTC Derivatives	Exchange-Traded Derivatives
Contract Terms	Customised between parties	Standardised by exchange; cannot be altered
Counterparty Risk	HIGH — bilateral; either party may default	LOW — clearing corporation guarantees settlement
Transparency	Low — private bilateral terms	High — public price discovery on exchange screens
Liquidity	Low — hard to exit; no secondary market	High — anonymous matching; easy to enter/exit
Examples	Forwards, most Swaps	Futures, Exchange-traded Options
Indian Regulation	FIMMDA norms / RBI guidelines	SEBI regulates all exchange-traded derivatives

4 Purpose of Derivatives — Hedging, Speculation & Arbitrage

Three Primary Purposes of Derivatives



Purpose	Who Uses It	Example	Risk Profile
Hedging	Farmers, importers, fund managers with existing exposure	Biscuit maker buys wheat futures to lock input cost; farmer sells wheat futures to fix selling price	Reduces price risk; pays certainty via derivative cost
Speculation	Traders, hedge funds, proprietary desks	Trader buys Nifty futures expecting rally; profits if Nifty rises above entry price	HIGH; leveraged; loss can exceed initial margin
Arbitrage	Algorithmic traders, arbitrage MF schemes	Buy Nifty cheaper in cash market + simultaneously sell Nifty futures costlier; pocket spread	Near-zero risk if executed simultaneously; profit erodes as gap closes

5 Benefits, Costs & Risks of Derivatives

Category	Key Points
Benefits	Enables hedging and risk management. Enhances liquidity of underlying markets. Reduces overall transaction costs. Increases market participation, price discovery and information dissemination.

Category	Key Points
Costs & Risks	Counterparty risk (default). Price risk (adverse moves). Liquidity risk (cannot exit). Legal/regulatory risk (enforceability). Operational risk (fraud, bad documentation, execution errors).
SEBI Warning	Derivatives are LEVERAGED instruments — unsuitable for those with limited resources, limited experience, or low risk tolerance. All participants must read the Model Risk Disclosure Document (MRDD) before trading.

6 Equity, Currency & Commodity Derivatives

Derivative Type	Underlying Asset	Indian Exchanges	Primary Use Case
Equity Derivatives	Individual stocks, Nifty, Sensex, sector indices	NSE, BSE	Hedge equity portfolio; speculate on stock/index moves
Currency Derivatives	USD/INR, EUR/INR, GBP/INR, JPY/INR	NSE, BSE, MSE	Hedge import/export forex exposure; FX rate speculation
Commodity — Bullion	Gold, Silver	MCX, NSE, BSE	Inflation hedge; portfolio diversification; jewellery industry
Commodity — Energy	Crude oil, Natural gas	MCX	Hedge energy input costs; petroleum refiners and traders
Commodity — Metals	Copper, Aluminium, Zinc, Nickel	MCX, ICEX	Industrial hedging; manufacturing sector risk management
Commodity — Agriculture	Wheat, Soybean, Chana, Castor seed	NCDEX, MCX	Farmers lock in prices; food processors hedge input costs

CHAPTER 10 — QUICK REVISION: UNDERSTANDING DERIVATIVES

Derivative	Contract whose value is DERIVED from an underlying asset (stock, bond, commodity, FX, interest rate).
Zero Sum Game	One party profits only at cost to the other. Net P&L of both sides always = zero (ignoring costs/taxes).
Forward	OTC bilateral contract; customised; both obligated; counterparty risk; illiquid; no central exchange.
Futures	Standardised exchange-traded forward. Clearing corp guarantees settlement. Daily MTM. Both post margins.
Call Option	Right (NOT obligation) to BUY at strike price. Profitable when market price > strike (In-The-Money).
Put Option	Right (NOT obligation) to SELL at strike price. Profitable when market price < strike (In-The-Money).
Option Premium	Price paid by buyer to writer for the right. Buyer max loss = premium paid. Writer takes on the obligation.
ITM / ATM / OTM	In-the-Money = positive intrinsic value. At-the-Money = at strike. Out-of-Money = zero intrinsic value.
Interest Rate Swap	Exchange fixed vs floating interest payments. Notional principal NEVER exchanged. Only interest flows.
Hedging	Use derivatives to protect existing position from adverse price movement. Locks in known value.
Speculation	Directional bet on price using derivatives without owning the underlying. High risk; leveraged.
Arbitrage	Simultaneous buy (cheap market) and sell (expensive market) of same asset. Riskless profit until gap closes.

Initial Margin	Upfront collateral (SPAN + ELM) before entering derivatives position. Must cover 99% of loss scenarios.
Open Interest	Total outstanding contracts not yet settled. Rising OI = new money flowing into the market.
FIMMDA	Fixed Income Money Market and Derivatives Association — voluntary industry body for bond/derivatives markets.

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MCQ PRACTICE — Chapter 10 — Understanding Derivatives

10 Questions | Answers shown below each question

1

What makes derivatives a "Zero Sum Game"?

- a) Both parties always profit from a derivatives contract
- b) Total profit of one party always equals the total loss of the counterparty
- c) Derivatives have zero transaction costs and zero taxes applied
- d) Both buyer and seller always receive the same price at settlement

✓ Answer: b) Total profit of one = total loss of the counterparty

In any derivative contract, one party benefits from price movement while the other loses the same amount. Net positions of buyer + seller always add to zero. The term "Zero Sum" reflects this: no new wealth is created; gains are only transferred between parties. Note: the assumption is no taxes and no transaction costs.

2

What is the PRIMARY limitation of a forward vs a futures contract?

- a) Forwards cannot be used for hedging purposes at all
- b) Forwards require immediate full payment unlike futures contracts
- c) Forwards carry counterparty risk and illiquidity as they are not exchange traded
- d) Forwards are regulated by SEBI unlike futures which are unregulated OTC

✓ Answer: c) Counterparty risk + illiquidity — not exchange traded

Forwards are bilateral OTC contracts. If the market moves against one party, they may default (counterparty risk). Since forwards are not exchange listed, there is no secondary market to exit the position (liquidity risk). Futures solve both problems by moving contracts to exchanges where clearing corporations guarantee all trades.

3

An investor buys a CALL option on Infosys with strike price Rs.1,500. The stock trades at Rs.1,480. Which is correct?

- a) In-The-Money — intrinsic value = Rs.20 since stock is close to strike
- b) Out-of-The-Money — zero intrinsic value as stock is below strike
- c) At-The-Money — premium and price gap are equal at Rs.20
- d) Should be exercised immediately for a Rs.20 profit

✓ Answer: b) Out-of-The-Money — zero intrinsic value, stock below strike

For a CALL option: In-The-Money when Market Price > Strike Price. Here Rs.1,480 < Rs.1,500, so the option is Out-of-The-Money. Intrinsic value = zero (exercising means buying at Rs.1,500 when market offers Rs.1,480 — a loss). The only value is time value. The option should NOT be exercised; it may still be sold in the market for its remaining time value.

4

In an Interest Rate Swap, what is the "notional principal"?

- a) The actual cash exchanged between parties at initiation of the swap
- b) The principal used to calculate interest but which is NEVER exchanged
- c) The net profit earned by the party receiving the fixed rate payments
- d) The margin deposited with the clearing corporation to guarantee the swap

✓ **Answer: b) Principal used to calculate interest — never actually exchanged**

In an IRS, both parties agree on a notional principal (e.g., Rs.10 crore) purely to calculate the interest amounts. Only the INTEREST PAYMENTS on this notional amount are exchanged each settlement date. The Rs.10 crore itself is never transferred between parties. This is a defining feature distinguishing swaps from loans where principal actually changes hands.

5

A wheat farmer is worried about falling wheat prices before harvest. Which strategy is correct?

- a) Buy wheat call options to profit from a potential price rise
- b) Buy wheat futures to lock in a buying price for the commodity
- c) Sell wheat futures to lock in a selling price and hedge downside risk
- d) Sell wheat put options to earn premium income on the position

✓ **Answer: c) Sell wheat futures — locks in selling price, hedges downside**

The farmer owns wheat (is long the physical commodity). To hedge, the farmer takes the OPPOSITE position in derivatives — selling (shorting) wheat futures. If wheat prices fall, the farmer loses on physical wheat sales but profits on the short futures position, offsetting the loss. This is classic commodity hedging for agricultural producers.

6

Which of the following BEST describes arbitrage in derivatives markets?

- a) Buying Nifty futures expecting the index to rise 10% over next month
- b) Buying Nifty in cash market and simultaneously selling Nifty futures at a higher price
- c) Buying a put option to protect a stock portfolio from a market crash
- d) Selling a call option to earn premium income on a stock already held

✓ **Answer: b) Buy cash (cheaper) + sell futures (costlier) simultaneously — riskless spread**

Arbitrage = exploiting the same asset's price difference in two markets. When Nifty futures trade above the cash market price, an arbitrageur simultaneously buys cash Nifty and sells Nifty futures, locking in the risk-free spread. The act of arbitraging itself closes the gap. This is the basis of Arbitrage Mutual Funds which earn near risk-free returns by exploiting cash-futures spreads.

7

What is the purpose of the Initial Margin in derivatives trading?

- a) It is the profit earned on the first day of holding a derivatives position
- b) It is the option premium paid to buy a call or put contract
- c) It is collateral deposited before trading to cover potential losses in 99% of cases
- d) It is the fee charged by the stock exchange for listing derivative contracts

✓ **Answer: c) Collateral to cover potential losses in 99% of scenarios**

Initial margin is the upfront collateral (cash or approved securities) deposited with the clearing corporation before entering any derivatives position. It has two components: SPAN margin (calculated using CME's Standard Portfolio Analysis of Risk software) and ELM (Extreme Loss Margin). It must be large enough to cover losses in 99% of historical scenarios. Higher stock volatility = higher required initial margin.

8

After SEBI merged with FMC in 2015, which body regulates commodity derivatives in India?

- a) RBI regulates commodity derivatives under the Banking Regulation Act
- b) FMC continues to independently regulate all commodity derivatives
- c) SEBI now regulates both securities and commodity derivatives post-2015 merger
- d) Ministry of Agriculture directly regulates all agricultural commodity derivatives

✓ **Answer: c) SEBI regulates both securities AND commodity derivatives post-2015**

The Forward Markets Commission (FMC) was merged into SEBI in September 2015. Since then, SEBI has been the single unified regulator for both securities markets and commodity derivatives markets in India. National commodity exchanges (MCX, NCDEX, ICEX) must obtain a certificate of registration from SEBI and operate under SEBI's regulatory framework.

9

Nifty futures Open Interest is INCREASING while price is also RISING. What does this signal?

- a) Traders are closing long positions — a bearish reversal signal expected
- b) New money entering on the long side — confirms and strengthens bullish trend
- c) The exchange is issuing new Nifty contracts to meet investor demand
- d) Options writers are hedging short positions — a neutral signal

✓ **Answer: b) New money entering on long side — confirms bullish trend**

Open Interest = total outstanding (unsettled) derivative contracts. When OI increases, NEW buyers and sellers are entering the market creating NEW contracts. Rising OI + Rising Price = new long positions being built = bullish trend confirmation with new money. Declining OI + Rising Price = shorts covering (weaker signal). Open Interest is NOT the same as trading volume.

10

Which of the following is NOT a risk of derivatives trading?

- a) Counterparty risk — default by counterparty to the contract
- b) Liquidity risk — inability to exit a position at the desired time
- c) Principal guarantee — exchange guarantees return of original capital invested
- d) Operational risk — fraud, poor documentation, improper trade execution

✓ **Answer: c) Principal guarantee — exchanges provide NO such capital guarantee**

Derivatives carry multiple risks: counterparty risk, price risk, liquidity risk, legal/regulatory risk, and operational risk. The exchange (through its clearing corporation) guarantees SETTLEMENT of contracts — not the return of your invested capital. Derivatives are leveraged instruments and losses can significantly exceed the initial margin deposited. This is why SEBI requires all participants to read the Model Risk Disclosure Document.

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NISM Series X-A: Investment Adviser Level 1

Understanding Mutual Funds

LEARNING OBJECTIVES: MF Concepts & NAV • Open/Closed/ETF Structures • Equity Funds • Debt Funds • Hybrid Funds • Systematic Plans (SIP/SWP/STP) • Direct vs Regular Plans

1 What is a Mutual Fund? — Core Concepts & Terms

A **Mutual Fund** pools money from investors and invests it in a diversified portfolio managed by a professional Fund Manager. Set up as a **Trust**: Sponsor → Trustees → AMC (Asset Management Company) + Custodian. Primary regulator: **SEBI** under SEBI (Mutual Funds) Regulations, 1996. Industry body: **AMFI** (Association of Mutual Funds in India).

NAV Net Asset Value = Net Assets / Outstanding Units. Computed daily.	Units Investor's share in the fund scheme. Like shares of a company.	NFO New Fund Offer — first time a scheme collects money from investors.
AUM Assets Under Management — total market value of portfolio assets.	Expense Ratio Annual fund management cost as % of AUM. Deducted daily from NAV.	Exit Load Fee on redemption within specified holding period. Deducted from NAV.

NAV Formula:

$$\text{NAV} = (\text{Total Assets} - \text{Liabilities \& Expenses}) / \text{Number of Outstanding Units}$$

■ WORKED EXAMPLE — NAV Calculation

NUM Equity Fund collects Rs.1,00,000. Allots 10,000 units. NAV = Rs.10.

Portfolio rises to Rs.1,20,000 → NAV = Rs.1,20,000 / 10,000 = Rs.12.

Investor A: 500 units. Value = 500 x Rs.12 = Rs.6,000.

Key: Investor buying or redeeming units does NOT change NAV — both assets & units change proportion

2 Open-Ended vs Closed-End vs ETF — Structure Comparison

Feature	Open-Ended	Closed-End	Interval Fund	ETF
Buy/Sell Units?	Anytime at NAV	Only at NFO; then on exchange	Only during open windows	Anytime on exchange at live price
Listing?	Not mandatory	Mandatory	Mandatory	Mandatory
Unit Capital?	Changes with transactions	Fixed after NFO	Fixed except in open windows	Changes via creation/redemption
Price Basis?	End-of-day NAV	Exchange market price	NAV during open window	Real-time market price (intraday)
Exit Route?	Redeem with AMC directly	Sell on exchange to other investors	Redeem with AMC in open window	Sell on exchange to other investors

Cut-off Timing: NAV applicable depends on time request AND clear funds are received. SEBI mandates uniform cut-off times across all MFs for fairness. **Mark-to-Market:** Portfolio valued at current market prices daily. If a security is not traded or price is stale, SEBI prescribes the valuation method.

3 Equity Fund Categories — SEBI Classification

Fund Category	Min Equity %	Universe	Key Risk / Feature
Large Cap Fund	80% in top 100 cos.	AMFI-defined top 100	Stable; liquid; blue-chip; lower risk
Mid Cap Fund	65% in cos. 101-250	AMFI-defined 101-250	Higher growth potential; economic cycle risk
Small Cap Fund	65% in cos. 251+	AMFI-defined 251+	Highest return potential; highest risk; illiquid
Large & Mid Cap	35% large + 35% mid	Top 250 companies	Balanced growth + stability; diversified across sizes
Multi Cap Fund	25% large + 25% mid + 25% small	All market caps	True diversification; SEBI mandates all three caps
Flexicap Fund	65% in equities overall	All market caps	No mandatory split; maximum fund manager flexibility
ELSS (Tax Saver)	80% in equities; 3-yr lock-in	All equities	Section 80C benefit upto Rs.1.5L; 3-yr lock-in
Sector Fund	80% in one specific sector	Single sector only	High concentration risk; cyclical timing critical
Thematic Fund	80% in theme stocks	Cross-sector theme	More diversified than sector; still concentrated
Value Fund	65% in equities	Undervalued stocks	Lower risk; long horizon; contrarian deep-value
Contra Fund	65% contrarian strategy	Undervalued/out-of-favour	AMC can offer Value OR Contra — not both
Focused Fund	Max 30 stocks; 65%	Concentrated portfolio	Higher stock-specific risk; conviction-based

4 Debt Fund Categories — Duration & Credit Spectrum

Fund Category	Macaulay Duration / Maturity	Key Feature	Risk
Overnight Fund	1 day	Safest; invests in overnight securities only	Near Zero
Liquid Fund	Up to 91 days maturity	Low NAV volatility; no exit load after 7 days	Very Low
Ultra Short Duration	3 months - 6 months	Slightly higher yield; some duration exposure	Low
Low Duration	6 months - 12 months	Short-term parking; higher yield than liquid	Low
Money Market	Up to 1 year maturity	T-Bills, CPs, CDs; stable and liquid	Very Low
Short Duration	1 year - 3 years	Income + modest capital gains from long bonds	Low-Medium
Medium Duration	3 years - 4 years	Higher yield; exposed to rate volatility	Medium
Long Duration	Greater than 7 years	Maximum rate sensitivity; rides falling rate cycles	High
Gilt Fund	80%+ in G-Secs any maturity	Zero default risk; pure interest rate risk play	High
Corporate Bond	80%+ in AA+ and above	High quality credit; better yield than gilt	Medium
Credit Risk Fund	65%+ in AA and below	High yield but higher default risk	Medium-High

Fund Category	Macaulay Duration / Maturity	Key Feature	Risk
Dynamic Bond	Any duration; flexible	Fund manager navigates full yield curve freely	Varies
FMP	Closed-end; matches tenor	Eliminates MTM risk if held to maturity	Near Zero if held
Target Maturity	Open-ended; defined maturity	Wider range than FMP; 3-15yr; roll-down feature	Reduces over time

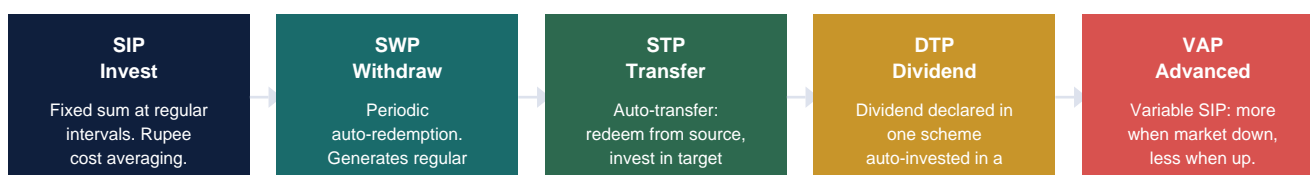
5 Hybrid, Solution-Oriented & Other Fund Categories

Fund Category	Equity Allocation	Debt Allocation	Risk & Use Case
Conservative Hybrid	10% - 25%	75% - 90%	Low risk; regular income; for conservative investors
Balanced Hybrid	40% - 60%	40% - 60%	AMC can offer this OR Aggressive Hybrid, not both
Aggressive Hybrid	65% - 80%	20% - 35%	Equity-oriented; some debt stability; most popular hybrid
Dynamic AA / BAF	Dynamically managed; 65%+ long equity	Dynamically managed	Auto risk management using valuation models
Multi Asset Allocation	Min 10% each in 3+ asset classes	Min 10%	True diversification; equity, debt, gold etc.
Arbitrage Fund	65%+ (but hedged long + short)	Remaining	Low risk; equity taxation; earns cash-futures spread
Equity Savings Fund	Min 65% equity + arbitrage	Min 10%	Three-way: equity + debt + arbitrage; lower volatility
Capital Protection (Closed)	Small % via equity derivatives	Large % protects principal	Principal protected at maturity; limited equity upside

Other Fund Types	Description
Fund of Funds (FoF)	95% in other MF schemes. Extra cost layer. Equity FoF NOT taxed as equity fund; taxed at 12.5% + cess for LTCG from Union Budget July 2024.
Gold / Silver ETF	Tracks domestic gold/silver price. Each unit = fixed weight. Physical gold 99.5% purity held by custodian.
Solution: Retirement Fund	Lock-in 5 years or till retirement age (whichever earlier). Long-term retirement planning.
Solution: Children's Fund	Lock-in 5 years or till majority (age 18), whichever is earlier.
Specialized Investment Fund	NEW category. Min Rs.10 lakh investment. Between MF and PMS. Allows derivatives for non-hedging, long-short strategies.

6 Systematic Transactions — SIP, SWP, STP, DTP, Value Averaging

Systematic Transaction Tools — Automate Your Mutual Fund Journey



Plan	How It Works	Key Benefit	Key Consideration
SIP	Fixed amount at regular intervals at prevailing NAV	Rupee cost averaging; removes market timing stress	No profit guarantee; less useful in steadily rising markets
SWP	Regular auto-redemption of fixed amount at prevailing NAV	Regular income; fewer units redeemed when NAV is high	Exit loads + capital gains tax on each redemption
STP	Regular transfer from source to target scheme (same AMC)	Gradual deployment; manages lump-sum investment risk	Exit loads & taxes on source redemption; same AMC only
DTP	Dividend declared in scheme A auto-invested in scheme B	Automatically harvests gains; auto cross-scheme rebalancing	Dividend amount varies; not a fixed/predictable transfer
Value Averaging	Invest more when NAV below target path; less when above	Better cost average than SIP; maximises volatility benefit	Complex calculations; most AMCs do not support directly

7 Direct vs Regular Plans — Investment Modes

Dimension	Regular Plan	Direct Plan
Distributor	Via broker / distributor / bank	No intermediary — investor directly with AMC
Expense Ratio	HIGHER — includes distribution commission paid to distributor	LOWER — no commission; same underlying portfolio
NAV	Lower NAV (higher expenses deducted daily from portfolio)	Higher NAV (lower expenses compound into higher returns)
Long-Term Returns	Lower — expense drag compounds negatively over time	Higher — lower expense ratio compounds positively
Support	Distributor assists with transactions, KYC, queries, problems	Self-service — investor handles everything independently
Best For	Investors who need help and hand-holding through the process	Knowledgeable self-sufficient investors comfortable online

■ KEY INSIGHT — Direct vs Regular: The Compounding Cost Impact

Same portfolio. Same fund manager. Only the expense ratio differs between Direct and Regular.

Regular: 1.8% expense ratio vs Direct: 0.6% = 1.2% annual difference in effective return.

Rs.10 lakh over 20 years at 12% gross: Regular = ~Rs.86L vs Direct = ~Rs.98L.

A 1.2% difference compounds to ~Rs.12 lakh extra corpus in the Direct Plan over 20 years!

■ CHAPTER 11 — QUICK REVISION: UNDERSTANDING MUTUAL FUNDS

NAV	Net Asset Value = Net Assets / Outstanding Units. Changes daily. All transactions at current NAV.
Open-Ended	Continuous buy/redeem at NAV any business day. Unit capital changes. No mandatory listing.
Closed-End	Fixed units after NFO. Mandatory exchange listing. Transact with other investors on exchange.
ETF	Mutual fund listed on exchange. Real-time intraday price. Demat account required. Tracks index.
Large Cap	Top 100 by market cap (AMFI). Min 80% in large caps. Stable, liquid, blue-chip stocks.
Mid Cap	Ranks 101-250 by market cap. Min 65%. Higher growth potential, higher economic cycle risk.
Small Cap	Rank 251+ by market cap. Min 65%. Highest risk and return potential; illiquid in downturns.

ELSS	Min 80% in equities. 3-yr mandatory lock-in per instalment. Section 80C benefit upto Rs.1.5L/yr.
Aggressive Hybrid	65-80% equity + 20-35% debt. Most popular hybrid. Equity taxation applies.
BAF / Dynamic AA	Dynamically adjusts equity/debt using valuation models. Maintains 65%+ long equity for tax.
Credit Risk Fund	Min 65% in AA and below rated bonds. High yield but higher default risk. Illiquid in crisis.
FMP	Fixed Maturity Plan: closed-end debt fund. Matches portfolio tenor to scheme maturity. Eliminates MTM.
SIP	Fixed amount at regular intervals. Rupee cost averaging — more units when NAV is low.
SWP	Periodic auto-redemption for regular income. Fewer units redeemed when NAV is high.
STP	Transfer from source to target scheme within same AMC. Gradual deployment of lump sum.
Direct Plan	No distributor. Lower expense ratio. Higher NAV. Completely DIY — investor self-manages.
Regular Plan	Through distributor. Higher expense ratio includes commission. Distributor provides support.
Expense Ratio	Annual cost as % of AUM. Deducted daily from portfolio. Directly impacts NAV growth rate.

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MCQ PRACTICE — Chapter 11 — Understanding Mutual Funds

10 Questions | Answers shown below each question

1

An investor holds 1,000 units in an equity fund at NAV Rs.25. She redeems 200 units. What happens to the NAV immediately after redemption?

- a) NAV falls because money was taken out of the fund by the investor
- b) NAV rises because fewer units are now outstanding after redemption
- c) NAV remains unchanged — net assets and units fall proportionally
- d) NAV becomes zero as the investor partially exited the fund scheme

✓ **Answer: c) NAV unchanged — net assets and units fall proportionally**

When units are redeemed, the fund pays out (NAV x units redeemed) from portfolio cash. Both net assets AND outstanding units fall by the same proportional amount. $NAV = \text{Net Assets} / \text{Units}$: both numerator and denominator fall in the same ratio, so NAV stays constant. NAV only changes when the underlying portfolio value changes — not when investors transact.

2

Which SEBI equity fund category gives the fund manager **MAXIMUM** flexibility in choosing market cap allocation?

- a) Large Cap Fund — invests only in top 100 companies by market cap
- b) Multi Cap Fund — must maintain 25% each in large, mid and small cap
- c) Flexicap Fund — min 65% in equities with NO mandatory market cap split
- d) Focused Fund — maximum 30 stocks with minimum 65% in equities

✓ **Answer: c) Flexicap Fund — no mandatory split; maximum allocation freedom**

Flexicap funds require only 65% invested in equities overall, with no minimum allocation to any specific market cap segment. This gives the fund manager complete freedom to shift allocations based on market opportunities. Multi Cap forces 25% minimum in each cap (large, mid, small), making it more constrained. Flexicap is the most flexible actively managed equity fund category.

3

An investor with Rs.5 lakh wants to save tax under Section 80C with willingness to lock in for 3 years. Which MF category is most suitable?

- a) Aggressive Hybrid Fund for best risk-adjusted return with 1-yr lock-in
- b) ELSS with 3-year lock-in per instalment and Section 80C tax benefit
- c) Large Cap Fund invested for 3 years for LTC G tax exemption benefits
- d) Fixed Maturity Plan maturing in 3 years for assured return and safety

✓ **Answer: b) ELSS — only MF with 80C benefit; 3-yr mandatory lock-in**

ELSS (Equity Linked Savings Scheme) is the **ONLY** mutual fund category that qualifies for Section 80C deduction (up to Rs.1.5L per year). It mandates a 3-year lock-in from the date of EACH investment instalment. At least 80% must be in equities. The tax saving combined with equity market exposure makes it ideal for long-term tax-efficient wealth building.

4

In a FALLING interest rate environment, which debt fund generates the HIGHEST returns?

- a) Overnight Fund — invests only in overnight securities for safety
- b) Liquid Fund — invests in securities maturing in less than 91 days
- c) Long Duration Fund — Macaulay duration greater than 7 years
- d) Credit Risk Fund — invests in lower-rated bonds with high yields

✓ **Answer: c) Long Duration Fund — highest duration = maximum price appreciation**

Bond prices and interest rates move inversely. When rates fall, bond prices RISE. The longer the Macaulay duration, the greater the price sensitivity. Long Duration Funds (duration > 7 years) experience maximum capital appreciation in a falling rate cycle. Their return = coupon income + significant capital gain. Short duration and liquid funds barely benefit from rate cuts due to minimal duration exposure.

5

What is the key distinction between an ETF and a regular open-ended mutual fund?

- a) ETFs invest in wider range of securities than open-ended funds can
- b) ETFs trade on exchange at real-time intraday prices; open-ended funds at end-of-day NAV
- c) ETFs are actively managed while open-ended funds are always passive index funds
- d) ETFs have zero expense ratio while open-ended funds charge annual expenses

✓ **Answer: b) ETFs trade on exchange at real-time prices; open-ended at end-of-day NAV**

Key ETF differences: (1) ETFs have intraday real-time prices on exchange; open-ended funds have a single end-of-day NAV. (2) ETF transactions are investor-to-investor on exchange; open-ended is investor-to-AMC. (3) ETFs require a demat account; open-ended do not. (4) ETFs have at least 95% in index securities; expense ratio similar to index fund. Both typically track an index but ETFs offer intraday liquidity and real-time pricing.

6

An investor starts a SIP of Rs.5,000/month in Nifty index fund. Nifty falls 20% in month 3. How does SIP help?

- a) The SIP should be stopped immediately to avoid buying into a falling market
- b) Investor automatically buys MORE units in month 3 at the lower NAV
- c) The SIP amount automatically increases to Rs.6,000 to compensate for the fall
- d) Investor loses the full Rs.5,000 as the market has fallen 20% that month

✓ **Answer: b) More units bought at lower NAV — rupee cost averaging benefit**

Rupee cost averaging is the core benefit of SIP. When NAV falls 20%, the same Rs.5,000 buys MORE units than usual. When markets recover, these cheaper units generate higher returns. Investors should NOT stop SIP during market falls — that is precisely when they benefit most by accumulating more units at lower prices. The averaging effect reduces the overall cost per unit over time.

7

A BAF (Balanced Advantage Fund) reduces equity allocation when markets become expensive. What is the benefit?

- a) It guarantees the fund will never lose money in any market condition
- b) It automatically manages risk by reducing equity when overvalued; increasing when cheap
- c) It ensures the fund always outperforms a pure equity fund over every period
- d) It eliminates the need for the investor to pay any exit load on redemption

✓ **Answer: b) Auto risk management — reduces equity when expensive; increases when cheap**

BAFs use quantitative models (P/E, P/B ratios) to dynamically shift allocation between equity and debt. When equity is expensive (high P/E), the fund reduces equity exposure to protect against overvaluation crash risk. When equity is cheap, it increases equity for higher growth potential. This auto-rebalancing removes the behavioral bias of investors who typically buy high in euphoria and sell low in panic.

8

A Systematic Transfer Plan (STP) involves which specific pair of transactions?

- a) Buying units in two different AMC funds on the same day simultaneously
- b) Periodic redemption from source scheme + investment in target scheme of SAME AMC
- c) Receiving dividends from a fund and reinvesting them in the same fund scheme
- d) Buying ETF units on exchange and simultaneously selling futures to earn the spread

✓ **Answer: b) Redeem from source + invest in target of SAME AMC at regular intervals**

STP = periodic redemption from a source fund PLUS simultaneous investment in a target fund of the SAME AMC. Classic use: investor parks lump sum in liquid/debt fund (source), then STPs monthly into equity fund (target) for gradual market deployment. This reduces risk of investing entire lump sum at a market peak. Exit loads and capital gains tax apply on the source fund redemption with each transfer.

9

The Direct Plan has a lower expense ratio than the Regular Plan of the same fund. What is the long-term implication?

- a) Both plans show identical returns since they invest in identical portfolios
- b) Direct Plan shows HIGHER NAV and better returns due to lower cost compounding
- c) Regular Plan outperforms because the distributor adds value exceeding the cost
- d) The expense ratio difference cancels out over a long time horizon making both equal

✓ **Answer: b) Direct Plan — higher NAV and better returns through lower cost compounding**

Same portfolio, same fund manager — only expense ratio differs. The lower Direct Plan expense ratio means MORE of the daily portfolio return stays as NAV appreciation. Over long periods, this 0.5%-1.5% p.a. difference compounds significantly. On Rs.10L invested for 20 years with 12% gross return: a 1.2% annual cost difference results in approximately Rs.12 lakh more in the Direct Plan corpus versus Regular Plan.

10

Which statement about a Credit Risk Fund is CORRECT?

- a) Credit Risk Funds invest only in AAA-rated securities to minimize default risk
- b) Credit Risk Funds invest minimum 65% in corporate bonds rated AA and BELOW
- c) Credit Risk Funds are guaranteed by SEBI against any credit defaults
- d) Credit Risk Funds have the lowest expense ratio among all debt fund categories

✓ Answer: b) Min 65% in AA and below rated bonds — higher yield for higher risk

Credit Risk Funds deliberately take credit risk by investing predominantly (65%+) in bonds rated AA and below. Lower credit rating = higher yield demanded by market as compensation for higher default probability. These funds can generate higher returns in normal times but face severe liquidity issues and NAV crashes during credit events (e.g., IL&FS 2018, DHFL 2019 defaults hit credit risk funds severely). Investors must understand the risk before investing.

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