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B.Com Honours | Semester 1 | Calicut University

Stock Market Fundamentals

Course Code: COM1FM105 (2) • Module 4 Notes

1. Institutional Structure & Working Mechanism of Mutual Funds

A **Mutual Fund** is a financial intermediary that pools financial savings from millions of individual and institutional investors sharing common financial objectives. The mobilized capital corpus is invested across a diversified portfolio of capital market instruments—including equity shares, corporate debentures, government bonds, commercial papers, and money market assets—managed by professional fund managers in accordance with stated investment objectives. Each investor holds a fractional, proportionate ownership of the fund's aggregate portfolio, represented by **Units**.

In India, mutual funds are governed under the strict statutory framework of the **Securities and Exchange Board of India (Mutual Funds) Regulations, 1996**. To ensure complete investor protection and eliminate systemic conflict of interest, SEBI mandates a rigorous **Three-Tier Trust Structure**, legally separating fund sponsorship, governance oversight, portfolio management, and asset custody.

1.1 The Statutory Three-Tier Architecture of Indian Mutual Funds

THE LEGAL ARCHITECTURE OF INDIAN MUTUAL FUNDS

SEBI MF Regulations, 1996

1. The Sponsor (Promoter Entity)

The corporate entity that initiates and establishes the mutual fund trust, analogous to a company promoter.

- Must satisfy strict SEBI fit-and-proper criteria: carrying on business in financial services for at least **5 years** with a positive net worth in all 5 preceding years.
- Must contribute at least **40% of the net worth** of the Asset Management Company (AMC).

2. Board of Trustees / Trustee Company

The legal owner and fiduciary guardian of the fund corpus, holding all portfolio assets in trust for the exclusive benefit of unit-holders.

- At least **two-thirds (66.6%)** of the trustees must be independent individuals unconnected with the Sponsor.
- Monitors AMC operations, audits compliance with SEBI investment limits, and prevents self-dealing or inter-scheme malpractices.

3. Asset Management Company (AMC)

The operational investment manager appointed by the Trustees (e.g., SBI Funds Management, HDFC AMC, Nippon Life India AMC).

- Must maintain a minimum net worth of **₹50 Crores**. At least 50% of its board must be independent directors.
- Employs Chief Investment Officers (CIOs), professional research analysts, and fund managers to execute daily portfolio buys and sells.

4. Custodian & RTA (Operational Intermediaries)

- **Custodian:** An independent statutory entity (e.g., SBI SG, HDFC Bank, Citibank) that physically/electronically holds the securities in safe custody. The AMC never touches the securities directly.
- **Registrar and Transfer Agent (RTA):** Operates investor servicing infrastructure (CAMS, KFintech), processing KYC, applications, redemptions, and dividend disbursements.

2. Classification of Mutual Fund Schemes (SEBI Categorization Standards)

To eliminate investor confusion and misleading scheme names, SEBI issued a landmark harmonization circular in October 2017 standardizing all mutual fund schemes across five clearly defined categories based on structure, investment objective, and portfolio composition.

2.1 Classification by Structure

1. Open-Ended Schemes

Units can be purchased and redeemed continuously on any business day directly from/to the AMC at the prevailing day's Net Asset Value (NAV). Has no fixed maturity date; total capital corpus expands or contracts based on daily investor cash flows. Provides maximum liquidity.

2. Close-Ended Schemes

Units are offered strictly during an initial New Fund Offer (NFO) window and cannot be redeemed with the AMC until the maturity date (typically 3 to 5 years). To provide interim liquidity, SEBI mandates that close-ended schemes must be listed on recognized stock exchanges (NSE/BSE).

3. Interval Schemes

A hybrid structural model that combines open-ended and close-ended features. The scheme operates like a close-ended fund for most of the year, but opens a predetermined "transaction window" (e.g., for 5 days every quarter) during which investors can buy or redeem units directly at NAV.

2.2 Classification by Investment Objective & Asset Allocation

SEBI STANDARDIZED MUTUAL FUND ASSET CATEGORIES Mandatory Portfolio Mandates

Scheme Category	Statutory Portfolio Allocation Rules	Risk-Return Profile & Ideal Investor
Large Cap Fund	Minimum **80%** of total assets invested in equity shares of top 100 companies by market capitalization.	Moderate risk; high stability; blue-chip compounding. Ideal for conservative long-term equity investors.
Mid Cap Fund	Minimum **65%** of total assets invested in equity shares of mid-cap companies (ranked 101st to 250th).	High risk; higher growth potential; volatile cycles. Suitable for aggressive investors with 5–7+ year horizon.
Small Cap Fund	Minimum **65%** of total assets invested in small-cap companies (ranked 251st onwards by market cap).	Very high risk; extreme price volatility; multi-bagger potential. For high-conviction aggressive capital.
Flexi Cap Fund	Minimum **65%** in equity; fund manager has dynamic, unrestricted freedom to allocate across large, mid, and small caps.	Dynamic diversification across market caps without rigid sector limits. Excellent all-weather core equity holding.
ELSS (Tax Saving)	Minimum **80%** in equity; qualifies for deduction under **Section 80C** (up to ₹1.5 Lakh/year); mandatory **3-year lock-in**.	Lowest lock-in among 80C instruments (vs. 15-year PPF and 5-year FD); superior wealth creation track record.
Liquid & Overnight Funds	Overnight funds invest in securities maturing in 1 day; Liquid funds invest in debt assets maturing in up to **91 days**.	Lowest credit and duration risk; near-zero volatility. Ideal for parking emergency surplus cash instead of bank accounts.
Balanced Advantage (BAF)	Dynamic asset allocation fund adjusting equity allocation (30%–80%) counter-cyclically using P/E or valuation algorithms.	Protects downside during market crashes and captures upside in bull runs. Ideal for conservative first-time investors.

2.3 Investment Styles: Active Management vs. Passive Indexing

Active Fund Management

- **Goal:** Generate *Alpha* ($alpha$)—returns in excess of the benchmark market index (e.g., beating the Nifty 50).
- **Operational Reality:** Relies on active stock picking, sector rotation, and market timing by fund managers.
- **Cost:** Incurs higher research, analyst, and transactional expenses, reflected in a higher Total Expense Ratio (TER: 1.5% to 2.25%).

Passive Fund Management (Index Funds & ETFs)

- **Goal:** Replicate the exact performance of an underlying index (e.g., Nifty 50, Sensex) with minimum *Tracking Error*.
- **Operational Reality:** No active stock picking. The fund simply buys all constituent stocks in their exact index weightings.
- **Cost:** Extremely low Total Expense Ratio (TER: 0.10% to 0.50%), preserving maximum compounding wealth for investors.

3. Operational Mechanics: NAV, NFO, Plans, and SIP Dynamics

Entering and managing mutual fund investments requires understanding how fund units are priced, the substantial structural cost differences between distribution plans, and the mathematical mechanics of systematic compounding.

3.1 Net Asset Value (NAV): Pricing Mutual Fund Units

The **Net Asset Value (NAV)** represents the per-unit market value of a mutual fund scheme. It is calculated by the AMC at the close of every business day after stock exchanges shut, reflecting the closing market prices of all underlying securities held in the portfolio.

Net Asset Value Mathematical Formulation

```
ext{NAV Per Unit} = ⬆rac{ ext{Total Market Value of Securities} + ext{Receivables & Cash} - ext{Total Accrued Expenses & Liabilities}}{ ext{Total Number of Outstanding Units}}
```

Numerical Demonstration: Calculating Mutual Fund NAV

Fund Balance Sheet Data: An equity mutual fund holds a portfolio of listed shares valued at ₹500 Crores at closing prices. It holds cash and bank balances of ₹25 Crores and dividend receivables of ₹5 Crores. Accrued management fees and operational liabilities total ₹10 Crores. Total outstanding units issued to investors = 10 Crore units.

Step 1: Calculate Gross Assets
$\text{Gross Assets} = ₹500\text{ Cr} + ₹25\text{ Cr} + ₹5\text{ Cr} = \mathbf{₹530\text{ Crores}}$.

Step 2: Calculate Net Assets of the Scheme
$\text{Net Assets} = \text{Gross Assets} - \text{Accrued Liabilities} = ₹530\text{ Cr} - ₹10\text{ Cr} = \mathbf{₹520\text{ Crores}}$.

Step 3: Calculate Net Asset Value (NAV) per Unit
$\text{NAV} = \frac{₹520\text{ Crores}}{10\text{ Crore Units}} = \mathbf{₹52.00\text{ per Unit}}$

3.2 Direct Plan vs. Regular Plan: The Wealth-Eroding Impact of TER

Every mutual fund scheme offers two operational avenues: a **Regular Plan** and a **Direct Plan**. Both plans invest in the exact same identical portfolio of stocks managed by the exact same fund manager. The sole divergence lies in the **Total Expense Ratio (TER)**:

DIRECT PLAN VS. REGULAR PLAN STRUCTURAL COMPARISON

Investor Return Optimization

Dimension	Regular Mutual Fund Plan	Direct Mutual Fund Plan
Distribution Route	Purchased through intermediaries: mutual fund distributors, brokers, or banks holding an AMFI Registration Number (ARN).	Purchased directly from the AMC (via AMC website, MF Central, or direct platforms like Zerodha Coin, Groww).
Commission Structure	AMC pays ongoing perpetual **trail commissions (0.5% to 1.5% annually)** out of fund assets to the distributor.	Zero commissions paid to any intermediary; zero distribution drag.
Total Expense Ratio (TER)	Higher TER (e.g., 2.0% per annum).	Substantially lower TER (e.g., 1.0% per annum, saving 1.0% every year).
Net Asset Value (NAV)	Lower NAV because higher daily expenses are deducted from fund assets.	**Consistently higher NAV**, compounding into substantial long-term wealth divergence.

The Compounding Mathematical Cost of a 1.0% Commission Drag

Consider an investor who starts a monthly SIP of **₹10,000 for 25 years**, assuming a gross underlying portfolio return of 12% per annum:

• **In a Direct Plan (TER = 0.8% $implies$ Net Return = 11.2%):** Final Accumulated Wealth = **₹1.61 Crores**.

• **In a Regular Plan (TER = 1.8% $implies$ Net Return = 10.2%):** Final Accumulated Wealth = **₹1.33 Crores**.

• **The Wealth Loss:** The 1% distributor commission cost the investor a staggering **₹28 Lakhs** in unearned compounding wealth! Academic finance strongly recommends Direct Plans for financially literate investors.

3.3 Systematic Investment Plan (SIP) Mechanics & Rupee-Cost Averaging

A **Systematic Investment Plan (SIP)** is a disciplined investment methodology where a fixed sum of money is debited automatically from an investor's bank account on a recurring date (monthly or quarterly) and invested in a chosen mutual fund scheme. SIP solves the psychological curse of market timing through **Rupee-Cost Averaging**:

Rupee-Cost Averaging Principle

```
ext{Units Allotted} = rac{ ext{Fixed Monthly Investment Amount}}{
ext{Prevailing Day's NAV}}
```

When the stock market drops and NAV declines, the fixed SIP installment automatically purchases **more units**. When the market surges and NAV climbs, the installment purchases **fewer units**. Over market cycles, the average cost per unit falls below the average market price, delivering superior risk-adjusted returns without requiring the investor to forecast market tops or bottoms.

4. Post-Investment Operations, Portfolio Diagnostics & Taxation

Managing mutual fund wealth over the long term involves utilizing automated withdrawal mechanisms, analyzing risk metrics on fund fact sheets, and managing statutory capital gains tax liabilities.

4.1 Automated Portfolio Operations: SWP and STP

Systematic Withdrawal Plan (SWP)

Allows an investor to withdraw a fixed sum of money on a monthly basis from their accumulated mutual fund corpus by redeeming the exact required number of units.

- **Ideal for Retirees:** Generates predictable monthly cash flow.
- **Superior Tax Efficiency:** Unlike bank FD interest (which is 100% taxable as ordinary income), each SWP withdrawal consists partly of principal capital (tax-free) and partly of capital gains, drastically reducing annual tax outflow.

Systematic Transfer Plan (STP)

Enables an investor to park a large lump sum of cash in a safe Liquid or Overnight debt fund, systematically transferring a fixed sum every week or month into an equity fund.

- **Eliminates Timing Risk:** Prevents investing a huge lump sum right at a market peak.
- **Earning Dual Returns:** Uninvested capital earns liquid fund yields (6%–7%) while steadily transitioning into equity compounding.

4.2 Risk-o-meter & Evaluating the Fund Fact Sheet

SEBI mandates that every mutual fund must publish a monthly **Fund Fact Sheet** and display a **Risk-o-meter** consisting of six visual risk levels: *Low, Low to Moderate, Moderate, Moderately High, High, and Very High*. Key analytical ratios evaluated on the Fact Sheet include:

- **Standard Deviation ($sigma$):** Measures the historical volatility of the fund's monthly returns. A lower standard deviation signifies return stability.
- **Sharpe Ratio:** Measures risk-adjusted excess returns over the risk-free rate (R_f): $ ext{Sharpe} = rac{R_p - R_f}{sigma_p}$. A higher Sharpe ratio proves the fund manager generates genuine alpha rather than taking reckless speculative volatility.
- **Beta (eta):** Measures scheme sensitivity relative to its benchmark index. $eta < 1.0$ indicates lower volatility than the market.
- **Portfolio Turnover Ratio (PTR):** The percentage of the portfolio bought or sold over the past 12 months. High PTR ($>100%$) indicates aggressive churning, increasing brokerage friction.

4.3 Statutory Mutual Fund Taxation Framework (Post-Finance Act 2023 & 2024)

STATUTORY INDIAN MUTUAL FUND TAXATION ARCHITECTURE

Current Post-Budget 2024 Regime

Scheme Category	Holding Period Threshold	Tax Rate (Post-July 2024)	Statutory Provisions & Exemptions
Equity-Oriented Schemes (Equity $ge 65%$)	Short-Term: $le 12$ Months Long-Term: > 12 Months	STCG: **20.0% Flat** LTCG: **12.5% Flat**	LTCG enjoys a statutory annual exemption of up to **₹1,25,000** per financial year under Section 112A.
Specified Debt Mutual Funds (Equity $le 35%$, invested post-April 1, 2023)	Any Holding Period (Short-term or Long-term)	Taxed at applicable individual **Income Tax Slab Rates**	Under Finance Act 2023 amendment to Section 50AA, indexation benefits are eliminated; treated as short-term capital gains regardless of duration.
Non-Equity / Hybrid Funds (Equity $> 35%$ but $< 65%$)	Short-Term: $le 24$ Months Long-Term: > 24 Months	STCG: Slab Rates LTCG: **12.5% Flat**	Long-term capital gains apply after 2 years of holding without indexation benefits.

5. Calicut University Examination Bank: Questions & Solutions

The following curated question-solution sets reflect the exact academic standards, conceptual depth, and analytical rigor prescribed by Calicut University for **COM1FM105 (2): Stock Market Fundamentals** (Module IV: Mutual Fund Investment).

Part A: Short Answer Questions (2 Marks Each)

Question 1 [Part A - 2 Marks] **Cognitive Level: Understand**

Define a Mutual Fund and identify its key structural parties under SEBI regulations.

A **Mutual Fund** is a trust that pools capital from numerous investors to invest in a diversified portfolio of securities managed by professional managers. Under SEBI (Mutual Funds) Regulations 1996, its four primary structural parties are: (1) **The Sponsor** (promoter), (2) **The Board of Trustees** (fiduciary overseer), (3) **The Asset Management Company - AMC** (investment manager), and (4) **The Custodian** (independent asset safekeeper).

Question 2 [Part A - 2 Marks] Cognitive Level: Understand

What is Net Asset Value (NAV)? State its mathematical formula.

Net Asset Value (NAV) is the per-unit market value of a mutual fund scheme, calculated at the end of every trading day. Its formula is: $ ext{NAV} = ⬆rac{ ext{Total Market Value of Portfolio Securities} + ext{Receivables & Cash} - ext{Accrued Liabilities & Expenses}}{ ext{Total Number of Outstanding Scheme Units}}$

Question 3 [Part A - 2 Marks] Cognitive Level: Remember / Understand

Distinguish between an Open-Ended and a Close-Ended Mutual Fund scheme.

An **Open-Ended Scheme** allows investors to buy and redeem units continuously on any business day directly from the AMC at the prevailing NAV without a fixed maturity. A **Close-Ended Scheme** has a fixed maturity tenure (e.g., 3–5 years); units can be purchased from the AMC only during the initial NFO and must be traded on stock exchanges for interim liquidity.

Question 4 [Part A - 2 Marks] Cognitive Level: Understand

Why does a Direct Plan of a mutual fund have a higher NAV than a Regular Plan?

A **Direct Plan** is sold directly by the AMC without paying distributor commissions, resulting in a lower Total Expense Ratio (TER) compared to a **Regular Plan** (which pays trail commissions to distributors). Because fewer daily expenses are deducted from fund assets, the Direct Plan compounds at a higher net rate, yielding a consistently higher NAV.

Question 5 [Part A - 2 Marks] Cognitive Level: Understand

What is Rupee-Cost Averaging in a Systematic Investment Plan (SIP)?

Rupee-Cost Averaging is an automated investment mechanism where investing a fixed rupee amount regularly ensures that more units are purchased when the NAV drops during market declines, and fewer units are purchased when the NAV rises during market rallies, reducing the average purchase cost per unit over time.

Question 6 [Part A - 2 Marks] Cognitive Level: Understand

What is an Equity Linked Savings Scheme (ELSS)? State its lock-in period.

An **ELSS** is an equity-oriented mutual fund scheme that invests at least 80% in equity securities and qualifies for tax deductions up to ₹1,50,000 under **Section 80C** of the Income Tax Act. It carries a statutory mandatory **lock-in period of 3 years**, the shortest among all Section 80C tax-saving options.

Question 7 [Part A - 2 Marks] **Cognitive Level: Understand**

Explain the purpose and tiers of the SEBI Risk-o-meter.

The **SEBI Risk-o-meter** is a standardized graphical pictorial gauge displayed on all fund materials to communicate the underlying portfolio risk. It has six visual risk tiers: (1) Low, (2) Low to Moderate, (3) Moderate, (4) Moderately High, (5) High, and (6) Very High, updated monthly based on portfolio liquidity and volatility.

Question 8 [Part A - 2 Marks] **Cognitive Level: Understand**

Differentiate between Growth Option and IDCW Option in mutual funds.

Under the **Growth Option**, all corporate dividends and capital gains generated by the portfolio are automatically reinvested back into the scheme, maximizing wealth compounding. Under the **IDCW (Income Distribution cum Capital Withdrawal) Option**, periodic payouts are paid out to the investor, triggering immediate income tax at slab rates and depleting the compounding capital base.

Part B: Short Essay / Conceptual Questions (5 Marks Each)

Question 9 [Part B - 5 Marks] **Cognitive Level: Analyze**

Examine the Three-Tier Trust Structure of mutual funds under SEBI Regulations. Why is the Custodian kept legally independent of the AMC?

1. Three-Tier Governance Structure:
SEBI mandates a structural separation of powers to protect unit-holders from corporate fraud:
• **Sponsor:** The promoter that establishes the fund trust and contributes initial capital, complying with 5-year track record norms.
• **Trustees:** Hold the assets in trust for unit-holders. At least 66.6% must be independent directors. They supervise AMC compliance and protect unit-holder rights.
• **Asset Management Company (AMC):** The operational body managing portfolio investments using research analysts and fund managers.

2. Legal Independence of the Custodian:
The **Custodian** is an independent bank/institution (e.g., SBI SG, Citibank) that holds physical and electronic possession of all shares and bonds owned by the scheme. The AMC possesses the intellectual authority to decide *what* to buy or sell, but possesses *zero physical custody* over the securities or cash. This structural bifurcation ensures that AMC managers cannot embezzle, misappropriate, or secretly divert fund assets, preventing rogue fund collapses.

Question 10 [Part B - 5 Marks] **Cognitive Level: Analyze**

Discuss the Systematic Withdrawal Plan (SWP) as a regular income tool. Compare its tax efficiency against traditional Bank Fixed Deposits for a retiree.

1. SWP Operating Mechanism: A Systematic Withdrawal Plan allows investors to redeem a predetermined fixed rupee amount monthly from their mutual fund corpus. The AMC redeems the exact fractional units required at the prevailing NAV, leaving the remaining corpus to continue compounding.

2. Tax Efficiency Comparison: SWP vs. Bank Fixed Deposits:

- *Bank Fixed Deposit Interest:* 100% of the interest earned annually is added directly to the retiree's taxable income and taxed at progressive slab rates (up to 30% + cess), regardless of whether it is withdrawn or reinvested.
- *Mutual Fund SWP Cash Flows:* Every SWP monthly installment is considered a redemption of units, consisting of two parts: (a) **Return of Capital (Principal):** Completely tax-free; and (b) **Capital Gains Component:** Only the capital gain fraction is taxed.
- *Long-Term Equity Exemption:* In equity funds held over 12 months, long-term capital gains enjoy a statutory tax exemption of up to ₹1,25,000 per financial year, with gains above this threshold taxed at a modest 12.5%.

Conclusion: SWP delivers substantially higher post-tax monthly cash flows with lower effective tax liability, making it a superior cash-flow instrument for retirees.

Question 11 [Part B - 5 Marks] **Cognitive Level: Understand & Apply**

Explain the statutory taxation framework governing Mutual Funds in India following the Finance Act 2023 and Finance Act 2024 amendments.

Mutual fund taxation is categorized based on portfolio asset allocation:

1. Equity-Oriented Mutual Funds ($ge 65%$ Domestic Equity):

- *Short-Term Capital Gains (STCG - $le 12$ Months):* Taxed at a flat rate of **20.0%** (increased from 15% in Budget 2024).
- *Long-Term Capital Gains (LTCG - > 12 Months):* Taxed at **12.5%** (increased from 10%) on aggregate gains exceeding the enhanced statutory exemption limit of **₹1,25,000** per financial year.

2. Specified Debt Mutual Funds ($le 35%$ Equity - Post-April 1, 2023 Investments):

- Under Finance Act 2023 (Section 50AA), indexation benefits were completely eliminated for debt mutual funds.
- All capital gains (regardless of whether held for 1 month or 10 years) are deemed as **Short-Term Capital Gains** and taxed at the investor's applicable **Income Tax Slab Rates**.

3. Hybrid / Multi-Asset Funds ($> 35%$ but $< 65%$ Equity):

- Holding period threshold for long-term status is **24 Months**.
- LTCG (> 24 months) is taxed at **12.5%** without indexation. STCG ($le 24$ months) is taxed at individual slab rates.

Part C: Comprehensive Essay & Problem Solving (10 / 15 Marks)

Question 12 [Part C - 15 Marks] **Cognitive Level: Synthesize & Evaluate**

Comprehensive Essay: Evaluate the role of Mutual Funds as an institutional vehicle for retail capital mobilization in India. Detail the structural classification under SEBI regulations, analyze the wealth-creation mechanics of Rupee-Cost Averaging in SIPs, and critically evaluate the impact of Total Expense Ratio (TER) in Direct vs. Regular plans over a multi-decade horizon.

Mutual Funds as Catalysts of Retail Financialization in India

Mutual funds have democratized Indian capital markets, enabling over 4.5 crore unique retail investors to participate in corporate wealth creation through professional intermediation, risk diversification, and low-cost systematic entry.

1. Structural Classification under SEBI Framework

Under SEBI's 2017 categorical harmonization, mutual funds operate across distinct asset bands:

- **Equity Schemes:** Large Cap (Top 100 stocks, min 80% equity), Mid Cap (101–250 stocks, min 65%), Small Cap (251+ stocks, min 65%), Flexi Cap (unrestricted multi-cap allocation), and ELSS (tax saving under Section 80C with a 3-year lock-in).
- **Debt Schemes:** Categorized by Macaulay duration: Overnight, Liquid (up to 91 days), Corporate Bond (min 80% in AA+ rated paper), and Gilt Funds (investing in sovereign government securities with zero default risk).
- **Hybrid Schemes:** Conservative Hybrid (10%–25% equity), Aggressive Hybrid (65%–80% equity), and Dynamic Asset Allocation (Balanced Advantage Funds utilizing counter-cyclical algorithmic rebalancing).

2. The Mechanics of Rupee-Cost Averaging & Compounding in SIPs

The Systematic Investment Plan (SIP) eliminates the behavioural flaw of market timing:

- **Counter-Cyclical Accumulation:** Because the monthly investment sum is invariant, when market valuations drop during bear phases, the SIP automatically accumulates a higher volume of units at discounted NAVs.
- **The Mathematical Power of Compounding:** Reinvesting capital gains over 15 to 25 years produces exponential growth: $A = P imes rac{(1 + r)^n - 1}{r} imes (1 + r)$. A ₹10,000 monthly SIP compounding at 12% generates ₹1 Crore in 20 years and ₹1.9 Crores in 25 years on an aggregate principal investment of just ₹30 Lakhs.

3. The Compounding Destruction of Total Expense Ratio (TER) in Regular Plans

The Total Expense Ratio represents the annual percentage fee debited daily from scheme assets to pay for fund management, custodian, audit, and distributor fees. The critical distinction between Direct and Regular plans lies in distributor trail commissions:

- In a **Regular Plan**, the AMC deducts 0.75% to 1.25% per annum to pay perpetual trail commissions to mutual fund distributors or brokers.
- In a **Direct Plan**, this commission is eliminated, reducing the TER by ~1.0% annually.

- *The 25-Year Compound Impact:* While a 1% annual difference appears negligible in year one, when compounded over a 25-year investment horizon, it erodes between **20% to 28% of total accumulated terminal wealth**. An investor who builds a ₹2 Crore portfolio in a Direct Plan would end up with only ~₹1.55 Crores in a Regular Plan, losing ₹45 Lakhs purely in distributor commissions. Financially literate investors must prioritize Direct Plans.

Question 13 [Part C - 15 Marks] **Cognitive Level: Apply & Calculate**

Mutual Fund Financial & Practical Problem:

1. **On March 31, 2025, the balance sheet of *Malabar Growth Equity Fund* exhibits the following:**
    - **Market value of listed equity investments = ₹850 Crores.**
    - **Cash, bank balances, and short-term money market assets = ₹45 Crores.**
    - **Accrued dividends and interest receivable = ₹15 Crores.**
    - **Accrued management fees, custodian charges, and operational expenses = ₹10 Crores.**
    - **Total number of units outstanding = 20 Crore units.**

    Calculate the Net Asset Value (NAV) per unit of the scheme.
2. **An investor initiates a monthly SIP of ₹10,000 across four consecutive months in an open-ended fund. The NAVs on the respective monthly investment dates were: Month 1 = ₹50; Month 2 = ₹40; Month 3 = ₹25; Month 4 = ₹50.**
    - **Calculate the number of units purchased each month and total units accumulated.**
    - **Calculate the average purchase cost per unit under Rupee-Cost Averaging, and compare it with the simple arithmetic average of the four monthly NAVs.**
3. **If the investor redeems all accumulated units in Month 15 at an NAV of ₹65, calculate the Long-Term Capital Gains (LTCG) and net tax payable under the post-Budget 2024 statutory tax framework (Section 112A).**

Comprehensive Mathematical Solutions

Part 1: Net Asset Value (NAV) Calculation

- **Step 1: Total Gross Scheme Assets:**
$ ext{Gross Assets} = ₹850 ext{ Cr} + ₹45 ext{ Cr} + ₹15 ext{ Cr} = mathbf{₹910 ext{ Crores}}$.
- **Step 2: Total Net Assets (AUM):**
$ ext{Net Assets} = ext{Gross Assets} - ext{Accrued Liabilities} = ₹910 ext{ Cr} - ₹10 ext{ Cr} = mathbf{₹900 ext{ Crores}}$.
- **Step 3: Net Asset Value (NAV) per Unit:**
$ ext{NAV} = 🡅rac{ ext{Net Assets}}{ ext{Total Outstanding Units}} = 🡅rac{₹900 ext{ Crores}}{20 ext{ Crore Units}} = mathbf{₹45.00 ext{ per Unit}}$

Part 2: Rupee-Cost Averaging Analysis

Monthly Units Purchased ($ ext{Units} = 🡅rac{₹10,000}{ ext{NAV}}$):

- Month 1 (NAV = ₹50): $🡅rac{₹10,000}{₹50} = mathbf{200.00 ext{ Units}}$.
- Month 2 (NAV = ₹40): $🡅rac{₹10,000}{₹40} = mathbf{250.00 ext{ Units}}$.
- Month 3 (NAV = ₹25): $🡅rac{₹10,000}{₹25} = mathbf{400.00 ext{ Units}}$.
- Month 4 (NAV = ₹50): $🡅rac{₹10,000}{₹50} = mathbf{200.00 ext{ Units}}$.

- **Total Capital Invested:** $4 imes ₹10,000 = mathbf{₹40,000.00}$.
- **Total Units Accumulated:** $200 + 250 + 400 + 200 = mathbf{1,050.00 ext{ Units}}$.

Comparative Cost Analysis:

- **Effective Average Cost per Unit (Rupee-Cost Averaging):**
  $ ext{Average Purchase Cost} = rac{ ext{Total Investment}}{ ext{Total Units}} = rac{₹40,000}{1,050 ext{ Units}} = mathbf{₹38.10 ext{ per Unit}}$
- **Simple Arithmetic Average of NAVs:**
  $ ext{Arithmetic Average} = rac{₹50 + ₹40 + ₹25 + ₹50}{4} = rac{₹165}{4} = mathbf{₹41.25 ext{ per Unit}}$
- *Academic Insight:* The effective average cost under SIP (₹38.10) is significantly lower than the arithmetic average NAV (₹41.25). Because the investor acquired 400 units when the market crashed to ₹25, Rupee-Cost Averaging substantially reduced the overall acquisition cost.

Part 3: Redemption & Capital Gains Tax Liability (Post-Budget 2024)

- **Redemption Value in Month 15 (NAV = ₹65):**
  $ ext{Total Redemption Proceeds} = 1,050 ext{ Units} imes ₹65 = mathbf{₹68,250.00}$.
- **Total Capital Invested:** ₹40,000.00.
- **Total Long-Term Capital Gains Realized:**
  $ ext{LTCG} = ₹68,250.00 - ₹40,000.00 = mathbf{₹28,250.00}$
- **Statutory Tax Assessment under Section 112A:**
  - Holding period is 15 months (> 12 months), qualifying as LTCG.
  - Statutory Annual Exemption Limit post-Budget 2024 = **₹1,25,000** per financial year.
  - Because the total realized LTCG of ₹28,250 is well below the statutory exemption threshold of ₹1,25,000, **Taxable LTCG = ₹0.00**.
  - **Total Net Tax Payable:** $mathbf{₹0.00 ext{ (NIL)}}$.