CHAPTER 10

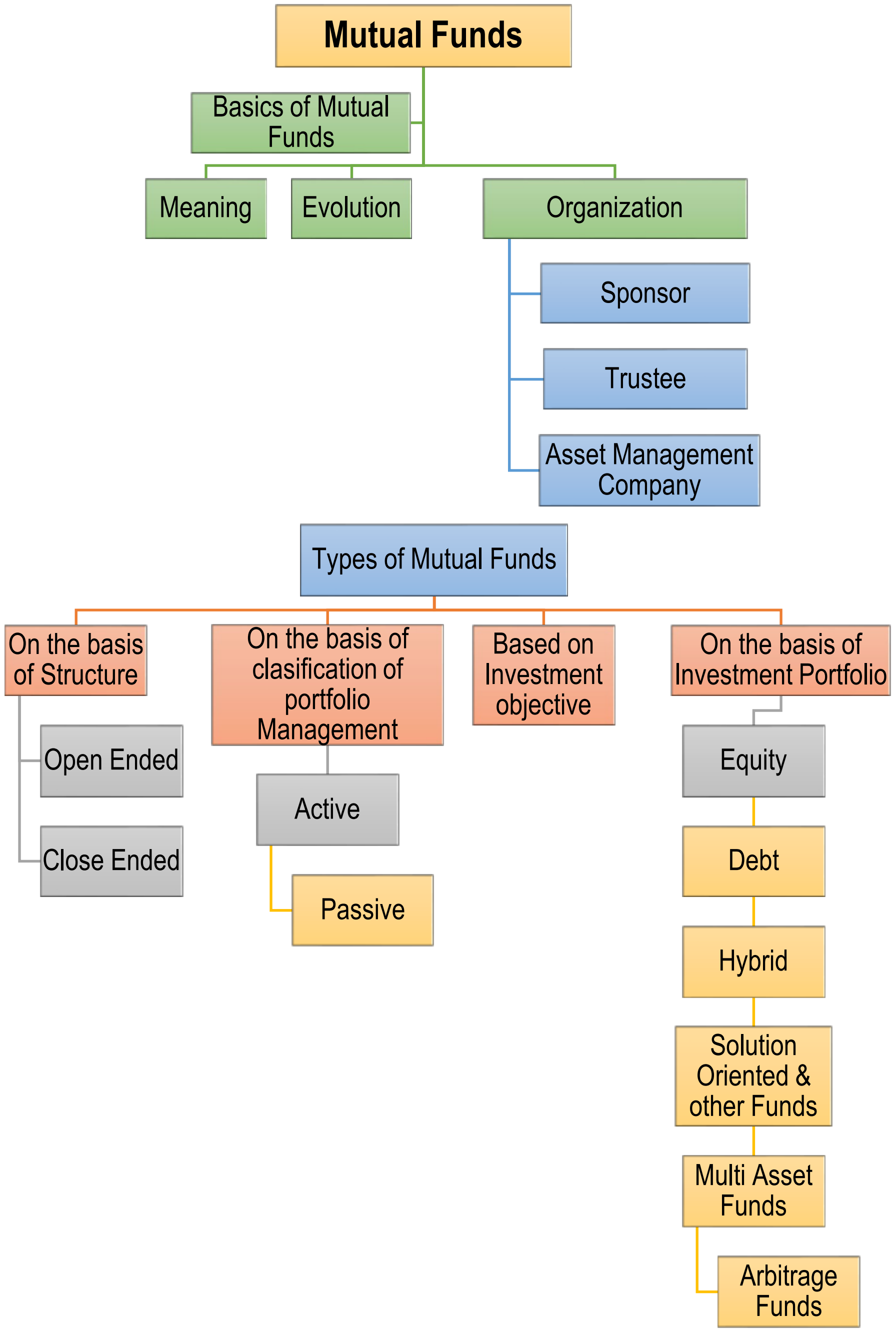
MUTUAL FUNDS

LEARNING OUTCOMES

After going through the chapter student shall be able to understand

- Basics of Mutual Funds- Including its concepts and benefits etc.
- Evolution of the Indian Mutual Fund Industry
- Types of Mutual Funds
  - (1) Structural Classification
  - (2) Portfolio Classification
- Evaluating performance of Mutual Funds
  - (1) Net Asset Value (NAV)
  - (2) Costs incurred by Mutual Fund
  - (3) Holding Period Return (HPR)
- The criteria for evaluating the performance
  - (1) Sharpe Ratio
  - (2) Treynor Ratio
  - (3) Jensen's Alpha
  - (4) Sortino Ratio
- Advantages and Disadvantages of Mutual Fund
- Factors influencing the selection of Mutual Funds
- Signals highlighting the exit of the investor from the Mutual Fund Scheme
- Money Market Mutual Funds (MMMFS)
- Exchange Traded Funds
- Side Pocketing
- Tracking Error
- Real Estate Investment Trusts (ReITs)
- Infrastructure Investment Trusts (InvITs)

CHAPTER OVERVIEW



- Explanation of Importants Terms
- Net Asets Value (NAV) and Indicative NAV

Performance Measurement

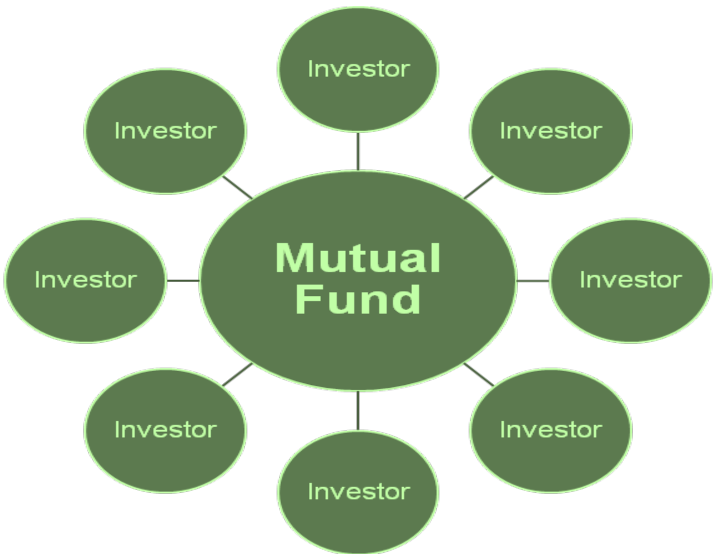
- Cost Incurred
- Point to Point Return
- Rolling Return
- Sharp & Treynor ratio
- Jenson Alpha & Sortino Ratio
- Alpha & Benchmarking

- Advantages and Disadvantages
- Factors Influencing the Selection of Mutual Funds

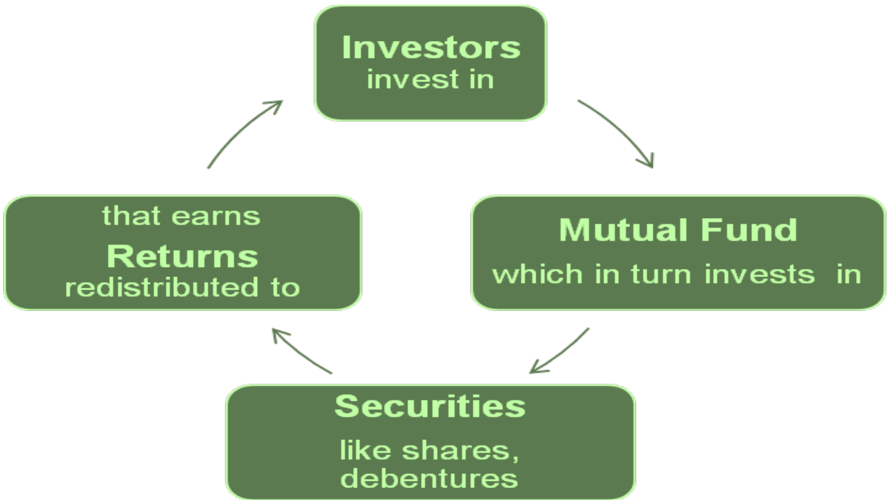
- Signals Highlighting the Exit of the Investor from the Mutual Fund Scheme
- Money Market Mutual Funds
- Separation of Distribution and Advisory Functions in the MF Industry
- Exchange Traded Funds
- Side Pocketing
- Tracking Error
- Real Estate Investment Trusts (REITs) & Infrastructure Investment Trusts (INVITs)

1. MEANING

A Mutual Fund is a pool of funds from a diverse cross section of society, that imparts the benefits of scale and professional management to the investors, which otherwise would not have been available to them. The rationale for any pooling of service is two-fold: affordability and convenience. Office commuters can go to the office by own vehicle or taxicab, which is the synonym for do-it-yourself in the context of investments. The other way of doing the office commute is by public transport like bus or train, which essentially is the pooling concept, bringing transport within the reach of those people who cannot afford their own vehicle. The synonym here is the Mutual Fund. To be noted, it is not just affordability due to which people may take to public transport; there could be reasons like saving the hassles of maintaining and driving own vehicle. The other benefit in the mutual fund context is professional management and tracking of investments.



The diagram above illustrates that a mutual fund is a common pool of investments of a cross section of investors. To understand the concept better, please look at the following diagram:



A Mutual Fund is a pool of investment funds of several investors who have a common investment objective. The asset management company that manages the day-to-day running of the fund invests the money collected in securities like stocks, bonds etc. The investors, called unit holders as they hold units in the pool proportionate to their investment, earn from the appreciation in the investments and dividend / coupon received in the fund. Thus, a Mutual Fund is the most suitable investment for the common man as well as HNIs since it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost.

2. EVOLUTION

2.1 History of Mutual Funds (Global)

A mutual fund, as the term suggests, is a pooling of resources of many investors and is managed by professionals. The concept of pooling money for investments has been there for a long time. It began in the Netherlands in the 18th century; today it is a growing, international industry with fund holdings accounting for trillions of dollars in the United States alone. The closed-end investment companies launched in the Netherlands in 1822 by King William I is supposedly the first mutual funds. Another theory says a Dutch merchant named Adriaan van Ketwich whose investment trust created in 1774 may have given the king the idea. The concept spread to Great Britain and France, and then to the United States in the 1890s.

2.2 Expansion

By the late 1920s, there were quite a few mutual funds in the USA. With the stock market crash of 1929, some funds were wiped out, particularly the leveraged ones. The creation of the Securities and Exchange Commission (SEC), and the Securities Act of 1933 put certain safeguards for investor protection.

Despite the global financial crisis of 2008-2009, the story of the mutual fund is far from over. In fact, the industry is still growing. In the U.S. alone there are more than 10,000 mutual funds and fund holdings are measured in the trillions of dollars.

2.3 History of Mutual Funds in India

The evolution of the mutual fund industry in India has been relatively more 'administered' i.e., there have been quite a few administrative interventions. The history, as delineated by Association of Mutual Funds of India (AMFI), is as follows:

The mutual fund industry in India started in 1963 with the formation of Unit Trust of India, at the initiative of the Government of India and Reserve Bank of India. The history of mutual funds in India can be broadly divided into four distinct phases:

2.3.1 First Phase – 1964-87

Unit Trust of India (UTI) was established in 1963 by an Act of Parliament. It was set up by the Reserve Bank of India and functioned under the Regulatory and administrative control of the Reserve Bank of India. In 1978 UTI was de-linked from the RBI and the Industrial Development Bank of India (IDBI) took over the regulatory and administrative control in place of RBI. The first scheme launched by UTI was Unit Scheme 1964. At the end of 1988, UTI had ₹ 6,700 crore of assets under management.

2.3.2 Second Phase – 1987-1993 (Entry of Public Sector Funds)

1987 marked the entry of non- UTI, public sector mutual funds set up by public sector banks and Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC). SBI Mutual Fund was the first non- UTI Mutual Fund established in June 1987 followed by Canbank Mutual Fund (Dec 87), Punjab National Bank Mutual Fund (Aug 89), Indian Bank Mutual Fund (Nov 89), Bank of India (Jun 90), Bank of Baroda Mutual Fund (Oct 92). LIC established its mutual fund in June 1989 while GIC had set up its mutual fund in December 1990. At the end of 1993, the mutual fund industry had assets under management of ₹47,004 crore.

2.3.3 Third Phase – 1993-2003 (Entry of Private Sector Funds)

With the entry of private sector funds in 1993, a new era started in the Indian mutual fund industry, giving the Indian investors a wider choice of fund families. Also, 1993 was the year in which the first Mutual Fund Regulations came into being, under which all mutual funds, except UTI, were to be registered and governed. The erstwhile Kothari Pioneer (now merged with Franklin Templeton) was the first private sector mutual fund registered in July 1993.

The 1993 SEBI (Mutual Fund) Regulations were substituted by a more comprehensive and revised Mutual Fund Regulations in 1996. The industry now functions under the SEBI (Mutual Fund) Regulations, 1996.

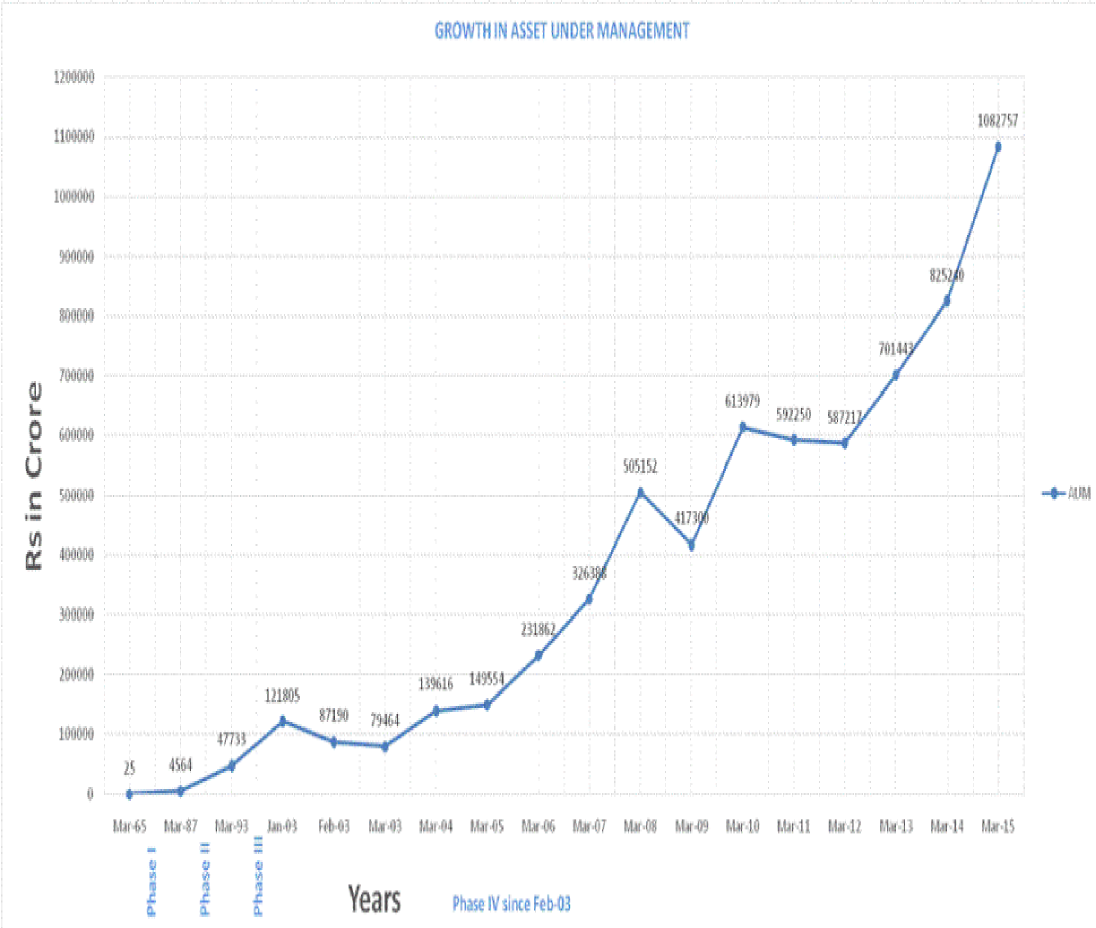
The number of mutual fund houses went on increasing, with many foreign mutual funds setting up funds in India and the industry has witnessed several mergers and acquisitions. As at the end of January 2003, there were 33 mutual funds with total assets of ₹ 1,21,805 crore. The Unit Trust of India with ₹44,541 crore of assets under management was way ahead of other mutual funds.

2.3.4 Fourth Phase – since February 2003

In February 2003, following the repeal of the Unit Trust of India Act 1963, UTI was bifurcated into two separate entities. One is the Specified Undertaking of the Unit Trust of India with assets under management of ₹ 29,835 crore as at the end of January 2003, representing broadly, the assets of US 64 scheme, assured return, and certain other schemes. The Specified Undertaking of Unit Trust of India, functioning under an administrator and under the rules framed by Government of India does not come under the purview of the Mutual Fund Regulations.

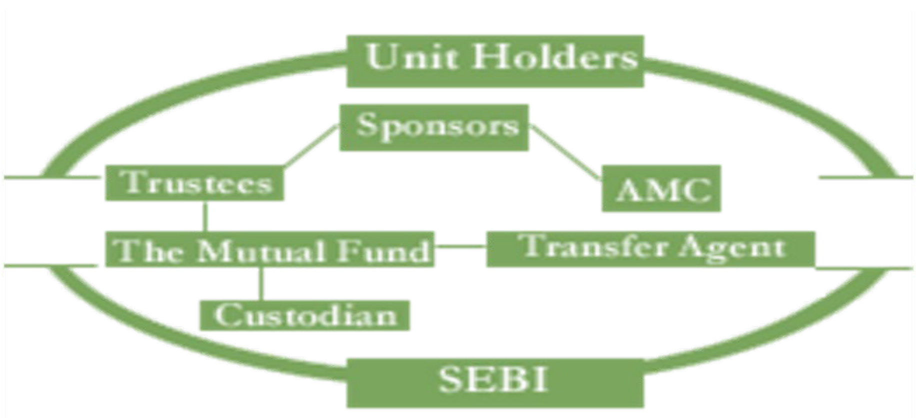
The second is the UTI Mutual Fund, sponsored by SBI, PNB, BOB and LIC. It is registered with SEBI and functions under the Mutual Fund Regulations. With the bifurcation of the erstwhile UTI which had in March 2000 more than ₹76,000 crore of assets under management and with the setting up of a UTI Mutual Fund, conforming to the SEBI Mutual Fund Regulations, and with recent mergers taking place among different private sector funds, the mutual fund industry has entered its current phase of consolidation and growth.

Growth in terms of quantum of funds managed.



[Source: Website of Association of Mutual Funds (AMFI)]

2.4 Mutual Fund Organization



There are various entities involved in the overall structure. They are explained as below:

Sponsor

Sponsor is the entity that creates a mutual fund. The rules are set by the Securities and Exchange Board of India, in the Mutual Fund Regulations of 1996. Sponsor is defined under the SEBI regulations as any person who, acting alone or in combination with another body corporate, establishes a mutual fund. Sponsor is the promoter of the fund. A Sponsor could be a bank, a corporate or a financial institution. Sponsors then form a Trust and appoint a Board of Trustees. The sponsor also appoints Custodian.

As per SEBI regulations, a sponsor must contribute at least 40% of the net worth of the Asset Management Committee (AMC) and possess a sound financial track record over five years prior to registration. Sponsor signs the trust deed with the trustees. Sponsor creates the AMC and the trustee company and appoints the board of directors of companies, with SEBI approval. Sponsor should have at least a 5-year track record in the financial services business and should have made a profit in at least 3 out of the 5 years. The AMC's capital is contributed by the sponsor. Sponsor should contribute at least 40% of the capital of the AMC.

Trust

The Mutual Fund is a trust under the Indian Trusts Act, 1882. The trust deed is registered under the Indian Registration Act, 1908. The Trust oversees the safekeeping of the unit holders' investments.

Trustee

The Board of Trustees i.e., the body of individuals, looks after safeguarding the interest of the unit holders. At least 2/3rd of the Trustees is independent i.e. not associated with the Sponsor. A mutual fund in India is form as Trust under Indian Trust Act, 1882. The trust-mf is managed by the Board of Trustees. The Board of Directors i.e. Trustees do not manage the portfolio of securities directly rather they supervise the work of AMC (Asset Management Company) and ensure that the fund is managed by stated objectives and as per SEBI regulations.

Trusts always work for the interest of unit holders, and it is created through a document called Trust Deed that is executed by sponsors in favor of Trustees. The Trustees being the primary guardians of unit holder's funds and assets, they must ensure that the investor's interests are safeguarded and that the AMC operations are as per regulation laid down by SEBI. SEBI mandates a minimum of 2/3rd independent directors on the board of the trustee company. Trustees are appointed by the sponsor with SEBI approval. The trustees make sure that the funds are managed according to the investor's mandate.

Asset Management Company (AMC)

The AMC is that part of the mutual fund system that looks after the operations and investments of the MF. Formation of the AMC requires approval by SEBI. The AMC needs to have a net worth of ₹ 50 crore. The role of AMC is to act as investment manager of trust. The AMC (as appointed by trust/sponsor) requires approval by SEBI.

The AMC is under the supervision of its own board of directors and the directors of trustees and SEBI. The trustees are empowered to terminate the appointment of AMC and appoint a new AMC with prior approval of SEBI and unit holders. The AMC, in the name of the Trust, manages different investment schemes as per the investment management agreement with the trustees. A Director of AMC should have complete professional experience in finance.

The AMC cannot act as a trustee of any other MF. The AMC always acts in the interest of unit holders (investor). The AMC gets a fee for managing the funds, according to the mandate of the investors. At least ½ of the AMC's Board should be of independent members. An AMC cannot engage in any business other than portfolio advisory and management. An AMC of one fund cannot be Trustee of another fund. AMC should be registered with SEBI. Also, AMC signs an investment management agreement with the trustees.

3. TYPES OF MUTUAL FUNDS

There are various types of mutual funds, classified primarily based on the underlying portfolio.

3.1 On the basis of Structure

3.1.1 Open Ended Funds

It is a commonly used term in the mutual fund industry; let us understand the term for the investor. Most of the funds (or Schemes, technically) are open ended, ones that are available for purchase from the AMC and redemption with the AMC on an on-going basis, round the year on all working days, till it is wound up.

What it means for the investor is, there is liquidity round the year - can be purchased anytime and can be sold (redeemed, technically) anytime i.e. the investor can enter and exit anytime. AMC issues new units when investor enters/purchase units form AMC and redeem/sells the units back to AMC. Listed open-ended funds can be sold at the Exchange as well, but in case of redemption with the AMC, liquidity is assured. There is no additional cost for this liquidity as AMCs do not charge any premium for redemption.

Sometimes there is an exit load in an open-ended fund. It means if the investor exits within that period, there will be a penalty charged on the exit value, but liquidity is available nonetheless at the cost of the exit load. It is a matter of discipline so that the investor comes in with the requisite horizon in mind and if she exits within that period, she pays adequate compensation to the other investors who are staying back.

The implications of open-ended funds for the AMC are fund (or Scheme) corpus size volatility; fund size increases when investors purchase units from the AMC and fund size comes down when investors redeem units.

An open-ended fund comes into existence through the New Fund Offer (NFO) process and the Fund (or Scheme) parameters are decided by the NFO documents - Scheme Information Document (SID) and Key Information Memorandum (KIM). There is another document called Scheme Additional Information (SAI).

There is no defined maturity date for open-ended funds. If there is a single investor- the Scheme continues to be in existence. There are limitations on maximum holding by a single investor: it is referred to commonly as the 20/25 rule i.e., there must be a minimum 20 investors to float a Scheme and maximum permissible holding per investor is 25%.

3.1.2 Close Ended Funds

Close ended funds are available for subscription only during the New Fund Offer (NFO) period and not beyond that. The initial subscription amount is collected from investors and the fund is 'closed' after the NFO closure date i.e., no further purchase is allowed. There is no redemption possible with the AMC. Hence from the AMC's perspective, the fund (or Scheme) corpus size is stable and there is no need to keep some portion in liquid or easily marketable securities to meet sudden redemption pressure.

Close ended funds may have a defined maturity date e.g., fixed maturity plans (FMPs) that have a maturity date. In an open-ended structure, it is practically not feasible to have a maturity date as it is meant to be available for investment and redemption on an on-going basis. Closed ended funds are listed at the Exchange but are not as liquid as open-ended funds as there is no defined liquidity like redemption with the AMC.

Broadly, open-ended funds are much more popular than closed ended as the mutual fund industry is supposed to provide investment solutions along with liquidity that is available at any point of time. Close Ended Funds are meant to fulfil a particular requirement.

Difference between Open Ended Funds and Close Ended Funds

Particulars	Open-Ended Mutual Funds	Close-ended Mutual Funds
Lock-In Period	Such funds have no lock-in period. The units of open-ended funds can be bought and sold at any point in time. Sometimes the only exception to this is the Equity Linked Savings Scheme. It is an open-ended mutual fund that has a 3-year lock-in.	Close-ended mutual funds have a specific lock-in period. Redemption of the units of such funds is only possible after the expiry of the said lock-in.
Liquidity	Open-ended funds are highly liquid since the units can be bought and sold freely without any restrictions.	Close-ended mutual funds have no liquidity since they can only be redeemed after the expiry of the lock-in period. For liquidity they have to be liquidated by selling through Markets where they trade.
Mutual Fund Units and Fund Size	There's no limit on either the number of units in open-ended mutual funds or the fund size. New units are created by the fund house as and when individuals invest money into the fund.	The number of units and the fund size in close-ended mutual funds is limited. Investors cannot invest in such funds once all the listed units have been subscribed.
Investment Method	Open-ended mutual funds support both lump-sum investments as well as Systematic Investment Plans (SIPs).	Since you can only subscribe to the units of a close-ended fund during the New Fund Offer (NFO) period, only lump-sum investments are allowed.
Track Record of Performance	Since open-ended mutual funds are perpetual by nature, track records of past performances are available	Close-ended funds do not have any track record of performance.

3.2 On the basis of Classification of Portfolio Management

Active Funds:

Active Funds are mutual funds where the fund manager plays an active role in deciding whether to buy, sell or hold the investments. Active funds employ a variety of strategies to construct and manage their portfolios. For example, to outperform the entire market and others acting as powerful hedges against unforeseen market declines or corrections. In an Active Fund, the Fund Manager is 'Active' in deciding whether to Buy, Hold, or Sell the underlying securities and in stock selection. Active funds adopt different strategies and styles to create and manage the portfolio.

The investing strategy and style are explicitly available in the Scheme Information document (offer document). Active funds seek to outperform their benchmark index in terms of returns. Furthermore, the fund strategy determines its risk and return characteristics. Active funds are expected to generate better returns (alpha) than the benchmark index. The risk and return in the fund will depend upon the strategy adopted. Active funds implement strategies to 'select' the stocks for the portfolio.

Passive Funds:

Passive funds are the index funds which track the market index and try to generate returns in line with the index. Fund managers of the passive funds invest in the components of the underlying index in the same proportion as the index. The objective of the passive funds is to generate market like returns. Passive Equity funds are the index funds which follow equity indices like Nifty 50 index or any of the sectoral indices.

If you are a beginner and find it challenging to choose the right equity investment for your portfolio, passive equity funds are the ideal choice for you. These are simple, low cost and easy to track. Passive Funds hold a portfolio that replicates a stated Index or Benchmark, for example, Index Funds and Exchange Traded Funds (ETFs)

In a Passive Fund, the fund manager has a passive role, as the stock selection / Buy, Hold, Sell decision is driven by the Benchmark Index and the fund manager / dealer merely needs to replicate the same with minimal tracking error.

Difference Between Active and Passive Funds:

(i) Active Funds

- Rely on professional fund managers who manage investments.
- Aim to outperform Benchmark Index.

- Suited for investors who wish to take advantage of fund managers' potential for generating higher income.

(ii) Passive Funds

- Investment holdings mirror and closely track a benchmark index, e.g., Index Funds or Exchange Traded Funds (ETFs).
- Suited for investors who want to allocate exactly as per market index.
- Lower Expense ratio hence lower costs to investors and better liquidity.

3.3 Investment based on Investment Objective

Mutual funds offer products that cater to the different investment objectives of the investors such as–

- Capital Appreciation (Growth)
- Capital Preservation
- Regular Income
- Liquidity
- Tax-Saving

Mutual funds also offer investment plans, such as Growth and Dividend options, to help tailor the investment to the investors' needs.

(Source: https://www.amfiindia.com/investor-corner/knowledge-center/types-of-mutual-fund-schemes.html)

3.4 On the Basis of Investment Portfolio

The Schemes would be broadly classified in the following groups:

a. Equity Schemes

Equity Schemes are those schemes which invest in Equity Shares. The target here is capital appreciation and they are riskier due to equity component. Markets are considered to have cycles thus these funds are considered better from the long-term perspective, as in the short term, markets can be volatile.

b. Debt Schemes

Debt Schemes invest in fixed income securities thus target fixed income. The idea here is diversification and they are safer than equity funds. But the quality of debt instrument in which the fund is investing is always to be considered and selected. If the quality, i.e. safety of investment, is more then obviously the returns will be lower and vice versa. Thus, there are different types of debt funds which are differentiated based on safety and returns they offer. "The more the credit risk, the greater the return and less the credit risk lessor the return".

c. Hybrid Schemes

Hybrid funds Invest in a mix of equities and debt securities. SEBI has classified Hybrid funds into 7 sub-categories as follows:

(i) **Conservative Hybrid Fund** - 10% to 25% investment in equity & equity related instruments; and 75% to 90% in Debt instruments.

(ii) **Balanced Hybrid Fund** - 40% to 60% investment in equity & equity related instruments; and 40% to 60% in Debt instruments.

(iii) **Aggressive Hybrid Fund** - 65% to 80% investment in equity & equity related instruments; and 20% to 35% in Debt instruments.

(iv) **Dynamic Asset Allocation or Balanced Advantage Fund -**Investment in equity/ debt that is managed dynamically (0% to 100% in equity & equity related instruments; and 0% to 100% in Debt instruments).

(v) **Multi Asset Allocation Fund** - Investment in at least 3 asset classes with a minimum allocation of at least 10% in each asset class.

(vi) **Arbitrage Fund** - Scheme following arbitrage strategy, with minimum 65% investment in equity & equity related instruments.

(vii) **Equity Savings Fund** - Equity and equity related instruments (min.65%); debt instruments (min.10% and derivatives (min. for hedging to be specified in the SID).

d. Solution-oriented & Other funds

(i) **Retirement Fund -** Lock-in for at least 5 years or till retirement age whichever is earlier.

(ii) **Children's Fund** - Lock-in for at least 5 years or till the child attains age of majority whichever is earlier.

(iii) **Index Funds/ ETFs -** Minimum 95% investment in securities of a particular index.

(iv) **Fund of Funds (Overseas/ Domestic) -** Minimum 95% investment in the underlying fund(s).

(v) **Hybrid funds** - Invest in a mix of equities and debt securities. They seek to find a 'balance' between growth and income by investing in both equity and debt.

e. Multi Asset Funds

A multi-asset fund offers exposure to a broad number of asset classes, often offering a level of diversification typically associated with institutional investing. Multi-asset funds may invest in several traditional equity and fixed income strategies, index-tracking funds, financial derivatives as well as commodities like gold. This diversity allows portfolio managers to potentially balance risk with reward and deliver steady, long-term returns for investors, particularly in volatile markets.

f. Arbitrage Funds

"Arbitrage" is the simultaneous purchase and sale of an asset to take advantage of the price differential in the two markets and profit from price difference of the asset on different markets or in different forms. An arbitrage fund buys a stock in the cash market and simultaneously sells it in the Futures market at a higher price to generate returns from the difference in the price of the security in the two markets. The fund takes equal but opposite positions in both the markets, thereby locking in the difference.

The positions must be held until expiry of the derivative cycle and both positions need to be closed at the same price to realize the difference. The cash market price converges with the Futures market price at the end of the contract period. Thus, it delivers risk-free profit for the investor/trader. Price movements do not affect the initial price differential because the profit in one market is set off by the loss in the other market. Since mutual funds invest their own funds, the difference is the return.

Hence, Arbitrage funds are a good choice for cautious investors who want to benefit from a volatile market without taking on too much risk.

(Source:https://www.amfiindia.com/investor-corner/knowledge-center/types-of-mutual-fund-schemes.html)

A. Equity Schemes:

Sl. No.	Category of Schemes	Scheme Characteristics	Type of scheme (uniform description of scheme)
1	Multi Cap Fund	Minimum investment in equity & equity related instruments – 65% of total assets	Multi Cap Fund – An open-ended equity scheme investing across large cap, mid cap, small cap stocks
2	Large Cap Fund	Minimum investment in equity & equity related instruments of large cap companies – 80% of total assets	Large Cap Fund – An open-ended equity scheme predominantly investing in large cap stocks
3	Large & Mid Cap Fund	Minimum investment in equity & equity related instruments of large cap companies – 35% of total assets Minimum investment in equity & equity related instruments of mid cap stocks – 35% of total assets	Large & Mid Cap Fund – An open-ended equity scheme investing in both large cap and mid cap stocks
4	Mid Cap Fund	Minimum investment in equity & equity related instruments of mid cap companies – 65% of total assets	Mid Cap Fund – An open-ended equity scheme predominantly investing in mid cap stocks
5	Small Cap fund	Minimum investment in equity & equity related instruments of small cap companies – 65% of total assets	Small Cap Fund – An open-ended equity scheme predominantly investing in small cap stocks
6	Dividend Yield Fund	The scheme should predominantly invest in dividend yielding stocks. Minimum investment in equity – 65% of total assets	An open-ended equity scheme predominantly investing in dividend yielding stocks
7	Value Fund	Scheme should follow a value investment strategy. Minimum investment in equity & equity related instruments – 65% of total assets	An open-ended equity scheme following a value investment strategy

8	Contra Fund	The scheme should follow a contrarian investment strategy. Minimum investment in equity & equity related instruments – 65% of total assets	An open-ended equity scheme following contrarian investment strategy
9	Focused Fund	A scheme focused on the number of stocks (maximum 30) Minimum investment in equity & equity related instruments – 65% of total assets	An open-ended equity scheme investing in maximum 30 stocks (mention where the scheme intends to focus, viz; multi cap, mid cap, small cap)
10	Sectoral / Thematic	Minimum investment in equity & equity related instruments of a particular sector/ particular theme – 80% of total assets	An open-ended equity scheme investing in - sector (mention the sector) An open-ended equity scheme following – theme (mention the theme)
11	ELSS	Minimum investment in equity & equity related instruments – 80% of total assets (in accordance with Equity Linked Saving Scheme, 2005 notified by Ministry of Finance)	An open-ended equity linked saving scheme with a statutory lock in of 3 years and tax benefit

For classification of companies as per market capitalization, the definition is as follows:

- **Large Cap:** 1st -100th company in terms of full market capitalization
- **Mid Cap:** 101st -250th company in terms of full market capitalization
- **Small Cap:** 251st company onwards in terms of full market capitalization

B. Debt Schemes:

Sr. No.	Category of Schemes	Scheme Characteristics	Type of scheme (uniform description of scheme)
1	Overnight Fund	Investment in overnight securities having maturity of 1 day	An open-ended debt scheme investing in overnight securities

2	Liquid Fund	Investment in Debt and money market securities with maturity of upto 91 days only	An open-ended liquid scheme
3	Ultra-Short Duration Fund	Investment in Debt & Money Market instruments such that the Macaulay duration of the portfolio is between 3 months – 6 months	An open ended ultra – short term debt scheme investing in instruments with Macaulay duration between 3 months and 6 months
4	Low Duration Fund	Investment in Debt & Money Market instruments such that the Macaulay duration of the portfolio is between 6 months – 12 months	An open-ended low duration debt scheme investing in instruments with Macaulay duration between 6 months and 12 months
5	Money market Fund	Investment in Money Market instruments having maturity upto 1 year	An open-ended debt scheme investing in money market instruments
6	Short Duration Fund	Investment in Debt & Money Market instruments such that the Macaulay duration of the portfolio is between 1 year – 3 years	An open-ended short-term debt scheme investing in instruments with Macaulay duration between 1 year and 3 years
7	Medium Duration Fund	Investment in Debt & Money Market instruments such that the Macaulay duration of the portfolio is between 3 years – 4 years	An open-ended medium-term debt scheme investing in instruments with Macaulay duration between 3 years and 4 years
8	Medium to Long Duration Fund	Investment in Debt & Money market instruments such that the Macaulay duration of the portfolio is between 4 – 7 years	An open-ended medium-term debt scheme investing in instruments with Macaulay duration between 4 years and 7 years
9	Long Duration Fund	Investment in Debt & Money Market Instruments such that the Macaulay duration of the portfolio is greater than 7 years	An open-ended debt scheme investing in instruments with Macaulay duration greater than 7 years

10	Dynamic Bond	Investment across duration	An open-ended dynamic debt scheme investing across duration
11	Corporate Bond Fund	Minimum investment in corporate bonds – 80% of total assets (only in highest rated instruments)	An open-ended debt scheme predominantly investing in highest rated corporate bonds
12	Credit Risk Fund	Minimum investment in corporate bonds – 65% of total asset (investment in below highest rated instruments)	An open-ended debt scheme investing in below highest rated corporate bonds
13	Banking and PSU Fund	Minimum investment in Debt instrument of banks, Public Sector Undertakings, Public Financial Institutions – 80% of total assets	An open-ended debt scheme predominantly investing in Debt instruments of banks, Public Sector Undertakings, Public Financial Institutions
14	Gilt Fund	Minimum investment in Gsecs – 80% of total assets (across maturity)	An open-ended debt scheme investing in government securities across maturity
15	Gilt Fund with 10-year constant duration	Minimum investment in G secs – 80% of total assets such that the Macaulay duration of the portfolio is equal to 10 years	An open-ended debt scheme investing in government securities having a constant maturity of 10 years
16	Floater Fund	Minimum investment in floating rate instruments – 65% of total assets	An open-ended debt scheme predominantly investing in floating rate instruments

For debt funds, the classification is based on Macaulay Duration, and not based on Average Maturity of Modified Duration.

The calculation of Macaulay Duration has been dealt with in the Chapter – Security Valuation in the Advanced Financial Management Paper of CA Final Course.

C. **Hybrid Schemes:**

Sr. No.	Category of Schemes	Scheme Characteristics	Type of scheme (uniform description of scheme)
1	Conservative Hybrid Fund	Investment in equity & equity related instruments – between 10% and 25 % of total assets Investment in Debt instruments – between 75% and 90% of total assets	An open-ended hybrid scheme investing predominantly in debt instruments
2	Balanced Hybrid Fund	Equity & Equity related instruments – between 40% and 60 % of total assets. Debt instruments – between 40% and 60% of total assets No arbitrage would be permitted in this scheme	An open-ended balanced scheme investing in equity and debt instruments
	Aggressive Hybrid Fund	Equity & Equity related instruments – between 65% and 80% of total assets; Debt instruments – between 20% and 35% of total assets	An open-ended hybrid scheme investing predominantly in equity and equity related instruments
3	Dynamic Asset Allocation or Balanced Advantage	Investment in equity / debt that is managed dynamically	An open-ended dynamic assets allocation fund
4	Multi Assets Allocation	Invests in at least three asset classes with a minimum allocation of at least 10% each in all three asset classes	An open-ended scheme investing in the three different asset classes
5	Arbitrage Fund	Scheme following arbitrage strategy. Minimum investment in	An open-ended scheme investing in arbitrage opportunities

		equity & equity related instruments – 65% of total assets	
6	Equity Savings	Minimum investment in equity & equity related instruments – 65% of total assets and minimum investment in debt – 10% of total assets Minimum hedged & unhedged to be stated in the SID	An open-ended scheme investing in equity, arbitrage and debt

D. Solution Oriented Schemes:

Sr. No.	Category of Schemes	Scheme Characteristics	Type of scheme (Uniform description of scheme)
1	Retirement Fund	Scheme having a lock – in for at least 5 years or till retirement age whichever is earlier	An open ended retirement solution oriented scheme having a lock – in of 5 years or till retirement age (whichever is earlier)
2	Children's Fund	Scheme having a lock – in for at least 5 years or till the child attains age of majority whichever is earlier	An open-ended fund for investment for children having a lock – in for at least 5 years or till the child attains age of majority (whichever is earlier)

E. Other Schemes:

Sr. No.	Category of Schemes	Scheme Characteristics	Type of scheme (Uniform description of scheme)
1	Index Funds / ETFs	Minimum investment in securities of a particular index (which is being replicated / tracked) – 95% of total assets	An open-ended scheme replicating / tracking an index
2	FOFs (Overseas / Domestic)	Minimum investment in the underlying fund – 95% of total assets	An open-ended fund of fund scheme investing in a particular fund (mention the underlying fund)

3.5 SEBI Allowed Flexicap Plans in Relief to Fund Houses Facing Tight Regulation

The Securities and Exchange Board of India introduced flexicap schemes under the broader equity mutual fund category. The move came as a relief to fund houses which operated multicap schemes after the capital markets regulator tightened investment norms for this category. The majority of the large multicap schemes were shifted to the new flexicap category. Kotak Standard Multicap Fund, the largest scheme in the category was renamed Kotak Standard Flexicap. The fund manager, investment process and fund portfolio remained the same. The new category gave the fund manager flexibility to invest in a mix of large, midcap and smallcap stocks. The scheme needs to invest at least 65% of the corpus to equity, SEBI said in a circular.

The decision to introduce flexicap schemes followed protests from a section of the mutual fund industry after the regulator on September 11, 2020, unexpectedly asked multicap funds to allocate at least 25% of their portfolios to large-, mid- and smallcap stocks each. Till then, there were no investment restrictions for this product, resulting in many of these schemes holding as much as 75% of their portfolios in largecap stocks, resembling large and midcap schemes as per SEBI's classification. Multicap portfolios manage 20% of the industry's equity assets under management.

Motilal Oswal Multicap Fund, another large scheme in the category, was also being shifted to the flexicap category. Most multicap funds got their schemes reclassified into the flexicap category. Fund managers of large multicap funds were opposed to staying in this category under the new investment rules, which would require them to shift a large chunk of their corpus in largecap stocks to small and midcaps. They feared the rush to make obligatory purchases of illiquid smaller stocks to meet the norms that would drive up these stocks and be detrimental to the multicap investor.

4. DIRECT PLAN AND REGULAR PLAN

One may invest in mutual funds directly i.e., without involving or routing the investment through any distributor/agent in a 'Direct Plan'. Or one may choose to invest in mutual funds with the help of a Mutual Fund distributor/agent in what is termed as a 'Regular Plan'. 'Direct Plan' and 'Regular Plan' are both part of the same mutual fund scheme, have the same/common portfolio, and are managed by the same fund manager, but have different expense ratios (recurring expenses that are incurred by the mutual fund scheme).

The Direct Plan has a lower expense ratio than the Regular Plan, as there is no distributor/agent involved, and hence there are savings in terms of distribution cost/commissions paid out to the distributor/agent, which is added back to the returns of the scheme. Hence, a Direct Plan has a separate NAV, which is higher than the "Regular" Plan's NAV. In due course, the lower expense ratio of the Direct Plan translates to higher returns on the investments which keep compounding over the years. Thus, the investment in the Direct Plan would be worth more over a period, in comparison to investment in the Regular Plan of the same scheme. It should be however borne in mind that the difference between NAV of Direct Plan and Regular Plan tends to be marginal.

Direct Plans are for those who prefer to invest DIRECTLY in a mutual fund scheme without the help of any distributor/agent. Investing in a Direct Plan is like buying a product from the manufacturer directly, whereby the cost to the customer would be lower. Except that, investing in a mutual fund scheme directly is not as simple as buying some item from a factory outlet, because choosing a mutual fund scheme requires adequate knowledge and awareness of the mutual fund product, especially the risks that are associated with the potential rewards. Choosing a Direct Plan means making your own decisions about fund/scheme selection (and the related execution work) which not everyone may be capable of.

In short, Direct Plan is suited for those who understand what kind of mutual funds are needed for different kinds of investment needs, can research these independently, and are able to identify/shortlist the funds to invest in, and then go through the process of investing without the help of an intermediary. However, when the markets fall and investment values come under pressure, independent advice from a professional advisor can help one stay the course. Thus, a Direct Plan makes sense only if you have adequate knowledge and capability to select good funds yourself; or are willing to seek professional advice from a registered investment adviser for a fee.

While the Direct Plan makes sense for knowledgeable, Do-it-Yourself (DIY) investors, it may not be suited for all investors, especially new and inexperienced investors. So, if you are a new and inexperienced investor or unsure of which scheme to invest in and need guidance/assistance in investing, you may be better off seeking the help of a mutual fund distributor and investing in a Regular Plan.

5. EXPLANATION OF IMPORTANT TERMS USED IN MUTUAL FUNDS

New Fund Offer (NFO): A mutual fund house, also known as an asset management company, will issue a New Fund Offer (NFO) when they choose to introduce a new mutual fund scheme. It's a mutual fund scheme's initial offer that gives investors the chance to invest early and earn substantial profits.

A mutual fund house can raise the necessary funds through an NFO to buy stocks or debt instruments. Customers can purchase units at INR 10 per unit NAV for a subscription duration ranging from ten (10) to fifteen (15) days offered by AMCs. Investors receive units from AMCs according to a first-come, first-served policy.

Expense Ratio: Under SEBI (Mutual Funds) Regulations, 1996, Mutual Funds are permitted to charge certain operating expenses for managing a mutual fund scheme – such as sales & marketing/ advertising expenses, administrative expenses, transaction costs, investment management fees, registrar fees, custodian fees, audit fees – as a percentage of the fund's daily net assets.

All such costs for running and managing a mutual fund scheme are collectively referred to as 'Total Expense Ratio' (TER). The TER is calculated as a percentage of the Scheme's average Net Asset Value (NAV). The daily NAV of a mutual fund is disclosed after deducting the expenses.

(Source: Amfi Website)

Scheme Information Document (SID):

Scheme Information Document contains basic information about the scheme which investors should know about before investing. The scheme information document usually runs into several pages and may seem too technical for novice investors. However, it has very useful scheme related information, which can help investors make informed investment decisions. However, some key information which investors should look for and read in the scheme information document are as follows:

- Fund management team details
- Risks factors
- Scheme details
- Other information

Statement of Additional Information (SAI):

This document is essentially an addendum to the SID. Information provided in the SAI includes the following: -

(i) **Constitution of the mutual fund** i.e. the Asset Management Company of the scheme, scheme sponsors and trustees. The sponsor is the promoter of the Asset Management Company. The sponsor provides capital, creates a board of trustees and sets up the Asset Management Company (AMC). The role of the trustees is to protect the interest of investors, monitoring the AMC and ensuring compliance with regulations.

(ii) **Key information about the AMC** i.e. Key personnel of the AMC, key associates of the AMC like Bankers, Custodians, Registrars, Auditors and Legal Counsel, Financial and legal issues etc.

Key Information Memorandum (KIM):

KIM is Key Information Memorandum. As the name suggests, it has key scheme related information. The KIM is essentially a concise version of the SID. The KIM is available with all mutual fund scheme application forms. It is recommended to read the KIM carefully before investing, especially if you have not gone through the SID.

(Source : https://www.miraeassetmf.co.in/quiz-module-list/topic-2/intermediate-level/investor-rights-obligations/sid-sai-kim-before-investing

Systematic Investing Plan (SIP):

It is designed to aid you in achieving your financial objectives over time. It offers a straightforward way to regularly invest a predetermined sum in your chosen mutual funds. SIP, with its promise to make investing accessible to everybody, has become a major change in financial planning and asset management. But besides understanding the meaning of SIP, it is also important to understand how it works and how it can play a huge role in the success of your wealth-building journey. Let's discuss SIP in detail.

How does SIP work?

SIP offers a convenient method for investing in mutual funds, allowing you to determine your desired regular investment amount easily. This amount is automatically deducted from your bank account to buy mutual fund units. Over time, these investments grow due to compounding. There are two principles on which the SIP works. *They are as follows:*

(i) Regular Investing

SIPs offer a strategic shield against the unpredictable tides of the financial markets. By adhering to consistent investments, SIPs ensure that the average purchase cost remains stable over the long term.

In practical terms, when market conditions are buoyant, you acquire fewer units of your chosen investment, and during market downturns, you secure more units for your investment. This key difference between SIP and mutual fund investing can provide investors with a risk-mitigation strategy and potentially higher returns over time.

(ii) Power of Compounding

The power of compounding in SIP refers to reinvesting the returns generated by your mutual fund investments back into the same fund. Over time, this process leads to exponential growth as your returns earn additional returns.

The longer you stay invested, the more significant the compounding effect becomes, potentially resulting in substantial wealth accumulation, making SIP an effective strategy for long-term financial goals.

Let's consider two friends, Alice and Bob. Alice started investing ₹10,000 annually in an SIP at 25, with an expected SIP return rate of 10% per annum. Over 30 years, she has made a total contribution of ₹ 3,00,000. On the other hand, Bob started his investments at the age of 35 and invested ₹ 10,000 annually, expecting a 10% annual return. Over 20 years, Bob's total investment amounted to ₹ 2,00,000.

(Source: https://www.kotak.com/en/stories-in-focus/mutual-funds/what-is-sip.html)

(iii) Law of averages:

If NAV of the units comes down SIP helps in averaging, as investor is investing the same amount of money every month (period) the no. of units he/she can buy with that amount is more as the NAV has come down, which will reduce the overall cost of the portfolio of mutual fund. When the NAV starts recovering again the breakeven point arrives early because of law of averages.

Lump Sum Investment:

In a lump sum, it means a single, bulk amount invested a one-time mutual fund investment. It is just like FD. It is different than SIP where the money was pumped in periodically. In Lump sum money is invested in one shot and without the intention to repeat it periodically.

The Systematic Transfer Plan (STP): It eliminates the additional burden involved in moving or transferring funds between mutual fund schemes. When you have a large quantity of money to invest in one go, this is the option you should pick. It does assist you in distributing your money over time to lessen the effects of dealing with the market at its highest point. It is preferable to go from equity plans to debt schemes and vice versa when you want to be risk-adverse with a plan.

Systematic Withdrawal Plan (SWP): One can periodically take out a predetermined amount of money from one’s assets by using a systematic withdrawal plan. Retirees benefit most from this plan because they may require a consistent income stream most of the time. But they also use this technique to invest in new schemes or adjust their existing investments.

6. NET ASSET VALUE (NAV)

There is a valuation of the fund done at the end of every business day, so that the investor knows the value of his/her investments as on that date. The term ‘value’ here refers to the market value i.e., if hypothetically the entire portfolio were to be liquidated, how much would be realized. Since each investor holds units in the pool of funds, the valuation is published in terms of per unit, so that the value of one's holdings can be computed. The formula for computation of NAV is:

$$\text{NAV} = \frac{\begin{array}{c}\text{Market Value of Investments held by the Fund + Value of Current Assets -}\\ \text{Value of Current Liabilities and Provisions}\end{array}}{\begin{array}{c}\text{No. of Units on the valuation date before redemption}\\ \text{or creation on units}\end{array}}$$

From the above formula, it can be observed that from the market value of the investments as on that day, we must add the cash equivalents or other current assets and need to deduct any expenses that have accrued but not paid out, so that the NAV represents a true and fair picture. That is the reason it is called 'net' asset value i.e., it is net of liabilities, expenses, etc.

Example

From the following information in respect of a mutual fund, calculate the NAV per unit:

	₹
Cash and Bank Balance	6,00,000
Bonds and Debenture (unlisted)	7,50,000
Equities (current market value)	13,00,000
Quoted Government Securities	10,50,000
Accrued Expenses	1,25,000
Number of outstanding units	2,50,000

Solution

Cash and Bank Balance	6,00,000
Bonds and Debenture (unlisted)	7,50,000
Equities (current market value)	13,00,000
Quoted Government Securities	10,50,000
Total Assets (Realizable Value)	**37,00,000**
Less: Accrued Expenses	1,25,000
Net Assets	**35,75,000**

Number of outstanding units	2,50,000
Net Assets Value (NAV)/unit	**14.30**

NAV is published on every business day for all funds; for Liquid Funds, NAV is published on Sundays as well. In equity funds, returns come mostly from price movement. Hence the differential in NAV between two dates is mostly the difference in market value of the investments. In debt funds, returns come mostly from interest accrual. Hence the differential in NAV between two dates is mostly the accrual, provided the period is sufficiently long to absorb short term volatilities.

7. INDICATIVE NET ASSET VALUE

A measurement of an investment's intraday net asset value (NAV) is called indicative net asset value (iNAV). Approximately every 15 seconds, INAV is reported. It provides investors with a gauge of the investment's worth throughout the day.

(i) Key characteristics

- Indicative net asset value (iNAV) is a measurement of an investment's intraday net asset value (NAV).
- An agent that calculates indicative net asset value (iNAV)—typically the exchange where the investment is traded—reports it roughly every 15 seconds.
- Both exchange-traded funds and closed-end mutual funds can publish indicative net asset value (iNAV) (ETFs).
- The calculation agent will utilise the established prices of all securities in the portfolio to get the overall asset value, which is then reduced by the fund's liabilities and divided by the number of shares to determine the indicative net asset value (iNAV).

(ii) Comparing net asset value and indicative net asset value (NAV)

The iNAV is a tool that aids in preserving trading of assets close to par value. It provides a glimpse of a fund's worth that is almost real-time thanks to iNAV reports that are sent out every 15 seconds. A fund may be able to avoid considerable premium and discount trading by reporting an iNAV.

Because they fall under the Investment Company Act of 1940's definition of a mutual fund investment, closed-end funds, and ETFs compute net asset values. The funds trade like stocks on the open market, with transactions taking place at the market price, while they determine a daily net asset value.

8. PERFORMANCE MEASUREMENT

It comes as a statutory warning that "mutual fund investments are subject to market risks . . . past performance is not an indication of future performance". Very few people read it or understand the importance of the statement. The implication of the statement is that the performance we are looking at today is the result of certain investment decisions taken by the fund manager in the past. The fund manager is ultimately a human being, and future decisions may or may not be as effective and hence future returns from that fund may or may not be as good.

Even though past performance may not be repeated in future, there is no logic to go for a Fund that has been an underperformer, because that fund manager could not prove himself / herself efficient over the period under consideration. The outperformer has something going for himself / herself. Hence, let us look at past performance also as a hygiene factor.

What should be avoided is,

- looking at past performance over a short period of time
- looking at returns only till a particular date and comparing the numbers.
- basing a decision on a ranking system, ranked only by returns till a particular date.

Let us now understand why the above practices should be avoided.

A short period of time is not adequate to judge the performance of a fund manager, just like the runs scored or wickets taken by a cricketer in 5 matches is not enough to judge his class - at best it shows his current form. Similarly, if a bond fund is outperforming the peer group over a period of say 1 or 2 months, it may be that the calls (investment decisions) taken by the fund manager over 1 or 2 months have proved better than other fund managers and that's it. Fund managers who have proven herself over a long period of time should be preferred.

As discussed earlier, a Fund may have done well over say a 1-year period which makes it eligible for '5 stars' (performance ranking done by some agencies / websites) as against another Fund which is say '4 stars' or '3 stars' and you take the decision to invest in the 5-star rated Fund, it may not be an entirely correct decision. Nothing wrong about a fund doing well, more so if the performance-based ranking is over an adequate period and it is done on a 'Risk-Adjusted Basis' i.e., adjusted for volatility in returns.

The point is, there are certain 'hygiene factors' which should be considered. Lay investors would be attracted by the '5 stars' and would not be aware that a 5-star rated Fund may be low on the hygiene factors. For example, a Fund with a corpus of ₹1,000 crore from a leading AMC / sponsor with 4-

star performance should be preferred over a 5-star rated Fund with a corpus of ₹20 crore which is from an AMC that ranks among the bottom 5 in terms of corpus / their sponsor is not so well known or if the credit quality of the Fund is relatively poor.

8.1 Performance Measures

There are various ways of measuring performance; what is most used is looking at point to point returns (i.e., returns from one date to today's date) over various time periods e.g., 1 month, 3 month, 6 months, 1 year, 2 years, etc.

As a matter of regulation, returns from fixed income funds for a period of less than 1 year should be annualized on a simple basis and for a period of more than 1 year, it should be annualized on a compounded basis. There are more refined methods of looking at point to point returns, which are

- looking at risk-adjusted (i.e., adjusted for volatility) returns.
- looking at various statistical ratios e.g., Sharpe Ratio, Alpha Ratio, Treynor Ratio, etc.

8.1.1 Costs incurred by Mutual Fund

Costs, when high, reduce the returns of an investor. High Costs are the cause of below par performance of some mutual funds. Costs carry two components: (1) Initial Expenses attributable to establishing a scheme under a Fund and (2) Ongoing recurring expenses (Management Expense Ratio) which is made up of (a) Cost of employing technically sound investment analysts (b) Administrative Costs (c) Advertisement Costs involving promotion and maintenance of Scheme funds. The Management Expense Ratio is measured as a % of average value of assets during the relevant period.

Expense Ratio = Expense / Average value of Portfolio

If Expenses are expressed per unit, then Expense Ratio = Expenses incurred per unit / Average Net Value of Assets.

For example, a mutual fund has paid annual expenses of Rs. 20 lakhs. The assets under management in the beginning and at the end of year were Rs. 200 lakhs and Rs. 400 lakhs respectively.

$$\text{Expense Ratio} = \frac{\text{Rs. 20 lakhs}}{(\text{Rs. 200} + \text{Rs. 400 lakhs}) / 2} \times 100 = 6.67\%$$

The Expense Ratio relates to the extent of assets used to run the Mutual Fund. It is inclusive of travel costs, management consultancy and advisory fees. It, however, excludes brokerage expenses for trading as purchase is recorded with brokerage while sales are recorded without brokerage.

8.1.2 Point to Point Returns

Point to point simply measures returns from a past date to the current date, by taking the NAV at these two dates. For measurement of returns, the growth option NAV should be taken and not the dividend option as there would be complications of adding back dividend. As an example, the return over one year from 31 December 2017 to 31 December 2018 is the increment in the growth option NAV divided by the NAV as on 31 Dec 2017.

Similarly, returns over three months from 30 September 2018 to 31 December 2018 is the increment in the growth option NAV divided by the NAV as on 31 December 2017. The return over three years from 31 December 2015 to 31 December 2018 is the increment in the growth option NAV divided by the NAV as on 31 December 2015. To be noted, returns from equity funds over a period of less than one year is expressed as absolute and for more than one year, it is annualized on a compounded basis. Further, fixed income funds for a period of less than one year should be annualized on a simple basis and for a period of more than one year, it should be annualized on a compounded basis.

Point to point return explained.

Example: Yash Vardhan Large Cap Equity Investment began on January 2, 2015. Initial investment amount is ₹ 10,00,000. NAV at the start of the fund Rs 100.54. Ending on January 2, 2017 - Closing NAV ₹ 172.95. If you were requested to find out the returns, you probably could without much trouble. Let's calculate -

Solution – By dividing ₹10,00,000 by ₹100.54, you get 9946.290 units. The final investment value is equal to 9946.290 units x ₹ 172.95 (or ₹17,20,210.86).

The CAGR method can be used to determine the growth of this lump sum investment over a two-year period: = [Ending Value/Beginning Value] ^ (1/2) - 1 = [17,20,210.86/10,00,000] ^ (1/2) - 1 = 31.16%. It would be considered as a tremendous growth rate.

8.1.3 Rolling Returns

The method to iron out the possible skew in point-to-point returns which may result from outperformance / underperformance in the recent past, is to look at rolling returns. Measurement of rolling returns works like this - For a period under consideration, it takes many short periods of fixed frequency, measures the return from the Fund over these shorter time periods and take the average of all the data over the entire period.

Performance of a Liquid Fund over a 3-month period:

- **Point-to-point:** Simply measure the performance of the growth option NAV from the start date to today's date, annualized.
- **Rolling return of daily frequency:** Measure the return from the start date to next date, from next date to next-to-next date and so on and take the average of all these observations.
- **Rolling return of weekly frequency:** Measure the return from the start date to next week, from next week to next-to-next week and so on and take the average of all these observations.

Performance of an Equity / Bond Fund over a 3-year period:

- **Point-to-point:** Simply measure the performance of the growth option NAV from the start date to today's date, annualized on a compounded basis.
- **Rolling return of monthly frequency:** Measure the return from the start date to one-month-later date, from next month to next-to-next month and so on and take the average of all these observations.
- **Rolling return of quarterly frequency:** Measure the return from the start date to three-month-later date, from next quarter to next-to-next quarter and so on and take the average of all these observations.

The superiority of rolling return as a performance measurement over simple point-to-point return is that it irons out the various smaller pockets of outperformance and underperformance against the peer group and throws up a more dependable (smoothened out) data.

Rolling Returns explained

The objective is to find the fund's 2-year rolling return. So, let us start in 2015 to do this.

Firstly, calculate the return between the NAV on January 2, 2015, and the NAV on January 2, 2013, which is two years ago. Secondly, shift the date by one day, i.e., between January 3, 2015, and January 3, 2013, and then compute the return between these dates using the NAV for these two dates. Once again change the date to January 4th, 2013, or 2015, and compute the return.

So, the purpose is to keep on going in this manner until a time series with a 2-year return is arrived at.

Let's figure out the initial rolling return:

NAV as of January 2nd, 2013, was 100.54.

NAV on January 2nd, 2015, was 172.95.

Since the period is two years, we use CAGR: [172.95/100.54] ^ (1/2)-1 = 31.16%.

NAV on January 3, 2013, would be the second rolling return in this series, at 101.75.

NAV on January 3, 2015, was 173.65; So, the CAGR in this situation = [173.65/101.75] ^ (1/2)-1 = 30.64.

Next, it will be calculated from January 4, 2013, to January 4, 2015, and so on.

8.2 Statistical Ratios

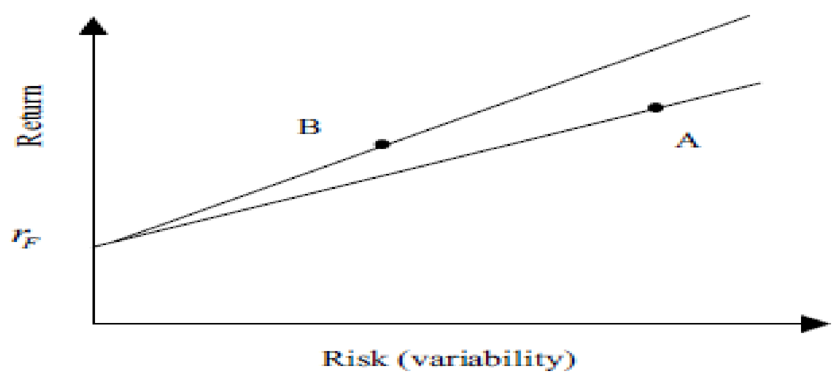
8.2.1 Sharpe Ratio (Reward to Variability)

The Sharpe ratio evaluates the relationship between an investment's return and risk. The idea that excess returns over time may indicate greater volatility and risk rather than investment expertise is expressed mathematically in this way.

As a result of his work on the capital asset pricing model (CAPM), economist William F. Sharpe proposed the Sharpe ratio in 1966 under the name reward-to-variability ratio.

The numerator of the Sharpe ratio is the difference over time between realised or predicted returns and a benchmark, such as the performance of a certain investment category or the risk-free rate of return. The standard deviation of returns over the same period, which serves as a gauge of volatility and risk, serves as its denominator.

Furthermore, investors prefer stocks or portfolios with relatively less risk or less volatility. But how do we evaluate portfolios with different returns and different levels of risk? **Let us take an example.**



	Portfolio A	Portfolio B	Benchmark
Annualized return	7.9%	6.9%	7.5%
Annualized risk	5.5%	3.2%	4.5%

Sharpe ratio			
(Risk-free rate = 2%) $SR = \frac{r_P - r_F}{\sigma_P}$	$\frac{7.9\% - 2.0\%}{5.5\%}$ = 1.07	$\frac{6.9\% - 2.0\%}{3.2\%}$ = 1.53	$\frac{7.5\% - 2.0\%}{4.5\%}$ = 1.22

r_P is the portfolio return

r_F is the risk-free rate

σ_P is the SD of the portfolio

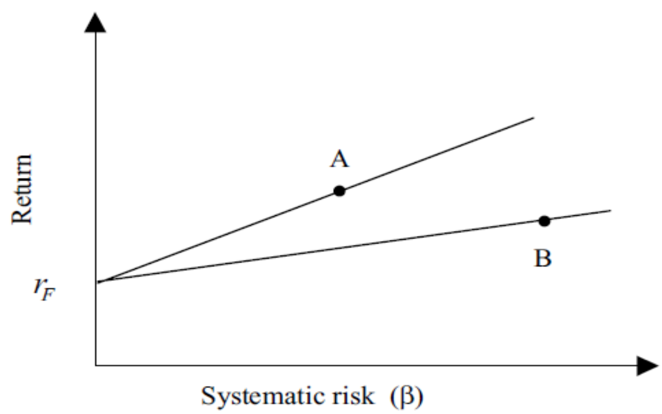
SR = Sharpe Ratio

As we see in the table above, though the return of portfolio A (7.9%) is higher than portfolio B (6.9%) and Benchmark (7.5%), variability also is higher. The Sharpe Ratio of portfolio A (1.07) is much lower than portfolio B (1.53) and lower than benchmark portfolio (1.22).

The higher the Sharpe ratio, the better because the portfolio has given that much higher return to compensate for the higher variability. The Sharpe ratio is a very popular method for measuring risk-adjusted return.

8.2.2. Treynor Ratio

The output of Treynor ratio is like Sharpe Ratio, the difference being that in the denominator, instead of taking standard deviation, it takes beta of the portfolio i.e., systematic risk.



Treynor Ratio (TR) = $\frac{r_P - r_F}{\beta_P}$

β_P = Beta of the portfolio

The Treynor ratio measures excess return generated per unit of risk in the portfolio i.e. excess return earned above the risk-free investment. Treasury bills are usually taken as the proxy for risk-free return as it is issued by the Government and duration is not very long. Risk refers to the portfolio beta i.e. the extent to which the portfolio performance varies along with the relevant market.

Let's consider the following example to understand Treynor Ratio:

Portfolio Return: 10%

Risk-Free Rate: 6%

Portfolio Beta: 1.2

Treynor Ratio = (10% - 6%) / 1.2 = 3.33%

In this example, the portfolio generated a Treynor Ratio of 3.33%, which shows its performance in comparison to its exposure to systematic risk.

8.2.3 Jensen's Alpha

This is the difference between a fund's actual return and those that could have been made on a benchmark portfolio with the same risk- i.e., beta. It measures the ability of active management to increase returns above those that are purely a reward for bearing market risk. Caveats apply however since it will only produce meaningful results if it is used to compare two portfolios which have similar betas.

Assume Two Portfolios

	A	B	Market Return
Return	12	14	12
Beta	0.7	1.2	1.0

Risk Free Rate = 9%

The return expected = Risk Free Return + Beta portfolio (Return of Market - Risk Free Return)

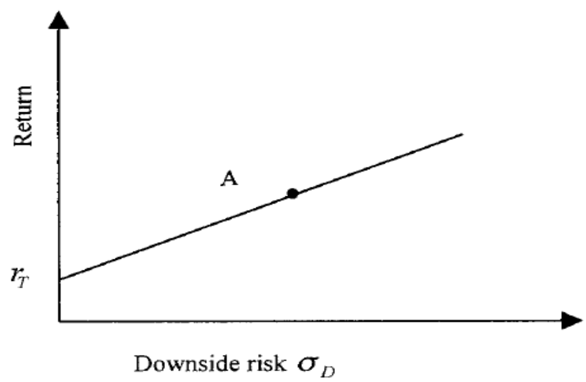
Using Portfolio A, the expected return = 0 .09 + 0.7 (0.12 - 0.09) = 0.09 + 0.021 = 0.111

Jensen Alpha = Return of Portfolio- Expected Return= 0.12 - 0.111 = 0.009

If "apples are compared to apples"- in other words a computer sector fund A is compared with computer sector fund B - it is a viable number. But if taken out of context, it loses meaning. Alphas are found in many rating services but are not always developed the same way- so you can't compare an alpha from one service to another. However, we have usually found that their relative position in the rating service is to be viable. Short-term alphas are not valid. A minimum time frame of one to three years is preferable.

8.2.4 Sortino Ratio

Sortino ratio is a variation of the concept of Sharpe or Treynor ratios; instead of measuring it against any type of risk, Sortino measures it against only downside risk in the portfolio.



$$SR = \frac{r_P - r_F}{\sigma_D}$$

Here,

σ_D is the standard deviation on the downside i.e., not just the entire deviations in the portfolio but the downside deviations only.

Sortino ratio penalizes only returns below a specified rate. Sharpe and Sortino measure risk-adjusted return, but they are different. Sortino ratio differentiates negative volatility from entire volatility by taking the standard deviation of negative returns, called downside, rather than total standard deviation.

For example, assume Mutual Fund A has an annualized return of 14% and a downside deviation of 10%. Mutual Fund B has an annualized return of 12% and a downside deviation of 7%. The risk-free rate is 5.5%. The Sortino ratios for both funds would be calculated as:

$$\text{Mutual Fund A Sortino} = \frac{14\% - 5.5\%}{10\%} = 0.85$$

$$\text{Mutual Fund B Sortino} = \frac{12\% - 5.5\%}{7\%} = 0.93$$

Even though Mutual Fund A is returning 2% more on an annualized basis, it is not earning that return as efficiently as Mutual Fund B, given their downside deviations. Based on this metric, Mutual Fund B is the better investment choice.

8.2.5 Portfolio or Fund Alpha

The Alpha is the excess return over broad market, represented by the benchmark. Beta is the systematic return or return along with the market whereas Alpha is the return over and above the market generated by active fund management and by taking risks i.e., unsystematic risks. To gauge the excess return over the market, the index or benchmark is taken to represent the market return and the excess return over the index / benchmark is the Alpha. Alpha may be positive or negative i.e., active portfolio calls or portfolio churning can go either way.

8.2.6 Benchmarking

For any performance evaluation, benchmarking is very important. However, the question is, what is the correct benchmark? In most literature on mutual funds and on communications from AMCs, the standard / official benchmark is mentioned. For example, for a large cap equity fund, the Nifty 50 Index can be used or if it is a Short-Term Bond Fund, the CRISIL index for Short Term Bond Funds (STBex) would be mentioned.

9. ADVANTAGES AND DISADVANTAGES OF MUTUAL FUND

9.1 Advantages

(i) **Professional expertise:** Except for some large corporate investors with dedicated treasury departments, it is not possible for an investor to replicate the expertise and professional fund management skills of MFs. The market is dynamic and portfolio reshuffling calls must be taken as and when required. Active tracking of portfolio is not the job of the archetype investor.

(ii) **Risk Diversification —** Buying shares in a mutual fund is an easy way to diversify your investments across many securities and asset categories such as equity, debt, and gold, which helps in spreading the risk - so you won't have all your eggs in one basket. This proves to be beneficial when the underlying security of a given mutual fund scheme experiences market headwinds.

With diversification, the risk associated with one asset class is countered by the others. Even if one investment in the portfolio decreases in value, other investments may not be impacted and may even increase in value. In other words, you don't lose out on the entire value of your investment if a particular component of your portfolio goes through a turbulent period. Thus, risk diversification is one of the most prominent advantages of investing in mutual funds.

(iii) **Operational / Transaction ease:** The process of buying and selling an instrument in the secondary market is quite cumbersome as compared to the process of investing / redeeming in MFs. For a similar / comparable return, the investor would rather settle for an easier process.

(iv) **Affordability & Convenience (Invest Small Amounts)** — For many investors, it could be more costly to directly purchase all the individual securities held by a single mutual fund. By contrast, the minimum initial investments for most mutual funds are more affordable.

(v) **Accessibility:** Mutual Funds are easy to access, through distributors, online, acceptance centers etc.

(vi) **Ticket Size**: All ticket sizes are available, from as small as ₹5000 to multiples of crores.

(vii) **Liquidity:** In mutual funds, liquidity is just a redemption away. Nowadays, it can be done online, and the money gets credited to your bank account. The time for getting the credit depends on the nature and terms of the fund; it may be T+1 day to T+3 days.

(viii) **Option of multiple funds:** There are multiple categories of funds discussed earlier, there is one to suit your requirement, managed by professionals. That is not the case with direct investment in equity stocks / bonds.

(ix) **Well-Regulated**: Mutual Funds are regulated by the capital markets regulator, Securities and Exchange Board of India (SEBI) under SEBI (Mutual Funds) Regulations, 1996. SEBI has laid down stringent rules and regulations keeping investor protection, transparency with appropriate risk mitigation framework and fair valuation principles.

(x) **Tax Benefits**: Investment in ELSS upto ₹1,50,000 qualifies for tax benefit under section 80C of the Income Tax Act, 1961. Mutual Fund investments when held for a longer term are tax efficient.

9.2 Disadvantages of Mutual Fund

(i) If you are running your own portfolio, you can run your own strategies. In mutual funds, you are following the fund manager thus, dependent on him.

(ii) In developed markets like the USA, there is a shift towards passively managed funds i.e., ETFs (discussed below) as there is not much alpha generated over the broad market. ETFs run at a much lower cost than actively managed funds. While ETFs also are mutual funds, the point is, the alpha is missing in developed markets due to better information and efficiency in markets.

10. FACTORS INFLUENCING THE SELECTION OF MUTUAL FUNDS

(1) **Past Performance** – The Net Asset Value is the yardstick for evaluating a Mutual Fund. The higher the NAV, the better it is. Performance is based on the growth of NAV during the referral period after taking into consideration Dividend paid.

Growth = $(NAV_1 – NAV_0) + D_1 / NAV_0$.

Where,

NAV_1 = Closing NAV

NAV_0 = Opening NAV

D_1 = Dividend paid by the Mutual Fund

Example:

NAV at the beginning ₹ 80

NAV at the end ₹ 100

Dividend per unit ₹ 1.50

Growth = $(NAV_1 – NAV_0) + D_1 / NAV_0$

= (100 – 80) + 1.50/80 x 100 = 26.875%

(2) **Timing** – The timing when the mutual fund is raising money from the market is vital. In a bullish market, investment in mutual funds falls significantly in value whereas in a bearish market, it is the other way round where it registers growth. The turns in the market need to be observed.

(3) **Size of Fund**– Managing a small sized fund and managing a large sized fund is not the same as it is not dependent on the product of numbers. Purchasing through large sized fund may by itself push prices up while sale may push prices down, as large funds get squeezed both ways. So, it is better to remain with medium-sized funds.

(4) **Age of Fund**– Longevity of the fund in business needs to be determined and its performance in rising, falling and steady markets must be checked. Pedigree does not always matter as also success strategies in foreign markets.

(5) **Largest Holding** – It is important to note where the largest holdings in mutual fund have been invested.

(6) **Fund Manager**– One should have an idea of the person handling the fund management. A person of repute gives confidence to the investors.

(7) **Expense Ratio**– SEBI has laid down the upper ceiling for Expense Ratio. A lower Expense Ratio will give a higher return which is better for an investor.

(8) **PE Ratio**– The ratio indicates the weighted average PE Ratio of the stocks that constitute the fund portfolio with weights being given to the market value of holdings. It helps to identify the risk levels in which the mutual fund operates.

(9) **Portfolio Turnover** – The fund manager decides as to when he should enter or quit the market. A very low portfolio turnover indicates that he is neither entering nor quitting the market very frequently. A high ratio, on the other hand, may suggest that excessively frequent moves have led the fund manager to miss out on the next big wave of investments. A simple average of the portfolio turnover ratio of peer group updated by mutual fund tracking agencies may serve as a benchmark.

11. SIGNALS HIGHLIGHTING THE EXIT OF THE INVESTOR FROM THE MUTUAL FUND SCHEME

(1) When the mutual fund consistently under performs the broad-based index, it is high time that the investor should get out of the scheme. It would be better to invest in the index itself either by investing in the constituents of the index or by buying into an index fund.

(2) When the mutual fund consistently under performs its peer group instead of it being at the top. In such a case, the investor would have to pay to get out of the scheme and then invest in the winning schemes.

(3) When the mutual fund changes its objectives e.g., instead of providing a regular income to the investor, the composition of the portfolio has changed to a growth fund mode which is not in tune with the investor's risk preferences.

(4) When the investor changes his objective of investing in a mutual fund which no longer is beneficial to him.

(5) When the fund manager, handling the mutual fund schemes, has been replaced by a new entrant whose image is not known.

12. MONEY MARKET MUTUAL FUNDS (MMMFs)

The Government of India thought of introducing Money Market Mutual Funds (MMMFs) on Indian financial canvass in 1992. The aim of the Government was to develop the money market and to enable individual investors to gain from money market instruments since it is practically impossible for individuals to invest in instruments like Commercial Papers (CPs), Certificate of deposits (CDs) and Treasury bills (TBs) which require huge investments. The Government constituted a Task Force on MMMFs under the chairmanship of Shri D. Basu.

Money market funds are generally the safest and most secure of mutual fund investments because the period is short term and the visibility is clear, thus probability of default is not present there. The goal of a money-market fund is to preserve principal while yielding a modest return. Money-market mutual fund is akin to a high-yield bank account but is not entirely risk free. When investing in a money-market fund, attention should be paid to the interest rate that is being offered.

13. SEPARATION OF DISTRIBUTION AND ADVISORY FUNCTIONS IN THE MUTUAL FUND INDUSTRY

The industry association of Mutual Funds in India (AMFI) prohibited distributors from using nomenclature that includes references to advisors, therefore some mutual fund (MF) distributors may need to rename themselves. The move follows the decision taken by markets regulator Securities and Exchange Board of India (SEBI) to separate distribution and advisory functions in the MF industry.

“Pursuant to the regulatory amendment, MF distributors whose registered name has terms such as adviser / advisor / financial adviser/ investment adviser/ wealth adviser/wealth manager etc., are required get their registered name changed,” AMFI said in a circular.

AMFI issued a non-exhaustive list of names that are permitted and prohibited for distributors.

“The name of an MF distributor should reflect the registration held by the entity and should not in any way create an impression of performing a role for which the entity is not registered. Thus, every MF distributor, while dealing in distribution of securities, should clearly specify that he /she is acting as an MF distributor,” AMFI has said.

The industry body also prescribed font size for MF distributors to be used in all forms of communication such as websites, mobile apps, business cards and signboards.

14. EXCHANGE TRADED FUNDS (ETFS)

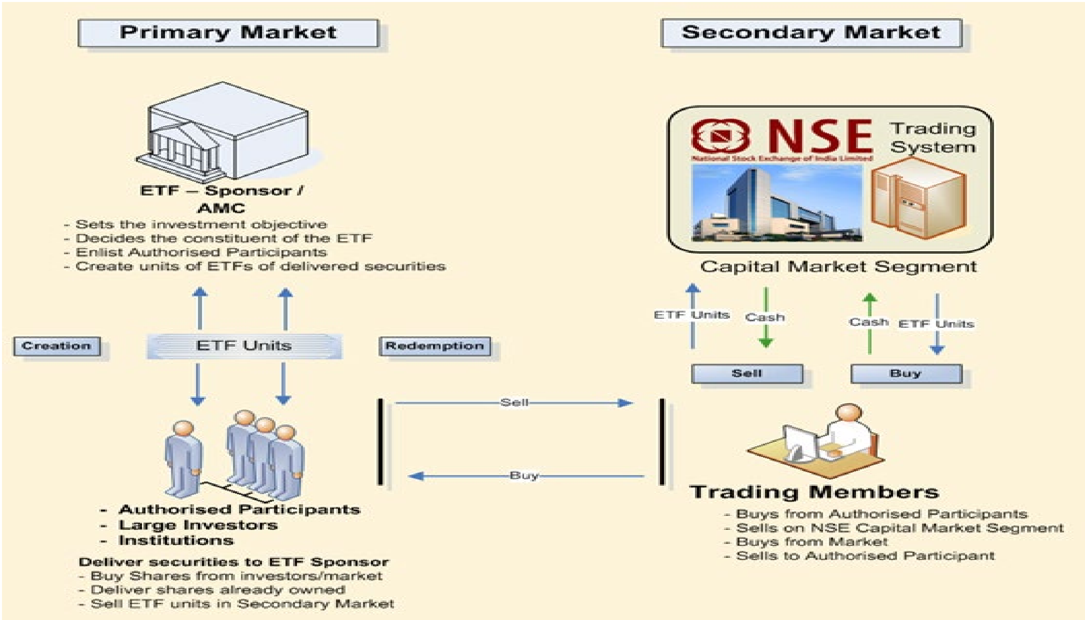
14.1 Introduction

An exchange-traded fund (ETF) is a Mutual Fund Scheme that is traded on stock exchanges, much like stocks. If the ETF represents a portfolio, it being listed as an ETF means the entire portfolio is being traded as one unit at the Stock Exchange. ETFs can be diverse; the portfolio may comprise stocks, bonds, commodities, index, etc. It usually trades close to its intrinsic value or market value of the underlying assets, but it is nothing hard and fast.

14.2 Advantages of ETFs

Fund management expenses are lower in ETFs than actively managed funds, as these are passively managed funds, investing in assets like gold or equity index.

- ETFs offer intra-day purchase and sale on the Exchange, which suits active traders. This is not possible with conventional funds.
- Close-ended funds have a fixed corpus. ETFs also have a given corpus, but that may change as per demand. Authorized Participants can create new units or redeem existing units with the AMC. This makes the ETF price realistic i.e., it moves with the movement in the underlying market.



Equity ETFs listed on NSE

Issuer Name	Name	Underlying	Launch Date
Edelweiss AMC	Edelweiss Exchange Traded Scheme - NIFTY	NIFTY 50 Index	08-May-2015
ICICI Prudential AMC	ICICI Prudential NIFTY ETF	NIFTY 50 Index	20-Mar-2013
Kotak AMC	Kotak NIFTY ETF	NIFTY 50 Index	02-Feb-2010
MotilalOswal AMC	MOSt Shares M50	NIFTY 50 Index	28-Jul-2010
Quantum AMC	Quantum Index Fund - Growth	NIFTY 50 Index	10-Jul-2008
Religare AMC	Religare Invesco NIFTY ETF	NIFTY 50 Index	13-Jun-2011
SBI AMC	SBI ETF NIFTY	NIFTY 50 Index	23-Jul-2015
UTI AMC	UTI NIFTY ETF	NIFTY 50 Index	03-Sep-2015
Birla Sun Life AMC	Birla Sun Life NIFTY ETF	NIFTY 50 Index	21-Jul-2011
ICICI Prudential AMC	ICICI Prudential CNX 100 ETF	NIFTY 100	20-Aug-2013
Kotak AMC	Kotak Banking ETF	NIFTY Bank	04-Dec-2014
SBI AMC	SBI ETF Banking	NIFTY Bank	20-Mar-2015

MotilalOswal AMC	MOSt Shares M100	NIFTY Midcap 100	31-Jan-2011
SBI AMC	SBI ETF NIFTY Junior	NIFTY Next 50	20-Mar-2015
Kotak AMC	Kotak PSU Bank ETF	NIFTY PSU BANK	08-Nov-2007
ICICI Prudential AMC	ICICI Prudential Sensex ETF	S&P BSE Sensex	10-Jan-2003
UTI AMC	UTI Sensex ETF	S&P BSE Sensex	03-Sep-2015
Reliance Nippon Life Asset Management Limited	Reliance ETF NIFTY BeES	NIFTY 50 Index	28-Dec-2001
	Reliance ETF NIFTY 100	NIFTY 100	22-Mar-2013
	Reliance ETF Bank BeES	NIFTY Bank	27-May-04
	CPSE ETF	NIFTY CPSE Index	28-Mar-14
	Reliance ETF Dividend Opportunities	NIFTY Dividend Opportunities 50	15-Apr-14
	Reliance ETF Consumption	NIFTY India Consumption	03-Apr-14
	Reliance ETF Infra BeES	NIFTY Infrastructure	29-Sep-10
	Reliance ETF Junior BeES	NIFTY Next 50	21-Feb-03
	Reliance ETF PSU Bank BeES	NIFTY PSU BANK	25-Oct-07
ICICI Prudential AMC	BHARAT 22 ETF	S&P BSE BHARAT 22 index	28-Nov-17

15. SIDE POCKETING

What Does Mutual Fund Side Pocketing Mean?

A strategy to protect investors in instruments with exposure to risky assets is called side pocketing. It is essentially an accounting technique used to distinguish between liquid and high-quality investments and illiquid investments in a loan portfolio.

How does it function?

The fund houses move the illiquid asset into a side pocket whenever a bond owned by the fund has its rating downgraded, and the current holders receive a pro rata allocation in it.

What Effect Does Side Pocketing Have on NAV?

The fund's NAV only represents the value of liquid assets when side pocketing is used; illiquid assets are placed into a separate pocket and have a different NAV determined by an estimate of the realisable value of investors.

Does it Protect Investing?

Risky bets can be separated from safer and more liquid investments with the use of side pocketing so that they are not affected by changes in the risky assets' credit profiles. Here, attempts are taken to maintain the scheme's net asset value so that small investors' ability to redeem their investment won't be harmed by any abrupt withdrawals by large investors.

Additionally, side pocketing makes sure that investors who held the investment at the time of the write-off will benefit if the bond is ever recovered. As allotment and redemption are carried out on liquid assets, the side pocketing process assures that investors owning units of the core plan do not experience a liquidity crunch.

New Development

Debt mutual funds are now able to use the "side pocket" idea, thanks to the market regulator Securities and Exchange Board of India (SEBI). In the past, the regulator opposed side-pocketing and prohibited mutual fund companies from segregating their problematic investments.

The Association of Mutual Funds of India (AMFI) approached SEBI in 2016 to request the creation of regulations governing side-pockets when the market experiences a credit event after JP Morgan Asset Management (India investments)'s in Amtek Auto defaulted and the fund house turned to the side pocket. SEBI, however, turned down the suggestion at the time.

The NAV of numerous debt schemes fell precipitously in 2018. Following these schemes, credit ratings were lowered for investments in Infrastructure Leasing & Financial Services Ltd (IL&FS) and certain of its subsidiaries. The rule on debt funds was changed because of this catastrophe.

Will side-pocketing entice investment firms to take on more credit risk?

Ajay Tyagi, Chairman of SEBI, was quoted as saying, "SEBI would take sufficient measures and implement safeguards to guarantee that this provision is not abused. These protections will be included in the final guidelines. Segregated or hazardous investments will be closed to new subscriptions after the investment segregation process is complete. Investors can still subscribe to the portion made up of liquid assets or safer assets, nevertheless.

Institutional investors typically have the first right of redemption in times of crises. Retail investors become trapped in hazardous or segregated assets because of this process. Because other holdings are unaffected, side-pocketing is implemented in this situation to help fund companies manage redemption pressures better. **Let's use an example to better understand the procedure now:**

Example

Let's say a fund has a corpus of ₹ 5000 crores. Of this, a firm that is in default on its debt holds ₹ 250 crores. An institutional investor wishes to redeem the entire investment in this scenario. To pay substantial investors, this redemption pushes the fund manager to sell good bonds. Toxic assets that are still present at the end of the accounting year account for a significant amount of the corpus.

Thus, the process influences retail investors. Side pocketing will be used to protect each investor; 250 crores will be set aside, and 4750 crores will serve as the safer corpus. Following that, units will be distributed to investors (both institutional and retail).

Are there drawbacks to side pocketing?

Side pocketing is a technique that needs to be applied with caution. Illiquid investment value is also a sensitive topic. The illiquid asset's NAV will therefore continue to be of concern. Investors will also find it challenging to track two NAVs—one for each of the liquid and illiquid assets. Finally, the availability of side pockets will provide fund houses more leverage. Therefore, it is the fund manager's responsibility to apply the method carefully and logically.

16. TRACKING ERROR

16.1 Concept of Tracking Error and its distinction with Tracking Difference

Passive funds don't actively choose their stocks; instead, they invest according to rules. They purchase all equities with the same weight as in the index to copy the performance of an index (such as the Nifty 50 or Nifty 500). The fund may deviate somewhat from the benchmark's return during the replication process due to several practical difficulties.

The tracking difference (TD) and tracking error (TE) are metrics used to describe these variations in the returns. TD represents the discrepancy between benchmark return and fund return. Assume that over the course of a year, the benchmark Nifty 50 Index returned 12% while the Nifty 50 Index Fund generated 11% in returns. The 1% deviation in returns represents the tracking difference.

TD is usually negative because of the total expense ratio (TER) and other costs. Avoid any fund with a greater TD that is either positive or negative. Higher TD may indicate less effective fund management. The fact that TD examines point-to-point data to assess the effectiveness of fund management is one of its shortcomings.

TE is used to observe how the fund is run during the period. Higher TE is brought on by continuous movements in the daily monitoring difference over time. It is the daily tracking difference's variability (or volatility), which can be called as the tracking difference's standard deviation. If an investor wants to compare index funds that track the same index without using technical terms, he can use the following rule of thumb: the lower the TE, the more well a fund tracks the index. When we mix TD and TE, things become fascinating. Both should ideally be lower and considered together when assessing the fund's performance.

Investors should choose the fund with the lowest tracking error and tracking difference after comparing the performance of various schemes tracking the same index. It's crucial to keep in mind, though, that a fund may have a high tracking error and still beat its peers. Investors should evaluate both characteristics to make an informed decision when choosing an efficiently managed fund rather than relying primarily on one when making their decision. A fund with a higher tracking error doesn't necessarily suggest inefficient index tracking, and vice versa, therefore concentrating solely on tracking error or tracking difference can be deceptive.

16.2 Reasons for Deviation Between a Scheme's Return and the Benchmark (Index) Return

What causes the fund to depart from benchmark returns, though? The same returns as the index are essentially impossible for a fund manager to attain. A fund manager encounters several real-world obstacles that cause the scheme return to differ from the benchmark return, which are follows:

(i) **Total Expense Ratio (TER)**: It is charged by passive funds to cover management and operating costs related to running the fund. The returns on the funds are directly impacted by a higher or lower TER.

(ii) **Cash holdings:** To honor investor redemptions, passive funds also keep a specific portion of their Assets Under Management (AUM) in cash and cash equivalents, which are often liquid securities. Since this money isn't invested, rising or falling markets may cause it to add to or detract from the fund's returns.

(iii) **Securities lending:** In addition to receiving returns from the index, passive funds may also generate income. For a fee, they can lend securities they own to other market players for a short time. The increased income aids in cost-cutting and betters tracking accuracy.

(iv) **Timing of execution:** Several stocks are added or withdrawn when the index is rebalanced. Although the index calculates returns using closing day prices, in practice fund managers might not be able to execute trades precisely at the closing prices. Due to this, the execution price has a minor discrepancy, which results in tracking difference. This also applies to managing the cash flow of investors daily.

(v) **Dividend receipt is delayed,** which could increase the tracking difference. When a fund gets dividends from the underlying securities, there is a timing gap between when the payout is made and when the benchmark index takes those payments into account.

(vi) **Other costs:** Passive funds also incur other expenses like goods and services tax on management fees, brokerage fees for buy and sell transactions, exit load expenses, etc., which also impact fund returns. Apart from these, several factors such as corporate actions (stock splits, mergers and acquisitions, spinoffs, etc.) also cause tracking differences.

16.3 Calculation of Tracking Error

$$TE = \sqrt{\frac{\sum\left(d - \bar{d}\right)^2}{n-1}}$$

d = Return of Portfolio

$\bar{d}$ = Return of Benchmark

n = No. of observation

Example

The following data is available for the yearly returns for both Fund PQR and the Nifty:

Year	Fund PQR	Nifty
2022	15.54%	20.73%
2021	13.34%	10.96
2020	3.50%	1.38%
2019	10.00%	12.79%
2018	34.69%	31.49%

Calculate the tracking error. Also suggest the course of action for the investor.

$$\text{Tracking Error} = \sqrt{\frac{\left(\text{Return of a portfolio} - \text{Return of a benchmark}\right)^2}{(n-1)}}$$

$$= \sqrt{\left(\frac{(15.54\% - 20.73)^2 + (13.34\% - 10.96)^2 + (3.50\% - 1.38\%)^2 + (10.00\% - 12.79\%)^2 + (34.69\% - 31.49\%)^2}{(5-1)}\right)}$$

= 0.037

The small tracking error in the question shows that Fund PQR does not considerably exceed the benchmark. As a result, the investor can think about taking his money out of the fund and investing it in a different, more promising investment options. Alternatively, he can be content with the fact that his portfolio is gaining ground on the market.

17. REAL ESTATE INVESTMENT TRUSTS (REITs)

17.1 Introduction

A Real Estate Investment Trust (ReIT) is a form of investing in real estate, where the operator, the REIT, owns, and operates the real estate. ReITs may own commercial real estate like warehouses, offices, etc. ReITs can be publicly traded or private. The unitholders of a REIT earn their income from real estate without directly owning it. As a regulation, REITs must pay out at least 90% of their income to unitholders.

Type of ReIT	Holdings
Equity	Own and operate income-producing real estate
Mortgage	Provide mortgages on real property
Hybrid	Own properties and make mortgages

17.2 Indian Context

SEBI notified regulations for investment trusts in September 26, 2014: specifically, real estate investment trusts (REITs) and infrastructure investment trusts (InvITs) – which was subsequently amended in September 23, 2016. REITs and InVITs allow sponsors to monetize revenue-generating real estate and infrastructure assets while enabling investors or unit holders to invest in these assets without owning them. REITs and InVITs enjoy favourable tax treatment, including exemption from dividend distribution tax and relaxation of capital gains tax.

17.3 Structure of investment trust

Investment trusts to hold assets either directly or through SPV. Investment trusts can invest in two-level SPV structure through Holding Company (Holdco), subject to sufficient shareholding in the

Holdco and the underlying SPV and other safeguards including the following:

a. Investment trusts to have right to appoint majority directors in the SPV(s),

b. Holdco to distribute 100% cash flows realized from underlying SPVs and at least 90% of the remaining cash flows.

Mandatory sponsor holding shall not less than 25% of the total units of the REIT after initial offer on a post-issue basis (the minimum sponsor holding specified in this clause shall be held for a period of at least three years from the date of listing of such units). The sponsor shall always hold not less than 15% of the outstanding units of the listed REIT. In the case of InvIT, mandatory sponsor holding is 15%. There is no limit on the number of sponsors both in the case of REIT and InvIT. REITs can invest up to 20% in under-construction assets, while InvITs (through public issue) can invest up to 10% in under-construction assets.

Investment trusts shall hold controlling interest and not less than 50% equity share capital or interest in the SPVs (except in the case of public private partnership projects where such holding is disallowed by the government or regulatory provisions).

Furthur, SPVs shall hold not less than 80% of assets (90% in case of InvITs) directly in properties (infrastructure projects for InvITs) and not invest in other SPVs.

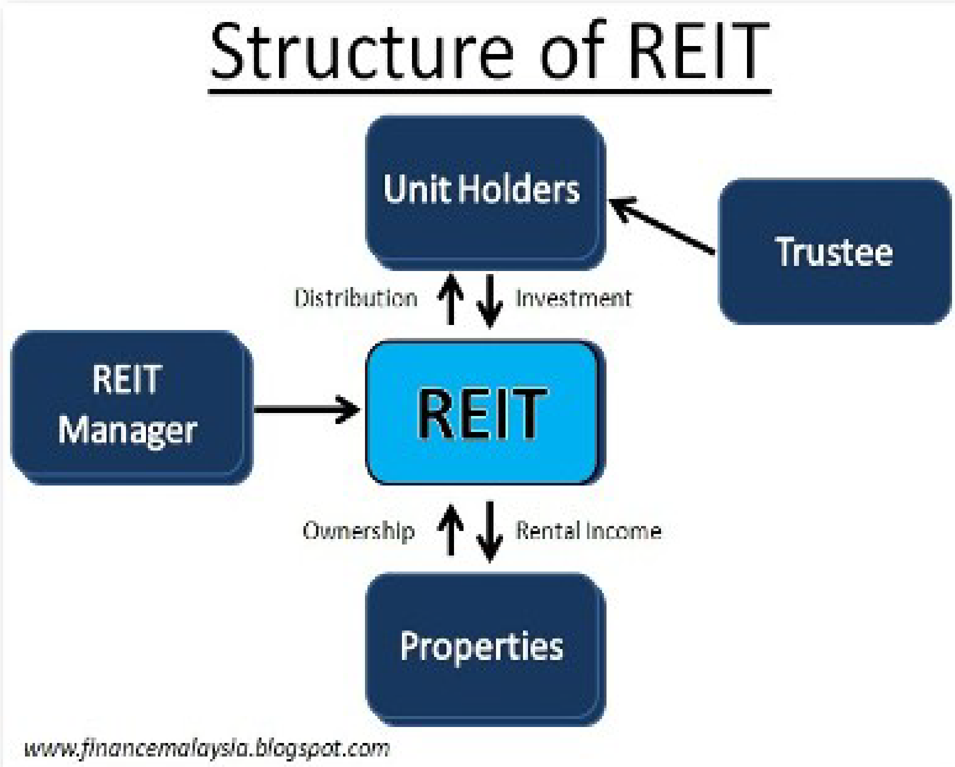
Lastly, SPVs should not engage in any activity other than those pertaining and incidental to the underlying projects.

17.4 Stipulations to ensure transparency

Trustee to hold assets for the benefit of unit holders, oversee activities, and ensure compliance with respect to reporting and disclosure requirements.

A full valuation shall be conducted by an independent valuer not less than once in every financial year; a half yearly valuation of the assets shall be conducted by the valuer for the half-year ending September 30 for incorporating any key changes in the previous six months.

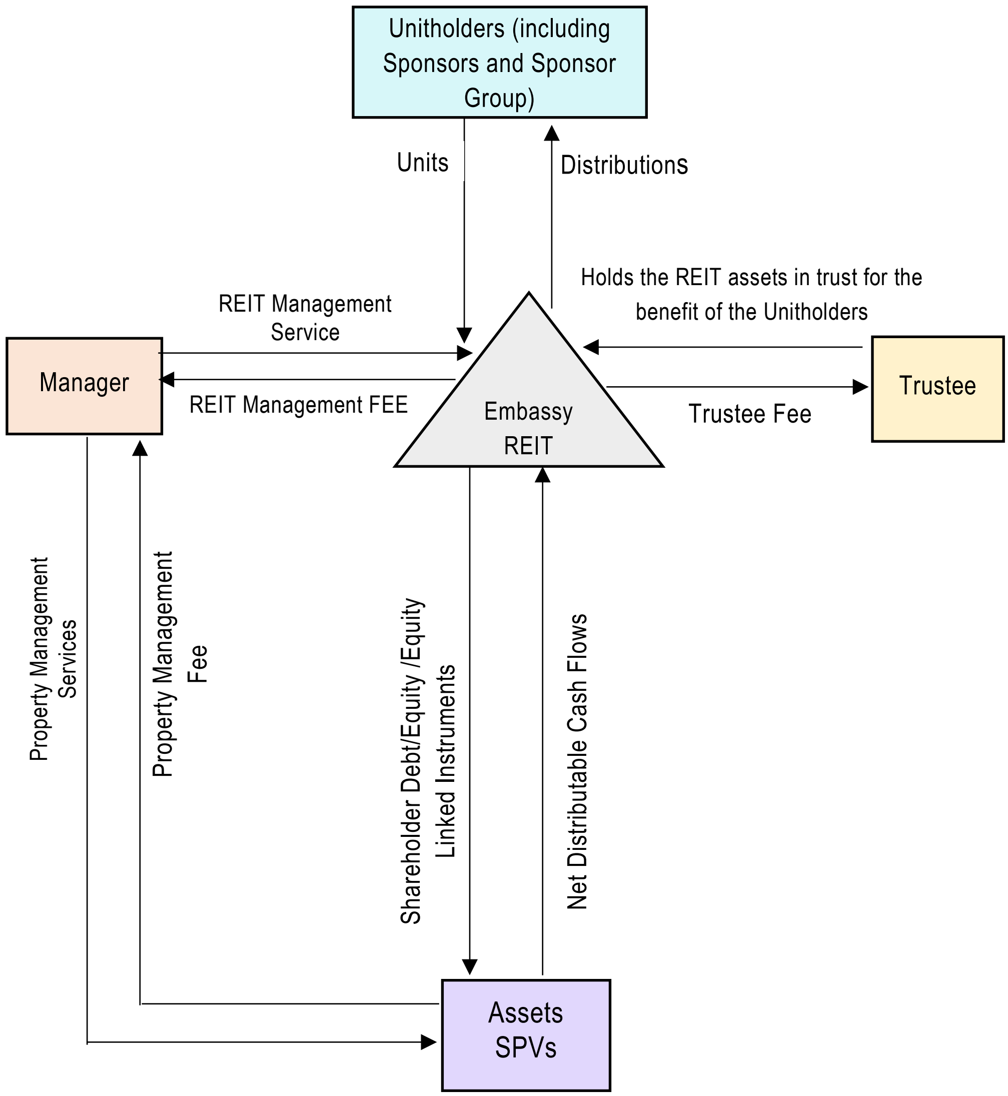
All related-party transactions should be on an arm's-length basis.



Source: Google to https://commercialobserver.com/2013/03/reit-so-sweet-investors-reconsider-real-estate-investment-trusts/

ReITs recently took off in India; the first IPO of REIT has been Embassy Office Parks REIT, backed by Blackstone Group, raised about ₹4,750 crore in India's first real estate investment trust listing. The REIT, which includes Embassy Group properties, offered 158.6 million units at ₹299 to ₹300 a piece. It started taking orders from anchor investors before moving on to a public offering. A successful listing of the REIT has opened a fundraising avenue for India's cash-starved property companies. The nation's real estate developers are struggling with sluggish sales and price declines. The trust's portfolio comprises about 33 million square feet of office space across four Indian cities, Bengaluru, Pune, Mumbai, and Noida, as per Offer Document filed with SEBI. Its Express Towers property, located in Mumbai's central business district, counts Wells Fargo & Co., Warburg Pincus as well as Blackstone as tenants.

The following chart illustrates the relationship between the Embassy REIT, the Trustee, the Manager, and the Unitholders (which include the Sponsors) on the Listing Date.



(Source: Embassy REIT Offer Document)

18. INFRASTRUCTURE INVESTMENT TRUSTS (INVITS)

An InvITs is a pool of money for investing in infrastructure projects and distribution of the earnings to the unit holders. An InvIT issues units that are listed on the Stock Exchange. In that sense, InvITs are like Exchange Traded Funds (ETFs) of Mutual Funds. The difference is, in a Mutual Fund, the underlying portfolio of shares or bonds change in value every day and there is an NAV declared every day. An InvIT invests in the projects which are identified as Special Purpose Vehicles (SPVs) that are not valued everyday but once in six months for publicly offered InvITs. Both InvITs and Mutual Funds are regulated by SEBI.

InvITs are set up as a trust and registered with SEBI. An InvIT involves four entities: **Trustee, Sponsor, Investment Manager and Project Manager**. The trustee, who oversees the role of an InvIT, is a SEBI registered debenture trustee and he cannot be an associate of the Sponsor or Manager. 'Sponsor' means promoters and refers to any company or body corporate with a net worth of ₹ 100 crore which sets up the InvIT and is designated as such while applying to SEBI. Promoters or Sponsors, collectively, must hold at least 15% in the InvIT for a minimum of 3 years. The value of the assets owned/proposed to be owned by InvIT shall be at least ₹500 crore. The minimum issue size for an initial offer is ₹ 250 crore. InvITs are allowed to add projects in the same vehicle in future so that investors can benefit from diversification as well as growth in their portfolio.

Given the challenging phase of infrastructure in the country today, InvITs may provide an alternate source of funds. Several existing infrastructure projects which are under development in India are delayed and 'stressed' on account of varied reasons like increasing debt finance costs, lack of international finance flowing to Indian infrastructure projects, project implementation delays caused by various factors like global economic slowdown, cost overruns, etc. InvITs may offer a source of long-term re-finance for existing infrastructure projects. InvITs may help in attracting international finance into Indian infrastructure sector. These would also enable the investors to hold a diversified portfolio of infrastructure assets. Among Asian markets, Singapore is a success story for listed Trusts. In Singapore, there are 39 listings with a market capitalization of approx $70 billion, but the bias is on REITs than on InvITs.

There is a debate on whether an InvIT, by nature of investment, is equity or debt as it has features of both. It is somewhere in between; loosely, debt-plus or equity-minus in terms of risk return profile. It has equity-like features such as the units are listed, can change hands like equity stocks, there is periodic valuation of the projects akin to periodic results of companies and economic factors like higher GDP growth or higher inflation would lead to expectation of higher revenue and hence higher price of the units at the Exchange. Its debt-like features are - there is periodic pay-out of the earnings of the InvIT from the underlying SPVs, which is not exactly like contractual coupon pay-out on bonds but somewhat comparable as the valuation gives a perspective on how much to expect. It is a hybrid instrument with a somewhat predictable cash flow yield (akin to debt) and potential appreciation with growth of the economy (akin to equity).

Taxation wise, an InvITs is a pass-through vehicle. There is a mandate to distribute at least 90% of net-distributable cash flows. Interest component of income distributed by trust to the unit holders would attract withholding tax @ 10% for resident unit holders. Interest income is taxable in the hands of the unit holder. Dividend income is exempt in the hands of the unit holder and there is no dividend distribution tax.

At this point of time, InvIT is not a retail product, the minimum primary application amount being ₹ 10 lakh and the minimum secondary transaction amount being ₹ 5 lakh. The restriction is imposed because there is no track record and lack of awareness. There is a liquidity risk as well, in the secondary market, the units may not be traded every day as the investor base is not wide at this point of time. May be over a period, with the development of this market, SEBI would look to ease the threshold amount for REITs and InvITs. As of now, investors should keep it on the radar and participate through the mutual fund route who have a better understanding of the risk factors and can handle secondary market liquidity issues.

SEBI allows unlisted InvITs to raise funds via right issues

The Securities and Exchange Board of India has allowed unlisted infrastructure investment trusts (InvITs) to raise funds through rights issue of their units.

The regulator has come up with detailed guidelines on conditions for issuance of units, pricing, timelines, and allotments. SEBI said InvITs can make a rights issue of units provided it fulfil the conditions, including none of the respective promoters or partners or directors of the sponsor or investment manager or trustee is a fugitive economic offender, nor are they barred from the accessing the securities market.

If the InvIT wants to have the issue underwritten, it can appoint underwriters, SEBI said.

The regulator said the minimum allotment to any investor will be Rs 1 crore. Besides, the rights issue should open within three months from the record date and kept open for at least three working days but not more than 15 days.

The InvIT shall not make any further issue of units in any manner during the period between the date of filing the letter of offer with the Board and the allotment of the units offered through the letter of offer. The InvIT shall file an allotment report with the Board providing details of the allottees and allotment made within 15 days of the issue closing date," SEBI said in a circular.

TEST YOUR KNOWLEDGE

Multiple Choice Questions (MCQs)

1. The funds which allows to issue and redeem units any time during the life of the scheme and new investors can join the scheme any time by directly applying to the mutual fund and can redeem their units any time by surrendering the units to the Mutual Fund are called: -

    (a) Balanced Funds

    (b) Liquid Funds

    (c) Close Ended Funds

    (d) Open Ended Funds

2. Mr. Rahul is 25 years old. He has just started his career by taking a job in a well-known Steel Company. He wants to grow his money and wants to generate wealth in long term by investing in Mutual funds. He should invest in which type of mutual funds: -

    (a) Debt Fund

    (b) Liquid fund

    (c) Equity fund

    (d) Gold ETF

3. Market Value of Total Assets of the Mutual Fund is at ₹ 15 cr. and Total Liabilities is at 3 cr. It has 1 cr. outstanding Units issued. Calculate the N.A.V. per unit of the Mutual Fund: -

    (a) ₹ 17

    (b) ₹ 10

    (c) ₹ 12

    (d) ₹ 15

4. Which type of fund is more volatile?

    (a) Large-cap funds

    (b) Mid-cap funds

(c) Small-cap funds

(d) Hybrid Funds

5. ____________ are an important link between fund managers and investors.

(a) Trustees

(b) Asset Management Companies

(c) Custodians

(d) Registrar And Transfer Agents

6. What is an open-ended mutual fund?

(a) It is the one that has an option to invest in any kind of security

(b) It has units always available for sale and repurchase.

(c) It has an upper limit on its NAV

(d) It has a fixed fund size

7. ________ is a method of investing in mutual funds wherein an investor chooses a mutual fund scheme and invests the fixed amount of his choice at fixed intervals.

(a) Systematic Transfer Plan

(b) Systematic Withdrawal Plan

(c) Systematic Investment Plan

(d) Systematic Innovative Plan

8. Which among the following is not one of the ways of measuring performance of mutual funds?

(a) Sharpe Ratio

(b) Treynor Ratio

(c) Liquidity Ratio

(d) Sortino Ratio

9. Which among the following is true in case of rolling returns?

(a) It simply measures the performance of the growth option NAV from the start date to today's date, annualized.

(b) Measure the return from the start date to next date, from next date to next-to-next date and so on and take the average of all these observations.

(c) measure the return from the start date to next week, from next week to next-to-next week and so on and take the average of all these observations.

(d) All of the above

10. The CEO, Sumesh Kumar Nahta wants to know from the CFO, CA Aakash Mehta that if the equity fund is redeemed at ₹ 20 and the exit load is 2.50%, what will be the NAV of the equity fund?

(a) 19.50

(b) 20.50

(c) 19.975

(d) 20.00

11. Front end load is also called ………..

(a) Entry Load

(b) Exit Load

(c) Both Entry and Exit Load

(d) Trail Commission

Theoretical Questions

1. Briefly describe the organization of Mutual Funds.

2. Explain Mutual Funds based on Classification of Portfolio Management.

3. What is a Net Assets Value? Explain with the help of an example.

4. As a performance measurement, what is the difference between Point-to-Point Returns and Rolling Returns?

5. Explain the significance of Side Pocketing in protecting mutual fund investors. What effect does side pocketing have on NAV? Are there any drawbacks to side pocketing?

Practical Questions

1. Mr. Shreyas wants to invest in Ready Mutual Fund Scheme for which the following information is available:

Asset Value at the beginning of the month	₹ 80
Annualized return	15 %
Distributions made in Income & Capital gain (per unit respectively).	₹ 0.80 and ₹ 0.60

Calculate the month end net asset value of the mutual fund scheme.

2. An investor purchased 400 units of a Mutual Fund at ₹ 12.25 per unit on 31st December 2021. As on 31st December 2022 he has received ₹ 1.50 as dividend and ₹ 1.00 as capital gains distribution per unit.

Required:

(i) The return on the investment if the NAV as of 31st December 2022 is ₹ 13.25.

(ii) The return on the investment as on 31st December 2022 if all dividends and capital gains distributions are reinvested into additional units of the fund at ` 12.50 per unit.

ANSWERS/SOLUTIONS

Answers to the MCQ based Questions.

1.	(d)	2.	(c)	3.	(c)	4.	(c)	5.	(a)
6.	(b)	7.	(c)	8.	(c)	9	(d)	10	(b)
11.	(a)								

Explanations to the practical Questions in the MCQs

3. Net Assets Value = Value of Assets – Value of Liabilities/Total Number Outstanding Units

= ₹ 15 crore – ₹ 3 crore/₹ 1 crore = ₹ 12 crores

10. Redemption Price = NAV/ (1 + Exit Load)

Or, 20 = NAV/ (1 + 0.025) So, NAV = ₹ 20.5

Answers to the Theoretical Questions

1. Please refer to paragraph 2.4

2. Please refer to paragraph 3.2

3. Please refer to paragraph 6

4. Please refer to paragraph 8.1

5. Please refer to paragraph 15

Answers to the Practical Questions

1. Calculation of NAV at the end of month:

Given Annual Return = 15%

Hence Monthly Return (r) = 1.25%

$$r = \frac{\text{(Closing NAV - Opening NAV) + Dividend + Capital Gain}}{\text{Opening NAV}}$$

$$0.0125 = \frac{(\text{Closing NAV} - ₹\ 80) + ₹\ 0.80 + ₹\ 0.60}{₹\ 80}$$

$$1 = \text{Closing NAV} - ₹78.60$$

$$\text{Closing NAV} = ₹\ 79.60$$

2. (i) $$\text{Return on Investment} = \frac{\text{(Closing NAV - Opening NAV) + Dividend + Capital Gain}}{\text{Opening NAV}}$$

$$= \frac{(13.25 - 12.25) + 1.5 + 1}{12.25} \text{x} 100 = 28.57\%$$

(ii) If all dividends and capital gain are reinvested into additional units ₹ 12.5 per unit, the position would be as follows:

Total amount reinvested = ₹ 2.5 x 40 Units = ₹ 1000

$$\text{Additional units added} = \frac{1000}{12.5} = 80 \text{ units}$$

Value of now 480 (400 + 80) units as on 31/12/2022 = 480 units x ₹ 13.25 = ₹ 6360

Price paid for 400 units as on 31/12/2021 = 400 units x ₹ 12.25 = ₹ 4900

$$\text{Return} = \frac{6360 - 4900}{4900} \text{x} 100 = 29.80\%$$