Mutual Fund Analyst

Key factors to consider to be investment ready

- Evaluating the fund manager(s) Performance – Jensen's Alpha(risk) – track record – experience segments
- Performance against index
- Past returns vs expected returns
- What is mutual fund portfolio overlap and how to avoid it?
- Strategies & "how to make mutual funds work for you"
- When to redeem the mutual fund investment?
- Setting benchmarks & recommendation of a model portfolio

The investment process consists of two tasks

Security Analysis which focuses on assessing the risk and return of a security

Portfolio Selection which involves choosing the best possible portfolio

What is a Portfolio?

- A portfolio is a collection of assets
- An asset's risk and return are important in how they affect the risk and return of the portfolio
- The risk-return trade-off for a portfolio is measured by the portfolio expected return and standard deviation, just as with individual assets

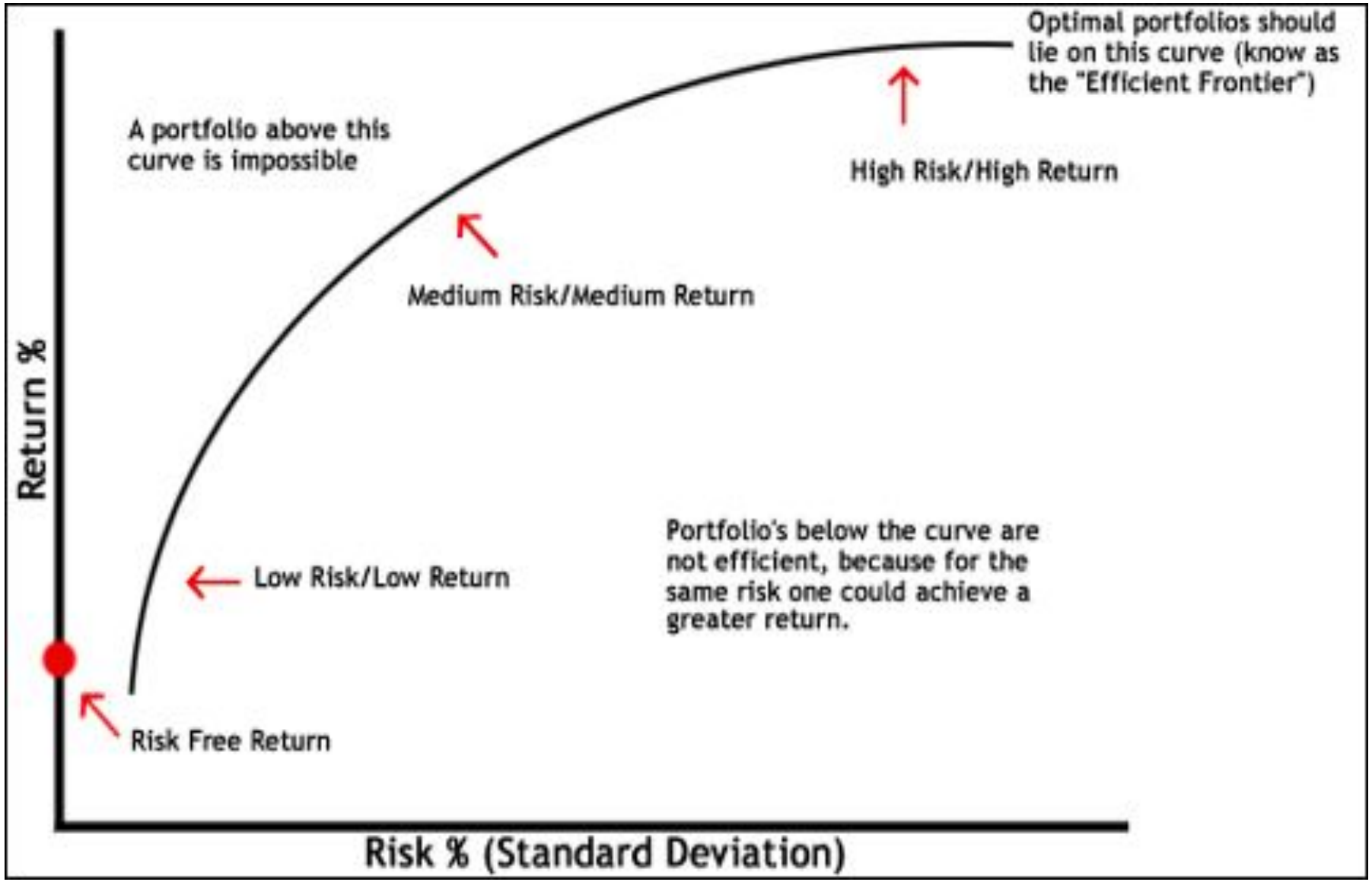
Optimal Portfolio

Maximize (expected return of portfolio)

(weighted sum of individual expected rates of return)

Minimize (portfolio risk)

(expected value of squared variable- how much rate of return of portfolio tends to vary from its mean)


Optimal portfolios should lie on this curve (know as the "Efficient Frontier")
A portfolio above this curve is impossible
High Risk/High Return
Medium Risk/Medium Return
Return %
Portfolio's below the curve are not efficient, because for the same risk one could achieve a greater return.
Low Risk/Low Return
Risk Free Return
Risk % (Standard Deviation)

Bottom-up investing

Bottom-up investing, often used by individual private investors, typically starts by choosing a manager or fund they like, only subsequently, if ever, considering how to construct the portfolio as a whole. This ad hoc approach takes no account of the investor's objective or risk profile. In addition, studies of investor behaviour show that individual investors often chase top-performing investments or funds, by which time the performance has already been delivered, which leads many to lose money by buying at the top and selling at a loss.

Top-down investing

By comparison, professional investors begin by exploring investment risk and what they need the investment to do for them. They then work through a series of steps, creating a framework to decide which types of investments are needed. Only then do they choose individual funds or other investments. Planning a portfolio based on risk tolerance and investment objectives gives you a better chance of meeting your goals within a level of risk you are comfortable with.

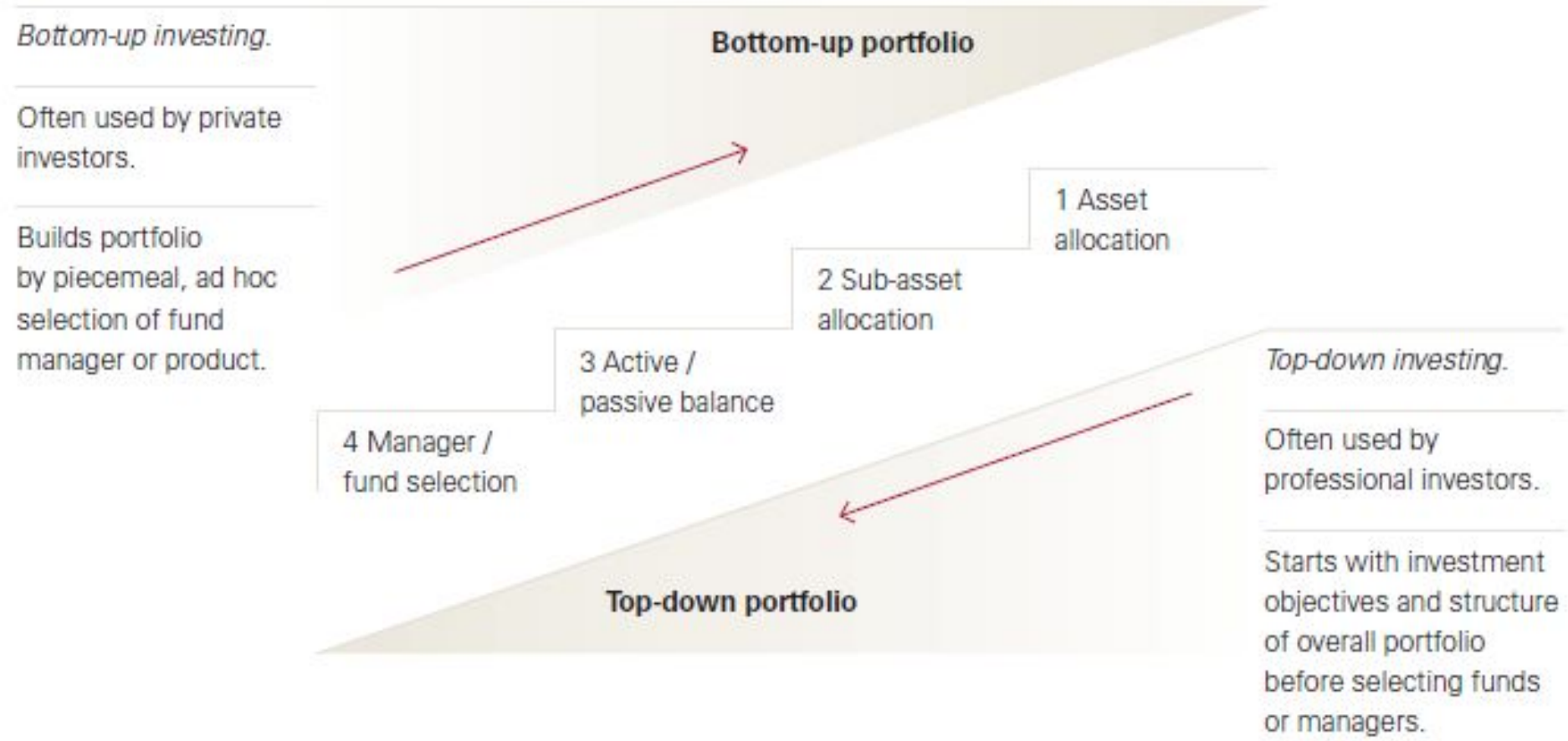
At a very general and simplified level, the top-down approach generally goes through four broad stages:

1 Decide how to allocate your money between the different types of investments (asset allocation).

2 Choose where to invest within each investment type.

3 Decide on the balance between actively managed and index passive funds. (See definitions on page 16.)

4 Evaluate individual funds and fund managers.


Bottom-up investing.
Often used by private investors.
Builds portfolio by piecemeal, ad hoc selection of fund manager or product.
Bottom-up portfolio
1 Asset allocation
2 Sub-asset allocation
3 Active / passive balance
4 Manager / fund selection
Top-down portfolio
Top-down investing.
Often used by professional investors.
Starts with investment objectives and structure of overall portfolio before selecting funds or managers.

Portfolio Objectives and Constraints

Portfolio Construction Objectives

Portfolio Constraints

- The key constraints in portfolio construction are the **risk tolerance of the investor and investment horizon.**
- In asset allocation, risk profiling is a key process.
- It enables the advisor to ascertain whether the investor is able and willing to take on the risks of the products being chosen for him.
- A retired investor who chooses to invest in a sector fund with a hope that his investment would double in a short period of time is taking on a risk which he may not have appetite for.
- He may not be able to risk his life's saving to create the corpus that is meant to fund his retirement, in a risky asset that can potentially erode in value in the short term and is not well diversified.

Phases of Portfolio Management

Portfolio management is a process of many activities that is aimed at optimizing the investment. Five phases can be identified in the process:

1. Security Analysis.
2. Portfolio Analysis.
3. Portfolio Selection.
4. Portfolio revision.
5. Portfolio evaluation.

Each phase is essential and the success of each phase is dependent on the efficiency in carrying out each phase.

- SECURITY ANALYSIS: Classification of securities(shares, debentures, bonds etc..), examining the risk-return characteristics of individual securities, fundamental and technical analysis.

- PORTFOLIO ANALYSIS: Identification of range of possible portfolio from a different set and ascertaining risk and return.

- PORTFOLIO SELECTION: Efficient portfolio is identified and optimal portfolio is selected.

- PORTFOLIO REVISION: Addition or deletion of securities due to change in availability of additional funds, change in risk, need for cash etc.

- PORTFOLIO EVALUATION : Comparison of objective norms with relative performance. Provides feedback mechanism for improving the entire portfolio management process.

Investment Styles

- ***Value Versus Growth***
  - A growth investor focuses on the current and future economic "story" of a company, with less regard to share valuation
  - Focus on EPS and its economic determinants
  - Look for companies expected to have rapid EPS growth

Investment Styles

- ***Value Versus Growth***
  - Value investor focuses on share price in anticipation of a market correction and improving company fundamentals
  - Value stocks generally have offered somewhat higher returns than growth stocks, but this does not occur with much consistency from one investment period to another
  - Focus on the price component
  - Not care much about current earnings
  - Assume the P/E ratio is below its natural level

Style Analysis

- Construct a portfolio to capture one or more of the characteristics of equity securities
- Small-cap stocks, low-P/E stocks, etc…
- Value stocks (those that appear to be under-priced according to various measures)
  - Low Price/Book value or Price/Earnings ratios
- Growth stocks (above-average earnings per share increases)
  - High P/E, possibly a price momentum strategy

Style Analysis

EXHIBIT 15.14 A Style Analysis Grid

Large-Cap Value	Large-Cap Blend	Large-Cap Growth
Mid-Cap Value	Mid-Cap Blend	Mid-Cap Growth
•*Manager A* Small-Cap Value	Small-Cap Blend	Small-Cap Growth

Large ↕ Small

Value ↔ Growth

https://www.advisorkhoj.com/mutual-funds-research/mutual-fund-portfolio-overlap

CAPM

- A model that describes the relationship between risk and expected return and that is used in the pricing of risky securities.
- The model was introduced by Jack Treynor, William Sharpe, John Lintner and Jan Mossin independently, building on the earlier work of Harry Markowitz on diversification and modern portfolio theory
- The general idea behind CAPM is that investors need to be compensated in two ways: time value of money and risk

Assumptions

- Can lend and borrow unlimited amounts under the risk free rate of interest
- Individuals seek to maximize the expected utility of their portfolios over a single period planning horizon.
- Assume all information is available at the same time to all investors
- The market is perfect: there are no taxes; there are no transaction costs; securities are completely divisible; the market is competitive.
- The quantity of risky securities in the market is given.

Implications and relevance of CAPM

- Investors will always combine a risk free asset with a market portfolio of risky assets. Investors will invest in risky assets in proportion to their market value..
- Investors can expect returns from their investment according to the risk. This implies a liner relationship between the asset's expected return and its beta.
- Investors will be compensated only for that risk which they cannot diversify. This is the market related (systematic) risk

CAPM EQUATION

$$E(r_i) = R_f + \beta_i(E(r_m) - R_f)$$

- $E(r_i)$ = return required on financial asset i
- R_f = risk-free rate of return
- β_i = beta value for financial asset i
- $E(r_m)$ = average return on the capital market

Alpha

Alpha is used in finance to represent two things:

- A measure of performance on a risk-adjusted basis.
- The abnormal rate of return on a security or portfolio in excess of what would be predicted by an equilibrium model like the capital asset pricing model (CAPM).

Active managers' rates of achieving alpha in funds and portfolios have been shrinking substantially, with about 20% of managers producing statistically significant alpha in 1995 and only 2% in 2015.

Experts attribute this trend to many causes, including:

- The growing expertise of financial advisors
- Advancements in financial technology and software that advisors have at their disposal
- Increasing opportunity for would-be investors to engage in the market due to the growth of the internet
- A shrinking proportion of investors taking on risk in their portfolios and
- The growing amount of money being invested in pursuit of alpha

Portfolio evaluation

- **Sharpe Index**
  - Measure a portfolio's excess return per unit of risk i.e. risk adjusted performance
  - Risk = Standard deviation
  - Sharpe = (Portfolio Return - Risk-Free Return) / Standard Deviation

- **Treynor Index**
  - Similar to Sharpe index except that risk in this case = Beta
  - Useful to assess excess return from each unit of systematic risk
  - Enables investors to evaluate how structuring the portfolio to different levels of systematic risk will affect returns.
  - Treynor = (Portfolio Return - Risk-Free Return) / Beta

Portfolio evaluation

- **Jensen's measure**
  - Represents average return on a portfolio over and above that predicted by CAPM
  - Also referred to as "Jensen's alpha"
  - Jensen's measure = Expected portfolio return – (Portfolio return as per CAPM)
  - i.e. Expected portfolio return – $[r_f + \text{Beta} * (r_m - r_f)]$

Quick Understanding

If the risk – free rate is 6%, calculate the Treynor measure, Sharpe measure, and Jensen measure using the following information:

	Mean Return (%)	Standard Deviation (%)	Beta
A	12	18	1.1
B	10	15	0.9
C	13	20	1.2
Market Index	11	17	1.00

Quick Understanding

	Treynor Measure	Sharpe Measure	Jensen Measure
A	5.45	0.333	0.5
B	4.44	0.267	- 0.5
C	5.83	0.350	1.0
Market Index	5.00	0.294	0

1. Once it is finalized, a mutual fund schemes bench mark cannot be changed at later date.
   a. True
   b. False

2. Which amongst the following is a measure of risk adjusted return of mutual fund scheme.
   c. Standard Deviation
   d. Beta
   e. Variance
   f. Sharpe ratio

3. Which of the following cannot be considered for the purpose of selecting scheme benchmark.
   g. MF Scheme's Investment Objective
   h. Investment Strategy Of MF Scheme
   i. Scheme's asset allocation pattern
   j. Scheme Past Returns

4. -------- takes into account all dividends generated from the basket of constituents that make up the index in addition to the capital gain

a. **Total Return Index**
b. Price Return Index
c. Dividend Return Index

5. Which is the most appropriate measure of evaluating how closely an index fund is tracking its benchmark.

d. Treynor Ratio
e. **Tracking Error**
f. Total Expense Ratio
g. Assets Under Management (AUM)

Thank You