Module 1: Stock Market

Why invest?

Adjust for 8-10% inflation
So, popular asset classes are:

i) Fixed Income Instruments

Bank FD
Government Bonds
Have around 5-6% return
For corp, 9-10% return

ii) Equity

Shares of publicly listed companies on BSE & NSE.

Upto 12% return (can be 20%.)

iii) Real estate

Very closed & require money upfront
Little complex

↑ Risk ↑ Return

iv) Commodity

Gold & Silver

5-8%.

Regulators ?

Market Participants

- Domestic Retail Participants (Me & other people)
- NRIs & OCI
- Domestic Institutions (Corporate entities)
- Domestic Asset Management Companies (MF companies like SBIMF, ICICI Pru)
- Foreign Institutional Investors (Non-Indian Corporate entities)

SEBI (Security & Exchange Board of India) is regulator for market. It has rules for each entity:

- Credit Rating Agency (Corp (or govt). loan)
  CRISIL
- Debenture Trustees (Companies loan) they issue Deb. Trustee
  Banks

- Depositories (Digital vault for shares Stored in Depository Account or Demat Account)

  NSDL & CDSL

- Depository Participant (DP opens & maintain your account)

  Banks & Stockbrokers

- Foreign Institutional Investors (Foreign entities with interest in investing in India)

  foreign Corp, Individuals, Funds

- Merchant Bankers (Help companies with IPO process)

  Karvy, Axis Bank, EC

- Asset Management Companies (Offer MF schemes & invests money in markets)

  HDFC AMC, SBI Capital

- Portfolio Managers (Similar to MF but min invest is 50 Lakh)

  Capital mind Wealth PMS, Motilal PMS

- Stock Brokers (Gateway to Stock Market, giving electronic access to stock markets)

  Zerodha, ICICI Direct

Market Intermediaries

(Trading Acct.) Me ? → StockBroker

Registered with Stock market exchang

Simple
Efficient
Broker's net worth

StockBroker → Call API Web Platform → Stock Exchange → Clearing NSE, ICCL

Identify Buyer & Seller
Ensure no defaults

Banks — Bank Account → (Trading Acct.)

Depository Participant → Demat Account → Depository NSDL, CSDL

Calls Depositories

Provide Share Certificate

DEMATERIALIZATION of Share

IPO ?

Company (Small Team)

Shares are issued by %

↓ Fund

Angel Investors / Seed Round or Fund

Dilution of shares by promoter

↓ More fund required by company

Venture Capitalist (VC) / Series X

Dilution

↓ more fund for improving business, called CAPEX

Funding Through Profits (Called internal accruals)

Series B Funding

Approach Bank for loan (Debt)

↓ More fund

Series C through VC (Not practical as VC have less money

Debt (Finance charges/ Interest Rate)

Private equity (PE) (Invests in later stage of startups, big professional team
They sit on board how to make decisions

↓ More fund

All above

IPO - general public (Initial Public Offer)

→ Primary Market

Why go for IPO because :

- Raise funds for CAPEX requirement
- Avoid the needs to raise Debt
- Large investors rather than 1 PE
- Early exit for early investors
- Reward employee
- Improve visibility

Company

↓ Appoints

Merchant Bankers

- Conduct due diligence on compliance
- Prepare DRHP
- Underwriting shares
- Help in marketing
- Help in getting price band

↓ Apply with registration statement

SEBI

↓ Nods

DRHP preparation

- Size of IPO
- Est. no. of shares offered
- Fund utilization
- Business description
- Financial statements
- Risks involved in business
- Management details & bg

↓

Market

↓

Fix price band (Range 100 - 120)

↓

Book building (effective price discovery)

↓

Closure

→ Listing day

After shares are listed, it is in secondary market and people can buy / sell shares.

* Undersubscription: During book building, 1 Lakh were offered but bids received only on 90 K

* oversubscription

* Green Shoe option: In case of oversubscription, some extra shares they can list.

* Fixed Price IPO

* Price Bands & Cut off price: Range at which stock gets listed, cut off price is the list price.

Stock Markets :

electronic marketplace to express one's POV in trade. It facilitates the transaction between market participants.

market moves on sentiment :

- If a buyer wants to buy, seller can decide what price they want to sell it to buyer.

- If a seller wants to sell, buyer can decide what price they want to buy from

If both buyer & seller agrees, new last trade price is set.

It moves on news & events, no major news or events no movement, except supply demand.

Once when a decision is made, an order is placed. let's say 20 shares at 3000. The stock exchange will look for sellers & try to ensure the shares are available to you.

To buy, You need to provide

- Details of trading account
- Price at which you intend to buy
- No. of shares you intend to buy.

- You can own these shares for as long as you want and now you are part of the company. (bonus, dividends, rights)

- Returns is what the annual yield is:

i) Absolute Return

$$\left[\frac{\text{Ending Period Value}}{\text{Starting Period Value}} - 1\right] * 100$$

ii) Compounded Annual Growth Rate

$$\left[\frac{\text{Ending Value}}{\text{Starting Value}}\right]^{\frac{1}{\#\text{ of years}}} - 1$$

- Trader

  └ exiting the trade at earliest given opportunity

i) Day Trader

Initiates & close the position during the day.

ii) Scalper

Very less time & large share dealer

High risk

iii) Swing Trader

Holds trade for slightly long.

- Investor

  ↳ Buys stock expecting significant appreciation in the stock.

i) Growth Investor

Identify companies that grow

ii) Value Investor

Identify good companies that have been beaten down.

- Index allows you to get sentiment of the market. Stock Market Index

S&P Nifty 50 → NSE index
Sensex → BSE index
Nifty Bank Index → Banking sector Index

It gives us the sentiment & practically:

i) Information
Trend & state of the economy.

ii) Benchmarking
To compare whether your return compared with market.

iii) Trading
Check if index improves & trade accordingly.

iv) Portfolio Hedging

India follows free-float market capitalization method to construct the index.

Buy → Broker (Hold funds) → NSE → Seller T day

Trade completed at T+1 day

80% back in trade acct
20% of Sell trade → Broker (Blocked in DEMAT Not in broker acct) → NSE → Broker T day

Trade completed at T+1 day

Two type of Brokerage

Intraday

Same day
doesn't require DEMAT

Equity Delivery

T+1 day (as of Jan'2
require DEMAT

Earmarking allows to put a temporary hold on the securities towards an upcoming settlement for the sale transaction.
Instead of broker's pool account

In Harshad Mehta, the securities could be put in broker's account for as long as 30 days.

Corporate actions?

Financial initiatives taken by company that results in a change to its stock price.

i) Dividends

Can choose to pay dividends, (portions of profits made by company)

Not mandatory but can be paid from cash reserve if there is loss.

Dividend Declaration Date → Ex-Date → Record Date → Dividend Payout Date

(AGM decides)

After dividend of ₹ 15 is paid, stock drops by 15 ₹.

Can be paid at any time.

ii) Bonus Issue

Instead of cash in dividends, shares are paid out here. (from company's reserves)

Done in 1:2, 1:1, 1:3, etc. ratio

Stock price declines

Done to encourage retail participants if price is very high

iii) Stock split

No. of shares held increases
Value of shares remains same (Total Investment

Encourages more retail participation.

iv) Rights Issue.

Raise fresh capital before doing IPO or after IPO.

Select a right ratio 1:4
↓
Shareholders for every 4 share can buy 1 more share at a discount
↓
Helps to raise capital. (dilute the share)

v) Buyback of shares

Company invest in itself. & buys back.
- Improve profitability on per-share basis.
- To consolidate their stake in company.
- Prevent take-over
- Support share price from declining & show confidence.

vi) OFS (offer for sale)

offer secondary issue of shares to whole market from their reserves (promotor's)

vii) FPO (Follow on Public offer)

Shares can be diluted &

Fresh shares can be created & offered in FPO

Requires Merchant Bankers.

Key events & Impact on Markets

Outside events impact market :

i) Monetary Policy

Money supply controlled by RBI in market, by setting interest rates

↑ Interest Rate → ↓ growth → ↓ economy

↓ Interest Rate → ↑ Spending → ↑ price / inflation

So, growth & inflation needs to be managed by RBI rates

a) Repo Rate

Rate at which RBI ~~borrows~~ lends money from banks.

↑ Repo Rate → ↑ borrowing cost → ↓ economy

b) Reverse Repo Rate

Rate at which RBI borrows money.

↑ Reverse Repo → ↓ money in market → ↓ economy

c) Cash Reserve Ratio (CRR)

Banks must maintain funds with RBI

↑ CRR → ↓ money in market → ↓ economy.

ii) Inflation

Measured by Index

a) WPI (Wholesale Price Index)

Movement of prices at wholesale level.

b) CPI (Consumer Price Index)

Movement of prices at retail level

Complex & diff. for rural, urban

iii) Index of Industrial Production (IIP)

Production of Industries

↑ IIP → ↑ Economy

(If IIP is low, RBI might be forced to reduce interest rate)

iv) Purchasing Managers Index (PMI)

Business activity across manufacturing & service sectors.

↑ PMI → ↑ economy. (50 is base)

v) Budget

Policy announcements & Economic reforms

Released end of Feb week.

vi) Corporate Earnings Announcement.

Corp declare earnings every quarter

- L Revenue Growth
- L Expense trend
- L Finance charges
- L Profitability trends
- L Project updates

↑ earning → ↑ stock Price

vii) Non-financial events

Covid → ↓ Supply Chain → ↓economy / ↑ Inflation

Ukraine / Russia → ↓ Supply Oil → ↑ energy costs / ↑ Inflation

Getting Started

To get a POV

- Fundamental Analysis

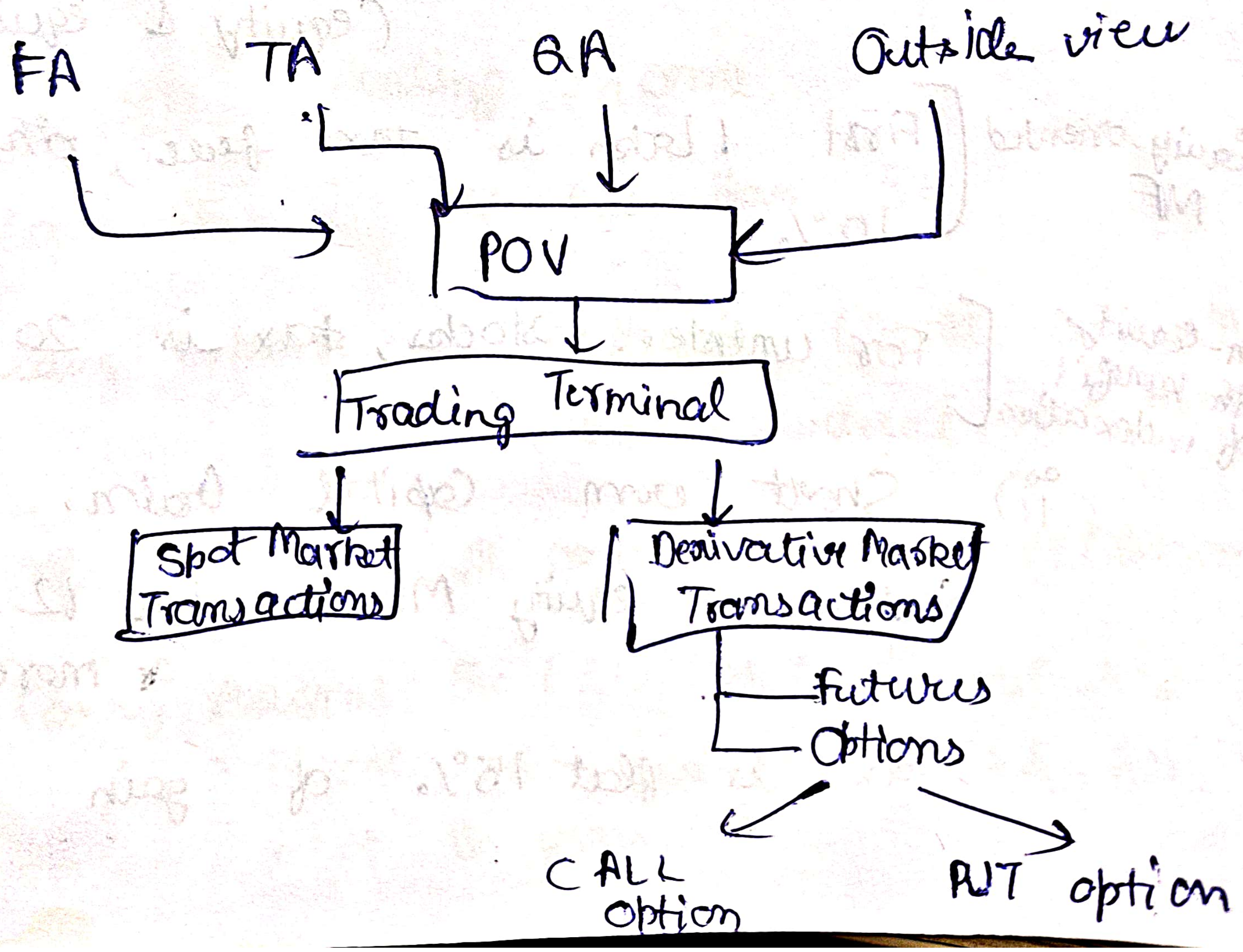
  Company earnings & financial statements

- Technical Analysis

  Study of price & Volume, can be used on all assets

- Quantitative Analysis

  study of quantified data, objective way of trade



Module 7: Markets & Taxation

Trader or Investor or both?

Individual can decide on his own to either show stock investments as capital gain or as business income (trading)

Once decided, same will be continued for subsequent years.

How to classify income in following:

i) Long Term Capital Gain

After 365 days, LTCG
(equity & equity MF)

Equity-oriented MF [First 1 Lakh is tax free, other is 10%

Non-equity with benefit of indexation [For unlisted stocks, tax is 20%

ii) Short Term Capital Gain

Stocks or equity MF under 12 months & more than 1 day

Tax is flat 15% of gain

iii) Speculative Business Income

Intraday stocks or Non-delivery is under SBI

Currency Trading

Taxed like business income (Slab x%)

iv) Non-Speculative Business Income

Trading Futures & options on recognized exchange

Taxed like business income

★ Pros on Trading Income

- Low Tax : If less than 5L

- Claim Expense : Brokerage Charge, STT, taxes are considered as expense

- Offset the loss with gains : Loss - Total Income

- Carry forward the F&O Loss : If net loss is there, it can be carried for next 8 years.

- Carry forward the intraday equity loss

* Cons on Trading Income

- Potentially High taxes

- ITR Forms: ITR 3 or 4 required

- Audit: Need to Maintain book of accounts if turnover is over 5 cr. or profit is less than 6% of turnover.

* What to decide then?

- For Intraday trading & F&O trading ITR3 and come under trading income

- For equity delivery, if more than a year holding - show as investments and claim an exception

  If buying & selling is frequent for shorter terms, declare as non-speculative business income instead of STCG.

- If investing / trading is only source of income, declare as business income instead of capital gains.

- You can be both trader & investor

What is STT?

STT is Securities Transaction Tax payable to GOI when trades are executed on recognized stock exchanges

STT is 0.1% of trade value for equity delivery based trades & usually is less tax if off-market is compared.

Brokerage + Other charges = Cost of Share
(Not STT)

Advance Tax is required for STCG, salary on 15th June, Sept, Dec & March.
15% 45% 75% 100%

Equity MF = 65% money invested in domestic companies

Turnover, Balance Sheet & P&L

Turnover is business turnover

↳ For Delivery based transactions

Sales value = Total turnover

↳ For Speculative transactions

Turnover = | Buy − Sell |

↳ For non-speculative transactions

Turnover = Total of favourable & unfavourable differences

Why we need turnover calculation, only when treating trading as business ~~calculati~~ income.

Audit requirement is determined from turnover:

i) Rs 5 crore mark turnover

Section 44AD(i) If turnover is less than 5 cr & profit is less than 6 % & total income is taxable.

If audit is required, following are required to be maintained (ITR 3 requires them)

i) Balance Sheet

overall snapshot of wealth

Sumary of assets, your liabilities & net worth (assets - liabilities)

Requires

- Bank Statement
- Loan Statement
- House loan statement
- Personal loan statement
- Principal balance of any outstanding loans
- Demat holding statement

ii) Profit & Loss Statement

summary of revenue streams & expenses for the FY.

Revenue

- Sale value from stock holdings
- Income from FO, Intraday or commodity Trades

Salary is not revenue

Expenses

- Salaries of trading help
- Rent for office / room
- Brokerage charges, taxes
- Advisory fees, consultancy, depreciation

Profit = Revenue - Expenses.

iii) Book of Accounts / Book-keeping

Bank Book

Trading Book (can be done from broker)

ITR Forms

To fill taxes, ITR forms are needed.

If sources of income are different, ITR forms are different :

i) ITR 1

Salary + Interest Income + Rental Income

ii) ITR 2

Income from Capital Gains + ITR 1
(Investor)

iii) ITR 3

Income from business / profession + ITR 2
(Trading + Investor)

iv) ITR 4

If turnover is low, declare presumptive income & get away from audit requirements

Foreign Stock and Taxation

Rules
- Limit of 2 crore annually under LRS (Liberalised Remittance Scheme)

- TCS = 20% if investments exceed 7 Lakh per year

- Investments sold should be brought back to India within 180 days unless invested back.

For investments in stock, there are 2 incomes :

i) Dividends
ii) Capital Gains

For foreign company, if holding is more than 24 months gains are LTCG & taxed at 20% with benefits of Indexation

(unlisted shares)

otherwise STCG and tax is according to slab

For dividends, it is income from other sources

Conversion of Currency = Exchange rate of last day of month prior to month you received dividend.

and taxed at slab rate.

* Above all was India Tax, there is foreign tax also:

For capital gains, US ~~or foreign~~ don't charge tax (other countries might) for non-residents

For dividends, between US and India they are taxed only in India but US does a 25% withholding tax. & then India again does tax.

Form 67 needs to be used to claim the credit for withholding tax paid in US.

This can be different for each country.

Going to foreign assets,

Banks & Repository accounts

Module 11: PF- Mutual Funds

PF Math

- Simple Interest = $P \times T \times R$
- Compound Interest = $P \times (1+R)^{\wedge T}$
- Compound Returns

Interest is what you pay when you borrow money.

Return is what you earn when you invest money.

$$\text{Absolute Return} = \left[P \times (1+R)^{\wedge T} - \text{Initial}\right] \%$$

$$\text{CAGR Return} = \left[\frac{P \times (1+R)^{\wedge T}}{P}\right]^{\wedge\left(\frac{1}{T}\right)} - 1$$

- Present Value of Money

Opportunity Cost = What else can be done with funds available that is risk-free

= Risk free rate + Risk Premium

↓

measure of excess return to compensate if their is high risk in investment.

Government Bonds over 15 years is usually 7.5%

Premium can be 1.5 - 2%

Total opportunity cost = 9% (Called as discount rate if discounting)

$$\text{Present Value} = \frac{\text{Future Value}}{(1 + \text{discount rate})^{\text{Time}}}$$

- Future Value of Money

$$\text{Future Value} = P * (1 + \text{Opportunity Cost})^{T}$$

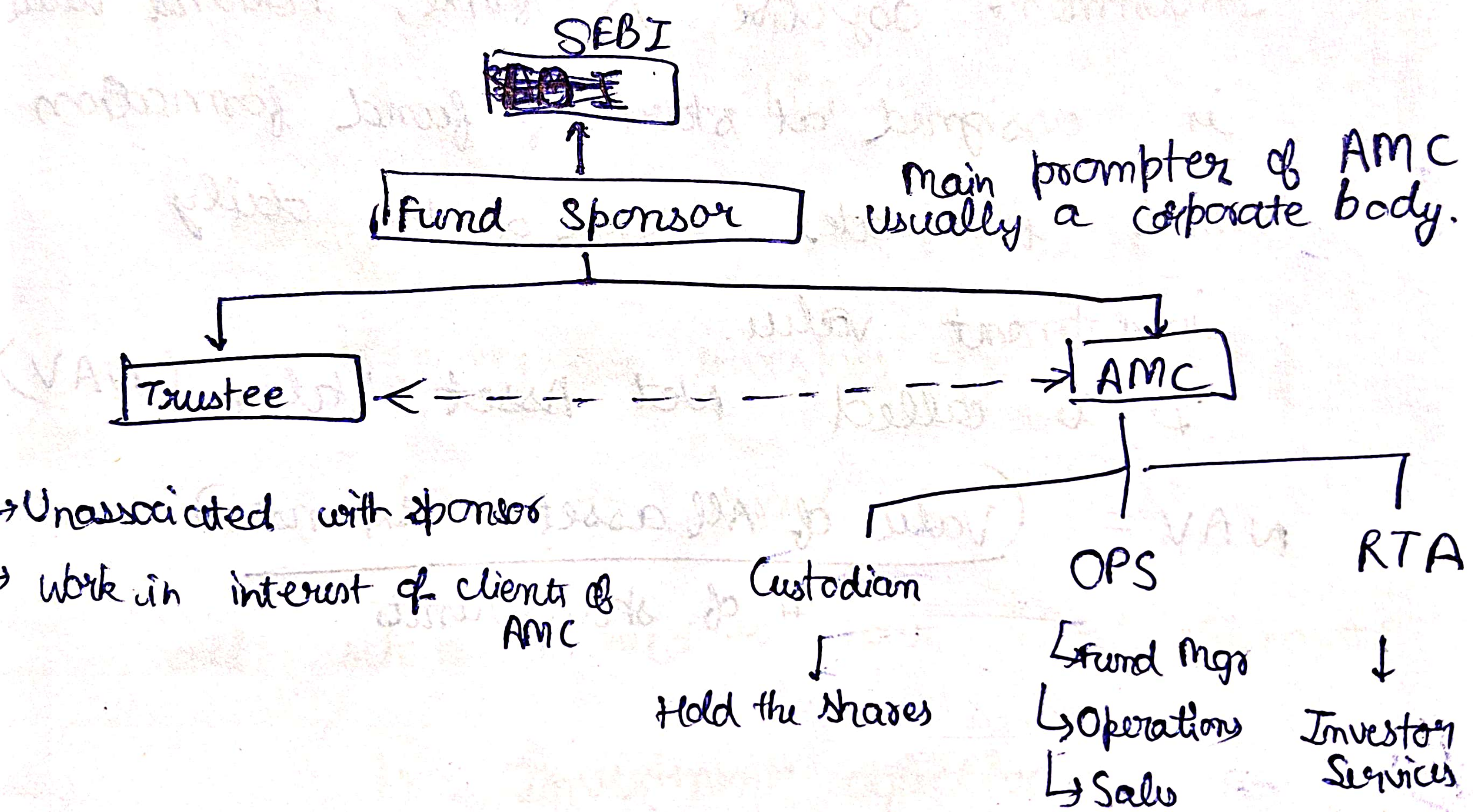
Also, consider Inflation in future value if retirement is a concern.

Intro to MF

AMC (Asset Management Company) is a company where a fund manager works and manages your money.

↓

Large scale fund manager, registered with SEBI & easily available to all over India



- Custodian holds shares & assets of AMC.
- AMC is the Investment Manager appointed with fund sponsor & trustee
- Custodian & RTA are 'service provider' for AMC company.

Now, moving on to the investment :

- When a fund manager invests in MF, they are issued Shares/Unit at notional value
- Fund is formed when different people pool in their money.
- Investment objective is same, notional value is assigned at start of fund formation which fluctuates based on the daily investment value.

  It is called Net Asset Value (NAV)

$$NAV = \frac{(\text{Value of All asset} - \text{expenses})}{\#\text{ of shares/units}}$$

Fund Fact Sheet

Document that puts all the information related to fund / scheme.

- Before discussing fund's fact sheet, some numbers:

  No. of fund houses = 45 (AMC)

  Kotak, Axis, ICICI Pru AMC, etc.

  No. of schemes = 1510

  Money managed by AMCs - 35L crore

  No. of unique investors = 2.4 crores.

- Going back to fund fact sheet

  all schemes need to have SEBI approval.

  i) Investment objective

  Where will stock be invested?
  How will it generate revenue?

  ii) Benchmark

  Benchmarked against an index suitable

iii) Type of Scheme

- Open-ended

  If fund will run forever or will close after a fixed period

  * Deal with open-ended fund.

- equity

  Asset class where MF invests

  Debt or equity

- Growth

  Whether dividends is the main way of money or capital appreciation

  Capital appreciation is growth.

iv) Fund Manager

Who is maging fund

v) Allotment Date

How old the fund is

vi) Plans & Options

L Regular Plan

MF distributor is between AMC & investor who earns commission.

L Direct Plan

Buy MF directly from AMC

L Dividends Payout option

Dividends if issued are paid & can be withdrawn

L Dividends Reinvestment ~~Plan~~ Option

Dividends are reinvested in same fund.

L Growth Option

Capital appreciation

vii) SIP Details (Systematic Investment Plan)

Fixed amt. of money in same fund for many years.

viii) Load structure

↳ Entry Load
Nil
↳ Exit Load

Amount of money you will have to pay at time of withdrawl.

• Riskometer

AMC is supposed to self-assess & let customers know about risk.

Low, Low to Moderate, Moderate, Moderately High, High, Very High

Categories of Mutual Funds are different & for category there are multible sub-category which tells what that MF invests in.

Large Cap Stock - 1 to 100 company
Mid-cap 101 to 250
Low/Small-cap 251st onwards
in terms of full market capitalization

MF Categories

5 different categories of MF and each category has more categories :

- Equity

Large-Cap	Focused	Sector
Mid-Cap	Dividend Yield	ELSS
Small-Cap	Value or Contra	Flexi-Cap
Multi-Cap		

- Debt

Money-Mkt	Medium Duration	Coporate risk
Short Duration	Short term	Credit risk
Overnight	Ultra short term	Banking & PSU
Liquid	Medium to long duration	GILT
Long Duration	Dynamic bond	Floater

- Hybrid

Conservative Hybrid	Multi asset
Balanced / Agressive Hybrid	Arbitrage
Dynamic Asset allocation / Balanced Fund	Equity Savings

- Solution Oriented

Children's Fund	Retirement Fund

- Others

Index Fund / ETF	Fund of Fund

An AMC is supposed to run only one scheme per category
1 large cap
1 mid cap, etc.
but Sectoral funds can be multiple.

I. Equity Schemes

Different categories differ with timeline of wealth generation & risk/reward ratio.

Some considerations:
- Require time
- Don't switch
- Don't do headline investing

a) Large-Cap Fund

Top 100 companies, more than 80% investment in large-cap companies
Portfolio is always disclosed

b) Mid-cap / small cap / large & midcap funds
Volatility high ↑ Risk ↑

c) Multi-cap fund

Requirement : 65% in equity & related instruments

Risk ↑ Return ↑

Good for beginners to learn

d) Focused Fund

No. of stocks in other funds - 60 to 70

No. of stocks in this fund — 30 (max.)

(11 in JM's)

High Risk ↑ High Return ↑

More volatile, so should take when person is matured in investment journey.

e) Dividend-Yield Fund

Invests in stocks of companies that pays high dividends regularly. (You don't get the dividend as investor) depends.

$$\text{Dividend yield} = \frac{\text{Dividend paid during year}}{\text{Stock Price}}$$

Atleast 65% in dividend yielding stock

f) ELSS Fund (Equity Linked Savings Scheme)

Special category of MF that enjoy tax exemption on investments under 80C

- Mandatory lock-in of 3 years

- 80% investment in equity & related instruments by fund manager.

Kinda like Multi-cap fund, no restrictions on where to invest.

II. Debt Schemes

What is Debt, taking money on loan

There are risks with debt:

i) Cashflow Risk
Irregular payment

ii) Default Risk
Bankrupt

iii) Interest rate risk
IR may reduce

iv) Credit Rating Risk

Credit score may degrade

v) Asset Risk

The asset / collateral property loses its value.

If corporates takes loan from bank, it is called 'loan agreement'.

If corporates raises money from multiple investors, it is called 'bond'.

↓

Interest + Principal will be returned

For bonds, there is
- i) Credit risk
- ii) IR risk
- iii) Price risk
- iv) Liquidity risk (No money to take out)

a) Liquid Fund

It makes investment in debt products with maximum maturity of upto 91 days.

When it less than year
- When corp borrows, it issues commercial paper
- When govt. borrows, it issues T-Bills

Just like humans, corporates have credit score which tells the credit rating.

Why invest in liquid fund?

* To park cash which is going to be used soon. The purpose is to protect the capital & use it in its entirety for the purpose planned.

* Liquid fund offers a slightly higher return compared to bank's saving account. (6% to 3-5%)

Risk is more as companies can default government not so much

b) Overnight Fund

Investment in securities which have 1-day debt obligation.

Credit rating risk is low, default risk exists but small.

The investment is done in 'Tri Party

Repo' or TREPS which is RBI regulated money market.

All 100% investment is done in TREPS, so overnight fund A & B are same for investors except the expense ratio.

* So if park cash which is needed within 90 days, overnight fund is an option
Return is around 4-5%

c) Ultra Short Duration Fund

Macaulay's Duration of Bond : Estimated time to recover the principal amt. invested in a bond.

Bond issues interest rate so invested principal will be back before maturity as part of coupon/timely payments.

So, ultra short duration fund is when the Macaulay duration of the portfolio is between 3-6 months.

* Good if parking money for 1-2 years, return is close to bank's FD.

$$\text{Price of bond} \propto \frac{1}{\text{Yield of bond}}$$

$$\text{Interest Rates} \propto \frac{1}{\text{Bond Price}}$$

(Simple supply & demand)

Modified Duration (of bond) : Sensitivity of the bond's price to the change in interest rate.

In context of MF, we use NAV

↑ Interest Rates → ↓ NAV

d) Low Duration & Money Market

Macaulay duration of the low duration fund at the aggregate portfolio level varies between 6 to 12 months

Rating of a corp bond

AAA — High rating, low credit risk
AA (+ -)
|
|
BB (+ -)
|
|

* Good if parking money for short duration

Money Market fund can invest only in money market instruments having maturity upto 1 year

- Commercial Papers
- Certificate of Deposits
- T-Bills

c) Short Duration & Medium Duration Funds

Short Duration ↓ Macaulity Duration is 1 - 3 years at portfolio level

Medium Duration ↓ 3 - 4 years

f) Banking & PSU Debt Fund

80% debt investment to be done in Banks, Public Sector Undertakings, Public Financial Institutions & Municipal Bonds

20% in any paper

Credit risk is low

* Good if parking cash for 3-5 years

g) Credit Risk Funds

Minimumes investments in corporate bonds of AA- or below rated company = 65%

35% anywhere. High Credit risk

Not really worth it for retail investor.

h) GILT Funds

Minimum Investment in government securities = 80%. 0 Credit risk but high interest rate risk.

Recap so far

- Direct Equities (Kite)
  Stocks, IPO

- Equity Mutual Fund (Coin)

- Direct Bonds (CPs, T- Bills)
  Coin

- Debt Mutual Fund (Coin)

- Soverign Gold Bonds (Coin)

- Fixed Deposits from bank

With this assets, we can build portfolio with different asset allocation patterns to achieve any portfolio goal.

Index Funds

management of one fund from another is what distinguishes each fund. The management can decide what strategy to deploy:

- Active → Beat a benchmark or deliver alpha
- Passive
  ↓
  Simply tracks the preformance of a benchmark as closely as possible
  |
  Nifty 50, Nifty 100, ...

Return of passive / Index fund

= Benchmark Return − Cost / Expense ratio

Index fund is one that tracks a broad cap-weighted index like Nifty 50, S&P 500

Arbitrage Funds

↓

Simultaneous buying & selling of securities, currency or commodities in different markets or in derivative forms in order to take advantage of differing prices for same asset.

Opp. 1 Price

Maruti - at NSE 5714

at BSE 5735

21 ₹ profit

Opp. 2 Spot - Future

Oppt 3 Rollover, transaction costs, execution risk

It is risky because of debt component (35% can be invested anywhere)

Proxy for low/ short duration funds.

Measuring Returns of MF

Investment Type	Duration	Type of Return
Lumpsum	< 1y	Absolute Return
Lumpsum	> 1y	CAGR
SIP	< 1y	Absolute return
SIP	> 1y	XIRR

XIRR ↓ Extended Internal Rate of Return

Point-to-Point Returns / Rolling Returns

↓ Return between date A & B

Final = (Ending NAV) + No. of units
price

↓ Returns between A & B for rolling period of time

↓ Max
Min
Average for the period

Equity funds should be taken for 5 years rolling.

MF expense Ratio, Direct & Regular Plans

Fee charged by MF's AMC is 'Total expense Ratio' or TER.

* NAV that is declared is after deducting the TER

Inv. Amount = 1000

NAV = 10

# of units = 100

This NAV (includes the expense beared)

* Money is collected from investments & deducted daily.

SEBI has directed maximum TER over an equity & Debt fund.

expense ratio is different for direct & regular plans: (only TER is diff.)

I. Direct Plan

Buying a MF directly from AMC.

Investor has to deal with MF:

- Market understanding & track
- MF performance
- Rebalancing.

II. Regular Plan

MF distributors come in between & they charge money.

Because expense ratio ↑ NAV ↓

MF Benchmarking

↓

Measure the performance of a fund by comparison on a set against a TRI

E.g Benchmark = 10.5% by Nifty 50

Equity fund = 12%
CAGR

Alpha = 1.5% (12 - 10.5)
on a risk adjusted basis

TRI (Total Return Index) includes & factors in dividends.

Indexes only check appreciation

The returns of the "index" largely depends on the weights assigned to each of the index constituents.

Upto investor to look at benchmark.

MF Risk Measures

I. Beta

Measure of relative risk vis a vis its benchmark

≤ 0 Decline if market moves up
$= 0$ No dependency on market risk
< 1 → Less risky (depends on market)
$= 1$ Market Index
> 1 Market prefer

Does not give actual risk of MF but relative risk compared to benchmark.

II. Alpha

Risk-free return is the maximum return you can generate without taking any risk.

FD return & savings acct. return is risk-free

Alpha is excess return of the MF over the benchmark return, on a "risk adjusted basis".

$$Alpha = \left(\frac{\text{MF Return} - \text{Riskfree Return}}{\text{Benchmark Return} - \text{risk free return}} \right) * \text{Beta}$$

Fund is rewarded if returns are generated by keeping a low risk profile & penalized for being volatile.

III. Standard Deviation

↓

Riskiness of Stock or MF

Volatility is % of standerd deviation

↑ SD ↑ Volalitility ↑ Risk

IV. Sharpe Ratio

↓

Bundles the concept of Risk, Reward (Return) & risk-free rate.

$$\text{Sharpe Ratio} = \frac{[\text{Fund Return} - \text{Risk Free Return}]}{\text{Standard Deviation of fund}}$$

Only works for equities as it consider price based risk.

V. Sortino Ratio

Standard deviation considers +ve & -ve returns (returns variation / risk)

So, if we don't penalize (+ve returns) as we did in Sharpe ratio, we can come up with

$$\text{Sortino Ratio} = \frac{[\text{Fund return} - \text{Risk free return}]}{\text{Downside Risk}}$$

VI. Capture Ratios

↓

Tells what extent did the fund capture from (+ve) returns of its benchmark & to what extent it captured the (-ve) returns from the benchmark

"Morning star India" lists capture ratios

Analyzing Mutual Funds

I. Equity fund

Before this, a recap

- Investment and personal finance
- Assets required to finance goal
- MF are primary financial instrument
- Learn about MF, their categories & types
- Index fund & Arbitrage fund
- Risk & Performance of MF

Now, we want to build a portfolio and it requires

- Indentify a financial goal and translate in terms of time and corpus
- Identification of funds to help achieve the goal

Analyze Funds

Portfolio Composition

- Periodic review & maintenance of portfolio.

Step 1: Basic Hygiene check

Tyke of fund - Multi, Mid, Small, Large

Index benchmark

Fund Inception Date

Fund mager history

AUM of the fund

Expense ratio

Check on 3rd party for other metrics

- Standard deviation
- SD, Beta, Alpha
- Capture Ratio
  - Comparison to each category from different AMCs.

Step 2: Rolling Returns Check

Comparison with peer

Step 3. Risk - Return Matrix Check | Step 4: Capture Ratios

Morningstar

II. Debt Fund

Centered on risk & portfolio of fund.

Minimum amt. to be invested in debt fund

= Average Maturity of the fund.

step1: Portfolio allocation (for corporate bonds)

- Diversification of fund
- Exposure to companies
- Credit ~~risk~~ rating check on the papers held by fund.

(For govt. bonds)

we assume risk free in credit but interest risk

step2: Now, check industry average (Value Research)

How much securities compared to other bond funds.

Quality of papers AAA, AA+ } - compare to industry average

Step 3: Modified Duration

Average Maturity

Yield to Maturity

↓

Total returns expected based on assumption that bond is held to maturity & cash flow is reinvested into bond.

Best to avoid debt funds with large and small AUMs

Building Mutual Fund Portfolio

Before building portfolio, we need to cover for risk:

I. Cover for the risk.

Term Insurance

Life Insurance

II. Cover for emergency

6 month of corpus

Now, portfolio building is all about financial goal

I. Time

II. Investment Amt.

III. Risk availability (Age)

IV. Target Amt.

Refer to MF cheat sheet to choose

MF portfolio for a single financial goal can be done with 2-3 MFs at max.

i) Reduce overlap to minimum.

ii) If want AMC diversification, use different types of fund (equity Large from one / Debt Liquid from other etc.)

Method of elimination can be used as per goal.

ex. 10 years 1.5 cr (Young)

for 10 years, debt is not required

so equity

Large Cap

Mid-Cap

Value Fund are options

Don't back off in lumpy flow

ex: 25 lakh in 8 years (old)

Not 100% equity

So a mix.

Arbitrage

Short Duration

Corp bond

may be 20-25% can go into large-cap

ex. 3. Retirement with 50 L from sale of asset.

(20 + years)

- Invest lumpsump in fund which offers Capital protection.

- Withdraw chunks of it every month & invest into designated fund for retirement.

- Continue doing so till exhaustion of capital

Index funds
Mid-cap funds are options.

Asset Allocation

Asset - Anything you own

Liability - Anything you owe

Assets

Precious Metals

Gold, Silver

Real-Estate

Land
Rental
Comercial

Collectibles

Art
Stamps
Coins
Bitcoin

Financial

Stock
equities
Bonds
Commodities

Allocation

Splitting one's savings between different types of assets.

Liability

Housing Loan

Loan Balances

Macro - Economics

I. GDP

↓

Total value of the economic output of the family, which includes goods sold, products manufactured and sold, and service offered.

GDP is usualy measured in %age (growth rate)

Absolute ← Nominal growth rate
Real GDP growth rate
=
Nominal − Inflation

Market Cap = Price of stock * Stock outstanding

Family = Government & people of India
abar

(PSUs, LIC)

Government Revenue = Tax + Non Tax − Revenue Expenditure (Subsidary, salary)
− Capital Expenditure

Personal Finance Review

I. Don't be scared

you lose, you learn

II. Reflect on where you are

III. Know where your finances are

Assets
Liabilities

IV. Review goals

well defined
Cost of goal
Adjust for inflation
Figure out right asset allocation
Have Reasonable return assumptions

Risk Tolerance – Ability to withstand market volatility

Risk Capacity – How much risk you can take at goal level

V. Have emergency fund

VI. Clear debt

Avalanche
Snowball

VII. Diversification & Asset Allocation

Diversity of investing in different asset classes.

Equity : Domestic & Intl. equities

Debt : Within between various duration & risk levels.

Don't diversify
L See where investment is & don't invest in same stock through different Mutual fund.

VIII. Check Performance against benchmarks

- Rolling Return - check consistency
- Sharpe ratio, Sortino ratio, capture ratio
- Fees

IX Rebalancing

65%   30%   5%

If equity goes up to 70%

sell 5%. and Invest somewhere else

65%   30%   10%.

X. Savings Rate Matters

Rate of Saving > Rate of Return
as return is unpredictable

Human capital is important

Insurance

1. Get one good insurance

2. Fill everything correctly
   - age
   - History of medical conditions

3. Choose Insurance cover smartly
   20 Lakh is good enough
   Health insurance premium increases
   - 4-6% to counter inflations
   - If age bands are changing
   - They can increase premium out of blue

4. Co-payment is scam.
   They make sense unless they are mandatory
   or Buying a policy for some one old with pre-existing disease

Check room renting in insurance clause.

5. Dunning Kruger Effect

People overestimate their ability even when they may have little to no expertise on the subject matter.

- Declare everything
  if popping pills

- Tell surgeries & genetic condition
- You can't fool/outwit insurer.

6. Insurance company have waiting periods for certain illness

Permanent exclusions ← Sometimes even no payment

Also, they can have limit on certain illness.

Hospitals overcharge so insurance add them in exclusion list.

7. Check who are covered under policy

Buy personal insurance even if employee gives one.

8. How to choose which insurance ?

- Check network hospitals & work on ensuring pre-auth of claim.

(Not gimmick)

- Alternative medicine cover (like homeo, allo)

(Slightly Gimmick)

- Restoration Benefit

Under group policy, if one is hospitalized a top-up can be done for other family to cover.

Check ~~how~~ will they cover

(Not gimmick, but can be)

- Pre & Post Hospitalization expenses cover for 30 days - 6 months

(Not gimmick, but kinda available in all)

- Day care Treatment

(Covers all treatments if hospitalized for less than 24 hours)

(Not gimmick)

- No claim bonus

If no claim done in last year, cover increases

(Not gimmick, but good feature)

- Domicilary Cover
  - Condition that prevents you from moving to actual medical facility
  - Medical practioner must confirm that hospitalization is necessary.
  - All costs must be deemed just and reasonable.
    Hospital can give needless provisions

(Slightly gimmicky)

- Consumables

  glove, TV monitors, mask, PPE kit

  are covered or not.

  (Not a gimmick)

- Critical Illness

  If well-defined it's good.

  Top-up if it is critical illness

  (slightly gimmicky)

- Top-up Plans (to increase cover)

  It offers a sizeable extended cover after the customer pays the deductible during a hospitalization

Deductible could be from another insurance or from pocket.

But the catch is deductible needs to be low as you will exhaust the base insurance anyway if you go to hospital once

(Highly gimmicky)

- Super Top-Up Plans

Remove the recurring deductible feature.

Exhaust base insurance & then only you can use super-top up.

Provided that base insurance is exhausted

So, better to have same date for base insurance & top-up.

(Not gimmick, actually good to have)

- Claim Settlement Ratio

Not very useful to us as we don't have context on claims settled.

If we see IRDAI's annual report, we get good idea

How many claims?

(ICR) How much is insurer in profit?

Formula for calculating claim settlement ratio?

(Not gimmick, but requires research)

- Porting

If insurance is no good today ditch it and buy a new plan or port it.

Check if carryover of benefits can be done like

- Waiting Periods
- How much cover it waived off for waiting period

(Not a gimmick)