Mutual Funds(MF)

- vehicle for retail and institutional investors to benefit from the capital market.
- Pool existing securities and then issue their own shares against the pool/portfolio.
- Small investments and Diversification
- offered through a New Fund Offering (NFO)- Close-ended schemes & Open – end schemes (majority)
- Checks and balances for protecting the interests of investors.
- Types of funds:
  - Long term funds
    - Equity Funds
    - Bond funds
    - Hybrid Funds
    - Indexed funds
    - Exchange traded funds (ETF)
  - Short term funds
    - Money Market Mutual Funds
- Hedge Funds and PMS

MF VS HF

- MF accept money from unit holders to fund investments. HF use mix of funds- unit holder's funds and borrowed funds.
- MFs are not permitted to borrow to invest but to only for investor services up to 20 % of the net assets and cannot be for more than 6 months.
- HF are like PMS aimed HNWI, operate with high fee structures, and less closely monitored.
- HF rely on borrowings, take extreme risk positions including *short-selling of securities*!

How borrowing can be a double-edged sword for the fund?

		Scenarios			
		Good Market		Good Market	Bad Market
S.N	Particulars	Fund A		Fund B	Fund B
a	Unit-holders' Funds (Rs Cr)	1000		100	100
b	Borrowings (Rs Cr)	0		900	900
c	Total Investment (Rs Cr); a + b	1000		1000	1000
d	Return on investment (%)	15%		15%	5%
e	Return on investment (in Cr); c x d	150		150	50
f	Interest on loan (%)			7%	7%
g	Interest on loan (Rs Cr); b x f	0		63	63
h	Unit-holders' Profits (Rs Cr); e - g	150		87	-13
i	Profit for Unit-holders (%); h/a	15%		87%	-13%

What is Short-selling?

- Selling a security which you don't own!!!
- A trader requires a margin account, pay interest on the value of the borrowed shares while the position is open. A trader buys the shares on the market and returns them to the lender or broker in closing.
- *Example*: ABC stock currently @ Rs 50 is expected to go down in the next few months.
  - 100 shares borrowed and sold
    - "short" 100 shares!!.
  - If the stock goes to Rs 40, 100 shares will be bought @ Rs. 40 from the market.
  - Profit = Rs 50 – Rs 40 = Rs 10 x 100 shares = Rs 1,000.
  - If the position is not closed at Rs 40 ??? and a company to it with Rs 65 per share!
  - The Loss at Rs 65…….= Rs1,500
    - Rs 50 – Rs 65 = - Rs15 x 100 shares
  - The loss can go unlimited unlike long position where investor own security

Money market mutual funds

- Invest mostly in money market instruments, with maturity of up to one year.
- They are open-ended funds and their liabilities are like deposits.
- Ideal for investors with very little tolerance for risk.
- Since they have short tenure, they are not very sensitive to interest rate changes in the economy.
- Taxed like debt schemes.
- Considered as an alternate to deposits.

Returns from Mutual Funds

- Return reflects three aspects of the underlying portfolio of mutual fund assets.
  - Income & Dividends
  - Capital Gain
  - Capital appreciation
    - Assets are marked to market
    - Net Asset Value (NAV) = Market value of fund's total assets under management – any liabilities / Number of mutual fund shares outstanding
    - NAV is the price of MF shares.

Calculation of NAV on an Open-End MF

- Number of shares outstanding fluctuates daily.
- Demand for shares determines the shares outstanding.
- Calculation of NAV on an open end MF
  - Example: ‘Diamond Mutual Fund’ has 15000 shares outstanding (assuming no liabilities).
    - 1000 shares of Pepper, trading @ Rs 30
    - 2000 shares of Salt, ……… @ Rs 40
    - 1500 shares of Hot and Cold,……..at Rs 50
  - $\text{NAV} = \dfrac{\textit{Total mkt value of assets under management}}{\textit{Number of MF shares outstanding}}$
      - = 1000 x 30 + 2000 x 40 + 1500 x 50/15000
      - = 30000 + 80000 + 75000/15000
      - = 185000/15000 = ***Rs. 12.33***
- if shares of all raise next day and no change in outstanding shares!!!
  - Pepper goes to Rs 35, Salt goes to Rs 45, and Hot & Cold goes to Rs55.
    - = 1000 x 35 + 2000 x 45 + 1500 x 55
    - = 35000 + 90000 + 82500 = 207500
    - 207500/15000 = ***Rs. 13.83***
  - Thus NAV will increase

Cont.….NAV of an open-end MF when the number of shares increases!

- Suppose the ‘Diamond’ today sold 1000 additional shares at NAV of Rs 12.33. Additional funds are invested in the Pepper, which is current trading at Rs 30.
- Additional shares = Rs 12330/Rs 30 = 411
  - New Portfolio = 1411 - Pepper; 2000 - Salt; and 1500 -Hot and Cold
- Given the same change in share prices:
  - = 1411 x Rs 35 + 2000 x Rs 45 + 1500 x Rs 55
  - = 49385 + 90000 + 82500
  - = 221885/16000
  - = Rs 13.88 …NAV on the next day.
- *Therefore, funds value change overtime due to to both capital appreciation and investment size.*
- The additional shares and the profitable investments increased NAV slightly, from Rs 13.83 to Rs 13.88.

Market Value of Closed-End MF shares

- Just like corporations traded on exchanges.
- Fixed number of shares/units outstanding at a given time.
  - Example: REIT- Real Estate Investment Trusts; ICICI Prudential Growth Fund (Series 2)
- Value of underlying shares and demand for the MF shares determine the NAV of the MF.
  - Trading at Premium: demand is high - can trade more than the fair market value (NAV) of the securities held. When markets boom.
  - Trading at a Discount: demand is low – can trade at less than the fair market value (NAV) of the securities held. When markets fall.
- Example 1: high demand for a closed-end MF
  - 50 shares (NS) trading @ Rs. 20 per share (PS). The market value of the underlying is Rs 800, or Rs 16 (Rs 800/50) per share.
    - **Assets** — **Liabilities and Equity**
    - Market value of assets= Rs 800 — Market value of MF shares (PS x NS)= Rs 1000
    - Premium = 200 (at a Rs 4 (i.e. 200/50) per share.
- Example 2: low demand for other closed-end MF
  - 100 shares (NS) trading @ Rs 25 per share (PS). The market value of the underlying is Rs. 3,000, or 30 per share.
    - **Assets** — **Liabilities and Equity**
    - Market value of assets = Rs 3000 — Market value of fund shares (25 x 100) = Rs 2500
    - Discount = 500 (at a Rs 20 (i.e. 500/25) per share.

Mutual Fund Costs

- AMC – Asset Management Company-Load and non-load funds
- Load funds- Two types of Fees
  - Sales Load: upfront
  - Operating Fee (Annual): Management fees (for administration) + 12b-1 fees (for distribution and marketing)
- Expressed as % of the average net assets invested in MF.
- Example: Rs 10000 investment.
  - Sales load/entry load = 4 %; investment will be = Rs 10000 (1-0.04) = Rs 9600.
  - 1.0% operating fee (Management fee @ 0. 85% and 12b fee -1 @ 0.15%) charged on the average net value invested and calculated at the year end.
  - Investment returns is 5 % (at the year end), and these to be reinvested.
- 1st year- annual operating expenses and value of investment :
  - *Annual operating expenses = Avg. Net Asset value x Annual operating expenses (%).*
  - = (9600 + 9600 (1.05))/2 x 1% = (9600 + 10080)/2 = 19680/2
  - = 9840 x 1% = Rs 98.4 = annual operating expenses
  - Value at the end of the year = 9600 (1.05) = 10080 – 98.4= Rs 9981.6
  - The return to the investor :
    - (9981.6 – 10000) / 10000 = Rs. - 1.84% !!!

Mutual Fund Costs (Cont.)

- 2^{nd} year, value and expenses will be
  - Annual operating expenses = Avg. Net asset value x % of annual operational expenses.
    - = (9981.6 + 9981.6 (1.05)) /2 x 1.%
    - 20462.28/ 2 = 10231.44 x 1%
    - 10231.44 x 1% = Rs 102.31 = Annual *operating expenses*
  - *Vale of the investment* at the end of 2^{nd} year:
    - 9981.6 (1.05) – 102.31
    - 10480.68 – 102.31
    - Rs. 10378.37
- So;
  - Total fee for 2 years =
    - Load = Rs. 400
    - Operating Expenses = Rs 98.4 + Rs 102.31 = Rs 200.71
  - Income from original investment = 10378.37- Rs 10000 = Rs. 378.37