Mutual Funds and Other Investment Companies

Chapter 4

Investment Companies

- financial intermediaries that collect funds from individual investors and invest in a portfolio of assets
- shares = claims to portfolio
- services
  - administration and record keeping
  - diversification and divisibility
  - professional management
  - reduced transaction costs

Net Asset Value

- used as a basis for the valuation of the shares issued by the investment company (the “value” of a share)
  - selling new shares
  - redeeming existing shares
- calculation

$$NAV = \frac{\text{Market value of assets} - \text{Liabilities}}{\text{Shares outstanding}}$$

Types of Investment Organizations

- Unit Investment Trusts
  - portfolio is fixed for the entire life of the fund (*unmanaged* fund)
  - lower management fees
  - shares called *redeemable trust certificates*, usually sold at a premium

Types of Investment Organizations (cont.)

- Managed Investment Companies
  - management company manages the portfolio for an annual fee
  - *open-end* = ready to redeem or issue shares
    - not traded on exchanges – investors buy or sell to the issuer ➔ number of shares changes daily
    - shares price ≥ NAV (if the fund carries a *load*)
  - *closed-end* = do not redeem or issue shares
    - traded on organized exchanges – investors trade with other investors
    - price ≠ NAV (why? if price < NAV, i.e. *selling at a discount to NAV*, higher dividend yield!)

Types of Investment Organizations (cont.)

- Other investment organizations
  - *commingled funds* = partnerships of investors, similar to open-end funds
  - *real estate investment trusts* (*REITs*) = similar to closed-end funds investing in real estate, either directly (*equity trusts*) or indirectly (*mortgage trusts*)
  - *hedge funds* = "mutual funds" not registered with the SEC and open only to wealthy or institutional investors, speculating on valuation differences between assets

Open-End and Closed-End Funds: Key Differences

- Shares outstanding
  - *closed-end*: no change unless new stock is offered
  - *open-end*: changes when new shares are sold or old shares are redeemed
- Pricing
  - *open-end*: NAV
  - *closed-end*: Premium or discount to NAV

Mutual Funds

- open-end investment companies
- dominant for of investment company (around 90% of investment company assets)
- specific investment strategy outlined in its prospectus
- management companies usually manage a family of mutual funds (diversification)
- management companies: Vanguard, Fidelity, Putnam

Investment Policies

- Money Market
- Equity
  - income funds = high dividend yields
  - growth funds = capital gains (riskier)
- Fixed Income (bond)
- International
- Balanced and Income
- Asset Allocation
- Index
- Specialized Sector

Costs of Investing in Mutual Funds

- Fee Structure
  - *front-end load* = commission (sales charge) paid when buying the shares
  - *back-end load* = exit fee when selling the shares
  - *operating expenses* = costs incurred by the fund in operating the portfolio (expressed as percentage of total assets)
  - *12b-1 charges* = distribution costs paid by the fund (advertising, annual reports, commissions paid to brokers)
  - operating expenses and 12b-1 charges are deducted annually from the value of assets

Costs of Investing in Mutual Funds (cont.)

- Fees and Returns
  - the value of an investment after n years is

$$Value_n = (1-f)\cdot I\cdot(1+r-e-b)^n\cdot(1-s)$$

  where:
    - f = front-end load
    - I = sum initially invested in fund
    - r = (gross) rate of return on shares
    - e = operating expenses ratio
    - b = 12b-1 charges
    - s = back-end load

Costs of Investing in Mutual Funds (cont.)

- Fees and Returns
  - operating expenses and 12b-1 charges are deducted annually from the value of assets
  - rate of return:

$$R = \frac{NAV_1 - NAV_0 + \text{Income and capital gain distributions}}{NAV_0}$$

  - this measure does not take into account front- or back-end fees

Exchange Traded Funds

- allow investors to trade funds based on indexes like they would trade stock
- examples
  - “spiders” (SPDR = Standard & Poor’s Depositary Receipt, based on S&P 500)
  - “qubes” (based on Nasdaq 100)
  - WEBS
- advantages
  - traded continuously during the day
  - price cannot depart too much from NAV
  - cheaper than mutual funds

A First Look at Fund Performance

- difficult comparison because of risk
- if benchmark is Wilshire 5000 Index (most comprehensive value-weighted index) – most funds underperform (even when adjusting for costs)
- do “good managers” continuously perform well (Goetzmann and Ibbotson, 1994)?
  - roughly 62% of “winners” tend to stay winners the following 2 years
  - seems to be a mix of luck and “skill”
  - changed over time (70s vs. 80s)
  - bad performance is more persistent

Percentage of Funds Outperformed by the Index, 1972-2001