Consider investing in mutual funds

- Easy way to get started investing
- Only takes a small initial amount
- You get professional management without spending lots of time investigating stocks
- You get diversification you could never achieve on your own – lowers risk
  - Across industries and within industries
- Funds provide good historical returns

What’s a mutual fund?

- Mutual fund is an investment company (usually a corporation) that
  - pools the funds of many like-minded investors
  - invests their money in a diversified portfolio of stocks and bonds
Well-known mutual funds

- Vanguard
  - Started by Jack Bogle as a thesis at Princeton
  - Created the concept of index funds
- Fidelity
- Dreyfus
  - Started by Jack Dreyfus, Lehigh '35
- GlobalFunds LP
  - Started by AJ Klatch, Lehigh IBE '06

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Where the $money comes from

How the $money is spent

- Fund has $100,000 (less fees earned by the fund managers) to invest in securities
- Investment decisions are made by the fund's professional management team
- 5% in GE, 10% in GM bonds, 10% in IBM, 7% in HP, 5% in Coke, 11% in t-Bills, etc.
- Interest and dividends are reinvested to buy more stocks and bonds or paid out
- Value of the fund (hopefully) increases

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$money comes and goes

- Enter Goofy with his $15,000 – he can buy 150 shares worth $100 each (NAV)
  - Some goes to buy additional securities
  - Some goes to pay the fund managers’ fees
  - Some goes to pay off Minnie who is redeeming (selling) 50 of her shares
    - No need to liquidate part of the fund’s portfolio to pay off Minnie’s redeemed shares
    - Would not want to have to sell when the market is temporarily depressed

Bigger than banks

- Over 8,300 mutual funds available, more than all the stocks listed on the NYSE and AMEX combined
- Biggest financial intermediary (connects borrowers to lenders) – bigger even than commercial banks in terms of assets

Management team

- **Security analysts** who decide what securities to buy and sell
  - Under-valued and over-valued securities
- **Money managers** who decide the composition of the portfolio
- **Traders** who do the actual buying and selling
- Separation of duties is a safe-guard against fraud
Three kinds of funds

- Open-end funds
  - Load funds
  - No-load funds
- Closed-end funds
- REIT’s

Open-end funds

- Vast majority of mutual funds are open-end funds
  - Can issue an unlimited number of shares
  - Investors buy from the fund and sell back to the fund at Net Asset Value (NAV) = total assets/number of shares outstanding
  - For the Disney Fund NAV = 100,000/1,000 = $100 per share
  - Need to hold some cash in case redemptions exceed new purchases

Load or no-load

- Most open-end funds are load funds
  - They charge you a front-end fee (2-3% of purchase price) when you buy into the fund
  - Normally no redemption-fee
- 30% of all mutual funds are no-load
  - No fee or load when buying or selling
- All funds also charge a management fee (.5% to 3%) off the top – eats into profits
- Funds are required to disclose their fees
Do some research

- Each fund is required to publish a 2 to 6 page "fund profile" in plain English detailing
  - Its objectives
  - Its risks
  - Its fees and expenses

- If a load fund
  - Buy from a stock broker or directly from fund’s sales force

- If a no-load fund
  - Buy from a commercial bank or just mail a check to the fund

Closed-end funds

- Only about 25% of all mutual funds
- Have a fixed maximum number of shares
- You buy and sell on exchange or OTC with other investors and not with the fund itself – you pay a commission to a broker just like with any other stock trade
  - No redemption of shares – sell shares on exchange
    - No need for fund to keep idle cash
    - Fund can stay fully invested
  - Tend to be more aggressive in their investing – don’t have to sell at inopportune times
- Share price determined by supply and demand

REIT’s

- Real Estate Investment Trusts
- Mutual funds that own portfolios of mortgages and real estate investments
- You can enjoy the benefits of real estate ownership without the headaches of property management
- REIT’s provide attractive dividend yields
More on REIT’s

- Three types of REIT’s
  - Property REIT’s - invest in shopping centers, hotels, office buildings
    - Capital gains-oriented
  - Equity REIT’s – invest in mortgages
    - Income-oriented
  - Hybrids – invest in both properties and equities
- Income earned by REIT’s is not taxed but income distributed by REIT’s to investors is taxed as ordinary income
  - Unattractive at tax time

Mutual fund philosophies

- Whatever you want, it’s out there
  - Specialize in stocks
  - Specialize in bonds
  - Strive for max capital gains
  - Strive for max current income
  - Appeal to speculators
  - Appeal to tree huggers
  - The big companies have a whole family of funds
  - Allow you to move among their funds at little cost

Types of funds

- Growth
- Aggressive growth
- Value
- Income
- Balanced
- Bonds
- Money market
- International
- Index
Growth funds

- Objective: capital appreciation
  - Long-term growth and capital gains
- Invest mostly in common stocks with good long-term growth potential
- Tend to be aggressive and risky

Aggressive growth funds

- Very speculative
- Invest in high-flying, small companies
- Invest in very volatile companies
  - Big swings in stock prices
- Sometimes buy stocks on margin (pay for a portion with debt)
  - Very risky — see next three slides
- Become more popular as market rises
  - May be too late to capture the upturn?

Buying stocks with your money

- If \( P_0 = 50 \) and you have \$5,000, you can buy 100 shares \((5,000/50)\)
- Later, if \( P_1 = 75 \), your holdings are worth \$7,500 \((100\times75)\)
- Your gain is \( 7,500 - 5,000 = 2,500 \)
- Your rate of return is 50%
  - \( 2.500/5,000 = 50\% \) return
- Congratulations!
Buying stock on margin

- You buy “on margin” by borrowing an additional $5,000 at i = 5%, and if \( P_0 = $50 \), you can buy 200 shares (10,000/50)
- Later if \( P_1 = $75 \), your holdings are worth $15,000 (200x75)
- Your gain is 15,000-5,000-5,000-interest (say $125) = $4,875
- Your rate of return is 4875 / 5000 = 97.5%
  - Example of leverage to magnify the gain

Doesn’t always work

- But what if \( P_1 = $25 \), your 200 shares are worth only 5,000 (200x25)
- Your loss is 5,000-5,000-5,000-125 = -$5,125 and 5,125/5,000 = 102.5% loss
  - Lose original $5,000 and $125 in interest
  - Example of leverage to magnify the loss
  - Lender (broker) won’t lose – you lose
    - Lender will give you a “margin call” as the market is dropping to ensure that the lender won’t lose
    - Either pay more money or else lender will sell your securities
- No matter who does it, buying on margin (leverage) is dangerous

Value funds

- Seek to buy undervalued stocks that are fundamentally sound
- Low price to earnings (P/E) ratios, high dividend yields, moderate debt
- Historically are very competitive with growth and aggressive growth funds
  - But are safer since their underlying holdings are safer – good, solid companies
- Good mutual fund choice
### Equity-income funds

- Emphasis on high current income
  - Capital gains are nice but not primary objective
- Buy high-yielding common stocks
  - Stock’s yield = dividend / current price
  - \( \text{DPS} = \$4.00 \) and \( \text{P}_1 = \$50; \text{yield} = 4/50 = 8\% \)
- Capital preservation is a goal
  - Don’t want to lose the investors’ money
  - Invest in high-grade companies
- Low risk way of investing in common stock

### Balanced funds

- Maintain balanced portfolio of stocks and bonds
- Stocks provide long-term capital gains
- Bonds provide high current income
- Relatively low risk mutual funds – seek high quality investments

### Bond funds

- Invest in fixed income securities - bonds
- Mainly interested in high current income
- Three advantages of investing in a bond fund rather than buying bonds directly
  - Fund provides diversification – hard to do on your own since \( P_{\text{bond}} \) typically is \$1,000 or even \$5,000
  - Fund automatically reinvests bond coupons
  - Fund provides better liquidity
You want bonds? We got bonds!

- Available bond funds specializing in:
  - Government bonds
  - High-grade corporate bonds
  - High-yield corporate bonds (aka “junk bonds”)
  - Municipal bonds
    - Provide tax-free income
    - Could be high-grade or high-yield

  - If interest rates rise, value of fund drops
    - Value of the fund’s bonds decline as rates rise

Money market funds

- Buy money market securities
  - Short-term with maturities < 1 year, often only a few months
- Look for attractive short-term rates
  - US Gov’t T-bills
  - Commercial paper (short-term IOU’s of top companies in $100,000 denominations)
- Some seek tax-exempt munies of 30 to 90 days maturity

International and global funds

- Invest your money in foreign securities
  - Some specialize by region
    - Mexico, Europe, Pacific Rim
- International funds – just foreign securities
- Global funds – foreign and US companies
  - Greater diversification
- Stock funds, bond funds, aggressive funds, balanced funds, etc.
- Considered high risk - so do your research
Index funds – different animal

- **Mutual funds that buy and hold portfolios identical to those held in market indexes**
  - For example, a fund might hold the exact same 500 stocks as the S&P 500 in the same proportions

- **Index funds try to match the market rather than beat the market – sounds like underachievers?**

- **Why an index fund? – sobering statistic**
  - In a given year, only about 20% of managed funds beat the market, but they all still charge high fees
  - Index funds beat the other 80% of managed funds and have very low cost structures

Advantages of index funds

- **Buy and hold strategy**
  - Only change portfolio when index drops a company and replaces it with a new one
  - Essentially the fund is run by a computer that matches fund’s holdings to the target index:
    - S&P 500, S&P Mid Cap 400, Russell 2000, Wilshire 5000 or growth indexes or even bond indexes
  - Very low cost investment management
  - Not paying high fees to incompetent managers

- **Another advantage is their stability**
  - Little realized capital gains so produce little taxable income each year – only at share redemption

Picking 1 to 3 out of 8000

- **What are your investment objectives?**
  - How well do you want to eat vs. how well do you want to sleep?
  - Can you tolerate high risk as you go for aggressive growth?
  - Are you a tree hugger who wants predictable, steady income with very little risk?
  - Would you be comfortable with volatile returns?

- **Look at a potential fund’s profile for its objectives**

- **WSJ, Barron’s, Money, Fortune, Forbe’s provide data and info on mutual funds**

- **Value Line Mutual Fund Survey and Morningstar’s Mutual Funds provide tons of stats on the big funds**
Still picking

- Whittle decision down to 2 to 3 types of funds
- Specify constraints
  - No-load funds
  - Tax-free income
  - No overseas investments
  - Research the past performance of the funds you’re interested in
- Funds required to report their performance in Summary of Income and Capital Changes

Measuring fund performance

- Three potential sources of income:
  - Dividend distributions
    - Fund may choose to pay out dividends and interest it has received – taxed as ordinary income
  - Capital gains distributions
    - Fund may choose to pay out some of its net capital gains – taxed as capital gains
  - Mutual fund price appreciation
    - NAV rises – unrealized capital gains – no taxes until sold

Yield or return on a fund

dividends = 55, capital gains = 1.75, NAV\_t = 24.47, NAV\_y = 29.14

Yield = \( \frac{\text{dividends} + \text{capital gains}}{\text{average NAV}} \times \text{change in NAV} \)

Yield = \( \frac{55 + 1.75 + (29.14 - 24.47)}{2} \) = 26.02% approximate

\[
\text{Yield} = \frac{55 + 1.75 + 29.14}{(1 + r)^2} = 24.47 \Rightarrow PV, r = 28.48\% \Rightarrow PV, 1 \Rightarrow n, i = 28.48\%
\]
Summary

- Historically load funds have NOT outperformed no-load funds
  - Better off going with a no-load fund
- Even great funds have bad years — you’re in it for the long haul
- Most stock & bond funds fail to beat the market
- You do not need a broker to buy a mutual fund
- Mutual fund names are often misleading

Recommendations

- Over the long-run, returns on stock funds should exceed returns on bond funds
- Invest in mutual funds that buy common stocks and not fixed income bonds
  - Index funds are a possibility
  - As you get closer to retirement, move into safer, bond funds
- While you’re still young, go for as much risk as you can tolerate on money you don’t need
  - Don’t invest house and car down payments in risky funds
  - Might end up driving your used Yugo and living in an apartment for a few more years
  - Might end up living in your used Yugo