

## Lecture 5: Mutual Funds

ECON435: Financial Markets and the Macroeconomy

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Spring 2011

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## Investment Companies

- allow small investors to “team up” and invest together on a large scale
- each investor owns shares in the total fund

### Benefits:

- diversification
- professional management
- lower transaction costs
- record-keeping and administration

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## Net Asset Value (NAV)

$$\text{NAV} = \text{value of each share} = \frac{\text{Value of Assets} - \text{Liabilities}}{\text{Number of shares}}$$

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## Types of Investment Companies

- Managed Investment Companies
  - open-end funds: investor can issue/redeem shares at NAV
  - closed-end funds: investor can trade shares → price often below NAV
- Real Estate Investment Trusts (REITs)
- Hedge Funds: funds for wealthy investors; minimal SEC regulation

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## Mutual Funds

Mutual funds = open-end managed investment companies

Different investment policies:

- money market funds
- equity funds, e.g. income or growth
- sector funds, e.g. technology, banks
- bond funds
- balanced funds: both stocks and bonds
- international funds
- index funds: aim to match a market index

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## Types of US Mutual Funds

	Assets (\$ billion)	% of Total Assets	Number of Funds
<b>Equity funds</b>			
Capital appreciation focus	\$ 2,701.0	25.9%	3,070
World/international	1,314.1	12.6	915
Total return	1,896.5	18.2	785
<b>Total equity funds</b>	<b>\$ 5,911.6</b>	<b>56.8%</b>	<b>4,770</b>
<b>Bond funds</b>			
Corporate	\$ 272.2	2.6%	289
High yield	156.2	1.5	207
World	59.4	0.6	113
Government	192.0	1.9	309
Strategic income	448.6	4.3	364
Single-state municipal	154.9	1.5	481
National municipal	210.0	2.0	230
<b>Total bond funds</b>	<b>\$ 1,494.4</b>	<b>14.4%</b>	<b>1,593</b>
<b>Hybrid (bond/stock) funds</b>			
<b>Money market funds</b>	<b>\$ 653.1</b>	<b>6.3%</b>	<b>508</b>
Taxable	\$ 1,988.1	19.1%	576
Tax-exempt	366.4	3.5	273
<b>Total money market funds</b>	<b>\$ 2,354.5</b>	<b>22.6%</b>	<b>849</b>
<b>Total</b>	<b>\$10,413.6</b>	<b>100.0%</b>	<b>8,120</b>

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## Costs of Mutual Funds

- ❑ Operating Expenses: transaction costs, administrative expenses, consulting fees: up to 2%
- ❑ Marketing and Distribution Costs
- ❑ Front-End Load: sales commission when you purchase shares in the fund: up to 6% → reduces your investment
- ❑ Back-End Load (or "exit fee"): fee when you sell your shares: up to 6%, often declining the longer you hold the fund
- ❑ 12b-1 Charges: additional commission paid to brokers & advertising: limited to 1%

NOTE: often investors are willing to pay these fees so as to receive "professional advice"

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## Example of Fees and Returns for Various Fund Class

	Cumulative Proceeds (All Dividends Reinvested)		
	Fund A	Fund B	Fund C
Initial investment*	\$10,000	\$10,000	\$ 9,200
5 years	17,234	16,474	15,502
10 years	29,699	27,141	26,123
15 years	51,183	44,713	44,018
20 years	88,206	73,662	74,173

\*After front-end load, if any.

Notes:

1. Fund A is no-load with .5% expense ratio.
2. Fund B is no-load with 1.5% expense ratio.
3. Fund C has an 8% load on purchases and a 1% expense ratio.
4. Gross return on all funds is 12% per year before expenses.

Cumulative performance assuming 12% annual return

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## Returns on Mutual Funds

Returns on Mutual Funds consist of:

- ❑ increase in NAV of securities held
  - ❑ income distributions
  - ❑ capital gains distributions
- fund itself tax exempt: investors pay taxes on dividends + capital gains inside the fund
- funds with high turnover lead to high tax burden

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## Exchange Trade Funds (ETFs)

ETFs are traded on exchange like stocks

Advantages:

- ❑ lower costs
- ❑ trade continuously
- ❑ can be bought on margin

→ ETFs have become very popular

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## Examples of ETFs

A. ETF Sponsors		
Sponsor	Product Name	
Barclays Global Investors	i-Shares	
Merrill Lynch	HOLDERS (Holding Company Depository Receipts: "Holders")	
StateStreet/Merrill Lynch	Select Sector SPDRs (S&P Depository Receipts: "Spiders")	
Vanguard	VIPER (Vanguard Index Participation Equity Receipts: "Vipers")	
B. Sample of ETF Products		
Name	Ticker	Index Tracked
<b>Broad U.S. Indexes</b>		
Spiders	SPY	S&P 500
Diamonds	DIA	Dow Jones Industrials
Cubes	QQQQ	NASDAQ 100
iShares Russell 2000	IWM	Russell 2000
Total Stock Market VIPERS	VTI	Wilshire 5000
<b>Industry Indexes</b>		
Energy Select Spider	XLE	S&P 500 energy companies
iShares Energy Sector	IYE	Dow Jones energy companies
Financial Sector Spider	XLF	S&P 500 financial companies
iShares Financial Sector	IYF	Dow Jones financial companies
<b>International Indexes</b>		
WEBS United Kingdom	EWU	MCSI U.K. Index
WEBS France	EWQ	MCSI France Index
WEBS Japan	EWJ	MCSI Japan Index

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## Spiders (SPY): track S&P 500



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## Mutual Fund Performance

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- difficult to predict future performance based on past performance:
  - really bad performers are likely to remain bad performers
  - good performance in the past is no indicator for good performance in the future

Futher information:

[www.morningstar.com](http://www.morningstar.com), [finance.yahoo.com/funds](http://finance.yahoo.com/funds)

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