The Capital Markets

Prof. Ian Giddy
New York University

The Money and Capital Markets

- The players
- Stocks and bonds: the instruments and markets
- The economy and the market
- Constructing a portfolio
- Picking stocks

The Portfolio Project
The Project

- Part I: Construct a well balanced portfolio for a client
- Part II: Analyze a company to add to the portfolio

Finance Theory...

- Time Is Money
- Same Thing, Same Price
- Risk Is Rewarded
Applied Finance Theory...

Price \textit{versus} Value

---

Buy, Sell or Hold?

- How and where do I trade?
- What should I buy? When? Why?
- How can I estimate the value of a bond? A stock? An IPO? An option or other derivative?
- How should I combine investments?
- When is it time to sell?
Stock and Bond Issues

Primary Market for Equities

- Private Equity Placement
- Initial Public Offering (IPO)
- Subsequent Offering
- Stock Buyback?
- Management Buyout?
Investment Banking Arrangements

- Underwritten vs. “Best Efforts”
  - Underwritten: firm commitment on proceeds to the issuing firm
  - Best Efforts: no firm commitment
- Negotiated vs. Competitive Bid
  - Negotiated: issuing firm negotiates terms with investment banker
  - Competitive bid: issuer structures the offering and secures bids
Secondary Market for Equities

- Private Equity Placement
- Initial Public Offering (IPO)
- Subsequent Offering
- Secondary Market Trading

Institutional Investors and Money Managers

- Institutional Investors
  - Mutual Funds
  - Insurance Companies
  - Pension Funds
  - Hedge funds, Central banks, etc.

- Money Managers
  - Money managers
  - Stocks and bonds
**Mutual Funds**

- **Open-End**
  - Stocks and bonds
  - Variable number of shares
  - Not traded on an exchange
  - Price = NAV (less fees)

- **Closed-End**
  - Stocks and bonds
  - Variable number of shares
  - Traded on a stock exchange
  - Price may not = NAV

**Active vs. Passive Management**

**Active Management**
- Finding undervalued securities
- Timing the market

**Passive Management**
- No attempt to find undervalued securities
- No attempt to time
- Holding an efficient portfolio
**Instruments and Markets**

- What Investments?
  - Treasury Bills? (risk-free)
  - Stocks and Bonds? (risky)

**Risky Investments?**

- Return
- Risk
Capital Allocation Possibilities: Treasuries or an Equity Fund?

Expected Return

THE EQUITY FUND
Return 17%
Risk 27%

THE US TREASURY BOND
Return 7%
Risk Zero

Risk

Capital Allocation Possibilities: Treasuries or an Equity Fund?

Expected Return

\[ E(r_p) = 17\% \]

\[ r_f = 7\% \]

\[ \sigma = 27\% \]
We Can Buy Some T-bills and Some of the Risky Fund

ONE PORTFOLIO:
30% Bills, 70% Fund
E(R)=0.3X7+0.7X17=14%
SD=0.7X27=18.9%

SLOPE=0.37

Risk (Standard Deviation)

Financial Institutions and Markets

- The Money Market
  - The operation of the Money Market
  - Participants in the Money Market
  - The Eurocurrency Market
- The Capital Market
  - Domestic bonds, Eurobonds
  - Equities
- Foreign Exchange
How do Securities Trade?

Key Securities

- Money market instruments - Short-term debt instruments, like deposits and bills
- Bonds - used by businesses and governments to raise money
- Common Stock - Units of ownership, interest, or equity
- Preferred Stock, Convertibles - A form of ownership with features of both debt and common stock
How do Securities Trade?

Efficient

Unregulated

Regulated

Inefficient

Foreign Exchange:
How Much Does a Dollar Buy? Cost?

An over-the-counter market

Spot

Forwards

Futures, Options
Organized Securities Exchanges are organizations that act as markets for previously issued securities:

- They are secondary markets - for stocks traded after they have been issued in the public market.
- Trading is accomplished through an auction process.
- Once placed, an order to buy or sell is usually executed in a matter of minutes.
The Role of Securities Exchanges

- Create a continuous, liquid market in which demanders of funds can obtain needed financing
- Design and enforce rules of conduct so that trading is fair
- Create an efficient market that allocates funds to their most productive uses
- A key to the efficient allocation of funds is the rate of return on an investment

Let’s Play the Game

Costs of trading

- **Commission**: fee paid to broker for making the transaction
- **Spread**: cost of trading with dealer
  - **Bid**: price dealer will buy from you
  - **Ask**: price dealer will sell to you
  - **Spread**: ask - bid
- **Combination**: on some trades both are paid
Costs of Trading

- **Commission**: fee paid to broker for making the transaction
- **Spread**: cost of trading with dealer
  - **Bid**: price dealer will buy from you
  - **Ask**: price dealer will sell to you
  - **Spread**: ask - bid
- **Combination**: on some trades both are paid

Types of Orders

Instructions to the brokers on how to complete the order
- **Market**
- **Limit**
- **Stop loss**
**Margin Trading**

- Using only a portion of the proceeds for an investment
- Borrow remaining component
- Margin arrangements differ for stocks and futures

**Stock Margin Trading**

- **Maximum margin** is currently 50%; you can borrow up to 50% of the stock value
- Set by the Fed
- **Maintenance margin**: minimum amount equity in trading can be before additional funds must be put into the account
- **Margin call**: notification from broker you must put up additional funds
Margin Trading - Initial Conditions

X Corp $70
50% Initial Margin
40% Maintenance Margin
1000 Shares Purchased

Initial Position
Stock  $70,000  Borrowed  $35,000
Equity  35,000

Margin Trading - Maintenance Margin

Stock price falls to $60 per share

New Position
Stock  $60,000  Borrowed  $35,000
Equity  25,000
Margin% = $25,000/$60,000 = 41.67%
**Margin Trading - Margin Call**

How far can the stock price fall before a margin call?

\[
\frac{(1000P - $35,000)}{1000P} = 40\%
\]

\[P = \$58.33\]

* 1000P - Amt Borrowed = Equity

**Short Sales**

**Purpose**: to profit from a decline in the price of a stock or security

**Mechanics**

- Borrow stock through a dealer
- Sell it and deposit proceeds and margin in an account
- Closing out the position: buy the stock and return to the party from which it was borrowed
**Short Sale - Initial Conditions**

- **Z Corp**: 100 Shares
- **50%**: Initial Margin
- **30%**: Maintenance Margin
- **$100**: Initial Price
- **Sale Proceeds**: $10,000
- **Margin & Equity**: 5,000
- **Stock Owed**: 10,000

**Short Sale - Maintenance Margin**

- Stock Price Rises to $110
- **Sale Proceeds**: $10,000
- **Initial Margin**: 5,000
- **Stock Owed**: 11,000
- **Net Equity**: 4,000
- **Margin %**: (4000/11000) 36%
**Short Sale - Margin Call**

How much can the stock price rise before a margin call?

\[
\frac{($15,000^* - 100P)}{100P} = 30\% \\
P = $115.38
\]

* Initial margin plus sale proceeds

---

**Instruments and Markets**

- **Governments**
- **Treasuries**
- **Agencies, Mortgage-backed Securities**
**Instruments and Markets**

- **Governments**
- **Treasuries**
- **Agencies, Mortgage-backed Securities**

**Benchmark Bonds**

<table>
<thead>
<tr>
<th>Bond Type</th>
<th>Price</th>
<th>Yields</th>
<th>Maturity</th>
<th>Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasury</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agencies, Mortgage-backed Securities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: The table above is an example and does not reflect actual bond prices and yields.*

---

*Image credits: Copyright ©1999 Ian H. Giddy*
Corporate Bonds: Spread over Benchmark

US Bond Markets
Instruments and Markets

Corporate Bonds

Domestic

International

Major Securities Markets

International Capital Markets

- The Eurobond Market is the market for bonds issued outside the country of the currency
- The Foreign Bond Market is one in which a foreign corporation or government issues bonds in a domestic market in the local currency
- An International Equity Market has emerged that allows corporations to sell large blocks of shares simultaneously to investors in several different countries
International Bond Markets are Linked

Issuers and investors compare terms in the domestic and Eurobond markets, which are linked across currencies via currency swaps.

Interest Rate Swap

The typical interest-rate swap is an exchange of a fixed for a floating interest rate for a period of time. Effectively, it involves paying the difference between a fixed rate and a floating rate like Libor:

8% Fixed

GE

3-mo Libor, floating

Chase
Derivatives

Derivatives are, by definition, derived from cash instruments, like bonds, stocks, currencies or commodities.

Example: foreign exchange
- FX Forwards, futures, swaps
- Currency options
- Knock-ins, PERLS

The Chicago Mercantile Exchange
Managing a Portfolio

Long-Term Returns on Investments
The Economy and the Markets

- How much should I pay for a bond?
- Interest rates and inflation
- Growth and employment
- How much should I pay for a stock?
- Corporate profits and equity values

Emerging Equity Markets

<table>
<thead>
<tr>
<th>Index</th>
<th>Index Value</th>
<th>Week on Week movement</th>
<th>Month on Month movement</th>
<th>Year to Date movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>World(483)</td>
<td>190.24</td>
<td>0.97</td>
<td>0.50</td>
<td>13.28</td>
</tr>
<tr>
<td>Europe(163)</td>
<td>143.71</td>
<td>0.00</td>
<td>0.00</td>
<td>3.38</td>
</tr>
<tr>
<td>CZECH REPUBLIC(15)</td>
<td>76.95</td>
<td>-5.84</td>
<td>-7.05</td>
<td>-8.16</td>
</tr>
<tr>
<td>EGYPT(16)</td>
<td>196.46</td>
<td>1.31</td>
<td>0.67</td>
<td>-0.74</td>
</tr>
<tr>
<td>GREECE(19)</td>
<td>170.18</td>
<td>9.14</td>
<td>5.44</td>
<td>-9.05</td>
</tr>
<tr>
<td>POLAND(48)</td>
<td>318.31</td>
<td>2.97</td>
<td>0.67</td>
<td>-21.41</td>
</tr>
<tr>
<td>PORTUGAL(18)</td>
<td>204.60</td>
<td>3.75</td>
<td>1.87</td>
<td>16.54</td>
</tr>
<tr>
<td>RUSSIA(49)</td>
<td>452.52</td>
<td>-13.18</td>
<td>-2.83</td>
<td>134.93</td>
</tr>
<tr>
<td>SOUTH AFRICA(20)</td>
<td>146.26</td>
<td>-8.54</td>
<td>-0.97</td>
<td>-8.85</td>
</tr>
<tr>
<td>TURKEY(27)</td>
<td>187.67</td>
<td>2.84</td>
<td>1.53</td>
<td>14.28</td>
</tr>
<tr>
<td>Asia(199)</td>
<td>213.37*</td>
<td>-7.04</td>
<td>-3.19</td>
<td>-4.90</td>
</tr>
<tr>
<td>CHINA(33)</td>
<td>65.77</td>
<td>-0.88</td>
<td>-1.33</td>
<td>1.69</td>
</tr>
<tr>
<td>INDONESIA(26)</td>
<td>164.23</td>
<td>-6.17</td>
<td>-3.62</td>
<td>-4.71</td>
</tr>
<tr>
<td>KOREA, SOUTH(27)</td>
<td>94.81</td>
<td>-3.38</td>
<td>-3.63</td>
<td>2.43</td>
</tr>
<tr>
<td>MALAYSIA(29)</td>
<td>220.65*</td>
<td>-11.51</td>
<td>-4.96</td>
<td>-17.36</td>
</tr>
</tbody>
</table>

Copyright ©1999 Ian H. Giddy
Corporate Profits Drives Stock Prices

Performance Benchmarking: Buy Kellogg?

<table>
<thead>
<tr>
<th>Kellogg Co</th>
<th>2nd Qtr</th>
<th>Year Ago</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$3,010,800</td>
<td>$1,564,000</td>
</tr>
<tr>
<td>Net Income</td>
<td>$35,800</td>
<td>$37,100</td>
</tr>
<tr>
<td>Earnings</td>
<td>$0.22</td>
<td>$0.33</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kellogg Gold Corp</th>
<th>6 mos</th>
<th>Year Ago</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$3,400,500</td>
<td>$3,497,300</td>
</tr>
<tr>
<td>Net Income</td>
<td>$104,200</td>
<td>$104,500</td>
</tr>
<tr>
<td>Earnings</td>
<td>$1.56</td>
<td>$1.93</td>
</tr>
</tbody>
</table>
Performance Benchmarking: Buy Kellogg?

KELLOGG CO

Date | Time | Related News Stories
--- | --- | ---
05/05/99 | 11:51 | REDUXIST 128 corporate earnings surprise data
06/05/99 | 03:41 | Kellogg (NYSE:K) core volume up more than previously reported
06/05/99 | 15:52 | TWo new directors appointed to Kellogg Company Board
06/05/99 | 16:54 | Kellogg (NYSE:K) U.S. sales rise above 200
06/03/99 | 05:54 | NYSE Expiration - Kellogg Co (NYSE:K) exercised at 21.0, 7 trades
06/03/99 | 09:48 | NYSE Expiration - Kellogg Co (NYSE:K) 16.94, last traded at 17.0, 0 trades
03/07/99 | 11:54 | NYSE Expiration - Kellogg Co (NYSE:K) 17.68, last traded at 17.7, 0 trades

Performance Benchmarking: Buy Kellogg?

KELLOGG CO

Copyright ©1999 Ian H. Giddy

Capital Markets 57

Copyright ©1999 Ian H. Giddy

Capital Markets 58
Performance Benchmarking: Buy Kellogg?

Performance Benchmarking: Buy Kellogg?
Performance Benchmarking: Buy Kellogg?

Conclusion: Benchmarks are needed because performance is relative.

How Can We Know About a Company?

- Financial statements
- Web resources
- Forecasting and comparative

Example:
- J&J company report
- Pharma industry report
Ian H. Giddy
NYU Stern School of Business
Tel 212-998-0332; Fax 212-995-4233
ian.giddy@nyu.edu
http://giddy.org