Financial Management, 15.414

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MOT Program, Summer 2003
Preliminaries

Reading

- Brealey and Myers, *Principles of Corporate Finance*
- Class notes
- Reading packet + handouts

Web pages

- Course server
- Data: wrds.wharton.upenn.edu
Preliminaries

Teaching assistant

- Recitations: Monday, Wednesday

Grades

- Assignments (45%) and final exam (40%)
- Class participation (15%)
- Add’l practice problems on syllabus (not graded)
Today

Introduction

Overview of the course
Introduction

Corporate finance

- **Investment policy**
  How the firm spends its money (real and financial assets)

- **Financing and payout policy**
  How the firm obtains funds (debt, equity, …) and dispurses of excess cash
Balance sheet view of the firm

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities and Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Assets</strong></td>
<td><strong>Current Liabilities</strong></td>
</tr>
<tr>
<td><strong>Fixed Assets</strong></td>
<td><strong>Long-Term Debt</strong></td>
</tr>
<tr>
<td>1. Tangible fixed assets</td>
<td></td>
</tr>
<tr>
<td>2. Intangible fixed assets</td>
<td></td>
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<tr>
<td>Shareholders’ Equity</td>
<td></td>
</tr>
</tbody>
</table>
Introduction

But we also need to understand …

- **Capital markets**
  - How securities (stocks, bonds, options, …) are traded
  - Pricing
  - Risk and return
  - Market efficiency
  - International markets
Financial markets

- Firms
  - Current assets
  - Fixed assets
- Financial Markets
- Individuals
- Financial Intermediaries
- Government

- Financial assets: Debt, Equity
Size and stock returns

Firms sorted by market value (deciles)
Accruals and stock returns

Firms sorted by last year's operating accruals (deciles)
Introduction

Finance is really about value

- Firms
- Projects and real investments
- Securities

Central question

How can we create value through investment and financing decisions?
Merck

Medco acquisition (1993)

➤ **Strategic considerations**
  Positioning
  Does the acquisition generate competitive advantages?

  Sustainability
  Are the competitive advantages sustainable through time?

➤ **Financial considerations**
  Investment
  Does the acquisition generate value for Merck?

  Financing
  What is the best way to finance it?
Types of questions

Investment decisions

At the end of 2001, GM had $18.6 billion in cash. Should it invest in new projects or return the cash to shareholders? If it decides to return the cash, should it declare a dividend or repurchase stock? If it decides to invest, what is the most valuable investment? What are the risks?
General Dynamics

1980s were generally good

- Strong sales growth ($4.7 billion to $10.2 billion)
- Reasonable profitability
- R&D and capital investment

Beginning of 1990

- End of the Cold War
- Likely decline in defense spending
- Strategy??
General Dynamics

Investment, 1980 – 1990

R&D + capital expenditures $3.7 billion
If invested at 10% $5.5 billion
Ending market value $1.0 billion

Value destroyed $4.5 billion

Earnings in 1990 = –$578 million
Investment in 1990 = $711 million
General Dynamics

1991 – 1993

➤ William Anders, CEO

➤ Divestitures and layoffs
  Sales, $10.2 to $3.2 billion
  Employees, 54,050 to 26,800 (cont. operations)

➤ Investment cuts
  R&D, $390 to $33 million
  Cap exp, $321 to $14 million

➤ Cash payouts
  $3.4 billion to shareholders
Types of questions

Financing decisions

- In 1998, IBM announced that it would repurchase $2.5 billion in stock. Its price jumped 7% after the announcement. Why? How would the market have reacted if IBM increased dividends instead? Suppose Intel made the same announcement. Would we expect the same price response?

- Your firm needs to raise capital to finance growth. Should you issue debt or equity or obtain a bank loan? How will the stock market react to your decision? If you choose debt, should the bonds be convertible? callable? Long or short maturity? If you choose equity, what are the trade-offs between common and preferred stock?
Types of questions

Financial markets

➢ In the 5 years from Jan. 1995 to Dec. 1999, the U.S. stock market increased in value by 227%. DY on the S&P 500 dropped from 2.90% to 1.17%, and the P/E ratio increased from 14.9 to 32.4. Why? What does this tell us about future returns? How should it affect our financing and investment decisions?

➢ From 1946 – 1999, small firms returned 17.8% and large firms returned 12.8%. From 1963 – 1999, stocks with low B/M ratios returned 13.8% and those with high B/M ratios returned 19.6%. What explains the differences? How can we measure a stock’s risk? What does this mean for financing and investment decisions?
S&P 500 dividend yield, 1871 – 1999
S&P price-earnings ratio, 1871 – 1999
The course

Broad and fairly quick survey

Managerial focus (general managers)

Empirically-oriented
Outline

**Part 1. Valuation**
- Basic principles
- Capital budgeting and real options
- Firm valuation

**Part 2. Risk and return**
- Diversification
- Measuring risk: CAPM and APT
- Estimating discount rates
- Market efficiency

**Part 3. Financing and dividend policy**
- Debt vs. equity
- Dividends and stock repurchases
A few powerful themes

i. Value maximization

ii. Cash flows

iii. Risk, return, and diversification

iv. Market efficiency

v. Information asymmetries and signaling