CHAPTER 1  
Investments - Background and Issues

Financial Versus Real Assets

- Essential nature of investment
  - Reduced current consumption
  - Planned future consumption
- Real Assets
  - Assets used to produce goods and services
- Financial Assets
  - Claims on real assets

1.1 REAL ASSETS VERSUS FINANCIAL ASSETS

1.2 A TAXONOMY OF FINANCIAL ASSETS

Table 1.1. Balance Sheet – U.S. Households, 2006

<table>
<thead>
<tr>
<th>Assets</th>
<th>$ Billion</th>
<th>% Total</th>
<th>Liabilities and Net Worth</th>
<th>$ Billion</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real assets</td>
<td>$32,129</td>
<td>53.4%</td>
<td>Mortgage</td>
<td>$9,151</td>
<td>15.1%</td>
</tr>
<tr>
<td>Consumer durables</td>
<td>5,600</td>
<td>9.1%</td>
<td>Consumer credit</td>
<td>2,190</td>
<td>3.5%</td>
</tr>
<tr>
<td>Other</td>
<td>2,229</td>
<td>3.6%</td>
<td>Real &amp; other taxes</td>
<td>2,292</td>
<td>3.7%</td>
</tr>
<tr>
<td>Total real assets</td>
<td>$36,957</td>
<td>59.4%</td>
<td>Total liabilities</td>
<td>$12,199</td>
<td>19.9%</td>
</tr>
</tbody>
</table>

Financial assets:
- Deposits: $14,393 (23.2%)
- Life insurance reserves: 1,699 (2.7)
- Pension reserves: 11,159 (16.6)
- Corporate equity: 5,405 (8.4)
- Bank loans to business: 4,798 (7.7)
- Other equity: 2,229 (3.6)
- Debt securities: 3,714 (4.7)
- Other: 1,128 (1.7)

Total financial assets: $38,097 (60.3%)

Net worth: $34,832 (53.1%)

Table 1.2 Domestic Net Worth, 2006

<table>
<thead>
<tr>
<th>Assets</th>
<th>$ Billions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonresidential real estate</td>
<td>$13,713</td>
</tr>
<tr>
<td>Residential real estate</td>
<td>$22,196</td>
</tr>
<tr>
<td>Equipment and software</td>
<td>3,811</td>
</tr>
<tr>
<td>Inventories</td>
<td>1,634</td>
</tr>
<tr>
<td>Consumer durables</td>
<td>3,843</td>
</tr>
<tr>
<td>Total</td>
<td>$43,199</td>
</tr>
</tbody>
</table>

Note: Some items may differ from total because of rounding error.
Major Classes of Financial Assets or Securities
- Debt
  - Money market instruments
    - Bank certificates of deposit
  - Capital market instruments
    - Bonds
- Common stock
- Preferred stock
- Derivative securities

1.3 FINANCIAL MARKETS AND THE ECONOMY

Financial Markets
- Informational Role of Financial Markets
  - The Google effect
- Consumption Timing
- Allocation of Risk
- Separation of Ownership and Management
  - Agency Issues

Corporate Governance and Ethics
- Accounting Scandals
  - Examples: Enron and WorldCom
- Misleading research reports
- Auditors watchdogs or consultants
  - Example: Arthur Andersen and Enron
- Sarbanes-Oxley Act
  - Tighten the rules of corporate governance

1.4 THE INVESTMENT PROCESS

The Investor’s Portfolio
- Asset allocation
  - Choice among broad asset classes
- Security selection
  - Choice of which securities to hold within asset class
  - Security selection
1.5 MARKETS ARE COMPETITIVE

Risk

How should one measure risk
Assets with higher expected returns have greater risk
What role does diversification play

Efficient Markets Theory

Should be neither underpriced nor overpriced securities
Security price should reflect all information available to investors

Active Versus 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

1.6 THE PLAYERS

The Players

Business Firms – net borrowers
Households – net savers
Governments – can be both borrowers and savers
Financial Intermediaries
– Banks
– Investment companies
– Insurance companies
– Credit unions
Investment Bankers
Table 1.3 Balance Sheet of Commercial Banks

<table>
<thead>
<tr>
<th>Assets</th>
<th>$ Billion</th>
<th>% Total</th>
<th>Liabilities and Net Worth</th>
<th>$ Billion</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real assets</td>
<td></td>
<td></td>
<td>Documents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment and premises</td>
<td>19.9</td>
<td>1.0%</td>
<td>$36,382.0</td>
<td>64.9%</td>
<td></td>
</tr>
<tr>
<td>Other real estate</td>
<td>2.6</td>
<td>0.1%</td>
<td>750.0</td>
<td>3.8%</td>
<td></td>
</tr>
<tr>
<td>Total real assets</td>
<td>22.5</td>
<td>1.0%</td>
<td>$37,132.0</td>
<td>68.7%</td>
<td></td>
</tr>
<tr>
<td>Financial assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>207.4</td>
<td>11.2%</td>
<td>39,602.0</td>
<td>69.0%</td>
<td></td>
</tr>
<tr>
<td>Investment securities</td>
<td>1,245.7</td>
<td>7.2%</td>
<td>2,050.0</td>
<td>3.6%</td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td>1,093.4</td>
<td>6.3%</td>
<td>1,969.0</td>
<td>3.4%</td>
<td></td>
</tr>
<tr>
<td>Other financial assets</td>
<td>8,142.9</td>
<td>46.4%</td>
<td>8,426.6</td>
<td>14.7%</td>
<td></td>
</tr>
<tr>
<td>Other assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unidentified assets</td>
<td>314.6</td>
<td>1.7%</td>
<td>207.4</td>
<td>0.4%</td>
<td></td>
</tr>
<tr>
<td>Total nonfinancial assets</td>
<td>342.0</td>
<td>1.9%</td>
<td>278.5</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>Net worth</td>
<td>971.7</td>
<td>10.0%</td>
<td>$8,405.0</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,325.7</td>
<td>75.0%</td>
<td>$9,446.5</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

Table 1.4 Balance Sheet of Nonfinancial U.S. Business

<table>
<thead>
<tr>
<th>Assets</th>
<th>$ Billion</th>
<th>% Total</th>
<th>Liabilities and Net Worth</th>
<th>$ Billion</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real assets</td>
<td></td>
<td></td>
<td>Documents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment and software</td>
<td>3,642</td>
<td>15.8%</td>
<td>4,034.0</td>
<td>17.5%</td>
<td></td>
</tr>
<tr>
<td>Real estate</td>
<td>6,714</td>
<td>29.4%</td>
<td>651.0</td>
<td>2.6%</td>
<td></td>
</tr>
<tr>
<td>Inventories</td>
<td>1,225</td>
<td>5.3%</td>
<td>772.0</td>
<td>3.4%</td>
<td></td>
</tr>
<tr>
<td>Other assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total real assets</td>
<td>5,586</td>
<td>22.2%</td>
<td>5,458.0</td>
<td>22.7%</td>
<td></td>
</tr>
<tr>
<td>Financial assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposits and cash</td>
<td>973.0</td>
<td>4.2%</td>
<td>868.0</td>
<td>1.9%</td>
<td></td>
</tr>
<tr>
<td>Shares and debt</td>
<td>2,077.0</td>
<td>8.9%</td>
<td>2,077.0</td>
<td>9.0%</td>
<td></td>
</tr>
<tr>
<td>Total financial assets</td>
<td>11,814</td>
<td>47.8%</td>
<td>11,446.0</td>
<td>46.4%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>22,016</td>
<td>100.0%</td>
<td>$23,016</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

1.7 RECENT TRENDS

- Managing foreign exchange
- Diversification to improve performance
- Instruments and vehicles continue to develop (WEBs)
- Information and analysis improves

Figure 1.1 Global Debt Issue

- Offers opportunities for investors and originators
- Changes in financial institutions and regulation
- Improvement in information capabilities
- Credit enhancement and its role
Financial Engineering

- Repackaging Services of Financial Intermediaries
- Bundling and unbundling of cash flows
- Slicing and dicing of cash flows
- Examples: strips, CMOs, dual purpose funds, principal/interest splits

Unbundling – Mortgage Security

Figure 1.3 Building a Complex Security

Computer Networks

- Online trading
- Information made cheaply and widely available
- Direct trading among investors