Overview of Credit Policy and Loan Characteristics

Chapter 10

William Chittenden edited and updated the PowerPoint slides for this edition.
Recent Trends in Loan Growth Quality

- Larger banks have, on average, recently reduced their dependence on loans relative to smaller banks.
- Real estate loans represent the largest single loan category for banks.
- Residential 1-4 family homes contribute the largest amount of real estate loans for banks.
  - Commercial real estate is highest for banks with $100 million to $1 billion in assets.
Recent Trends in Loan Growth Quality

- Commercial and industrial loans represent the second highest concentration of loans at banks.
- Loans to individuals are greatest for banks with more than $1 billion in assets.
- Farmland and farm loans make up a significant portion of the smallest banks’ loans.
<table>
<thead>
<tr>
<th>Net loans and leases</th>
<th>&lt; $100 Million</th>
<th>$100 to $1 billion</th>
<th>$1 to $10 Billion</th>
<th>&gt; $10 Billion</th>
<th>All Comm Banks</th>
<th>All Savs Instits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plus: Loan Loss Allowance</td>
<td>0.89%</td>
<td>0.93%</td>
<td>0.95%</td>
<td>0.85%</td>
<td>0.87%</td>
<td>0.50%</td>
</tr>
<tr>
<td>Total loans &amp; leases</td>
<td>61.70%</td>
<td>67.33%</td>
<td>64.53%</td>
<td>55.87%</td>
<td>58.30%</td>
<td>71.78%</td>
</tr>
<tr>
<td>Plus: Unearned income</td>
<td>0.04%</td>
<td>0.06%</td>
<td>0.05%</td>
<td>0.03%</td>
<td>0.04%</td>
<td>0.01%</td>
</tr>
<tr>
<td>Loans and leases, gross</td>
<td>61.74%</td>
<td>67.39%</td>
<td>64.58%</td>
<td>55.90%</td>
<td>58.34%</td>
<td>71.79%</td>
</tr>
<tr>
<td>All real estate loans</td>
<td>38.74%</td>
<td>48.51%</td>
<td>42.18%</td>
<td>26.65%</td>
<td>31.20%</td>
<td>62.56%</td>
</tr>
<tr>
<td>Real estate loans in domestic offices:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction and land development</td>
<td>4.35%</td>
<td>7.94%</td>
<td>6.73%</td>
<td>2.23%</td>
<td>3.45%</td>
<td>2.77%</td>
</tr>
<tr>
<td>Commercial real estate</td>
<td>11.93%</td>
<td>19.55%</td>
<td>15.86%</td>
<td>4.83%</td>
<td>7.93%</td>
<td>5.02%</td>
</tr>
<tr>
<td>Multifamily residential real estate</td>
<td>0.85%</td>
<td>1.76%</td>
<td>2.27%</td>
<td>0.75%</td>
<td>1.04%</td>
<td>4.79%</td>
</tr>
<tr>
<td>1-4 family residential</td>
<td>16.35%</td>
<td>17.08%</td>
<td>16.58%</td>
<td>17.90%</td>
<td>17.62%</td>
<td>49.97%</td>
</tr>
<tr>
<td>Farm loans</td>
<td>6.24%</td>
<td>1.89%</td>
<td>0.58%</td>
<td>0.21%</td>
<td>0.58%</td>
<td>0.01%</td>
</tr>
<tr>
<td>Commercial and industrial loans</td>
<td>9.81%</td>
<td>10.60%</td>
<td>11.69%</td>
<td>10.72%</td>
<td>10.80%</td>
<td>3.54%</td>
</tr>
<tr>
<td>To non-U.S. addressees</td>
<td>0.00%</td>
<td>0.05%</td>
<td>0.35%</td>
<td>1.92%</td>
<td>1.48%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Loans to individuals</td>
<td>6.10%</td>
<td>5.06%</td>
<td>7.51%</td>
<td>11.21%</td>
<td>9.97%</td>
<td>5.39%</td>
</tr>
<tr>
<td>Credit cards</td>
<td>0.10%</td>
<td>0.57%</td>
<td>2.76%</td>
<td>5.39%</td>
<td>4.42%</td>
<td>1.63%</td>
</tr>
<tr>
<td>Related Plans</td>
<td>0.09%</td>
<td>0.15%</td>
<td>0.28%</td>
<td>0.55%</td>
<td>0.47%</td>
<td>0.02%</td>
</tr>
<tr>
<td>Other loans to individuals</td>
<td>5.91%</td>
<td>4.34%</td>
<td>4.46%</td>
<td>5.27%</td>
<td>5.09%</td>
<td>3.75%</td>
</tr>
<tr>
<td>Total other loans and leases *</td>
<td>0.85%</td>
<td>1.33%</td>
<td>2.63%</td>
<td>7.11%</td>
<td>5.79%</td>
<td>0.28%</td>
</tr>
<tr>
<td>Loans to foreign governments &amp; official institutions</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.01%</td>
<td>0.12%</td>
<td>0.09%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Obligs of states &amp; political subdivisions in the U.S.</td>
<td>0.35%</td>
<td>0.43%</td>
<td>0.44%</td>
<td>0.31%</td>
<td>0.34%</td>
<td>0.02%</td>
</tr>
<tr>
<td>Other loans</td>
<td>0.23%</td>
<td>0.45%</td>
<td>0.97%</td>
<td>2.44%</td>
<td>1.99%</td>
<td>0.10%</td>
</tr>
<tr>
<td>Lease financing receivables</td>
<td>0.25%</td>
<td>0.34%</td>
<td>1.05%</td>
<td>2.03%</td>
<td>1.69%</td>
<td>0.10%</td>
</tr>
<tr>
<td>Of non-U.S. addressees</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.06%</td>
<td>0.51%</td>
<td>0.39%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Loans to depository institutions and acceptances</td>
<td>0.02%</td>
<td>0.11%</td>
<td>0.17%</td>
<td>2.20%</td>
<td>1.68%</td>
<td>0.06%</td>
</tr>
</tbody>
</table>

Memoranda:
- Commercial real estate loans not secured by real estate: 0.12% 0.18% 0.21% 0.57% 0.48% 0.04%
- Loans secured by real estate to non-U.S. addressees: 0.00% 0.06% 0.04% 0.69% 0.52% 4.00%
- Restructured loans and leases, total: 0.05% 0.05% 0.02% 0.00% 0.01% 0.10%
- Total loans & leases in foreign offices: 0.00% 0.03% 0.27% 5.28% 3.99% 0.00%
Recent Trends in Loan Growth Quality

- Wholesale Bank
  - Emphasizes lending to businesses

- Retail Bank
  - Emphasizes lending to individuals
  - Primary funding is from core deposits
Recent Trends in Loan Growth Quality

- FDIC Bank Categories
  - Credit Card Banks
  - International Banks
  - Agricultural Banks
  - Commercial Lenders
    - Vast majority of FDIC-insured institutions fall in this category
  - Mortgage Lenders
  - Consumer Lenders
  - Other Specialized Banks (less than $1 billion)
  - All Other Banks (less than $1 billion)
  - All Other Banks (more than $1 billion)
Credit Risk Diversification and Lending Concentrations by Asset Concentrations: December 2004

<table>
<thead>
<tr>
<th>Number of institutions reporting</th>
<th>All Institutions</th>
<th>Credit Card Banks</th>
<th>International Banks</th>
<th>Agricultural Banks</th>
<th>Commercial Lenders</th>
<th>Mortgage Lenders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans outstanding (in billions)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All real estate loans</td>
<td>60.16%</td>
<td>6.73%</td>
<td>25.16%</td>
<td>54.27%</td>
<td>66.54%</td>
<td>91.56%</td>
</tr>
<tr>
<td>Construction and development</td>
<td>5.50%</td>
<td>0.00%</td>
<td>0.86%</td>
<td>3.41%</td>
<td>10.90%</td>
<td>2.33%</td>
</tr>
<tr>
<td>Commercial real estate</td>
<td>12.28%</td>
<td>0.03%</td>
<td>2.37%</td>
<td>13.88%</td>
<td>22.98%</td>
<td>4.72%</td>
</tr>
<tr>
<td>Multifamily residential real estate</td>
<td>2.76%</td>
<td>0.00%</td>
<td>0.29%</td>
<td>1.02%</td>
<td>4.42%</td>
<td>4.28%</td>
</tr>
<tr>
<td>Home equity loans</td>
<td>8.01%</td>
<td>5.98%</td>
<td>4.46%</td>
<td>1.02%</td>
<td>7.31%</td>
<td>9.25%</td>
</tr>
<tr>
<td>Other 1-4 family residential</td>
<td>30.00%</td>
<td>0.71%</td>
<td>12.08%</td>
<td>16.27%</td>
<td>19.89%</td>
<td>70.90%</td>
</tr>
<tr>
<td>Commercial and industrial loans</td>
<td>15.82%</td>
<td>2.38%</td>
<td>21.71%</td>
<td>13.99%</td>
<td>20.31%</td>
<td>3.54%</td>
</tr>
<tr>
<td>Loans to individuals</td>
<td>15.19%</td>
<td>89.43%</td>
<td>25.72%</td>
<td>7.39%</td>
<td>8.02%</td>
<td>4.12%</td>
</tr>
<tr>
<td>Credit card loans</td>
<td>6.52%</td>
<td>83.04%</td>
<td>10.88%</td>
<td>0.34%</td>
<td>0.83%</td>
<td>0.53%</td>
</tr>
<tr>
<td>Other loans to individuals</td>
<td>8.67%</td>
<td>6.39%</td>
<td>14.84%</td>
<td>7.17%</td>
<td>7.19%</td>
<td>3.58%</td>
</tr>
<tr>
<td>All other loans and leases (including farm)</td>
<td>8.83%</td>
<td>1.43%</td>
<td>27.42%</td>
<td>24.23%</td>
<td>5.13%</td>
<td>0.79%</td>
</tr>
<tr>
<td>Average return on equity</td>
<td>13.28%</td>
<td>22.16%</td>
<td>10.35%</td>
<td>11.45%</td>
<td>13.48%</td>
<td>11.61%</td>
</tr>
<tr>
<td>Average return on assets</td>
<td>1.29%</td>
<td>4.01%</td>
<td>0.76%</td>
<td>1.23%</td>
<td>1.30%</td>
<td>1.18%</td>
</tr>
<tr>
<td>Net charge-offs to loans</td>
<td>0.56%</td>
<td>4.67%</td>
<td>0.91%</td>
<td>0.21%</td>
<td>0.30%</td>
<td>0.12%</td>
</tr>
</tbody>
</table>

Asset Concentration Group Definitions (Groups are hierarchical and mutually exclusive):

- **Credit card lenders**—Institutions whose credit card loans plus securitized receivables exceed 50 percent of total assets plus securitized receivables.
- **International banks**—Banks with assets greater than $10 billion and more than 25 percent of total assets in foreign offices.
- **Agricultural banks**—Banks whose agricultural production loans plus real estate loans secured by farmland exceed 25 percent of total loans and leases.
- **Commercial lenders**—Institutions whose commercial and industrial loans, plus real estate construction and development loans, plus loans secured by commercial real estate properties exceed 25 percent of total assets.
- **Mortgage lenders**—Institutions whose residential mortgage loans, plus mortgage-backed securities, exceed 50 percent of total assets.
### Credit Risk Diversification and Lending Concentrations by Asset Concentrations: December 2004

<table>
<thead>
<tr>
<th></th>
<th>Consumer Lenders</th>
<th>Other Specialized &lt;$1 Billion</th>
<th>All Other &lt;$1 Billion</th>
<th>All Other &gt;$1 Billion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of institutions reporting</strong></td>
<td>132</td>
<td>465</td>
<td>1,120</td>
<td>75</td>
</tr>
<tr>
<td><strong>Loans outstanding (in billions)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All real estate loans</td>
<td>27.62%</td>
<td>68.42%</td>
<td>69.28%</td>
<td>58.92%</td>
</tr>
<tr>
<td>Construction and development</td>
<td>0.84%</td>
<td>5.26%</td>
<td>3.98%</td>
<td>3.45%</td>
</tr>
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<td>19.55%</td>
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<td>9.03%</td>
</tr>
<tr>
<td>Multifamily residential real estate</td>
<td>0.36%</td>
<td>2.26%</td>
<td>1.24%</td>
<td>1.27%</td>
</tr>
<tr>
<td>Home equity loans</td>
<td>6.51%</td>
<td>2.26%</td>
<td>3.23%</td>
<td>11.49%</td>
</tr>
<tr>
<td>Other 1-4 family residential</td>
<td>17.13%</td>
<td>36.84%</td>
<td>39.55%</td>
<td>32.83%</td>
</tr>
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<td>1.50%</td>
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<tr>
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<td>12.94%</td>
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</tr>
<tr>
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<td>1.57%</td>
<td>5.26%</td>
<td>6.59%</td>
<td>11.47%</td>
</tr>
<tr>
<td>Average return on equity</td>
<td>16.81%</td>
<td>10.03%</td>
<td>10.18%</td>
<td>13.69%</td>
</tr>
<tr>
<td>Average return on assets</td>
<td>1.66%</td>
<td>1.66%</td>
<td>1.10%</td>
<td>1.35%</td>
</tr>
<tr>
<td>Net charge-offs to loans</td>
<td>1.57%</td>
<td>0.59%</td>
<td>0.31%</td>
<td>0.25%</td>
</tr>
</tbody>
</table>

**Asset Concentration Group Definitions** (Groups are hierarchical and mutually exclusive):

**Consumer lenders**—Institutions whose residential mortgage loans, plus credit card loans, plus other loans to individuals, exceed 50 percent of total assets.

**Other specialized <$1 billion**—Institutions with assets less than $1 billion, whose loans and leases are less than 40 percent of total assets.

**All other <$1 billion**—Institutions with assets less than $1 billion that do not meet any of the definitions above; they have significant lending activity with no identified asset concentrations.

**All other >$1 billion**—Institutions with assets greater than $1 billion that do not meet any of the definitions above; they have significant lending activity with no identified asset concentrations.
Relative Importance of Loans, Investment Securities, and Cash Assets at Commercial Banks, 1935–2004

- **Total Loans as a Percent of Total Assets**
- **Investment Securities as a Percent of Total Assets**
- **Cash as a Percent of Total Assets**

[Graph showing the percentage of total assets for loans, investment securities, and cash assets from 1935 to 2004.]
Noncurrent Loans as a Percentage of Total Loans, all FDIC Insured Institution, 1984–2004
Net Charge-offs by Loan Type at U.S. Commercial Banks, 1985–2004

- Charge-Offs Total Real Estate
- Charge-Offs Commercial and Industrial
- Charge-Offs Loans to Individuals
- Charge-Offs All Other Loans
Credit Card Loss Rate and Personal Bankruptcy Filings, 1984–2004

Net Charge-off Rate (%) vs. Personal Bankruptcy Filings (Thousands)

- Net Credit Card Charge-Off Rates, %
- Personal Bankruptcy Filings (Thousands)
In 1984, there were nearly 14,500 banks in the U.S. This fell to fewer than 7,700 at the beginning of 2004. This reduction in the number of banks is a direct result of the relaxation of branching restrictions and increased competition. Banks face tremendous competition. This has forced consolidation as banks attempt to lower costs and provide a broader base of services.
Trends in Competition for Loan Business

- Most firms can obtain loans from many different sources
  - Finance companies
  - Life insurance companies
  - Commercial paper
  - Junk bonds

- Reduced regulation, financial innovation, increased consumer awareness, and new technology have made it easier to obtain loans from a variety of sources
Trends in Competition for Loan Business

- Banks still have the required expertise and experience to make them the preferred lender for many types of loans.

- Technology advances have meant that more loans are becoming “standardized,” making it easier for market participants to offer loans in direct competition to banks.

- **Structured Note**
  - Loan that is specifically designed to meet the needs of one or a few companies but has been packaged for resale.
Trends in Competition for Loan Business

- Many types of loans can be standardized, credit scored and securitized
  - Mortgages
  - Government-guaranteed student loans
  - Small business loans (sponsored by the SBA)
  - Credit cards
  - Auto loans
Trends in Competition for Loan Business

- Not all loans can be standardized
  - Farm loans
  - Many small business loans
    - Repayment schedules and collateral are often customized so that they do not conform to some standard
  - Medium to large businesses will have specialized needs as well
- This is the area of lending that is still dominated by commercial banks and the area in which the bank is uniquely qualified
# The Credit Process

## Business Development and Credit Analysis

- Market research
- Advertising, public relations
- Officer call programs
- Obtain formal loan request
- Obtain financial statements, borrowing resolution, credit reports
- Financial statement and cash flow analysis
- Evaluate collateral
- Line officer makes recommendation on accepting/rejecting loan

## Credit Execution and Administration

- Loan committee reviews proposal/recommendation
- Accept/reject decision made, terms negotiated
- Loan agreement prepared with collateral documentation
- Borrower signs agreement, turns over collateral, receives loan proceeds
- Perfect security interest
- File materials in credit file
- Process loan payments, obtain periodic financial statements, call on borrower

## Credit Review

- Review loan documentation
- Monitor compliance with loan agreement:
  - Positive and negative loan covenants
  - Delinquencies in loan payments
- Discuss nature of delinquency or other problems with borrower
- Institute corrective action:
  - Modify credit terms
  - Obtain additional capital, collateral, guarantees
  - Call loan
The Credit Process

- **Loan Policy**
  - Formalizes lending guidelines that employees follow to conduct bank business

- **Credit Philosophy**
  - Management’s philosophy that determines how much risk the bank will take and in what form

- **Credit Culture**
  - The fundamental principles that drive lending activity and how management analyzes risk
The Credit Process

Credit Culture
- The fundamental principles that drive lending activity and how management analyzes risk

Values Driven
- Focus is on credit quality

Current-Profit Driven
- Focus is on short-term earnings

Market-Share Driven
- Focus is on having the highest market share
Business Development and Credit Analysis

- **Business Development**
  - Market research
  - Train employees:
    - On what products are available
    - What products customers are likely to need
    - How they should communicate with customers about those needs

- Advertising and Public Relations
- Officer Call Programs
Credit Analysis

- Evaluate a borrower’s ability and willingness to repay

Questions to address

- What risks are inherent in the operations of the business?
- What have managers done or failed to do in mitigating those risks?
- How can a lender structure and control its own risks in supplying funds?
Business Development and Credit Analysis

- Five C’s of Good Credit
  - Character
  - Capital
  - Capacity
  - Conditions
  - Collateral
Business Development and Credit Analysis

Five C’s of Bad Credit

- Complacency
- Carelessness
- Communication
- Contingencies
- Competition
Credit Execution and Administration

- Loan Decision
  - Individual officer decision
  - Committee
  - Centralized underwriting

- Loan Agreement
  - Formalizes the purpose of the loan
  - Terms of the loan
  - Repayment schedule
  - Collateral required
  - Any loan covenants
  - States what conditions bring about a default
Credit Execution and Administration

- Documentation: Perfecting the Security Interest
  - Perfected
    - When the bank's claim is superior to that of other creditors and the borrower
      - Require the borrower to sign a security agreement that assigns the qualifying collateral to the bank
      - Bank obtains title to equipment or vehicles
Credit Execution and Administration

- **Position Limits**
  - Maximum allowable credit exposures to any single borrower, industry, or geographic local

- **Risk Rating Loans**
  - Evaluating characteristics of the borrower and loan to assess the likelihood of default and the amount of loss in the event of default
Credit Execution and Administration

- **Loan Covenants**
  - **Positive (Affirmative)**
    - Indicate specific provisions to which the borrower must adhere
  - **Negative**
    - Indicate financial limitations and prohibited events
## Sample Loan Covenants

<table>
<thead>
<tr>
<th>Negative</th>
<th>Affirmative</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Capital outlays cannot exceed $3 million annually</td>
<td>• Borrower must maintain following financial ratios:</td>
</tr>
<tr>
<td>• Cash dividends cannot exceed 60% of periodic earnings</td>
<td>- Current ratio &gt;1.0</td>
</tr>
<tr>
<td>• Total officers' salaries cannot exceed $500,000 annually</td>
<td>- Days receivables outstanding &lt;50 days</td>
</tr>
<tr>
<td>• No liens on assets beyond existing liens</td>
<td>- Inventory turnover &gt;4.5 times</td>
</tr>
<tr>
<td>• No mergers, consolidations, or acquisitions without bank approval</td>
<td>- Debt to total assets &lt;70%</td>
</tr>
<tr>
<td>• No sale, lease, or transfer of more than 10% of existing assets</td>
<td>- Net worth &gt;$1 million</td>
</tr>
<tr>
<td>• No change in senior management</td>
<td>- Fixed charge coverage &gt;1.3 times</td>
</tr>
<tr>
<td>• No additional debt without bank approval</td>
<td>- Cash flow from operations &gt;dividends + current maturities of long-term debt</td>
</tr>
<tr>
<td>• Certified financial statements must be provided within 60 days of end of each fiscal year</td>
<td></td>
</tr>
</tbody>
</table>
Credit Execution and Administration

Loan Review

- Monitoring the performance of existing loans
- Handling problem loans

Loan review should be kept separate from credit analysis, execution, and administration

- The loan review committee should act independent of loan officers and report directly to the CEO of the bank
Credit Execution and Administration

Problem Loans

- Often require special treatment
- Modify terms of the loan agreement to increase the probability of full repayment
  - Modifications might include:
    - Deferring interest and principal payments
    - Lengthening maturities
    - Liquidating unnecessary assets
Characteristics of Different Types of Loans

■ UBPR Classifications
  ■ Real Estate Loans
  ■ Commercial Loans
  ■ Individual Loans
  ■ Agricultural Loans
  ■ Other Loans and Leases in Domestic Offices
  ■ Other Loans and Leases in Foreign Offices
Characteristics of Different Types of Loans

- Real Estate Loans
  - Construction and Development Loans
  - Commercial Real Estate
  - Multi-Family Residential Real Estate
  - 1-4 Family Residential
  - Home Equity
  - Farmland
  - Other Real Estate Loans
Characteristics of Different Types of Loans

- **Commercial Real Estate Loans**
  - Typically short-term loans consisting of:
    - Construction and Real Estate Development Loans
    - Land Development Loans
    - Commercial Building Construction and Land Development Loans
Characteristics of Different Types of Loans

- Commercial Real Estate Loans
  - Construction Loans
    - Interim financing on commercial, industrial, and multi-family residential property
  - Interim Loans
    - Provide financing for a limited time until permanent financing is arranged
- Land Development Loans
  - Finance the construction of road and public utilities in areas where developers plan to build houses
Characteristics of Different Types of Loans

- Commercial Real Estate Loans
  - Developers typically repay loans as lots or homes are sold
  - Takeout Commitment
    - An agreement whereby a different lender agrees to provide long-term financing after construction is finished
Characteristics of Different Types of Loans

- **Residential Mortgage Loans**
  - **Mortgage**
    - Legal document through which a borrower gives a lender a lien on real property as collateral against a debt
  - Most are amortized with monthly payments, including principal and interest
Characteristics of Different Types of Loans

- **Residential Mortgage Loans**
  - **1-4 Family Residential Mortgage Loans**
    - Holding long-term fixed-rate mortgages can create interest rate risk for banks with loss potential if rates increase.
    - To avoid this, many mortgages now provide for:
      - Periodic adjustments in the interest rate
      - Adjustments in periodic principal payments
      - The lender sharing in any price appreciation of the underlying asset at sale
    - All of these can increase cash flows to the lender when interest rates rise.
Characteristics of Different Types of Loans

- The Secondary Mortgage Market
  - Involves the trading of previously originated residential mortgages
  - Can be sold directly to investors or packaged into mortgage pools

- Home Equity Loans
  - Second Mortgage Loans
    - Typically shorter term than first mortgages
    - Subordinated to first mortgage
Characteristics of Different Types of Loans

**Equity Investments in Real Estate**

- Historically, commercial banks have been prevented from owning real estate except for their corporate offices or property involved in foreclosure.
- Regulators want banks to engage in speculative real estate activities only through separate subsidiaries.
Characteristics of Different Types of Loans

- Working Capital Requirements
  - Net Working Capital
    - Current assets – current liabilities
    - For most firms, net working capital is positive, indicating that some current assets are not financed with current liabilities
Characteristics of Different Types of Loans

- Working Capital Requirements
  - Days Cash
    - Cash/(Sales/365)
  - Days Receivables
    - AR/(Sales/365)
  - Days Inventory
    - Inventory/(COGS/365)
  - Days Payable
    - AP/(Purchases/365)
  - Days Accruals
    - Accruals/(Operating Expenses/365)
Characteristics of Different Types of Loans

- **Working Capital Requirements**
  - **Cash-to-Cash Asset Cycle**
    - How long the firm must finance operating cash, inventory and accounts receivables from the day of first sale
  - **Cash-to-Cash Liability Cycle**
    - How long a firm obtains interest-free financing from suppliers in the form of accounts payable and accrued expenses to help finance the asset cycle
Balance Sheet and Income Statement
Data for Simplex Corporation

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities and Equity</th>
<th>Selected Income Stat Data</th>
</tr>
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<tbody>
<tr>
<td>Cash</td>
<td>80</td>
<td>Accounts payable</td>
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<td>Accounts receivable</td>
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<td>Accrued expenses</td>
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<tr>
<td>Inventory</td>
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<td>Notes pay—bank</td>
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<td>Current assets</td>
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<td>CM LTD</td>
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<tr>
<td>Fixed assets</td>
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<td>Current liabilities</td>
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<tr>
<td>Total Assets</td>
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<td>LTD</td>
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<td>Equity</td>
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</tbody>
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### Cash-to-Cash Cycle

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</tbody>
</table>

### Working Capital Cycle †

<table>
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<th>Current Assets</th>
<th>Current Liabilities</th>
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<tr>
<td>Days cash</td>
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<tr>
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<tr>
<td>Days accounts receivable</td>
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<td>= 700 / 25.00</td>
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<tr>
<td>Days inventory</td>
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<tr>
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<td>= 500 / 16.71</td>
</tr>
<tr>
<td>Asset cycle</td>
<td>61.12</td>
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</table>

Difference in cash-to-cash cycles = 26.96
Working Capital Needs = 26.96 x 16.71 = 450.58
Cash-to-Cash Working Capital Cycle for Simplex Corporation

Days Cash = 3.20

Days Acct Rec = 28.00

Days Inventory = 29.92

Total = 61.12

Days Payable = 22.71

Days Accruals = 11.45

Total = 34.16

Days Financing = 26.96

Working Capital Financing needs
= Deficit x Avg. Daily COGS
= 26.96 * 16.71
= 450.53
Characteristics of Different Types of Loans

- Seasonal versus Permanent Working Capital Needs
  - All firms need some minimum level of current assets and current liabilities
  - The amount of current assets and current liabilities will vary with seasonal patterns
Characteristics of Different Types of Loans

- **Permanent Working Capital**
  - The minimum level of current assets minus the minimum level of adjusted current liabilities
    - **Adjusted Current Liabilities**
      - Current liabilities net of short-term bank credit and current maturities of long-term debt

- **Seasonal Working Capital**
  - Difference in total current assets and adjusted current liabilities
Trends in Working Capital Needs

- Total Current Assets
- Minimum Current Assets
- Total Current Liabilities
- Minimum Current Liabilities
- Total = Permanent Working Capital Needs + Seasonal Working Capital Needs
- Permanent Working Capital Needs
- Seasonal Working Capital Needs

Dollars vs. Time (q)
Short-Term Commercial Loans

- Open Credit Lines
  - Loan is seasonal if the need arises on a regular basis and if the cycle completes itself with one year
  - Used to purchase raw materials and build up inventories of finished goods in anticipation of later sales
  - It is self-liquidating in the sense that repayment derives from the sale of finished goods that are financed
Short-Term Commercial Loans

- Open Credit Lines
  - The bank makes a certain amount of funds available to a borrower for a set period of time
    - Often used for seasonal loans
  - The customer determines the timing of the actual borrowings ("takedowns")
  - Borrowings increase with inventory buildup and decline with the collection of receivables
Short-Term Commercial Loans

- Open Credit Lines
  - Typically require that the loan be fully repaid at least once during each year to confirm that the needs are seasonal

- Commitment Fee
  - A fee, in addition to interest, for making credit available
    - May be based on the entire credit line or on the unborrowed balance
Short-Term Commercial Loans

- Asset-Based Loans
  - Loans Secured by Inventories
    - The security consists of raw materials, goods in process, and finished products.
    - The value of the inventory depends on the marketability of each component if the borrower goes out of business.
    - Banks will lend from 40 to 60 percent against raw materials that are common among businesses and finished goods that are marketable, and nothing against unfinished inventory.
Short-Term Commercial Loans

- Asset-Based Loans
  - Loans Secured by Accounts Receivable
    - The security consists of paper assets that presumably represent sales
    - The quality of the collateral depends on the borrower’s integrity in reporting actual sales and the credibility of billings
Short-Term Commercial Loans

- Asset-Based Loans
  - Loans Secured by Accounts Receivable
    - Accounts Receivable Aging Schedule
      - List of A/Rs grouped according to the month in which the invoice is dated
    - Lockbox
      - Customer’s mail payments go directly to a P.O. Box controlled by the bank
      - The bank processes the payments and reduces the borrower’s balance but charges the borrower for handling the items
Short-Term Commercial Loans

- Highly Levered Transactions
  - Leveraged Buyout (LBO)
    - Involves a group of investors, often part of the management team, buying a target company and taking it private with a minimum amount of equity and a large amount of debt
      - Target companies are generally those with undervalued hard assets
    - The investors often sell specific assets or subsidiaries to pay down much of the debt quickly
      - If key assets have been undervalued, the investors may own a downsized company whose earnings prospects have improved and whose stock has increased in value
      - The investors sell the company or take it public once the market perceives its greater value.
Short-Term Commercial Loans

Highly Levered Transactions

- Arise from three types of transactions
  - LBOs in which debt is substituted for privately held equity
  - Leveraged recapitalizations in which borrowers use loan proceeds to pay large dividends to shareholders
  - Leveraged acquisitions in which a cash purchase of another related company produces an increase in the buyer’s debt structure
Term Commercial Loans

- Original maturity greater than 1 year
  - Typically finance:
    - Depreciable assets
    - Start-up costs for a new venture
    - Permanent increase in the level of working capital
  - Lenders focus more on the borrower’s periodic income and cash flow rather than the balance sheet
    - Term loans often require collateral, but this represents a secondary source of repayment in case the borrower defaults.
Term Commercial Loans

- **Balloon Payments**
  - Most of the principal is due at maturity
- **Bullet Payments**
  - All of the principal is due at maturity
Short-Term Commercial Loans

- Revolving Credits
  - A hybrid of short-term working capital loans and term loans
  - Typically involves the commitment of funds for 1 – 5 years
  - At the end of some interim period, the outstanding principal converts to a term loan
  - During the interim period, the borrower determines how much credit to use
  - Mandatory principal payments begin once the revolver is converted to a term loan
Short-Term Commercial Loans

- Agriculture Loans
  - Proceeds are used to purchase seed, fertilizer and pesticides and to pay other production costs
    - Farmers expect to repay the debt with the crops are harvested and sold
  - Long-term loans finance livestock, equipment, and land purchases
    - The primary source of repayment is cash flow from the sale of livestock and harvested crops in excess of operating expenses
Short-Term Commercial Loans

- Consumer Loans
  - Installment
    - Require periodic payments of principal and interest
  - Credit Card
  - Non-Installment
    - For special purposes
      - Example: Bridge loan for the down payment on a house that is repaid from the sale of the previous house

- The average consumer loan is relatively small and has a maturity of 1 to 4 years
Short-Term Commercial Loans

- Venture Capital
  - A broad term used to describe funding acquired in the earlier stages of a firm’s economic life
    - Due to the high leverage and risk involved, banks generally do not participate directly in venture capital deals
    - Some banks have subsidiaries that finance certain types of equity participations and venture capital deals, but their participation is limited
Short-Term Commercial Loans

- Venture Capital

  This type of funding is usually acquired during the period in which the company is growing faster than its ability to generate internal financing and before the company has achieved the size needed to be efficient.
Short-Term Commercial Loans

- Venture Capital
  - Venture capital firms attempt to add value to the firm without taking majority control
    - Often, venture capital firms not only provide financing but experience, expertise, contacts, and advice when required

- Types of Venture Financing
  - Seed or Start-up Capital
    - Early stages of financing
    - Highly leveraged transactions in which the venture capital firm will lend money for a percentage stake in the firm
      - Rarely, if ever, do banks participate at this stage
Short-Term Commercial Loans

Venture Capital

Types of Venture Financing

Later-Stage Development Financing:
- Expansion and replacement financing
- Recapitalization or turnaround financing
- Buy-out or buy-in financing
- Mezzanine Financing

Banks do participate in these rounds of financing, but if the company is overleveraged at the onset, the banks will be effectively excluded from these later rounds of financing.
Overview of Credit Policy and Loan Characteristics

Chapter 10

William Chittenden edited and updated the PowerPoint slides for this edition.