Lending Management

Principles of Lending

- **Principles of safety**
  - **Timely recovery of principal and interest**
  - **Diversification of loans**
  - **Obtaining the regular status of the borrower**
  - **Valuation of security given by borrower**
  - **Charging of interest rate to maintain margin**
- **Principles of Liquidity**
  - **Inflows in the form of repayment of loans should match the demand of depositors as outflows**
  - **Minimization of gap between inflows and outflows**

Principles of Lending Cont…

- **Principle of profitability**
  - Profitability to be maintained to honour all the obligations
- **Principle of purpose**
  - Loans only for productive purpose with a definite source of repayment
- **Principle of security**
  - Primary Security and personal security
- **Principle of marketability**
  - Security for loan should be freely marketable
- **Principle of value stability**
  - Value of collateral should be stable

Regulation of Lending Activities

- The mix, quality, and yield of the loan portfolio are heavily influenced by regulation
- 40 % of the credit to priority sector
- Priority to Small and Medium Enterprises
- Credit risk exposure limit to a single borrower is 15 percent and 5 percent extra for infrastructure projects
- A bank cannot grant any loans and advances on the security of its own shares.

Regulation of Lending Activities Cont…

- **Without prior approval of the Board or without the knowledge of the Board, no loans and advances should be granted to relatives of the bank's Chairman/Managing Director or other Directors, Directors (including Chairman/Managing Director) of other banks and their relatives**
- **Banks should not extend finance for setting up of new units consuming/producing the Ozone Depleting Substances**
- **Restrictions on Advances against Sensitive Commodities under Selective Credit Control**

Regulation of Lending Activities Cont…

- **Loan against shares, debentures and bonds may be granted to individuals to meet contingencies and personal needs or for subscribing to new or rights issues of shares / debentures / bonds or for purchase in the secondary market, against the security of shares / debentures / bonds held by the individual.**
- **Loans against the security of shares, debentures and bonds should not exceed the limit of Rupees ten lakhs per individual if the securities are held in physical form and Rupees twenty lakhs per individual if the securities are held in dematerialised form**
- **Banks should maintain a minimum margin of 50 percent of the market value of equity shares / convertible debentures held in physical form. In the case of shares / convertible debentures held in dematerialised form, a minimum margin of 25 percent should be maintained**

Regulation of Lending Activities Cont…

- **A uniform margin of 50 per cent shall be applied on all advances / financing of IPOs / issue of guarantees on behalf of market makers. A minimum cash margin of 25 per cent (within the margin of 50%) shall be maintained in respect of guarantees issued by banks for capital market operations**
- **Loans/advances to any individual from banking system against security of shares, convertible bonds, convertible debentures, units of equity oriented mutual funds and PSU bonds should not exceed the limit of Rs. 10 lakh for subscribing to IPOs**
- **The interest rates for loans vary across the banks but it should be above the base rate. The base is determined on the basis of cost of deposits, CRR, SLR, overhead cost, return on equity.**

Regulation of Lending Activities Cont…

- **The guidelines vary across the type of loans e.g. industrial loan. Loans for SMEs, agricultural loans etc.**
- **The margin amounts vary on the basis of collateral used for the loans and it varies from time to time as per RBI guidelines**
- **Different guidelines for individuals, directors of the bank, employees, groups etc.**

Factors to Consider to Reduce Credit Risk in Loan Policy

- **Avoid high risk loans**
- **Proper valuation of collateral**
- **Diversification of loans**
- **Proper documentation**
- **Credit limits**
- **Proper monitoring**
- **Use of instruments to transfer risk**

Steps in the Lending Process

- Finding Prospective Loan Customers
- Evaluating a Customer’s Character and Sincerity of Purpose
- Making Site Visits and Evaluating a Customer’s Credit Record
- Evaluating a Prospective Customer’s Financial Condition
- Assessing Possible Loan Collateral and Signing the Loan Agreement
- Monitoring Compliance with the Loan Agreement and Other Customer Service Needs

Evaluating a Loan Request

1. **The Cs of Credit (Credit worthiness of the borrower)**
   - **Character**
     - **Personal characteristics of borrowers, honesty, specific purpose of loan and serious intent to repay the loan**
   - **Capacity**
     - **Legal authority to sign binding contract and cash flow**
   - **Cash / Capital**
     - **Financial condition of the borrower and ability to generate enough cash to repay loan**
   - **Collateral**
     - **Adequate assets to support the loan**
   - **Conditions**
     - **Economic conditions faced by borrower**
   - **Control / Compliance**
     - **Does loan meet written loan policy and how would loan be affected by changing laws and regulations**

Evaluating a Loan Request…

2. **Can the Loan Agreement Be Properly Structured and Documented?**
   - This requires drafting a loan agreement that meets the borrower's need for funds with a comfortable repayment schedule
     - If a major borrower gets into trouble because of an inability to service a loan, the lending institution may find itself in trouble
   - Proper accommodation of a customer may involve lending more or less money than requested over a longer or shorter period

Evaluating a Loan Request…

3. **Can the Lender Perfect Its Claim against the Borrower's Earnings and Any Assets That May Be Pledged as Collateral?**
   - Reasons for Taking Collateral
     - If the borrower cannot pay, the pledge of collateral gives the lender the right to seize and sell those assets
     - It gives the lender a psychological advantage over the borrower

Types of Collateral

- Accounts Receivables
- Inventory
- Real Property
- Personal Property
- Personal Guarantees

Structure of Loan Agreement

- Type of credit facility
- Term of the loan
- Method and timing of repayment
- Interest rates and fees to be paid
- Collaterals
- Covenants
- Borrower Guaranties or Warranties

Process of Creation of Charge

- **The process of transferring ownership in favour of the lender over a security is called charge**
- **Creation of charge depends on the nature of securities**
- **Without charge the lender can not have possession over the security**

Types of charges

- **Fixed Charge**
  - The identity of the securities remains same throughout life e.g. land, buildings etc.
  - The debtor retains the ownership and possession of the asset
  - Not allowed to dispose without consent of the bank till the liability remains with the bank
- **Floating Charge**
  - The identity or nature of the assets keep on changing e.g. financial assets like stocks
- **Pari Passu Charge**
  - A common charge is created on a single asset in favour of multiple creditors

Types of charges…

- 1^{st} Charge
  - Assets are charged to a creditor first
- 2^{nd} Charge
  - Asset is already charged to one bank and again created for another bank
  - Before creating 2^{nd} charge no objection from the first charge holder should be obtained

Modes of creating charge

- **Hypothecation**
  - **It is created on movable assets such as vehicles**
  - **The ownership as well as possession of the security remains with the borrower**
  - **Bank can take possession of the securities with the consent of the borrower on default**
- **Pledge**
  - **Ownership remains with the borrower and possession remains with the bank**
  - **It is transferred to the borrower according to the payment made to the bank**

Modes of creating charge …

- **Assignment**
  - **Transfer of right on a security in favour of creditor to receive existing or future benefits.**
  - **The transferor of the claim is called assignor and transferee is called assignee**
  - **Financial assets are charged to the bank through assignment e.g. life insurance policy, fixed deposits etc.**
- **Mortgage**
  - **It is a transfer of interest in specific immovable property (e.g. land) for the purpose of securing payment of advances and loans**

Short-Term Loans to Business Firms

- **Self-Liquidating Inventory Loans**
  - **These loans are used to finance the purchase of inventory – raw materials or finished goods to sell**
  - **Such loans take advantage of the normal cash cycle inside a business firm**
  - **There appears to be less of a need for traditional inventory financing**
    - **Due to the development of just in time (JIT) and supply chain management techniques**

Short-Term Loans to Business Firms …

- **Working Capital Loans**
  - **Short-run credit that lasts from a few days to one year**
  - **Secured by accounts receivable or by pledges of inventory**
  - **Carry a floating interest rate**
  - **A commitment fee is charged on the unused portion of the credit line and sometimes on the entire amount of funds made available**

Short-Term Loans to Business Firms …

- **Interim Construction Financing**
  - **Secured short-term loan used to support the construction of homes, apartments, office buildings, shopping centers, and other permanent structures**
- **Security Dealer Financing**
  - **Dealers in securities need short-term financing to purchase new securities and carry their existing portfolios of securities until they are sold to customers or reach maturity**

Short-Term Loans to Business Firms …

- Retailer and Equipment Financing
  - Lenders support installment purchases of automobiles, home appliances, and other durable goods by financing the receivables that dealers selling these goods take on when they write installment contracts to cover customer purchases
- Asset-Based Financing
  - Credit secured by the shorter-term assets of a firm that are expected to roll over into cash in the future
- Syndicated Loans (SNCs)
  - A loan package extended to a corporation by a group of lenders

Long-Term Loans to Business Firms

- Term Business Loans
  - Designed to fund longer-term business investments, such as the purchase of equipment or the construction of physical facilities, covering a period longer than one year
- Revolving Credit Financing
  - Allows a customer to borrow up to a prespecified limit, repay all or a portion of the borrowing, and reborrow as necessary
  - One of the most flexible of all business unsecured loans
  - May be short-term or long-term
  - Lenders normally charge a loan commitment fee
  - Two types: formal loan commitment and confirmed credit line

Long-Term Loans to Business Firms Cont…

- **Long-Term Project Loans**
  - Credit to finance the construction of fixed assets
  - Most risky of all business loans
  - Some of the risks of project loans:
    1. Large amounts of funds are usually involved
    2. The project may be delayed by weather or shortage of materials
    3. Laws and regulations in the region where the project lies may change
    4. Interest rates may change

Long-Term Loans to Business Firms …

- **Loans to Support the Acquisition of Other Business Firms – Leveraged Buyouts**
  - **Leveraged buyouts (LBOs) usually involve acquiring a controlling interest in another firm with the use of a great deal of debt (leverage) to finance the transaction**

Analysis of Business Loan Applications

- The most common sources of repayment for business loans are:
  1. The business borrower's profits or cash flow
  2. Business assets pledged as collateral behind the loan
  3. A strong balance sheet with ample amounts of marketable assets and net worth
  4. Guarantees given by the business, such as drawing on the owners' personal property to backstop a loan
- If cash flows are inadequate, lender turns to assets whose value fluctuates with production in the economy
- Need to diversify geographically and across different markets and different firms

Analyzing Business Loan Application

- **Lenders credit analysis department prepares an analysis of how key figures on borrowers financial statement have changed (last 3 to 5 years)**
- **Percentage composition ratios , often called common size ratios, control for differences in size of firm**
- **Comparative analysis of ratios help determine any developing weakness in loan protection, such as decrease in assets pledged as collateral or a reduction in earning power**

Financial Ratio Analysis of a Customer's Financial Statements

- Information from balance sheets and income statements is typically supplemented by financial ratio analysis
- Critical areas of potential borrowers loan officers consider:
  1. Ability to control expenses
  2. Operating efficiency in using resources to generate sales
  3. Marketability of product line
  4. Coverage that earnings provide over financing cost
  5. Liquidity position, indicating the availability of ready cash
  6. Track record of profitability
  7. Financial leverage (or debt relative to equity capital)
  8. Contingent liabilities that may give rise to substantial claims in the future

Financial Ratio Analysis: Control over Expenses

- Barometer of the quality control of business firm’s management is how carefully it controls its expenses and how well are the earnings
- Financial ratios used by credit analysts to monitor a firms expense control program include:

✓ Wages and salaries/Net sales
✓ Overhead expenses/Net sales
✓ Depreciation expenses/Net sales
✓ Interest expense on borrowed funds/Net sales
✓ Interest expense on borrowed funds/Net sales
✓ Cost of goods sold/Net sales
✓ Selling, administrative, and other expenses/Net sales
✓ Taxes/Net sales

Financial Ratio Analysis: Operating Efficiency

- Measure of the business firm's performance effectiveness
- How effectively are assets being utilized to generate sales?
- How efficiently are sales converted into cash?
- Important financial ratios here include:
  1. Annual cost of goods sold/Average inventory (or inventory turnover ratio)
  2. Net sales/Net fixed assets
  3. Net sales/Total assets
  4. Net sales/Accounts and notes receivable
- Average Collection period = Accounts receivable /(Annual credit sale/360)

Financial Ratio Analysis: Marketability of Customer’s Product/Service

- **Repay of loan also depends on the business customer’s ability to market goods, services, or skills successfully**
- **Lender has to assess the public acceptance of what the business customer has to sell by analyzing factors such as growth rate of sales revenue, market share, gross profit margin(GPM), and net profit margin (NPM)**

$$GPM = \frac{\text{Net sales} - \text{Cost of goods sold}}{\text{Net sales}}$$

$$NPM = \frac{\text{Net income after taxes}}{\text{Net sales}}$$

Financial Ratio Analysis: Coverage Ratio

- **It measures the adequacy of earnings**
- **Coverage refers to the protection afforded creditors based on the amount of a business customer's earnings**
- **The best-known coverage ratios include:**

$$\text{Interest coverage} = \frac{\text{Income before interest and taxes}}{\text{Interest payments}}$$

$$\begin{array}{c}\text{Coverage of}\\ \text{interest}\\ \text{and principal}\\ \text{payments}\end{array} = \frac{\text{Income before interest and taxes}}{\text{Interest payments} + \dfrac{\text{Principal repayments}}{1 - \text{Firm's marginal tax rate}}}$$

$$\text{Coverage of all fixed payments} = \frac{\begin{array}{c}\text{Income before interest, taxes,}\\ \text{and lease payments}\end{array}}{\text{Interest payments} + \text{Lease payments}}$$

Financial Ratio Analysis: Liquidity Indicator

- **Reflects the borrower's ability to raise cash in timely fashion at reasonable cost, including the ability to meet loan payments when they come due**

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$\text{Acid-test ratio} = \frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$$

$$\text{Net liquid assets} = \begin{matrix}\text{Current}\\ \text{assets}\end{matrix} - \text{Inventory} - \begin{matrix}\text{Current}\\ \text{liabilities}\end{matrix}$$

$$\text{Net working capital} = \text{Current assets} - \text{Current liabilities}$$

Financial Ratio Analysis: Liquidity Indicator Cont..

- Commercial lenders are particularly sensitive to changes in customer’s liquidity position; conversion of liquid assets, including cash accounts usually fund loan repayments
- Erosion of customers liquidity position increases the risk that the lender will have to attach the customer’s lesser liquid assets to recover funds; hence time consuming, costly and uncertain
- Excess liquidity has forgone opportunity cost in terms of income producing assets
- Excess liquidity also invites dishonest managers and employees to “take the money and run”

Financial Ratio Analysis: Profitability Indicator

- How much net income remains for the owners of a business firm after all expenses (except dividends) are charged against revenue?
- Popular bottom line indicators include:
  i. Before-tax net income / total assets, net worth, or total sales
  ii. After-tax net income / total assets (or ROA)
  iii. After-tax net income / net worth (or ROE)
  iv. After-tax net income / total sales (or ROS) or profit margin

Financial Ratio Analysis: Financial Leverage Factor

- It is the barometer of a business firm's capital structure
- Any lender is concerned about how much debt a borrower has taken on in addition to the loan being sought
- Financial leverage: use of debt in the hope the borrower will generate earnings that exceeds the cost of debt, thereby increasing returns to a business firm's owners

Financial Ratio Analysis: Financial Leverage Factor

- **Key financial ratios used to analyze any borrowing business's credit standing and use of financial leverage include**

$$\text{Leverage ratio} = \frac{\text{Total liabilities}}{\text{Total assets}}$$

$$\text{Capitalization ratio} = \frac{\text{Long-term debt}}{\text{Total long-term liabilities and net worth}}$$

$$\text{Debt-to-sales ratio} = \frac{\text{Total liabilities}}{\text{Net sales}}$$

Historical analysis of financial statement

Balance sheet for a Company								
	Most recent year		One year ago		Two years ago		Three years ago	
Balance sheet items	Dollar Value	Percentage of Total	Dollar Value	Percentage of Total	Dollar Value	Percentage of Total	Dollar Value	Percentage of Total
Assets								
Cash	2.0	6.1%	2.3	6.8%	2.7	7.7%	3.2	8.6%
Marketable securities	1.5	4.5%	1.8	5.3%	2.0	5.7%	1.0	2.7%
Accounts receivable	9.3	28.2%	8.4	24.7%	7.2	20.6%	5.1	13.8%
Inventories	6.2	18.8%	5.5	16.2%	4.4	12.6%	3.3	8.9%
Total Current Assets	19.0	57.6%	18.0	52.9%	16.3	46.6%	12.6	34.1%
Fixed asset, gross	20.4	61.8%	21.2	62.4%	22.5	64.3%	23.4	63.2%
Less: Accumulated Depriciation	11.1	33.6%	10.2	30.0%	9.0	25.7%	6.1	16.5%
Fixed asset, net	9.3	28.2%	11.0	32.4%	13.5	38.6%	17.3	46.8%
Other asset	4.7	14.2%	5.0	14.7%	5.2	14.9%	7.1	19.2%
Total Asset	33.0	100.0%	34.0	100.0%	35.0	100.0%	37.0	100.0%
Liabilities and Equity								
Accounts payable	2.3	7.0%	2.2	6.5%	1.8	5.1%	2.0	5.4%
Notes payable	4.9	14.8%	4.4	12.9%	4.2	12.0%	3.7	10.0%
Taxes payable	0.1	0.3%	0.2	0.6%	0.1	0.3%	0.8	2.2%
Total current liabilities	7.3	22.1%	6.8	20.0%	6.1	17.4%	6.5	17.6%
Long-term debt	13.2	40.0%	13.2	38.8%	13.5	38.6%	12.4	33.5%
Other liabilities	1.0	3.0%	1.4	4.1%	4.5	12.9%	7.1	19.2%
Total Liabilites	21.5	65.2%	21.4	62.9%	24.1	68.9%	26.0	70.3%
Common stock	2.0	6.1%	2.0	5.9%	1.0	2.9%	1.0	2.7%
Paid-in surplus	3.0	9.1%	3.0	8.8%	3.0	8.6%	3.0	8.1%
Retained earnings	6.5	19.7%	7.6	22.4%	6.9	19.7%	7.0	18.9%
Total net worth	11.5	34.8%	12.6	37.1%	10.9	31.1%	11.0	29.7%

Income statement

Net sales	33.0	100.0%	31.0	100.0%	29.0	100.0%	32.0	100.0%
Less: Cost of goods sold	19.0	57.6%	17.0	54.8%	16.0	55.2%	15.0	46.9%
Gross Profit	14.0	42.4%	14.0	45.2%	13.0	44.8%	17.0	53.1%
Less: Selling, administrative and other expenses	9.0	27.3%	9.0	29.0%	8.0	27.6%	11.0	34.4%
Less: Depriciation expense	3.0	9.1%	3.0	9.7%	3.0	10.3%	2.0	6.3%
Net Operating Income	2.0	6.1%	2.0	6.5%	2.0	6.9%	4.0	12.5%
Less: Interest Expense on borrowed funds	2.0	6.1%	1.0	3.2%	2.0	6.9%	2.0	6.3%
Net income before taxes	0.0	0.0%	1.0	3.2%	0.0	0.0%	2.0	6.3%
Less: Income taxes	0.1	0.3%	0.3	1.0%	0.1	0.3%	0.2	0.6%
Net income after taxes	-0.1	-0.3%	0.7	2.3%	-0.1	-0.3%	1.8	5.6%

Historical Analysis of Financial Statement: Expense Control

Cost of goods sold/net sales	57.6%	54.8%	55.2%	46.9%
Selling, administrative and other expenses/ net sales	27.3%	29.0%	27.6%	34.4%
Depriciation expenses/net sales	9.1%	9.7%	10.3%	6.3%
Interest expense on borrowed funds/net sales	6.1%	3.2%	6.9%	6.3%
Taxes/net sales	0.3%	1.0%	0.3%	0.6%

Selling, administrative and other expenses, and taxes relative to net sales have declined; rest have either remained steady or risen as a percentage of net sales

The inability to reduce the overall expense in the face of a relatively flat sales has caused net earnings to decline over the past four years

Highly convincing arguments are needed to convince that the firm's expense and earning picture will improve

Historical Analysis of Financial Statement: Operating Efficiency

Inventory turnover ratio: Annual cost of goods and services sold/average inventory	3.06		3.09		3.64		4.55
Average collection period: Accounts receivable /(annual sales/360) in days	101.5		97.5		89.4		57.4
Turnover of fixed assets:							
Net sales/net fixed assets	3.55		2.82		2.15		1.85
Turnover of total assets:							
Net sales/total assets	1.00		0.91		0.83		0.86

Inventory turnover-indicator of managements efficiency in controlling size of firms inventory – has declining trend

Average collection period is increasing; suggests rise in past due accounts and poor collection

Although fixed asset turnover is rising, (refer B/S) primary reason is decline of plant and equipment – firm either selling assets to raise cash or simply not replacing worn out capital

Historical Analysis of Financial Statement: Marketability of Product Line

	Most recent year	One year ago	Two years ago	Three years ago
Gross Profit Margin	42.4%	45.2%	44.8%	53.1%
Net Profit Margin	-0.3%	2.3%	-0.4%	5.8%

- **Both Gross profit margin and net profit margin are on a downward trend**
- **There might be potential problems, including potentially inappropriate pricing policies, expense control problems, and market deterioration**

Coverage Ratio Analysis

- Interest coverage is weak
- Its earnings are barely adequate to cover the interest payments, and once repayment of principal is included, earnings are simply inadequate to cover interest and principal payments
- Firm must use less debt to finance itself and boost its earnings
- Lengthen its dent repayment through restructuring, so that current debt service payments are reduced

Historical Analysis of Financial Statement: Liquidity

Liquidity							
Current ratio: Current asset/current liabilities	2.60		2.65		2.67		1.94
Acid-test: (current asset-inventories)/current liabilities	1.75		1.84		1.95		1.43
Working capital= current asset-current liabilities	11.70		11.20		10.20		6.10
Net liquid asset= current asset-inventories-current liabilities	5.50		5.70		5.80		2.80

Firm made substantial progress in building up its liquidity two years ago: current asset 3 times over current liabilities

Current and acid test ratios have dipped significantly in the recent year

Good thing: recent expansion of working capital of $9.7 million and its relatively stable net liquid asset

However, large part of working capital increase is from selling off the firm's plant and equipment and through use of debt

Historical Analysis of Financial Statement: Profitability

Profitability							
Before tax net income/total asset	0.00%		2.94%		0.00%		5.41%
After tax net income/total asset	-0.30%		2.06%		-0.29%		4.86%
Before tax net income/net worth	0.00%		7.94%		0.00%		18.18%
After tax net income/net worth	-0.87%		5.56%		-0.92%		16.36%

Long term decline in profitability
Little evidence to suggest a turn around

Historical Analysis of Financial Statement: Leverage

Leverage:							
Leverage ratio: Total liabilities/total asstes	65.2%		62.9%		68.9%		70.3%
Total liabilities/net worth	1.87		1.70		2.21		2.36
Capitalization ratio: Long term debt /long term debt plus net worth	53.4%		51.2%		55.3%		53.0%
Debt-to-sales ratio:Total liabilities/net sales	65.2%		69.0%		83.1%		81.3%

Leverage ratio has improved, with assets and net worth generally growing faster than debt

Its mix of funding sources: debt and equity capital has been relatively constant while total liabilities have declined relative to sales

Much of firms asset has come from sources other than debt, such as depletion of fixed assets and a buildup on current assets like accounts receivable and inventories

Industry comparison

- It is standard practice to compare each business customer's performance to the performance of the customer's entire industry
- It gives the idea about the sustainability and successful business strategy of the companies in comparison with industry average

Contingent Liabilities

Usually not shown on customer balance sheets are other potential claims against the borrower:

1. **Guarantees and warranties behind the business firm's products**
2. **Litigation or pending lawsuits against the firm**
3. **Unfunded pension liabilities**
4. **Taxes owed but unpaid**
5. **Limiting regulations**

Contingent Liabilities …

- These contingent liabilities can turn into actual claims against the firm’s assets and earnings at a future date
- The loan officer must ask the customer about pending or potential claims against the firm
- Following up the own investigation by the bank from government records, public notices and news papers

Environmental liabilities

- Environmental clearance
- Hazardous activities which are debarred by the environmental laws
- Possible lender liability of environmental damage as per regulation
- Lenders’ environmental risk assessment programme

Underfunded Pension Liabilities

- **Borrowing customers should record employee pension plan surpluses and deficits on their balance sheets**
- **If projected pension-plan liabilities exceed expected funds sources, the result may be an increase in liabilities**
- **Increases the price of loan**

Analysis of Cash Flow Statement

- **The Statement of Cash Flows illustrates how cash receipts and disbursements are generated by operating, investing, and financing activities**
- **Will the borrower be able to generate sufficient cash to support its production and sales activities and still be able to repay the lender?**
- **Why is the cash position of the borrower changing over time and what are the implications of these changes?**

Cash flow from investment activities

- **Purchase of new machinery**
- **Redemption of marketable securities**

Cash flow from financing activities

- Increase in notes payable
- Repayment of long-term debt
- Repayment of other liabilities
- Dividends paid

Other Factors

- **Broader, long-term relationship**
- **Denial of loans affects the deposit base, personal accounts of stock holders and employees**
- **Longer-term loan policy**
- **Relaxing the requirements**

Objectives of loan pricing

- Maintain Margins
- Balance risk-return profile
- Ensure market rates

Margin Maintenance

- **Average cost of funds vs. marginal cost of funds**
- **Deployment of excess deposit: Average cost of funds**
- **If banks does not have any surplus fund and credit requirements are funded using the incremental deposits: Marginal cost of funds**

Risk-return profile

- Tenor of loan
  - Long term loans are riskier than short-term loan
  - Mismatch between maturity of assets and liabilities
  - Maximum tenor should be fixed accordingly
- Credit risk
  - Probability of default of loans
- Size of loan
  - It affects servicing cost

Market rates

- Loan price should be based on market rate structure prevailed in the market at that point of time
- Marginal cost of lending Rate (MCLR)
  - It is an internal reference rate for banks to determine the interest they can charge on loans.
  - Additional or incremental cost of arranging additional rupee for a prospective buyer has been taken into account
  - Factors considered for MCLR: Tenor of loan, marginal cost of funds, operating cost, negative carry on account of CRR
- Base rate
  - It is the minimum rate set by the Reserve Bank of India below which banks are not allowed to lend to its customers. (not used since 2016 in India)

Cost plus loan pricing model

- Measure cost of funds
- Assess the servicing costs
- Quantify the credit risk and set premium
- Assess the profit margin that ensures ROE
- Relate the rate to a reference rate
- Ensure market presence

Cost plus loan pricing model

- **If the bank is not a position to identify the sources from which the funds are used to extend a particular credit facility, the average cost of funds (ACF) will be the suitable option**
- **If the banks can clearly segregate its liabilities then it can use pooled cost of funds with similar maturities**
- **Loan price= Cost of funds + margin**

$$\begin{array}{c} \text{Loan} \\ \text{interest} \\ \text{rate} \end{array} = \begin{array}{c} \text{Marginal} \\ \text{cost of raising} \\ \text{loanable funds} \\ \text{to lend to} \\ \text{the borrower} \end{array} + \begin{array}{c} \text{Nonfunds} \\ \text{operating} \\ \text{costs} \end{array} + \begin{array}{c} \text{Estimated} \\ \text{margin to} \\ \text{compensate for} \\ \text{default risk} \end{array} + \begin{array}{c} \text{Desired} \\ \text{profit} \\ \text{margin} \end{array}$$

Example

Maturity	Amount (Rs. Crore)	Rate
0	15	0.00
6 moths	25	5.00
1year	15	10.00
2 years	15	12.00
3 years	30	13.00

Compute the loan price using ACF and MCF approach for a loan proposal of Rs. 30 crore for 3 years?
Average cost of funds: 25*0.05 + 15*0.1+ 15*0.12+ 30*0.13= 8.45
If margin is 2% then loan price: 8.45 + 2= 10.45%
Pooled cost of funds: 13% + 2% = 15%

Example cont…

- Cost of servicing: 3%, risk margin: 0.25%, profit margin: 1.25%
- Loan Price using ACF = 8.45% + 3% + 0.25% + 1.25% = 12.95%
- Loan Price using MCF= 13% + 3% + 0.25% + 1.25% =17.5%
- The profit margin which the bank sets should enable the bank to earn its required ROE
- When required ROE is met then the price charge which is known as contractual rate becomes expected return for that loan

Cost plus loan pricing model …

- **Bank will earn expected return as long as there is no default payment of the loan**
- **In the presence of default, the contractual rate will not give the bank the expected return.**
- **If the bank has to reach the targeted ROE, then the risk should be quantified to arrive at a contractual rate that in turn gives the bank the expected rate**
- **When a default is expected from a loan, the bank adjusts the recovered amount towards the principal**

Cost plus loan pricing model …

- E (R) = P1(r) + P2 [(Principal (1+r) *R)/Principal -1]
- P1 = Probability of repayment
- P2=Probability of default
- R= Recovery rate
- P1(r)= Returns using the contractual rate (probability of total payment of the loan in the normal course of payment)

Example

- Loan= Rs. 1500 cr, Avergae contractual rate: 14%, probability of repayment= 90%, recovery rate= 80%
- E(r) = 11.72%
- The difference between E(r) and contractual rate arises due to 80% recovery rate and 90 % repayment rate

The Price Leadership Model

$$\text{Loan interest rate} = \text{Base or prime rate (including the lender's desired profit margin over all operating and administrative costs)} + \overbrace{\text{Default-risk premium paid by nonprime-rated borrowers} + \text{Term-risk premium paid by borrowers seeking long-term credit}}^{\text{Markup}}$$

- **Leading commercial lenders have switched to LIBOR-based loan pricing due to the growing use of Eurocurrencies as a source of loanable funds**
  - **LIBOR-based loan rate = LIBOR + Default-risk premium + Profit margin**

Below-Prime Market Pricing

- Banks announced that some large corporate loans covering only a few days or weeks would be made at low money market interest rates
  - Federal funds rate on domestic loans plus a small margin

Customer Profitability Analysis (CPA)

- **Assumes that the lender should take the whole customer relationship into account when pricing a loan**

$$\text{Net before-tax rate of return to the lender from the whole customer relationship} = \frac{\text{Revenues from loans and other services provided to this customer} - \text{Expenses from providing loans and other services to this customer}}{\text{Net loanable funds used in excess of this customer's deposits}}$$

Customer Profitability Analysis (CPA) Cont…

$$\begin{array}{c}\text{Before-tax rate}\\ \text{of return over costs}\\ \text{from the entire}\\ \text{lender-customer}\\ \text{relationship}\end{array} = \frac{\text{Revenues expected} - \text{Costs expected}}{\text{Net amount of all loanable funds supplied customer}}$$

- **If the net rate of return is positive, the proposed loan is acceptable because all expenses have been met**
- **If the net rate of return is negative, the proposed loan and other services provided to the customer are not correctly priced as far as the lender is concerned**
- **The greater the perceived risk of the loan, the higher the net rate of return the lender should require**

Customer Profitability Analysis (CPA) Cont…

- **Earnings Credit for Customer Deposits**
  - **In calculating how much in revenues a customer generates for a lending institution, many lenders give the customer credit for any earnings received from investing the balance in the customer's deposit account**

$$\text{Net investable (usable) funds for the lender} = \text{Customer's average deposit balance} - \text{Average amount of float in the account} - \left(\text{Required legal reserves behind the deposit} \times \text{Net amount of collected funds in the account}\right)$$

$$\text{Amount of earnings credited to the customer} = \text{Annual earnings rate} \times \text{Fraction of the year funds are available from the deposit} \times \text{Net investable (usable) funds}$$

Types of Loans Granted to Consumers

Consumer loans are classified by

1. **Purpose – what the borrowed funds will be used for**
2. **Type – whether the borrower must repay in installments or repay in one lump sum**
3. **Combination of both loan types and loan purpose**

Types of Loans Granted to Consumers: Residential Loans

- Credit to finance purchase of a home or fund improvements on a private residence
- Usually a long-term loan, typically bearing a term of 10 to 30 years
- Secured by the property itself
- May carry either a fixed interest rate or a variable (floating) interest rate

Types of Loans Granted to Consumers: Nonresidential Loans

Installment Loans	Noninstallment Loans
• Short-term to medium-term loans • Repayable in two or more consecutive payments (usually monthly or quarterly) • Used to buy big-ticket items (e.g., automobiles, furniture, and home appliances) or to consolidate existing household debts	• Short-term loans individuals and families draw upon for immediate cash needs • Repayable in a lump sum • May be for relatively small amounts and include charge accounts that often require payment in 30 days or less • May also be made for a short period (usually six months or less) to wealthier individuals and can be quite large

Types of Loans Granted to Consumers: Credit Card Loans & Revolving Credit

- **One of the most popular forms of consumer credit today is accessed via credit cards**
- **Offer their holders access to either installment or non-installment credit**
- **Credit card users can be installment users and non-installment users**
- **Installment users of credit cards are far more profitable due to the interest income they generate**
- **Card providers also earn discount fees (usually 1 to 7 percent of credit card sales) from merchants who accept their cards**

Characteristics of Consumer Loans

- Consumer loans are profitable credits with “sticky” interest rates
  - ✓ Typically prices above the cost of funding them but contract interest rates often don’t change readily with market conditions as do most business loans ; exposed to significant interest rate risk
- Tend to be cyclically sensitive : rise in periods of economic expansion when consumers are more optimistic about future
- Relatively interest inelastic: more concerned about the size of monthly payments required by a loan agreement than the interest rate charges
- Education & income level influence on use of credit
- Borrowing often used to achieve a standard of living than a safety net to be used only in emergencies

Evaluating Consumer Loan Applications: Character & Purpose

- Character of borrower
  - ✓ Lender must be assures that the borrower feels a keen sense of moral responsibility to repay loan on time
  - ✓ Fundamental character of borrower revealed through purpose of loan request

    Lender must ask:

    Has the customer clearly stated what he or she plans to do with the money?

    Is the stated purpose of loan consistent with the lender's loan policy?

    Is there evidence of sincere intension to repay any funds borrowed?

Evaluating Consumer Loan Applications: Character & Purpose Cont..

- Borrower's ability to pay
  - ✓ Borrowers income and valuable assets must be sufficient to reassure the lender that the customer has the ability to repay loan with a comfortable margin of safety
  - ✓ Lenders must check with one or more regional or national credit bureaus

    Credit Bureaus are institutions that hold files on most individuals who have borrowed money, indicating their record of repayment and credit rating
  - ✓ Incase borrower is without a credit record or with a poor track record of repaying loans, a cosigner may be requested to support the repayment

Evaluating Consumer Loan Applications: Other Factors

Income Levels:	•Both size and stability of an individual's income are considered •Customer to report net salary, take home salary •With large loans, check with customers employer to verify accuracy
Deposit Balances	•It is an indirect measure of income size and stability •Right to offset: permits the lender to call a loan that is in default and seize any checking savings deposits the customer may hold in order to recover its funds
Employment and Residential Stability	•Duration of employment considered while granting a sizable loan to someone •Length of residency: longer period stays in one residency; the more stable
Pyramid of Debt	•Individuals draws credit at one lending institution to pay another is frowned upon