Commercial Lending School

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Introduction

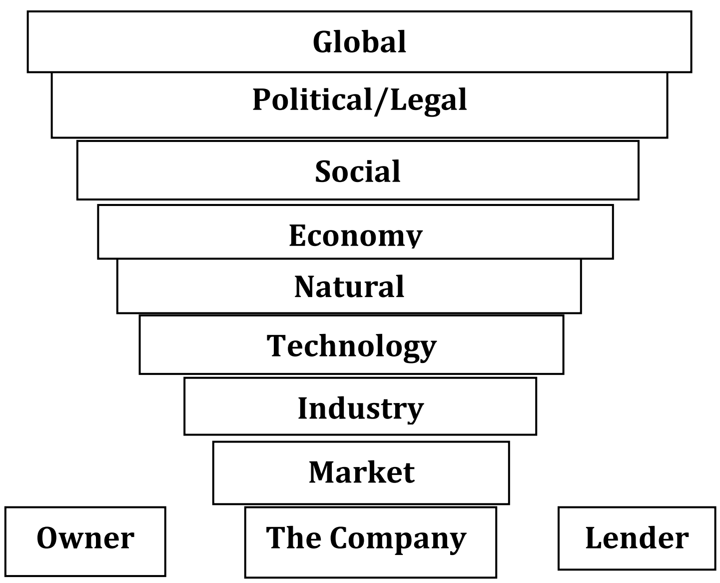
The five C's of credit are the foundation for this two-day commercial lending school.

Beginning with an analysis of the commercial borrower's character, the program will emphasize measures of repayment, the impact of financial leverage, market and industry conditions to be monitored, the bank's collateral support, and the importance of timely and accurate risk ratings.

Beginning Basics

<u>A Company's External Environment</u>

Business owners and companies do not exist in a vacuum. Companies must compete successfully for market share and at the same time navigate the threats presented by what is called the external environment.



Business owners and lenders must realize that none of the elements of the external environment can be controlled. They can only be anticipated and planned for.

Question: What elements of today's external environment present to greatest threats to your bank's business borrowers?

Competitive Strategy

Companies compete differently. Some will compete on price. Some compete by differentiating their products or services from like competitors. Others will identify a particular market segment and offer products and services to me unique customer needs.

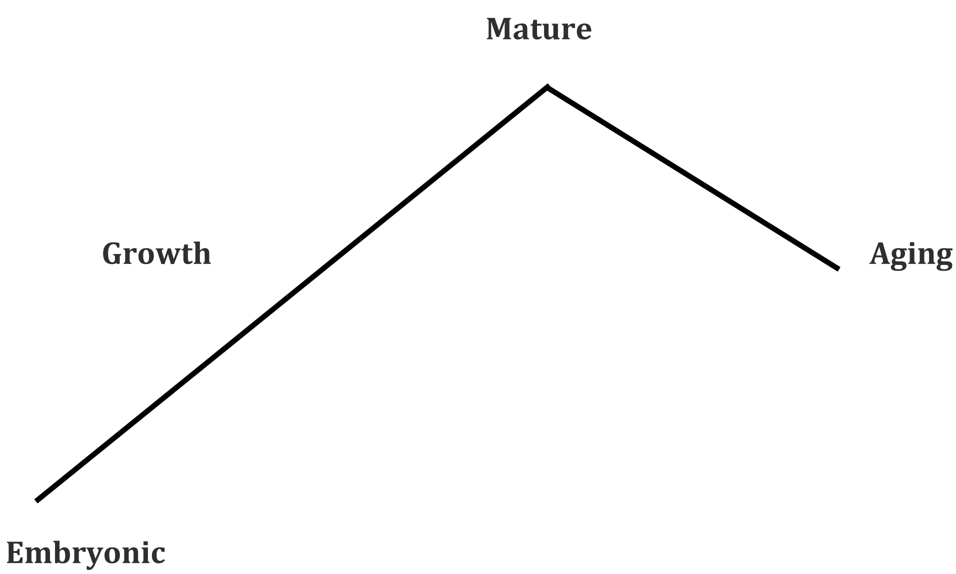
Regardless of the competitive strategy, it must be sustainable.

Question: Why is it important to identify the competitive strategy used by your bank's business borrowers?

A Company's Life Cycle

Companies, products, markets and industries go through life cycles. It is important for the lender to identify a company's position in its life cycle as well as the position of key products, markets and the industry itself.

As a company moves through its life cycle, company owners must cope with change.



Sustainable Financial Leverage

Financial leverage is the relationship between a company's total debt and net worth.

All problem borrowers have too much debt on their balance sheet. Excessive debt increases a company's operating leverage in two ways. Interest expense is high in relation to net profit.

Additionally, depreciation expense increases when debt has been used to acquire fixed assets.

A company's financial becomes "excessive" when the ratio of total liabilities/tangible net worth exceeds 3.00:1.00.

The Five "C's of Credit

- Character – Willingness to Repay
- Capacity – Ability to Repay
- Capital – Measures the ability to withstand adverse "conditions".
- Conditions – The borrower's "external" environment.
- Collateral – Strengthens the borrower's character by putting borrower assets at risk.

Two Foundation Questions

Does the business owner's loan request "make sense"?

- Does the request comply with all aspects of the bank's loan policy and credit administration procedures?
- Can the loan be originated in compliance with all applicable regulatory and fair lending compliance requirements?

Where can the bank "go" with the borrower's relationship?

- Given a variety of factors, will the relationship be profitable through repayment?
- Will the relationship remain in compliance with all applicable regulatory and fair lending compliance requirements?

The Purpose of Business Lending

From the business owner's point of view, banks provide loans for the purpose of growing the business and creating an opportunity for the owner to accumulate personal wealth.

From the banker's point of view, business loans, when properly managed create opportunities for long-term, profitable relationships that serve to increase bank earnings and capital.

Lenders to businesses become risk managers, financial consultants and trusted advisors.

Types of Business Loans

- Lines of Credit provide financing for current working assets of the business such as inventory and accounts receivable.

  Annual operating lines of credit are also made to crop and livestock producers.

- Terms Loans provide financing for the acquisition of fixed assets such as vehicles, equipment and even commercial real estate.

  Term loans are repaid (amortized) over a specific repayment term.

- Revolving Loans provide financing for a "permanent" investment in the current working assets of the business.

Calculating the Business Owner's "Character Ratio"

The most subjective aspect in analyzing a small business owner's creditworthiness is the lender's character assessment of the small business owner.

Character is the first and most important of the five "C's" of credit.

While there is no "character ratio" to be calculated, the small business owner's consumer credit report gives important insight into the matter of character.

Key Questions About Credit History

What does the credit report reveal about the borrower's:

- Historical ability to manage debt?
- Adverse information (late payments, judgments, past bankruptcy)?

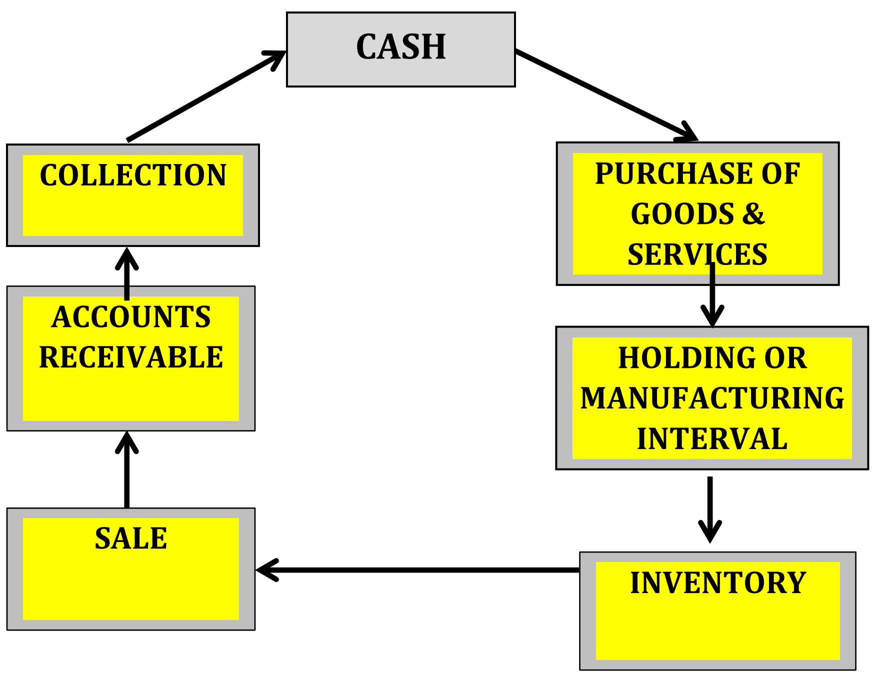
Does the borrower have a "credit score" reflective of the bank's tolerance for risk of loss?

Business Operating Cycles

The operating cycle of a business describes the manner in which current working assets are utilized in the business.

Working assets are typically inventory, accounts receivable and fixed assets.

All operating cycles begin with cash which is most often a combination of the owner's cash and an advance against the lender's operating line of credit.



At the start of the operating cycle, the owner begins to make a series of "cash investment" decisions.

A significant part of cash flow analysis will be for the bank to determine the quality of these decisions.

Current financial information is required to properly monitor the quality of cash investment decisions.

For example:

- Is the owner's cash investment in inventory reasonable and justified based on the current Days Inventory Ratio calculation and the bank's valuation of the owner's inventory?

  - Another way of asking the same question is how much "stale" (unsaleable) inventory remains on the owner's balance sheet that should be charged off?

Inventory turnover is a measurement of cost of sales divided by average inventory. For comparison purposes, the ratio is best expressed in terms of days rather than the number of annual turns.

$$\frac{\text{Cost of Sales/Average Inventory}}{365} = \text{Days Inventory}$$

For monitoring purposes, the Days Inventory calculation can be compared to both company performance from year to year as well as industry standards.

Significant increases or decreases in Days Inventory must be investigated by the bank.

- Is the owner's cash investment in accounts receivable reasonable and justified based on the current Days Receivable calculation compared to the owner's collection policy?

  - Another way of asking the same question is how many receivables are uncollectible and should be charged against current earnings?

Receivables turnover is a measurement of sales divided by average receivables. For comparison purposes, the ratio is best expressed in terms of days rather than the number of annual turns.

$$\frac{\text{Sales/Average Receivables}}{365} = \text{Days Receivable}$$

For monitoring purposes, the Days Receivable calculation can be compared to both company performance from year to year as well as industry standards.

Significant shifts in Days Receivable must be investigated by the bank.

- Does the owner pay trade creditors according to required repayment terms?

Accounts payable turnover measures the number of times these current liabilities are paid to trade creditors (suppliers of inventory).

The bank must document supplier credit terms.

Borrowers who do not meet supplier credit terms in a timely manner will be placed on a “cash only” basis, cut off from trade credit. In this case, the bank may find itself in a “forced lending” situation.

Accounts payable turnover is a measurement of cost of sales divided by average payables.

For comparison purposes, the ratio is best expressed in terms of days rather than the number of annual turns.

$$\frac{\text{Cost of Sales/Average Payables}}{365} = \text{Days Payable}$$

For monitoring purposes, the Days Payable calculation can be compared to company performance from year to year and to supplier credit terms.

Significant shifts in Days Payable must be investigated by the bank.

<u>Important Point</u>**:** Owners can overstate both earnings and capital by “manipulating” inventory and accounts receivable values.

Keys to Success for Manufacturers, Wholesalers, Retailers and Service Companies

<u>Key Operating Cycle Questions</u>

- How does cash flow through the company’s operating cycle?
- When does cash flow?

    - When inventory is purchased, manufactured or sold.
    - When accounts receivable are collected.
    - When “bills” are paid.

- What is the quality of the owner’s <u>cash “investment”</u> decisions?
- What are the <u>repayment</u> consequences?

Owner/Lender Goals for All Operating Cycles

▪ Generate "sufficient" cash from operations to start the cycle over again

▪ Pay the Bank

▪ Pay the Owner

In This Order of Priority…Only!

Manufacturers

▪ Start with Cash to purchase…

▪ Raw Materials & Fund Labor Costs to produce…

▪ Finished Goods for Sale to create…

▪ Accounts Receivable for conversion back to…Cash…for Operations, Bank and Owner

Lending Risks for Manufacturers

• What can go wrong?
  - An inefficient manufacturing process
  - Missed sales targets
  - Poorly managed inventory
  - Poorly managed accounts receivable

The Bank Must Monitor These

Retailers

▪ Starts with Cash to purchase…
▪ Inventory for sale to create…Cash…for Operations, Bank and Owner

Note: Some retailers may offer customers credit terms and create receivables

Lending Risks for Retailers

▪ What can go wrong?
  - Missed sales targets
  - Poorly managed inventory

The Bank Must Monitor These

Wholesalers

- Starts with Cash to purchase…

- Inventory for sale to create…

- Accounts receivable for conversion back to…Cash…for Operations, Bank and Owner

Lending Risks for Wholesalers

- What can go wrong?

  - Missed sales targets
  - Poorly managed inventory
  - Poorly managed accounts receivable

The Bank Must Monitor These

Service Companies

- Starts with Cash to support and provide…
- Service delivery to create…
- Accounts receivable for conversion back to…Cash…for Operations, Bank and Owner

Lending Risks for Service Companies

- What can go wrong?

  - Missed sales targets
  - Poorly managed accounts receivable

The Bank Must Monitor These

Steps in Financial Analysis

The steps in financial analysis include:

- Balance Sheet and Income Statement Review.
- Comparative Analysis.
- Ratio Analysis.
- Cash Flow and Repayment Analysis.

<u>Balance Sheet and Income Statement Review</u>

This review permits the analyst to identify a company's "critical cash factors" which are discussed below.

Remember that these critical cash factors are sources and uses of cash.

<u>Comparative Analysis</u>

Comparative Analysis allows the credit analyst to quickly review a company's operating statements. Two types of comparisons can be made.

- Internal comparisons where company performance is measured from one year to the next.
- External comparisons where company performance is measured against third party data.

Internal comparisons are effective only if the analyst can establish meaningful trends.

"Common-sized" financial statements facilitate comparative analysis. Common-sizing reduces raw numbers to percentages.

Balance sheet accounts are divided by <u>total assets</u>.

Income statement accounts are divided by <u>sales</u>.

Critical Cash Factors

These factors represent sources and uses of cash. Successful business operations depend of how well the owner manages these variables. They include:

- Level of Sales and Growth Rate.
- Gross Margin (Product Price and Cost of Goods Sold).
- Sales, General, and Administrative Expense.
- Interest Expense.
- Taxes.
- Owner Distributions and/or Dividends.
- Accounts Receivable.
- Inventory.
- Fixed Assets.
- Accounts Payable.
- Financial Leverage (Debt Structure).

The factors are “critical because:

- They are controllable by management.
- They can be monitored by the bank using the borrower’s current financial statements.

Question: Which factor is most important and why?

Narrowing the Focus of the Analysis

Question: Assuming you begin a credit analysis with complete financial information, on average, how long will it take you to complete the analysis?

The scope of the analysis can be narrowed identifying what’s “most” important to analyze.

Every business has its own “critical cash factors”.

A review of the company’s balance sheet, income statement and operating cycle allows the lender or credit analyst to identify the important critical cash factors.

Quick Analysis

A quick analysis focuses on the trends in the common-size percentages for the following:

- Sales
- Gross Margin
- Operating Expenses
- ”Tangible” Net Worth
- Short-Term Debt

This analysis involves three steps.

Step 1: Gather the common-size percentages for each account for two consecutive years.

Step 2: Determine if the trend is positive, stable or negative.

Tangible net worth and current liabilities are a two-part test.

If TNW is less than 25% of total assets, then debt is greater than 75% of total assets, yielding a Debt/TNW ratio in excess of 3.00:1.00 which is high and results in a negative.

If current liabilities exceed current assets, there is no working capital and that results in a negative.

Step 3: Focus on the number of negative trends.

- One – Is there an offsetting positive trend.
- Two – This is a potential problem unless the business owner has already implemented problem-solving corrective action.
- Three -This is an actual problem borrower.
- Four – This borrower will potentially default.
- Five – In all likelihood, this borrower is a probable loss.

This analysis is a good indicator of actual problem loans two years prior to the company losing money and three years prior to default.

Reminder: This quick analysis does not necessarily preclude a more extensive financial analysis. However, beware of 3 negatives!

Quick Analysis Exercise #1

ABC Company provides professional mailing services to its customers. The bank provides a $200,000 line of credit which is secured by accounts receivable and the personal guaranties of the company owners. The owners request a renewal of the line of credit. From year-end operating results you learn the following:

	X1	%	X2	
Sales	$2,620	________	$2,830	________
Gross Margin	$ 752	________	$ 891	________
Operating Expenses	$ 695	________	$ 648	________
Total Assets	$1,545	________	$1,639	________
Current Assets	$ 877	________	$1.073	________
Current Liabilities	$ 563	________	$ 690	________
Tangible Net Worth	$ 631	________	$ 806	________

- First, calculate the common-size percentages for each account.
- Second, identify the number of positive and negative trends for the following:

  Sales

  Gross Margin

  Operating Expenses

  Tangible Net Worth

  Current Liabilities.

- Your conclusions?

Quick Analysis Exercise #2

XYZ Company manufactures patio furniture. 60% of the company's annual sales are made to a "big box" store. The company projects a 30% increase in sales for the coming year. XYZ needs to expand its manufacturing capability and requests a commercial real estate loan in the amount of $1,250,000. From year-end operating results, you learn the following:

	X1	%	X2	
Sales	$2,643	______	$3,689	______
Gross Margin	$1,110	______	$1,155	______
Operating Expenses	$1,055	______	$1,099	______
Total Assets	$1,449	______	$1,910	______
Current Assets	$1,341	______	$1,764	______
Current Liabilities	$ 853	______	$1,349	______
Tangible Net Worth	$ 262	______	$ 310	______

- First, calculate the common-size percentages for each account.
- Second, identify the number of positive and negative trends for the following:

  Sales

  Gross Margin

  Operating Expenses

  Tangible Net Worth

  Current Liabilities.

- Your conclusions?

Knowing the "Important" Ratio Calculations

Comprehensive financial analysis of a business' balance sheet and income statement will include the calculation of certain ratios, depending of the purpose of the loan.

For example, if the bank is financing a company's current working assets (account receivable and inventory), the following ratios will be calculated:

- Days Receivable Ratio
- Days Inventory Ratio
- Days Payable Ratio

There are five classes of ratio. These include:

- <u>Liquidity Ratios</u> measure the company's balance sheet liquidity. What is the company's ability to convert current assets to cash in order to bridge the irregular inflows of cash with the regular outflows of cash.

- <u>Asset Utilization Ratios</u> address the owner's efficiency in using company assets during the operating cycle.

- <u>Financial Leverage Ratios</u> address the inherent risk of the company's financial structure and they describe the relative levels of risk carried by creditors and owners.

- <u>Profitability Ratios</u> measure the owner's effectiveness in pricing, cost control, asset utilization and the use of financial leverage.

- <u>Expense Ratios</u> measure changing levels of expense versus sales over time.

<u>Liquidity Ratios</u>

- Current Ratio:

$$\frac{\text{Total Current Assets}}{\text{Total Current Liabilities}}$$

This ratio is an approximation of a company's ability to meet its current obligations. The higher (or stronger) the ratio the better.

This ratio does not address the underlying quality of current assets. A standard rule of thumb for liquidity is 2:1.

▪ Quick (Acid Test) Ratio:

$$\frac{\text{Cash + Accounts Receivable + Other Cash “Equivalents”}}{\text{Total Current Liabilities}}$$

This is a more conservative measure of a company’s liquidity. The standard rule of thumb here is 1:1. A ratio of less than 1:1 indicates the company must rely upon the sell down of inventory to repay short-term debt.

Utilization Ratios

▪ Days Receivable

This ratio expresses the average number of days that a company’s accounts receivable are outstanding. A higher number of days might indicate account delinquencies.

This calculation is a two-step process.

$$\frac{\text{Sales}}{\text{Accounts Receivable}}$$

$$\frac{365}{\text{Sales/Receivables Ratio}}$$

▪ Days Inventory

This ratio expresses the number of days that inventory is available for sale. A high inventory turnover can indicate strong liquidity or effective marketing. A high turnover can also indicate a shortage of inventory to meet current sales levels.

A low inventory turnover can indicate weak liquidity or the presence of unsalable inventory. It can also indicate a planned build-up of inventory in anticipation of a materials shortage. The calculation is also a two-step process.

$$\frac{\text{Cost of Sales}}{\text{Inventory}}$$

$$\frac{365}{\text{Cost of Sales/Inventory}}$$

- Days Payable

This ratio expresses the number of days accounts payable to suppliers (trade creditors) are outstanding. The number of days calculated should closely match the repayment terms offered by suppliers.

This indicates that the company is meeting its trade obligations in a timely manner.

The calculation is a two-step process.

$$\frac{\text{Cost of Goods Sold}}{\text{Accounts Payable}}$$

$$\frac{365}{\text{Cost of Goods Sold/Accounts Payable}}$$

Leverage Ratios

Companies with high levels of debt in relation to net worth are highly leveraged. Companies like these are more vulnerable to economic downturns and increasing rate environments.

While rules of thumb for this ratio can vary from industry to industry, a ratio of 2:1 indicates acceptable financial leverage.

- Debt/Worth

This ratio expresses the relationship between capital (or equity) contributed by creditors versus that contributed by the company.

The higher the ratio, the greater the risk assumed by creditors. A lower ratio usually indicates long-term financial safety.

$$\frac{\text{Total Debt}}{\text{Adjusted (or Tangible) Net Worth}}$$

Profitability Ratios

Profitability ratios measure the owner's performance.

- Return on Sales

This ratio measures the owner's effectiveness in managing pricing, costs and overall company performance.

It expresses how many cents of every sales dollar contribute to pre-tax profit.

$$\frac{\text{Profit Before Taxes}}{\text{Net Sales}}$$

Note: Result is multiplied by 100 to create a percentage

- Return on Assets

This ratio expresses the pre-tax return on assets and measures the owner's effectiveness in using all resources available to the company.

$$\frac{\text{Profits Before Taxes}}{\text{Total Assets}}$$

Note: Result is multiplied by 100 to create a percentage

- Return on Equity

This ratio expresses the rate of return on the company's tangible (adjusted) net worth.

$$\frac{\text{Profit Before Taxes}}{\text{Tangible (Adjusted) Net Worth}}$$

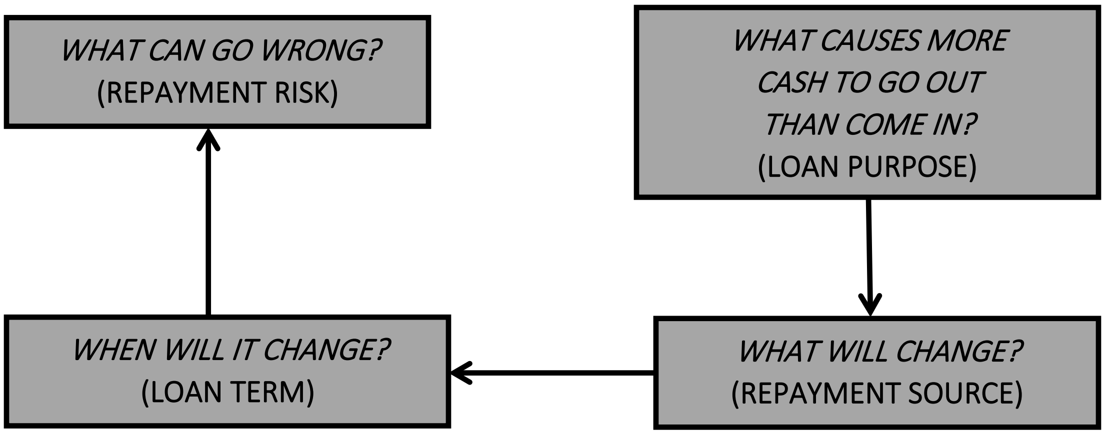
Note: Result is multiplied by 100 to create a percentage

Expense Ratios

Any expense on the company's income statement can be converted to an expense ratio by dividing the account by net sales.

Cash Flow Available for Debt Service

Basic Cash Flow Questions

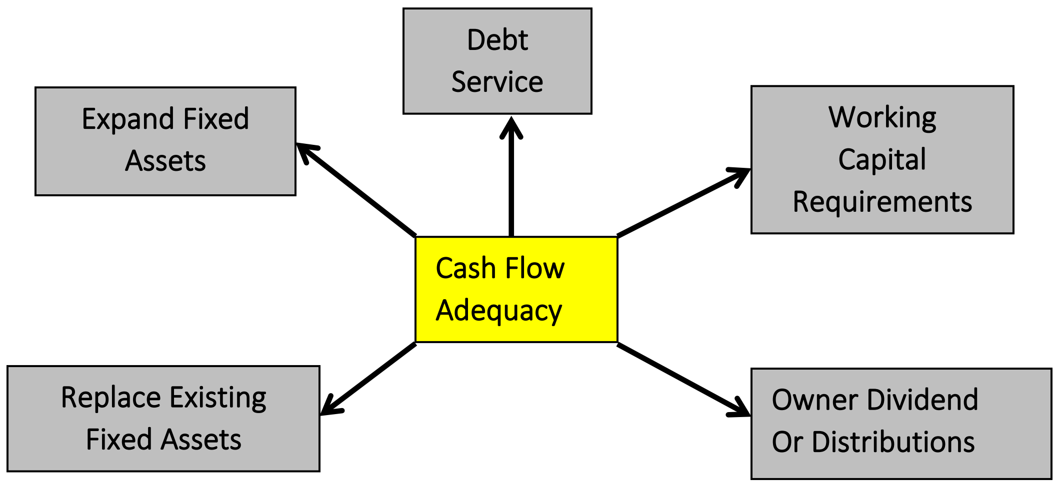


Underwriting Questions

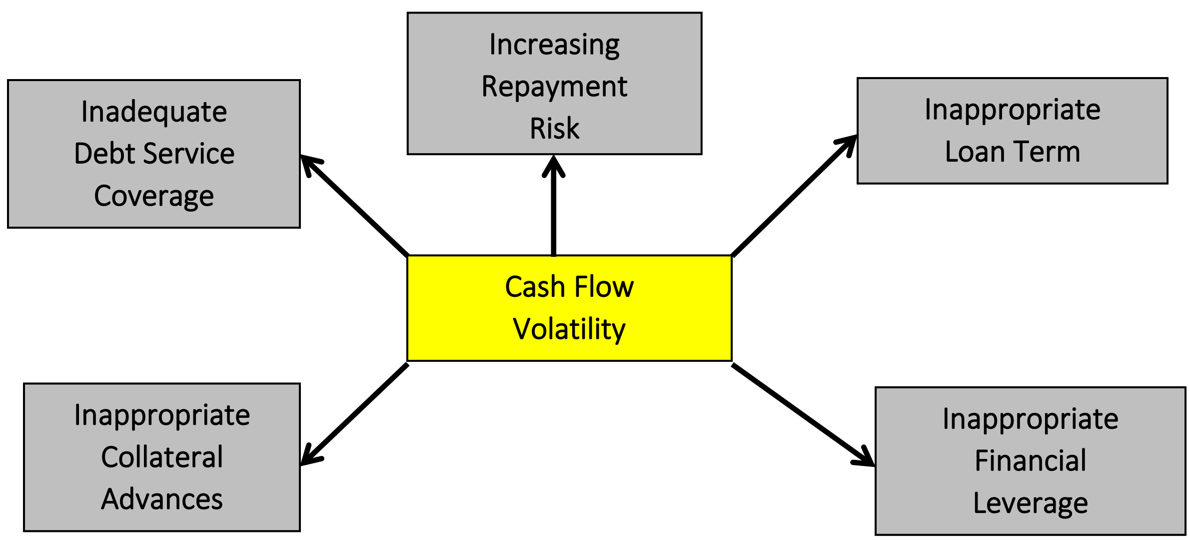
- Is the loan purpose specific? Does the purpose "make sense"?
- Is the global debt service coverage ratio acceptable?
- Have the repayment sources been properly underwritten, including guarantors if applicable?
    - What is the most appropriate source of repayment for short-term debt, i.e., a line of credit?
    - What is the most appropriate source of repayment for a term loan?
- Is the proposed loan term reasonable and within bank policy limits?

Two Key Issues in Analyzing Cash Flow

- When is a company's cash flow adequate?



- What causes the company's cash flow to be volatile?



Calculating Repayment Capacity

Traditional Calculation

$$\frac{\text{Net Profit + Depreciation Expenses + Interest Expense}}{\text{Global Debt Service}}$$

EBITDA

$$\frac{\text{Earnings Before Interest and Taxes + Depreciation + Depletion + Amortization}}{\text{Global Debt Service}}$$

Personal Cash Flow

These models integrate both business and personal cash generated during the business cycle then makes adjustments for the following:

- Business Debt Service.
- Personal Debt Service.
- A provision for the borrower's personal lifestyle.

Note: A Debt Service Coverage Ratio is not calculated when using this model.

Uniform Cash Analysis (UCA)

Like Personal Cash Flow, these models integrate both business and personal cash generated during the business cycle then makes adjustments for the following:

- Business Debt Service.
- Personal Debt Service.
- A provision for the borrower's personal lifestyle.

Additionally, a Debt Service Coverage Ratio is not calculated when using UCA.

Question: How does your bank provide for the business owner's personal lifestyle?

Core Cash Flow Analysis

The model recognizes that internally generated cash flow is Net Profit + Non-Cash expenses.

The first priority for the use of cash is the viable core of business assets by replacing assets as needed and amortizing debt.

In this case, sales growth is discretionary.

The calculation is shown below.

Net Profit + Depreciation Expense
Less: Replacement Capital Expenditures
Less Scheduled Debt Service
Less: Distributions in Lieu of Taxes
Core Cash Flow

Core cash flow is available to fund working capital requirements, amortize revolving debt and support owner lifestyle.

Global Debt Service Coverage Analysis

"Global" simply means "all", as in all sources of cash available for debt service adjusted for all uses of cash that will occur prior to servicing debt.

Once adjustments have been made, the remaining cash can be divided by total annual debt service to calculate a global debt service coverage ratio.

This ratio calculation is essential for both loan pricing and risk rating assignment.

Financing Current Working Assets (Accounts Receivable and Inventory) and Calculating Working Capital Requirements

The lender faces two primary challenges when structuring a line of credit for the purpose funding a company's working capital requirements.

1. At initial underwriting, determining the amount of the line, or in the case of renewing an existing line, how much additional funding will be required.

2. Determining, based on a variety of factors, when to inform the borrower that the bank will no longer increase short-term debt and will now require the borrower to amortize some portion of the short-term debt currently extended.

To better understand these two challenges, a general understanding of working capital is required.

Working Capital

"Net" Working Capital is defined as Current Assets – Current Liabilities.

Working capital bridges the "gap" between the sale of inventory, collection of accounts receivable and the payment of accounts payable to trade creditors.

Inv Turnover (Days) **A/R Turn (Days)**

0 90 60 150

A/P Turnover (Days) **Working Capital**

0 45 150 (Bank + Owner)

With the exception of seasonal businesses, the gap will be permanent.

Working capital will be necessary to primarily fund a company's projected sales growth.

What Creates A Need For Working Capital?

- Growth in sales
- Creation of a competitive advantage
- Take advantage of trade discounts
- Fund operating Losses
- Overcome inefficiencies in the operating cycle

Calculating the Working Capital Financing Gap

The financing gap calculation is used to project a company's working capital requirements based on current and projected sales.

Consider the following financial information:

ABC Company

Assets		Liabilities	
Cash	$ 250,000	Notes Payable	$400,000
A/R	$ 750,000	A/P	$375,000
Inventory	$1,125,000	Accruals	$100,000
		CMLTD	$ 85,000
Total Current Assets	$2,125,000	**Total Current Liabilities**	$1,000,000
Fixed Assets	$ 375,000	Long Term Debt	$ 500,000
		Capital	$1,040,000
Total Liabilities	$2,500,000	**Liabilities & Capital**	$2,500,000

Income Statement

Sales	$4,500,000	
COGS	$2,925,000	
Gross Profit	$1,575,000	
Operating Expenses	$1,203,750	(Depreciation = $200,000)
Operating Profit	$ 371,250	
Interest Expense	$ 90,000	
Taxes	$ 101,250	
Net Profit	$ 180,000	

Accounts receivable, inventory and accounts payable are the primary components of a company's working capital. These components can be expressed as a percentage of sales.

ABC Company's Financing Gap Calculation

% of Sales ($4,500,000)

Accounts Receivable ($750,000)	17.0	(Use of Funds)
Inventory ($1,125,000)	30.0	(Use of Funds)
Accounts Payable ($375,000)	<10.0>	(Source of Funds)
Financing Gap	37.0	

A company's financing gap is the owner's cash investment in accounts receivable and inventory less the financing provided by accounts payable.

This assumes that the growth in working capital components will be proportionate with the growth in sales.

For ABC Company, each $1.00 increase in sales will result in a funding gap of 37 cents.

This gap must be funded by internally generated profit, a capital contribution or an increase in the bank's line of credit.

Assume ABC Company projects a 5% increase in sales for the coming year.

Projected Sales	$4,725,000
Current Sales	$4,500,000
Net Projected Increase	$ 225,000
	X .37
Projected Additional Working Capital Requirement	$ 83,250

Question: What will the borrower's preference for funding this additional working capital requirement? Utilize profit? Invest additional capital? Or approach the bank for an increase in the bank's line of credit?

Determining When to Term Out Revolving Debt

The second challenge when structuring lines of credit is how to determine when to inform the borrower that the bank will no longer increase short-term debt and will now require the borrower to amortize some portion of the short-term debt currently extended.

The bank's decision is based on the answers to five questions:

1. Can the borrower reasonably amortize the proposed amount in five years or less?

2. Can the borrower maintain a minimum acceptable debt service coverage ratio (1.25:1.00?) including the proposed amount of revolving debt to be amortized?

3. Can the borrower manage the company's financial leverage (debt/tangible net worth) to less than 3.00:1.00?

4. Will the bank's collateral remain properly margined?

5. Can the borrower maintain a current ratio greater than 1.30:1.00?

Whenever the owner's projected sales growth will cause the above factors to exceed the control points, a portion of the current line of credit must be amortized.

Note: A loan agreement covenant requiring the borrower to maintain a minimum 1.30:1.00 current ratio limits the maximum short-term debt to a manageable amount.

The first step in determining the amount of revolving debt to amortize is to calculate the company's core cash flow. Consider the following model:

Net Profit
+ Depreciation (and other non-cash expenses)
Less Replacement Capital Expenditures
Less Scheduled Debt Service
Less Distributions (if applicable)
Core Cash Flow Available

Note: Core Cash Flow is available for the following:

- Working Capital
- Amortizing Revolving Debt
- Owner Lifestyle (including Dividends and Distributions)

ABC Company Core Cash Flow Calculation

Net Profit	\$180,000
+Depreciation	\$200,000
Less Replacement Capital Expenditures	\$200,000*
Less Scheduled Debt Service	\$ 85,000
Less Distributions	\$ - 0 –
Core Cash Flow	\$ 95,000

The second step is to determine how much of short term, if any, debt should be amortized. Again, using ABC's core cash flow:

Core Cash Flow	\$95,000
To Provide 1.25:1.00 DSC	X .80
	\$76,000
	X 5 Years (Max amortized term)
	\$380,000

The current outstanding balance on ABC's line of credit is $400,000. In this example, the bank must (1) require ABC Company to amortize $20,000 and (2) cause the owner of ABC Company to agree to stabilizing sales.

Question 1: Will the owner of ABC Company agree to the bank's requirements?

Question 2: When is the best time to discuss amortizing revolving debt with the borrower?

Understanding the Relationship Between Balance Sheet Equity and Financial Leverage

Question: How do business owner's measure "success"? In other words, what is the business owner's priority for the use of cash?

For example:

- Grow Sales?
- Increase Equity?

Which do you think is most important?

Balance Sheet Equity

The "Balance Sheet Equation" is Assets = Liabilities and Equity (Net Worth).

The business' equity is the difference between total business assets (adjusted for overstatements) less total liabilities.

Assets adjustments are typically made for overstated (uncollectible) accounts receivable and (unsalable) inventory. Other asset adjustments include assets that add no tangible business value.

Financial Leverage

Financial leverage is the relationship between business equity and total business debt. The best measure of leverage is Tangible (Adjusted) Net Worth divided by Total Liabilities.

A debt/tangible net worth ratio of less than 3.00:1.00 is acceptable. A ratio greater than 3.00:1.00 indicates excessive financial leverage.

A company's debt/tangible net worth financial leverage ratio indicates to what extent the business can withstand long-term financial adversity (i.e., risks from the company's external environment.

Loan Structure Issues

Cash Flow Adequacy

- Can the company adequately service both short term and long-term debt?
- Can the company replace existing fixed assets and expand assets as necessary?
- Can the company fund its working capital requirements based on the trend in sales?
- Can the company pay dividends without impairing operating cycle performance?

Cash Flow Stability or Volatility

- If the company's cash flow is not stable, what is causing the volatility?
    - Is repayment risk increasing due to unacceptable debt service coverage?
    - Is the borrower's total debt improperly structured?
    - Is the borrower's financial leverage increasing?
    - Has the bank exceeded its established collateral advance rates?

Loan Support Provided by Collateral

- What are the bank's advance rates on various classes of collateral?
- How will the bank monitor the quality of its collateral over the life of the loan?

Acceptable Repayment Terms

- Are repayment terms in compliance with established loan policy requirements?
- Is the bank financing the shorter of either the useful life of the asset or the depreciable life of the asset?
- Is there an acceptable relationship between the company's core cash flow and its outstanding debt?

Loan Monitoring Requirements

- What will be the bank's financial statement requirements and what will be the frequency of presentation of this information?
- What affirmative and negative covenants will be incorporated into the commercial loan agreement?

Questions Related to Loan Structure

The bank must answer the following:

1. How will it properly finance the borrower's working capital requirements?

2. What will be the appropriate term for a loan originated to acquire fixed assets?

3. When will the bank require the borrower to convert revolving debt to amortizing debt?

4. How will the bank finance a service company with few tangible collateral assets?

5. At what point will the bank "encourage" the borrower to slow sales growth?

6. How will the bank determine the appropriate repayment period for a seasonal line of credit?

7. How will the bank define acceptable cash flow and debt service coverage?

Loan Structure Mistakes

Bank lenders can make the following "unforced errors":

1. Failing to accurately project peak working capital requirements.

2. Failing to provide additional working capital requirements when financing fixed assets (i.e., additional depreciation and interest expense).

3. Failing to provide for replacement of existing fixed assets and the addition of new fixed assets.

4. Failing to properly monitor line of credit usage and permitting the borrower to use advances to fund the purchase of fixed assets.

5. Requiring businesses with level sales to "clean-up" lines of credit for other than liquidity purposes.

6. Failing to properly margin collateral throughout the business cycle.

7. Failing to require the amortization of a loan for the purchase of fixed assets to the shorter of the depreciable life of the asset or the useful life of the asset.

8. Failing to require the borrower to term out revolving debt as discussed above.

9. Failing to maintain a manageable relationship between core cash flow and revolving debt on the balance sheet.

Analyzing the Small Business Owner's Personal Financial Statement

Basics to Consider

Before evaluation of the owner's personal financial statement, consider the following:

- Is the statement addressed to your bank?
- Have all sections been completed by the borrower?
- Is the statement signed and dated by the borrower and spouse (if all or some of the assets are owned jointly?)
    - Individually owned assets should be identified.
- Is the financial statement current (by date) in compliance with bank policy?
- Is the statement dated prior to loan disbursement?
- Has the statement been checked for math errors?
- Does the statement summarize debt service payments?
    - If not, such a summary must be obtained.
- Have all contingent liabilities been itemized?

The Mix of Assets and Liabilities

- Are the assets listed liquidity, marketable and solvency?
    - In other words, how quickly can assets be sold and for what amount of cash?
- Can the ownership of assets be verified?
- Do the asset values listed correspond with the borrower's reported income?
- Does the mix of reported liabilities correspond with the mix of assets reported?
- Can the reported liabilities be repaid from the borrower's income and cash flow or will assets have to be sold to provide a source of repayment?
- Does there appear to be an over-reliance on revolving debt (i.e., credit card debt)?

Other Considerations

- Is the income report continuing and verifiable? Is it recurring and stable?)
- Has the borrower provided a summary or estimate of personal living expenses?
    - This information will be needed for the global debt service coverage analysis.
- Is the reported insurance coverage adequate given the borrower's lifestyle?

Adjusting Net Worth

The borrower's personal financial statement must be adjusted for the over (or under) stated value of the assets and liabilities listed. This process is both objective and subjective.

For example, liabilities can be checked against the borrower's credit report.

Cash balances can be verified. Some assets, such as marketable securities, can be checked against most recently quoted prices.

In the case of other assets, the process can be very subjective. Adjustments can be made on the basis of the bank's experience in liquidating certain types of assets.

In other cases, the lender can rely on general knowledge of the local market.

Typically, the following assets, if listed, are "adjusted" or deducted from net worth:

- Personal assets not supported by appraisals such as furniture, jewelry, furs, etc.
- The value of closely held businesses.
- Amounts due from related parties.
- Pledged cash value of life insurance.

Determining the Potential Impact of "Contingent Liabilities"

While a borrower's contingent liabilities can include litigation, the primary concern for lenders is to identify all of the personal guaranties given by the borrower.

Personal guaranties are required for several reasons:

- They may demonstrate the owner's commitment to repay.
- Guaranties can minimize a borrower's ability to transfer business assets into personal ownership.
- They represent a potential vehicle for the bank to gain leverage in the management of a problem loan.
- If properly underwritten, personal guaranties can represent a secondary source of repayment.

There are two truths with regard to personal guaranties:

1. The only time a bank relies on the guaranty is when problems arise.
2. Problems arise for guarantors (and the bank) at the worst possible time!

A personal guaranty always represents a potential claim on the borrower's liquidity and net worth.

Reminder: A bank cannot require a spouse to guarantee company debt unless the spouse is a shareholder or company officer. (Regulation B)

<u>Underwriting the Value of Personal Guarantees</u>

- What is the purpose of a personal guarantee?

- What is a personal guarantee really worth?

The "cash" value of a personal guarantee must be supported by the guarantor's unassailable character (extreme willingness to repay) and personal (measurable) wealth (realistic ability to repay).

All personal guaranties must be underwritten using current financial information. Personal Guaranties may be" unlimited" or "limited".

Personal Guaranties may be unsecured or secured.

Sample Provisions of An Unlimited Personal Guaranty

- Continuing Guarantee of Payment and Performance.
- Indebtedness.
- Continuing Guaranty.
- Duration of Guaranty.
- Guarantor's Authorization to Lender.
- Guarantor's Representations and Warranties.
- Guarantor's Financial Statements. (Annual Personal Financial Statements and Tax Returns)
- Guarantor's Waivers.
- Guarantor's Understanding With Respect to Waivers.
- Right of Setoff.
- Subordination of Borrower Debts to Guarantor.
- Miscellaneous Provisions
- Definitions.

Evaluating the Bank's Collateral Position

Collateral – Strengthens the borrower's character by putting borrower assets at risk.

Question: When is the only time the bank relies on the value of collateral?

Key Beginning Points

- Cash (and only cash) repays a loan!
- Not Collateral!
- Just Cash! (Preferably the Borrower's Cash!)

Collateral is only as good as the lender's ability to locate it, identify it, lay legal claim to it and sell it for enough to recover the outstanding principal balance plus interest and the cost of liquidation.

Collateral Quality is a function of:

- Collateral Liquidity
- Marketability
- Dependability of Value
- Controllability

Collateral Value

Collateral supports timely and orderly repayment.

The bank's valuation of current and proposed collateral is one of the most important parts of the loan underwriting process.

Banks establish "advance rates" for various types of collateral in order to establish prudent loan-to-value relationships between the collateral and outstanding indebtedness.

For example:

- 70% against eligible accounts receivables

- 40% against eligible inventory

- 80% against new equipment

- 50% against used equipment

- 75% to 80% against owner occupied commercial real estate

- 70% to 75% against non-owner occupied commercial real estate

Assigning Timely and Accurate Risk Ratings

Credit risk is the primary financial risk in the banking system and exists in virtually all income-producing activities.

How a bank selects and manages its credit risk is critically important to the bank's performance over time.

Capital depletion through loan losses has been the primary cause of nearly all bank failures.

Identifying and rating credit risk is the essential first step in managing it effectively.

It is a regulatory expectation for banks to have loan quality risk management systems that produce accurate and timely risk ratings.

Accurate classification of borrower relationships is among the top supervisory priorities.

An effective loan quality rating system provides Management and the Board of Directors with a clear picture of the makeup and quality of the bank's loan portfolio.

Board and Management Expectations

No single credit risk rating system works for every bank.

The risk rating parameters described below should be incorporated into the bank's loan quality rating system.

The system should be integrated into the bank's overall portfolio risk management.

It should form the foundation for credit risk measurement, monitoring, and reporting, and it should support management's and the board's decision making.

The board of directors should approve the credit risk rating system and assign clear responsibility and accountability for the risk rating process.

The board should receive sufficient information to oversee management's implementation of the process.

The risk rating system should assign an adequate number (or range) of ratings.

To ensure that risks among pass credits (i.e., those that are not adversely rated) are adequately differentiated, most rating systems require several pass grades.

Risk ratings must be accurate and timely.

The criteria for assigning each rating should be clear and precisely defined using objective (e.g., cash flow coverage, debt-to-worth, etc.) and subjective (e.g., the quality of management, willingness to repay, etc.) factors.

Ratings should reflect the risks posed by both the borrower's expected performance and inherent transaction risk

The risk rating system should be dynamic — ratings should change when the risk of loan loss changes.

The risk rating process should be independently validated (in addition to regulatory examinations).

Banks should determine through back-testing whether the assumptions implicit in the rating definitions are valid   that is, whether they accurately anticipate outcomes.

If assumptions are not valid, rating definitions should be modified.

The rating assigned to a borrowing relationship should be well supported and documented in the credit file.

Loan Quality Rating Controls

A number of interdependent controls are required to ensure the proper functioning of a bank's loan risk rating process.

The board and senior management must ensure that a suitable framework exists to identify, measure, monitor, and control credit quality and the risk of loan loss.

Board-approved policies and procedures must guide the risk rating process.

These policies and procedures should establish the responsibilities of both management and individual lenders.

The board and management also must instill a credit culture that demands timely recognition of the risk of loss and a lending culture that has little tolerance for rating inaccuracy.

Unless the board and senior management meet these responsibilities, their ability to oversee loan portfolio quality will be adversely affected.

Staffing

The best and most important control over loan quality ratings is a well-trained and properly motivated staff.

Personnel who rate credits should be proficient in the bank's rating system and in credit analysis techniques.

Most banks typically assign the responsibility for loan quality ratings to individual loan officers.

Loan officers maintain the closest contact with the borrower and have access to the most timely information about their borrowers.

Keep in mind, however, that their objectivity can be compromised by those same factors and their incentives are frequently geared more toward producing loans than rating them accurately.

Subjective vs. Objective Risk Ratings

Subjective loan quality ratings provide narrative guidance to assess the risk of loan loss.

Examples: Narrative descriptions of risk levels such as "Substantially Risk Free", "Minimal Risk", "Modest Risk", etc.

Objective loan quality ratings provide defined guidance.

Examples include:

- Current Ratio Requirements
- Debt to Tangible Net Worth Requirements
- Debt Service Coverage Requirements

Range of Ratings

The range (or individual number) of ratings depends on:
- The scope of the bank's lending activities
- The composition of the bank's loan portfolio
- The size of the bank's loan portfolio
- The bank's historical experience with loan loss

A Risk Rating Exercise

Using the terms "performing", "watch", "substandard", "doubtful" or "restructured troubled debt candidate", risk rate the following:

1. The company does not generate sufficient cash flow to service quarterly principal payments, but has adequate cash flow to service monthly interest expense.
2. The company has recently lost a large customer and the decline in sales is expected to have a negative impact on the company's financial performance going forward.
3. The company has recently lost a large customer and the decline in sales is expected to have a negative impact on the company's financial performance going forward. However, the company's current global debt service coverage ratio is strong. The company has relatively low financial leverage, a 3.00:1.00 current ratio and a strong cash position.
4. The company has filed bankruptcy and is in a long-term workout. Term debt is secured by collateral consisting of fixed assets. However, there is no reliable estimate of market or net liquidation value.

5. The company's aggressive sales growth has outstripped both internally generated working capital and the company's net worth. Liquidity is very tight and both gross and net profit margins have started to decline. The company's projected global debt service coverage ratio is 1:15:1.00.
6. The company has declining but marginally adequate global debt service coverage, recent net operating losses, is unable to meet projections, is not in compliance with several loan agreement covenants, has very high financial leverage, and unproven management. However, the loan is performing as agreed.

<u>Two Questions</u>

Would you describe your bank's loan quality rating descriptions as more subjective or more objective in nature?

Do you believe that risk ratings are applied in a timely and accurate manner by lenders, credit analysts and loan review staff at all times?

Brief Comments on Problem Loan Management

<u>When is a borrower really a "problem"?</u>

- When the borrower cannot repay according to the note's repayment terms.
- When the borrower cannot otherwise perform per a governing commercial loan agreement.
- When the borrower's "loan support" (collateral, personal guaranty) no longer offsets the <u>current</u> repayment weaknesses.

<u>A Problem Loan Definition</u>

<u>Any</u> loan with the potential for a breakdown in the repayment agreement which subjects the bank to the <u>prospect</u> of loss.

The following should be documented in a problem borrower report.

- The servicing officer (and originating officer, if different)
- The borrower
- Guarantors, if any
- Total bank indebtedness and number of loans
- The borrower's current status

    - Original loan purpose
    - Original repayment sources

- Cause(s) of the problem (internal and external)
- Current and proposed risk rating
- Annual debt service summary
- Collateral review and valuation
- Financial documentation and debt service coverage analysis
- Disposition Strategy

    - Likelihood of Borrower-Initiated Bankruptcy
    - Continue working with the borrower [ ]
    - Liquidate Collateral Assets [ ]
    - TDR Status (if applicable)
    - Rationale for Bank Action and Action Plan

Trend Analysis Case Studies

Consider the following trend information, then answer the questions below:

	X1	X2	X3
Company 1			

Sales are increasing annually at a rate of approximately 5%.

Current Ratio	2.10:1.00	1.90:1.00	2.20:1.00
Days Inventory	40 Days	38 Days	38 Days
Days Receivable	47 Days	48 Days	48 Days
Days Payable	29 Days	31 Days	31 Days
Profitability % (of sales)	4%	4%	4%
Leverage Ratio	2.78:1.00	2.75:1.00	2.80:1.00

Notes:

- Company credit terms are net 45 days. (Historical Days receivable averages 47 days.)
- X3 RMA Days Inventory is 35 days.
- Supplier credit terms are net 30 days.

Comments

	X1	X2	X3
Company 2			
Sales are flat.			
Current Ratio	2.00:1.00	1.92:1.00	1.80:1.00
Days Inventory	42 Days	48 Days	52 Days
Days Receivable	35 Days	39 Days	42 Days
Days Payable	36 Days	42 Days	44 Days
Profitability %	5%	4%	3%
Leverage Ratio	2.10:1.00	1.90:1.00	1.70:1.00

Notes:

- Company credit terms are net 30 days. (Historical Days receivable averages 47 days.)

- X3 RMA Days Inventory Average is 40 days.

- Supplier credit terms are net 30 days.

Comments

Company 3

Sales are increasing at a rate of approximately 10% annually.

	X1	X2	X3
Current Ratio	2.20:1.00	2.25:1.00	2.50:1.00
Days Inventory	40 Days	39 Days	38 Days
Days Receivable	55 Days	56 Days	54 Days
Days Payable	29 Days	28 Days	27 Days
Profitability %	5%	6%	7%
Leverage Ratio	1.75:1.00	1.60:1.00	1.55:1.00

Notes:

- Company credit terms are net 60 days. (Historical Days receivable averages 57 days.)
- X3 RMA Days Inventory is 40 days.
- Supplier credit terms are net 30 days.

Comments

Concluding Case Study

Acme Corporation is a manufacturer with level sales. The corporation's 20X0 and 20X1 balance sheets are given below.

The 20X1 income statement is also provided. Using this information:

1. Calculate Acme's 20X1 financing gap and core cash flow.

2. Given Acme's core cash flow, calculate the maximum line of credit the bank <u>should</u> extend.

Notes:

1. In the calculation of Excess (Core) Cash Flow, assume that Replace Cap X = $225.

2. There are no distributions.

3. X1 RMA information indicates that average inventory turnover is 75 days.

4. Acme extends 30-day credit to its customers.

5. Acme's suppliers extend 30-day credit terms.

Acme Corporation Balance Sheet

Assets	20X0	20X1
Cash	156	168
Accts Receivable	463	570
Inventory	694	847
Fixed Assets	344	414
Total Assets	1,657	1,999
Liabilities		
Notes Payable	181	377*
CMLTD	63	63
Accts Payable	298	354
LTD	350	300
Owner Equity		
Capital	340	340
Retained Earnings	425	565
Total Liabilities & Equity	1,657	1,999

*Current Line Availability is $400

X1 Income Statement

Sales	$5,000
COGS	$3,000
Gross Profit	$2,000
- Operating Expenses	$1,500
- Depreciation	$ 225
- Interest Expense	$ 60
Operating Profit	$ 215
- Taxes	$ 75

Net Profit After Taxes	$ 140

Financing Gap Calculation

	% of Sales
Accts Receivable	_________
Inventory	_________
Accts Payable	_________
Financing Gap	_________

Core Cash Flow Calculation

Net Profit	$_________
+ Depreciation	$_________
Less Replacement Capital Expenditures	$ 225*
Less Scheduled Debt Service	$_________
Less Distributions in Lieu of Taxes	$ - 0 -
Core Cash Flow	$_________

*Replacement CAPEX = Depreciation in this case.

LOC/Revolving Debt Calculation

Core Cash Flow	$
To Provide 1.25X Debt Service Coverage	X_________
	__________
X Maximum Amortization	X 5 years
Maximum Amount of Revolving Debt	$_________
Current Balance on the LOC	$377*

*Current Line Availability is $400

For Discussion:

- If Acme advances the remaining LOC availability and no other sources of cash are available to fund growth, what is the maximum potential sales increase in X2?

- Acme projects a 5% increase in sales for X2 and requests a $75,000 increase to the current line of credit. What should the bank's response be and why?

- How should the bank view the health of Acme's balance sheet? What are the trends in the major components of working capital? (Use year-end balances for any calculations.)

- What specific loan covenants should the bank negotiate with Acme at this time?

- From "Day One", what loan covenants <u>should have been</u> in place?

Concluding Observations

Don’t make these Credit Risk Management Mistakes.

- Aggressive loan underwriting.
- Aggressive loan structuring and loan pricing.
- Growth into “high risk” types of lending.
- Overlooking the risks in loan concentrations.
- Heavy reliance on non-core funding sources.
- Loan growth at the expense of loan quality.
- Slow reaction to emerging problem borrowers.
- Lending “Arrogance”!