Training Manual: The Basics of Financing Agriculture

Module 5.2 | Analyzing Financial Statement

Acknowledgement

The Agriculture Finance Training Manual is part of AgriFin's Agriculture Finance Training Tools. The Manual was developed by IPC - Internationale Projekt Consult GmbH as part of AgriFin's technical advisory project for Cameroon Cooperative Credit Union League (CamCCUL).

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Session Overview

LEARNING OBJECTIVE	Analyzing the financial sustainability of SMEs requires an in-depth understanding of their business, the key financial statements, and the potential risks involved. This session provides a step-by-step guide on reviewing financial documents, analyzing key trends and taking investment decisions.
SCOPE	At the end of the session, the trainee will have an understanding of the following areas: • Validating official documents provided by the client, including cross-checking and verification protocols • Assessing qualitative Information based on market studies • Analysing financial statements and making calculated inferences • Evaluate client credit history and asset base to assess the collateral and repayment schedule
TARGET	Agriculture loan officers, financial analysts, trainers, and other professionals interested in agriculture financing
DURATION	2 hours

Content

1. Cross-checking and Verification (contd.)
2. Market Position Assessment
3. Ownership & Management Structure Review
4. Financial Position Assessment
5. Business Equity
6. Profitability & Payment Capacity
7. Revenues
8. Financial Ratio Analysis
9. Liquidity Ratios
10. Efficiency Ratios
11. Net Working Capital
12. Debt Ratios
13. Profitability Ratios
14. Financial Assessment
15. Investment Plan
16. Credit History
17. Collateral

1. Cross-checking and Verification

Balance sheet cross checks - assets		
	Supporting documents	**Cross-check**
Cash	n/a	Visual verification
Inventories	List of inventories	Random visual check
Accounts payable	List of receivables	Visual check of the records of the most important buyers
Fixed assets	Ownership document	Visual check
Balance sheet cross checks - liabilities		
	Supporting documents	**Cross-check**
Accounts payable	List of payables	Interview with the client, crosscheck with latest purchases
Loans from banks	Credit bureau report	Crosscheck from client interview
Informal debt	n/a	Crosscheck from client interview

Pay special attention to the larger items when verifying balance sheets

1. Cross-checking and Verification (contd.)

Profit & Loss cross checks		
	Supporting documents	**Cross-check**
Sales	Sales book	Examination of client records, and verification of inventory and purchases
Cost of sales	Client's calculation of cost of sales	Examination of client's calculation of COS, inventory list; check purchase and sales price of 5 randomly chosen items.
Salaries	Client reports on salaries during last month	Cross check with client employees and market standards
Marketing		Plausibility check

Thoroughly verify the complete transactions for larger items in the P&L statements

2. Market Position Assessment

Goods & Services offered
Examine the products. Determine how long Client has been selling them. With what success? Are there substitute products? What is the future demand for such products?

Pricing and sales policy
Compare Client's prices and prices of the competition. Does he have to reduce prices at some point? How does this impact net profitability?

Competitors and competitive advantages
Examine the competition (size and number) and establish the Client's ranking in the market. What is the Client's comparative advantage which will help him to provide clients with a competitive product?

Customer base
Analyze Client's clients , and their characteristics, and their potential move to other suppliers.

2. Market Position Assessment (contd.)

Assessment of demand
Establish if there is demand for the Client's products and its development. Increasing demand should provide higher sales, i.e., higher repayment capacity, where as lower future demand, reduces repayment capacity.

Market size, geographic location.
What is the size, location of the market . Does the Client have expansion plans? Are his plans realistic?

2. Market Position Assessment (contd.)

Assessment

Strong

- Client has been operating successfully in the market for a long period of time;
- Client has a significant and/or increasing market share; Client has competitive advantages; the market has strong entry barriers;
- Client has strong, long-term relationships with his/her clients and suppliers
- There is a continuous demand for the client's goods/services;
- Client is able to adjust output prices to conform to increasing input prices;
- Client has a clear strategy for maintaining and developing his/her business in the future

Satisfactory

- You were able to verify several of the above-mentioned statements, but the Client has
- No significant competitive advantages,
- the Client's position in the market can be rated as satisfactory so long as he/she has long-term relationships with his/her clients, as this will ensure the continuity of the business for the future

Weak

- Credit Analyst identifies weaknesses with respect to the above-mentioned key characteristics, such as falling market shares, strong competitors entering the market, unsustainable relationships with clients and suppliers, etc.

3. Ownership & Management Structure Review

From interviews with the Client and references from other business men:

What is the owner's background?
→ Is he a respectable and reliable business man?

Does the business have multiple owners? What is their relationship and their competencies? What are their obligations/ rights in the business? Is there a succession plan
→ Is there risk coming from any other owner?

3a. Ownership Assessment

Strong

- Client has long experience in his/her business and is/are respectable and reliable person/s;
- rights and obligations (e.g. profit-sharing agreements) are clearly defined;
- succession planning is in evidence and there is a clear and defined management structure, with a qualified key management team and a sound decision-making policy; training programs for employees are in place, etc.

Satisfactory

- Credit Analyst was able to identify several of the above-mentioned characteristics, and the client has undertaken credible measures to improve weak areas for the future,
- the ownership and management structure of the client's business can be rated as satisfactory.

Weak

- In cases where the majority of the above-mentioned areas are weak and when there are no opportunities for future improvement, the ownership and management structure of the client's business shall be rated as weak

4. Financial Position Assessment

Financial strength of the company indicates repayment capacity, i.e.., the analysis of the financial statements provides most important part of the credit analysis

- Liquidity and net working capital
- Cash conversion cycle and financing of current assets .
- Business equity
- Payment capacity and profitability
- Revenues (level, structure, seasonality)

4a. Liquidity and Net Working Capital

Client ability to pay all current debt on agreed terms, i.e., the company generates sufficient funds to cover all short-term debt.

Cash is the most liquid form of assets, where as semi-finished products take longer to sell and turn into cash.

Current assets can be ranked according to their level of liquidity:
Cash

- Receivables
- Goods and finished products
- Raw materials
- Semi-finished products

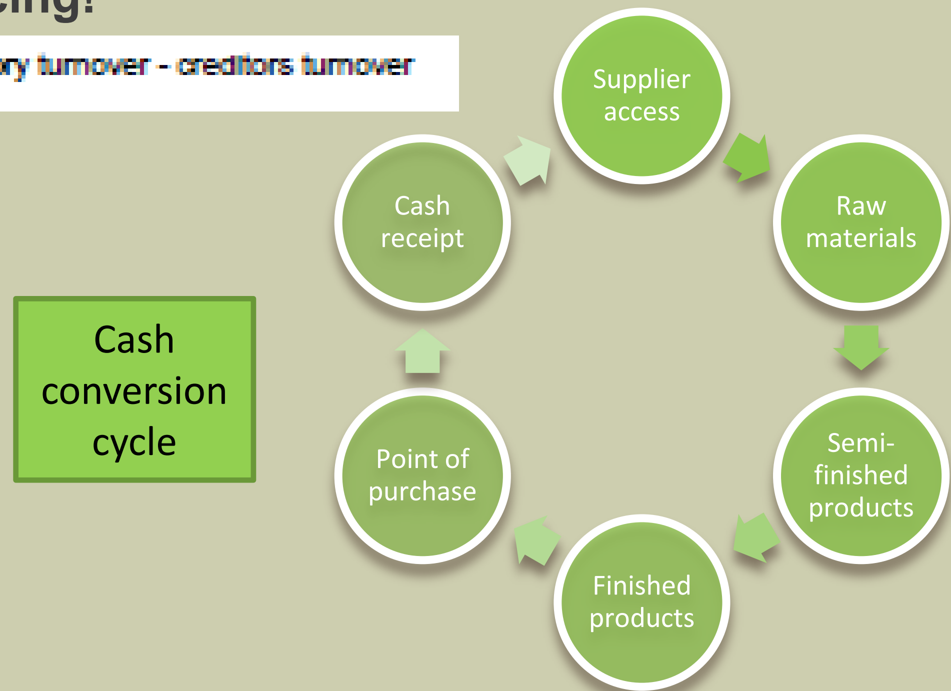
4b. Cash Conversion Cycle

Cash conversion cycle

Shows length of time between cash expenditures for materials/goods and cash receipts from sales. Average length of time the material is tied up in current assets (days).

The longer the cycle, the higher the need to finance operations via external or internal financing!

Cash Conversion Cycle = debtors turnover + Inventory turnover - creditors turnover



4b. Cash Conversion Cycle (contd.)

Liquidity gap
Shows you how much the company has to finance its current assets. A longer gap between extending credit to buyers and paying suppliers means higher level of resources needed to finance turnover.

Measuring how many days' deferred payment the company is being given by its suppliers and giving to its buyers, or determining whether the company has to finance its business with prepayments provides us with an indication of the quality of an business's co-operation
with its suppliers and buyers.

5. Business Equity

Equity capital shows the real financial strength of a company, but it is a very expensive resource for financing business. Most financial institutions have guidelines regarding how much financing can be provided to a business based on its equity, i.e., the amount the client has invested him/herself.

- The level of equity shows the **company's capacity to repay its debts** in case of problems

But the structure of equity is also important:

- o Initial capital (net worth) – most stable and desired to stay the dominant part of equity
- o Reserves
- o Losses (negative, will reduce the amount of equity over time.
- o Retained earnings

- Equity is one of the most important positions in the balance sheet and provides a direct link to the P&L. This connection can be observed when part of the company's profit is invested back into the business and which one is withdrawn.

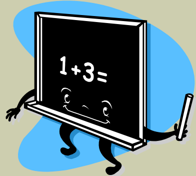
5. Business Equity(Continued)

- Equity is one of the most important positions in the balance sheet and provides a direct link to the P&L. This connection can be observed when part of the company’s profit is invested back into the business and which one is withdrawn

6. Profitability & Payment Capacity

- Profit is one of the important reasons **why a client is in business**. Companies that do not make profit have no space for growing and developing their business. Businesses that make no profit are not sustainable in the long term. Net profit of a company is the amount of money available for long-term investing. If all the profit that is made (or the largest part of it) is invested in the business, then this investment can be seen as increases in capital.
- **There are a that directly affect profit:**
  - level of revenues,
  - gross margin, and
  - operating costs,
  - financial and other costs and revenues.
- **Increases or decreases in any of these parameters** can have a significant impact on a company's profit .

6a. Profitability Assessment Example



Analyze the profit and loss figures below and identify potential sources for the net profit figures.

	2010	
Total sales	125,000	
Cost of sales	95,200	
Gross profit	29,800	
Gross margin	24%	
Salaries	7,850	
Rent costs	1,850	
Depreciation	3,500	
Other costs	5,100	
Operating costs	18,300	
Profit from business activity	11,500	
Interest	1,500	
Net profit before tax	10,000	
Tax on profit	1,667	
Net profit	8,333	7%

6a. Profitability Assessment Example (contd.)

- In this example, the client has a gross margin of 24% and the gross profit of the company is EUR/USD 29,800; after the subtraction of operating costs, interest and tax on profit, the company has net profit in the amount of EUR 8,333/USD, with a profit rate of 7%.
- There are several factors that can result in higher profitability, such as
  - lower input costs,
  - large discounts from suppliers,
  - favorable sales price,
  - weak competition,
  - lowering operating costs,
  - providing services when selling products
  - … etc.

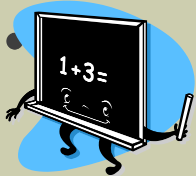
7. Revenues

Increasing or decreasing revenues gives information about trends in the business. A decrease can indicate issues like:

- loss of buyers,
- intensification of competition,
- closing of retail outlets,
- decrease in sales prices, etc.

In comparing revenues is very important that same period of time is analyzed, because businesses establish different times of year to achieve targets for receivables. For example, there are some businesses where the majority of revenues is achieved in the last few months of the year, so comparing monthly averages for revenues in the first half of year to the averages for the entire last year can provide misleading information.

7a. Revenues Assessment Example



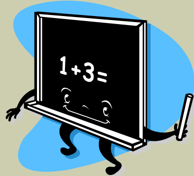
Analyze client's business trends based on the revenue figures provided below.

Month	Revenues		Difference, in %
	2010	2011	
January	12,520	14,000	12%
February	14,800	16,900	14%
March	20,125	22,560	12%
April	18,560	20,180	9%
May	19,600	22,500	15%
June	22,500	25,280	12%
July	30,590		
August	37,850		
September	46,120		
October	52,700		
November	56,600		
December	69,460		
Average, year	33,452	20,237	-40%
Average, Jan.-June	18,018	20,237	12%

7a. Revenues Assessment Example (contd.)

- A year-on-year comparison of revenues for the same periods shows that the company's revenues increased by 12% on average during 2011; however, comparing the average revenues for the period from January to June 2011 to the average revenues during the previous year would lead to the incorrect conclusion that the company's revenues decreased by 40% in 2011.
- In addition to conducting a proper comparison of revenues, determining the seasonality of revenues is also important, because:
  - the company does not make equal profit in every month, i.e.., it would be more appropriate to pay lower instalments when revenues are lower, and larger instalments in periods when revenues are up;
  - seasonality of revenues means that the company requires external resources to finance business before the high season (to purchase new supplies and prepare for the high season) or after the season (paying remaining obligations to suppliers);
  - different levels of revenue during year can explain some deviations in the main financial indicators, like long inventory turnover or higher level of short-term loans before high season for sales, or high level of receivables just after the conclusion of high season.

7b. Revenue Structure Example



Revenues of four different businesses - Business A, Business B, Business C, and Business D – have been provided below. Compare their revenues and analyze trends.

	A	B	C	D
Trade	550.000	160.000	420.000	500.000
Production	-	390.000	-	50.000
Services	-	-	130.000	-
Total sales	550.000	550.000	550.000	550.000
Cost of Sales	503.250	146.400	384.300	457.500
Cost of Production	-	292.500	-	37.500
Total costs	503.250	438.900	384.300	495.000
Gross margin	0	0	0	0
		0		0
Gross profit	46.750	111.100	165.700	55.000
Operating costs	22.500	22.500	31.500	22.500
Profit from business activities	24.250	88.600	134.200	32.500
Interest	5.200	5.200	5.200	9.500
Profit tax	2.850	13.575	25.410	28.000
Profit	16.200	69.825	103.590	- 5.000
Other income	1.050	1.050	1.050	120.000
Other costs	3.000	3.000	3.000	3.000
Net profit	14.250	67.875	101.640	112.000
Profit rate	0	0	0	0

7b. Revenue Structure Example

- In the example above there are four different businesses with same level of revenues, although the structure of revenues varies.
- **Business A** makes all revenues from trade and has the lowest gross and net margin.
- **Business B** has better performance than Business A, with 71% of all revenues made from production, which has higher gross margin (25%) than trade (8.50%).
- **Business C** has the best performance because approximately 24% of all revenues are made from services, and the business has a low level of expenses in profit and loss, as seen in higher operating costs.
- **Business D** has the highest net profit rate, but this Business recorded a loss from core business, and the main reason for making a net profit is other income. This could be sales of fixed assets and extra income that is recorded only in this year from business that is not the company's core business, so this means that the net profit of Business D may not be sustainable in the next year.

8. Financial Ratio Analysis

A financial statement provides an assessment of the profitability of a company over a certain period

Different financial ratios:

- Liquidity ratios
- Efficiency ratios
- Debt ratios
- Profitability ratios

This is not to be confused with the liquidity of a company which is shown in its cash flow statement. In other words, a company can be profitable but not liquid!

9. Liquidity Ratios

Current ratio

- Comparing short term assets and long term assets , shows the ability of the business to meet its current obligations. The higher the ratio, the more stable the firm is.
- Short-term assets (to be paid within one year): cash, receivables, and inventory

$$\text{Current ratio} = \frac{\text{Short-term (ST) assets}}{\text{Short-term (LT) liabilities}}$$

Acid ratio test

- The acid ratio determines whether the more liquid ST assets that can be quickly turned into cash are enough to cover the ST liabilities.

- The ratio tests the company's capacity to meet its current obligations The ratios shows weather the business can meet its current obligations in the case of an unexpected interruption of sales. The higher the better

$$\text{Acid ratio} = \frac{\text{Cash and cash equivalents + ST receivables}}{\text{ST payables}}$$

10. Efficiency Ratios

Debt turnover

- Comparing short term assets and long term assets , shows the ability of the business to meet its current obligations. The higher the ratio, the more stable the firm is.
- Short-term assets (to be paid within one year): cash, receivables, and inventory

  - **Debtors turnover =** $\frac{\text{ST receivables}}{\text{Monthly sales}} * 30$

Creditors turnover

- The acid ratio determines whether the more liquid ST assets that can be quickly turned into cash are enough to cover the ST liabilities.

- The ratio tests the company's capacity to meet its current obligations The ratios shows weather the business can meet its current obligations in the case of an unexpected interruption of sales. The higher the better

  - **Creditors turnover =** $\frac{\text{ST Liabilities-(debts to suppliers)}}{\text{Monthly cost of sales}} * 30$

10. Efficiency Ratios (contd.)

Inventory turnover

- Average time period needed to turn inventory into sales (days). Compare this number for different periods to understand « low » seasons, and compare it with similar companies in the same sector.

$$\text{Inventory turnover} = \frac{\text{Inventory}}{\text{Monthly cost of sales}} * 30$$

- A high inventory turnover indicates efficient inventory management showing that stock is being sold quickly . The smaller the number of days, the higher the ratio. A high number of days necessary to sell the inventory shows inefficient inventory management, overinvestment in inventory, poor quality of goods, stock accumulation, accumulation of obsolete goods. The ratio is also an index for profitability , where a high ratio shows low profitability, a low ratio, high profitability.

11. Net Working Capital

- If net working capital is positive, the conclusion is that part of the ST assets are financed by LT liabilities or equity. This is positive since these assets have a high level of liquidity and a lower period of turnover, but a large amount of net working capital possesses a large volume of free working capital, i.e., significant stock of materials, finished products, etc.

  - **Net working capital =** Short-term assets – Short-term liabilities

- Definite risk if NWC is 0. Negative NWC is an indicator for weak liquidity, since all ST asset s are financed by ST liabilities, i.e., there is a danger that the company cannot meet its obligations.

12. Debt Ratios

Financial leverage

- Measure of how many times higher the total assets are compared to the company's equity .

$$\text{Financial leverage} = \frac{\text{Total assets}}{\text{Equity}}$$

- A higher the ratio shows that the business has a higher equity base and would be preferred by lenders, as it proves higher protection against liquidation and financial problems. The higher the financial leverage, the higher the opportunities for higher profit and ROE, but at the same time, the higher the risk of insolvency.

Debt/Equity ratio

- Another way to express financial leverage. Expressed the correlation between mobilized funds and equity . Banks prefer to lend to companies with a low debt/equity ratio, because the higher the ratio, the higher the risk for the bank.

$$\text{Debt/equity ratio} = \frac{\text{Debt}}{\text{Equity}}$$

12. Debt Ratios (contd.)

Equity/asset ratio

- Shows how much of the company's assets are financed by its own funds. The higher the ratio, the better the standing of the company. .

$$\text{Equity/assets ratio} = \frac{\text{Equity}}{\text{Assets}}$$

13. Profitability Ratios

- Profitability ratios are calculated to show the correlation between the different types of profit and sales revenues.

Gross profit margin

- Correlates gross profit to sales revenues (as% age). Comparing the ratio with averages of the sector yields information of the production process of the Client.

$$\text{Gross profit margin} = \frac{\text{Gross profit}}{\text{Sales revenues}}$$

Net profit margin

- Measures how profitable the sales are, after all cost (including taxes and interest) have been deducted.

$$\text{Net profit margin} = \frac{\text{Net profit (after taxes)}}{\text{Sales revenues}}$$

- The higher the net margin, the better the financial standing of the company.

13. Profitability Ratios (contd.)

Break-even example

- If the fixed cost for the company are 10,000 and the gross margin is 20%

X = 10,000/20%

X = 50,000

→The minimum sales the company has to achieve is 50,000 units.

- Alternative break-even ratio:

$$\text{Total sales} = \frac{(\text{Total fixed expenses} + \text{Interest expense})}{\text{Gross Margin}}$$

14. Financial Assessment

Strong

- Clients' business has a good liquidity, profitability and solvency
- Good liquidity is defined as the ability to pay debts when they fall due. Since debts are paid from cash flow and profits, quality of liquidity is assessed based on ability of the business to generate profit and cash flow from business operations sufficient to cover instalments for LT loans and/or at least interest for ST loans, fees, payment of dividends. Liquidity quality is also assessed according to client's ability to carry investments.
- Compare client's scores with other businesses in the same industry during the assessment/rating process.

Satisfactory

- Majority of the client's financial ratios are found to be satisfactory (i.e. within an acceptable range), the weak financial ratios can be improved by the investment to be financed and financial risk is manageable, the client's financial situation can be rated as satisfactory.

14. Financial Assessment (contd.)

Weak

- Majority of the client's financial ratios indicate a weak business performance during the period analyzed, then the client's financial situation shall be rated as weak.
- A weak financial situation is indicated by a profit level that is insufficient to cover instalments for long-term loans or interest payments for short-term loans, as well as by a low liquidity ratio, a low profitability ratio compared with those of other businesses in the same sector.

15. Investment Plan

- Assess the **projected economic benefits** from the investment such as the impact that the investment will have on revenues, expenses and profit in the short term, and in the long term as well.
- Another important factor is **timeframe** within which investment are to be operational.
- **Working capital investments** (ST assets: receivables, inventory)
- **Short turnover**, i.e., financing should be short-term (12 months)
- Analyze **why Client lacks liquid funds**. Normally a stable, profitable business can maintain its business operations without having to borrow.
- Many businesses **need working capital financing** to expand operations (permanent working capital) for which maturities can go up to 36 months;
- Financing of **fixed assets** (e.g., equipment, buildings, etc.)
- Investments that will have **direct impact on sales, profit**, etc.
- Investments that **will reduce cost**
- **Client should also co-invest in the project!**
- **Determine the payback period** (how long will it take for the investment to pay for itself?)

15a. Investment Plan Assessment

Low risk

- Client is found to have a solid and well-researched investment plan
- Client should contribute to the investment; the client's investment projects should be meaningful; the client's investment and business plan should be clear and based on careful research, taking into account all factors that could impair the business's results; and the projected outcomes should be satisfactory.

Medium risk

- Client is investing in a new line of products or launching new activities, or where the client is investing in a new market,
- Majority of the client's investment are supported by external financing; investment is in its initial phase but based on a thoroughly analyzed investment plan; and the projected outcomes are satisfactory

High risk

- Majority of the above-mentioned areas to be weak and numerous uncertainties exist regarding the realization and final outcomes of the investment

16a. Credit History Assessment

Strong

- Client has repaid previous and outstanding credit exposures in accordance with the respective payment plans with no significant delays and has made appropriate use of the funds.
- It is important to identify how the repayments were made. “Good repayments” are defined as those which the client paid without delays and which she was able to pay from profits and operating cash flow, excluding cases in repayments were from inflating loan funds or the debt was re-financed/ postponed.

Satisfactory

- Client’s credit history is characterized by a limited number of days of delay but is otherwise assessed as good,
- Delays can be explained or justified and are/were under control..

Weak

- Cases where the client is found to be delayed in payment with respect to existing instalments, has failed to repay his/her debts to any financial institution according to the agreed loan terms or has failed to fulfil his/her commitment as guarantor of the loan,
- or has not made appropriate use of the funds

17. Collateral

Collateral requirements are based on three criteria:

- Repayment capacity
- Reliability of the Client (based on credit history)
- Maturity of the credit risk exposure

Collateral value is calculated on the fair market value of the collateral minus a discount. A discount is calculated to determine the sustainable and prudential value that could be realized in the event that the item is sold during the lifetime of the credit exposure, taking into account that the collateral item could lose value over time due to wear and tear or might be sold at a price lower than the current fair market value due to certain market conditions, along with other factors that could reduce the amount that the bank can recover from the sale of the item in the future.

17. Collateral (contd.)

The discount percentage depends on the type of collateral item

- Generally speaking, short-term loans and other short-term bank products may be collateralized with more liquid collateral (cash, guarantor, bank guarantee, pledges on equipment or vehicles), whereas long-term credit exposures call for less liquid collateral (real estate).

Positive collateral characteristics;

- The collateral is sufficiently liquid so as to be easily sold in the event of repayment problems
- The collateral possesses a stable and sustainable value over time
- The collateral possesses real meaning for the client in a subjective, emotional sense

17a. Collateral Exercise

Choosing adequate collateral for loans with long maturities is important, because the bank needs to be protected from losses for the entire maturity period. For example, the table above shows that vehicles are an inadequate form of collateral for a ten-year loan because their value depreciates to zero after just five years. Equipment is a better form of collateral because its (amortized) value decreases at about the same rate as the amount of remaining principal; However, caution must be exercised when considering whether to accept this form of collateral because the appearance of new,

		Collateral value		
Year	Outstanding	Vehicle	Equipment	Mortgage
0	200,000	200,000	200,000	200,000
1	180,000	140,000	180,000	196,000
2	160,000	120,000	160,000	192,000
3	140,000	80,000	140,000	188,000
4	120,000	40,000	120,000	184,000
5	100,000	20,000	100,000	180,000
6	80,000	0	80,000	176,000
7	60,000	0	60,000	172,000
8	40,000	0	40,000	168,000
9	20,000	0	20,000	164,000
10	0	0	0	160,000

17b. Collateral Assessment

Strong

- Client's collateral value exceeds the amount of the requested credit exposure,
- structure of the collateral is appropriate (i.e. long-term credit exposures are collateralized with real estate) or the offered collateral is assessed to be very liquid, then the client's collateral can be rated as strong.

Satisfactory

- collateral requirements are fulfilled, but the collateral is later deemed to be less liquid than initially perceived and the structure of collateral is not ideal, then the Client's collateral can be rated as satisfactory.

Weak

- coverage ratio is low or if the
- collateral mainly consists of movable items or items with low liquidity, then the client's collateral shall be rated as weak.

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