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Bank Credit Risk Management on Professional and Individual Portfolios

Faez Hlail Srayyih[a], Ameerah Abd Mashaan[b], Manaf Abdalmutalib Ahmed[c], [a,b,c]University of Anbar, College of Administration and Economics, Iraq.

The banking institutions have priority to anticipate the risks related to credits. This analysis helps to identify potential risks before they occur. As we have seen, there are many techniques to quantify and assess the risks of each portfolio. The bank is gaining both time and money in spreading risk among its customers. Indeed, as soon as a risk appears, it must be quickly managed, which mobilises human but also financial resources. When the customer's situation deteriorates, the bank is never completely sure of recovering the full amount of its investment. It is this constant uncertainty that scares banks. Anticipation by upstream risk analysis makes it possible to bridge part of this uncertain future and secure the credit activity.

Keywords: *Professional portfolio, Banking institutions, Financial resources.*

Introduction

Customers are the best lines of defence of the bank, and they play a role in preventing fraud revealed. Security is a shared responsibility, and customers need to protect themselves Secure and protect their cards and confidential numbers all the time when Transactions. The following are the best practices and guidelines to help you achieve that shared responsibility (Statnik, 1997; Charlier, 1995; Akerloff, 2017).

Password Protection

Never share or disclose your PIN to anyone (including family members, restaurant staff, Sale staff, or pedestrians next to an ATM).

Save the PIN and do not write or store it anywhere. Enter the PIN in a way that the sales staff, cameras cannot from your capture, use your other hand or body to cover an entry Number either at ATMs or points of sale.

Do not choose a PIN with identical numbers such as (1111, 333, or numbers) such as 1234, 5678 (personal numbers and information such as phone, date of birth, or mailbox number.
Change your PIN from time to time at ATMs Al - Rasheed Bank.
Use different PINs for different payment cards.

Security Cards

Do not allow anyone to use your card. Once you receive a new / renewed card, make sure you sign (Altman, 2015; Altman and Saunders, 1998; Altman et al., 2017).
The signature bar is located on the back of the card.
Keep your cards in a systematic order to make you notice.
Loss of any card immediately.
Do not leave your cards away from you in a car or any unsafe area. Be vulnerable to thieves.
Be sure to return your card after each purchase and make sure it is the same.
Your card is given the name and signature. Always make the card visible to you when you complete a transaction.

From ATMs

Stand close to ATMs and use your hand and body to block screen to ensure your PIN is not visible (Anandarajan and Lee, 2001; Beaver, 2015; Berger and Udell, 1990).
Do not rush to use an ATM, and take your time in the procedure.
Do not pay attention to anyone trying to rush you.
Your attention to the transaction.

Do not accept help from anyone, as the goal may be to distract you. Another person steals your money and your card.

If your ATM is being held, please report it. Immediately call the call centre on 07090100000, before you leave and you are still in front of the device. Before you leave the ATM, please make sure you take the card and cash.

General Instructions

- Subscribe to Al-Rasheed Bank's free text messages service. Alerts you whenever you use your card (Grawitz, 2001; Hadj, 2007)

- Ensure that Al-Rasheed Bank has updated contact details such as mobile numbers, office, home, and postal details to contact you and confirm any suspicious transactions.
- Make sure the card is with you at all times and be attentive to all transactions.
- Inform the bank of any large transactions you will make by talking to the call centre at 07090100000.
- Compare all transaction receipts with the statement of account to ensure Health.
- Notify the bank immediately if you do not receive your statement your if you become a victim of fraud
- If you detect an unauthorised transaction or receive a transaction text message.
- You did not:
- Report immediately and speak to the call centre on the number 070 4100 000 (without delay).
- Register your complaint by submitting an "Objection Form".
- Return the plastic card immediately as evidence that you had time Fraud occurs.
- Provide evidence to help you prove fraud such as a passport photo, transaction receipts.
- In the event of fraud in another country, a report must be submitted to the competent authorities and police.
- · If you are not subscribed to a text message service or internet service, subscribe immediately.

By taking all of the precautions above, you reduce your chances of being cheated. However, we must not forget that banks are essential actors for the proper functioning of our economy. Credit institutions provide both stability and economic growth by supporting individuals and businesses. It is unusual for an economic actor to become fully self-financing. Banks intervene to relieve the budget of businesses and individuals by helping them finance all or part of their investments.

As part of this brief, we will analyse counterparty risk, also known as credit risk. Ranso gives a precise definition to characterise this type of risk: "the counterparty risk represents the potential loss realised by the bank in the event of a future default of its counterparty. Credit risk can be defined as the total loss recorded on a transaction following the default of the counterparty. It is also sometimes called a signature risk. It is common to use the term counterparty risk to refer exclusively to credit risk". This risk becomes interesting to study because it has a significant weight within banks and has increased in recent years.

Counterparty Risk Generates Very Specific Impacts within Banks

- Direct financial impacts (non-return capital loan, capital loss, misappropriation of funds)

- Indirect financial impacts (high provision on profits, the anticipation of probable loss, additional charges).
- Commercial impacts (loss of customers, depreciation of the image of the bank).

The means and techniques of bank credit risk management

As stated by Conso, "the risk is omnipresent, multifaceted, it concerns all employees of the company and of course the general management, but also shareholders in terms of the overall risk of the company. To combat it therefore concerns all the actors". Banks must mobilise massively in the general interest of the entire organisation. In case of excessive risks, all employees will be affected. It is imperative for credit institutions to know the sources of risk in order to anticipate them.

Management Tools for Identifying and Assessing Credit Risk

Credit institutions have adapted to the rapid changes in their environments. The introduction of techniques makes it possible to quickly and efficiently visualise the potential hazards in each portfolio. First and foremost, the bank must identify and assess the risks before it can be processed. In this part, we will highlight the evolution of banking strategies to cope with the growth of credit risk. We will then see how the institutions can quantify and qualify the sources of risk.

The Risk Strategy of Credit Institutions According to Market Conditions

The banking environment has changed significantly in recent years. It will now be difficult to predict the future of the banking sector because of rapid and unpredictable changes in this area. Credit institutions will have to adapt to cope with the many changes in the market.
Banks' strategies must take into account many variables:
- A very competitive environment in the credit market.
- An increasingly restrictive and restrictive regulation.
- Extremely low-interest rates affect profitability.
- A growing risk factor generates costs.

To remain competitive, credit institutions must make strategic choices because current conditions threaten credit spreads. Loans are now better for clients than lenders. The contraction of capital gains directly affects the profitability of banks. Risk management is a major step. If properly managed, credit institutions can significantly maximise their profitability and save time. As part of their exercises, banks must take into account a multitude of threats that affect credit risk.

Table 1: Representation of Credit Risk Threats of Al Rasheed Bank

Financial risks	Operational risks	Operating risks	Accidental risks
Credit Liquidity Market Solvency Adequacy of own funds Balance sheet structure Profitability Currency	Internal fraud External fraud Customers, products, services Employment and safety policy Technological risk Degradation of physical assets Process management	Country risk Fiduciary risk Reputation Regulation Macroeconomic environment Civil liability	Politics Banking crisis Contagion Exogenous risks

It is important to understand the elements that constitute a bank rate to analyse them precisely. A traditional bank rate offered to customers includes the following variables:
Bank Rate = Refinancing Cost + Equity Compensation + Cost of Risk + Management Cost + Margin.

If you start from the mortgage that the bank rate on a mortgage is 2.5%, then Refinancing cost 0.5% + Capital compensation 0.5% + Cost of risk 0.5% + Management cost 0.5% + Margin 0.5%.
In this example, it is quickly seen that the margin released remains relatively low. Banks do not generate significant capital gains on loans given the conjuncture. However, it must be taken into account that the establishment of loan, customer loyalty who can then consume more remunerative services.

Due to shrinking margins, credit institutions have several strategies for restoring the profitability of the business

Increase Margins

This option remains difficult to implement due to the strong competition in the banking market. As soon as a lender increases its margins, customers will turn to other institutions that offer more favourable pricing conditions. The risk is directly related to profitability with a loss of customers.

Analysis and Identification of Credit Risk

The risk associated with the credit activity may depend on the borrower or lender. If the risk comes from the debtor, it is a case of insolvency. In the case of external risk, the bank is not responsible for the deterioration of the customer's situation. If the risk comes from the creditor, the problem lies in the bank's credit distribution policy. In this context of internal risk, the bank is responsible for distributing the credits on the market. This step reveals a plural threat, the bank as the customer can have his liability engaged.

Before being able to manage the risks, it is necessary to identify them. It allows searching for sources or risk factors related to the credit activity. This analysis makes it possible to verify the achievement; the objectives pursued and to put in place corrective measures if necessary. To carry out these searches, the bank will look at all the data relating to the customer as well as the credit requested. There are many reasons for the client to be unable to honour his commitments. This risk is one of the most common in the credit business. Difficult to identify, it makes its management all the more complex.

The Credit Risk Assessment

Scoring and Rating

These two methods of assessing the client's risk are often considered as identical even though they still have differences:
- Scoring is a true expert system, often used in the mid-sized enterprise (ETI) environment and small and medium-sized enterprises (SMEs). This analysis is not done by the companies themselves but by institutions outside these organisations. We can mention the French insurance company for foreign trade (COFACE), a major player in this sector to help these companies. Banks also use this method extensively internally because of their statistical bases.
- The rating is based on a financial audit. It is a financial rating for larger organisations, especially large listed companies. The resources used by these two methods remain very different even if the end goal remains the same, to fight against the risk of insolvency.

Scoring, also known as credit scoring, is a method widely used by banks as a decision support tool. This technique is defined by Mester as "a statistical method for predicting the probability that a loan applicant (debtor) will default".

Van Praag explains that the purpose of credit is "to determine a score, that is to say a level that is meant to represent a certain risk for the lender. This score is obtained by taking into account various parameters whose choice is important as to the predictive capacity of the system. After the completion of this quantified evaluation, it suffices to integrate the score obtained into a previously calibrated evaluation grid. The reading of a score assumes the determination of a risk grid, which will allow the interpretation of the figure obtained that will help in the final decision of the lender ".

Table 2

Lower bound	Upper bollard	Likes
Lower bound	150	Very low risk, agreement on the proposed transaction
152	200	Low risk, agreement on the proposed transaction
202	250	Average risk agreement after the second analysis
252	300	High risk, agreement after the second analysis
302	350	Very high risk, agreement after customer visit and complete audit
352	Upper bollard	Upper bollard/Unbearable risk, automatic refusal

This table allows us to see that the quantification of the risk lies between two terminals, a high and a low. Most often, when the score is high, the risk becomes very important, whereas if the risk remains low then the score is low. This representation makes it possible to translate the degree of risk into a precise number. A debtor is thus in relation to his level of risk. The banker can consolidate his position on acceptance or refusal of credit. The calculation of the score remains fairly easy, and the result can hardly be criticised. However, its interpretation implies objectivity because the scoring brings a margin of error.

Table 3: Basic factors taken into account for credit scoring	
For individuals	For professionals
□ Age □ Nationality (Iraq, Arab, other) □ Family situation, matrimonial regime □ Residence Department □ Type of habitat □ Housing situation (tenant, owner, lodger) □ Seniority in housing □ Socio-professional category □ Professional situation □ Professional seniority □ Type of phones used □ Use of email □ Relationships between co-borrowers (couple life, friends, family, colleagues ...)	□ The business sector □ The quality of the social climate □ The competence of decision-makers □ The plurality of decision-makers □ The age of the debtor □ The legal form of the debtor □ The existence of a management control service

This technique must now provide even more information to credit institutions. Scoring discriminates between borrowers who will be able to repay and those who are likely to default. This evolution does not stop there because the credit scoring must in the long term highlight the actors who are interesting or not to lend. In this respect, Wallis explains that scoring is a method of estimating the interest of credit and not of risk. Dionne, Artis and

Gullen address the notions of earnings and credit cost via scores, which modifies the traditional approach of scoring against risks. This type of evaluation model has time advantages. Scores can significantly reduce the processing time of files for basic credits. It gives the opportunity to manage a large number of borrowers quickly, which generates profitability and a possible widening of the portfolio. Scoring provides comprehensive risk measures, so credit analysts can more easily look at other risks in the client relationship.

However, it can be noted that bankers remain somewhat behind with this technique, especially in the context of corporate loans according to Mester. This analysis is more reserved for a clientele of individuals and small businesses. The relationship of these borrowers is less complex than the large companies. Van Praag explains that "scoring is like a decision-making tool but it should not be a discriminating decision-making criterion". It highlights that scores are never perfect. There is always a margin of error because they incorporate little qualitative aspect. Credit scoring hardly takes into account changes that change the attitude of the borrower based on his default. The quality of the borrowers or the specificities of certain sectors of activity are often put aside. It must also be taken into account that creating and maintaining scoring for the bank is an important cost. It also requires having a database that is complete, complete and large enough to amortise the investment.

The statistical analysis of the scoring makes it possible to quickly provide information related to the borrowers at the bank. However, this tool must be supplemented with other management techniques to obtain real legitimacy because used alone; it can be a source of error causing the cost for the credit institution.

The Rating

Rating or creditworthiness reflects the credit quality of an issuer. It is carried out by financial specialists outside the bank. This technique is used by rating agencies, credit insurance companies or the Banque de France with the FIBEN file (bank file of companies). These institutions use both qualitative and quantitative data to conduct their analyses. Qualitative criteria, however, remain preferred for analysing and judging the quality of the issuer.

To perform this notation, the main elements retained are:
- The activity of the company
- The positioning of the organisation on the market
- In the balance sheet, both current and long-term liabilities
- The composition of the capital
- Cash and future income
- The situation of society

There are a large number of rating agencies, the four most recognised are KMV, Moody's, Standard and Poor's, Fitch Ratings and DBRS. Each organisation has devised a rating scale and a specific methodology, but they all meet the same evaluation needs. The rating is a very interesting tool that gives a global vision on the situation of an organisation or a product at a specific moment. However, we must not forget that this analysis is not perfect. To make a viable decision, you have to cross other information. During the subprime crisis, some rating agencies gave very high ratings to unsavoury financial products or companies in the credit market. This proves that the rating is to be used with caution to be really effective depending on the situation.

VAR (Value at Risk)

VAR is a simple tool that makes it easy to interpret a level of risk. To measure the proportion of threat, it is mandatory to have a certain level of probability based on statistics, which does not always reassure investors. VAR is defined as a technique that determines maximum potential loss based on duration and degree of confidence.

In other words, the VAR gives the capacity of visualised:

"We are certain at X%	X% → confidence threshold
that we will not lose more than V	V → Value at Risk
in the next T days	T → time horizon

The VAR model has been democratised by JP Morgan to become a common technique in financial risk assessment.

For Saunders and Allen, the objective is to measure the change in the future value of a portfolio relative to the change in credit quality. To estimate the VAR, there are three statistical methods:

The Historical VAR

This method is based on data observed in a past period to define the future variables of the risk factors. Past variables are used to value portfolios to simulate losses or profits. This technique has an advantage because it is based on a history of product prices or risk factors on a portfolio; its implementation is quite easy. However, if the historical are short-lived, the calculation may be insignificant. If history is long-term, the relevance of old data can be questioned.

Parametric VAR

This is the assumption that the risk factors may approach a theoretical law that estimates the VAR of a portfolio. The calculation formula and the matrix make it possible to know the volatility of the elements studied. However, this method must be used sparingly because there may be approximations and deviations depending on the variables or the complexity of the formula.

The VAR Monte-Carlo

The implementation of the Monte Carlo Var takes into account elements of the historical and parametric Var. First, a certain degree of risk factor must be assigned to each portfolio. Then scenarios of variations of risk elements are implemented. From the simulation of these samples, we obtain risk result hypotheses for the portfolios studied. This fairly complete technique requires a heavy means in terms of calculation. Indeed the number of simulations can be very important with a growing complexity, which causes difficulties in the analysis of the results to obtain a real precision.

Global Problems Related to VAR

As soon as a risk study is conducted with VAR, it must use data from the past. This proves to be rather problematic because it is necessary to define the duration of the period to realise an estimate. If we assume that the risk factors have a certain stability over time, then the longer the duration will be, the more the VAR will be precise. However, the financial sector is never stable over a long period. There are quiet periods and others with significant fluctuations. The Var can be completely modified and make a vague result depending on the volatility of the selected period. The major problem of VAR is based on the time variable because it is complex to define a period that is neither too long nor too short, with controlled volatility.

Financial Analysis

The financial statements are specific to the professional market. This technique can be summarised as follows: "The objective of the financial analysis is to shed light on the reality of a company using standardised and standardised data such as the tax package in France. This study is based on information about the company's past. However, it must shed light on the future of the company by identifying current imbalances that could lead to major future difficulties". For the banker, the financial diagnosis of the company is an essential basis for conducting analyses. All the information collected will be processed, to check the durability of the company and anticipate a possible lack of payment. Thanks to all these data, the bank is able to know if:

Regulatory Authorities

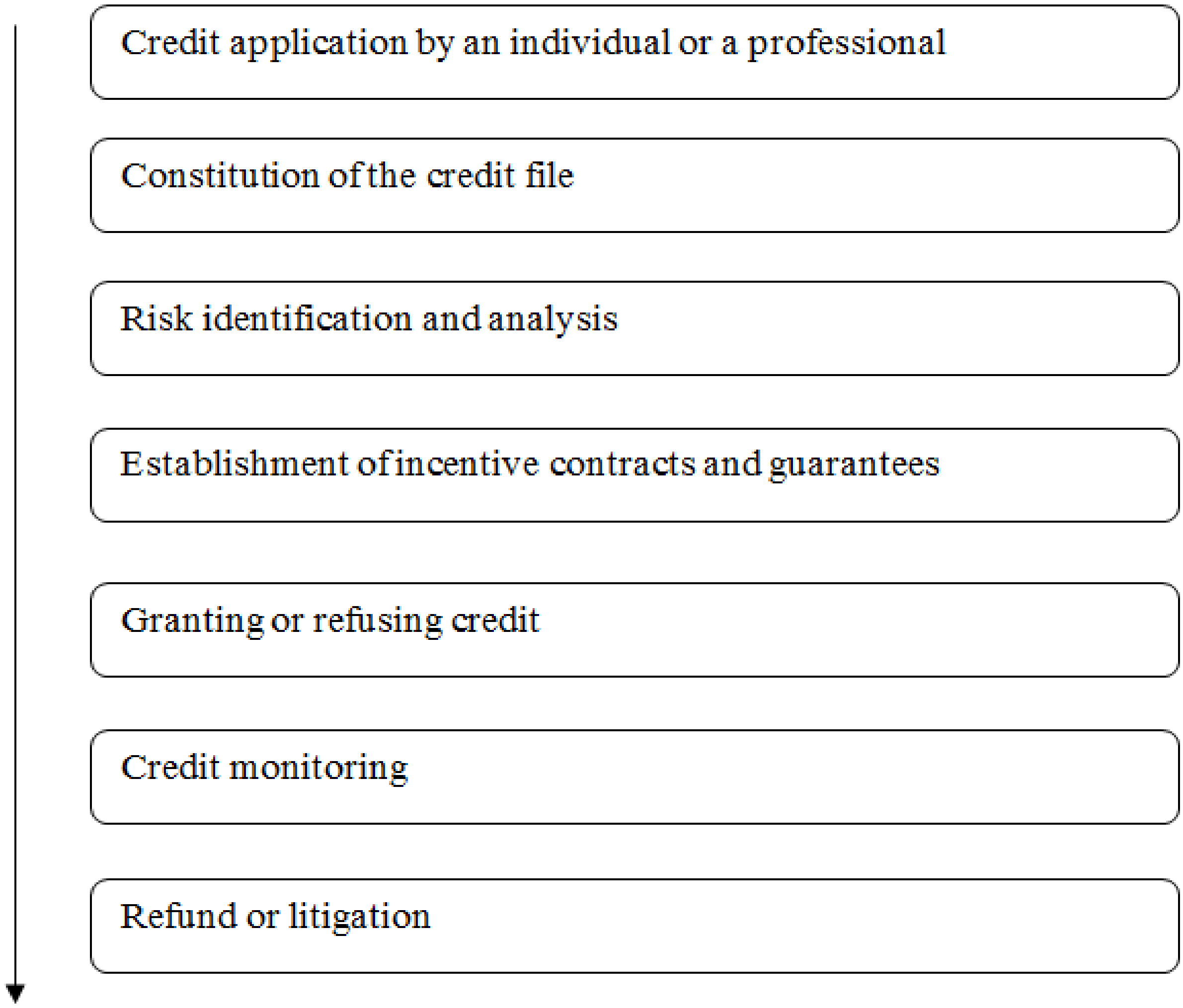
The Central Bank of France has introduced the centralisation of banking risks. It can monitor and control the credits granted by the various French banking institutions. A national hazard file is maintained to identify and track incidents. Composition of the file:
- Legal status
- Of the nationality code
- Registration number
- ISIC activity code (classification by economic activity)

The French Central Bank establishes databases that group the proportion of credit by sector of activity. With this information, French banks get decision support to grant credits. However, the centralisation of risks is limited at the national level because no such mechanism exists at the regional or international level. It becomes impossible to identify a borrower from a bank in a different state.

Analysis of a Credit Risk Sector

Following the exponential evolution of the banking system in recent years, credit institutions have been forced to create risk channels, to delegate some of the threats that weigh on the credit activity. This strategy makes it possible to better anticipate, analyse and find solutions with much shorter treatment periods. These channels of risk have become pillars in the new banking organisation because they have a major role in the monitoring of loans from the granting until the maturity of these. Especially since the importance of this service has steadily increased to reduce the risk on all bank portfolios. We will now see the organisation of the Société Générale risk chain step by step throughout the life of a loan.

Figure 1. Société Générale risk chain step by step throughout the life of a loan



Business Analysis

In his book, Manchon specifies that the banker can obtain information from his client in various ways. The main sources being the financial data as well as the information collected during the interviews with the customer. From the client's data, the banker can have a first impression on the credibility and trust of this loan applicant. This is only a point of view, but this can make a loan record more favourable. It may happen that this general opinion does not reflect the quality of the relationship, but the banker can quickly review his judgment.

The Decision Process

At Society General, the staff in the commercial agencies is not empowered to make the decision on loans. He must trace the loan files in his hierarchy.

Society General Group has a very specific decision-making process. In the context of a complex credit file the process is the following (for a more common file there is only a shuttle between points 1 and 4):

1) Constitution of the file by a customer advisor.
2) Verification and agreement with the agency director.
3) Verification by the head of the sector, who gives a favourable opinion or not on the file
4) Control by the Risk and Credit Analysis Department. This step studies credit only from the encrypted data from the borrower. The work is done by databases that evaluate the credit repayment potential from the financial information. If acceptance the credit is granted otherwise the file returns to the head of the sector.
5) The client advisor can then renegotiate the file at the local level with the director of risks. He will be able to highlight the opportunities of the project and the low probability of risk. This negotiation is less focused on financial data and takes into account all variables of success or failure of the loan file. The credit can be granted. Otherwise, it is definitely refused.

Société Générale has a decentralised decision-making system at the level of loans. This organisation allows a delegation of decision-making power in order to detect as much as possible opportunities or threats before granting credit. This procedure gives the company a good responsiveness to give an objective answer to the customer on the loan decision.

In the case of a request for credit with very large amounts or special operations, the decision is taken by a risk committee. This is a group of people with specific skills to appreciate the complexity of setting up a loan. This independent unit in the traditional risk chain comes in support to help make the most favourable decision for the company.

The Credit Processing Procedure in the Event of an Incident at Society General

Step two and three refer to the search for amicable solutions. This is a phase that precedes judicial processing in litigation. The bank will try to resolve the most cases amicably to save time and avoid significant expenses. If the customer has an unfavourable behaviour towards the bank, it will directly turn to drastic solutions more expensive but sometimes more effective with the litigation.

In case of amicable recovery, the file is transferred to a dedicated cell to be managed and analysed. An inventory of the situation will be made to define a recovery strategy in agreement with the client. Specialised service is in charge of advising the advisor in case of increased risk to intensify the recovery. This service ensures the smooth running of the strategy implemented. He has the responsibility to accompany the client so that the regularisation is complete and payable. As soon as the file returns to the requirements of the bank, it is transferred back to the agency to be managed. However, if the amicable negotiations are unsuccessful, the advisor may try to strengthen the guarantees or transfer the file to the dispute.

Judicial treatment remains the final phase in the risk management of a banking cell. This sector is represented by specialists, mostly jurists who are assisted by bailiffs or lawyers. As soon as a judicial reorganisation or judicial liquidation is implemented, the litigation department is responsible for closing the file and recovering the client's debts by all means.

The advisor himself has the power to denounce credit. He may decide to separate from his client following payment incidents, a lack of profitability or a risk that is too high. He denounces the contest by sending a letter to his client to inform him of the relationship breakdown. There is a 60-day deadline before closing so that the customer can find a new bank. However, if the client has a serious behaviour towards the bank, the notice is not obligatory, and the competitions are denounced without delay.

Over-indebtedness of Individuals

Over-indebtedness is defined as "the manifest impossibility for a debtor in good faith to face all of his unprofessionals due and to fall". Individuals benefit from an amicable procedure to negotiate with the bank to avoid heavier procedures. If the amicable negotiations are unsuccessful, the debtor can benefit from the recommendations phase. The over-indebtedness commission may require creditors to adjust the repayment of debts or reduce rates. If the debtor is in a state of durable insolvency, the commission has the choice to define simple recommendations (rescheduling, lowering of interest rates) or recommendations with partial deletion (suspension of the payment of receivables for two years).

In the event that a procedure does not lead to any result, the debtor will undergo a personal recovery procedure. It applies to people in irreparably compromised situations. This corresponds to a real impossibility to be able to implement measures of treatment of over-indebtedness. The opening judgment entails the suspension of the proceedings against the debtor and opens a period of observation of his situation. An agent is appointed by the judge to draw up an economic and social report of the home. The judge pronounces the judicial liquidation of the personal patrimony so that the sale of the property of the debtor repays the creditors. If that is not enough, the judge pronounces the closure for insufficiency of assets. It is the cancellation of all the nonprofessional debts.

Over-indebtedness of Professionals

The treatment of over-indebtedness of companies to solve payment difficulties can be organised in two phases.

The first is characterised by amicable procedures for dealing with the difficulties of companies. These are contractual procedures aimed at preventing the difficulties in reaching an agreement with the creditors.
- The ad hoc mandate: in the event of difficulty that can be solved by a third party, the court appoints an agent and assigns him/her to remit the company to a good financial level.
- Conciliation to promote the conclusion of an amicable agreement with the main creditors to put an end to the difficulties.

The second is represented by the collective procedures of treatment of the difficulties of the companies. These are legal proceedings aimed at a cure for hardship.
- The safeguard procedure: The debtor justifies difficulties that he cannot overcome and which may lead to a cessation of payment. The opening of the proceedings entails the temporary suspension of the proceedings. An observation period is implemented; all claims must be declared. Then a plan is made with the creditors so that all the parties find an interest. The court makes the plan applicable to the proposals if the debtor and the creditors agree.
- The bankruptcy procedure: a situation of cessation of payment is noted, but there are chances of recovery. An observation period remains open where all claims must be reported to prepare the recovery plan. The court begins a suspicious period to review the company's recent past to determine the exact date of cessation of payments. The judge may cancel certain banking acts if they have contributed to the deterioration of the financial position of the company. At the end of the recovery plan, there may be a continuation plan, in which case the bank maintains its support and has the possibility of setting up new credits. Otherwise, there is a partial or total sale of the company.
- The liquidation procedure: the company is in the cessation of payment and in the impossibility of recovery. The goal is to stop the activity of the company and to see the assets of the debtor. This allows to realise a global assignment or separate the assets of the indebted person. The bank interrupts all the assistance to the company because the situation is irreparably compromised. Creditors use them progressively according to the privileges that have been contracted.

As we have seen, the risk chain within a bank is an essential pillar for managing portfolio threats. From loan demand to maturity, loan specialists must be vigilant and analyse all the variables that could degrade the client's situation. With a unit specialised in loans, the bank remains able to qualify and quantify the risks related to their activities. It has many techniques to appreciate the different threats related to loans. These analyses provide an overview of potential portfolio-based incidents. It is thus possible to anticipate a danger more easily or to manage it amicably or in litigation. A risk channel ensures the liaison between the client and the bank to ensure that the credits granted are reimbursed in due time and in their entirety.

Analysis of Credit Risk Management and Recommendations

All banks have a very specific purpose when setting up credit. They must imperatively be repaid by the debtor. This is understandable otherwise, institutions must engage in often lengthy and expensive procedures without having the certainty of full repayment. Société Générale already uses techniques and powerful tools, but specific situations may become unfavourable, given its organisation to date. Société Générale's risk management is generally efficient. However, improvements can be exploited to further optimise the current system.
We will thus determine the effectiveness of this risk management while analysing it to find effective and adapted solutions.

Identification of Threats

When granting credit, the bank supports a multitude of threats that risk management must detect and resolve as appropriate. The identification of the risks is major because it makes it possible to classify all the dangers related to the activity of loan. Following effective identification, the credit institution can improve its preventive management by reducing the processing time of certain processes.

To conduct successful identification and evaluation, we divided the credit process into four steps to achieving accurate and objective results:
- Preparation of the file by the advisor
- Establishment of credit by the service of commitments
- Credit monitoring by the analyst
- Curative management by the legal service

Table 4: Preparation of the file by the advisor

Missions	Goal to reach	Risks	Impacts	Measures
Collecting information to build the folder	Check that the data collected is sufficiently numerous	Lack of information on the client's situation Incomplete file	Difficulty of analysis Loss of time during proceedings Financial loss	Document formalised to checkpoint by point the information so that the file is complete
Verification of collected data	Make sure the information from the customer is reliable	Wrong information	A possible problem in case of recovery Loss of resources, conflict with the client	Detailed examination of the client (cross the sources of information, visit the client)
Drafting contracts and analysing the file	Check compliance of loan conditions and financial data	Error in form or fund conditions Non-domiciliation of income High debt ratio	Financial loss Loss of time for setting up Legal sanction	Verification by several qualified people Mandatory domiciliation of resources Cross financial data

This step should not be overlooked because if an error occurs at this point in time, the rest of the risk management process is affected.

The taking of collateral: collateral is a very effective way for the bank to recover all or part of its commitments, provided that the situation does not deteriorate too quickly. Indeed the taking of guarantee rests partly on the domiciliation of the resources of the customer. However, the domiciliation can end quickly in case of bankruptcy of the company or the loss of employment of the debtor. It represents one of the basic sureties to guard against the risk of non-repayment. If it dies out, the recovery of the debt can be quickly compromised. The bank is therefore obliged to initiate court proceedings or to seize the debtor's assets. In the same principle, a deposit can be extinguished quickly if the bond has no more resources or if the person comes to die in case-specific clause.

Security interests, such as mortgages require relatively substantial legal procedures. If a security interest in real estate is taken, the bank is not sure whether it can resell the property to cover the entire claim. Indeed the good can depreciate because of many factors. This guarantee synonymous "excellence" a few years ago, has lost in quality and reliability especially because of the subprime crisis, which has highlighted the weakness of this type of safety.

At the level of pledges, it is observed that this collateral is relatively volatile and can rapidly deteriorate. No matter whether it is for stocks or financial securities, the value of the collateral can reduce very quickly depending on the context and no longer cover the entire commitment.
Collection: the main threat of recovery is the customer's home. The debtor can quickly change his place of residence without notifying his bank. It can even make the situation even more complex if the one goes abroad because the bank will have to find it. Recovery has a relatively high cost that can sometimes exceed the debt to be recovered. A temporal constraint is also to be taken into account because justice takes time to pronounce a judgment that satisfies the parties.

Provisioning: files are degraded very quickly, and the recovery procedure is not always in line with the recorded evaluation. There may be a lag between the activation of the provisioning and the expected provisioning. This can lead to a rough analysis of the quality of the claims.

Recommendations

After analysing the various credit management tools and procedures within Société Générale, we will propose recommendations to address the various risks and weaknesses that we have identified. This will allow the implementation of corrective actions and innovative techniques to optimise credit activities.
- Staff training is a very important way to properly manage risk. The bank needs to strengthen risk management seminars so that staff is more aware of credit threats while taking appropriate action.
- Establish a simpler credit procedure manual, which can take the form of a "checklist" so that the file is as complete as possible.
- Standardise credit documents as much as possible to manage recurrences and more easily detect errors or missing information.
- Require the domiciliation of resources from the client before the study of a loan.
- Establish a fully digital credit procedure in the same principle as online banks. Information can flow faster and easier between services. The data gets lost less easily because they are directly archived. As long as all the necessary information is not completed, the file can not be finalised, which reduces the incomplete files.

- Regularly carry out diagnostics on the management tools as well as on the problems encountered by the staff. This highlights the strengths of the credit management process but also the weaknesses for corrective action.
- Reinforce customer information on the consequences that loan repayment incidents can have in order to raise customer awareness.
- For companies, a specialist should systematically visit the organisation's place of activity to check the coherence of the project and ensure that the information collected is reliable.
- Improve the relationship of trust between the client and the advisor to avoid litigation as much as possible. This makes it easier to resolve incidents amicably and strengthen customer loyalty.
- The bank can improve its selection of clients who can benefit from loans knowing that they will have very little chance of not paying back.
- Multiply the guarantees and couple them with compulsory insurance in the setting up of loans to make the commitments as secure as possible.
- Société Générale can more generally try to reach an agreement with other banking institutions in order to relaunch the "positive file". The aim is to identify all the credits held by an individual to fight against over-indebtedness.

In a context of constant innovation, Societe Generale can improve or develop new credit risk management tools such as risk-adjusted return on capital (RAROC), expert systems, neural networks or stress tests.

The RAROC

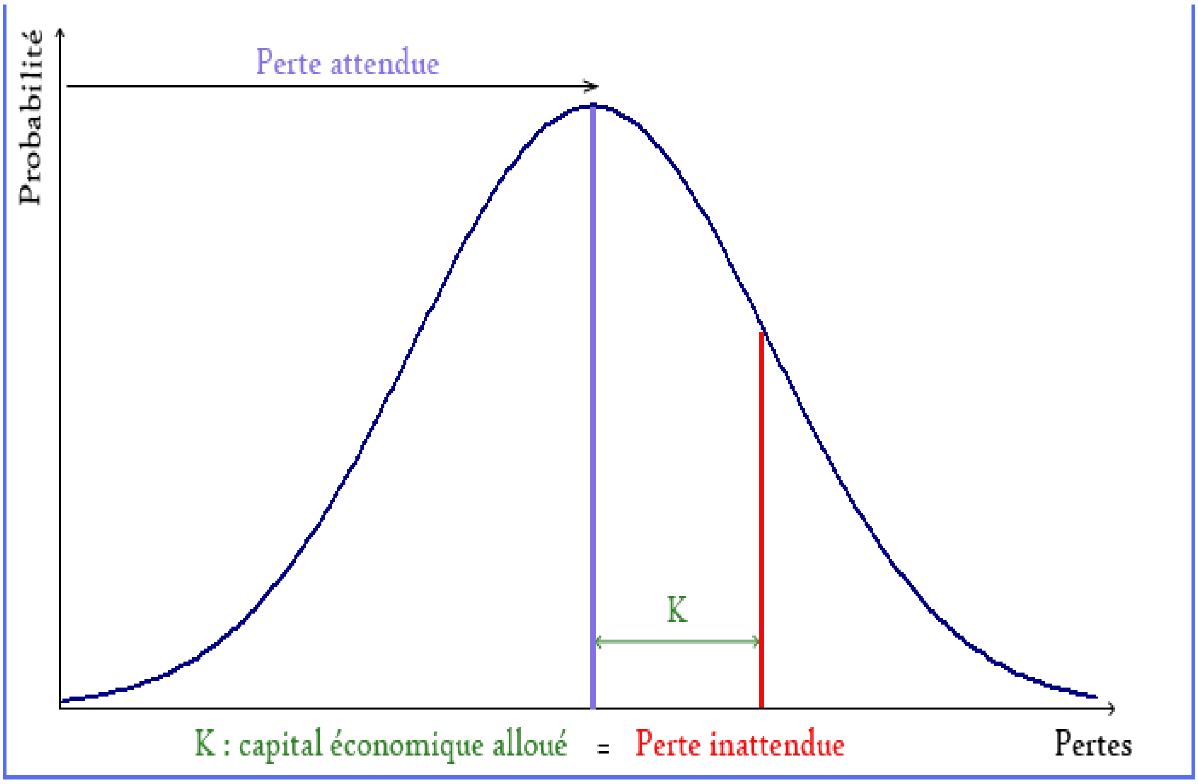
RAROC is a method that allows optimal allocation of capital. This is a very effective tool for measuring bank performance. Many performance evaluation techniques have a theoretical aspect, while RAROC has a very practical approach. This indicator is appreciated because it corresponds exactly to the requirements of the new prudential regulation.

Risk-Adjusted Return On Capital is a measurement tool used within banks and financial institutions to perform comparative performance comparisons or ex-ante resource allocation choices between investments, products or divisions with different risk and profitability profiles.

The RAROC provides a calculation that allows optimal allocation of funds while measuring the performance of the activity. To calculate it, you have to relate the return on an asset to the amount of economic capital used. The reconciliation of risk and return makes it possible to compare the different financial products and to define which ones are the most profitable. RAROC remains a real management tool for identifying and selecting financial opportunities. The RAROC thus represents the return on equity. It can be translated in two ways:

In a transaction, if the RAROC is lower than the cost of equity, then the investment is not profitable. It is necessary that the RAROC is higher than the cost of equity to generate profitability.

Figure 2



Expert Systems and Neural Networks

To cope with credit scoring failure due to an overly comprehensive assessment of the default risk assessment, banks have developed other methods of credit analysis to refine the results. This is a qualitative approach to replicate the choices of credit specialists or their risk assessment systems. To arrive at an expert system, expert opinions are grouped together and confronted to obtain consistent decisions. When the reviews have a good homogeneity and viability, the system is validated to work. It ultimately allows a rating for each borrower and defines the nature or characteristics of the risk. The goal is to have a long-term overview of the risks on the different portfolios in order to lead optimal risk management.

General Conclusion

In our capitalist economy, banking institutions are increasingly confronted with the logic of shareholder capitalism. Banks are pursuing a strategy to generate strong short-term profitability to compensate shareholders. It is now the markets that dictate majority intentions on the orientations of credit institutions. In this ever-changing environment, banks have had to adapt to stay competitive. Credit risk management thus occupies an essential place in the proper functioning of the bank because if incidents arise, the survival of the institution can be initiated.

All banking players have made progress to ensure good long-term financial capacity to develop the profitability and sustainability of the sector. It is now necessary for credit institutions to be able to process data quickly and efficiently to manage credit risk. It then becomes important for banks to become aware of the composition of their portfolios in order to analyse the various variables of profitability or risk in order to carry out appropriate policies.

Henceforth, the question of performance and capital gains on the credit activity is at the heart of the management of banking institutions. Regulation and intense competition have forced banks to thoroughly reform risk management channels. The major competence that credit institutions must develop continuously is adaptability. Banks that anticipate and evolve in their environments will be able to seize opportunities to the detriment of others. It is no longer enough to be passive to survive in the banking sector but to be the most proactive.

This brief therefore provides an overview of credit risk management within banking institutions. Positive elements have been identified. They will have to be maintained and strengthened to ensure the banks' performance. However, negative points have emerged, they must imperatively be corrected so as not to harm the activity. At the end of this project, the banks can thus make a statement on the effectiveness of their risk management and take corrective measures in relation to the various recommendations made. Each bank has a very specific credit policy, and its advice will not be suitable for all lending strategies. The ever-changing banking sector is not about to stop. New management techniques are emerging so that banks can adapt to these important changes while remaining effective.

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