

National Bank of Rwanda

Study on Payments System

**Final Report
by Horizon Systems
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Table of Content

1	Objectives	4
2	Background information	5
2.1	Geography	5
2.2	Demography	5
2.3	Economics	5
2.4	Vision 2020	6
3	Infrastructures	7
3.1	Telecommunications	7
3.2	Transportation	7
3.3	Banks and branches	7
4	Governance	9
4.1	Cash	9
4.2	Cheques	9
4.3	Transfer order	9
4.4	Magnetic and electronic cards	10
4.5	Exchange letters and sight orders	10
4.6	Compensation Chamber (Settlement Office)	10
4.7	Money market	10
5	Customers	11
5.1	“Individual” Customers	11
5.2	“Enterprises” as Customers	11
5.3	“Institutional” Customers	11
6	The payments system	12
6.1	Accounts	12
6.2	Cash (notes and coins)	12
6.3	Cheques and certified cheques	13
6.4	Transfers	13
6.5	Traveller’s cheque	14
6.6	Grey (parallel) exchange	14
6.7	Western Union and Money Gram	14
6.8	Cash dispensers and point of sales	14
6.9	International transfers	14
7	Critiques of the existing payment systems	15
7.1	Clients	15
7.2	Banks	15
8	Settlement between banks	16
9	Projects underway	17
9.1	SIMTEL	17
9.2	Telecommunications	17
10	Development tracks	18
10.1	National Operations	18
10.1.1	Cash	18
10.1.2	Cheques	23
10.1.3	Transfers	23
10.1.4	Memo-transfer	24
10.1.5	Currency exchange	24
10.2	International operations	25

10.2.1	Accepting Credit Cards	25
10.2.2	Issuing Credit Cards	26
10.3	Inter banks operations	26
10.3.1	Settlement (compensation).....	26
10.3.2	Pre-compensation (netting).....	26
10.3.3	Evolution: RTGS	27
10.3.4	Transportation of Valuables.....	28
10.4	Miscellaneous	28
10.4.1	Secondary market: exchange	28
10.4.2	Futures exchange	29
10.4.3	Documents	29
10.4.4	Fees charging	29
11	Organisation for implementation	31
11.1	Role of the Council of the CESP	31
11.2	Role of SIMTEL	31
11.3	Role of the project teams	31
	Appendix 1: Members of the Executive Committee of the Payment System (CESP)	33
	Appendix 2: Distribution of the Banks and of their Branches.....	34
	Appendix 3: Payment system.....	35
	Operations	35
	Compensation	35
	Foreign currencies.....	35
	Appendix 4: Domiciliation (Direct debit).....	36
	<u>Procedure</u>	36
	<u>Advantages</u>	36
	Customer:.....	36
	Company:.....	36
	Banks:	37
	<u>Remarks</u>	37
	Appendix 5: Truncation (cheques and transfers).....	38
	<u>Procedures</u>	38
	<u>Advantages</u>	38
	<u>Remarks</u>	39
	Appendix 6: Money supplies	40
	Appendix 7: Legal framework for bank cards	41
	Appendix 8: Annual Cost Of Cash Handling	44

1 Objectives

The present study has been made by Horizon Systems with the support of the National Bank of Rwanda (NBR) and with the participation of all institutions members of the Executive Committee on Payments System (ECPS or CESP, Comité Exécutif du Système de Paiements) which membership list is reproduced in appendix 1. The objectives were:

- To describe the existing payments system.
- To examine feasible changes and improvements
- To propose an action plan including key success factors.

In this text the term “banks” without other precisions, means all banking institutions, the “Union des Banques Populaires du Rwanda” and the “Office National des Postes”.

2 Background information

In this chapter we shall only mention those key elements, which can help in better understanding the financial situation at large and the payments systems in particular. Most of the figures have been obtained from the Report 2001 of the NBR (Rapport sur l'Evolution Economique et Financière du Rwanda, 2001 or Report on the Evolution of Economics and Finances).

2.1 Geography

- Rwanda is a country in the centre of Africa covering about 26,300 square kilometres.
- The nearest ports are Mombassa and Dar Es-Salaam, distant by more than 1,700 kilometres.
- The landscape goes from a quasi plain (to the East) to a mountain range (to the West), but shows mostly hills on the whole territory. Mean altitude is around 1,800 meters above sea level.
- Excepting a few large protected natural reserves, most of the territory is either used for crop or cattle.

2.2 Demography

- The population is estimated at 8.4 million people (density is 275 inhabitants per square kilometre) of whom less than 10% live in urban zones consisting in Kigali, the capital city and the major cities of the other 11 provinces.
- About 60% of the population are below 20 years of age.

2.3 Economics

Except indicated otherwise, the figures are the ones at end of 2001 (figures for 2002 are about to be published soon). These figures are provided only as an order of magnitude, only to allow meaningful comparisons with those figures involved in the payments system.

The GDP (Gross Domestic Product) has grown from 336 billion FRW (Franc Rwandais) in 1995 to 681 billion in 2000 and 728 billion in 2001.

	1995	199x	2000	2001
GDP in billion FRW	336		681	728
GDP in billion steady FRW (1995 based)	336		538	574
GDP per inhabitant in FRW	59,076		81,886	86,617
GDP per inhabitant in steady FRW (1995 based)	59,076		64,630	68,310

The contribution (added value) of financial services to the GDP is:

FS contribution to GDP	1995	199x	2000	2001
In billion FRW	7.3	...	18.1	19.9
In billion steady FRW (1995 based)	7.3	...	14.3	15.7

Tax collection (enterprises and individuals): 24.5 billion FRW.

Foreign currencies sold by the NBR: 115 billion USD (of which 63 to the other banks).

Foreign currencies bought by the NBR: 138 billion USD (of which 2.8 from other banks).

Monetary Mass M2 = fiduciary + at sight + term deposits + akin + foreign currencies deposits.

	1996	1997	1998	1999	2000	2001
M2 in billion FRW	70	90	92	98	112	121
Fiduciary Mass in billion FRW	21.9	22.6	20.9	21.5	22.6	28.5
Ratio Fiduciary / M2 in %	31	25	23	22	20	21

Banks' own internal reserve:

	1995	199x	2000	2001
In billion FRW	6.9	...	23.5	26.2

2.4 Vision 2020

From the key points of Vision 2020 we shall only highlight the following two directions:

- Development of an economic sector offering service based activities with emphasis on ICT (Information and Communication Technologies).
- Reduction of risks and business costs by managing the environment and by developing appropriate infrastructures.

The modernization projects under way (electronic payment cards) and the projects proposed in this study are completely aligned with the above two directions. Indeed they fully use ICT and will notably improve the service level for domestic clients as well as for foreign clients like businessmen, tourists and participants to fairs, trade shows or venues.

3 Infrastructures

The major urban centres are connected to Kigali via quality roads while reasonably practicable roads link themselves. Commodity services like fixed and mobile telephony, water, gas, electricity are available in these cities but a majority of the country is still lacking any such service.

3.1 Telecommunications

1. Kigali is linked to all major cities via a star network (Multi Service Access Network), which offers bandwidth at demand, point-to-point connection, VPN (virtual private network). The Ministry of Justice already uses this network as well as a number of banks. RWANDATEL is of course welcoming new banking applications on its network.
2. Most cities are served by POTS offering voice, data, Internet access to the domestic users and with international access. Users can subscribe to leased lines or ISDN.
3. The telephony network does not branch out to the deepest rural zones, yet many centres are linked. Indeed RWANDATEL and ARTEL are installing about 400 VSAT to serve them, each VSAT offering a capacity of 2 to 6 voice or data lines. This point is important for the deployment of the card payments at the shops (refer VISA Project – debit cards in § 9.1).
4. A number of bank branches are connected to their head office data centre; a few more branches will further be connected before end of 2003.
5. A project is underway to link the head office of each bank to the NBR. The system should be ready by end of 2003. This data link between the banks and the NBR is an indispensable step to the evolution of the payments system.

3.2 Transportation

1. The head office of all banks are located in Kigali, a situation that makes easy the physical transfer of money (notes and coins) or values (documents, cheques, deeds) between the banks. Same for inter-bank settlement, which is still manual.
2. Bank branches in provinces are served by a practicable road network linking them to Kigali. Each branch is at most 5 hours away from its head office but this still induces a further delay in the settlement of operations between banks. For far away places and for urgent cases, a plane is used for money or valuables transportation.
3. The banks themselves manage the transportation of valuables by using escorted armoured vehicles but they try to limit their costly use by seeking to cooperate if and when possible.
4. Transportation of documents is sometimes done via public transports.

3.3 Banks and branches

1. The actors on the financial scene are: the NBR, 6 commercial banks, the “Union des Banques Populaires du Rwanda (UBPR)” and the “Office National des Postes (ONP)”. The distribution of branches across the country is shown in appendix 2.

2. The NBR has no branch outside the head office. Its staff amounts to about 450 persons.
3. The commercial banks tally 15 branches (including head office) in Kigali and 21 branches in the provinces. Staff amounts over 1,000 persons.
4. The UBPR manages a network of 148 local banks (their shareholders are local clients) of which 60 are considered important in size. The total staff represents about 750 persons.
5. The ONP has 19 post offices of which 2 are located in Kigali. The number of staff handling financial operations of banking nature is not known.

4 Governance

The various payment means used by the clients are, in decreasing importance of use:

Cash (fiduciary money),
Cheques,
Transfer orders,
Magnetic and electronic cards,
Exchange letters and sight orders.

There is no synthetic text describing the by-laws and judicial framework surrounding the payments. Some laws, rules & regulations concerning payment means have been issued over time but are much in need of a refurbishing and harmonization, to take into account the evolution of commercial practices and the use of technology. On the other hand the existing framework seems adequate for governing the daily operational practices.

4.1 Cash

Article 44, 14° of the Constitution dated June 10th 1991 gives to the President of the Republic the authority to strike money. Demonetizations are declared via ministerial decrees.

The judicial status of mint is regulated by the articles 33 à 41 of the law n°11/97 (dated 26.07.1997), which define the by-laws and the role of the National bank of Rwanda, including legal enforcement, levy or exoneration power, protection.

4.2 Cheques

The cheque is ruled by a decree dated 10.12.1951 and the ordinance n°41/98 dated 30.07.1952, stipulating the conditions of a cheque creation, its emission, its transmission, its payment, its security.

Professional people in finance believe that the judicial framework is adequate but the repressive means against counterfeiting and most importantly against cheques without sufficient funds (bounced cheques) are not enough deterrent or not forcefully enough applied. The trust in cheques has fallen very low, hence the (too) large utilization of cash.

We take note that the already mentioned law n°11/97 obliges the NBR to centralize and to publish “incidents” relative to unpaid cheques. Sanctions like the closing of the account are regularly taken.

4.3 Transfer order

The transfer order is an order or mandate given to a bank to debit one’s account of a certain sum and to credit that same sum to another account at the same bank or at another bank. There is no particular rule governing the transfer order but one assumes that it is governed by the rules of commercial exchanges. In practice there is no specific problem associated with this payment means.

4.4 Magnetic and electronic cards

This means is used since 1999 by only one bank, which issues rules and regulations specific to that type of payment, including contracts for card subscribers, for shops accepting points of sales, all indicating the duties and rights of each party.

This new payment method will witness a major growth with the creation of SIMTEL and the VISA debit cards project that will go live in 2004. The NBR must provide to all banks a legal framework to ensure that the contracts and rules & regulations of each bank will be thorough enough and coherent all together. A proposal is provided in appendix 7, based upon the recommendations of the European Union (30.07.1997) and the recent (17.07.2002) Belgian law. As soon as the information specific to VISA will be available such text can be incorporated into their recommendations.

4.5 Exchange letters and sight orders

These means are less frequently used and are ruled by a decree, dated 28.07.1934. In case of fraud or non-payment, they suffer the same weaknesses as the cheques but they too are subject to NBR's publication.

Let us mention two other functions, which are not per se a means of payment but are intimately linked to the financial activity.

4.6 Compensation Chamber (Settlement Office)

The decree-law n° 06/81 (dated 16.02.1981) has given to the NBR the authority to promulgate the By-Laws of the Settlement Office. Rule n°1/89 dated 28.08.89 is still in force and describes the operations of the settlement, the responsibilities, the procedures and the sanctions.

4.7 Money market

The money market has been organised through the instruction n°02/97 (dated 12.08.1997), which defines the procedures to be followed for RFPs (Requests For Proposal) concerning lending of money, loans, issuance of Treasury Bonds.

5 Customers

The importance of habits and the expectations of customers are sometime underestimated. The behaviour of the customer vis-à-vis his or her bank and money is not always rational and the introduction of new and more modern payment means often faces a lot of inertia. For example it is not seldom to have to count up to four, five or more years of promotional effort in favour of the new card system before reaching a satisfactory level in terms of number of subscribers and number of operations per cardholder.

We list here below the key elements able to influence the payments system and the evolution of the systems.

5.1 “Individual” Customers

1. There are about 100,000 individual customers at the commercial banks, 350,000 at the UBPR and 5,500 at the ONP.
2. Most of the customers are cash users. Many clients (often civil servants) withdraw immediately in cash their salary when paid-in their bank account.

5.2 “Enterprises” as Customers

1. There are about 10,000 enterprises banking at the commercial banks.
2. Commercial and industrial enterprises use cash a lot too because the trust in cheques is so low and also because cash allows more “flexible accounting”.
3. Some service enterprises (Rwandatel, Rwandacel, Electrogaz, security companies, schools) and a few State departments like Rwanda Revenue Authority are responsible for a large number of payments (e.g. 50,000 invoices per month for Rwandatel) of which the handling has a major impact on the services by the tellers in the branches.

5.3 “Institutional” Customers

The NBR manages of few hundred institutional clients: State departments (inland revenues, tax authority, VAT, ...), domestic and foreign banks, embassies, international institutions, projects, NGO, ...

6 The payments system

A summary table of the most frequent payment means and their relative importance is given in appendix 3. The figures in that table should not be considered as “accounting” data but rather as best estimates given the information gathered at the banks.

6.1 Accounts

1. The vast majority of accounts are current accounts (over 100,000). There are also a few hundred fixed term deposits or foreign currencies deposits but they are obviously much less frequent.
2. The UBPR on the other hand features many savings accounts with a saving passbook. To the contrary of civil servants rural customers do leave a good chunk of their assets in savings accounts.
3. Multibanking (customers having accounts in more than one bank) is very rare for individuals and enterprises.
4. Current accounts do not bear credit interests.
5. The current account is often used as a transit method between the monthly wage and cash.
6. The fee for maintaining an account is levied each month. Monthly standard fee is around 500 FRW.

6.2 Cash (notes and coins)

The cash problem is felt important and worrying at several levels. A recent study “Rapport révisé de la Commission chargée d’examiner la problématique des retraits excessifs d’espèces aux guichets des banques” (Revised analysis report about the excessive cash withdrawals at bank tellers) dated 08.05.2003 by the BCDI describes the phenomenon in details. Let us extract the following facts:

1. One estimates by the difference between the total fiduciary mass (about 43 billion FRW at end of 2002) and the deposits in banks and other institutions (about 13 billion FRW) that the cash floating is about 30 billions FRW.
2. These 30 billion FRW compare to the 45 billion FRW in current account deposits and the 45 billion FRW term deposits and akin (end 2002 figures). In appendix 6, a few comparisons with other countries are shown.
3. About 30% of banks’ personnel is busy handling cash (withdrawals, verification, transportation, ...), meaning 300 people just for the commercial banks. One estimates (see appendix 8) that cash handling costs between 5 and 6 billion FRW each year (personnel, security, printing, transportation and financial opportunity loss), which corresponds to about 600 FRW per cash transaction.
4. With 1.6 million cash transactions per year, the FRW cash handling represents more than 80% of all banking operations.
5. In commercial banks, the average transaction (deposit or withdrawal) is comprised between 200.000 and 500.000 FRW (depending of the type of bank). The average withdrawal is slightly higher than the average deposit except for the NBR (this is understandable given the NBR’s role).

6. Taking into account the notes deposits and takings made by the NBR, there are about 30 billion FRW in cash entering and leaving the bank tellers each month.
7. The withdrawals and deposits in foreign notes are also not negligible: about 65,000 operations per year of higher magnitude (an average transaction is around 750,000 FRW).

Lacking alternatives, the cash plays thus its specific role of commercial exchange means. Unfortunately, as the economic activity grows, this means becomes quickly:

1. A source of expenses (issuing, handling, maintenance, destruction, transportation, ...). These expenses are clearly more important than those associated with other payment methods and they penalize together banks and users.
2. A source of difficulty (transport, security).
3. A cause of financial inefficiency (lack of productivity).

6.3 Cheques and certified cheques

1. The cheque is a classical payment instrument but does not enjoy widely acceptance in the country. Yet efficiency of a payment instrument depends essentially of the users' trust in such instrument.
2. The operational handling of a cheque is very much manual and the handling of a "non regular" cheque (bounced, falsified, stolen, ...) is very onerous.
3. The cheque is used in commercial relations (we find it at the compensation office where many hundreds cheques are exchanged each day) but it is often used as means of cash withdrawal.
4. In provinces, the cheque is even less used because the additional delay before paid-in due to the displacement.
5. Usually a chequebook of 25 cheques is issued for a fee of 500 FRW (+ VAT).
6. To levy the insecurity of a cheque many suppliers and administrations demand certified cheques, which are even more costly than a regular cheque and which are charged at a higher fee by the banks (from 1,500 to over 3,000 FRW + VAT). About 35,000 certified cheques are issued every year.
7. Despite their meagre reputation, unpaid cheques (refused at the compensation) are infrequent. Often these cheques are bounced because a temporary lack of funds but not because of fraud: 125 cheques were declared fraudulent at the NBR during the first five months of 2003, i.e. 0.17% of cheques presented at the compensation. During the same period sanctions (closing of accounts) have been taken for 55 accounts.

6.4 Transfers

1. An internal transfer, i.e. a transfer within the same bank, is a simple instrument relatively safe which is gradually entering users' habits (about 140,000 operations with an average of 1,000,000 FRW per transfer) but it should be more widely spread.
2. The transfer between banks (hence found at the compensation office) is also used but much less than the cheque (about a quarter of compensated operations).

6.5 Traveller's cheque

1. The traveller's cheque is a payment means more secure than the traditional cheque but is not free of fraud tentative. Banks accept them with great precaution but control costs are high (international phone calls).
2. The principal issuer of traveller's cheques is, but not only, the NBR.
3. One estimates that there are about 10,000 traveller's cheques issued or paid-in per year.

6.6 Grey (parallel) exchange

Let us mention a recent study "Etude du marché parallèle des changes rwandais" (Study of the parallel exchange market) by the NBR, dated 04.06.2002, which reports about 235 currency changers in the streets of Kigali and 40 to 50 billion FRW exchanged against USD. This study suggests that a simplification of the exchange regulations (essentially administrative) could bring back into the regular banking circuit part of these transactions.

6.7 Western Union and Money Gram

Let us mention the quite frequent use at certain banks of the international payment services of Western Union and Money Gram. Such service, outside traditional banking services (because not linked to a deposit or credit account), despite its high fee (a few % of the transferred amount) enjoys a certain success. The service is onerous yet simple, discreet, swift and available in all major towns of the world.

6.8 Cash dispensers and point of sales

Only the BCDI has developed a withdrawal and payment service with magnetic card. Here is information communicated by the bank:

1. The service is available since 1999.
2. There are 11 cash dispensers (Automated Teller Machine, ATM), of which 8 in Kigali.
3. About 8,000 cards are active generating around 20,000 cash withdrawals per month. The average withdrawal is about 25,000 FRW, much less than an average withdrawal at the teller, which is very normal even desirable.
4. A cash withdrawal is limited at 200,000 while there is no limit for payment at a shop.
5. Points of Sales are less used without a specific reason being identified. Actually, it is a service that requires a critical mass not just of users but also of shops offering the service.

6.9 International transfers

Payments linked to import-export activities and financial transfers are using the SWIFT international network. Around 150,000 operations (incoming/outgoing messages) have been registered in 2002 for an aggregate amount of 206 billion FRW (NBR and commercial banks). Curiously enough, up to today, no one bank has been able to communicate the fees charged by SWIFT.

7 Critiques of the existing payment systems

7.1 Clients

1. The most frequent complain is the queuing at the tellers, most often for simple cash withdrawals or deposits. Peak days are those last due date days when recurring invoices need to be settled (we shall discuss this later).
2. For clients travelling abroad, the impossibility to use cheques or the lack of credit cards.
3. For foreigners visiting the country the poor acceptance of credit cards.
4. For enterprises, the delays and costs for transfers in and out of the country.

7.2 Banks

1. The many queues at the tellers.
2. Cash handling.
3. Transportation in the provinces.
4. Operations originating in the provinces and requiring settlement at the compensation office.

8 Settlement between banks

The NBR is tasked with the organisation of the compensation office, where banks exchange daily their mutual debits and credits operations. The compensation (or settlement) is ruled by a strict protocol and operates for many years now without any flaw.

Today, the settlement operates manually:

1. D-day: the cheques and transfers (rarely other instruments) to be presented are all gathered by each participant to the settlement.
2. Participants ready operations (collection chit, ...) for settlement in the compensation office (or chamber) either on D-day or on the morning of day D+1.
3. Day D+1: the settlement starts at 10 AM and finished within a couple of hours. In the afternoon (usually 3 PM) participants inform one another of suspect instruments.
4. Day D+2: bounced cheques are represented (plus eventual penalty, ...).
5. Up to today, no incident has taken place where the NBR had to intervene (e.g. lack of funds from one participant).
6. A cheque presented in Kigali is usually cleared within 48 hours. The delay for cheques presented in the provinces is highly dependent upon the organisation of each bank (frequency and nature of transportation).

Some comments:

1. Depending when in the month or the year, the average number of instruments exchanged in the compensation office varies between 600 and 1,200. These exchanges can still be managed manually but the compensation office stresses the constant augmentation, year after year, of the number of exchanges (average figure was 300 for the year 2001). Recommendations are made to handle this growth evolution.
2. Operations originating from the provinces are cleared with a further delay that does not depend of the compensation office but of the extra time required to physically bring the instruments to Kigali. Cheque truncation (see further) and improved telecommunications between branches and head office should improve the situation. Equally so with the organization of a common valuables transport infrastructure (see §10.3.4).
3. Settlement, in many countries, operates within 24 hours and often for large amounts the settlement happens many times within the same day. We shall further comment this § 10.3.

9 Projects underway

9.1 SIMTEL

A “Protocole d’Accord pour la création d’une société interbancaire de monétique et de télécompensation” (Memorandum of Association for the creation of a company for payment systems and real time settlement) has been signed in April 2002 between the NBR, the commercial banks, the UBPR and the ONP. This company, SIMTEL, should become the operational arm of all the banks and the centre for all future inter-banks developments. It is certainly a wise and totally justified decision of principle. The first project undertaken by SIMTEL is the debit card project with VISA.

It is not within the objectives of this study to analyse SIMTEL and its projects. However it could be worth signalling some comments that were made by the banks or SIMTEL itself demonstrating their concerns linked to the evolution of the payment systems

1. The VISA project planning has been presented to the banks (test during Q1 2004, live in Q2 2004) but the operating procedures between the banks and SIMTEL have not yet been well defined.
2. The organisation work and computer developments, which will be necessary at each bank, have not yet been scheduled. However the VISA debit cards are planned to go live April 2004. The technical study, which just finished will allow evaluating the amount of work and the necessary resources for each bank to plan.
3. It is important that all banks, or almost, participate to the system with an equal level of security. This is a credibility issue for the debit cards.
4. For every new payment instrument, one should ensure that the current legal framework is sufficient. Otherwise one must adapt the regulations before going live, to avoid creating a judicial hole that would discredit the system. This aspect is not managed by SIMTEL.
5. It was foreseen that in each bank a small cell of three persons would be organised to support the project: one organiser and analyst, one legal and one sales. If these groups are not yet at work, it is highly urgent to do so and to give these persons adequate time to follow-up the project properly. This is in the interest of each bank and a key to the success of the project itself.

9.2 Telecommunications

The NBR is developing a telecommunication system allowing all banks to exchange data with the NBR. This is an extremely important tool and it would be worthwhile for the banks to examine as of today the possibility of use of such communication facility (see for instance the proposal regarding the settlement).

10 Development tracks

In the following sections we shall present development lines organised along the three following domains:

- National operations
- International operations
- Inter-bank operations

10.1 National Operations

National operations consist essentially in cash, cheques, deposits and exchange. We shall describe practical improvements in that order.

10.1.1 Cash

Recommended developments try to reduce the number of cash payments in favour of autopay, direct debits, standing orders or transfer operations.

10.1.1.1 Action Debit Cards (Visa)

The Debit Card project has been decided upon and has begun with the collaboration of Visa (see SIMTEL). The use of debit cards will diminish the number of withdrawal operations at the bank by a greater use of the cash dispenser function of the ATMs and by the payment by card in the shops.

Let us note a corollary effect: in those countries where customers are familiar with debit cards, a new habit has risen almost automatically, which even further diminishes cash withdrawals at the branches (both tellers and ATMs): it is cash obtained from the shop.

1. The customer who needs some cash uses his/her card to not only pay for the goods but also for getting cash from the shop. For instance he / she needs to pay 70,000 FRW for the goods but wishes to get 80,000 FRW in cash. The shop will debit his/her card by 150,000 FRW and give him/her 80,000 FRW in cash.
2. The benefit for the customer is the proximity service: the number of POS is much larger than the number of ATM.
3. The benefit to the shop owner: the amount given in cash to the customer is immediately credited on the shop's bank account.
4. Disadvantage for the shop, which is dealing partly in "black". This way of doing leaves traces in the books.

Summary and highlights

This project business plan has been presented elsewhere (SIMTEL) and must be implemented without delay. However, two remarks:

- 1) *It is very important that this project be developed in phases, the Kigali capital being the first served and the provinces only later after a sufficiently long period of maturity (stable operational environment, excitement of the card owners). The phased approach allows also for gradual investments. In other words, it is far better to ensure first the success of the project in Kigali and to progress by being pulled by customers' demand before extending the project in the provinces.*
- 2) *While extending in the provinces, one should consider the use of existing telecommunications networks.*

10.1.1.2 Payment of regular invoices.

Many companies, public as private, issue on regular basis many invoices with a fixed due date for payment. These cause enormous cash withdrawals and long queues at the tellers. Often the customer has to queue again at the company to bring the payment slip as proof of payment.

The current payment methods are a mix, from time to time inefficient, of automation and manual practices. However, each incursion into manual is source of administrative work without any added value and it gives a poor image of the entire banking system.

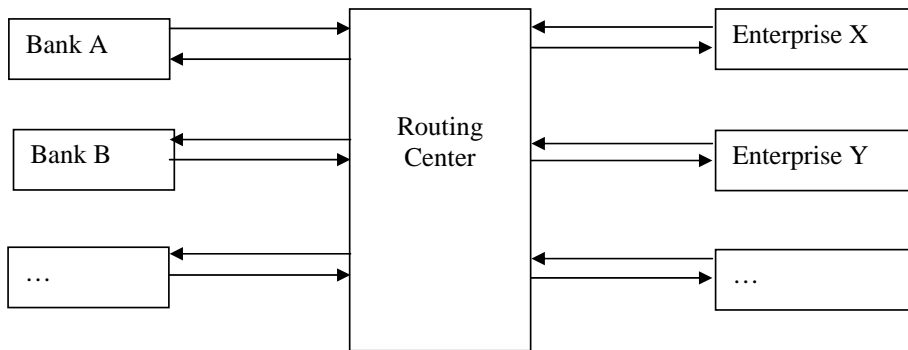
A typical example is the cash payment at the branch teller and the presentation of the payment slip at the teller of the service company that issued the invoice.

One should obtain from the services companies issuing regular invoices that they allow the organisation of more efficient payments.

The banks, eventually with the help of some administrations, should negotiate with these enterprises the implementation of new procedures that will simplify the payment of the invoices.

Proposition for the simplification of the payment of invoices.

1. At the moment of payment, whatever payment means has been used (cash, cheque, transfer, ...) the bank identifies all the clients who have paid an invoice to a specific enterprise and provides to that enterprise the list of customers and of their payments ("payment made by" file).
2. These files are sent via wires or, to start with, via magnetic file (e.g. floppy). The transmission of these files must be secured so that the file constitutes a proof of payment.
3. It would be better to go through a common file routing facility so that the enterprises would not have to develop, each on its own, communication solutions that would end up to be all different and so that the banks would all benefit from a standardized service with same level of security.



4. Such an approach also supposes the agreement on a common “structured communication” and on a common exchange protocol (examples exist and some are public), which, by the way, could be found in the future in other payment methods. This structured communication allows the enterprise an easy identification of the essential components of the invoice and the customer.
5. Transmission of the files could happen at a frequency to be agreed upon but the simplest is a daily transmission. Procedure for acknowledgement of file receipt must be applied.
6. Particular care should be put into the handling of the very last minute payments.
7. All these services enterprises have IT systems that will ease the matching of the list of pending invoices with the list of payments received.
8. To strengthen the appeal of such system, the banks can even negotiate that, if there is a payment delay due to the bank (for instance the client has paid a few days before the due date but the bank is unable to communicate the payment file because of technical problems), the banks would endorse eventual penalties. The bank can prevent itself from such occurrence by asking the customers to pay latest on due date before a given time or even to pay one or two days before due date (in provinces for instance).
9. To modify existing procedures always generate difficulties, for the banks as for the enterprises. In consequence it is advisable that the banks together, via the ABR (Association of Banks in Rwanda) and with the support of the NBR for instance, do approach each enterprise in turn to discuss and implement the proposed modifications.

Summary and highlights

For each concerned party the achieved simplification is important for a relatively modest investment. The implementation of this proposed action relies first on a substantial organisation and persuasion effort, followed by simple IT developments both by the banks and by the enterprises issuing the invoices

This proposal, together with the subsequent ones (Autopay, direct debit, ...) will significantly reduce the number of cash operations and the costs related to invoices handling.

This proposal puts the banks in position of trusted broker (between the enterprises, the administrations and the community of customers). This is indispensable for improving the trust credit of the payments system.

10.1.1.3 Payment of “official” moneys

By “official payments” one should understand the payments, without invoices being issued, of legal fees, as for instance, VAT payments, Inland Revenues Services, Taxes (customs, ...). For these payments too the current procedure can be simplified after prior agreement with the concerned authorities (e.g. Rwanda Revenue Authority).

1. The customer pays with the method he/she likes to use (though he/she should be recommended to use transfers or memo-transfers – see below).
2. The bank sends, on the same day, to the appropriate administration the list of clients, of their paid amounts, of the payment references, ... for that day.
3. The communication being sufficiently secure (to agree and to control), it is enforceable. This means that the administration is guaranteed that the sums listed in the transmitted file are indeed credited on its account and available.
4. To strengthen the appeal of such system, the banks can even negotiate that, if there is a payment delay due to the bank (for instance the client has paid a few days before the due date but the bank is unable to communicate the payment file because of technical problems), the banks would endorse eventual penalties. The bank can prevent itself from such occurrence by asking the customers to pay latest on due date before a given time or even to pay one or two days before due date (in provinces for instance).

Once these procedures will be in place, it is obvious that the customers (and the enterprises), who would want to continue in the old way would be more and more penalised (among others by the fees).

Summary and highlights

The simplification and operational benefits obtained by this proposal are of similar nature as the ones obtained by the improvement on payments for regular invoices.

10.1.1.4 Domiciled invoices (Direct debit or Autopay)

1. At the same time, the banks can promote the use of “domiciled invoices” (autopay): the client authorizes his/her bank to automatically pay invoices issued by a specific enterprise (refer to details in appendix 4).
2. The customer should not worry anymore about the payment. The IT system handles every step of the operations without any intervention from the client or the teller and without any cash movement.
3. This payment method is already in use at certain banks but it should know a wider usage. One should explain to the enterprises the benefits they will have if their clients domicile their invoices and they should encourage those clients who accept the autopay: for instance insurance companies should allow monthly payment of the premium, without interest levy, if autopay is accepted by the customer.
4. Ones generally believe that the rate of autopay use is a measure of the trust clients have in the banking system of their country.

Summary and highlights

Implementation of autopay demands operational and IT work both for the enterprises and the banks. As this means is already in use at a few banks, extra persuasion effort is required at the customer and enterprise level for the promotion of autopay.

10.1.1.5 Standing orders

A standing order consists in an instruction given by the customer to his/her bank to pay at given dates a fixed amount to a beneficiary. For instance, paying a 30,000 FRW rent to the account of the landlord every 5th of the month, permanently until revocation of the order. Contrary to autopay this method does not require any preliminary intervention of the beneficiary. Frequency of payment is irrelevant (weekly, monthly, quarterly, ...) but one should avoid going beyond one year.

Benefits are the following:

- The customer should not worry anymore about the payment.
- Bank has less administrative work.
- The beneficiary can count on regular and timely inflow of money.
- The client is informed that the payment is made according to his/her instruction.
- Standing order is easier to implement than autopay.

Summary and highlights

The implementation of standing order demands less organisation and IT work than for autopay and only to the banks. As this means does already exist, it should simply receive better promotion.

10.1.1.6 Imposing specific payment means

A recommendation was forwarded a few months ago, that the payments exceeding 100,000 FRW could not be made anymore in cash. It would be normal that companies do pay Taxes, VAT, Customs, ... only by cheque (bank cheque, see §10.1.2) or even better by transfer.

In case one implements the above proposed solutions, the transfer is indeed the simplest, fastest clearing method to make funds available to the beneficiary (even better than cheque). The threshold of 100,000 FRW could be lower in function of the success of this method.

Summary and highlights

For a small investment, one shall benefit of the vanishing of large cash movements, both for the banks and for the concerned administrations.

Summary and highlights of the proposals in §10.1.1.2 to §10.1.1.6

Given some organisation work, given an effort in communication and a relatively modest investment in IT, all these proposed improvements (which could be led in parallel) will significantly reduce the number of cash operations at the tellers (a realistic figure is a reduction of 30% within two years), will reduce the complexity of un-automated payments and will increase the efficiency of the payments system for the enterprises as well as for the customers

Rationalisation effects will without doubt reduce operating costs but more essentially will allow a significant increase in the number of operations (through the increase of banking activities: more customers generating more operations) while keeping infrastructure and people steady in size.

The communication effort is essential and should first target the bank staff itself, more particularly the tellers who in turn will convince their clients. Then the marketing effort should be directed towards chosen groups: the managers within public administrations and large companies, the hotels and restaurants staff, the embassy staff, other international organisations, ... whose example will spread like fire.

10.1.2 Cheques

The envisaged measures in § 10.1.1 will drastically reduce the number of certified cheques. For more stringent cases one suggests to replace certified cheques by bank cheques (simpler to deal with and safer).

Another suggestion made by banks consists in the promotion of crossed cheques. This avoids cash and favours the use of accounts. One must persuade tellers to act upon their clients.

On the other hand a simplified procedure can be implemented to handle cheques and transfers of low value (truncation). This procedure is explained in § 10.3.2. It is quite interesting for cheques written in the provinces and requiring compensation.

10.1.3 Transfers

A transfer is a written order by the client to transfer a specific amount to another account by debiting his/her own account.

1. Given the simplicity and the low risk of this method, the banks should promote it widely to their customers, to the shops and to the enterprises.
2. One should promote the use of pre-printed forms, available at all banks.
3. To the clients likely to use them, the banks should deliver pre-printed transfer forms with the customer information (name, address, account number, ...).
4. Enterprises, which issue large quantities of invoices should be encouraged to append to the invoices a partly filled transfer form indicating already appropriate information: name and address of the enterprise, account to credit, invoice reference, amount to pay, name of the payer, The client should only fill in the remaining details: his/her account number to debit, the date, and the signature.
5. Completed transfer forms should not necessarily be presented at the teller. They can be put in a mailbox available in the branch or in the branch wall on the street. To avoid discussions, one should probably deliver a receipt of the form during a temporary period (till customers get used to the method).
6. Ideally transfer forms should be standardised for the whole country (same form for all, except the logo of the bank). This will help the clients, the enterprises, the banks, ... and give the possibility, once volumes become important, for automated handling.
7. Transfers with low value should be treated separately, especially if written in the provinces and destined to compensation (see Netting or pre-compensation §10.3.2).
- 8.

Frauds on transfers are usually rare as the amount of money flows from one account to another. It happens however that unauthorised persons sign transfers on behalf of a third party to their own account and then withdraw cash and disappear. A certain control is thus necessary (and could be automated by IT systems) for transfers above a certain amount or for frequent transfers of smaller amounts.

Summary and highlights

Transfers exist at all banks. They should be promoted to reduce the cash operations. They induce also a “learning” process: the more the client is used to them, the more frequently he or she will use them.

10.1.4 Memo-transfer

A second way to diminish queuing and to provide to the customer a means to manage his/her accounts and finances (hence a “learning” process too) is the “memo-transfer”. The client fills in a transfer form in which he/she indicates the date of execution (in the future). The bank will then execute the payment on that date.

1. Traditionally, a transfer form has the payment date field left blank. The order is executed at the day of reception.
2. When this field is filled with a date in the future, the payment is executed on that date, provided of course that sufficient funds are available.
3. If not enough funds are available on that date, the order is left pending for a few days till sufficient funds make it executable.
4. If however after a certain “grace period” funds are still not available the client is informed (via phone or via statement of account) that his/her transfer order could not be executed.

The advantages of this system, which requires additional encoding and IT treatment, are:

- To the client: he/she can differ a payment, yet passing the order, till such date when he/she knows provision will be sufficient to allow the payment.
- To the client: he/she gives the order at such time when it is convenient for him/her, generally indicating payment at the latest allowed date (or as imposed by the supplier), knowing that the payment will be executed on time and without the hassle of last minute action when branches are packed by queues.
- To the bank: binding of the client, less queues at the branches at peak days, better treasury management, improved organisation of the encoding (which can be made in a back-office rather than by the tellers).

Summary and highlights

This means is not presently used. Its implementation will require some IT developments at the banks. The benefits will however be of similar nature than the one proposed in §10.1.3.

10.1.5 Currency exchange

The simplification of currency exchange operations (e.g. not registering the identity for small amounts) shall without doubt bring back to the banks a large number of exchange operations made on the parallel markets.

However it is probably the introduction of the credit cards (§10.2), which will notably reduce the currency exchange operations.

10.2 International operations

10.2.1 Accepting Credit Cards

A large number of foreigners (tourists, visitors, consultants, congress participants, reporters, ONG, shops, businessmen, ...) do spend – yet alone for their personal use (hotel, restaurant, transportation, souvenirs, ...) – sums often exchanged on the parallel market or in foreign currencies remaining in the commercial circuit

It is important and urgent that **credit cards issued in foreign countries** (at least one of them, e.g. VISA) be widely accepted by banks and businesses (e.g. hotels):

- Wider attraction (tourists and even commercial) for the country.
- Reasonable VISA commissions.
- Lesser notes circulation.
- Better visibility of the currencies market.

VISA has demonstrated in the past a high reluctance in accepting Rwanda banks as members of the VISA circuit. It is certain that there was (in London) a mingling of old images of African turbulences that distorted the reality and pushed VISA to only accept as an initial project the debit card as a consequence of NBR's insistence to do so.

VISA justifies its prudence invoking the fraud risks and the necessity to gain first a certain experience in the card business leading to minimised risks. They estimate that a six months practice period with debit cards, together with the operation of a complaints handling centre that SIMTEL should set up, would suffice to the introduction of credit cards. In line with the current project (debit cards) it is highly advisable that negotiations take place to establish a link between the Rwanda payments system to the major credit cards networks, so that those users fulfilling the stipulated conditions of the systems (one could start with a selection of establishments) could accept credit cards under reasonable conditions.

Let us insist on undertaking now negotiations also with Master Card, even only to just create some competition.

Credit cards operators now demand that credit cards be validated on-line, otherwise the fraud risks should be born by the accepting establishments. SIMTEL could be tasked to develop a central system of interconnection with the major credit card operators to allow local connection of the affiliated users.

Remark: the same system could be linked too to the major authorisation centres for Traveller's Cheques. On the other hand the number of Traveller's cheques would notably diminish due to increased acceptance of credit cards.

Summary and highlights

This project is much simpler than the debit card project and the use of SIMTEL (existing infrastructure) should allow to offer this service upfront at a very reasonable cost. Positive consequences are substantial: better currencies control, less cash operations, “image de marque”.

10.2.2 Issuing Credit Cards

On the other hand, banks should promote as soon as possible, taking into account the VISA requirements, the **issuing of credit cards to their own clients**, starting with those whom go abroad. These clients, probably the most active and most banking minded, even if their number is low are the source of important payment and exchange operations. Here too, one should target the reduction of the delays foreseen by VISA, by offering this service, to start with, to selected and specific groups of clients (e.g. high civil servants, managers of banks, ...).

Summary and highlights

This project would be much simpler than the debit cards and would give the banks a product highly esteemed by their most influential clients. Positive consequences are similarly substantial: better currencies control, less cash operations, image de marque.

10.3 Inter banks operations

10.3.1 Settlement (compensation)

The current settlement system is manual but it works efficiently. However the natural growth in number of operations and the soon presence of inter banks activities due to the introduction of the VISA cards, require some measures to be taken.

10.3.2 Pre-compensation (netting)

1. The use of cards in ATM and POS, forecasted for 2004, will lead to a large number of “displaced” operations (a customer withdraws notes from an ATM supplied by another bank than his/hers or pays goods in a shop banking elsewhere).
2. It is unrealistic to think that these operations will be presented at the Compensation Chamber for settlement and SIMTEL is planning the development of a netting (pre-settlement) system, which consists in keeping a net balance of the amounts due or receivable by one to or from the other participant. Once per day these balances are transmitted to the NBR for settlement.
3. The progress of banking habits will increase the number of cheques and inter bank transfers. It is advisable to treat swiftly and automatically a large number of those operations to avoid congesting the Compensation Chamber with all these low value operations.
4. It is thus highly recommended that a truncation system be developed, which consists in transmitting electronically (via wires or magnetic media) all the necessary information to settle these operations. The underlying instruments (papers) are handled in a side handling circuit and controlled a posteriori (for more details see appendix 5). Financial risks are low, as the amounts involved are small. Nevertheless this system requires very precise interbanking rules and regulations and very well documented procedures for all the banks participating in the system.

5. The information transmitted to a central point consists of the **net balance** to settle. The required IT application is very similar to the one SIMTEL is going to develop for the card operations.
6. The implementation of this netting will allow the existing (manual) settlement to continue operating for another two to three years, the time it takes for the VISA card operations to take off. It will also give time to study the legal and operational aspects of an RTGS (Real Time Gross Settlement, see further down) system.
7. These two netting systems (debit cards and small amount payments) shall use the standardised account number favoured by the NBR (of the form xxx-yyy-yyyy-zz where xxx identifies the bank and the entity within the bank – branch or department – , yyyyyyy is the seven digit customer account and , zz are the modulo 97 check digits).

Summary and highlights

This project requires definitively organisation work as well as moderate IT investments and also the collaboration between SIMTEL and the NBR. Benefits are twofold: work simplification (for the banks and the NBR) and swift service (especially for provinces). Another benefit to appreciate is that the risk less implementation of the system over a two to three years period will give time to implement an automated settlement system.

10.3.3 Evolution: RTGS

The current settlement system is based on the netting, once per day, of operations of the previous day.

Most of the Compensation Chambers created or renewed around the world in the last ten years opted for a real time gross settlement (RTGS). In oversimplifying the principles one can summarise the RTGS operations as follows:

1. Each bank participating to the RTGS has an account with the National Bank.
2. Each bank transmits continuously the operations to compensate.
3. The operation is immediately executed, provide funds are available: the account of the payer bank is debited and the account of the payee bank is credited. The operation is irrevocable.
4. Often, if the available balance is not sufficient, the operations are queued and the liquidator (bank manager) monitors and manages the queue of its bank (e.g. change priority or sequence of operations).
5. Mechanisms are put in place to guarantee the efficient operating of the system and to avoid deadlocks or the temporally failure of one participant to stall the system.
6. In particular the National Bank intervenes as a lender, based upon pre-established guarantees, to the various participants falling short of funds.

It is a system that requires a perfect legal framework to operate and excellent technology, certainly for telecommunications as for the guarantee of the well behaving IT applications.

Summary and highlights

This project requires deep analysis (legal, organisation, IT) but, given the volumes (after netting) and the existence of a good inter banks communications network, it would not require huge IT developments. Ideally, one should commence working on this project as soon as the debit card project is running well.

10.3.4 Transportation of Valuables

1. The delivery and collection of funds in province is a costly operation as a risky one. Many banks have expressed their wish to see a presence of the NBR in provinces.
2. On the other hand organisation local compensation in provinces is only a partial solution, which makes the central settlement even more complex for the participants.
3. Lacking a presence of the NBR in the provinces, one could improve the collaboration of the banks having a branch in the same city by systematically organisation inter branches transfers and by centralising the cash handling.
4. Some have even suggested operating one common funds transportation company. This would have a positive impact on the costs and the risks. SIMTEL could organise that common service by negotiating with existing specialised transportation companies. The ONP should also take part in this matter.
5. One technique, in practice in certain countries, is to have notes deposits on behalf of the NBR within a commercial branch that manages that cash on behalf of the NBR. Hence funds transfers Kigali-Provinces or Provinces-Kigali would be replaced by inter branches transfers in a province city. Obviously, procedures must be put in place, security measures implemented, insurance issues resolved (limits, responsibilities) and adequate controls put in action. It is obvious that, given the role and specific responsibilities of the NBR in that matter, such project should be headed by the NBR itself.

10.4 Miscellaneous

10.4.1 Secondary market: exchange

The NBR manages a primary market for Treasury Bonds. These financial instruments are fixed interest bearing for periods ranging from one week to one year. They seem to be adequate for the needs of commercial banks and a few other clients.

Some raise the question about the opportunity to have a stock market to create liquidity on a secondary market, allowing quotation of a few companies stocks and other fixed income securities. Expected benefits are:

1. Higher visibility of the quoted companies (because of the required acceptance and maintenance conditions).
2. Possibility for these companies to raise capital, diversifying their shareholding.
3. Awareness by part of the population and the enterprises of the well operating of these companies (financial and social aspects altogether).
4. Concerning the bonds traded on the market, the increased flexibility in funds management for the banks, the companies and a number of clients.

However, one should note that:

- It means an important investment, as well financially as well as politically.
- It is a long lasting investment bearing certain financial and economic risks: internal and external markets would be negatively affected by a project failure.
- A secondary market, even limited in scope, requires a strict legal environment as a preamble to any development.

A study required by the NBR will analyse the interest for the financial community to have a secondary market. The study will be carried out over the next few months.

However it would be useful to examine if the existing instrument (Treasury Bonds, Certificates of Deposit) could not enjoy, without waiting for more ambitious developments, more publicity among the enterprises and the individuals.

10.4.2 Futures exchange

Banks and enterprises together could benefit from future contracts, especially for currency exchange. The question is if this is thinkable given the current legal framework and present economic circumstances. If the answer is no, one could still bear this possibility in mind for the future.

10.4.3 Documents

Even if banks succeed in diverting the most frequent operations towards more rational systems, they still will be confronted with the handling of forms of all sorts. It would be highly useful for the banks as for their clients to provide standardised documents. Again, such standardisation initiative could be carried out by SIMTEL.

1. Every document that would be passed from one bank to another should be standardised in size, style and layout, so as to reduce errors and to diminish production costs.
2. A small working group should systematically review all existing documents within the banks and propose a common version.
3. Cheques and transfer forms should be taken care of, as they will continue to be present for a long period of time and be also more numerous over time.
4. Should this work be undertaken, one should pay some consideration to the use of barcodes. Usually banks do not like barcodes because they make think of groceries goods. However many different industries have massively adopted that kind of coding because the savings in encoding work (data and other information) are remarkable.

10.4.4 Fees charging

1. Once the VISA debit cards will be available and widely used with quality service, then one might think of prudently charging cash operations, at least in those regions where debit cards could be appropriately used.
2. Charging deposits is not natural: banks have all interest in keeping the cash as much as possible in their own circuit.
3. Charging withdrawals could be envisaged but only after a long notice period and provided a marketing campaign in favour of the use of cards and other payment means is launched.
4. In order not to overload the systems with heavy administration, one could propose a fixed fee per operations, hence compensating the administrative work.
5. As for charging the cards, one should begin with a low fee. Commercially moving from a free service to a fee based service is much more difficult than increasing an existing fee.
6. To promote and engage the customers into frequent banking habits, it would be useful to remunerate, even poorly, the deposits (current and others). This news should be brought together with the charging of withdrawals.
7. As a reminder, the NBR should guarantee a sound competition between banks and competition could take the form of various attractive charges.

8. Finally, for as much as one could bring customers into more banking and even force them to use banks, the notion of minimal banking service pops up as a “universal service” to which anyone would be entitled to and without prohibitive or discouraging fee charging.

← --- Mise en forme : Puces et numéros

11 Organisation for implementation

Especially with projects shared by several companies, there is a need for organisation, in order that every participant knows exactly what his responsibilities are, and that the developments fit properly in the existing structures.

11.1 Role of the Council of the CESP

The Council (board with the NBR, the commercial banks, the UBPR and the ONP) is responsible for the execution of the program updating the payment system. The Council defines the strategy to follow and takes the decisions about the projects to be developed.

The Executive Committee for the Payment Systems (ECPS or CESP in French) is a consultative board in charge of the detailed supervision of the Council decisions. This Committee is the link between the projects and the financial institutions, especially for collecting and distributing information. Specifically, the Committee is informed and discusses the progress reports it receives regularly from the projects under development.

11.2 Role of SIMTEL

An Agreement Protocol between banks (already mentioned in chapter 9) has created an operational company, SIMTEL, in charge of the development and the management of the technical infrastructures needed by the upgrading of the payment systems. Most of the possible actions proposed in chapter 10 require the functioning of a telecommunication centre connecting the financial institutions and other participants (like service providers and public administrations) and allowing the exchange of data in a very secured mode.

As SIMTEL must in any case develop a telecommunication centre for the management of the cash dispensers and the points of sale, care should be taken that this centre is expanded in order to serve other applications. More precisely, the proposals described in §10.1.1.2 and §10.1.1.3 (improvement of the payment of invoices and mandatory amounts) and in §10.3.2 (automated netting for small amounts) ask for a specific centre of telecommunication, managed by SIMTEL.

SIMTEL can't master, in a few months, the needed banking expertise. Therefore, SIMTEL should count on the existing banking experts and on swift decisional procedures for all commercial aspects concerning the "debit cards" project (see §11.3).

11.3 Role of the project teams

For each common project, a project team has to be staffed by a project leader, two or three part time members of the financial institutions and a representative from SIMTEL;.

- The project leader is responsible for the success of the project and reports to the ECPS all information of interest, negative or positive, to the development of the project.

- The project leader transmits to SIMTEL the technical specifications needed by the project and controls the phases of the development.
 - The project leader takes care of the test procedures, organises the production and controls the internal developments of the financial institutions participating to the project.
 - The team members from the financial institutions participate to the project at least one or two days a week. Their participation ensures the banking expertise necessary for the detailed functional specifications of the project.
 - The representative from SIMTEL is the link between the projects under development, within SIMTEL, and the new “banking” projects. He should also prepare and manage the technical developments, within SIMTEL, necessary to the new “banking” projects. The general coordination between projects would be improved if the head, or heads, of the “banking” projects are located in SIMTEL.
 - The banking partners should preferably come from the financial institutions that showed interest in the project.
 - The (already decided) “debit cards” project should also be supported by such a team.
 - Preferably, the same one person should lead the projects “Relationship banks-enterprises” (§10.1.1.2 and 10.1.1.3), “Netting” (§10.3.2), “Debit cards” and “Transportation” (§10.3.4). With the help of different teams, these projects could be worked out during the same elapsed time.
-

Appendix 1: Members of the Executive Committee of the Payment System (CESP)

BNR – Banque Nationale du Rwanda		
Jack MUKWENDE (President)	jmukwende@bnr.rw	08303737
J. Bosco SEBABI	jsebabi@bnr.rw	08589525
BACAR – Banque Continentale Africaine du Rwanda		
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BANCOR – BANque à la Confiance d'OR		
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BCDI – Banque de Commerce, de Développement et d'Industrie		
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COGEBANQUE – COmpagnie GENérale de BANQUE		
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Flavien ISHIMWE	cogebank@rwanda1.com	86875
ONP – Office National des Postes		
Longin NSINGA		08426688
UBPR – Union des Banques Populaires du Rwanda		
E. ABIJURU	emabijuru@yahoo.fr	08473084

Appendix 2: Distribution of the Banks and of their Branches

KIGALI (Centre Town): The 7 headquarters of the BNR and of the 6 trade banks and also the 2 commercial branches.

	BNR	BCDI	BCR	BK	BACAR	BANCOR	COGEBANQUE	
Kigali								
Centre	1	2	1	1	1	1	2	9
Kacyiru		1	1	1				3
Kinamba		1						1
Nyabugogo							1	1
Remera					1			1
Gisenyi		1	1	1		1		4
Ruhengeri		1	1	1	1			4
Butare		1	1	1				3
Cyangugu		1	1	1				3
Gitarama		1		1				2
Byumba			1					1
Gikongoro		1						1
Kibungo					1			1
Nyagatare		1						1
Rwamagana				1				1
	1	11	7	8	4	2	3	36

ONP – Office National des Postes : 2 offices in Kigali and 17 in the country.

UBPR – Union des Banques Populaires du Rwanda : headquarters in Kigali and 148 banks in Kigali and in the country.

Appendix 3: Payment system

Figures of the Commercial Banks (2002)

Operations

110.000 clients, of which 10.000 enterprises, commercials and institutions.

30 billion FRW in cash

85 billion FRW in deposit (demand deposit, term and comparable).

1.650.000 operations per year of **withdrawal or deposit in cash**,

500 billion FRW (IN + OUT), is 300.000 FRW per operation on average.

140.000 intern **transfers** per year,

140 billion FRW, that is to say 1 million per operation on average.

35.000 **certified cheques** per year.

10.000 **Traveller's cheques** per year.

Compensation

(Averages per day; 250 days per year)

700 **cheques** presented, either 175.000 per year,

830 million FRW, or 207,5 billion per year, or 1.185.000 per operation on average.

166 **transfers** presented, either 41.500 per year,

335 million FRW, or 83,75 billion per year, or 2.018.000 per operation on average.

Foreign currencies

65.000 operations per year of withdrawal or deposit **in cash** (parallel market excluded),

50 billion in equivalent FRW, or 750.000 per operation on average.

170.000 **transfers** (in and out),

126 billion in equivalent FRW, or 744.000 per operation on average.

Appendix 4: Domiciliation (Direct debit)

An important part of the banking payments are related to the recurring payment of private or public services, like telephone, water/gas/electricity, school expenses, subscriptions, ... which are generally caused by an invoice.

In these circumstances, the banks can propose a service of direct debit ("domiciliation" or autopay), which consists for the bank in carrying out the payment of the invoice directly to the supplier of services, the customer not being obliged to take other steps.

Procedure

1. The customer signs a form giving instruction to his bank to pay the invoices presented by company XXX (for example, Rwandatel), for service YYY (for example, a telephone line), by debiting his banking account. The form can be pre-printed, and provided either by the bank, or by company XXX.
2. The form is deposited at the bank, which validates the document, adds a number of domiciliation to it, and transmits it to company XXX.
3. Beginning at an agreed date, company XXX transmits its invoice to its customer and transfers the corresponding information to the customer's bank.
4. The bank debits the customer and credits a temporary account.
5. The customer is allowed to dispute the payment during a given number of days (for example, a glaring error of invoicing). In this case, the amount is paid back, and company XXX is informed about the dispute. Otherwise, after the given delay, the bank credits company XXX.
6. The customer can put an end to his order of direct debit. The bank informs company XXX of the decision of the customer.

Advantages

Customer:

The payment is carried out automatically, without queues and penalising delays.

Company:

The payments are carried out "regularly" and require less administrative work (followed, recalls, controls...).

Banks:

- Win the loyalty of the individual customer and of the company.
- Decrease the administrative work at the counters and the operational peaks.

Remarks

1. The banks must take the initiative to promote this service, because the service companies and the customers are reluctant to change their way of working.
2. It is obvious that a company XXX will transfer to each bank an electronic file (by floppy disk, or, later on, by network) with the customers of this bank who subscribed to direct debit and the amount to be paid. For its part, the bank pays only one total amount for the whole of the invoices.
3. It may occur that a company XXX transfers to only one bank the orders for all the customers, even customers of other banks, leaving at the receiving bank the care to transmit the information to the other banks (and to recover the amounts). If that were to occur, that could be operated through a netting system.
4. As soon as they understand the interest of this means of payment, the service companies generally promote it by offering one or other advantages to the customers who choose to subscribe to the direct debit system. For example, the insurance companies allow paying by direct debit a monthly premium instead of an annual premium, without charging any interest.
5. This means of payment should be proposed only to stable customers, for "repetitive" services.
6. This means of payment does not have a large success for annual payments (except while paying on a monthly basis).

Appendix 5: Truncation (cheques and transfers)

Whereas the "local" payments (i.e. operation carried out in a branch for an account in the same branch) are rather simple, the "displaced" payments (i.e. payments which are initiated in a branch in favour of an account of another branch, in the same bank or in another bank) require more complex procedures. Therefore they are more expensive and slower. The payment order (generally: cheque, transfer, but also other documents) is inputted on the spot, but the physical form is forwarded to the receiving branch, and, eventually, to the settlement system.

When the financial activity intensifies, the proportion of "displaced" payments increases appreciably and is likely to saturate the settlement system.

It is possible to reduce the disadvantages of the "displaced" payments by dissociating the treatment (computerised) of the order and the treatment of the paper forms. This procedure known as "truncation" is described hereafter, by ascending order of integration.

Procedures

1. A bank can carry out the truncation of the cheques and transfers of its own branches: the useful and necessary data for the processing of the operation are:
 - inputted at the branch,
 - communicated to the central system,
 - processed "immediately".Paper forms are transmitted with a given periodicity, according to volumes, distances, risks... The control of conformity between the operation carried out and the corresponding paper form is made later on. Some banks already set up this procedure.
2. A second stage, very important, to set up when the banks acquired a good experience of internal truncation, consists in truncation between banks. The banks send to the settlement system (or rather to the netting system) only the useful and necessary information. The paper forms are collected and exchanged for control, at a periodicity to agree between banks. This procedure form the subject of a convention between the banks, nevertheless it is not essential that all the banks take part together in this system (see Remark 1).
3. A third stage consists in no longer exchanging the paper forms between banks. The forms remain a few days in the branch that initiated the operation, then is stored by the bank. The forms are available for consultation on request, either by the receiving bank, or for reasons of internal control.

Advantages

These procedures lead to a considerable reduction in operational work related to these "displaced" operations and allow a faster treatment of the payment orders.

Remarks

1. This procedure is based on the confidence that one has of the correct functioning of the operational services and data processing services (those of its own bank and those of the bank with which one practises truncation). A too high rate of discords between transmitted information (electronically) and paper forms would kill the system rapidly. It is thus necessary to set up this procedure in a progressive way, by branch by branch, bank by bank.
2. In the same logic, truncation must start with operations of relatively low amounts, for example a ceiling of 100.000 FRW. Progressively, when confidence in the correct functioning increases, the ceiling can be raised.
3. The truncation system may appear quite dangerous, but the ultimate control of the transaction is carried out by the customers themselves. They would react if, in the event of error or fraud, they were debited incorrectly.
4. In the event of dispute by the receiving bank or its customer, the branch or the bank originating the transaction sends a copy (fax...) of the form, and in extreme cases, the form itself. When the organisation and the operational execution are of good quality, it will rarely be necessary to consult to the archived files. The claims are generally caused by customers who "don't remember any more" to have emitted this cheque, or who disputes it's amount.

Appendix 6: Money supplies

Simple ratios make it possible to compare the monetary use of the countries, for example to judge the importance of the fiduciary mass (cash) compared to the sight deposits and the other forms of deposits.

By way of example, we calculated

- The R1 ratio = relationship between the fiduciary mass and M1 (fiduciary mass + sight deposits).
- The R2 ratio = relationship between the fiduciary mass and M2 (fiduciary mass + sight deposits + term deposits and similar).

R1

Rwanda (end 2002)	40%
Tunisia (08.2002)	41%
France (1999)	13%
Euro Zone (1999)	17%

R2

Rwanda (end 2002)	23%
Tunisia (08.2002)	16%
Euro Zone (1999)	8%

For Rwanda :

Fiduciary mass (end 2002)	30.7 billion FRW
Sight deposits	45 billion FRW
Term deposits and similar	40 billion FRW

It is necessary to use these comparisons with prudence, because the exact definitions of the money supplies are not the same ones in each country, and the figures of the reports out of Internet sites do not cover always exactly the same reality.

Appendix 7: Legal framework for bank cards

1. Applicability

The regulation applies to the operations made by means of an electronic instrument of transfer of funds (a microchip and/or magnetic card):

- for cash withdrawals (with a cash dispenser),
- for the loading of the card,
- for the transfers of funds from the account attached to the card towards a third account,
- for the access to the account related to the card (consultation of balance, last operations...)

Often, for more clearness, one adds the means of payment to which the regulation does not apply (cheque, bill of exchange, transfer...).

2. Definitions

Definition of the technical terms used thereafter, for example:

- Electronic instrument of transfer of funds: any means allowing to carry out, entirely or partially, by way of an electronic device one or more of the following operations: transfers of funds of account on account, cash withdrawals, remote access on an account...
- Transmitter: the bank that places an electronic instrument of transfer of funds at the disposal of a person in conformity with a contract concluded with this person.
- ...

3. Transparency

It is necessary to define the minimal information and the method of communication, for example:

1. The customer must be able to receive, in writing, the conditions of emission and use of the card, before the signature of the contract.
2. Hours of availability of the various services, tariffs, ceilings, limits for the withdrawal of funds...
3. Duties and responsibilities for the customer and the bank, precautions to be taken.
4. The applicable value dates and the availability of the funds (for the traders).
5. Procedure (times, addresses, methods, recourse) in the event of dispute of an operation, in the event of loss or robbery of the card, in the event of technical failure...
6. The procedure that the transmitter will follow in the event of modification of the general conditions.
7. If the card is usable abroad, the conditions applicable abroad must be provided, including the exchange terms.

4. Availability of information

1. When executing an operation, the customer must be able to have a sufficient control of the operation that he is carrying out (visibility, guidance...).
2. For each operation, the customer must receive immediately or in a differed way, written information allowing him to retrace the operation: where, when, with which counterpart (ATM, POS-traders)...
3. If the card makes it possible to record an available amount, for example, in off line POS (card with loading of a pre-payment), the customer must be able to consult the balance of his card and the last operations.

5. Obligations of the customer

1. Compliance with the minimal rules of safety in the use of the instrument: for example, not associate too obviously the card and the identifying code (very sensitive in the event of robbery or domestic abuse).
2. Respect of the normal use of the card and the reading devices of the card.
3. No possible revocation of the operation carried out.
4. Speediness in transmitting information in the event of loss of the card or in the event of error in the account related to the card.
5. The customer remains responsible for the use of his card until the notification "for blocking of the card" is made at the bank or at the service that the bank indicated. This responsibility is limited to a certain amount, except if the customer acted with negligence (see minimal rules of safety).

6. Obligations of the tradesman

1. All obligations of the customer.
2. The place of sale that accepts the card must post in a visible way the brand names and logos of the available services.
3. The environment of the reading device of the card must offer a sufficient level of safety and discretion.

7. Obligations of the transmitting bank

1. The transmitter must be able to prove that he transmitted all useful information (see §3).
2. The transmitter is responsible to transmit the card and the personal code of identification by a safe procedure, and, preferably, by two independent ways. The transmitter supports the risks related to the transmission.
3. The transmitter is responsible for the incorrect execution (or the non-execution) of the operation carried out by card on approved equipment (by the transmitter or the service company which he elected).
4. The transmitter is responsible for the use of a counterfeited card.
5. The transmitter must be able to give a new identifying code to the customer who "does not remember" his code (with or without charges, with or without renewal of the card).
6. The transmitter must be able to replace a defective card or a lost card (with or without charges).

7. The transmitter must keep trace of the operations and the technical conditions of the operation of the system, to be able to manage the possible disputes and "to prove" that the disputed operation was correctly entered, in a not-failing technical environment. This information is available for X years.
8. The transmitter can modify the conditions of the contract with a reasonable previous notice, leaving the customer the time and the possibility of giving up the contract without penalties.
9. The transmitter is responsible of the consequences of an incorrect execution of the operations, as long as the customer observed the normal procedures of use and care.
10. The transmitter must be able to refund the customer with the residual value of the card (in the event of pre-payment), when the card is lost (and thus blocked) or is no longer readable. In the same way, when the contract ends, the customer must be able to recover the residual value.
11. The transmitter, or the entity indicated by him, must, in the event of abusive use of the card (for example as result of a robbery) do everything possible to put an end as fast as possible to this abuse and to track down the persons responsible of for the fraud.
12. The transmitter, or the entity indicated by him, is responsible for the healthy management of the equipment of payment.
13. The transmitter must guarantee the training of the tradesman.

8. General

1. It is necessary to envisage a procedure to regulate the disputes occurring between the customer and his bank, within each bank. In the event of failure, the dispute should be addressed to a third entity (concept of "ombudsman", attached to the BNR?).
2. It is obvious that the existing rules concerning the confidentiality and the data protection are applicable for the card transactions.
3. The conditions of end of contract, on the initiative of the transmitter or of the customer or the traders, must be fixed in an equitable way.
4. If the transmitter entrusts the management of whole or part of the system of payment per card to a third company, this company is submitted to the same duties and rules as the transmitter (in terms of service, transparency, of confidentiality...).

9. Example of additional clauses

1. The card remains the property of the transmitter.
2. The customer who finds a card declared lost must return it to the transmitter as soon as possible.

Appendix 8: Annual Cost Of Cash Handling

The annual cost of the cash handling in various European countries (Germany, Belgium, Spain, France, the United Kingdom) is estimated at 0.5% of the GDP (source: Belgian Association of the Banks, Windows on the payment systems, 1999).

For Belgium, by way of example, this percentage gives a first estimate of 800 €million.

By separately estimating the various components of the cost, we obtain:

- Physical safety (trunks, security of the branches...): 150 million €
- Transport: 25 million €
- Impressions of the notes, sorting, washing, destruction: 15 million €
- Financial loss (approximately 10 billion € at 5%): 560 million €

That is to say a total of 750 €million, which is rather close to the first estimate. Let us note that this cost does not include the cost of the personnel.

For Rwanda, following the same approach, the costs of the cash handling gives the following estimates:

From the GDP (2001): 0.5% of 728 billion FRW: **3.64 billion FRW**.

From the various components:

- Physical safety (trunks, security of the branches...): 90 million FRW
- Transport: 150 million FRW
- Impressions of the tickets, sorting, washing, destruction: 200 million FRW
- Financial loss (approximately 30 billion FRW at 8.33%): 2500 million FRW

That is to say approximately **2.94 billion FRW**.

The personnel carrying out the operations in cash is estimated at 70 people for the BNR and to 30% of the personnel, that is to say 300 people for the trade banks.

While taking as assumption that an employee costs on average 425.000 FRW per month (full employers' cost, + 25% of workstation and supervision expenses...), the "personal" cost is **1.9 billion FRW**.

While taking the same proportion for the UBPR (30% of the total personnel, 225 people), we get the total cost (except ONP) of **3 billion FRW**.

MC, RH, July 31st, 2003