

Innovating Service Delivery through IT

Home Banking: An IT-based Business Philosophy or a Complementary Distribution Channel? CORTAL 'versus' Crédit Commercial de France

This case was prepared by Claudia Loebbecke, Research Assistant, and Tawfik Jelassi, Associate Professor at INSEAD. The help of Goh Toh Sim, INSEAD MBA 1991, is gratefully acknowledged. The case is intended to be used as a basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

Checking the balance of your bank account, making an electronic fund transfer, browsing through foreign exchange rates, managing a portfolio, or purchasing stocks can all be done in France from your premises so long as you have a Minitel (videotex) terminal nearby. In 1992, with more than 6 million Minitel terminals installed throughout France and over 14,000 service applications already offered,¹ there are about 2 million customers subscribed to Home Banking² services. A study by the AFEC, the 'Association Française des Etablissements de Crédit',³ predicted that the number of subscribers will increase to eight million by 1994. This makes France the world leader in electronic Home Banking.⁴ Many factors have led to this success: the two fundamental ones are the French government's sponsorship of the videotex project and the banks' vision in exploiting this technology. Furthermore, Claude Porcherot, General Secretary of the Banque Nationale de Paris (BNP), explains, 'It is illusory to believe that once a customer is

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aware of technological gains in shrinking lead time, minimizing treasury immobilization, and reducing service costs he won't find a bank that offers these technological means.'

For Jean-Louis Pradels, IT Director at CORTAL,⁵ such technological advances are at the core of his bank's existence and its current success. Certainly, the rising popularity of the Minitel platform has led all major French banks to offer some kind of Home Banking services. They perceive it as a competitive necessity that allows them to exploit this 'complementary distribution channel'. CORTAL, however, has successfully leveraged the vidcotex technology, which has been central to its business strategy: establishing a niche in the Home Banking market.

The Banking Industry

The banking industry can be analyzed using Porter's industry forces.⁶

Threat of Entry

Entry barriers in the banking industry are low, but the sector is currently characterized by consolidation rather than fragmentation. European banks face increased competition from American (Citibank) and Japanese (Sumitomo) banks.⁷ Worldwide, Japanese banks are following their industrial counterparts by establishing footholds in all financial centers: 45% of their customers are already American firms. Some alliances between banks and other financial institutions, such as insurance companies, can be considered as new entrants (e.g., Dresdner-Allianz, BNP-UAP). Moreover, other institutions are setting up specialized subsidiaries (e.g., First Direct by British Midland Bank and CORTAL by Compagnie Bancaire) offering only Home Banking services.

Intensity of Rivalry among Existing Players

The banking industry is characterized by strong rivalry. It is currently undergoing significant restructuring through mergers, buy-outs and internal rationalization. With respect to IT-related services, competition in France is very intense: most French banks (e.g., BNP, Crédit Lyonnais, Société Générale, Crédit Agricole, CCF, Crédit du Nord, and so on) have major IT/Home Banking initiatives. The strong Minitel penetration in France has provided the banks with an operational medium for Home Banking.

Possible Pressure from Substitute Products

In the past there have been few widely available substitutes for traditional banks due to regulation in certain countries, which has shut out competitors. With the liberalization of the banking sector, several rival products have been developed which threaten the long-term viability of the traditional banking industry: non-banks have been taking an increasingly large role in providing financial services. For example, in 1990, the financing arm of Ford Motor Company was more profitable than the firm's car manufacturing operations. An example of substitute products in France is the interest-bearing account offered by Carrefour, a chain of retail stores. IT has played, and will continue to play, an important role in the emergence of these substitutes.

Bargaining Power of Buyers and Suppliers

In retail banking, customers and suppliers often constitute the same users' category: they deposit funds which the bank uses to make investments or issue loans. Customers often benefit from multiple services, e.g., seeking a loan (such as a mortgage), while at the same time they have a deposit account.

Individual customers have no power apart from changing banks. From a bank's perspective, providing account services is often not a break-even business, except for large customers. However, being able to distinguish between lucrative and break-even accounts and offer customized services accordingly has become a business imperative in order to meet the expectations of more educated, increasingly mobile and time-conscious customers.

The Concept of Home Banking: An Overview

The development of IT services in banking has gone through three distinct stages:

1. back-office automation,
2. front-office automation,
3. automation of the customer interface.

Like automatic teller machines (ATMs) and smart cards, Home Banking

belongs to the third stage. It allows customers to access a bank's computer via the telephone line from their office or home and to get account information, make money transfers or use other banking services.

'The way in which a financial service is delivered to a customer has become a crucial part of the value that consumers buy. As such, delivery systems will be the key to gaining a competitive edge in the 1990s. Two premises underlie this statement. The first is that the product and the delivery of the product are inextricably entwined for the financial service customer. The consumer does not separate the service from how it is provided . . . People do not buy checking accounts; they buy the ability to get cash when [and where] they want it . . . The second premise, therefore, is that those in the business of delivering financial services have to be there when the customers need them – with the right product when the customers want it, where they want it, and how they want it delivered.'

*Edward E. Furash**

Generally, Home Banking can be accessed in three different ways.

Vocal Access

Customers use a touch-tone telephone to transmit commands via the public switching network to their bank's computer; answers are often received in the form of a synthesized voice. Although vocal access is easily available due to the widespread availability of phones, it lacks the power of a screen to display system capabilities and requested information. Moreover, phone-based access invariably takes longer than other access types for the same type of operation. An alternative approach offered by some banks consists in using a human interface, i.e., an agent responds to a customer's request after consulting the bank's computer. This approach bears high costs but overcomes the lack of interaction.

PC-based Access

A PC attached to a modem is used to access a bank's computer via the public switching telephone network. Although interactive, the use of this access is still limited due to the small number of computer-literate customers owning a PC. It is further complicated by the need to tailor the software to fit different types of microcomputers.

Videotex-based Access

The necessary network and terminals are generally supplied by a telecommunication operator or a consortium of companies that includes service providers. Videotex-based access is an interactive means based on keyboard input and screen display of information. Its potential to create a critical mass is a prerequisite for the success of Home Banking. PC users can access videotex-based services through a special adapting card; this alleviates the technical problem of tailoring the software to a variety of PCs.

Minitel: An Example of Videotex-based Access

The success of Home Banking in France would not have been possible without Minitel, the national videotex platform. By late 1991, Minitel had over 1.6 billion calls and 105 million connect hours, with about 10% of the traffic for Home Banking services. This constitutes a tenfold increase from the figures registered in 1985.

The development of Minitel began in the late 1970s with the main intention of replacing or supplementing the paper-based telephone directories and operator services. It was perceived by the DGT,⁹ the state-owned telecommunication agency, as a means to reduce costs and improve customer service. It was also viewed as part of the government's industrial policy of modernizing the telecommunication network and providing a new, nationwide information technology infrastructure. From 1981 to 1983, an experiment in Vélizy, a small Paris suburb, involved 2,500 homes and 100 services including Home Banking. The success of this experiment led to the full-scale implementation of the automated telephone directory service in February 1983.¹⁰

The DGT distributed free Minitel terminals to subscribers and charged only for the connect time, with the first three minutes on the telephone directory free. The use of Transpac, the national packet-switching data communication network, made the charge for a connection independent of the geographical location of users.¹¹ Home Banking, as well as other services, has benefited from this deliberate policy of creating a mass market. The growth of the customer base and the increase in service providers have been mutually beneficial. Neither would have been possible without the strong sponsorship of the French government. By the end of 1983, there were 120,000 Minitels in France; 600,000 at the end of 1984, 3 million by December 1987; and over 6 million mid-1992.

The Kiosk Tariff System

The kiosk tariff system, introduced in March 1984, sped up the success of

Minitel and fostered further expansion of the market for videotex-based services. Users are billed every two months by France Télécom (previously the DGT); regular phone bills include Minitel charges without specifying the specific service(s) used. This has allowed service providers to offer services without having to incur billing and other related administrative costs.

CORTAL – Company Overview

CORTAL, founded in 1984 by the Compagnie Bancaire Group, is a bank specializing in the distribution of a range of financial products. Ninety-seven percent of its FF120 million capital is controlled by the parent company. The Compagnie Bancaire Group consists of several firms specializing in providing loans to private and corporate customers, including the provision of real estate financing. Furthermore, it sells and manages real estate, insurance, and other financial products, as well as IT services.

As of June 1992, CORTAL employed 140 people, 24 of whom were working in the IT Department.¹² The bank was serving 80,000 customers, up from 5,000 in 1985 (see Exhibit 1), to whom it offered 12 different products. Total managed deposits amounted to FF11.3 billion in 1991 (see Exhibit 2 for yearly deposits since 1984). The profile of a typical CORTAL customer is a person about 55 years old, quite rich, who has a deposit of roughly FF200,000. During the first half of 1992, CORTAL increased its customer base by about 1,000 new members per week.

Exhibit 1 CORTAL's customers (source: CORTAL)

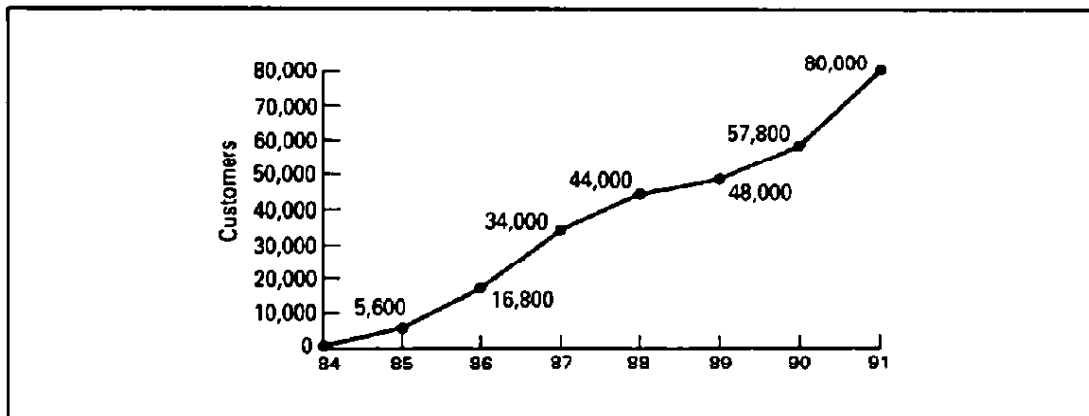
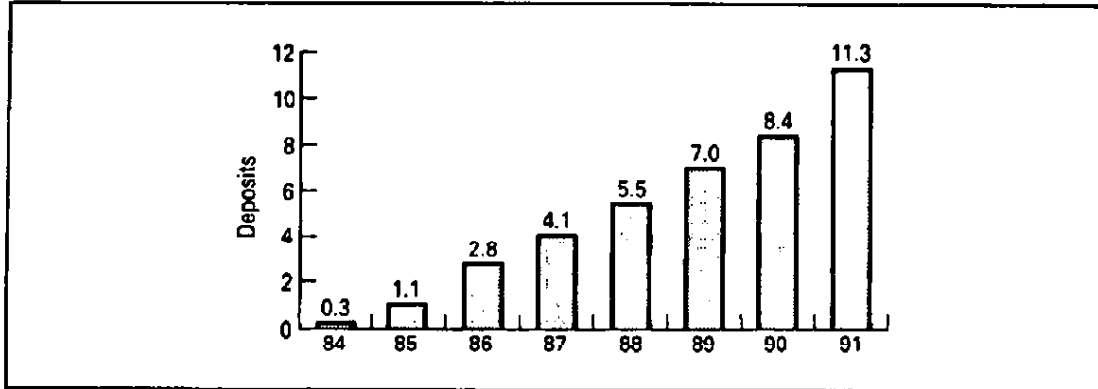


Exhibit 2 *Evolution of CORTAL's deposits (in billions of French francs)*
(source: CORTAL)



IT – At the Core of CORTAL's Distant Banking¹³

From the start CORTAL's business strategy has been based solely on the concept of 'Distant Banking'. Justified by productivity considerations, this concept consists in not having branches but letting customers perform their banking operations directly through Minitel or the phone-based vocal system. CORTAL's top management has been debating several critical issues: 'Is it possible to sell banking services without face-to-face contact with the customer? What conditions must be fulfilled for a successful implementation of the "Distant Banking" concept?'

'The computer does almost everything at CORTAL . . . If we want to be closer to our customers, the only way to do that is through information technology . . . The quality of this electronic link is vital for us as a distant bank. We have invested a lot in IT and, in my view, IT has given CORTAL a competitive advantage.'

Jean-Louis Pradels
IT Director at CORTAL

IT Impact on CORTAL's Business Processes

In 1986, eighteen months after the launch of the company, CORTAL's managers analyzed the information system (IS) then in use in the bank and its business impact. They investigated IS influence on four customer-related factors: product, distribution, price, and communication (see Exhibit 3). They found that each factor was heavily affected by the IS:

1. customized information was an integral part of most banking products;
2. distribution was achieved through the IS;
3. prices were defined after analyzing internal and external information sets acquired and presented through the IS;
4. communication with the client, especially in the form of direct marketing, was mainly accomplished via the IS.

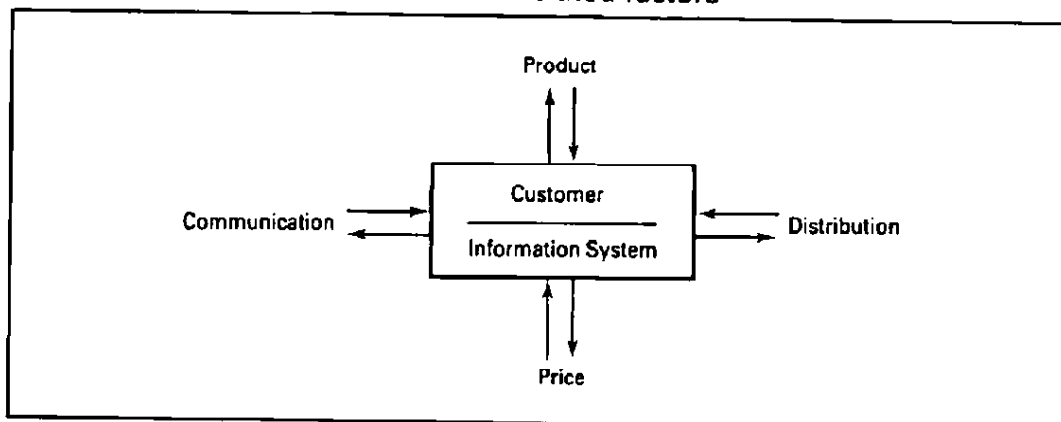
Further analysis of the above four factors showed that 'distribution' and 'communication' provided CORTAL with the greatest potential to distinguish itself from the large, branch-based banks. 'Product' and to a certain degree 'price' have become increasingly homogeneous across the industry.

CORTAL's top management concluded that the company's IS was of the utmost importance in

1. keeping in touch with customers and sustaining their contracts;
2. using the database effectively, for example, to target promising customers;
3. analyzing the results of direct marketing campaigns;
4. providing the flexibility needed to introduce new products in a timely fashion.

The above business goals led to the development of an IS strategy and the subsequent system design and implementation. The resulting system is still in use, apart from some upgrades.

Exhibit 3 *IS influence on customer-related factors*



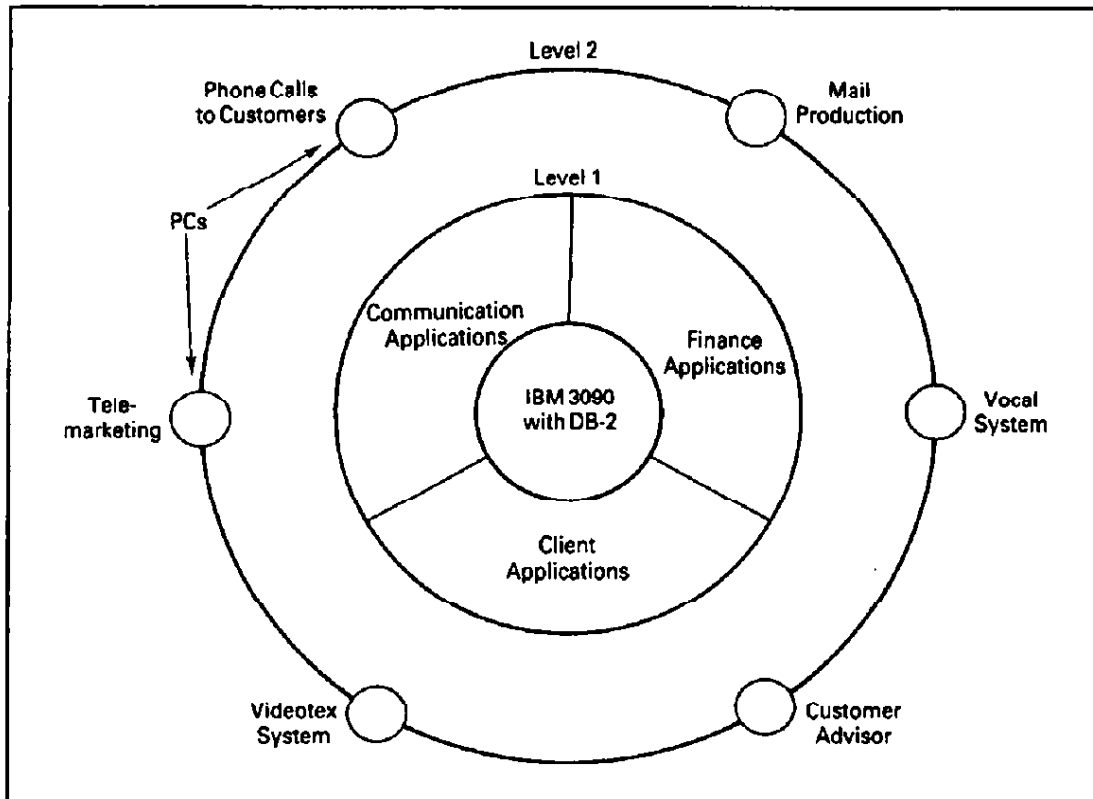
CORTAL's Information System

CORTAL's current IS is characterized by six main features. It incorporates a customer-oriented database that uses a 'customer segmentation code' to provide, among other information, the list of products purchased by a customer, his other banks, or his buying patterns. The database also allows for automatic generation of 'personalized' letters. Moreover, the IS provides real-time processing, flexibility, communication with the customer (e.g., through telephone and Minitel), and future system expansion. The latter feature required large IT investments when setting up the IS platform.

The system has two layers (see Exhibit 4):

1. The inner layer consists of an IBM 3090 mainframe for the database system DB-2, the accounting and finance applications, the commercial applications (especially direct mail) and all the client applications (i.e., the customer database, account administration, and so on).

Exhibit 4 *CORTAL's information system: two levels*



2. The outer layer is composed of several interconnected, specialized PCs. The PC functions include the vocal (voice-based) system, the Minitel-based system, mail production (the system decides which letter should be sent to whom), and an automatic dialing system that places phone calls to customers. PCs are currently used by customer advisers located in Paris as well as in six different regions throughout France.

Access Methods to CORTAL's IT-based Services

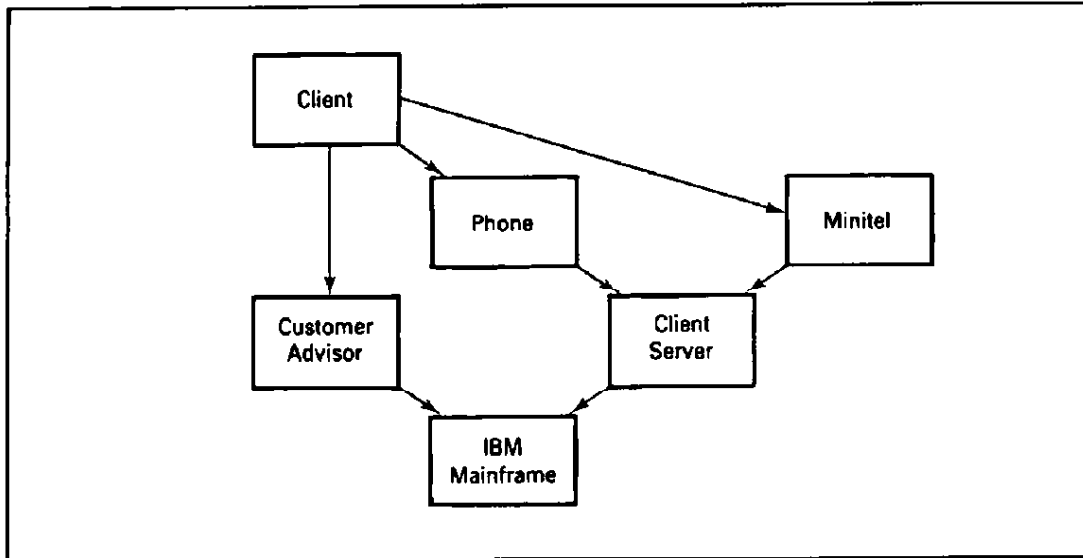
CORTAL's customers can access their bank accounts by phone or through Minitel. In 1989, CORTAL was the first French bank to offer an automated telephone-based ordering system, also known as audio-banking. Altogether, a customer has three alternative ways to do business with the bank. First, he can log on a Minitel, dial 3614 CORTAL, and enter his personal code. The Minitel then provides access to CORTAL's client server, which is connected to the IBM mainframe. Thus, the customer can take advantage of all applications located on CORTAL's IS, and his transactions are processed on the mainframe computer.

Second, a customer can dial 'Finofil', a phone number that gets him connected to CORTAL's client server. After keying in his personal code, he can access the same applications as with Minitel. By pushing specific buttons on the phone, he can either request information or place orders to buy/sell. Each subsequent step further specifies his intended use.

The third access alternative for the client is to call one of CORTAL's customer advisers, who directly accesses the customer database on the mainframe. This access method suffers from a data recency problem: the mainframe only receives updates from the server every evening. Therefore, the customer adviser does not know the data changes made on the same day through Minitel or audio-banking. (For a schema of the different access methods, see Exhibit 5.)

Does CORTAL really need both the audio-banking and Minitel access methods? By having only one method, wouldn't they reduce overhead and avoid system redundancy? In 1991, the phone-based system was five times less important than the Minitel in terms of fund amounts and even ten times less important regarding the number of placed orders. Nevertheless, for Jean-Louis Pradels the phone system is extremely important for the bank. Says he:

Not only has audio-banking improved our reputation as an innovator in the field, the system was easy and fast to install since it uses the same applications

Exhibit 5 *Access methods to CORTAL's IT-based services*

and personal codes as the vidcotex-based system. Furthermore, I believe that the success of audio-banking very much depends on promotion of the system, and here CORTAL certainly still needs to improve a lot. Once we convince the customers of audio-banking benefits, I would agree that 'everyone has a telephone – in the office as well as at home – and they will increasingly be prepared to use the telephone to communicate with their bank. They are quite likely in fact to carry out their personal banking from their office telephone'.¹⁴

CORTAL's Success Factors

CORTAL uses technology to be near its customers. Jean-Louis Pradels points out that 'Physical proximity [of branch-based banks] does not necessarily imply "being close" to a client. As an example, just think of a poor face-to-face service that you might have experienced at a branch. Our strategy is to apply IT to make CORTAL a "bank of proximity".' Bernard Auberger, CORTAL's CEO, elaborates on two other success factors for his bank:

We have two main guiding principles: first, a distant bank has to strictly limit its product range. A reduced number of products increases customers' understanding; also, advising clients can be done more easily and efficiently. If you try to sell too many different products through non-human interfaces, advisory procedures become very complex. This principle can certainly change

over time once customers are used to Home Banking and the bank has gained experience with it. Second, a distant bank must develop and enforce strict quality control mechanisms. Not only do your products have to be competitive, but your customer interface must also be superior to any human-based service offered through bank branches. Absolute system reliability, clarity of presentations, and user-friendliness are critical in this context. For example, CORTAL answers more than 95% of incoming phone calls within ten seconds; automated control mechanisms help achieve this standard. Yearly questionnaires, sent to all our clients and employees, are used as qualitative control measures to analyze the satisfaction rate on almost any dimension. [See Exhibit 6 for questionnaire results.] The most important outcome of these efforts is homogeneous service quality regardless of when and from where a customer accesses CORTAL. This gives us an advantage over all branch-based banks.

For Jean-Louis Pradels, the bank's success factors are the profit generated through the bank's premium product, 'Compte Optimal',¹⁷ and the company's IS platform.

Certainly, IT has allowed CORTAL to develop and grow rapidly. The availability of a comprehensive customer database is one key element of success. It is often taken for granted, but it constitutes the fundamental infrastructure for launching any Home Banking service . . . Creativity, ambition, flexibility, and the organizational structure are additional

Exhibit 6 *CORTAL: customer questionnaire results, July 1991*
(source: CORTAL)

Customer Satisfaction Questionnaire	
Satisfaction rate	Very satisfied or satisfied
Clarity of information regarding deposits	90.3%
Global statement appreciation	90.3%
Ease of subscription	90.1%
Clarity of the statement	90.0%
Clarity of the information given after the subscription	81.7%
Use of the monthly advice	81.7%
Rapidity of carrying out orders	78.2%
Customer Motivation Questionnaire	
Why did you choose CORTAL?	% of answers
We don't have to go there	41.0%
To diversify our deposits	40.0%
Because CORTAL belongs to Compagnie Bancaire	30.0%
For security reasons	27.0%
Because of the attractive advertisement	26.0%
Because of the quality of the product	21.0%

success factors and will remain in the medium run as CORTAL's strengths. However, steady improvement of the products offered and the current IS platform will be needed in order to sustain the bank's current competitive advantage; otherwise, CORTAL will be imitated soon.

CORTAL's Competitors

For CORTAL's top management, the sustainability of the bank's current success and the competitive response to 'Distant Banking' are among the burning issues. Who might threaten CORTAL's position? For Jean-Louis Pradels,

One cannot compare CORTAL with the large branch-based banks in France. Those banks have different strategies and certainly offer different services. Due to our rather specialized product range, we are a 'second' bank; all our customers have [an account in] a 'first' bank, then [at] CORTAL.

When thinking about our main competitors, we look for banks that provide similar products. In terms of our 'Compte Optimal', which is currently our star product, only a few financial institutions in Europe (e.g., American Express, AGF/Banque de Phénix, Paluel Marmont, Citibank, Caixa, and Robeco) offer something similar. However, we expect other banks to offer an interest-bearing checking account soon because they do not want to let us (and others) continue stealing their customers away.

With regard to 'Distant Banking', Dreyfus Co. and Fidelity (both US), as well as First Direct (a subsidiary of the British Midland Bank), have comparable concepts. Especially in France, due to the publicly-available videotex system, the entry barriers to Home Banking are comparatively low. Banks as well as other companies have heavily invested in IT lately. Furthermore, small, partly new banks are expected to enter the scene soon; they can use off-the-shelf, standardized commercial software provided by various consulting and software companies. Moreover, an increasing number of non-banks (for instance, other financial companies and retailers) have joined in. Last, but not least, almost all large branch-based banks in France are targeting the Home Banking segment. They view it as a complementary distribution channel for their existing services. Just look at CCF, which is today the field leader worldwide. Benefiting from a large customer base and a significantly wider product range, it has certainly approached the business differently than CORTAL did. The more 'large banks' offer high-quality Home Banking services, the more our philosophy of 'Distant Banking' loses its uniqueness, and less customers might come to CORTAL.

Crédit Commercial de France (CCF) – The Pioneer and World Leader in Home Banking

CCF marketed its first Home Banking service, 'Vidéocompte', right after the Vélizy experiment and has since been widely recognized as the world leader in Home Banking. In 1990, CCF achieved a penetration rate of 50% and had over 458,000 monthly connections to its Home Banking services. By late 1991, these numbers have both increased by about 5%. In 1986, CCF set up Technoclear, a subsidiary to market and develop its Home Banking technology.

CCF – Company Overview

CCF is the seventh largest French bank, with total consolidated assets of FF240,810 billion in 1991. Due to government changes in France, it was first nationalized in 1982 and then privatized in April 1987. With 500,000 account holders and 120 branches nationwide, CCF has been targeting high-income and corporate customer segments in the areas of cash management, foreign exchange operations, fund management, custody and trust services, as well as mergers and acquisitions. CCF's vision, as articulated in the 1986 annual report, still very much influences the bank's current strategy for domestic retail banking.

CCF is firmly committed to the future, as we capitalize on a prestigious heritage of personalized service and high-quality attention to customer needs in order to prepare the way for the bank of tomorrow . . .

. . . Over the coming years, CCF will further advance its leadership in financial services, enhancing its reputation as one of the most innovative and creative banks on worldwide markets. We will continue to consolidate our accomplishments in two highly appreciated areas: video [home] banking and personalized banking advice.

CCF – Home Banking Services

The Start: 'Vidéobanque' and 'Vidéocompte'

Up to 1981, in line with its reputation for high-quality service, CCF sent its customers a hard copy of each transaction they made with the bank. This service was called the 'Compte Automatique Journalier' (CAJ). According to Patrick de Segonzac, Executive Vice-President in charge of Organization

and Data Processing, the reason for CCF's adoption of Home Banking was twofold. Says he,

First, the CAJ service was getting too expensive. If a customer made one transaction every day, he received a daily bank statement. This was too costly for us in terms of printing and mailing the statements. CCF was looking for an alternative way of providing this service, and Minitel was viewed as a suitable one. Instead of the CAJ, CCF could offer Home Banking services free of charge, provided that clients had a Minitel terminal; customers paid only for the connection charges to France Télécom. Second, CCF saw the need to provide cash management services to corporate customers. We offered these services, at a fee, through Minitel.

In January 1982, the videotex-based version of CAJ (called 'Vidéobanque') was launched for corporate clients. In 1984, Home Banking for individual customers was started with the 'Vidéocompte' service which included getting account information and transferring money between accounts. In the same year, corporate customers were also able to connect, via Minitel, to the CCF foreign currencies exchange room for real-time exchange rates. Patrick de Segonzac comments: 'The launch of Home Banking services for individual customers couldn't be done earlier, since it had to follow the development of Minitel. It only became viable when DGT decided to distribute free terminals. The geographical expansion of "Vidéocompte" had to wait for the gradual distribution growth of Minitel.'

'Libertel'

In 1987, CCF introduced a financial management service for individual customers. It consists of a credit line called 'Libertel' assigned to each checking account and providing an overdraft. If needed, individual customers can transfer, via Minitel, the 'Libertel' credit amount to their checking account. The customer pays back this loan through subsequent monthly instalments at an additional 6.5% above CCF's basic interest rate. 'Libertel' provides individual customers with convenience and flexibility by getting the credit from their home or office without having to go through the usual application process. For René Riffard, Vice-President of Technoclear (the CCF subsidiary specialized in Home Banking technology) and former manager of Home Banking services at CCF, 'This revolving credit is a service offered only through Home Banking. Customers are responsible for managing their loan on a real-time basis; paying interest ends once they have fully reimbursed their loan.'

'Vidéotitre'

'Vidéotitre' allows customers to manage their securities portfolios. Portfolios

are automatically updated; securities are classified and displayed along with their performance. 'Vidéotitre' supports real-time purchase and sale orders of securities listed on the Paris stock exchange; it also provides access to all the prices quoted on the Paris exchange, as well as on the New York, London, Tokyo, Frankfurt, and Hong Kong exchanges. While the full service (including intervention in the stock market) is only open to CCF customers, the access to stock exchange information and the composition of a portfolio are available to all users through the Minitel kiosk system.

Further CCF Home Banking Services

Another CCF product called 'Multimonet' provides information about fixings, foreign currencies' exchange rates, negotiable rates, rates against the US dollar, and so on. This service is targeted towards corporate treasurers who have loans and/or deposits in foreign currencies.

Moreover, CCF provides a dialogue and a contact service. The former allows customers to use electronic mail with the bank, cancel lost checkbooks, notify of an address change, make appointments with bank officers, purchase foreign currencies, and request brochures or other information. The latter allows non-CCF customers to get in touch with the bank for enquiries or messages.

Marketing Approaches for Home Banking

For CORTAL, the marketing of Home Banking is at the core of its business. From the very beginning, it has adopted a direct mail approach and counted on word-of-mouth publicity. It has regularly used its customer database to generate mailings and initiate phone calls, in addition to employing its computer-supported telemarketing service.

For branch-based banks, intensive marketing of their Home Banking system could result in cannibalizing their 'face-to-face' services. Among these banks, CCF was the first to pursue an aggressive marketing strategy of Home Banking services. Glossy signs which read 'CCF installs CCF at your home for free' and 'Take a trip to your bank in less than 30 seconds' could be seen across the façade of CCF's corporate headquarters on the Avenue des Champs-Élysées in Paris. In contrast, other large banks were slow in notifying their customers of the access code needed to connect up to the banks' Home Banking service via their Minitels.

Home Banking Advantages

The Customers' Perspective

At the core of the Home Banking success lies a service which addresses customer needs and provides tangible benefits. By allowing customers to access banking services from their own (home or office) premises 24 hours a day, seven days a week, the system was very attractive to a wide range of socio-economic user categories. It is even more so for clients who live far away from their bank branches, for example in rural or remote areas. Furthermore, Home Banking enables customers to manage their accounts more effectively and to get assistance in certain domains through Minitel-provided information. Customers can make transfers from checking to savings accounts when financially beneficial, thus ensuring maximum interest earning on deposits. For frequent travellers Home Banking is especially useful, since it allows them to access their bank account anywhere and anytime as long as there is a Minitel terminal nearby.

The Banks' Perspective

For CORTAL, financial benefits are hard to quantify since the bank has never delivered its services in a different manner. However, at CCF, as René Riffard puts it:

Home Banking represents an annual cost savings of FF40 million on printed material, envelopes, and postage fees. Our SICAV (fund management) Department was able to save 1,000 photocopies per day immediately after Home Banking services were offered. Furthermore, the savings from check processing are enormous although difficult to quantify: a customer writes at least two checks a month, each costing about five francs to process!

From 1983 to 1985, CCF invested FF30 million to develop Home Banking and install the database server. However, the financial benefits from revenues generated through the service and the related cost savings amounted to FF44 million in 1986 and reached about FF76 million in 1991. The return on investment is almost nine times.

Furthermore, Home Banking relieves branches from non-value-adding activities, such as account enquiries, by getting the customer to do them himself. Since CCF introduced Home Banking, these activities have been reduced by 50%, thus reducing the workload and improving productivity at the branch level. Moreover, most of the other banks even generate revenue through subscription fees to their Home Banking services, although they 'make' the customer do some of the bank's work.

Home Banking also allows banks to broaden their customer base without establishing or expanding a branch network. CORTAL is a special case since all its customers are Home Banking users. The situation is different at CCF, which, compared with other French branch-based banks, is constrained by its small physical network. Says Ms. Canovas, Videotex Manager at CCF, 'With only 120 branches all over France, CCF has a vital need for Home Banking in order to contact customers and be contacted by them.' For René Riffard,

The Home Banking service is a strategic tool to capture and expand CCF's customer base. CCF has gained numerous corporate clients with its service accounts and has attracted 5 to 6% more individual customers in five years. However, calculations are difficult to make, since growth figures can't be attributed solely to the 'Home Banking' delivery mode. One also has to take into account the bank's products.

Home Banking also contributes to better communication with customers. Not only can clients be reached more easily, a detailed customer database enables a bank to understand its client needs and thereupon to provide personalized services rather than making blind efforts. Home Banking allows for fast and cost-efficient direct marketing (through mail or terminal), and thus increases the clients' awareness of the company as well as of specific banking offers. Additionally, leading Home Banking services enhance a bank's reputation as an innovative and technologically-oriented company focusing on customer needs.

Future Outlook

Claude Porchrot reflects on future developments in the banking sector:

The bank at home will continue to develop. As an example, consider credit cards; they have now reached a 70% penetration rate, but it took them twenty years to get there. Home Banking has only been around for about six years, thus it can be expected that its penetration rate will increase over time.

The main development will be the number of services offered through Minitel. At the moment, these services are still very basic – boiling down to a little more than finding out what your [account] balance is. In the future, we will see ordering traveller's cheques, trading shares, payment of bills, and tele-buying – all on Minitel!

More specifically, Bernard Auberger describes CORTAL's future outlook:

We need to broaden our product range and establish some additional offices in the field [for our customer advisors]. Broadening our product range is of

course, contrary to one of our success factors [i.e., limited product range]. However, we can now do it because we have gained sufficient experience and our clients are accustomed to Home Banking. Moreover, savings products have been simplified tremendously over the last years and are currently offered by numerous other institutions, some of which are non-banks. These institutions are likely to gain market shares; just look at Carrefour's success in this business . . .

Establishing additional offices in the field will help us show prospective customers that the bank physically exists and will also strengthen our relationship with customers by being near them. We believe that locating customer advisor centers throughout the country is more beneficial than having a centralized structure.

From an IT perspective, CORTAL has already developed a new information system which will be implemented in the second half of 1992. Explains Jean-Louis Pradels, 'The new system will integrate customer suggestions regarding our current service. Furthermore, it will be based on a true real-time concept, thus eliminating the data recency problem due to the once-a-day mainframe update [from the server]. Hence, our customer advisors will be aware of all data changes as soon as they occur.'

What are the further trends in Home Banking? For Jean-Louis Pradels and René Riffard, the future largely depends on advances in electronic payment, which integrates home shopping and Home Banking. A customer should be able to order goods, purchase train or plane tickets, make a reservation for a concert, and so on and pay through Minitel. This would be beneficial to both banks and service providers. However, at present electronic payment is greatly hindered by security deficits. René Riffard elaborates:

You can envision banks playing the role of 'multi-suppliers'. If you have about 300,000 customers, you have a real distribution network; the bank could announce a range of products electronically to its customers. For example, it is not far-fetched for CCF to forge a partnership in order to offer Château-Margaux wine. Hence, the bank could leverage its network and act as an intermediary. Customers would only need to initiate an electronic fund transfer; the remaining tasks from ordering to delivery would be managed by the bank.

CCF, through its subsidiary Technoclear, has been developing an encryptor to increase security and thus allow for procedures requiring electronic payments. Together with IBM, we are currently producing a prototype which will improve security on three levels. First, we will improve the customer identification mechanism by adding a sophisticated 'electronic signature' to the currently used personal identification number. At this level, we will add biometric identification procedures based on genetics which

cannot be imitated. Second, an encryption/decryption mechanism will protect the data during its transfer over the network. This mechanism will be fully automated and not personalized. Third, we will eliminate the risk of data, which potentially represents 'money', getting deviated to a non-authorized server instead of reaching the originally targeted mainframe of the bank or service provider.

In late 1993, CCF will begin to sell this technology, which will be embedded in a small device the size of a match-box. Since it can be used with any Minitel or PC, we foresee a target market of about 2 million customers per year. This rather high number can be justified by the fact that the end-customer only has to deposit FF150, which will be refunded upon return of the device.¹⁶

. . . If banks don't come up with a solution for electronic payment, some important financial intermediaries or information providers such as the PMU and Lotto betting companies may find one. On the other hand, the first bank that develops a secure electronic payment means will establish itself as a leader, and will probably create a standard for the banking industry.

For Jean-Louis Pradels at CORTAL, security issues constitute a primary concern for all. However, with regard to the success of Home Banking services,¹⁷ there are still some questions pending. Will the bank that finds the safest way to integrate electronic payment into Home Banking use it to take the lead? Or will it have to share this technology with other banks in order to establish an industry standard?

Technological trends could also integrate into Home Banking fax capabilities, the 'Visiphone',¹⁸ and the Integrated Services Digital Network (ISDN).¹⁹ According to Ms. Canovas, CCF customers could use their fax machine as an output device for Home Banking services. For example, they could thus receive, in printed form, simulation results of alternative mortgage scenarios. 'There is a trend towards multi-media in the Home Banking business', says Ms. Canovas. 'However, since the actual Home Banking software is independent of the underlying medium, we will remain the field leader regardless of the media used.'

'Further advancements of the Visiphone', says Jean-Louis Pradels, 'will allow CORTAL's customers to see their advisor on the phone-screen. Using broadband ISDN will allow us to combine the advantages of screen-based and vocal systems. In the longer run, ISDN could even take the lead and replace videotex in Home Banking.'

Exportability of Home Banking to the rest of Europe and elsewhere is another future dimension. Does the Minitel infrastructure limit to France the banks' geographical scope for Home Banking? The role played by France Télécom in providing a nationwide videotex network has been vital.

Distributing free Minitel terminals attracted a critical mass from which Home Banking customers have been drawn. This saved the banks tremendous investments and efforts to educate users and facilitated the acceptance of Home Banking. However, for René Riffard, the French success is feasible in other countries as well.

One should not wait for a third party, such as France Télécom, to provide free terminals. With a videotex network in place, the investment necessary to distribute terminals in order to build a critical mass (of, say, 400,000 customers) is likely to be about FF400 million. One could imagine a conglomerate, formed by banks, chains of retail stores, and other service providers, that has the financial means to offer free terminals to their customers.

Another issue that needs to be addressed is whose business Home Banking is going to be. 'From a traditional bank's perspective, other than the advantages and benefits, Home Banking has certainly triggered the risk that increasingly specialized "second banks" or non-banks can embark on this market.'²⁰ For a 'second bank' like CORTAL, such a statement is both positive and negative. CORTAL certainly likes the challenge it represents for traditional banks. At the same time, it feels threatened by non-banks that have a sophisticated infrastructure and good economies of scale. Jean-Louis Pradels again refers to Carrefour, which has created its own credit card fully financed by the 60-day credit it has from its suppliers. Says he, 'In a way, Carrefour and similar retailers have become a bank. You see, the problem is that a bank cannot become a chain of retail stores, but a retailer can act like a bank . . . On the other hand, we consider ourselves a small entrepreneurial company, a high-tech firm and not a bank.'

Who is likely to win the Home Banking race in the long run? Will it be the large, branch-based banks, who can heavily invest to sell their wide product range through a complementary channel? Or will it be the 'second banks' who have special expertise in Home Banking services? Or will it be the third players, like insurance companies and retailers, who lack banking expertise but often have large customer bases and strong infrastructures?

What Next?

Has Home Banking already become a competitive necessity? Should every French bank invest in it? Should foreign banks also try to enter this market segment in France? Are future product and/or technological developments likely to change the competitive landscape over the next three to five years?

Can CORTAL and CCF use their Home Banking experience to sustain their competitive advantage? Should French banks with strong Home Banking experience try to get into European and/or world markets? If so, how and when should they do it?

Notes

1. Minitel booklet, France Télécom, 1991.
2. 'Home Banking' is used in this case as a generic term to refer to both 'Home' and 'Office' banking.
3. French Society of Credit Organizations.
4. This is true although French banks were not the first to offer these services, nor was France the first country to start videotex-based applications.
5. CORTAL is the only 'distant bank' in France, i.e., it is the only French bank that does not have branch offices.
6. M.E. Porter, *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, New York: The Free Press, 1980.
7. Index Group, 'Architecture 2000 – Scénarios Marchés – Sommaire', 1989.
8. E.E. Furash, 'Gaining a Competitive Edge through Delivery Systems', *The Bankers' Magazine*, July/August 1990, pp. 54-9.
9. DGT stands for 'Direction Générale des Télécommunications'.
10. For more information on the development of Minitel, see in this volume 'Establishing a National Information Technology Infrastructure: The Case of the French Videotex System' by William Cats-Baril and Tawfik Jelassi.
11. For a detailed description of the technological features of the system, see in this volume 'The Technology of the Minitel System' by Irit Rapaport and Tawfik Jelassi.
12. Eight additional people from software development companies work in CORTAL's IT Department.
13. The terms 'Distant Banking' and 'Home Banking' are used here interchangeably.
14. Quoted from 'The Drive to Offer Electronic Services', *Banking World*, January/February 1990, p. 45.
15. The 'Compte Optimal' provides customers with the advantages of an interest-bearing checking account (in 1991, 7% interest on average). Clients are required to make an initial deposit of FF25,000, after which they can use this fund any time. The account balance is invested in fixed and floating bonds. An annual fee of FF450 is charged for the 'Compte Optimal'.
16. Banque Nationale de Paris (BNP) is a member of the Association Française pour le Paiement à Distance (French Society for Remote Payment), which also includes the electricity and gas company (EDF/GDF), two airlines (Air Inter and Air France), the national railway company (SNCF), France Télécom and a mail-order firm (La Redoute). This society has started, in partnership with EDF, France Télécom and two banks (Crédit du Nord and Crédit Mutuel), a new company called Téléfact to offer electronic payment services. Customers will be able to pay their electricity and telephone bills through Minitel instead of making automatic deductions from their bank account.

17. The success gained through Home Banking services should be distinguished from the additional business opportunity created through selling or leasing security devices.
18. A Visiphone consists of a traditional phone system augmented by a video capability which shows the person at the other end of the line.
19. ISDN is a digital network capable of handling simultaneously data, voice, text, and image transmission.
20. Adapted from Claude Porcherot, 'The Role of Technology in the Commercial Strategy at BNP', EFMA Conference, Brussels, February 1991.