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Digital transformation of retail banking in Morocco: proposed model

Transformation digitale de la banque du détail au Maroc : proposition d'un modèle

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Abstract

Given that our research based on a very meticulous documentary study, we have used dozens of reports to be able to draw the most probable conclusions to confirm or refute our research hypotheses. Twenty-seven annual reports were used, including 17 annual reports on banking supervision, and 10 annual reports on systems and means of payment and their monitoring, covering the period from 2004 to 2020. The objective of this research is to propose a targeted business model to ensure digital transformation for retail banks. Indeed, digitalization can become a key success factor with the main objective is optimising companies' business processes: through the implementation of a business model whose priority (i) the quality of the product or service, (ii) cost control and (iii) real-time availability. Ensuring the digital transformation of Moroccan retail banking means: (1) being able to compete with new entrants; (2) maintaining and improving its market share; (3) ensuring performance.

Keywords: Retail bank; Digitalization, Fin-Tech, New entrants; Business Model.

Résumé

Notre recherche basée sur une étude documentaire, nous avons utilisé des dizaines de rapports pour pouvoir tirer les conclusions les plus probables pour confirmer ou infirmer nos hypothèses de recherche. Au total, 27 rapports annuels ont été utilisés, dont 17 Rapport annuel sur la surveillance bancaire et 10 Rapport annuel sur les systèmes et moyens de paiement et leur surveillance, couvrant la période de 2004 à 2020. L'objet de cette recherche est de proposer un modèle d'affaire cible pour assurer la transformation digitale des banques de détail. En effet, la digitalisation peut intervenir en tant que facteur clé de succès ayant comme objectif l'optimisation des processus métiers des entreprises : à travers la mise en place d'un modèle d'affaire dont la priorité (i) la qualité du produit ou service, (ii) la maîtrise des coûts et (iii) la disponibilité en temps réel. Assurer la transformation digitale de la banque de détail marocaine, c'est : (1) être en mesure de rivaliser avec les nouveaux entrants ; (2) maintenir et améliorer sa part de marché ; (3) assurer la performance.

Mots clés : Banque de détail ; Digitalisation, Fin-Tech, Nouveaux entrants ; Modèle d'affaires.

Introduction

The Fourth Industrial Revolution: This is what we have been experiencing since the beginning of the third millennium and we will still experience it in the near future. It is characterized by structural changes affecting several sectors of activity and their business model, including internal organizational structures.

The Encyclopædia Britannica defines the Industrial Revolution as a radical and profound change in economic relationships and technological conditions. In modern history, it refers to "the process of change from an agrarian and handicraft economy to one dominated by industry and machine manufacturing. These technological changes introduced novel ways of working and living and fundamentally transformed society". (Britannica, 2021)

Several economic sectors have been strongly impacted by technological advances, such as: Telecom industry (transition from fixed to mobile telephony); Regular mail service (management and distribution); Transport industry (ticket management and distribution); Hotel industry (reservations management and payment); Banking sector. Banks, subject of our research, find themselves tilting towards a transition imposed by Covid-19, whose agenda is social distancing and the competitive pressure made by the new entrants (Porter, 1985) of finance like Google, Amazon, Facebook, Apple (GAFA) and Financial Technology companies (Fin-Tech).

In addition, the digital transformation of banks remains a requirement given the specific behavior of a new generation of ultra-connected consumers Multi-device: PC, Laptop, Smart-Phone, Tablet, Smart TV, etc.

Considering all these elements, our research focus on proposing a targeted business model to be adopted by retail banks in a competitive context driven by digitalization. The issue is: **what is the targeted business model to be adopted by retail banking to ensure digital transformation?**

Ensuring digital transformation means to:

- Be able to compete with new entrants in the sector.
- Maintain and improve its market share.
- Ensure performance.

To answer this question, we used the following assumptions:

H1. Digital transformation concerns all retail banks.

H2. The digitalization of banking services will lead to a freeze of new branch openings or even the closure of already existing ones.

H3. The Covid-19 crisis has accelerated the digital transformation.

H4. New entrants, by modifying consumer behavior, impose digital transformation.

H5. The digital transformation of retail banks requires a transformation of the business model.

The objective of this research – based on (i) the data collected through literature review regarding digital transformation and (ii) by relying on our own experience (over 15 years) in the banking sector, as professional retail bankers – is to propose a targeted business model that will ensure digital transformation.

Research methodology

We proceeded by the exploitation of reports published by the central bank of Morocco, during the period 2004-2020:

- Seventeen annual reports on banking supervision from 2004 to 2020.
- Ten annual reports on systems and means of payment and their monitoring from 2011 to 2020.

This work is structured in three parts:

1- A literature review highlighting key research concepts and the history of innovation in the banking sector.

2- Presentation of trends in digital transformation affecting the Moroccan banking sector.

3- Presentation of the existing retail banking business model and the proposal of a targeted model as an alternative solution.

1. Literature review

To clarify the concept of digitalization or digital transformation, we carried out a literature review on three platforms dedicated to scientific research, namely (i) CAIRN, (ii) SSRN´s eLibrary, and (iii) ResearchGate.

We suggest in this paragraph to highlight the main definitions of digitization and digital transformation in order to have a better understanding of the concepts used.

1.1. Definitions

- Digitalization is one of the most significant ongoing transformation of contemporary society and encompasses many elements of business and everyday life. Digitalization refers both to a transformation from analogue to digital. (Hagberg, et al., 2016).
- The action or process of digitizing: the conversion of analogue data into digital form. (Parviainen, et al., 2017).
- Digitalization means transformation of all information types (text, sound, visuals, video, and other data from various sources) into the digital language. (Machekhina, 2017).
- Digital technology takes information and breaks it down into its smallest components. By transforming an analogue signal into discrete pieces, digitalization makes it possible to manipulate information, text, graphics, software code, audio, and video in ways never before thought of transforming capabilities. (Maxwell & McCain, 1997).
- Digitalization creates new forms of interaction between companies and customers through channels (citing Hansen, et al., 2011). (Crittenden, et al., 2018).
- Digitalization is the process of spreading of a general-purpose technology. Digitalization of products and services shortens distances between people and things. It increases mobility. It makes network effects decisive. (Devereux & Vella, 2018).
- Digitalization is defined as the use of digital technologies and of data in order to create revenue, improve business, replace/transform business processes and create an environment for digital business, whereby digital information is at the core. (Clerck, 2017).
- Digitalization refers to the use of digital technology, and probably digitized information, to create and harvest value in new ways. (Gobble, 2018).
- Digitalization is defined as the way many domains of social life are restructured around digital communication and media infrastructures. In simple terms, digitalization may be defined as the use of digital technologies. (Srai & Lorentz, 2019).

To conclude, the definitions given by Hagberg, Parviainen, Machekhina, Maxwell and McCain, describe digitization as a process of transformation from analog to digital. Whereas the definitions given by Crittenden et al., Devereux and Vella, Clerck, Gobble, and Srai and Lorentz, suggest that digitization is a concept related to the degree of use of technology in operational processes.

As part of their research entitled "Digitalization: A Literature Review and Research Agenda", (João, et al., 2020), have set up a table summarizing a large number of definitions of the concept digitalization, listed by author.

Table 1. Definition of digitalization listed by author

Author(s)	Definition(s)
(Hagberg, et al., 2016)	"Digitalization is one of the most significant on-going transformation of contemporary society and encompasses many elements of business and everyday life. Digitalization refers both to a transformation from analogue to digital (e.g. a shift from cash to electronic payments) and to the facilitation of new forms of value creation (e.g. Accessibility, availability, and transparency)" (Hagberg, et al., 2016).
(Clerck, 2017)	"Digitalization is defined as the use of digital technologies and of data in order to create revenue, improve business, replace/transform business processes and create an environment for digital business, whereby digital information is at the core" (Clerck, 2017).
(Lenka, et al., 2017)	"The industrial management literature defines the digitalization as the phenomenon of intelligent connected machines that information and digital technologies power" (Lenka, et al., 2017).
(Machekhina, 2017)	"Digitalization means transformation of all information types (text, sound, visuals, video and other data from various sources) into the digital language" (Machekhina, 2017).
(Parviainen, et al., 2017)	"The action or process of digitizing; the conversion of analogue data (esp. in later use images, video, and text) into digital form" (Parviainen, et al., 2017).
(Thorseng & Griot, 2017)	"The transformation of existing socio-technical structures that were previously mediated by non-digital artefacts or relationships into ones that are mediated by digitized artefacts and relationships with newly embedded digital capabilities" (Thorseng & Griot, 2017).
(Valenduc & Vendramin, 2018)	"The term digitalisation is not the irruption of a new revolution, but the pervasive synergy of digital innovations in the whole economy and society" Valenduc & Vendramin, 2018).
(Crittenden, et al., 2018)	"Digitalization creates new forms of interaction between companies and customers through channels" (Crittenden, et al., 2018).
(Devereux & Vella, 2018)	"Digitalization is the process of spreading of a general purpose technology. The last similar phenomenon was electrification. Digitalization of products and services shortens distances between people and things. It increases mobility. It makes network effects decisive. It allows the use of specific data to such an extent that it permits the satisfaction of individual customer needs – be it consumers or businesses. It opens up ample opportunities for innovation,

	investment, and the creation of new businesses and jobs. Going forward it will be one of the main drivers of sustainable growth" (Devereux & Vella, 2018).
(Eling & Lehmann, 2018)	"The integration of the analogue and digital worlds with new technologies that enhance customer interactions, data availability and business process" (Eling & Lehmann, 2018).
(Gobble, 2018)	"Digitalization refers to the use of digital technology, and probably digitized information, to create and harvest value in new ways" (Gobble, 2018).
(Morley, et al., 2018)	"Digitalization is the growing application of ICT across the economy encompassing a range of digital technologies, concepts and trends such as artificial intelligence, the Internet of Things (IoT) and the Fourth Industrial Revolution" (Morley, et al., 2018).
(Ringenson, et al., 2018)	"Digitalization is about social life's restructuring around digital communication and media infrastructures" (Ringenson, et al., 2018).
(Gebre & Bygstad, 2019)	"Digitalization refers to the development and implementation of ICT systems and concomitant organizational change; it involves the transformation of socio-technical structures formerly mediated by non-digital artefacts into ones mediated by digitized artefacts" (Gebre & Bygstad, 2019).
(Srai & Lorentz, 2019)	"Digitalization is defined as the way many domains of social life are restructured around digital communication and media infrastructures. In simple terms, digitalization may be defined as the use of digital technologies" (Srai & Lorentz, 2019).

Source: Digitalization: A Literature Review and Research Agenda, (João, et al., 2020)

1.2. History of innovation in the banking sector

The digitization of banking in particular and financial services in general, has so far been presented as a recent phenomenon or a novelty. However, financial sector spending on IT devices and services has traditionally been quite high (Brandl & Hornuf, 2017).

The technological innovations in the banking and financial sector began in the 1960s with the installation of automatic teller machines (ATMs) and continued with the computerization of basic banking operations (Millo, et al., 2005).

By 1979, the banking and financial industry had already spent 32% of all investment spending on IT, the highest share of any industry. In 1980, half of the capital expenditure of banks was on computers or, in one way or another, related to computers (Franke, 1987).

In 1992, investment in the computerization of internal processes in the banking and financial sector reached 38% (Scott, Van Reenen and Zachariadis, 2017).

The high share of IT spending can be explained by the fact that the banking sector is the first industry to have used computers on a large scale in its work processes. (Brandl & Hornuf, 2017).

The digital architecture of the banking and financial system as well as the computerization of certain internal bank processes date back to this period (1980s and 1990s).

This early adoption of computers by the financial industry was made possible by Common Business-Oriented Language (COBOL), a problem-oriented programming language that was developed in 1959 as one of the first languages for programming business applications.

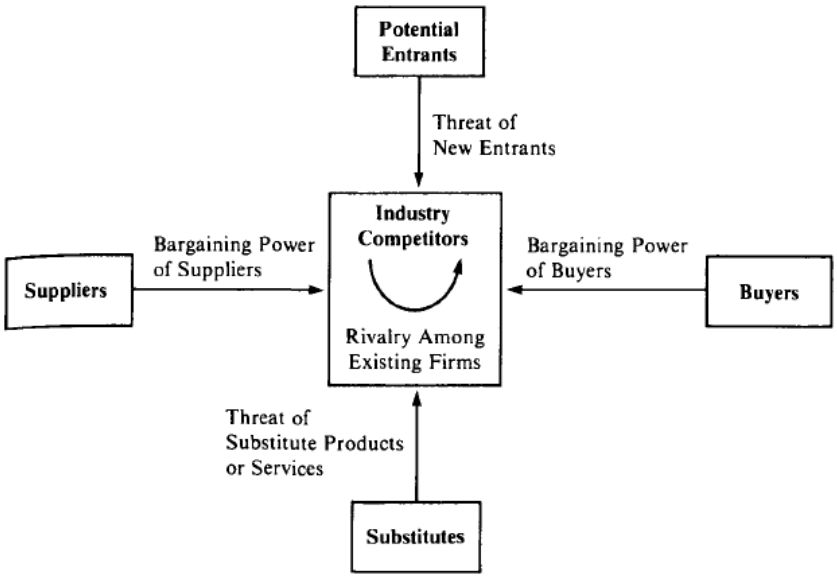
While the first programming languages were mainly used for scientific purposes, COBOL is an independent software that has the ability to access and manipulate masses of data (Beyer,2012).

1.3. New entrants

Obsolete IT infrastructure is at least partly responsible for the difficulties banks face in the process of digitizing financial services to compete with new entrants (Porter, 1985) such as GAFA and Fin Tech.

The first fundamental determinant of a firm's profitability is industry attractiveness. Competitive strategy must grow out of a sophisticated understanding of the rules of competition that determine an industry's attractiveness. The ultimate aim of competitive strategy is to cope with and, ideally, to change those rules in the firm's favor. In any industry, whether it is domestic or international, or produces a product or a service, the rules of competition are embodied in five competitive forces: the entry of new competitors, the threat of substitutes, the bargaining power of buyers, the bargaining power of suppliers, and the rivalry among the existing competitors (Porter, 1985). Figure n° 1 illustrates the five competitive forces.

Figure N°1: The Five Competitive Forces that Determine Industry Profitability



Source: Competitive Advantage: Creating and Sustaining Superior Performance (Porter, 1985)

The five-forces framework does not eliminate the need for creativity in finding new ways of competing in an industry. […] Strategies that change industry structure can be a double-edged sword because a firm can destroy industry structure and profitability as readily as it can improve it. (Porter, 1985)

In addition, many concepts related to strategic planning (Mintzberg, 1998) ignored the attractiveness of the services offered and emphasized the pursuit of market share. The winner in a struggle for market share in an unattractive business may not be profitable, and the struggle itself may worsen the structure of the industry or erode the profitability of the winner. (Porter, 1985).

The analysis of these structural problems, linked to the degree of technological adaptation of classical banks to compete with the new entrants of finance, prompts us to reflect more on the veracity and the consequences of the Schumpeterian theory of creative destruction (Schumpeter, 1942).

1.4. The creative destruction

As innovation and creativity are processes that promote diversity of supply, they lead to changes in industry structure and competition. The pervasive use of information and communication technology (ICT) is expected to bring substantial cost reductions and

productivity increases in industries. It is also associated with the rise of new products and services. Studies that incorporate broader technological change into the analysis are referred to as studies of creative destruction. (Handke, 2010).

The latter takes place when innovative firms generate productivity increases or new superior products, gain competitive advantages and take over market share at the expense of more conservative suppliers, which leads to productivity increases throughout the industry (Schumpeter, 1942).

In his landmark work "*Capitalism, Socialism, and Democracy*", Schumpeter argued that the most important form of competition keeping capitalist markets from becoming monopolistic is not competition in the ordinary sense, such as competition with respect to price, quality, and effort. Instead, the fundamental impulse that sets and keeps the capitalist engine in motion is the process of creative destruction, a process that incessantly revolutionizes the economic structure incessantly destroying the old one, incessantly creating a new one. This is a form of competition that strikes not at the margins of the profits and the outputs of existing firms but at their foundations and their lives. (Kut, 2002).

According to Handke (Handke, 2010), this process has three dimensions:

- The first and essential aspect of creative destruction is the introduction to the market of new superior products or more efficient production processes, which will diffuse at the expense of preceding solutions.
- Second, on an organizational level, a process of creative destruction means that more innovative firms gain market share from more conservative market participants.
- Third, the industry at large will become more productive. These productivity increases may show up in falling prices without proportional losses in quality or in greater quality without a proportional appreciation of prices.

1.5. Technical progress

While 1990s companies may look very different than 1980s or 1970s companies, superior profitability within an industry still rests on relative cost and differentiation. [...] Technological change may penalize the large-scale firm if facilities designed to reap scale economies are also more specialized and less flexible in adapting to new technologies. (Porter, 1980)

According to Michel Didier (1992), In 1780, it took 200 hours of work to harvest a quintal of wheat. This number was 72 in 1900 and 30 in 1950. Now 7 hours are enough. In 1950, one hour

of a railway worker could carry a passenger 67 kilometers. The same hour of work today allows one passenger to be transported 120 kilometers.

We are on average three times more productive than our parents, which allows us to consume three times more than they are. This means that on average, for equal work, we produce three times more than thirty years ago, thanks to better training, better organization of work, further automation of production and better tools.

The relationship between technical progress and economic progress is complex and has already been the subject of much research. (Vincent L.A, 1961).

The expression "technical progress" is likely to receive several definitions, among which it seems necessary to distinguish two main categories:

- In the restricted sense, technical progress means innovations or improvements considered from their technical aspect. Each technician, in his specialty, then refers to a technical goal: to achieve such result, to implement such new process, to develop such product or new article.
- In the broad sense, the expression "technical progress" can be considered as designating progress in productivity. In this sense, we no longer refer only to an objective, we expressly compare this objective with the means which made it possible to obtain it, taking into account the general limitation of these means.

According to Vincent L.A, (1961) "*Schumpeter showed us that technical innovations generally occurred in 'clusters', and often preceded phases of economic expansion. Conversely, periods of economic boom and depression influenced the implementation of innovations, especially when they required large investments. Thus, the phases of depression were unfavorable to technical innovations; on the other hand, the booms stimulated them excessively in the sense that the profitability of some of them only appeared clearly in the precarious conditions of the boom*".

2. Current situation and trends

Consumption habits have changed; the consumer has become more informed. He no longer suffers from his consumption as long as he has the multiple choice between several distribution networks (delivery, purchase in a physical store, online or mobile payment ...), but also the possibility of obtaining information about different sources in real time wherever it is located thanks to mobile devices, such as tablets and smartphones (Yaacoubi et Yamani, 2018).

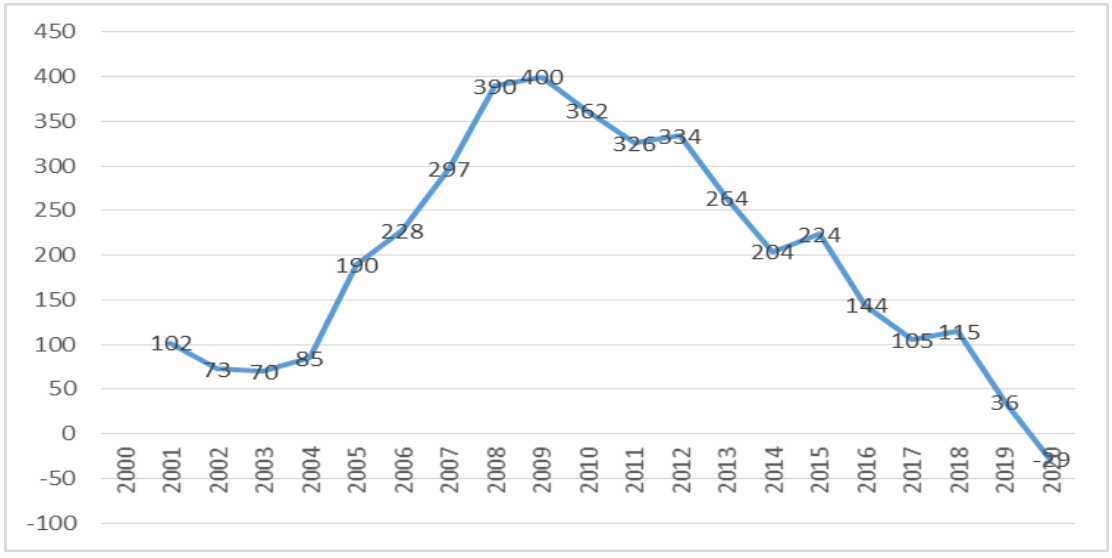
The pandemic crisis (COVID-19) has played a role of digital accelerator in financial services both on the banking side and on the user side. In this context, the central Bank of Morocco worked, with banks, to facilitate the opening of remote payment accounts during lockdown.

A dashboard for monitoring financial services digital technology has been developed with stakeholders (banks including participatory banks, finance firms, microcredit associations, payment institutions specializing in fund transfer intermediation, other institutions) to better monitor the progress and accompanying measures that are required.

2.1. Evolution of the banking network

After decelerating in previous years, the banking network saw a decline in 2020, in favor of increasing use of digital channels. Figure n° 2 depicts the number of additional branches opened annually.

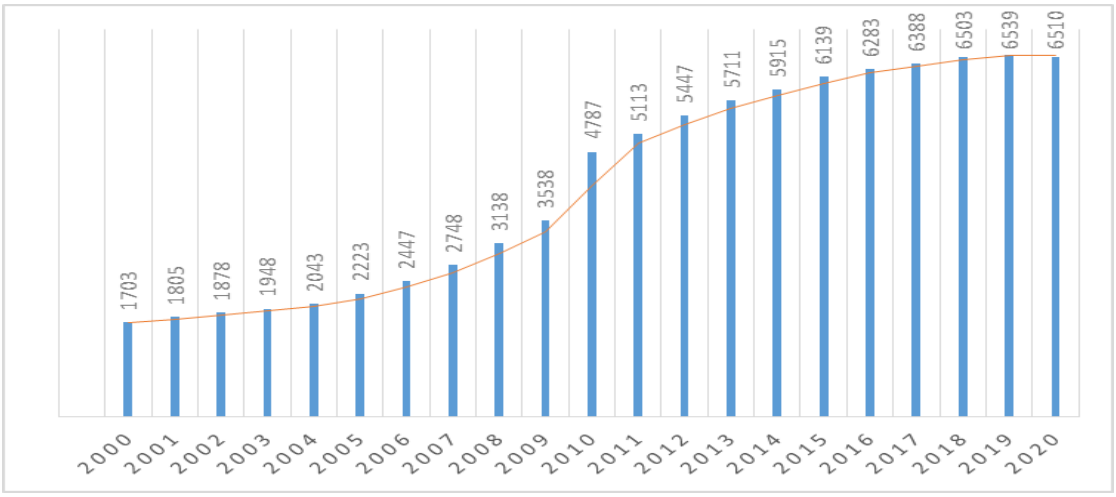
Figure N°2: Number of additional branches opened annually (2000 -2020)



Source: Authors

After a slight increase of 0.6% in 2019, the banking network recorded a decrease of 0.4% in 2020. Thus, the number of bank counters fell by 29 branches to stand at 6,510. This change is the result of a decrease of 50 branches for conventional banks, with the aim of optimizing their network. This evolution takes place in a context of digitization of the banking sector, with banks increasingly using digital channels. Figure n° 3 illustrates the evolution of the banking network.

Figure N°3: Evolution of the banking network (2000 – 2020)



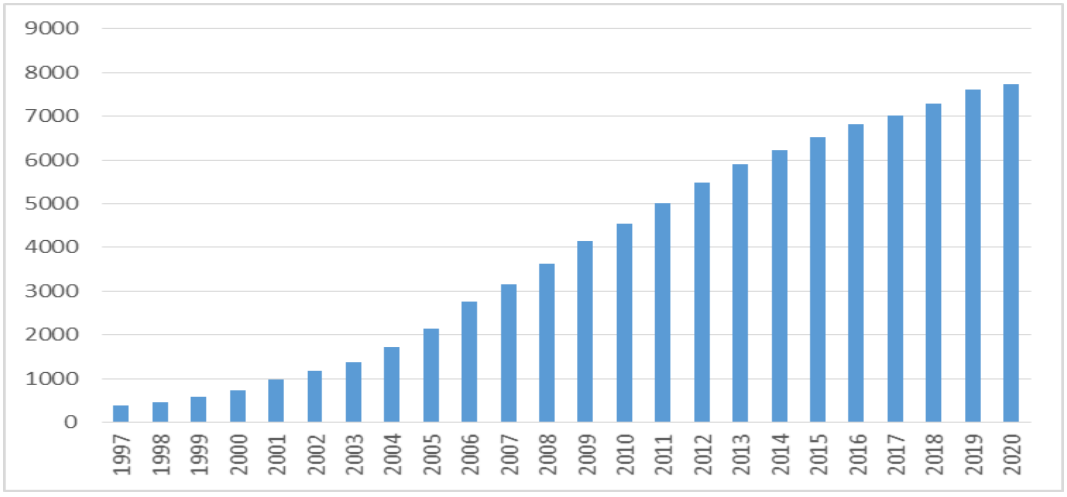
Source: Authors

It is important to point out that in Morocco; structural charges represent exorbitant amounts (BAM). These charges relate both to the number of branches opened, the costs of fixed assets and personnel charges. (Cherkaoui. K, 2020).

In fact, given the low rate of banking services and the delays in financial inclusion, Moroccan banks have adopted the customer proximity strategy for many years. Going to the customer where he is, was an effective way to improve banking and generalize banking services. (Cherkaoui. K, 2020).

The digital transformation of banking services has started in Morocco with the establishment of automatic teller machines (ATMs) and electronic payment cards. (Millo, et al., 2005). Figure n° 4 illustrates the evolution of the ATMs network.

Figure N°4: Evolution of the ATMs network (1997 – 2020)



Source: authors

2.2. Highlights of the digital transformation

Years 2012 - 2014: In parallel with the extension of their network, banks have continued to provide their customers with offers that are better adapted to their needs, using new low-cost distribution channels based on innovative technological solutions.

In this regard, banks have intensified their use of the mobile branch system. This approach is part of a broader banking coverage and an improvement of the level of financial inclusion of the population, especially those living in rural areas. This system provides better access to basic banking services, thus contributing to regional economic development. (BAM, 2015)

Taking advantage of the evolution of information technology, banks have strengthened their offer of Mobile Banking services. This solution offers a range of financial services covering, in particular, cash deposits and withdrawals (cash-in, cash-out), money transfer, transfers and bill payment. A customer's subscription to this service is accompanied by the opening of a bank account that operates in prepaid mode.

In addition, other measures have been taken:

- The launch of websites designed to allow customers to carry out banking transactions on their accounts remotely.
- The offer of prepaid cards.
- The launch of cash withdrawal transactions from ATMs;
- The introduction of cards for electronic payment on international websites.

Year 2015: The Central bank of Morocco initiated a study with the National Telecommunications Regulatory Agency for the implementation of a new development strategy for electronic payment. The goal is to set up a national payment platform via mobile telephony, at low costs, for the use of a wider ecosystem made up of merchants, households, infrastructure providers and authorized payment providers. (BAM, 2016)

Year 2016: the network of banking agencies in Morocco continued to grow at a slower pace, bringing the banking rate to 69%, an increase of 2 points compared to 2015. In the same trend, the evolution of the workforce of bank employees has slowed down significantly. (BAM, 2016)

Year 2017: Risk Management: new emerging risks are receiving increased attention, mainly those caused by the technology and digitalization wave.

Digital development is a real opportunity for banks to improve customer relations and services by making them more accessible and faster. Nevertheless, this trend, which involves an

increasing use of Web and mobile platforms, leads to high risk of cyber-attacks, and requires greater vigilance from banking institutions. (BAM, 2018)

Year 2018: marked the accreditation of 11 payment institutions to offer payment services backed by payment accounts, including three are bank subsidiaries. (BAM, 2018)

New entrants (Porter, 1985): Payment institutions are those authorized to offer one or more payment services. They may also, carry out foreign exchange transactions. The payment services are:

- Payment account.
- Fund transfer operations.
- Cash deposits and withdrawals from a payment account.
- The execution of payment transactions by any means of remote communication provided that the operator act only as an intermediary between the payer and the supplier of goods and services.
- The execution of permanent or single direct debits, card payment transactions and the execution of transfers, when these relate to funds placed in a payment account.

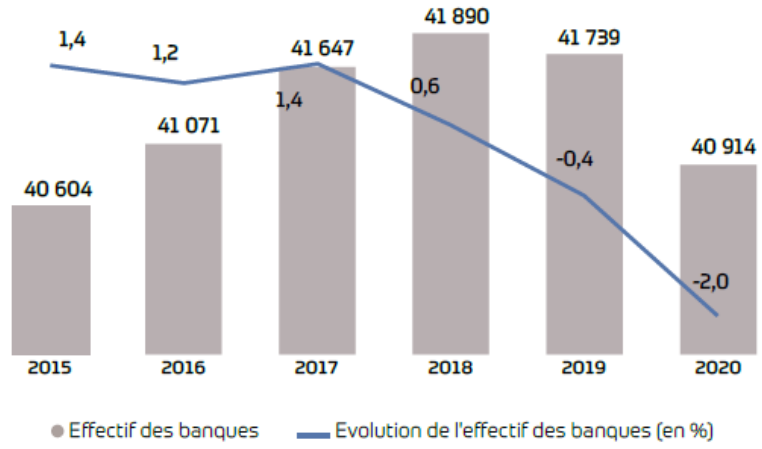
Year 2019: the banks have fully subscribed to this dynamic of digital transformation and have developed their mobile apps and internet applications and undertaken to enrich the functionalities and customer experience.

By relying on digital technology, they are also working on a digital transformation of their networks, notably through the creation of new agency formats equipped with digital tools for customers and the orientation of agency functions towards consulting, a function with greater benefit for the customer and the bank. (BAM, 2019)

Year 2020: the banking network marked a decline in 2020, in favor of an increasing use of digital channels as well as the development of the network of payment institutions: significant increase of 98.1%, with the opening of 5,911 new points of sale, an additional 78 own branches and 5,827 points of sale for authorized payment agents. The network reached a total of 11,935 points of sale. (BAM, 2020)

In addition, the bank workforce fell by 2% to 40,914 agents: 825 employees less, in a context of contraction of the banking network, digitalization of processes and the health crisis. Figure n° 5 illustrates the evolution of the number of banks' personnel. (BAM, 2020)

Figure N°5: Change in the number of banks' personnel



Source: Bank Al-Maghrib - Annual report on banking supervision (DSB, 2020)

3. Retail banking: the existing model and the proposal of a targeted model

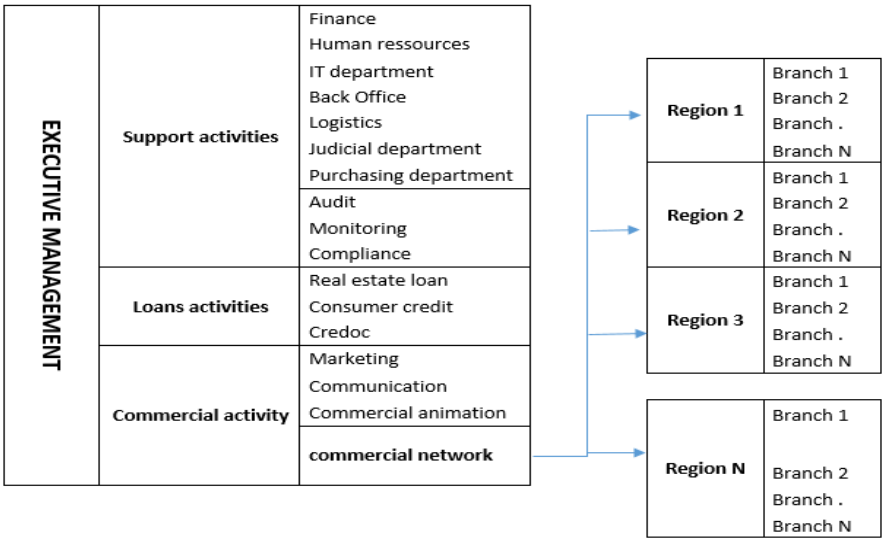
In these periods characterized by Volatility, Uncertainty, Complexity and Ambiguity, (Warren, et al., 1987) for traditional players facing new entrants (Porter, 1985) whatever the size and the problem of the organization and the leaders, there are always solutions to succeed in defining a new business model, repositioning or reorganizing.

3.1. The existing model

The current configurations of certain management modes, such as a traditional bank, have reached a state of unproductive and stationary satiation, unable to generate alternative solutions to meet digital transformation. The need for creative evolution (Schumpeter, 1942), remains indispensable given that the dominant mechanistic bureaucracy (Mintzberg, 1998) in the financial sector has shown its ineffectiveness for the simple reason that these management modes are only designed to function in a stable and predictable environment. (Mintzberg, 1998) We propose to rethink the classic organizational configurations that define the traditional business model of retail banks, taking into account the following elements:

- Mobility
- Adaptability
- Speed
- Agility
- Availability

Figure N°6: The traditional model of the distribution of banking products and services



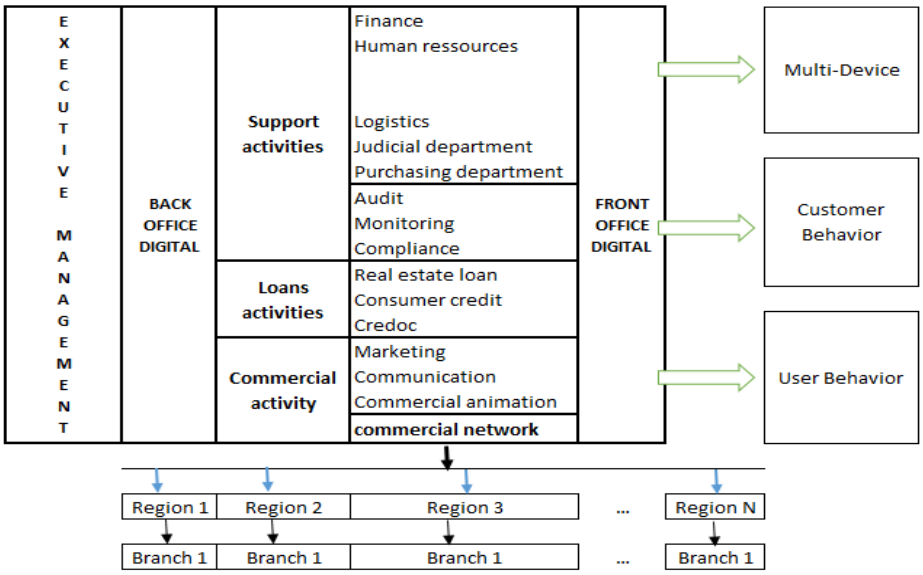
Source: Authors

In the traditional model, the most preferred distribution channel for banking products and services is the commercial network through branches. With this operating mode, three criteria of the five previously defined are lacking, namely: speed of services, mobility and availability. Figure n° 6 illustrates the traditional model of the distribution of banking products and services. It is important to clarify that in the above model, all functions must meet the needs of the commercial activity.

3.2. The targeted model

Digital transformation can act as an indispensable pivot with the primary objective of optimising the triangular system represented by: time, cost and quality. (Omerani, et al., 2022). In this target model, we propose a hybrid solution that provides the bank with a technological backbone through the implementation: upstream of all the bank's functions, the digital back office (an alliance between the IT department and the back offices) in order to ensure internal agility. Downstream, the digital front office (an alliance between the IT department and the commercial department). Figure n° 7 illustrates the target Model for the distribution of banking products and services.

Figure N°7: The Target Model for the distribution of banking products and services



Source: Authors

Like Fin-Tech, banks will manage through the digital front office: the multi-device (smartphone, pc, tablet, etc. used by customers), customer behavior to improve the customer experience as well as user's behavior (internal or external users of the channels). The aim is to limit the risks of cyber-attacks or fraud. (El haoua & Moutahaddib, 2021)

It should be noted that in the proposed model, physical relationship with the bank will not disappear because there will be bank branches for a very specific category of customers who privilege direct relationships to digital channels. The number of agencies will be reduced in order to ensure competitiveness in the sector.

To summarize, the different hypotheses were affirmed through our documentary research based mainly on the reports of the Moroccan central bank:

- Retail banks are affected by digital transformation in a changing world.
- The wave of bank branch closures started in 2014 with the closure of 16 branches (DSB, 2014) to reach 50 closures in 2020 (DSB, 2020).
- The COVID-19 health situation has effectively accelerated remote banking, especially during a period of lockdown (DSB, 2020);
- New entrants, in our case payment institutions, have influenced the behavior of an ultra-connected "Z" generation (BAM, 2020);

- The traditional business model of retail banks is inadequate to be able to compete with Fin-Tech whose business model is based on freemium (free services). Consequently, an organizational transformation is even urgent.

Conclusion

Our research based on a very meticulous documentary study, by opting for evidence-based supports such as the annual reports of the Moroccan central bank. As a result, we have used dozens of reports to be able to draw the most probable conclusions to confirm or refute our research hypotheses. Twenty-seven annual reports were used, including 17 Annual reports on banking supervision and 10 Annual reports on systems and means of payment and their monitoring, covering the period from 2004 to 2020.

Fraysse insisted on the need for organizational transformation: *"What if changes were going faster than expected? In any case, the conduct of digital change can no longer be delayed. Time is running out, the new entrants are taking positions facing the slowly moving dinosaurs. It is time to go digital because "business is digital"* (Fraysse, 2013).

Globally, the retail banking distribution model is changing, with declining branch visits and increasing use of remote access to banking services. Most interactions between banks and their customers are taking place more and more via mobile and digital tools to meet the needs of basic operations (consultation of accounts, transfer, ordering of checkbooks, etc.).

The barriers of digital transformation

- The significant cost of the digital transformation of banks. The costs of switching from one programming language to another are extremely high (Brandl & Hornuf, 2017).
- The redeployment of a very large part of the staff assigned to bank branches.
- The illiteracy rate of the population, which is estimated at 25% (32.2% in 2014 according to the general population census), will slow down the access of a large part of the population to digital financial services.
- The results drawn from the study, conducted by Nafzaoui, Sebbar and Berdi, show that the use of ICT generates considerable impacts on social relations through the reduction of physical contact between the actors and the individualization of the work processes. Which can lead to a certain isolation of the staff. (Nafzaoui et al. 2018)

The limits of research

Like any study, this study has limitations: the most important one being the lack of statistics on the use of digital banking channels as well as our inability to address consumer behavior, which we believe is a very critical element.

In the continuity of the research work dealing with the digitalization of banks and more specifically retail banks, we invite researchers to explore the correlation between the change in user behavior and the rate of digitalization of financial services in Morocco.

BIBLIOGRAPHIE

B. Brandl & L. Hornuf: Where did FinTechs come from, and where do they go? The transformation of the financial industry in Germany after digitalization. pp. 4-6 (2017)

Campos et Gayte, (2017), Redonner vie aux agences face à l'incertitude des modèles de valeur de la banque. Le Journal de l'École de Paris n°125

CHERKAOUI. K (2020), The digitization of banking services, a source of profitability: The case of Moroccan banks. Revue Internationale du Chercheur. Volume 1: n° 1 pp: 269 – 268

Christian W. Handke (2010), Thesis: The Creative Destruction of Copyright Innovation in the Record Industry and Digital Copying. Erasmus University Rotterdam.

Clerck, J.: Digitalization, Digital Transformation: The Differences. i-SCOOP (2017)

Devereux, M., Vella, J.: Debate: implications of digitalization for international corporate taxreform. Intertax 46(6), 550–559 (2018)

EL HAOUA. Y et MOUTAHADDIB. A. (2021) « La Fraude professionnelle dans le secteur bancaire : enjeux et solutions », Revue Française d'Economie et de Gestion « Volume 2 : Numéro 10» pp : 74 - 95

FRAYSSE E. (2013), Business is digital : c'est le moment ! Editions Kawa.

Gobble, M.: Digitalization, digitization, and innovation. Res. Technol. Manag. 61(4), 56–59 (2018)

Hagberg, J., Sundstrom, M., Egels-Zandén, N.: The digitalization of retailing: an exploratory framework. Int. J. Retail Distrib. Manag. 44(7), 694–712 (2016)

Hansen, D., Shneiderman, B., Smith, M.: Analyzing Social Media Networks with NodeXL: Insights from a Connected World. Morgan Kaufmann-Elsevier, Burlington (2011)

João, et al., : Digitalization: A Literature Review and Research Agenda, Springer Nature Switzerland pp. 443–456, 2020.

Machekhina, O.: Digital of education as a trend of its modernization and reforming. RevistaEspacios 38(40), 26–31 (2017)

Maxwell, L., McCain, T.: Gateway or gatekeeper: the implications of copyright anddigitalization on education. Commun. Educ. 46(3), 141–157 (1997)

Michael E. Porter (1985), Competitive Advantage: Creating and Sustaining Superior Performance. The Free Press, a Division of Macmillan, Inc. New York

Michael E. Porter (1980), Competitive Strategy: Techniques for Analyzing Industries and Competitors. The Free Press, a Division of Macmillan, Inc. New York

Michel Didier (1992), Économie : les règles du jeu. Edition, Ecomomica. Paris.

Nafzaoui et al. (2018), Analysis of the impacts of the use of Information and Communication Technologies (ICT) on working conditions in the organization. -Case of the Moroccan Banking Sector-. Revue CCA, n° 6. pp. 128-144

Omerani, et al., (2022) « Transformation digitale et performance financière: cas des banques commerciales Marocaines cotées », Revue Française d'Economie et de Gestion « Volume 3: Numéro 11» pp: 80-96.

Parviainen, P., Tihinen, M., Kääriäinen, J., Teppola, S.: Tackling the digitalization challenge: how to benefit from digitalization in practice. IJISPM 5(1), 63–77 (2017)

Raymond S. R. Kut (2002), The Creative Destruction of Copyright: Napster and the New Economics of Digital Technology. The University of Chicago Law Review, Vol. 69, No. 1, pp. 263-324.

Schumpeter, J.A. (1942), Capitalisme, socialisme et démocratie: 1re et 2e parties, Québec: Edition numérique.

Srai, J., Lorentz, H.: Developing design principles for the digitalisation of purchasing andsupply management. J. Purch. Supply Manag. 25(1), 78–98 (2019)

Vincent Louis-André (1961). Progrès technique et progrès économique. Revue économique, volume 12, n°6. pp. 876- 904

Yaacoubi & Yamani, (2018), E-communication in the era of digitalisation of the brand: from passive posture to interactivity. Revue CCA, n° 6. pp. 1166-1186

Annual report

Annual report on banking supervision (DSB, 2020)

Annual report on banking supervision (DSB, 2019)

Annual report on banking supervision (DSB, 2018)

Annual report on banking supervision (DSB, 2017)

Annual report on banking supervision (DSB, 2016)

Annual report on banking supervision (DSB, 2015)

Annual report on banking supervision (DSB, 2014)

Annual report on banking supervision (DSB, 2013)

Annual report on banking supervision (DSB, 2012)

Annual report on banking supervision (DSB, 2011)

Annual report on banking supervision (DSB, 2010)

Annual report on banking supervision (DSB, 2009)

Annual report on banking supervision (DSB, 2008)

Annual report on banking supervision (DSB, 2007)

Annual report on banking supervision (DSB, 2006)

Annual report on banking supervision (DSB, 2005)

Annual report on banking supervision (DSB, 2005)

Annual report on systems and means of payment and their monitoring (BAM, 2020)

Annual report on systems and means of payment and their monitoring (BAM, 2019)

Annual report on systems and means of payment and their monitoring (BAM, 2018)

Annual report on systems and means of payment and their monitoring (BAM, 2017)

Annual report on systems and means of payment and their monitoring (BAM, 2016)

Annual report on systems and means of payment and their monitoring (BAM, 2015)

Annual report on systems and means of payment and their monitoring (BAM, 2014)

Annual report on systems and means of payment and their monitoring (BAM, 2013)

Annual report on systems and means of payment and their monitoring (BAM, 2012)

Annual report on systems and means of payment and their monitoring (BAM, 2011)

https://www.britannica.com/topic/revolution-politics

https://www.britannica.com/event/Industrial-Revolution