Review of Business & Finance Studies
Vol. 12, No. 1, 2021, pp. 51-68
ISSN: 2150-3338 (print)
ISSN: 2156-8081 (online)

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www.theIBFR.com

GOING DIGITAL AND FINTECH: THE CASE OF BULL MARKET BROKERS

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ABSTRACT

This paper shows how a stock market broker of Argentina, Bull Market Brokers, underwent a digital transformation and became a financial market leader, an innovative Fintech and financial educator. This company is a unique case in which a Latin American, stock market, non-native digital company based in Argentina advances its structure, processes and products to modernize and successfully compete within the new Fintech landscape while strengthening and moving forward its leadership in the Buenos Aires Stock Market, the largest in Argentina by capitalization, listed firms and turnover. Using the case-study methodology, the main results this paper finds are that: 1) the extent of the change and adaptation to the new conditions demanded by the stock market participants are complex and multidimensional; 2) stock market intermediaries are undergoing a paradigm shift that forces them to fully digitalize their operations; 3) this shift occurs through innovation in products and processes, strategic objectives, organizational design, product development and even the target clientele; and 4) incidentally, the case finds that the ongoing COVID-19 pandemic crisis offers a window of opportunity to accelerate digital transformation in financial intermediation, forcing companies and organizations to further adapt and ultimately survive the change in the business model.

JEL: E44, G23, G24, O16, O31, O54

KEYWORDS: Brokerage Firm, Fintech, Digital Transformation, Financial Inclusion, Commercial Digitalization

INTRODUCTION

At the end of the 1990s, the Bull Market Corporation was created, condensing the personal and professional experience of over three decades of its founder and current president. Then, integrating the investment business, on April 18, 2000, it was incorporated into the *Mercado de Valores de Buenos Aires (MERVAL)*. MERVAL (Argentinean Stock Market) is a private corporation and the most important market in the country for structuring products and businesses linked to SMEs, non-standardized products in general and regional economies. Throughout these first 19 years, they gained experience in the stock market system, financial management and management of a small- and medium-sized company in the sector. They established themselves in the local market with Bull Market Brokers (BMB) and incorporated new markets through Bull Market Securities in the United States. Several business units were structured according to the specific needs of each market segment:

Bull Market Corporates: aimed at corporate clients who are interested in the capital market.
Bull Market Advisors: designed for individual investors.
Bull Wealth Management: personalized investment advice for large equity investments.

During the first stage of BMB's life, the company stood out because:

It earned support from Mercado de Valores S.A. and Caja de Valores S.A., a depositary institution in custody of all securities transacted.
It charged one among the lowest commissions on the market.
It provided distinctive personalized advice.
It favored investment diversification.

Up to this point, this was the case of a traditional stock market intermediary, which, although well structured, it was not disruptive, nor differentiated with respect to the Argentine stock market intermediaries until 2016. Since then, however, it has emerged as a leading player because of a pioneering and unique digital transformation in the financial sector in Argentina and Latin America. The change was such that it allowed the firm to quadruple its client base and double its staff in just 2 years. This development implied (and still implies) an exponential growth of virtually all of its financial, organizational and economic indicators, even having to adopt others according to the new digital paradigm, which let the firm to be recognized as a technology company dedicated to the financial industry.

This paper answers the question: Which were the main drivers of this innovative process that led Bull Market Brokers to become an innovative, disruptive financial intermediary operating in and beyond stock markets, a significant in terms of market size? To answer that question, the paper addresses the revolutionary nature of digital changes in stock markets (Gomber, Koch and Siering, 2017), the necessity to adapt all aspects of the organization to survive and to be successful in the financial world (OECD 2020), and the advancement of financial inclusion and the positive externality it causes, using the case study method. This case can serve as milestone in Argentina to understand the ongoing paradigm shift on how brokers and other intermediaries relate to customers, other institutions, and countries akin, how they manage internally and externally different aspects of an organization, how it promotes financial inclusion and furthermore how it plays a catalytic role during the Covid pandemic to accelerate the latter.

The paper is organized as follows. It first describes the digital transformation of the financial market and its impact on each of the players therein. Second, their introdu es the reader to the Argentine financial and stock markets´ indicators, features, challenges, and implications of bringing about innovating to them. Argentina stands among the least developed Emerging Stock Markets exhibiting an 8% market cap to GDP ratio, well below country peers such as Chile, Brazil, Mexico, Russia, or Thailand. Yet, Bull Market Brokers is among the top 5 drivers of that market. Third, it develops how the business structure and organization changed following the digitalization process and how the firm redefined a new identity and business model, including new financial products and services. Fourth, it reports the main findings about howBull Market Brokers´ transformed successfully and became a leader stock market broker and fintech. . It finally concludes and provides a few lessons.

The paper finds that Bull Market Brokers became a leader and successful digital broker and Fintech thanks to 1) The adequacy of the organizational structure, 2) The digitization of sales and product development, 3) The phenomenon of digital communication (Ramiro Marra CSO in his role as a YouTuber), 4) The promotion of unique financial inclusion and education compared to other brokers and financial intermediaries.

Unlike a broader literature which researches general business or trade digital transformation (e.g., MIT Sloan Management Review (2003), Matt, Hess and Benlian (2015), Cerezo, Magro and Salvatella (2014)) or a related literature on Fintech innovation (IADB, 2018) and digital disruption in financial markets (OECD, 2020), this paper makes a contribution in at least four dimensions:

a) it brings in a fresh case study of a leading innovating financial intermediary in Argentina, Latin America where most innovation by Fintech has occurred in recent years (IADB, 2018, McKinsey, 2015),

b) it develops a case among a few in Latin America where the firm undertakes an organizational transformation to full digitalize its operations while becoming a Fintech and a financial educator altogether,

c), in this respect, it introduces the role of stock market brokers in promoting financial inclusion and cost-free financial education generating a positive externality especially to millennials and people alike, and

d) it shows how the ongoing Covid19 crisis and financial market turmoil has dramatically accelerated the digitalization of stock market institutions and transactions.

But, the aspect to which this study circumscribes is about how digital transformation impacts on the business ecosystem, forcing companies and organizations to adapt. In several sectors, this effect has been so radical that it was essential to change the business model to survive. Examples include the emblematic cases of Kodak and Blockbuster.

DIGITAL TRANSFORMATION IN THE ARGENTINE FINANCIAL SECTOR

Concerning the financial sector in Argentina, digitalization has been underway for some time and is in full transition. It is becoming increasingly essential to adapt to continue competing in the market. Is it possible to imagine a bank *without Online Banking*? Or even without a telephone customer service? As described in a news article in *La Nación* in 2003, *Home Banking* began to gain popularity at that time, 19% of internet users used it, which represented 760,000 people, that is to say, that there were only 4 million people with access to the internet, which by 2003 represented just over 10% of the population. At that moment, it was used practically only to check account balances, and only 37% of consumers used it to make electronic payments. Today the situation is quite different, with almost 65% of national households with local Internet access, according to data from *ENACOM* (National Communications Agency) which, considering a population of 44 million, it yields 28.6 million Internet users, more than 7 times the digital population of 2003.

At the end of 2017, the site specialized in financial content, Roadshow (Jiménez, 2017), published that the use of Home Banking had reached 33% of Internet users, which is a noticeable growth from the 19% in 2003, but even more considerable in absolute values: from 760,000 to 10,000,000 people, from which, 4 million accessed by mobile devices. This seems to be a simple change of communication channel but implies a profound transformation in the consumer and customer consultation habits. This allows to measure the magnitude of the change in the sector, the new way customers relate to organizations, which should lead to rethinking the strategy. Looking at 2019 data (Clarín, Kantor, 2019): 90% of cash transactions are channeled digitally. The number of digital transactions jumped 60% in the last year. According to Banco Santander, the method of constitution of fixed term deposits in the last 10 years varied: From 40% to 10% at banks branches, from 15% to 76% through home banking on internet, from 0% to 12% on mobile phones.

These figures would suggest that physical bank branches will disappear in the next few years. However, the banking sector reports that a proportion of customers continue to visit them. It may be old-fashioned, but there is an analogy to physical books or printed journals that have been announced as dead for several years, yet they survive, transforming themselves. The same happens with bank branches that have increasing automated processes and the use of technological tools.

As the evolution continues, fresh players appear, without physical branches, the so-called Digital Banks. Among them can be mentioned: Wilobank, emerged in mid-2018 and during its first year gained 36,000 customers and expected to close 2019 with 100,000, Rebanking, made the same projection by the end of 2019 and has a target of 1 million users in the next 5 years, Brubank, authorized by the Central Bank of

Argentine Republic in September 2018, it began operating some months later under the slogan "We are a bank in an app" (not a bank app).

Client target estimates for a market like Argentina are surprising, especially considering that 75% of customers are between 18 and 40 years old (La Nación, Ferrari, 2018). However, *Wilobank* (Infobae, 2019) reports: "50% of our clients were previously unbanked.". In marketing terms, the number of potential customers is increasing. But most importantly, these new digital players are already playing a social role in promoting financial inclusion. If we analyze the players in the financial sector. Banks, in general, are lagging the furthest behind in this digital transformation. On the other hand, new native digital competitors are emerging, which sometimes turn out to be only one application or platform or as mentioned above "digital banks", but whose market share growth in certain products is dizzying. The term TechFin, coined in 2016 by Jack Ma, the founder of the Chinese technology giant Alibaba, could even be named, where technology companies provide financial services with a more customer and technology-centric focus. Finally, the financial or stock market companies are in the middle of the matter. Those who stick to the traditional bench model will probably perish. There will be a space for those who incorporate novel technologies and understand the new business model, taking advantage of the pioneers. But to do this, they will have to balance financial knowledge with technological innovation and become practically a Fintech.

INNOVATING AS A STOCK MARKET BROKER IN ARGENTINA

By 2015 Bull Market Brokers found itself among strong winds of change that the financial sector was blowing pushed by domestic and external factors. Thus, in the last five years, the paradigm of investment management has changed, and it has distinguished itself from the rest of the stock market companies, relying on technology. It was not straightforward to balance the financial profile, typical of the short term, with the technological one which is more of a medium-term concern.

In Argentina, the challenge is not only to have a steady trajectory or history but also to be innovative. It implies generating innovation in a context of uncertainty and a legal framework that is very outdated. It is unnecessary to cite many indicators to show that the financial market in Argentina is far behind the region in terms of development.

Domestic credit to the private sector is considered one of the main indicators of the financial market that influences long-run economic growth. In the case of Argentina, it has stood between 15 and 20% of GDP over the last two decades, while in most developed countries it exceeds 70% with countries like the United States and Japan in which it exceeds 150%, according to World Bank data. Argentina also compares unfavorably with the region where Mexico´s credit to private sector in terms of GDP is 35%, Peru 44%, Colombia 50%, Brazil 62% and Chile 117%.

Another indicator that proxies for the development of the financial market is the stock market capitalization *(Market Cap)* of local companies as a % of GDP. In this case, the size of *Merval (Argentine Stock Exchange Index)* compared to Argentina's GDP represented 8.9% in 2018, according to World Bank data. Compared to the 2018 world average which was 93%**,** the level of financial development lag becomes apparent. Since 1985, this global indicator has remained above 50% and has never fallen below that level. During the 2008 crisis, it fell to 56%, but by the following year, it had recovered to 84%. Analyzing the data for Latin America, in 2018 it averaged 40% and taking specific countries as examples, we find: Brazil 49%, Chile 84%, Colombia 31%, Mexico 32%, Peru 42%. In particular, the United States market is capitalized at 149% of its GDP.

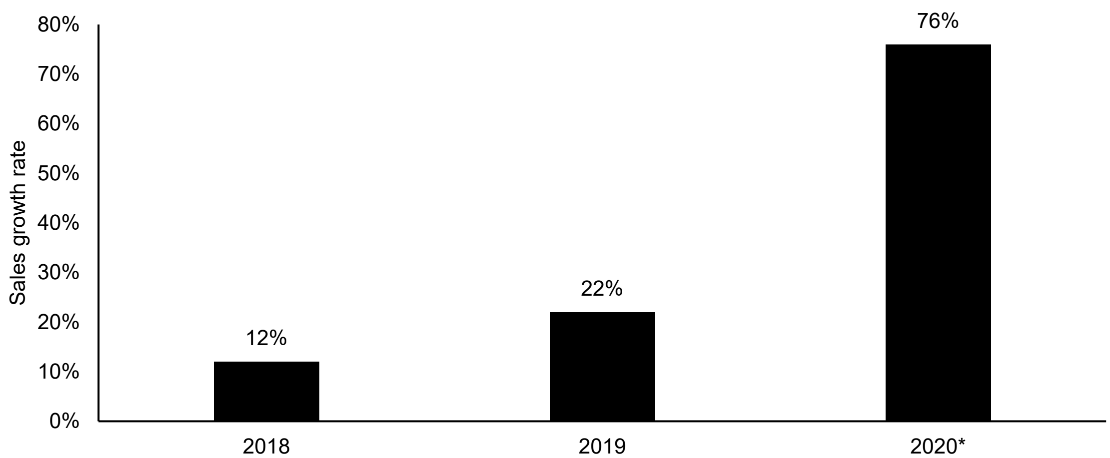
Paradoxically, Argentina's economic and banking crises and its confiscatory measures, had positive effects on the development of the digital financial market. An article in Argentine newspaper *La Nación* in 2003, just two years later, mentions that the use of *online banking* became popular and then consolidated since branches and ATMs were overcrowded amid the crisis. Then, thinking about the causes of the popularization of digital tools in the financial market, *"El Corralito"* could be described as a "black swan", as defined by Taleb Nassim in his eponymous book: "The Black Swan: The Impact of the Highly Improbable". In this way, it is possible to single out the particularities of the Argentine market and how they influence the digital evolution.

Coronavirus and Digitalization

Against this backdrop, it is possible to figure the effect of the current Covid-19 pandemic on the acceleration of the digitalization of the financial market since it forces traditional banks to operate 100% online (Cronista, 2020). Additionally, online sales grew exponentially in all items (See Figure 1), and for many companies (Ámbito Financiero, Fernandez, 2020), and it seems to be, as at the moment of writing this paper, the only way to sell and generate income.

This pandemic indirectly promoted the expansion of digital means of payment, such as *Mercado Pago* and digital banks, not to mention the digital transformation that the lockdown imposed on practically all aspects of daily life: medical appointments, education, telecommuting, among others.

Figure 1: Coronavirus Effect: Sales Growth Through Online Channels (Year-on-Year Comparison)



**Data until April 2020. Source: CACE (Cámara Argentina de Comercio Electrónico). This Figure shows the growth rate year-to-year of online channel sales considering all the argentinian e-commerce transactions. This necessarily leads to a expansion of digital means of payment which enhances the importance of financial institutions digital transformation.*

Prior to this situation, BMB took a step forward in digitalization and promoting financial inclusion, which differentiated the company in the market and from its competitors. BMB has disrupted the market, not only from a professional point of view but also from a social point of view, by providing financial training to the public, seeking alternatives to the informality of individual finance. In other words, their intention is the integration of more people into the formal economy.

BUSINESS STRUCTURE ACCORDING TO THE NEW STRATEGY

BMB increased its staff twofold in less than four years. Following this remarkable development, the real evolution or maturation became evident in the functional reorganization that took place in the organization chart. This restructuring made it possible to implement the growth strategy based on technological innovation and the new business model with previously unimaginable clients.

The first step was to identify potential new customers. To this end, the firm applied the idea of the Blue Ocean, (Mauborgne and Kim, 2004). This Blue Ocean idea means that to seek simultaneously low costs and differentiation in a market, could create a different market or a new space within an existing market. The company perceived that they were struggling in a small market with several competitors, which means they were in a Red Ocean. So instead of going the hard way by cutting commissions or launch new products for the same audience, they attempted to expand the scope of their demand. What before was not a market, now would become a target audience considering the informality and unknowledge that exists in Argentina about the financial world and financial investment.

So now their potential client is part of a middle or even lower-middle-class that historically and generationally learned to save and "invest" in dollar bills or, for the riskier, in fixed-term deposits. It would be simplistic to describe them as conservative but to understand their fear or disinterest in any financial instrument, it is enough to review Argentina's record of cyclical crises and the mistrust in its currency due to several years of inflation over than 2 digits annually and even monthly. This investor segment is very reticent with banks, both because of the recent banking crisis experience in 2001/2002 and because of the high maintenance costs and high-interest rates of credit cards that ended up being the principal business of these institutions.

As Ramiro Marra, current Chief Strategy Officer and member of the board of BMB, explains, this phenomenon that occurs in Argentina is called "the paradox of conservatism". History shows that it is safer to invest in stock market securities than in banks that have defrauded small savers. In 2001, the government froze people deposits´ holdings, converting them to another currency at a unilaterally arbitrated rate, and gave them out bonds in exchange for savings. The lack of financial education and the paradigm of "stock market investors are only experts" feeds this paradox.

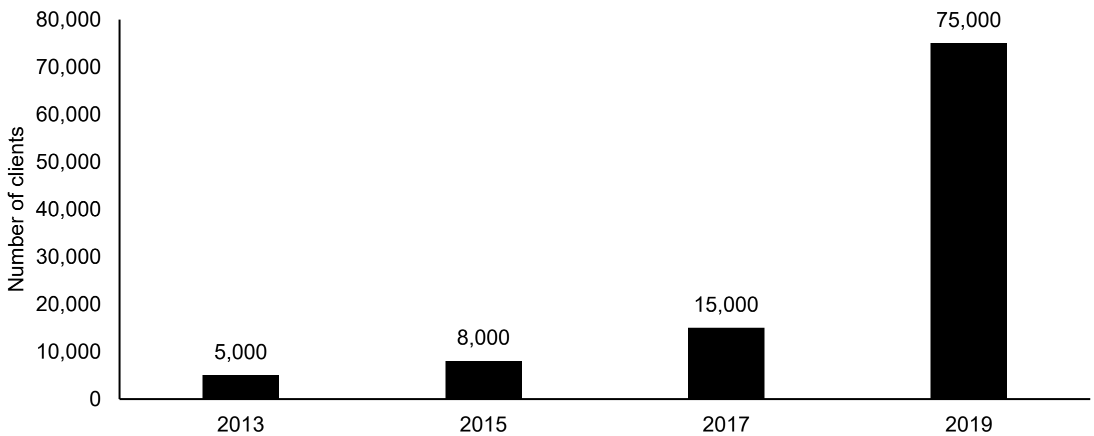
It is not only the small saver, but also an entire generation of SME entrepreneurs who have followed in the footsteps of their ancestors and professional mentors and maintain the conservative protectionist profile due to the economic fluctuations already mentioned. Many times, they are not even banked, much less leveraged, as we previously showed in the comparison of the internal credit indicator to the productive sector between Argentina and other countries.

Then, returning to the challenge that BMB had to face besides this unfavorable financial crisis remembrances and with such a distrustful public: How to capture this new target that could quintuple or even exceed 10 times the size of the traditional financial market? (See Figure 2)

The number of clients grew fourfold between 2017 and 2019, much faster than in the earlier 4 years. Indeed, from 2017 onwards, BMB was able to capture a new customer target on the back of soaring online accounts subscriptions, which suggests that a considerable part of this expansion resulted from a new kind of client. According to Bull Market Brokers' data, 99% of its growth is accounted for by young clients. Its portfolio comprises 85% clients aged between 18 and 45 years, with 42% concentrated in the younger age group of 18 to 30 years of age, the so called “millennials”.

Another impressing fact shows how the young generation is breaking the "paradox of conservatism" since 60% of the public has no or limited experience in stock market investments. We can interpret this phenomenon favorably, that despite having no expertise, they prefer this investment portfolio to that offered by the bank. The challenge is to educate this audience financially so they can be independent in their decisions and perform them wisely. Finally, the proximity of the new generations to technology makes them more likely to feel more confident about investing through an app than past generations who preferred investing in more liquid assets such as fixed-term deposits or US dollars.

Figure 2: Number of Clients 2013-2019



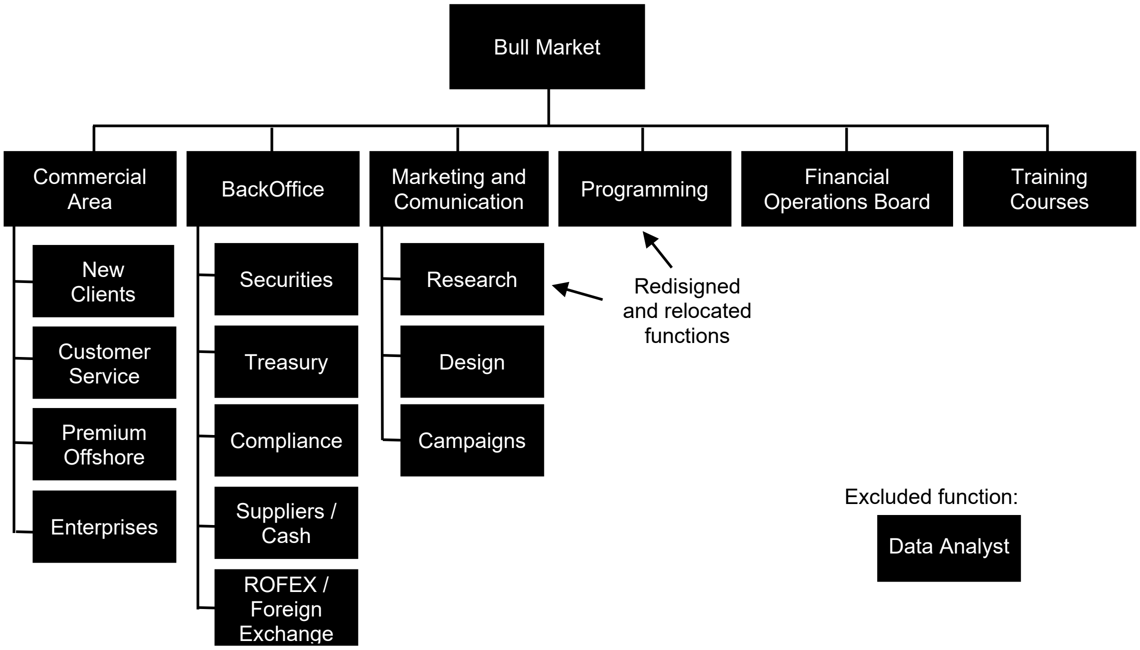
Source: Bull Market Brokers

In 2006, the U.S. Department of the Treasury stated that Argentina was the country with the largest stock of dollars per capita worldwide: 1,300 USD, surpassing the United States itself. It was followed by Panama (a dollarized country) with 648 USD, then Russia with 550 USD, and far behind by neighboring countries (6 USD for Brazil, Chile 16 USD, Paraguay 18 USD, Colombia 52 USD and Ecuador, also dollarized with 77 USD per capita). This illustrates the extent of the challenge to convince investors to switch from USD cash investment to “digital investments” in the stock market, bearing in mind the influence of previous generations.

To bolster the new stock market digital-investment strategy addressed to a new clientele, BMB first had to redesign its organizational structure. This is shown through the changes introduced in the organizational chart as of 2015 (Figure 3) to that as of 2017 (Figure 4). The key transformation was made in the department of “Marketing and Communication”, which is now called “Development and Marketing”. The latter expanded its functions, previously limited to the activities of a standard marketing area, to those of a Research and Development (R&D) department.

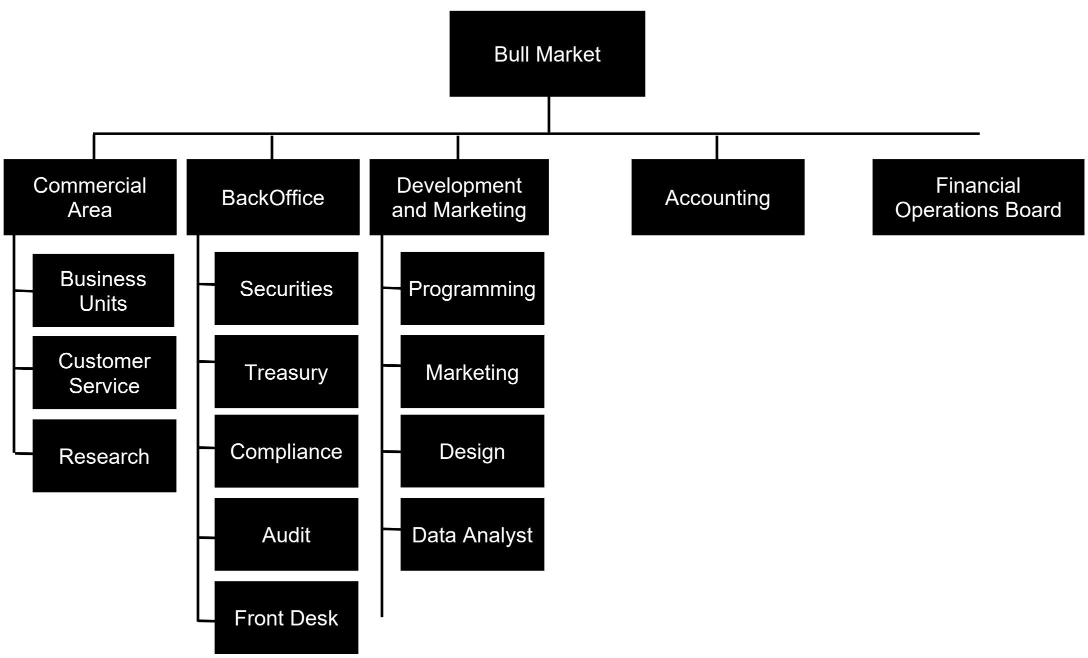
With Ramiro Marra, CSO, in charge of this area, the staff was increased from 3 to 10 people, incorporating roles such as Systems, Data Analysis and Programming. This is evidence of the inclusion of key functions for the company so that developments become closer to the market. On the other hand, restrictions were established in the direct contact between Development and Marketing and the client in order not to bias the area with day-to-day problems or claims that do not contribute to the development of solutions. For this reason, they relocated the Research department to the Commercial area with the rest of the direct contact functions of customer service. As part of the new strategy, the firm is oriented towards the needs of the market and its clients and potential clientele, dividing the identification functions in the Commercial area and the development functions in the Development and Marketing department.

Figure 3: Organizational Chart 2015 Before Restructuration



This Figure shows BMB organizational structure before restructuration and illustrate a more traditional not-digital-focused organization. It shows the lack of importance of analysis of information and databases by not having a data analyst position and the disconnection between the market (Marketing and Communication-Research) and the operations (Programming).

Figure 4: Organizational Chart 2017 After Restructuration



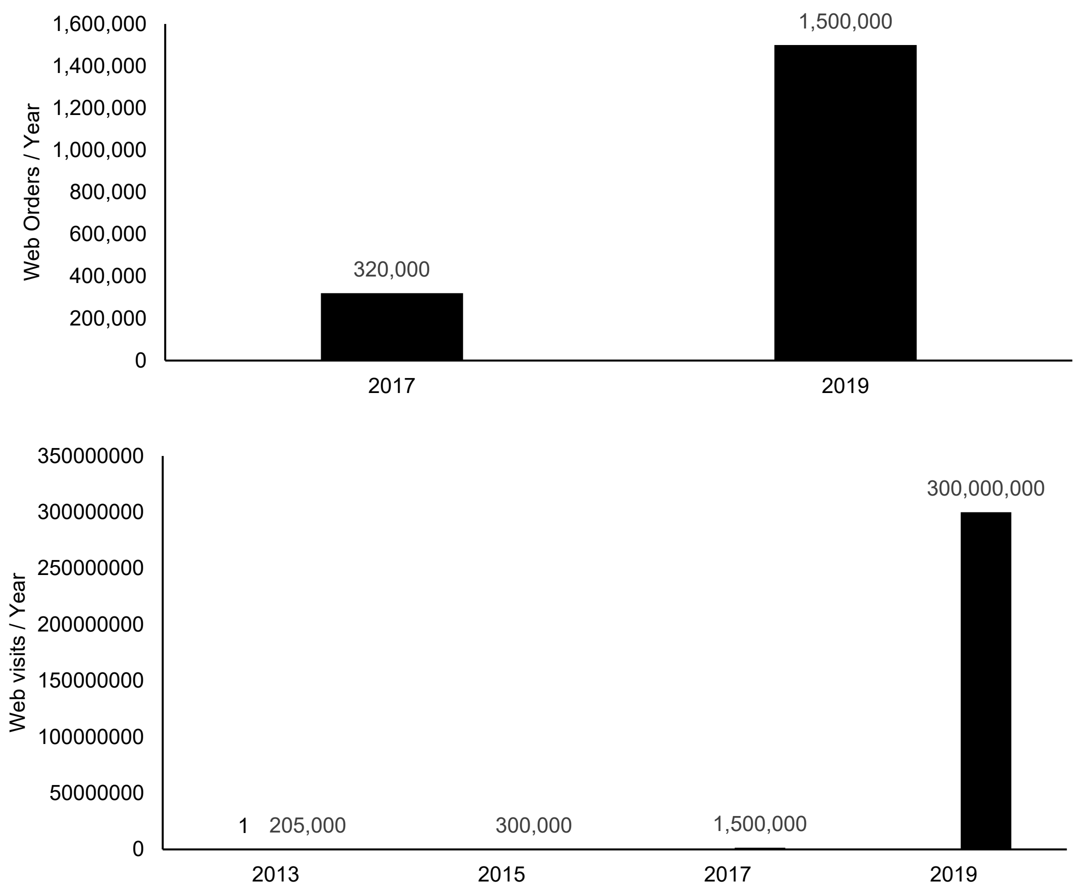
Source: Bull Market Brokers. This Figure shows BMB organizational structure after the restructuration and shows an integrated vision between the market and development (programming) of new products and services. Also, due to the vast amount of information generated by the digitalization of all the processes, it was incorporated the Data Analyst position in the same area where the R+D is. Finally, the day-to-day interaction with clients (customer support) was concentrated in the commercial area together with the research function so as to understand better the market needs.

With this adaptation of the organizational structure to meet new market demands, BMB was on the right path towards becoming a Fintech.

THE NEW IDENTITY AND NEW BUSINESS MODEL

At this point, we have already listed BMB's differences with a traditional brokerage house. When the market just understood this digital transformation, BMB was already scaling up and profiling towards a business model more similar to that of a Fintech. Its key indicators were no longer the number of clients and operations but the over 1.5 million annual visits to the website or the 320,000 web orders per year. Here again, the vertiginous change can be seen, since this data from 2017, two years later, is outdated in order of magnitude (See Figures 5). This reinforces the need to get into this digital transformation and how far behind a company would be with such a 1- or 2-year delay.

Figure 5: Key Indicators Since Digital Transformation



Source: Bull Market Brokers. These figures shows the 2 most important indicators that make evident the digital transformation: the web order growth by 5 times from 2017 to 2019 and the exponential growth of web visits in the same years due to the fact that almost every client access to his account through it and because they incorporated a web "dolarhoy" which shows the dollar price and it is used as a reference source.

Just as BMB was converting from a stock company to a Fintech incorporating technology into its financial-stock business knowledge base, there are companies in the Fintech market or TechFin as Jack Ma would say. They took advantage of technology and their status as a digital native to venture into the financial world, such as invertironline.com. This difference is even clearer in the name that refers to a website and not to a group or stock exchange company such as the Bull Market Group.

On the other hand, banks are far behind in this digital race and in understanding the distinct needs or preferences of the market, having difficulties in sustaining the demands of new investors who are looking for complex investment instruments based on technology. Also, they do not want to be charged for simple transfers, withdrawals or maintenance of accounts and cards, nor are they interested in the different types of insurance. They want a more simplistic and more ephemeral relationship than that proposed by banks with their protocols and authorization forms.

The Economist Intelligence Unit generates a ranking on regulatory developments that impact financial inclusion and evaluates 55 countries in terms of:

Public policy and government support
Stability and integrity
Products and points of sale
Consumer protection
Infrastructure

Argentina ranks in the 9th position, which it shares with Brazil, among the 55 countries in the ranking elaborated by this publication. They identify as key barriers the necessity of coordination between authorities and the private sector, and the lack of regulation of correspondent banking agents. The index suggests that an increase in coordination between the public and private sectors could be the crucial facilitator for financial inclusion in Argentina.

Finally, the report on Argentina's National Strategy for Financial Inclusion 2019 of the Ministry of Finance provides a fundamental piece of information that permits the inference of the responsibility of the banking system in financial inclusion until now: the Argentine financial system comprises 78 financial entities, of which 63 are banks and concentrate over 98% of assets and liabilities, leaving less than 2% for the remaining financial companies. Born less than 5 years ago, Fintech companies might play a fundamental role in financial inclusion in the coming years thanks to the sustained growth they are experiencing and their more accessible essence.

We conclude in Argentina this digital market is incipient: its potential is not fully exploited yet, leaving many clients, investors, and savers to be captured. This means that competition and the complementarity of experiences and knowledge make the business model evolve rapidly, so firms need versatility and quick adaptation to changes.

COMMERCIAL TRANSFORMATION

Throughout the digital transformation of the stock brokerage business, the challenge is not only to integrate business with technology but also to persuade the potential audience, then new communication channels are required. To this end, Bull Market Brokers' Chief Strategy Officer and Board Director, Ramiro Marra, assumed the role of digital communicator.

The first thing he and his team have noticed was that many people were looking for financial information through YouTube. It was a demand for rapid, concrete and uncontracted education, so in the absence of well-grounded material, with experience and with the support of a serious company in the capital market, the idea of making video tutorials with these characteristics arose.

At first, it was practically an experiment, another marketing activation action, and the impact it would have was not even suspected. The first video was published at the end of 2017 as a result of repeated requests from the few digital customers interested in Cryptcoins. By then, they were a minority considering the potential number of clients of that channel that were later captured, but they were already many if we compared them with the number of clients that BMB had at that moment.

As Ramiro Marra said in an interview, the authors had with him:

"One characteristic that distinguished us in terms of marketing was that I took a role towards the financial and the communication market, that was demanding financial information concretely in Argentina. People were looking for that information on YouTube. We saw that nobody was talking about what we were doing, but that there was a demand that was not satisfied because what they were looking for was education. Education that was rapid, concrete, uncontracted did not exist for finance. For other subjects, you could find substitutes like cooking, how to fix something in your house, like solving problems that you had with your computer. We believed that from the role we already had of preeminent positioning in the capital market, we could give that differential in YouTube and social networks".(Ramiro Marra, recorded interview, 2nd of October 2019)

Then, everything came up with the question: "Is Bitcoin a Financial Bubble?" To answer it, Ramiro Marra and his team filmed a video of almost 4 minutes talking about the risks of investing in bitcoins and comparing it to stock market investments. As part of the communication strategy, the video looks more like a viral bloopers style than a capital market expert giving a quick training.

The first videos proved that the bet was right. This simple communication method, coupled with the support of BMB's knowledge, met the unsatisfied demand they had identified. Throughout over 200 videos, Ramiro Marra built his digital identity and exponentially gained followers or potential clients, reaching 100,000 YouTube subscribers at the time of writing this article. Also, he has 6 videos with over 100,000 views, with 2.3 million being the largest. This trend of communication through digital media spread to all professions and arts, thus being born Financial Youtubers, Political Youtubers or Traveling Youtubers. See for instance https://www.youtube.com/watch?v=QmRHfd2xmOo (Spanish version with self-generated English subtitles).

With an average duration of 5 minutes, he reached 10 million views among all the videos. It is difficult to estimate the number of people trained as the same person may have watched several videos or re-watched the same video. To give an order of magnitude, at least hundreds of thousands of people learned how different financial instruments work such as a fixed-term deposit or a Central Bank bill, how a stock exchange broker works and its advantages over banks, and the first steps to dispose of their savings and investments and know-how to operate autonomously in the stock market environment.

If these numbers are compared with the formal education of a university or traditional institute that teaches financial courses, where the order of magnitude is hundreds or thousands per year, the impact and scope that is achieved with these videos are clear. Continuing with this social role of financial training, which is greatly undervalued in society and in the formal education system practically absent in the initial levels of instruction, a program of free online and classroom courses and training was created, called *Bull Training*, which reached over 30,000 people in early 2020.

It is also necessary to mention that this new target, the people who were reached with content and financial education through those digital media were not customers of the banks or the financial system overall. For example, at the digital bank *Wilobank* half of its customers were previously unbanked. Not only in technology is it imperative to innovate continuously but also in marketing and in the way of communicating with customers to stay current and reach them with the message we want. In line with this concept, Ramiro Marra commented that "Today it is a YouTube channel, tomorrow it can be a Reality Show or Instagram lives" showing how the strategy can be defined with the following oxymoron: the constancy of the change proposed by the market.

Concerning this novel way of reaching customers, we can conceive of a closer relationship, as the topics of the training videos arise from the viewers' comments and queries, in addition to offering them a communication channel available 24 hours a day. This closer affinity exists, paradoxically, in a context of virtualization of relationships in modern business. Thus, another axiom of the digital age becomes relative, in which relationships are supposed to be less spontaneous and more distant.

NEW PRODUCTS AND SERVICES

BMB had to design and program distinct products, according to the needs of the new market. This involved a series of technological changes and evolutions in management and data processing models. Thus, for example, Artificial Intelligence and Machine Learning methodologies were applied to provide personalized recommendations on the Mutual Funds (MIFs) based on the profile of each investor, offering them a specific platform under the concept of “MIF Supermarket”.

Another vital service in BMB´s transformation was to provide the possibility for clients to open accounts 100% online. In 2017, *Comisión Nacional de Valores de la Argentina, the national stock market regulator,* authorized this by modifying an earlier regulation in place. No law or decree was necessary, but an adjustment in the current regulations. It is interesting to stop at this point since the regulatory change was fundamental to this evolution. This reminds the example of the DMA (Direct Market Access), which allows customers to interact with their investments directly in the market, whereas before it was needed an operator to place the orders. That delayed the efficiency and attractiveness of the sector, increased its costs and took longer to execute. This regulation was already present in most countries of the world.

Nowadays, the delay is not attributed to regulations but rather to the infrastructure (stock exchange, banks, the market in general) due to years of disinvestment as a result of outdated regulations. *Banco Industrial BIND* is a case of successful investment in infrastructure, which was carried out in the framework of a new focus on digital. To cite two examples, they have implemented API (Application Programming Interface) technology to connect the bank directly to operators or brokers. They have also incorporated DEBIN, which allows an immediate online payment to be made to a human or legal person. Recently this last technology was applied for the constitution of fixed-term deposits online in any bank without the obligation of being a client.

Finally, it is also noteworthy that BMB implemented the first online currency exchange office, with the importance that this represents for the demand for foreign currency by Argentine savers and investors, improving the user experience for the transaction as well as reducing the cost by minimizing the exchange rate spread in comparison with other entities.

This is a clear example of a Blue Ocean, which was initially governed by differentiation as it was a fresh market but in a matter of 2 years, it was transformed into a Red Ocean where suppliers compete for prices and what rules are the lowest costs. There are already several players in this market in which is increasingly difficult to be distinguished except by the lowest price.

This transition traditionally took place over prolonged periods, but since it is a digital sector, its dynamism shortened that time to 2 years. The speed at which consumption patterns are changing, for example, with the use of home banking or with the growth in the number of clients of the new Fintechs (La Nación, Ferrari, 2018) evidences this transformation. This technological development was also used to improve internal operations and optimize investment decisions in each instrument within an MFI to maximize its results. Furthermore, all these changes in products and services offered, in the new relationship with clients and, summarizing, in the whole paradigm of the industry, caused an improvement in BMB profitability (see Appendix).

All this was feasible due to the organizational redesign through which development functions were incorporated into the commercial and marketing area. Also, the updating of regulations at government and state-level was critical, especially in a country that has many outdated laws and regulations of the legal system. For example, labor laws are almost 50 years old and little updated, leaving out the new working modalities, such as telecommuting, and with it, hindering their correct judgment and generating a gap with the market practices.

Regarding the rules of the financial system, progress has recently been made in enabling and facilitating the incorporation of technology through the Productive Financing Law (*Ley de Financiamiento Productivo),* formerly known as the Capital Market Law. However, as in every transition and change, there are stakeholders in favor and there are those who devote a notable deal of effort to lobbying against them. In this way, the banking sector continuously presses for specific regulations to limit the operation of Fintech, and the latter demonstrates their boundless capacity for financial inclusion that its innovations have.

Sooner or later digital transformation will definitely prevail, like the 24-year transition from the Cheque to the E-cheque (Liendo and Sturzenegger, 2020). The first step was the Law No. 24.452 in 1995 that allowed the signature to issue a cheque to be through electronic system; nevertheless, it did not contemplate the transmission nor the deposit of cheques, so cheques still needed to be issued on paper. In 2016 there was another attempt to eliminate paper by allowing the electronic deposit of cheques, but the obstacle was the signature, which was considered “electronic signature” and not digital signature. Finally, with the Decree No. 27/2018 which reforms the 1995 Law, the Central Bank was able to create e-cheques which are more secure, cheaper to operate, absolutely trackable and allow better credit analysis. This battle against traditional paper defenders was over.

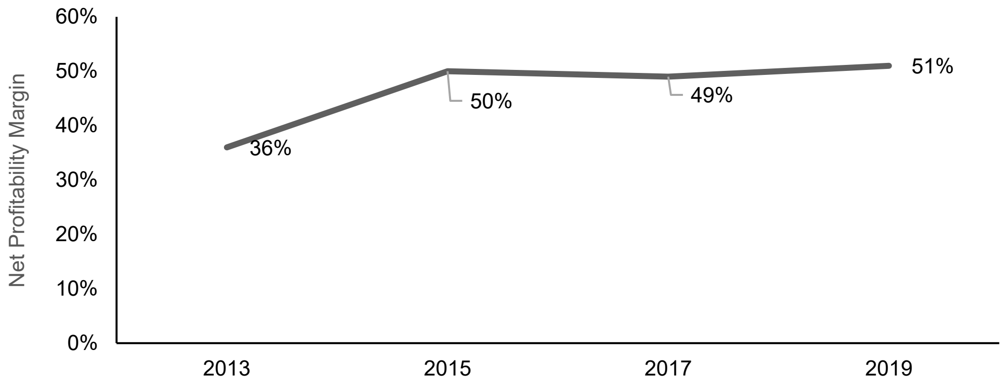
It can be named Digital Transformation, Market Broker 4.0 or just Fintech, but all these changes brought a revolution in the financial industry to which it is mandatory to join in order not to perish, a revolution comparable to the invention of the digital camera for the photographic industry or online content for film rentals.

FINANCIAL ANALYSIS

The digital transformation was not only critical to the survival of the financial industry but also improved the company's profitability. Firstly, to demonstrate this improvement in general terms, we use the financial indicator "Net Profit Margin" which is obtained by dividing the Ordinary Profit before Taxes by the Income. This indicator shows an increase from a level of 36% in 2015 to an average level of 50% in the last 3 years (see Figure 6).

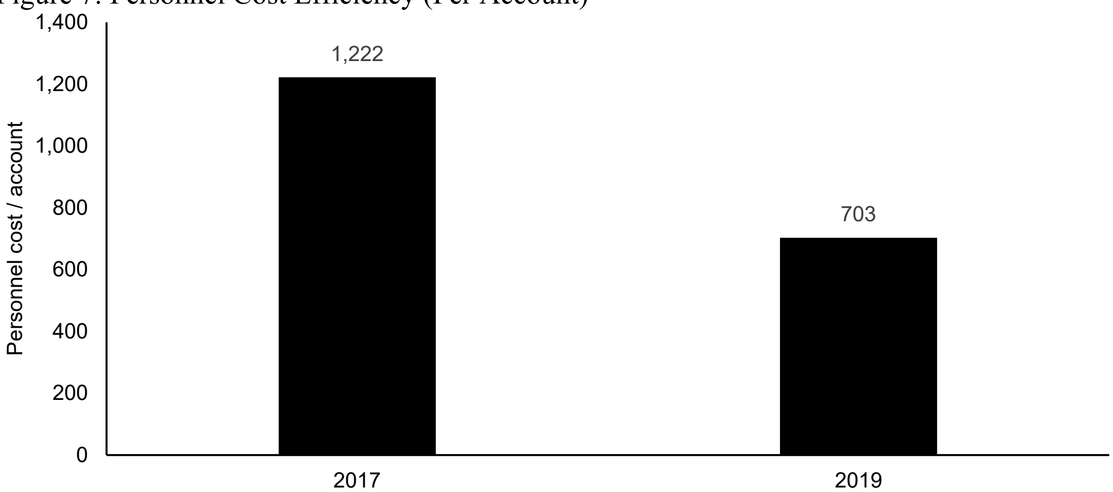
On the other hand, new services and products rarely generate much income in the short term, but they bring in new accounts. For example, the Mutual Fund market produced large inflows of new clients and contributed to the company’s position, which translates into higher revenues but in the long term. Finally, personnel costs became more efficient from digital transformation. If we analyze them in comparison with the size of the operation (measured in the number of accounts), we can see that from 2017 to 2019 it was reduced by more than 40% nominally. That is, without considering the inflationary effect that accumulated from both years was higher than 85% (see Figure 7). Consequently, we conclude that by digitizing the relationship with the client, an incremental number can be served with fewer resources.

Figure 6: Evolution of the Net Profitability Margin



Source: Comisión Nacional de Valores This Figure shows the evolution of the company profitability margin from 36% in 2013 to an average of 50% in the last 5 years. This was achievable by reducing costs of the operations by client and the massive growth of the number of clients, even with a reduction of the income by client by opening to smaller ones.

Figure 7: Personnel Cost Efficiency (Per Account)



Note: 2019 Salaries and Social Security Contributions were projected. Source: Comisión Nacional de Valores and Bull Market Brokers This figure shows the decrease of personnel cost by account from 2017 to 2019. It is important to stand out that it is a nominal comparison and it should be considered the high inflation that occur in those years to make the analysis more accurate, so the decrease is even higher.

CONCLUSION

The new paradigm of the financial sector is already settled and has led to the failure of conventional stock market brokers and dealers that could not adapt to the ongoing changes in Argentina and other Emerging Countries. One of the possible consequences is that these traditional institutions end up selling their assets to new digital players (Cronista, 2019). As for banks, the same fate can be predicted if they do not adapt soon and change the way they conceive, organize and operate their business.

In this paper we have learnt that Bull Market Brokers, an Argentine-based stock market intermediary is leading the paradigm shifts not only among stock market brokers but also among digital natives, both in Argentina and Latin America. The firm anticipated the transformation of the sector, moving forward timely and extensively, and innovating as follows:

First, new niche and target: They identified the impact that digitization would have on the financial sector. Then, they anticipated the competition in discovering the new demand and the potential customer.

Second, design and Organizational Model: They introduced changes to the organizational chart, giving greater importance to the synergy between the Commercial and Development areas.

Third, commercial digitization: They migrated to a 100% digital customer relationship model and rethought products and services for them.

Fouth, new communication and marketing: They promoted themselves in the digital media channels with an innovative strategy (Financial YouTuber) and a concise message, using the image of the Chief Strategy Officer as a hinge.

This change for the company was so radical that even today it has a significant role in financial inclusion, bringing investment knowledge and facilitating access to people that were previously excluded from the financial system.

PATH FORWARD AND FUTURE RESEARCH

This case yields some lessons for future academic research and to other stock market brokers akin, both in Argentina and Latin America, namely:

Bull Market Brokers has led a convergence process of the Argentine stock market and more broadly the financial industry to integrate in a single platform at least each of the following services and products: 100% digital transactions of any securities traded on various Stock Exchange, online banking, and currency exchange.

Bull Market Brokers has led a convergence process of the Argentine stock market and more broadly the financial industry to integrate in a single platform at least each of the following services and products: 100% digital transactions of any securities traded on various Stock Exchange, online banking, and currency exchange.

In order to transform the company into a fully digital, online operation, it was necessary to redesign the business structure and rethink the research and marketing functions by incorporating modern tools such as big data, machine learning and other techniques to support the rapid growth of Bull Market Brokers ‘assets, customers and transactions.

To expand their operations, increase sales and profits, stock market brokers should also broaden their customer base by reaching out to young millennials with nearly no financial education, as the experience of Bull Market Brokers demonstrates.

The coronavirus pandemic the world is going through at the time of writing this article, will further accelerate the paradigm shift towards digitization, forcing many financial institutions and intermediaries to adapt to it faster than expected. this case study provides a framework to analyze and understand in depth this new scenario and new financial business model.

REFERENCES

Angela, Andal-Ancion, Phillip A. Cartwright & George S. Yip (2003), *The Digital Transformation of Traditional Businesses*. Massachusetts: MIT Sloan Management Review.

Bancos obligados a ser 100% online: Cómo les fue en el primer tramo de cuarentena. (2020, April 07). Retrieved from https://www.cronista.com/3dias/Bancos-obligados-a-ser-100-online-como-les-fue-en-el-primer-tramo-de-cuarentena-20200401-0052.html

Bono, E. D. (1985). *Six thinking hats: An essential approach to business management*. Boston: Little, Brown.

Cerezo, P., Magro, C., & Salvatella, J. (2014). *10 claves para el debate sobre la transformación digital y su impacto socioeconómico.* [PDF]. Madrid: Roca Salvatella y Adigital.

Cuál es la fintech que se acaba de comprar una sociedad de bolsa. (2019, October 25). Retrieved from https://www.cronista.com/finanzasmercados/Cual-es-la-fintech-que-se-acaba-de-comprar-una-sociedad-de-bolsa-20191021-0008.html

Denis, I., & Crespo, L. (2017, December 31). Ahorrar en dólares, esa costumbre tan argentina. Retrieved from https://www.lanacion.com.ar/economia/ahorrar-en-dolares-esa-costumbre-tan-argentina-nid2096595
Digitalización de los mercados de capitales: Tendencias y transformaciones. (2019, July 09). Retrieved from https://www.medysif.com/es/digitalizacion-de-los-mercados-de-capitales-tendencias-y-transformaciones/

Domestic credit to private sector (% of GDP). (n.d.). Retrieved from https://data.worldbank.org/indicator/FS.AST.PRVT.GD.ZS?view=chart

Fernández, B. (2020, March 19). Efecto coronavirus: Las ventas online crecieron un 50%. Retrieved from https://www.ambito.com/informacion-general/ventas/efecto-coronavirus-las-online-crecieron-un-50-n5089676

Ferrari, B. (2018, June 4). Finanzas sin sucursal: Así son los primeros bancos digitales que empiezan a funcionar este mes. Retrieved from https://www.lanacion.com.ar/economia/finanzas-sin-sucursal-asi-son-los-%20primeros-bancos-digitales-que-empiezan-a-funcionar-este-mes-nid2124911
Informe 2015-2016: Evolución reciente, situación actual y desafíos para 2017 [PDF]. (2016). Fundación Observatorio PyME.

Informe especial: Financiamiento, desempeño PyME y desarrollo productivo. [PDF]. (2019, June). Fundación Observatorio PyME.

Inter-American Development Bank (2018). Innovations you may not know were from Latin America. Washington: DD. Retrieved from https://publications.iadb.org/publications/english/document/FINTECH--Innovations-You-May-Not-Know-were-from-Latin-America-and-the-Caribbean.pdf

Jiménez, A. (2017, October 26). Home banking: 4 millones de argentinos se conectan por dispositivos móviles. Retrieved from https://www.roadshow.com.ar/home-banking-4-millones-de-argentinos-se-conectan-por-dispositivos-moviles/

Kantor, D. (2019, March 17). La banca electrónica despegó: Las 3 claves para el usuario de hoy. Retrieved from https://www.clarin.com/economia/banca-electronica-despego-claves-usuario-hoy_0_M5asGrc9s.html

Kim, W. C., and Mauborgne, R. (2004). *Blue ocean strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant*. Boston, MA: Harvard Business School.

La reconversión de los bancos: Sin sucursales y con fuerte avance de las herramientas digitales. (2019, March 19). Retrieved from https://www.infobae.com/economia/finanzas-y-negocios/2019/03/19/la-reconversion-de-los-bancos-sin-sucursales-y-con-fuerte-avance-de-las-herramientas-digitales/

Liendo, H. and Sturzenegger, F. (2020), *A Practicioner's Guide to Efficiency and Competition Policies in Banking.* Buenos Aires.

Luzar, M. (2003, April 02). El Home Banking suma adeptos en la Argentina. Retrieved from https://www.lanacion.com.ar/sociedad/el-home-banking-suma-adeptos-en-la-argentina-nid485410

Market capitalization of listed domestic companies (% of GDP). (n.d.). Retrieved from https://data.worldbank.org/indicator/cm.mkt.lcap.gd.zs

Matt, C., Hess, T., Benlian, A. (2015). *Digital Transformation Strategies*. Munich: Springer Fachmedien.

McKinsey (2015). Two routes to Digital Success in Capital Markets. Working Papers on Corporate & Investment Banking.

Mintzberg, H. (1985). *Structure in fives: Designing effective organizations*. Prentice-Hall.
OECD (2020). Digital disruption in financial markets. Retrieved from: https://www.oecd.org/daf/competition/digital-disruption-in-financial-markets.htm. Paris.

Palacios, L. Z. (2016). *Industria de la comunicación y economía digital: Guía básica del Dircom*. Barcelona: UOC.

Peter Gomber & Jascha-Alexander Koch & Michael Siering (2017). Digital Finance and FinTech: current research and future research directions. Journal of Business Economics, Springer, vol. 87(5), pages 537-580, July.

Shukla, A., and Nerlekar, S. (2019). Impact of Digitization Transformation on Financial Markets. *SSRN Electronic Journal*. doi:10.2139/ssrn.3342126

Taleb, N. (2007). *The Black Swan: The Impact of the Highly Improbable*. New York: Random House.

ACKNOWLEDGMENT

This paper is based on the MBA dissertation of Federico Colombo. The authors are grateful for generous financial and academic support to the Graduate School of Business of the Pontifical Catholic University of Argentina, and in particular to its MBA staff. They also acknowledge invaluable comments from two anonymous referees, participants at a seminar held in 2020 in Buenos Aires, and to Ramiro Marra, CSO of Bull Market Brokers who generously provided all kind of information to make this case-study publishable.

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