

## **e-BANKING: WHERE DOES IT COME FROM, WHAT CAN WE EXPECT. THE SPANISH EXPERIENCE.**

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### **ABSTRACT**

The Internet has invaded almost every aspect of society. Culture, leisure, sports, learning, and of course, economy and finance. Analyzing banking industry gives us some light on this respect; according to [7], almost no banker believed as far as 1995 on the Internet as an alternative way for delivering financial services. But at the end of the first semester of 1998, 6.3% of US national banks was offering transactional services through the web, a figure that increased to a 20% in just nine months, according to [12]. In 15 months the offering was increasing at an amazing rate of 188.2%. The Spanish banking system, with the logical gap, is evolving in the same way, as we will later see. At the present time, all the big Spanish banks and the majority of the mid sized are offering transactional Internet services; virtual banks hold a share of 1.2% of the Spanish banking industry as by December 31, 2000, with a volume of deposits over Euro 3 billions, according to the Spanish Banking Association.

The structure of the present communication is as follows. I will first sum up the evolution of e-banking in the USA, showing the main features of the business. Then I will go on with the characteristics of the business in Spain, with some references to the European market. Finally I will explain what is thought to be the main challenges for the final development of the transactional web services.

### **e-BANKING IN THE USA: EVOLUTION AND FEATURES**

According to [10], the beginning of e-banking in the USA was during 1995; it's true that some banks opened their webs before, but if we accept the definition of e-banking as the possibility of acting through the Internet (that is, the bank has to offer a transactional<sup>1</sup> site), we cannot go further. At the end of 1997 there were 103 American banks offering that service. During the first six months of 1998 there was an amazing increase rate of 300%, reaching a total of 258 different institutions. The figures for year ending 1998 were of 350, 650 at the end of June 1999 and 1100 at the end of that year.

According to the research of the Office of the Comptroller of the Currency and developed in [12], there was a 54.2% of US national banks offering a web site; of them, just a tiny 20% offered transactional financial services; but the importance of them was not worthless: they represented the 89% of the total assets of the national banks, and the 84% of the deposits under USD 100.000. At the end of September 1999, may be not all the US banks had a

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<sup>1</sup> In its "Comptroller's Corporate Manuel", the Office of the Comptroller of the Currency (OCC) has published in January 2001 "The Internet and the National Bank Charter", defining four categories of electronic banking: informational web, transactional web, wireless and PC banking. We will pay specific attention on those offering a transactional site.

transactional site, but those which had one were the big ones.

We will now stop for a while on the features of the Internet banks from an economic and financial point of view. [12] offer some very interesting measures of the return when comparing e-banks to traditional ones. The first research on the matter was published in [10], where they did not find any significant evidence of differences from e-banks and banks from a financial perspective. But the referenced [12] did find some divergences when talking of profitability, efficiency or credit quality depending on the size of the bank. For instance, e-banks holding assets over USD 100 millions are clearly more profitable in terms of ROE, and just the opposite occurs for the banks under that figure. There also are evidences in terms of efficiency, measured as the ratio of non financial expenses over the net operating revenue: here the differences lie on the cluster of small banks, with assets under USD 100 millions. And finally, there is a better credit quality in, again, small e-banks than in those of the same size in the traditional business, with just the opposite occurring in the segment of banks with assets between USD 1 billion and 10 billions. The researchers explain that the cause might be in the certainty that big Internet banks focus their credit activity in credit cards more than non Internet banks do, assuming consequently bigger risks.

Expertise is another point to underline. This can be shown from a double perspective, experience in financial business and experience as a technological firm. In [8] and [12] we can have some responses on that matter. As it's easy to understand, new banks will be smaller in size, will have to assume big starting costs and they also will have to reach new clients with bigger expenses in marketing than those pre-existing do. In the income hand, they will have to compete in prices, a question that reduces margins. And there is another important point: new banks tend to use alternative ways (as the Internet) for delivering their products more than the established ones, with the inconvenience of educating customers and the difficulty of reaching big numbers during the first years. Focusing the analysis on the banks with assets under USD millions, new banks offering transactional services through the www are less profitable and less efficient than their non-Internet neighbors. But there is a reduction of the differences when talking of the same small banks with an experience of at least three years in the banking market; may be their efficiency is poor, but not their profitability.

There is then the point of the experience of the bank as a tech firm, not just as a financial one. [12] divide the institutions in three groups: banks not offering transactional services through the www, banks with an experience of at least one year on the transactional Internet business, and banks with a minor experience. In terms of ROE, they maintain that there are no significant differences between the three groups; but, on the other hand, there are some in terms of accounting efficiency:

mature e-banks are not less efficient than traditional ones, but new e-banks are.

It's [9] who finds substantial differences between what he calls pure play Internet banks<sup>2</sup> and non-Internet banks. His research is the first specific one on the matter, and he outlines that these pure Internet players are less profitable than banks (playing on the Internet or not) having commercial branches; in the case of an Internet bank, this is called "clicks and bricks" model. He states that e-banking is a business not quite different from any other *dotcom* one: spectacular growth without profits. He points out that maybe his model is not enough reliable to state that e-banking is not financially viable, but the idea is displayed.

On this respect, figures in Spain are significant. During 2000, *bancopopular-e*, *patagon* and *uno-e*, three pure Internet Spanish players<sup>3</sup>, lost around Euro 84 millions, according to the Spanish Banking Association; and during the first quarter of 2001, these three plus the two new ones lost Euro 14.45 millions.

### THE SITUATION IN SPAIN AND EUROPE

According to the Spanish Internet Users Association, 20.4% of the Spaniards (over 7 millions) over 14 have access to the Internet as by April 30<sup>th</sup>, 2001. This represents a jump of 80% from the numbers one year before. It's expected that by 2004 2.64 millions of Spaniards will be e-banking users. Almost 2 millions of households have nowadays an Internet connection. Relating these figures to our topic, and according to NetValue, one of the Internet consulting groups, Spanish people spent 56 minutes per person and connection to Internet financial sites during January 2001, which place them on the 6<sup>th</sup> place in the world ranking. Over 1.3 millions of people visited financial sites during the month, a 35% of the Internet private connections. The figures in May were quite similar, but data reveal that over 20 millions of Europeans visited this kind of pages, with Germans heading the ranking of time spent in the visit and followed by Spaniards and Italians.

The first experiences in electronic banking in Spain started more than 10 years ago through the property PC system. But the penetration was very tiny, representing just a 3% of the total banking transactions by year ending 2000, and with an expectation of a 7% by 2004. At the same time, a much younger experience as e-banking is expected to jump from 1% to 10% in the same period of time. We should also add the 2% of transactions through alternative

intelligent devices (such as mobile phone, TV, PDA, ..) expected for the same date<sup>4</sup>.

These figures are supported by the bet of the financial institutions: the first Spanish bank, BSCH, paid over Euro 550 millions for the Argentinean site *Patagon.com* and, just three months later, established its stand alone pure play Internet bank, *Patagon.es*. [6], CEO of BSCH<sup>5</sup>, points out five reasons for the increase of the share of e-banks: 1) the nature of the financial activity, which allows the integration in the Internet without significant problems; 2) the fact that customers are attracted by the new channel, with the possibility of accessing to and acting with the bank any time and any place; 3) a bigger efficiency of the channel when compared to others<sup>6</sup>, traditional or not, and what for him is the major incentive: the possibility of jumping from the current 160.000 sale points (branches) in Europe to over 300 millions allowed by the www; 4) the progressive reduction of the risks sustained by a new frame in the legal regulations and an increase of the security in the www; and 5) the own technological development of the Internet.

In March 2000 BBVA<sup>7</sup> launched his new stand alone e-bank, *Uno-e*, along with *Terra Lycos* and *First-e* (which sold its part during 2001): a financial supermarket offering products of almost any financial institution. The parent, BBVA, has its own portal<sup>8</sup>. The model is similar to *Patagon's*, and different from the one of *bancopopular-e.com*, another independent chartered branchless bank. But the first Spanish bank that offered financial services through the Internet was *Bankinter*, the bigger of the medium banks. They began offering free access to the Internet to their customers in 1996, as well as free e-mail. During 1997 they opened their Internet transactional branch, and they later changed their name on the www, working on a trade name basis: *ebankinter.com*. According to [13], it's the first non-Internet European bank in the ratio Internet customers/total customers: 20% by March 31, 1999, and 37.5% by June 2001, over a total amount of almost 1 million customers. New customers come in a 50% from the Internet channel, for just a 36% coming through the street branches. Transactions by the Internet exceed nowadays those made through traditional branches. Let's now have a look to the figures of the e-banking business in Spain. At year ending 2000, there were two clearly separate groups: virtual banks and traditional banks and thrifts. The first group was made up by five institutions, *bancopopular-e*, *evolvebank*, *Ing-Direct*, *patagon* and *uno-e*; they all allowed transactional operations through the Internet as well as a call center, and their main feature was the lack of street branches. The situation has changed nowadays, and *Ing-Direct* and

<sup>2</sup> De Young identifies 6 pure play Internet banks and thrifts in the States by June 30, 2000: *Ebank*, *First Internet Bank of Indiana*, *Gay and Lesbian Bank*, *Marketplace Bank*, *NetBank* and *Principal Bank*. By December 31, 2000, we can define 4 pure Internet players in Spain: *Ing-Direct*, *Patagon*, *Uno-e* and *bancopopular-e*; the situation as changed nowadays, and during the first semester of 2001, *Ing-Direct* and *Patagon* have opened commercial branches (7 that one, in major Spanish cities), called "cafés" by the first one. At the same time, two new Internet banks have entered the field: *ActivoBank* and *AllFunds*.

<sup>3</sup> *Ing-Direct* would be the fourth one, but at the bank they resist to define themselves as an Internet bank. In any case, exception made of this point, all their figures have been included in the Internet group.

<sup>4</sup> Vert, A (2001). "Del martini Banking al e-banking", *Tiempo* magazine, e-banking special; data from Ernst and Young.

<sup>5</sup> Banco Santander Central Hispano is between the 15 major banks in the world, with presence in 42 countries, leader in South America, the second bank in EuroStoxx 50 by market capitalization, and with over 35 millions of customers.

<sup>6</sup> Remember De Young's for *asensu contrario* opinion.

<sup>7</sup> With assets over Euro 315 billions, it's the second Spanish bank and one of the first of Europe; in December 2000 it was awarded "best world bank of the year" by Forbes magazine.

<sup>8</sup> This leads to one of the main problems of e-banking: the risk of cannibalisation. We will go over the subject later.

patagon operate now with few but existing commercial branches. But anyway we will pay attention to the figures of the group at year ending 2000. Evolvebank has a special situation because it's an English chartered bank, and its data have been excluded of the study.

As by December 31, 2000 the four banks represented a 1.2% of the total banking market share, with liabilities over Euro 3.000 millions- with just one of them, Ing-Direct, holding Euro 1.600 millions. These numbers imply an increase of 4 times the share in just one year and they represent the 7.3% of the new banking deposits; again, Ing-Direct headed the pack, with a 30% of the rate, establishing itself just behind the two bigger banks and the two bigger thrifts. They hold over 190.000 customers, with a third for Ing-Direct, a 31% for patagon, a 27% for Uno-e and a 9% for bancopopular-e. As by 30<sup>th</sup> of June 2001, Ing-Direct has almost 300.000 customers, Uno-e announced its first 100.000 customers, with 80.000 of them active, Patagon has over 60.000, and bancopopular-e 33.000.

During the first quarter of 2001, two new banks have entered the Internet banking field, Activo Bank and AllFunds. This one is not still working, but the first one has come into the scene with a huge marketing effort and a target of 150.000 customers for 2004, the 15% of their prospected potential customer portfolio.

The other group is made up with traditional banks and thrifts that offer Internet to their customers as an alternative channel for delivering their products. Thrifts have around 1.6 millions of online customers by year ending 2000; and between banks, BBVA had around 300.000 customers, Banesto 283.000, Bankinter 270.000; this one has by the end of the first semester 2001 almost 350.000, and the smallest of the big banks, Banco Popular, with over 4 millions customers, stated that 468.000 of them (11%) are users of the Internet facilities. BSCH didn't offer any information about the Internet customers, but according to a Datamonitor report (05.03.01) it should be the first bank in Spain and the fourth in Europe.

Europe presents a wide variety of landscapes. Nordic countries offer the biggest penetration rates according to [13], followed by Switzerland. Italy, with a 3% penetration, and France, with a 4%, would be the queuing countries. In the following Table 1 we can have a look on different figures of the study.

**Table 1. Key figures for understanding e-banking in Europe.**

	France	Germany	Italy	UK
Population	59.1	82.6	57.6	59.4
Internet users	2	23	10.2	20.6
% bank customers online	4%	12%	3%	10%

	Spain	Netherlands
Population	40	15.8
Internet users	5.9	4.5
%bank customers online	6%	8%

	Sweden	Switzerland
Population	8.9	7.1
Internet users	5.1	4.8
% bank customers online	26%	19%

Source: Online Finance Europe, JP Morgan, Sept 2000. Year 2000 estimations. Figures in millions otherwise stated

According to the researches by NetValue and Jupiter Media Metrix, over a million of Spaniards visited financial portals during January 2001, with an increase of 246% in time spent in connection in the period Sept 00 – Jan 01 (until 54 minutes), the first relative increasing rate in the world. According to the Datamonitor report dated March 5, 2001, 29% of Spanish Internet users were also e-banking customers, preceded by Swedish (44%), Danish (41.6%, according to Jupiter's report on January 14, 2001) and Germans (34%), and followed by French (20%), and British (16%); the average of European users will exceed at the end of Q1 2001 the rate of Americans, around 18%. On this respect, IDC Research forecasts 22.4 millions of Americans using online banking by 2004.

**PROSPECTS AND CHALLENGES FOR e-BANKING**

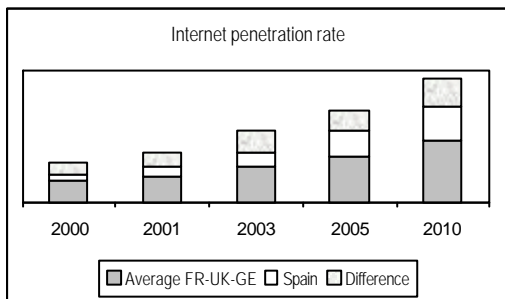
The success of e-banking is almost out of doubt. But it depends on the strategic model built, and in any case it would have to meet some questions, as the risk of cannibalisation, the increase of the penetration rate, the training of employees, the education of customers (in a double perspective: the surpass of the branchless system and the increase of the trust), the legal regulation of the activity and problems derived of the globalization of the economies (with faster, cheaper, easier capital transactions, and an increasing difficulty for following them).

Cannibalisation is the fact that a new stand alone Internet bank unit gets a rate of its customers from the parent's one. The experts see this as one the main dangers of the business. The case study of mbanx [13, p.42] is significant. In October 1996 the Bank of Montreal launched this stand alone and separately branded Internet subsidiary, with a target of 1 million customers. Three and a half years later they had just 170.000, and in August 99 it both electronic offerings, the parent one and mbanx, were folded into mbanx Direct. Even the address mbanx.com doesn't exist nowadays. One of the main reasons of the fiasco was cannibalisation: almost 80% of the accounts were customers from its parent, who wanted to retain their branch privileges and capture attractive online rates. This situation is similar in bancopopular-e, independently chartered but owned by Banco Popular, another big Spanish bank; but in respect to this one, its Managing Director stated that at the end of 2000 only a discrete 6% of the customers came from the parent bank.

One of the main problems is the penetration. According to JP Morgan estimates, online banking in the USA will raise from the current 15% of online households to a 33% in 2004. These data are not comparable to those offered about Europe, where we have the real penetration rate estimate as a ratio of bank customers online over total bank customers. In the period 2000-2004, France will

grow up from a tiny 4% to a 21%, Germany from 12% to 25%, Italy from 3% to 16%, the Netherlands from 8% to 24%, Sweden from 26% to 50%, Switzerland from 19% to 36%, UK from 10% to 22% and Spain from the present 6% to a 15%. As we can see, at the moment is not in a bad situation when comparing to its neighbors, but if projections are right, at the end of the reference period it will be the queue of the pack. The reason is neat. The penetration of e-banking is directly related to the household penetration of the Internet. The 2001 expected household Internet penetration rate is an 18% for Spain, faced to a 32% for France and a 41% for Germany and the UK. But while France will equal the rate to the one of UK and Germany in 2010 to a penetration of 95%, Spain will still in a 51%. In the following Chart 1 we can see the evolution of the Spanish rate compared to the average of the other three neighbors.

**Chart 1. Evolution of the differences in the Internet penetration rate.**



Other studies go on the same direction. [3] prospects a 24.2% Internet penetration by 2003, with e-banking representing a 25% among Internet users and 6.1% among the total population.

Banks that have betted on the Internet are the first concerned, and they have reacted in many different ways. They offer renting, leasing, tailor-to-measure credits, and Bankinter went further, offering the devolution of the monthly paid interests if the customer connected at least one a month to have a look into his accounts...

The second of the challenges is directly linked to this one. Every bank that wants to play on the Internet field has to have a specialized task force, and the training of employees is one of the main transition-to-the-Internet costs. The second Spanish thrift<sup>9</sup>, Cajamadrid, has launched a specific portal for its employees and their families, e-personas (*e-people*), following they get familiar to the use of new technologies.

Employees and their families are one of the main links on the value chain of the business, but customers are the big part. And the problem facing them is double. Ebanks would have to surpass the double challenge of trust and a branchless system.

Starting by that last, [5] and [15] have pointed out the difficulties of growing without traditional street branches. Also, [2] stated that customers wishing electronic billing have a well marked preference for traditional branch banks. This has lead many financial institutions (not just banks

and thrifts) to the referenced clicks and bricks model. One of the first virtual Spanish banks, Ing-Direct, began during Q1 2001 opening what they call "cafés", a mixture of branches and coffee-shops, where customers and non can have something, talk, chat, access to their accounts, and ask whatever to the employees of the bank. Another significant case is Bankinter, the oldest experience in e-banking in Spain. Instead of opening a stand alone Internet bank, they switched to a trade name strategy, e-bankinter.com in the www, transforming their over 200 street branches into "advising and person-to-person centers, and places to deliver financial products and services of a certain complexity", according to [1], CEO.

On this respect, an European research by [16] showed that 66% of the Spaniards, and 53% of Europeans, state they will never use e-banking facilities. But the same research guesses that it's one the European countries where situation can change in the short term; the reason is that, of this 66%, just 11% alleges questions of trust, faced to the 45% of Germans, 41% of Dutch and 31% of French and British. The main reason alleged by European people when asked why they do not bank online is they prefer dealing with someone in person (45%), and just 30% are concerned on security reasons.

The matter of trust is directly linked to the perception of security among customers. According to[4], investment in security is around 10% of the total investment done by the firms in the e-business area. Some studies state that it should increase three times. At the moment, all banks use the 128 bits SSL protocol (Security Socket Layer), which prevents the interception of data travelling through the www. But it seems that the solution will come with the arrival of the electronic signature, because there's an asymmetry problem in the relationship between bank and customers: these have the almost complete certainty of who is in front of them, something that is not true from bank's perspective. While this comes, banks should have to improve the trust of customers with privacy statements. If during a survey by the Federal Trade Commission showed that only a tiny 17% of the American financial portals had something on this respect as by Q1 1998, the improvement during the year was huge: as by June 30, there was a 40.4%, and a 51.6 in November. [12] pointed out that 84% of American banks on the Internet were offering enough information on the privacy matters as by Q3 1999.

The situation in Spain is quite good. Of course, the number of banks and thrifts is much lower, but after visiting (Q1 2001) the different sites, all the big ones plus the bigger of those of medium size plus the four working virtual banks offered easily reach information on the matter.

Another challenge for e-banking is the one related to the legal regulation of the activity, which travels on behalf of the globalization of the economy. Beside of the matters outlined before (privacy, electronic signature), the Electronic Bank Group of the Basel Committee points out the necessity of a "cooperative approach" in the supervision of the banking activity through the Internet in the way to surpass the different national regulations, as stated on [14]. According to the President of that Group, Mr. Hawke, Internet bank is an special challenge for the international bank supervising organizations, because it enables banks increasing their customer base out of their

<sup>9</sup> In Spain, thrifts hold over the half of the accounts of small investors.

the natural boundaries. The rivalry between banks (and no banks) increases with the disappearance of the borders, and this could lead to unfair trade practices. Vigilant of the problem, and with the aim of increasing their customers' calmness (and, of course, with the one of avoiding capital escapes to other countries), the Federal Deposit Insurance Corporation [11], on behalf with the Federal Reserve Bank of New York, the Office of the Comptroller of the Currency and the Office of Thrift Supervision published a very simple 11 pages pamphlet, "Tips for Safe Banking Over the Internet", where they show information about the activity. As stated in the Preface, it offers a guide for the Internet banking user for discovering if the bank is legitimated or not to practice the activity, how to keep information confidential, what are the rights of the user as a consumer and where to go if help is needed. The spirit of the "cooperative approach" is the attempt of finding solutions that would make unnecessary new national regulations that would obstruct free trade.

The quoted Group also develops supervising practices that would settle the lines for fair Internet banking activities. They pretend to supply proceedings to international community on risk management in e-banking, emphasizing on commercial trade. Since 1996, the OCC has published a dozen of reports on the online banking practice question, including matters on electronic security, privacy, and risk management. As far as 1995, according to [7], the necessity of an international regulation of the payment systems was seeing as one of the main questions to improve e-commerce. The paper quoted a report from the British Intelligence placing in USD 500 billions a year the money laundering business through the Internet. It seems so that some measure on the question would be of big help.

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