

DIGITAL ECONOMY

Digital Context in Argentina

Mauro N. Acuña / Víctor Adame / Alfonso Arellano / Rosa M. Oliveros

1. Digital scenario

In terms of the digital context, Argentina is still in a rather backward position, as shown by the 2015 BBVA Research Structural Digitization Index (see Figure 1). Its position is at a similar level to those less developed countries such as Peru or Egypt (measuring development in terms of GDP per capita).

Taking into account the different dimensions of the index, Argentina is above average, both in terms of individual use and affordability. However, the country has a great margin for improvement, especially in Information and Communication Technologies (ICT) regulation (digital consumer protection, laws resulting from electronic commerce and digital security assurance concepts such as electronic signatures), at business usage level and in the implementation of a better infrastructure.

Figure 1

2015 Structural Digitization Index



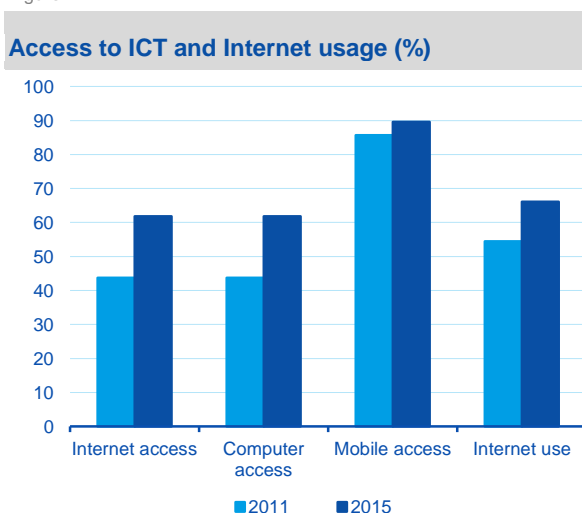
Source: BBVA Research

2. Demand side

Sixty-two percent of Argentinean households had Internet access in 2015, what supposes an increase of approximately 40 percent between 2011 and 2015. Regarding the Internet use, around 66 percent of Argentines use it. In both 2011 and 2015, Internet use was higher than Internet access, which indicates that individuals use the Internet outside their households (see Figure 2). Concerning to the availability of computers and mobile phones at homes, their levels were very different both in 2011 (44% and 86% respectively) and in 2015 (62% and 90% respectively), although the gap between them almost halved over this period.

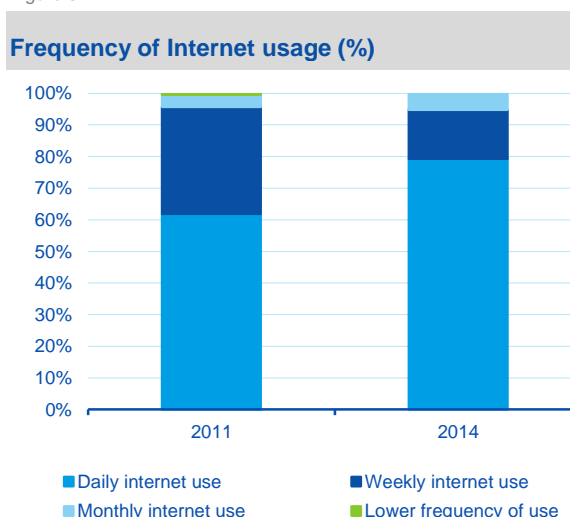
Figure 3 shows the frequency with which individuals used the Internet in 2011 and 2014, distinguishing between daily, weekly and monthly usage. It should be noted that most individuals use the Internet on a daily basis, nearly 80 percent in 2014. By contrast, the proportion of users who access the Internet weekly has dropped to almost half, just over 16 percent in 2014. While in 2011, 0.5 percent of individuals used the Internet less than once a month, in 2014 no-one did so. By region, Patagonia, La Pampa and Buenos Aires lead the list regarding percentage of Internet users, where about 75 percent of the population of the Patagonia used Internet in 2014. In contrast, the Northwest region lags behind the national average, at only 48 percent of Internet users. The regions of Litoral and Cuyo are approximately above the national average, with over 63 percent of Internet users in both cases.

Figure 2



Source: BBVA Research based on the INDEC ENTIC survey

Figure 3



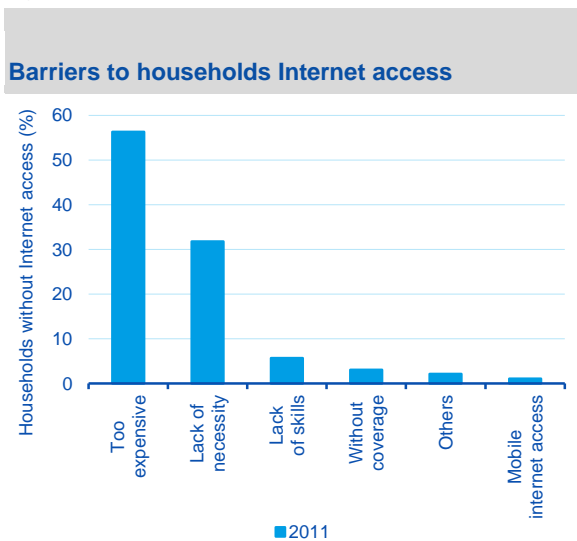
Source: BBVA Research based on the INDEC ENTIC survey and the Pew Research Center's Spring Survey 2014

Despite rapid growth in Internet access, around 40 percent of households in Argentina do not have access due to various problems, perceived as access barriers. The significance of these barriers varies over time, changing as new households join the ICT environment.

In this context, we note that the perception of some kind of barrier came only from one of the individuals living in each surveyed household, who is considered the representative of the household as a whole.

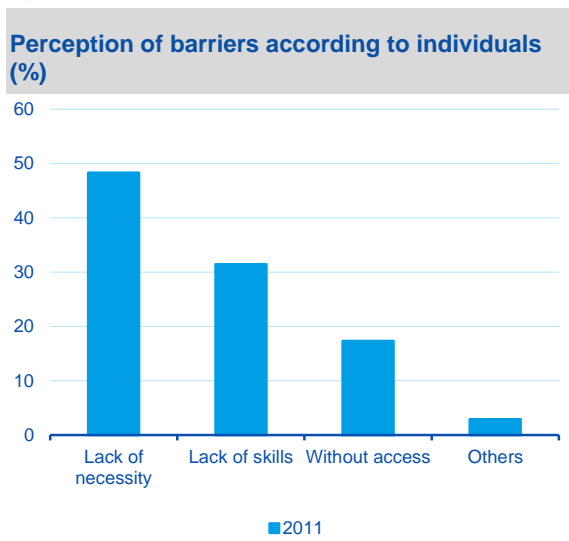
As shown in Figure 4, cost was the main barrier to the availability of Internet access at home in 2011, a particularly high perception in Argentina compared to other Latin American countries (around 57 percent of households without Internet access). Lack of necessity (voluntary barrier) is another major obstacle. Specifically, 32 percent of households without Internet access in 2011 stated they were not connected because they did not need it. Elsewhere, lack of skills and Internet access failure for reasons of coverage represent a problem for 6 and 3 percent of households, respectively.

Figure 4



Source: BBVA Research based on the INDEC ENTIC survey

Figure 5



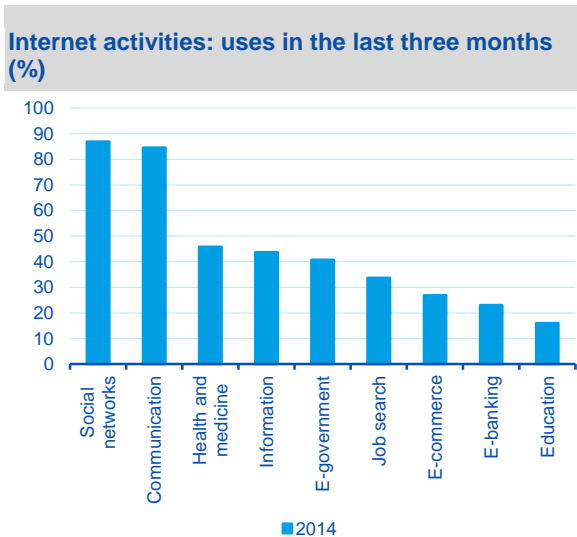
Source: BBVA Research based on the INDEC ENTIC survey

Figure 5 shows the perception of the main barriers for which Argentinians do not use the Internet. The main barrier to Internet use is lack of necessity, which is represented by 48 percent of respondents, while lack of skills comes in at second place with a percentage score of 31 percent. Lack of access, representing an obstacle for 17 percent of Argentinians who do not use the Internet, stems from a variety of environmentally dependent reasons which are not directly dependent on the individual (such as lack of an access device, lack of physical space for access or lack of coverage).

After analyzing access problems, we focus our analysis on the individuals who were using the Internet. Internet usage increased in the period 2011-2015 (from 54.4 percent to 66.1 percent). The home is the main Internet access point (about 70 percent of users in 2011), well above the other options. As for the rest, in 2011, the work place and private centers, in both cases representing close to 20 percent, were followed in order of importance by schools and the category "other" (with just over 12 percent). Finally appears mobile Internet access, which allows the use of the Internet from anywhere, with 2 percent.

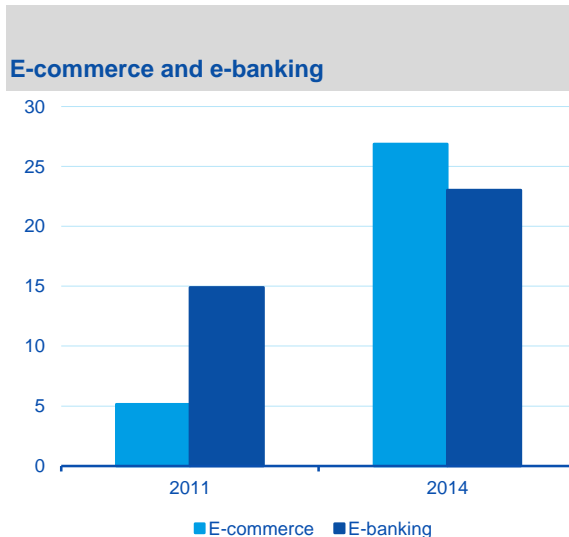
With regard to users' activities on the Internet in the last 3 months, access to social networks and activities related to communication stand out, with percentages of over 80 percent in both cases (see Figure 6). Consecutively we can find activities such as those related to searching for information on health, medicine and general information and electronic Government procedures, which in all cases have percentages of above 40%. Meanwhile, using the Internet to looking for a job is an activity performed by about 35 percent of the Internet users. E-commerce and e-banking account respectively for 26 percent and 23 percent, mainly due to training and skills requirements that users need to carry out these types of activity. Lastly, there is educational training via Internet (education), in which 16 percent of Internet users participate. Finally, we should highlight the great increase observed in the use of electronic commerce (it increased five-fold) and electronic banking (multiplying by 1.5) between 2011 and 2014 (see Figure 7).

Figure 6



Note: Non-exclusive options, all activities can be selected by an individual.
 Source: BBVA Research based on the INDEC ENTIC survey and the Pew Research Center's Spring Survey 2014

Figure 7

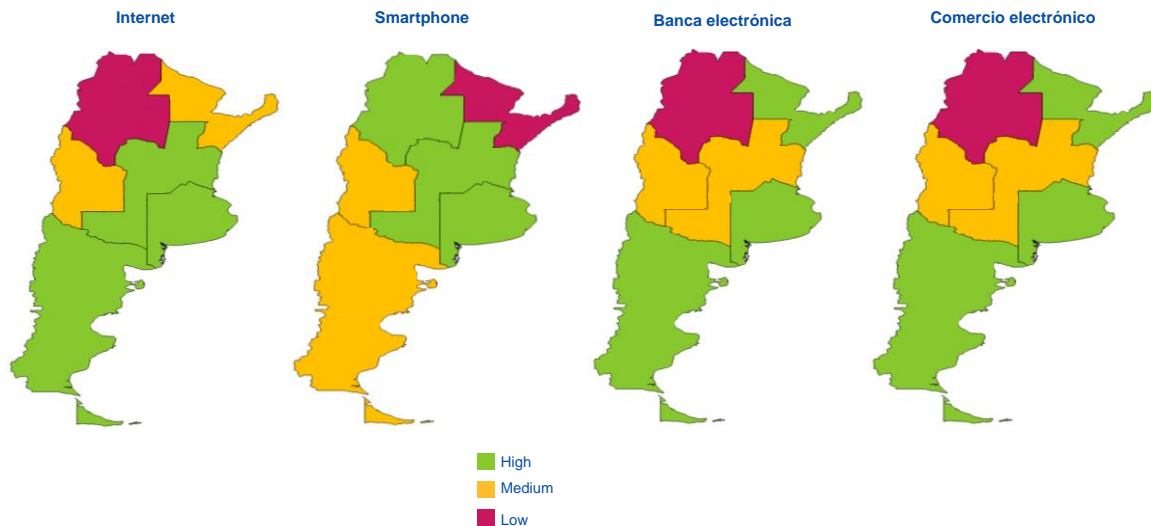


Note: Non-exclusive options, all activities can be selected by an individual.
 Source: BBVA Research based on the INDEC ENTIC survey and the Pew Research Center's Spring Survey 2014

If we look at electronic commerce and online banking by region, there are considerable differences between them (see Figure 8). Patagonia and Buenos Aires stand out above the rest, with percentages higher than 25 percent in electronic commerce and 30 percent in electronic banking. By contrast, the Northwest and La Pampa regions occupy the last places, with a percentage in no case higher than 20 percent. Electronic banking users accounted for 44 percent in Buenos Aires and 30 percent in Patagonia in 2014, while in the Northwest and in La Pampa the proportion was 13 percent and 16 percent, respectively. As for e-commerce, the regions of Patagonia and Buenos Aires are the ones that stand out, with 37 and 27 percent respectively in 2014.

Figure 8

Geographical distribution 2014: Use in the last 3 months



Source: BBVA Research based on the Pew Research Center's Spring Survey 2014

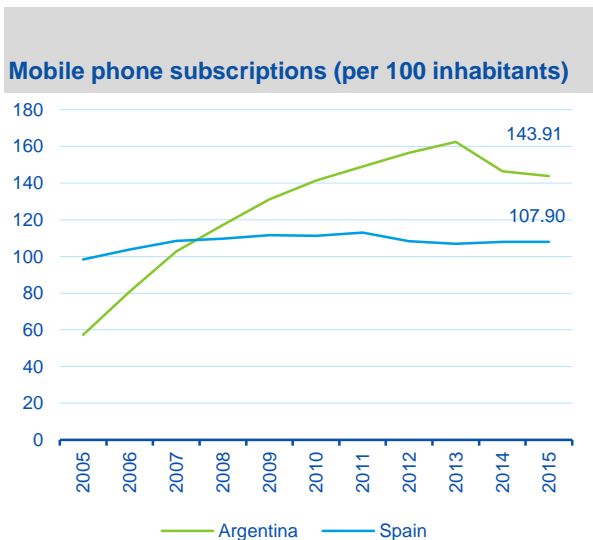
Given the socio-economic characteristics, both young people between 18 and 24 and students, as well as individuals with tertiary level of education and those with a high income, were those using the Internet and Smartphones in 2014. However, not exactly the same is happening in the case of electronic commerce and electronic banking. In these cases, workers are those who use the Internet the most to perform these types of activities. Individuals with tertiary education and those with high incomes are also frequent users of these activities. On the other hand, there are no large differences by age group between electronic commerce and electronic banking users, any differences being distributed more regularly than in the case of the use of Smartphones and the Internet.

3. Supply side

In drawing up this section, we used information provided by companies that provide services related to ICT, basically those that refer to subscriptions to certain services and their prices. It can be seen that mobile telephony in Argentina experienced a significant increase until 2013, and then it decreased slightly (see Figure 9). However, between 2005 and 2015 mobile phone subscriptions increased two and a half times, surpassing the rate in Spain (since 2007). Also, domestic mobile traffic measured in minutes has multiplied by almost 10 between 2008 and 2013, going from 10 billion minutes to 100 billion minutes (see Figure 10).

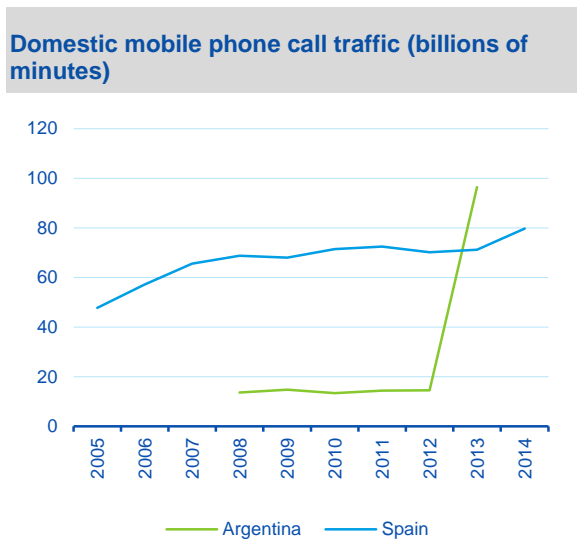
In contrast, traffic in Spain has grown less steeply, and although starting from a higher level in 2005 (see Figure 10), Argentina had significantly higher call traffic in 2013. As for the relationship between the number of subscriptions and traffic in minutes, Spain was above Argentina. This means that in per capita terms, the Spanish used the mobile phone to a greater extent for ordinary communications, although this difference was reduced very markedly in 2013.

Figure 9



Source: BBVA Research & ITU

Figure 10



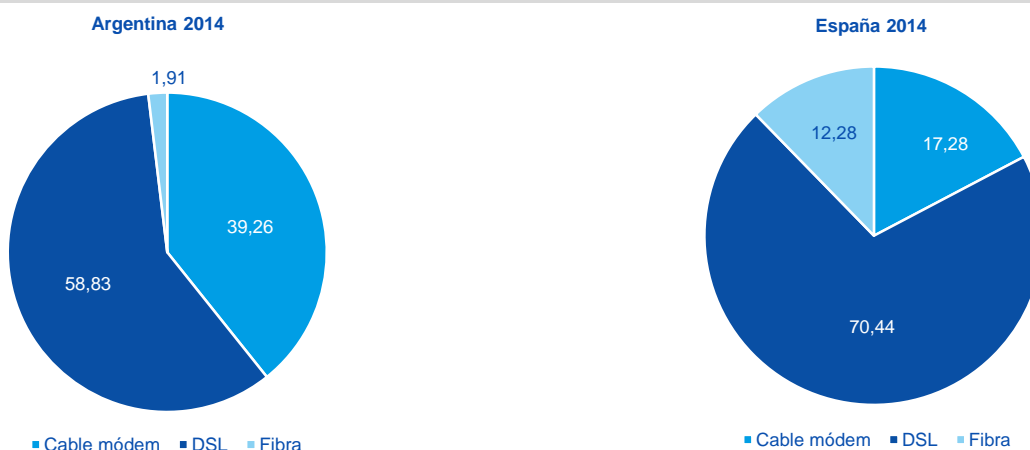
Source: BBVA Research & ITU

It is worth highlighting that the cost of a 1-minute-call was higher in terms of purchasing power parity in Argentina (USD 0.41) than in Spain (USD 0.11) in 2015. In Spain off-net and on-net charges evened out in 2012, while in Argentina this was already the case, although they diverged in the period from 2011 to 2014. With regard to fixed broadband subscriptions, it should be noted that these increased by 61 percent in Argentina between 2010 and 2015, reaching just over 16 percent in 2015; a figure considerably lower than the 28 percent of subscriptions in Spain in the same year.

Figure 11 shows unbundling per type of technology considered as fixed broadband used to connect to the Internet, both in Argentina and in Spain for 2014. Argentina had a higher technological stock than Spain, as it had a higher proportion of cable subscriptions (39 percent compared to 17 percent in Spain) and a lower percentage of connections using DSL technology (59 percent compared to Spain's 70 percent).

Figure 11

Fixed broadband technology



Source: BBVA Research & ITU

As for the price of the fixed broadband service (monthly cost), this is higher in Argentina (USD 41.16) than in Spain (USD 26.7). The cost of the service increased in Argentina between 2008 and 2015, although it declined markedly between 2008 and 2010. Since that year, it has increased to USD 41.16 (2015). However, in Spain, although it remained constant at over USD 34, in 2015 it experienced a significant decrease to USD 26.70.

Fixed broadband subscriptions increased in Argentina between 2010 and 2015 more markedly than in Spain: while in Argentina they increased by 61 percent, in Spain they increased by 23 percent. The same thing has happened with a greater difference in the case of mobile broadband subscriptions and in the case of wireless broadband subscriptions. In the case of mobile broadband, subscriptions in Argentina multiplied by 13 between 2010 and 2015, while in Spain they increased 3.5 times. Finally, wireless broadband subscriptions increased 6.5 times in Argentina during this period, while in Spain they increased almost three-fold.

As for its annual investment in telecommunications services, in 2014, Argentina invested more in relation to its GDP than Spain did. Thus, that year Argentina invested about 0.5 percent of GDP, while Spain invested 0.45 percent. It should be noted that between 2010 and 2014, both countries increased their investment in telecommunications in relation to GDP by practically the same amount, which represents an approximate increase of 20 percent.

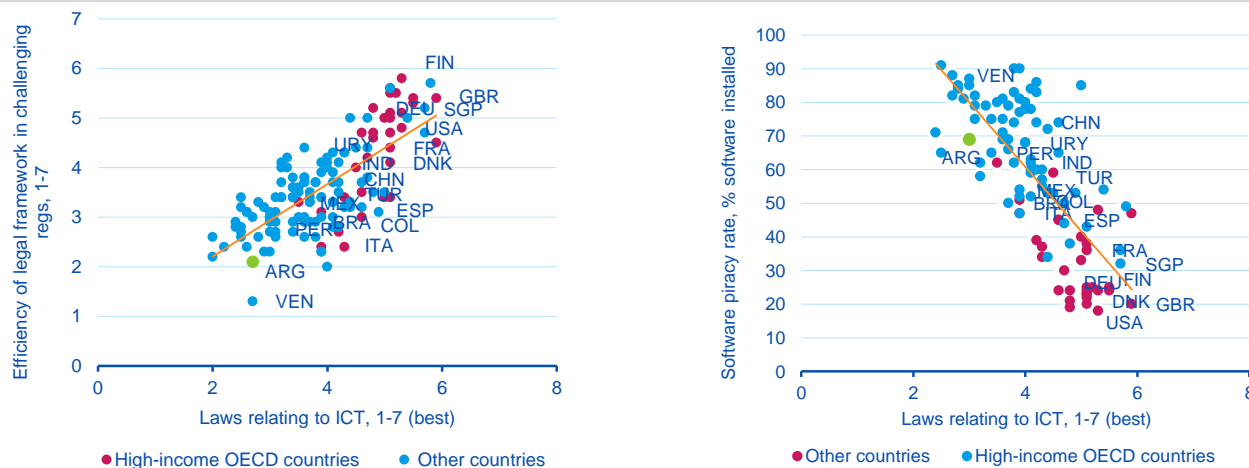
4. Regulation

Regarding to regulation, the scatter plots (see Figure 12) show that as regulation related to ICT increases, the system's efficiency increases. Argentina, with a rating of around 3 out of 7 in terms of ICT-related laws, ranks last out of the 19 Latin American countries for which information is available. It also has a score of 2 out of 7 in terms of the efficiency of the legal system (in penultimate place out of the 19 Latin American countries). We have also seen that as the laws related to ICT increase, the level of piracy decreases, there being a strong negative relationship between the two aspects. Argentina is quite far away from the leaders, with a position close to countries like Egypt or Kuwait. Scandinavian countries and the United Kingdom top the list in this respect, with a great number of laws relating to ICT.

Regulation is also vital for entrepreneurship (expressed in terms of the creation of new companies per 1000 workers). By relating this entrepreneurship indicator to the value each country holds in terms of the ease of doing business, we can see that there is a somewhat positive relationship between both, especially in countries with greater ease of doing business (Australia and the United Kingdom). There are exceptions like Korea and Finland, where the creation of companies is scarce although they still occupy a prominent position in the ranking. As for Argentina, it is worth mentioning that entrepreneurship is very scarce, where the ratio for the creation of companies per 1,000 workers is less than 0.5.

Figure 12

ICT laws: Relationship between efficiency and piracy



Source: BBVA Research and World Economic Forum

DISCLAIMER

This document has been prepared by BBVA Research Department, it is provided for information purposes only and expresses data, opinions or estimations regarding the date of issue of the report, prepared by BBVA or obtained from or based on sources we consider to be reliable, and have not been independently verified by BBVA. Therefore, BBVA offers no warranty, either express or implicit, regarding its accuracy, integrity or correctness.

Estimations this document may contain have been undertaken according to generally accepted methodologies and should be considered as forecasts or projections. Results obtained in the past, either positive or negative, are no guarantee of future performance.

This document and its contents are subject to changes without prior notice depending on variables such as the economic context or market fluctuations. BBVA is not responsible for updating these contents or for giving notice of such changes.

BBVA accepts no liability for any loss, direct or indirect, that may result from the use of this document or its contents.

This document and its contents do not constitute an offer, invitation or solicitation to purchase, divest or enter into any interest in financial assets or instruments. Neither shall this document nor its contents form the basis of any contract, commitment or decision of any kind.

In regard to investment in financial assets related to economic variables this document may cover, readers should be aware that under no circumstances should they base their investment decisions in the information contained in this document. Those persons or entities offering investment products to these potential investors are legally required to provide the information needed for them to take an appropriate investment decision.

The content of this document is protected by intellectual property laws. It is forbidden its reproduction, transformation, distribution, public communication, making available, extraction, reuse, forwarding or use of any nature by any means or process, except in cases where it is legally permitted or expressly authorized by BBVA.