Commercialisation of banking products and services in digital channels in Portugal

Results of the 2nd questionnaire on financial institutions | 2018

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Executive summary

This report presents the results of the 2nd questionnaire on the commercialisation of banking products and services in digital channels to financial institutions at the end of 2018.

This questionnaire falls under the initiatives to monitor the banking products and services marketed through digital channels that Banco de Portugal has been developing as part of its banking conduct supervision function, and follows from the first survey carried out in 2016¹.

The information obtained through this 2nd questionnaire allows Banco de Portugal to monitor the digitalisation of retail banking products and services, monitor their evolution, identify possible constraints on the development of digital channels and assess to what extent financial innovation complies with the regulatory framework in force.

Structure of the report

The report is organised into five chapters: "Development of digital channels", "Opening a current account", "Commercialisation of consumer credit", "Provision of payment services" and "Provision of customer security procedures".

In the chapter "Development of digital channels", we identify the digital channels provided by financial institutions to their customers, both individuals and companies, and the main reasons for institutions to use these channels to market retail banking products and services. Indicators of customer adoption and use of digital channels, the prospects of institutions on the growth in the use of these channels in the coming years and the main demand-side constraints that may affect their use are also presented. Institutions were also asked about the mechanisms required for customer authentication in accessing digital channels.

The "Opening a current account" chapter identifies the features available or to be made available in each of the digital channels in the various stages of the account opening process, from the identification of the customer to the conclusion of the contract. This chapter also presents the customer support mechanisms provided by the institutions when opening a deposit account via digital channels and the main constraints identified by institutions in relation to the digitalisation of the account opening process.

The chapter "Commercialisation of consumer credit" describes the features available or to be made available by institutions when contracting these credit products. This chapter also describes the support mechanisms available to customers when taking out consumer credit, as well as the main constraints identified by institutions in relation to acquiring consumer credit via digital channels.

The chapter "Provision of payment services" identifies the payment services provided by institutions in digital channels and the customer support mechanisms available. This chapter also refers the main constraints pointed out by institutions in relation to the provision of payment services in digital channels.

> Executive summary 7

1. Commercialisation of banking products and services in digital channels in Portugal – Results of the questionnaire on financial institutions (2016), available in the Bank Customer Website at https://clientebancario.bportugal.pt/en/publicacao/commercialisation-banking-products-and-services-digital-channels-portugal-2016.

In the chapter **"Provision of customer security procedures"**, the main security risks identified by institutions in the use of digital channels, the mechanisms implemented to mitigate these risks and the means of dissemination used to disclose information to customers about security procedures are presented.

The glossary of terms associated with digital channels can be found in Annex I of this report. The 2nd questionnaire on banking products and services in digital channels submitted to institutions in 2018 is available in Annex II of the report.

Main results

According to the questionnaire responses, the process of opening current accounts and acquiring consumer credit products, as well as the provision of payment services, are becoming increasingly digital. Institutions provide a significant number of stages in the contracting process on these channels and, in some cases, the functionalities available allow customers to acquire these products and services in a fully digital way. Following the greater offer, customers signed up and used these channels more often.

Over the next two years, the commercialisation of banking products and services via digital channels is expected to grow significantly. Institutions anticipate higher usage levels by bank customers and express their intention to diversify the products and services offered on these channels, improving the features made available and the security mechanisms adopted.

Development of digital channels

Most institutions have digital channels to provide banking products and services to their private and corporate customers. In 2018, the majority of institutions (87%) provide banking products or services to private customers through the online channel and 68% do so through mobile applications. From the surveyed institutions, 63% provided the online channel to corporate customers and 45% have a mobile channel for these customers. Over the next two years, the supply of banking products and services through mobile applications is expected to increase, as 24% of institutions have plans to provide this channel to their private customers and 18% to their corporate customers.

In 2018, the proportion of institutions that provide banking products and services through digital channels increased compared to 2016.

Among the institutions that responded to both questionnaires (2016 and 2018), the proportion of those that provide the online channel to private customers increased from 84% in 2016 to 88% in 2018. In mobile applications, the increase was more significant, with 69% of institutions making the mobile channel available to private customers in 2018 (compared to 59% of institutions in 2016).

The evolution of the provision of digital channels to corporate customers is similar. Between 2016 and 2018, the proportion of institutions offering the online channel increased (from 63% to 66%) as well as the proportion of institutions that made the mobile channel available (from 38% to 47%).

Customer loyalty continues to be the main reason for making digital channels available.

In 2018, most institutions (74%) indicate customer loyalty as the main reason for making banking products and services available in digital channels, just as in 2016. Institutions gave less importance than in 2016 to attracting new customers, while the provision of new products and services in these channels became more important.

In 2018, bank customers adopted and used digital channels more frequently than in 2016.

The levels of adoption and usage of digital channels by bank customers in 2018 are higher than in 2016, in both channels and for both types of customers. The evolution was more significant in mobile applications.

In 2018, around 58% of institutions indicate that more than 50% of their private customers have joined the online channel, compared to 35% of institutions in the mobile channel. More than half of corporate customers have already joined the online channel in 75% of institutions, a proportion that drops to 29% in the case of mobile applications.

The rates of effective use of digital channels by customers continue to be much lower than the adoption rates. The highest usage rates are registered in companies and in the online channel, with 54% of institutions reporting that more than half of their corporate customers have effectively used the online channel in the last three months.

Security risks perceived by customers continue to be the main constraint to the use of digital channels.

In 2018, security risks perceived by customers continue to be referred to by most institutions (74%) as the main obstacle to a greater digitalisation of the commercialisation of banking products and services, as was the case in 2016. However, the importance given to this obstacle has diminished and, conversely, the lack of financial literacy of customers has become more relevant.

Institutions anticipate a significant increase in the use of digital channels over the next two years.

Over the next two years there are prospects of significant growth in the use of digital channels, with about half of the institutions estimating growth rates of more than 50% in both the online channel and the mobile channel in both customer segments.

Customer authentication through biometric data is already common in mobile applications.

Institutions generally use more than one customer authentication mechanism simultaneously. For authentication in the online channel, institutions use the more traditional mechanisms, such as a customer-defined password (82% of institutions), an access code defined by the institution (68%) or a one-time password (68%). For authentication in mobile applications, mechanisms based on customer biometric data such as fingerprints (57% of institutions) or facial recognition (43%) are also frequent.

Current account

There is an increase in the digitalisation level in the process of opening a current account, with a significant proportion of banks providing the different stages of this process through digital channels.

Some banks allow the conclusion of the current account contract in a fully digital manner.

When opening a deposit account, most banks allow customers to identify themselves by manually entering their personal data (60% in the online channel and 42% in mobile applications); however, the proof of these identity details does not have to be made in digital channels.

The completion of the account opening process on digital channels, from identification and verification of the customer's identity, to the provision of pre-contractual and contractual information and to the conclusion of the agreement, is possible on the online channel of 25% of banks and in the mobile applications of 32% of banks, namely through assisted videoconferencing and the use of qualified trust service providers.

Over the next two years, it is expected that most banks will rely on assisted video conferencing or the digital mobile key in the account opening process.

Over the next two years, it is anticipated that the assisted videoconference will be used by most banks, with about half declaring their intention to use this mechanism in both digital channels. Despite this, a significant proportion of institutions (40%) indicate the complexity of the security requirements associated with the assisted videoconference as one of the constraints on opening a current account through digital channels.

The digital mobile key is not currently used as a means of proving customer identification, but most institutions mention the intention to use this process in the future when opening the account, both in the online channel (85%), and in mobile applications (74%).

The call centre is the customer support mechanism most provided by institutions, although it is expected that the chatbot will grow significantly. The most frequent customer support mechanism used when opening a current account is the call centre, provided by 65% of banks in the online channel and 47% of banks in the mobile channel. Over the next two years, this customer support mechanism should continue to be the most frequent, but chatbot is the one with the highest growth prospects. About half of the banks (55%) have plans to provide the chatbot in the online channel and 63% plan to make it available in mobile applications.

Consumer credit

Institutions provide an increasing number of features related to the commercialisation of consumer credit in digital channels.

Personal loans and credit cards are the products in which there is a greater digitalisation.

The dematerialisation of the contracting process occurs mainly in personal loans and credit cards. About half of the institutions (56% in personal loans and 47% in credit cards) offer features related to the contracting of these products in the online channel and about one quarter (23% in both products) provides these features in the mobile channel.

The remaining consumer credit products still have little expression in digital channels, although it is expected a significant growth in car loans over the next two years, in both channels. Almost 40% of institutions plan to provide features related to contracting car loans in both digital channels.

Fully digital contracting of consumer credit products is possible in some institutions.

The contracting of consumer credit products in a fully digital manner, from the identification and verification of the customer's personal data, to the credit simulation, presentation of pre-contractual and contractual information and conclusion of the contract, is possible in 19% of institutions in the online channel and one institution in the mobile channel. Digital contracting may be possible in other institutions if there is a business relationship with the customer (e.g. a current account) where the identification and proof of identification have previously been carried out.

The one-time password (OTP) is the most frequently used mechanism to conclude a contract.

The mechanisms most frequently used to conclude a contract are the OTP and the customerdefined password. However, over the next two years, the use of a qualified digital signature and biometric customer data to conclude consumer credit agreements through digital channels is expected to increase. About 22% of institutions refer the collection and verification of the customer's personal data, especially in terms of the solvency assessment, as the main constraint to the development of contracting consumer credit through digital channels. There is also a significant proportion of institutions (19%) that refer the impact of low customer adoption rates of mechanisms that enable distance signature, such as the digital mobile key.

Payment services

Questionnaire responses indicate that there is a significant offer of payment services on digital channels, although with growth prospects.

Most institutions allow for transfers and direct debit management in digital channels.

Transfers are the most frequent payment service in digital channels. Transfers can be made in the online channel of all banks, payment institutions and electronic money institutions. Most institutions (91%) also provide this service in their mobile applications. Direct debit management is possible in the online channel of most institutions (76%) and half (52%) provide this feature in their mobile applications.

Immediate transfers are provided by 40% of institutions in the online channel and by 39% of institutions in mobile applications. In the future, it is expected that this service will be frequent in both digital channels, with 40% and 35% of institutions mentioning plans to provide it in the online channel and mobile channel, respectively.

More than half of the institutions offer the payment of services and about one third allow the issuance of virtual cards, both in the online channel and in the mobile channel.

Most institutions have plans to provide account information services and payment initiation services.

Most institutions plan to provide account information services and payment initiation services, regulated by the revised Payment Services Directive (DSP2), over the next two years. No institution currently provides these services, but about 60% express their intention to offer them in both digital channels.

Security procedures

In 2018, phishing attacks are identified by the majority of institutions (87%) as one of the most significant security risks in the use of digital channels, just as in 2016.

In 2018, institutions gave less importance to identity theft than in 2016.

In 2018, institutions placed greater emphasis on the risks associated with theft/misappropriation of payment instruments and with SIM card swap.

Identity theft was considered as a less important risk by institutions in 2018.

Institutions adopt a greater number of security mechanisms in 2018 than in 2016.

To mitigate risk, most institutions (66%) use five or more security mechanisms simultaneously. The average number of security procedures implemented by institutions in digital channels in 2018 is higher than in 2016. Almost all institutions (92%) rely on information encryption or on the session time-out due to inactivity, 83% resort to a random customer code (token or OTP) and 78% register the date and time of the last access.

Most institutions (80%) provide the 3D Secure protocol as a security mechanism for the use of payment cards (debit or credit) in digital channels. In 37% of institutions, these cards are issued with the pre-activated 3D Secure protocol.

Pop-ups/banners and the information provided when customers sign up continue to be the most commonly used means of alerting customers to security procedures in digital channels.

Most institutions (74%) disclose information about risks and security procedures when customers subscribe digital channels. However, all institutions continue to provide this information to their customers at a later date. Pop-ups or banners in the online channel (homebanking or institutional site) are reported by almost all institutions (82%) and about half of the institutions disseminate this information via newsletters or email.

In 2018, there is an increase in the importance of social networks as a channel for the dissemination of information on security risks and procedures.



I Development of digital channels

1 Provision of digital channels by financial institutions

2 Main reasons for providing digital channels

3 Adoption and use by customers

4 Limitations to the demand

5 Growth prospects

6 Authentication mechanisms

The analysis carried out in this chapter considers the responses of 38 financial institutions, 20 of which are banks¹, 13 are specialised credit institutions², 4 are payment institutions and 1 is an electronic money institution³.

Provision of digital channels by financial institutions

Institutions were asked about the digital channels made available and/or to be made available in the future for private customers and companies.

The online channel is more available than the mobile channel, both for private customers and corporate customers.

Questionnaire responses show that 87% of institutions provide banking products or services through the **online channel** for **private customers** in 2018. This channel is currently provided by all banks. The institutions which do not yet make this channel available to their private customers express their intention to do so in the next two years.

About 68% of institutions provide banking products and services through **apps**. Most banks (85%) offer mobile applications to their private customers. This proportion decreases to 38% in specialised credit institutions. However, 24% of institutions express their intention to make the mobile channel available to their private customers in the next two years. Very few institutions do not intend to provide mobile applications in the future.

The questionnaire responses also reveal that in the case of **corporate customers**, there is a more significant weight of the online channel (63%) than the mobile channel (45%). The majority of banks (90%) make the online channel available to their corporate customers, and most (70%) provide mobile applications to these customers. In the future, mobile applications are expected to grow for corporate customers, as 18% of banks have plans to make this channel available. In this segment, 29% of institutions have no plans to offer the online channel and 37% do not intend to do it in the mobile channel in the next two years.

1. For the purposes of this analysis, only institutions that collect deposits in the course of their regular business have been classified as 'banks'.

2. For the purposes of this analysis, 'specialised credit institutions' mean institutions whose main activity is the granting of credit, irrespective of their legal nature (i.e. although some of these institutions are qualified to receive deposits, they do not carry out this activity on a regular basis).

3. The percentages shown in the charts are rounded to the unit.



Chart I.1.1 • Digital channels provided by financial institutions

Source: Banco de Portugal.

In comparison to 2016, in 2018 a greater number of institutions provide digital channels to their customers.

Among the institutions that responded to both questionnaires, the proportion of those who provide the **online channel** to their **private customers** increased from 84% in 2016 to 88% in 2018. Of the three institutions that in 2016 had plans to make the online channel available, only one effectively did it in 2018. The institution that in 2016 had no plans to provide the online channel to its private customers said in 2018 that it has plans to do so in the future.

The proportion of institutions that make **mobile applications** available to private customers increased more significantly, from 59% in 2016 to 69% in 2018. In 2018, there are three more institutions that provide this channel than in 2016.

The evolution in the provision of digital channels to **corporate customers** is similar. In 2018, 66% of institutions offer the online channel to their corporate customers, compared to 63% in 2016. One institution from the sample that had plans to make this channel available to corporate customers in 2016 effectively did so in 2018.

Mobile applications are provided to corporate customers in 2018 by about half of the institutions, compared to 38% in 2016. In 2018, three more institutions provide apps than in 2016. All three of these institutions had in fact expressed that they intended to make this channel available.

Chart I.1.2 • Digital channels provided by financial institutions | Comparison between 2016 and 2018 (comparable sample)



Source: Banco de Portugal. | Note: This chart only takes into consideration financial institutions that responded to both questionnaires (2016 and 2018).

2 Main reasons for providing digital channels

In the questionnaire, institutions were asked to identify the three main reasons for providing or intending to provide banking products and services in digital channels.

Customer loyalty is identified by institutions as the main reason for providing digital channels.

About 74% of institutions refer customer loyalty as one of the main reasons for digitalisation in the commercialisation of banking products and services. About half of the institutions indicate efficiency gains and the promotion of an image of technological innovation. Attracting new customers is reported by 45% of institutions and the provision of new products and services by 32% of the institutions.

Chart I.2.1 • Main reasons for financial institutions to provide banking products and services in digital channels (multiple answer)



Source: Banco de Portugal.

Compared to 2016, institutions placed less importance on attracting new customers and more importance on providing new banking products and services through digital channels.

Among institutions responding to both questionnaires, in 2018 there were five fewer institutions reporting the attraction of new customers as a relevant reason for providing digital channels. The provision of new products and services through digital channels became more important in 2018, being indicated by three more institutions than in 2016.

3 Adoption and use by customers

Financial institutions were questioned on the estimate of customers who adopted digital channels and those who actually used these channels in the last three months.

Online channel adoption rates are higher than those of mobile applications for both private and corporate customers.

Most (58%) of the institutions that provide the **online channel** reveal that more than half of their **private customers** have already joined this channel, while 21% show that adoption rates are between 25% and 50%. Only a small proportion of institutions (6%) report adoption rates below 5%.

The **mobile channel** adoption rates are lower than the online channel rates. Only 35% of institutions indicate that more than half of their private customers have already joined this channel. Almost half of the institutions that have apps indicate reduced levels of adoption of this channel: around 46% report adoption rates of up to 25% and 15% refer to adoption rates below 5%.

Corporate customer adoption levels are also more significant in the online channel than in mobile applications. Most financial institutions (75%) report that more than half of their customers have adopted the online channel. In this channel, 21% of institutions report adoption rates of up to 25% and only 8% refer to adoption rates of less than 5%.

In mobile applications for corporate customers, adoption rates above 50% are indicated by only 29% of institutions. About 65% of institutions indicate adoption rates of up to 25% and in 12% these rates are below 5%.

The adoption of the online channel by corporate customers is greater than that of private customers.

According to questionnaire responses, corporate customers are more likely to join the online channel than private customers. About 75% of institutions indicate corporate customer adoption rates of more than 50% in the online channel, compared to 58% in the case of private customers.

In mobile applications, institutions report higher rates of adoption by private customers than by corporate customers. Private customer adoption rates of more than 50% are indicated by 35% of institutions, compared to 29% of institutions in the corporate customers segment.





Source: Banco de Portugal.

In 2018, institutions indicate greater adoption rates of digital channels by customers than in 2016, in particular regarding mobile applications.

Among the institutions that responded to both questionnaires, in 2018, adoption rates of more than 50% in mobile applications by private customers are reported by four more institutions than in 2016. In 2018, these adoption rates by private customers are also referred to by two other institutions in the case of the online channel.

Adoption rates of more than 50% by corporate customers are indicated in 2018 by three more institutions in the case of mobile applications and by two more institutions in the case of the online channel.

The usage rates of digital channels are lower than their adoption rates for both private and corporate customers.

Despite the significant levels of adoption of the online channel, in 2018 only 27% of financial institutions indicate that more than half of their **private customers** have effectively used this channel in the last three months. In mobile applications, 35% of financial institutions report adoption rates by private customers of more than 50%, but only 19% of institutions estimate that more than 50% of customers have actually used them in the last three months.

The usage rates of digital channels by **corporate customers** are also lower than the adoption rates. Most institutions (75%) report adoption rates of more than 50% and about half (54%) report that the online channel has effectively been used in the past three months by more than 50% of corporate customers. In the mobile channel, although 29% of institutions estimate that more than half of their corporate customers have adopted their mobile applications, only 12% indicate usage rates above 50%. In this channel, about 41% of institutions report reduced usage rates (below 5%).

Usage rates are more significant in the online channel than in the mobile channel in both customer segments.

Companies use the online channel more often than private customers.

Only 19% of institutions report usage rates by private customers of more than 50% in the mobile channel, compared to 27% in the online channel. About 54% of institutions estimate that more than 50% of corporate customers use the online channel, compared to 12% of institutions in the case of the mobile channel.

Chart I.3.2 • Percentage of financial institutions by customer usage levels of digital channels , in the last three months



Source: Banco de Portugal.

Compared to 2016, in 2018 institutions identify an increase in the use of digital channels, which is more significant in mobile applications.

Of the institutions that responded to both questionnaires, in 2018 there are four more institutions than in 2016 indicating that more than half of their private customers use mobile applications. In 2018, there are also two more institutions that report these higher adoption rates in the case of the online channel.

Corporate customers' usage rates of more than 50% are mentioned in 2018 by two more institutions, in the case of the mobile channel, and by three more institutions, in the case of the online channel.

4 Limitations to the demand

In the questionnaire institutions were asked to indicate the three most relevant reasons that may restrict the demand for digital channels by customers.

Concerns about security, unfamiliarity with new technologies and lack of financial literacy of customers are referred to by institutions as the main constraints on the expansion of digital channels. Customer concerns about security are identified by 74% of institutions as a demand-side obstacle to the expansion of digital channels. Secondly, there is a lack of awareness of new technologies (lack of digital literacy), identified by 66% of institutions, followed by the lack of financial literacy of customers (61%). About half of the institutions indicate concerns relating to the sharing of personal data.

Conversely, customer disinterest (24%) and lack of knowledge on the applicable regulatory framework (18%) are the constraints that financial institutions consider less relevant.





Source: Banco de Portugal.

In 2018, institutions gave less importance than in 2016 to the constraints related to the security risks perceived by customers and the sharing of personal data.

Among institutions that responded to both questionnaires, in 2018 less importance was given to security risks perceived by customers and the sharing of personal data (five less institutions in both cases) than in 2016. On the other hand, the lack of financial literacy of customers was identified by five more institutions and the lack of knowledge of the applicable legal framework was reported by two more institutions.

5 Growth prospects

Financial institutions were questioned about the expected growth of the number of customers that will use digital channels in the coming years.

There are high growth prospects in the use of digital channels in the coming years, especially in the online channel. More than half of the institutions (55%) expect a growth rate of more than 50% in the use of the online channel by **private customers**. In the mobile channel, forecasts are slightly lower, with 46% of institutions estimating a growth of more than 50%.

Institutions also expect significant growth rates in the use of the online channel by **corporate customers**. Most financial institutions (58%) foresee growth rates of more than 50%. Growth forecasts for corporate customers using mobile applications are slightly lower, but 47% of institutions estimate increases in the usage rate of more than 50%.





Source: Banco de Portugal.

6 Authentication mechanisms

In the questionnaire, financial institutions were asked to indicate the authentication mechanisms for customers to access digital channels. Institutions generally use more than one customer authentication mechanism simultaneously.

In the online channel, the customer-defined password, the onetime password and the access code assigned by the institution are the authentication mechanisms most used.

In the **online channel**, the authentication mechanism most used by institutions is the customerdefined password (82%), followed by the access code assigned by the institution (68%) and the OTP (68%), a password assigned for a single access. About 34% of the institutions also mentioned the use of a PIN, a numeric code defined by the institution or by the customer.

Security mechanisms based on customer biometric data are of little importance in the online channel, and few institutions have plans to make them available in the future. No institution provides fingerprint authentication and 92% say they have no plans to do so. Facial recognition authentication is only possible in one institution and most (82%) have no intentions to implement it in the future.

In mobile applications, the use of biometric data is frequent.

In the **mobile channel**, the authentication mechanism most used by institutions is the PIN to access the mobile application (63%), followed by the customer-defined password (60%). In the future, these authentication mechanisms are expected to increase, with about 20% of institutions indicating that they have plans to provide them.

Authentication through biometric data already has a significant weight in mobile applications and is possible in 57% of institutions through a fingerprint and in 43% of institutions through facial recognition. It is expected that these mechanisms will be even more frequent in the future, with around a quarter of the institutions indicating plans to make them available to their customers. Some institutions also indicated plans to use authentication through voice recognition.

About half of the institutions provide the OTP and an access code assigned by the institution.



Chart I.6.1 • Customer authentication mechanisms to access digital channels

Source: Banco de Portugal.

II Opening a current account

1 Customer identification

2 Uploading documents

3 Provision of pre-contractual information

4 Provision of contractual information

5 Mechanisms for confirming the provision of pre-contractual and contractual information

6 Mechanisms for concluding the contract

7 Customer support mechanisms

8 Constraints on opening an account in digital channels

The analysis carried out in this chapter considers the responses of the 20 banks that, in the course of their regular activity, collect deposits from their customers, whenever they provide or plan to provide their customers the online channel or mobile channel.

The analysis focuses on all the features available in digital channels when opening a current account, and not only on the conclusion of the contract in these channels.

1 Customer identification

In the questionnaire, institutions were asked to mention the procedures they have in place or plan to provide in the future for identifying and proving customer identification details in digital channels in the context of opening an account.

The manual introduction of personal data by the customer is the functionality most frequently made available by institutions for customer identification in both channels.

In the **online channel**, the manual introduction of personal data by the customer is the feature most frequently used by institutions to initiate the account opening process (60% of institutions) and about a quarter of the institutions intend to make it available in the future.

Assisted video conferencing and the use of the digital mobile key are the procedures with the highest growth prospects for proving the customer's identity in both channels.

Assisted video conferencing and the use of qualified trust service providers are both mentioned by 20% of institutions as a means of proving the customer's identity. Although these functionalities are already available from a significant number of banks, their availability is expected to increase considerably over the next two years. About half of the institutions refer to have plans to make the assisted video conferencing available to open an account, and about a quarter of the institutions intend to use qualified trust service providers in the online channel.

The proportion of institutions that reads the customer's personal data from the chip on their citizen card via the customer's device remains small (5%), although 35% of institutions have plans to make this mechanism available in the future.

No institution provides the digital mobile key or uses other interoperability platforms between information systems issued by public services. It is anticipated that the use of the digital mobile key will become frequent in the future, since 85% of banks have plans to make it available.

The mechanisms for identifying customers and verifying their identification details used by banks do not differ significantly in the digital channels used. In **mobile applications**, manual input of customer data is also the most frequent feature (42% of institutions).

The assisted videoconference is available in the mobile channel of 32% of institutions and the use of qualified trust service providers is possible in 21% of institutions. Although no institution provides the digital mobile key, 74% indicate they have plans to do so in the future. In contrast, most institutions do not intend to identify and verify customer data by reading the citizen card chip or using other interoperability platforms between information systems (84% and 63% of banks, respectively).





Source: Banco de Portugal.

In 2018, the growth of assisted video conferencing in both channels stands out.

The identification of customers and the verification of their identification details through assisted video conferencing became possible in 2017¹. Of the institutions that responded to both questionnaires (2016 and 2018), four now provide video conferencing in the online channel and six in mobile applications.

Since 2016, the number of institutions that started to provide the manual input of data by customers in the mobile channel increased (five more institutions in 2018).

1. It should be recalled that in 2017, through Instruction No. 9/2017, Banco de Portugal recognised assisted video conferencing as a means of proving the customer's identity, establishing the procedures to be observed in the videoconference. This Instruction was subsequently repealed by Notice No. 2/2018, which regulated the use of assisted video conferencing and qualified trust service providers.

2 Uploading documents

Institutions were questioned about the procedures available or to be made available in the future in digital channels for uploading the necessary documentation when opening an account.

The upload of scanned documents or their photograph is possible in 35% of banks in the online channel and 37% in the mobile channel.

In the **online channel**, the uploading of documents through a photograph or scan is possible in 35% of the banks surveyed. In the future, a significant increase in the possibility of uploading documents is anticipated, since 45% of banks indicate that they plan to make the uploading of photographs available and 40% have plans to allow the uploading of scanned documents in the online channel.

The frequency of document uploading does not differ between the online channel and the mobile channel. In **mobile applications**, about 37% of banks allow document uploads through scanning or photograph. Over the next few years, about half of the institutions state they plan to make photo upload available, while 32% indicate plans for the uploading of scanned documents in their mobile applications.



Chart II.2.2 • Uploading documents to open an account

Source: Banco de Portugal.

In comparison to 2016, in 2018 the possibility of uploading documents to digital channels is growing.

Among the institutions that responded to both questionnaires, in 2018 there are six more institutions allowing the upload of documents through the online channel and four more through the mobile channel. There are also four more institutions that allow the upload of documents through scanning in the online channel and six more institutions that provide this functionality in mobile applications.

3 Provision of pre-contractual information

In the questionnaire institutions were asked to identify the procedures they provide or intend to provide in digital channels for the provision of pre-contractual information when opening a current account. These procedures may be used simultaneously. The provision of pre-contractual information is a procedure that can be made available in digital channels even if the conclusion of the contract is not made exclusively through these channels.

The most frequent form of providing pre-contractual information is via download or email, in both channels.

In the online channel, half of the institutions provide **pre-contractual information** documents via download or email and 30% provide this information through the 'customer area'. The automatic opening of documents is a feature provided by 25% of institutions. In the future, it is envisaged that these procedures will be more frequent, since a significant number of institutions have plans to make all of them available (more than 30%).

In **mobile applications**, the download or submission by email is also the most common procedure for the provision of pre-contractual information, referred by 42% of institutions. This is followed by the automatic document opening (21%) and visualization in the 'customer area' (16%). As in the online channel, at least 30% of banks indicate that they have plans to make these procedures available, such that a significant growth is expected in the next few years.

All the procedures for the provision of pre-contractual information identified in the questionnaire are more often available in the online channel than in the mobile channel, with a similar increase in both channels for the future.





Source: Banco de Portugal.

Compared to 2016, in 2018 the possibility of providing precontractual information via download or email in mobile applications is higher.

Of the institutions that responded to both questionnaires, in 2018 there are six more institutions than in 2016 that provide pre-contractual information via download or email in mobile applications. There are also three more institutions that make these documents available in the 'customer area' or through automatic document opening.

4 Provision of contractual information

In the questionnaire, institutions were asked to identify the procedures available or to be made available in digital channels in relation to the provision of contractual information on current accounts, which could be used simultaneously. The provision of contractual information is a procedure that can be made available in digital channels, even if the conclusion of the contract is not made exclusively through these channels.

The most frequent form of providing contractual information is via download or email, in both channels.

Half of the banks state that their customers can receive **contractual information** in the **online channel** via download or email and 45% allow the viewing of the information in the 'customer area'. The automatic opening of documents is a procedure mentioned by 25% of banks. In the future, it is expected that most institutions will use these features to provide their customers with contractual information, given that about 40% of banks report having plans to make them available in the online channel.

In **mobile applications**, the provision of contractual information to customers via download or email is indicated by 42% of institutions and 26% enable customers to view these documents in the 'customer area'. Automatic document opening is mentioned by 21% of institutions. A significant increase is expected in the provision of documents via download or email and the automatic opening of documents, as 47% of banks plan to use these procedures. There is also a significant proportion of banks (42%) planning to provide contractual information in the 'customer area' of their mobile applications.

All the contractual information procedures identified in the questionnaire are more frequent in the online channel than in the mobile channel. However, growth expectations in the next two years are higher in mobile applications.



Chart II.4.1 • Procedures regarding the provision of contractual information when opening an account

Source: Banco de Portugal.

Compared to 2016, in 2018 the provision of contractual information in digital channels increased, especially in mobile applications.

Among the institutions that responded to both questionnaires, in 2018 the provision of contractual information in the mobile channel increased. In comparison to 2016, there are seven more banks that provide their contracts via download or email and six more that allow them to be viewed in the 'customer area' or via automatic document opening in mobile applications. In the online channel, the growth was not as significant, with three more banks allowing the contract to be viewed in the 'customer area' or via automatic document opening and one more bank making it available via download or email.

5 Mechanisms for confirming the provision of pre-contractual and contractual information

In the questionnaire, institutions were asked to identify the mechanisms available or to be made available in digital channels to confirm that customers have read the pre-contractual and contractual information documents related to opening a current account.

In pre-contractual information, confirmation that the documents have been read via checkbox is the mechanism most commonly used by banks in both channels.
In the **online channel**, half of the institutions (50%) confirm that the pre-contractual information documents have been read by their customers using a checkbox, where customers declare to have read the documents that were made available to them. It is anticipated that this mechanism will continue to be used frequently in the future, as 30% of banks have plans to provide it. The mandatory scroll-down option is only provided by 15% of banks, but 45% express their intention to make it available in the next few years.

In the **mobile channel**, confirmation via checkbox that the contractual documents have been read is made available by 37% of the banks and 16% use the mandatory scroll-down option. In the coming years, there is expected to be an increase in the confirmation of reading via checkbox and mandatory scroll-down, since 47% and 42% of banks, respectively, express their intention to use these mechanisms in their mobile applications.

No bank uses an OTP to validate pre-contractual information by customers in the account opening process and the majority of banks (about 80%, in both channels) do not intend to do so in the future.





Source: Banco de Portugal.

The mechanisms used to confirm that the contractual information documents have been read are similar to those used for pre-contractual information.

To confirm that customers have read the contract, banks resort to similar mechanisms in the two channels. Confirmation via checkbox is slightly more frequent in the online channel and is mentioned by 50% of banks (compared to 42% of banks in the mobile channel), followed by the mandatory scroll-down (mentioned by 15% and 16% of banks, in the online channel and in the mobile channel, respectively) and the OTP (referred by 10% and 11% of banks in the online channel nel and in the mobile channel, respectively).

In the future, confirmation via checkbox and mandatory scroll-down are expected to increase significantly, particularly the latter, with about half of the institutions expressing their intention to make it available both in the online channel and in mobile applications. In contrast, most institutions do not intend to use the OTP as a confirmation mechanism (65% in the online channel and 53% in the mobile channel).

Chart II.5.2 • Mechanisms for confirming the provision of contractual information prior to opening an account



Source: Banco de Portugal.

6 Mechanisms for concluding the contract

Banks were questioned about the procedures they provide or plan to provide in the future for the conclusion of the current account contract in digital channels.

The most common mechanism used to conclude a contract is the OTP, both in the online channel and in the mobile channel.

The entire process of opening an account in digital channels, from identifying and proving the identity of the customer, to the provision of pre-contractual and contractual information and to the conclusion of the contract is possible in 25% and 32% of banks, respectively, in the online channel and mobile applications.

In the **online channel**, the OTP (25%), followed by the customer-defined password (15%) and the qualified digital signature (10%) are the mechanisms most used by banks to conclude the contract. In the future, it is envisaged that the use of the OTP and qualified digital signature will be more frequent, given that about half of the banks express their intention to conclude contracts online using these mechanisms. No bank provides mechanisms based on biometric data and 75% have no plans to provide them.

In the **mobile channel**, the OTP (21%), the customer-defined password (16%) and the use of biometric data (11%), such as fingerprint or face recognition, are the most common mechanisms. The qualified digital signature is only provided by an institution, although about half of banks express that they have plans to make it available in the future.



Chart II.6.1 • Mechanisms used to conclude the account-opening contract

Source: Banco de Portugal.

7 Customer support mechanisms

In the questionnaire, banks were asked to identify the support mechanisms available or to be made available in the future to customers during the process of opening a current account through digital channels.

The customer support mechanisms mainly provided by banks are call centres and FAQs in both channels.

Most banks provide customer support mechanisms in the **online channel**. In this channel, the customer support mechanisms most used in the account opening process are call centres and FAQ (Frequently Asked Questions), made available by 65% and 45% of banks, respectively. It is expected that in the future the availability of these mechanisms will increase, with 25% of banks indicating plans to make call centres available and 40% anticipating the use of FAQ.

There is also a significant proportion of banks (30%) that provides a tooltip to support their customers in the account opening process. Tutorials and video conferencing are currently provided by 25% and 10% of banks, and about 50% have no plans to provide them in the next two years.

In the online channel, the chatbot is the least common mechanism, provided by only one institution, but it is also the mechanism with the highest growth expectations, since more than half of the institutions claim to have plans to make it available in the future.

The chatbot is the customer support mechanism with the highest growth prospects in both channels.

About half of the banks provide customer support mechanisms in mobile applications. Call centres are also the most common support mechanism, used by 47% of banks, followed by FAQs (21%). In the future, the use of these mechanisms is expected to increase. About 58% of institutions have plans to provide their customers with FAQs and 42% have plans to use call centres.

The video conference and the tooltip are used by 16% of institutions. These mechanisms also have high growth prospects, with about half of the banks having plans to make video conferencing available and 32% intending to provide the tooltip.

In the mobile channel, 11% of institutions use tutorials and about half of the institutions say they have no plans to make this functionality available in the coming years. No bank provides a chatbot in their mobile applications, although 63% indicate they have plans to do so in the future.

Almost all of the mechanisms identified in the questionnaire are more frequent in the online channel than in the mobile channel. However, there are higher growth prospects in mobile applications, compared to the online channel, so this difference is expected to lessen in the coming years.





Source: Banco de Portugal.

8 Constraints on opening accounts in digital channels

Institutions were asked about the main constraints on opening a current account via digital channels.

The constraint most referred by banks is related with the security requirements associated with assisted video conferencing.

The main obstacle, identified by 40% of banks is the use of assisted video conferencing as a means of proving customer's identification details when opening an account through digital channels. These banks refer the complexity of the security procedures established for the collection and verification of customer data during video conferencing, such as the need for a qualified bank employee to ensure the videoconference or the requirements imposed in the presentation of a citizen card².

Around 20% of banks report a lack of standardisation with regard to the security requirements for opening a current account, compared with those requested by other EU Member States, and 15% of banks report the significant amount of data and documentation that must be proven in the process of opening a current account.

2. The procedures set out in Notice 2/2018 determine, for example, that this video conference should be provided by an employee with training in matters related to money laundering and prevention of terrorism and that the date and time of verification of the identification details should be registered.



III Commercialisation of consumer credit

1 Consumer credit products in digital channels

2 Stages in the consumer credit process

3 Customer identification

4 Uploading documents

5 Provision of pre-contractual information

6 Provision of contractual information

7 Mechanisms for confirming the provision of pre-contractual and contractual information

8 Mechanisms for concluding the contract

9 Costumer support mechanisms

10 Constraints on the commercialisation of consumer credit products in digital channels

In this chapter, the responses of 19 banks and 13 credit institutions specialising in consumer credit are analysed, whenever they provide or plan to provide their customers with the online channel or the mobile channel.

The analysis focuses on all the features available in digital channels in the context of the consumer credit agreement process, even though the credit contract is commercialised exclusively in these channels and there may be stages in the process that are carried out using traditional channels.

1 Consumer credit products in digital channels

In the questionnaire, institutions were asked to indicate the consumer credit products that they provide or plan to provide in the future in digital channels.

Personal loans and credit cards are the most frequent products, both in the online channel and in the mobile channel.

The results indicate that **personal** loans and **credit cards** are the most frequent consumer credit products in the **online channel**, provided by 56% and 47% of institutions, respectively. In this channel, the number of banks and specialised credit institutions that sell these types of products is similar. Credit lines are provided by 19% of institutions in the online channel.

In the future, the offer of **car loans** is expected to increase significantly in this channel, with 38% of institutions expressing their intention to make this type of product available. However, no significant diversification of the products offered in the online channel is expected in the next two years, since more than 60% of institutions state they have no plans to provide other consumer credit products, such as bank credit accounts, credit lines or overdraft facilities.

The provision of personal loans and credit cards in mobile applications is expected to increase significantly.

In **mobile applications**, 23% of institutions provide **personal loans** or **credit cards**. Most of the institutions that provide personal loans or credit cards through their mobile applications are banks, although there are two specialised credit institutions that provide personal loans in this channel. In the coming years, a significant increase in the commercialisation of these products in the mobile channel is expected, since about half of the institutions have plans to provide them.

Currently, only 3% of institutions provide **car loans** through their mobile applications, although 39% have plans to do so in the next two years. Most institutions (within 71% and 87%) have no plans to offer credit lines, overdraft facilities or current bank accounts through the mobile channel.

Almost all types of consumer credit are currently more frequent in the online channel, however an increase in the availability of these products is expected in the mobile channel. The percentage of institutions that express their intention to increase the supply of products in mobile applications is higher than in the online channel in most credit products.





Source: Banco de Portugal.

2 Stages in the consumer credit process

Institutions were asked about the stages in the process of contracting consumer credit products provided or to be provided in digital channels in the future.

Credit simulation and the submission of pre-contractual and contractual information documents are the stages most frequently provided in digital channels.

Most institutions (75%) offer the possibility of credit simulation in the **online channel** and more than half make the pre-contractual (69%) and contractual (53%) information documents available in this channel. In the future, it is estimated that more than 80% of institutions will provide these stages of the contract process in the online channel.

In most institutions, the contracting of consumer credit products is not yet fully digital. The credit agreement can be contracted in the online channel in 44% of institutions and 31% have plans to do it in the future.

Credit simulation is possible through **mobile applications** in 29% of institutions, followed by the presentation and download of pre-contractual (in 26% of institutions) and contractual information documents (23%). The conclusion of the credit agreement is possible in the mobile channel of 23% of institutions. Approximately half of the institutions express their intention to enable these stages in the credit contract process in their mobile applications in the future.

Institutions use the online channel more frequently in different stages of the contract process, although growth prospects are higher in mobile applications.

There is a greater dematerialisation of the contract process in the online channel compared to mobile applications. However, this difference is expected to lessen over the next two years as institutions show greater growth prospects in the mobile channel.





Source: Banco de Portugal.

3 Customer identification

In the questionnaire, institutions were asked to indicate the features provided or to be provided in digital channels in the future for customer identification and proof of their identification details when contracting consumer credit.

The identification mechanism most used in the online channel is the manual introduction of data by customers.

In the **online channel**, the manual introduction of personal data by customers is the most common identification mechanism, reported by 38% of institutions. The use of the IBAN from another credit institution with whom the customer has a business relationship and the use of qualified trust service providers are both referred to by 19% of institutions as mechanisms to prove the customer's identity. There is also one bank and one specialised credit institution that use other interoperability platforms between information systems issued by public services and one specialised credit institution that uses assisted video conferencing.

Customer identification in mobile applications is not very frequent.

In **mobile applications**, institutions use the manual input of customer data for their identification (13%) and the IBAN of another institution for customer identification and proof of identity (6%). In the next two years, a greater diversification of the identification and verification mechanisms used in the mobile channel is foreseen, with emphasis on the use of qualified trust service providers (referred by 45% of institutions), the digital mobile key or other interoperability platforms (both indicated by 42% of institutions). Still, growth prospects are limited, as more than half of the institutions report that they have no plans to provide any of the mechanisms mentioned in the questionnaire in their mobile applications.

Currently, the digital mobile key and the reading of personal data through the citizen card chip are not used as mechanisms for identifying and proving the customer's identification details in any of the digital channels, although there is a significant number of institutions with plans to make them available both in the online channel and in mobile applications.



Chart III.3.1 • Mechanisms for identifying and proving customer identification details in consumer credit contracts

Source: Banco de Portugal.

Compared to 2016, in 2018 the use of the IBAN of another institution with whom the customer already has a business relationship increased, in both channels.

Among the institutions that responded to both questionnaires, in 2018 there was an increase in the use of the IBAN of another institution with whom the customer already has a business relationship as a means of identification and verification. Since 2016, six institutions started using this mechanism to identify customers in the online channel and two in the mobile channel.

4 Uploading documents

Institutions were questioned about the procedures available or to be made available in the future in digital channels regarding the upload of the necessary documentation in the consumer credit process.

There are more institutions that allow the upload of documents through digitalisation or photograph in the online channel than in mobile applications.

In the **online channel**, 31% of institutions allow documents to be submitted via digitalisation and 25% via photograph. In the future, it is anticipated that these mechanisms will be available in most institutions, since 34% and 38%, respectively, refer plans to provide them in the online channel.

In **mobile applications**, the upload of documents in the consumer credit process is not very common. There are only three institutions that offer the upload of documents, two via digitalisation and one via photograph. However, about half of the institutions say they have plans to make these features available in the next two years.

Although document upload procedures are more frequent in the online channel, there are greater prospects for future growth in mobile applications. Over the next two years, more than half of the institutions are expected to provide mechanisms to upload documents in both channels.



Chart III.4.1 • Uploading documents for the consumer credit process

Source: Banco de Portugal.

In 2018, there are more institutions that allow the upload of documents than in 2016, especially in the online channel.

Among the institutions that responded to both questionnaires, in 2018 there are three more institutions than in 2016 that enable the upload of documents via photograph and three more that allow uploads via digitalisation in the online channel. There are also two more institutions that allow the upload of documents in the mobile channel (one via photograph and one via digitalisation).

5 Provision of pre-contractual information

In the questionnaire, institutions were asked to identify the procedures available or to be made available in digital channels relating to the provision of pre-contractual information on consumer credit products, which can be used simultaneously. The provision of pre-contractual information is a procedure that can be made available in digital channels even if the conclusion of the contract is not made exclusively through these channels.

Pre-contractual information is frequently provided by email or download, especially in the online channel.

In the **online channel**, more than half of the institutions (66%) provide their customers with precontractual information via email or download and 28% use the automatic opening of documents or allow the information to be viewed in the 'customer area'. It is anticipated that these mechanisms will be more frequently provided in the future, especially the automatic opening of documents and the viewing in the 'customer area', referred to by 28% of institutions.

In **mobile applications**, the submission of documents via email or download are the most common procedures for providing pre-contractual information (29%). The automatic opening of precontractual information documents or its view in the 'customer area' are less frequent, provided by only 10% of institutions. Over the next two years, most institutions are expected to use these mechanisms, as more than 30% have plans to make them available.

At present, the provision of pre-contractual information is more frequent in the online channel than in the mobile channel, in line with the availability of consumers credit products in these channels. However, over the next two years, a significant increase in the mechanisms for the provision of pre-contractual information in mobile applications is expected.

Chart III.5.1 • Procedures regarding the provision of pre-contractual information of the consumer credit agreement



Source: Banco de Portugal.

Compared to 2016, in 2018 the provision of pre-contractual information via email or download stands out.

Among the institutions that responded to both questionnaires, in 2018 the provision of precontractual information via download or email, automatic document opening or viewing in the 'customer area' increased. There are five more institutions than in 2016 that allow pre-contractual information documents to be downloaded or sent by email in each of the channels. The possibility of viewing the documents in the 'customer area' or the automatic opening of documents is provided by four more institutions in the online channel and by three more institutions in the mobile channel

6 Provision of contractual information

In the questionnaire institutions were asked to identify the procedures available or to be made available in digital channels relating to the provision of contractual information on consumer credit products, which can be used simultaneously. The provision of contractual information is a procedure that can be provided in digital channels even if the conclusion of the contract is not exclusively through these channels.

The most commonly used form of providing contractual information is via email or download, in both channels.

In the **online channel**, the consumer credit agreement is sent via email or download in 50% of institutions, while about 30% allow it to be viewed in the 'customer area' or facilitate the automatic opening of the document. In the future, it is anticipated that these mechanisms will be more common in the provision of contractual information. Of the institutions surveyed, 22% said they had plans to use email or download and around 30% said they had plans to allow automatic document opening or viewing in the 'customer area'.

In the **mobile channel**, contractual information is sent by email or download (23%), followed by the automatic opening of documents (13%) and viewing in the 'customer area' (10%). In the next two years, there is a significant number of institutions that plan to use these mechanisms to provide contractual information (about 40%).

Similar to what happens in the provision of pre-contractual information, in the case of contractual information, all the mechanisms used are more frequent in the online channel. Over the next two years, this gap is expected to decrease as there are higher growth prospects in mobile applications.





Source: Banco de Portugal.

Compared to 2016, in 2018 there are more institutions providing contractual information in the online channel and in the mobile channel.

Among the institutions that responded to both questionnaires, in 2018 there was in increase in the number of institutions that provide contractual information in the online channel. There are six more institutions sending contractual information via email or download and four more institutions making this information available through the 'customer area' or the automatic opening of documents. In the mobile channel, in 2018 there are four more institutions that make contracts available via email or download and three more institutions that allow the viewing of these documents in the 'customer area' or through their automatic opening.

7 Mechanisms for confirming the provision of pre-contractual and contractual information

Institutions were questioned about the procedures available or to be made available in the future to confirm that pre-contractual and contractual information documents have been read by customers before entering into the consumer credit agreement through digital channels.

The mechanism most used by institutions to confirm that pre-contractual information has been read by the customer is the checkbox, both in the online channel and in mobile applications.

In the **online channel**, the functionality most commonly used by institutions to confirm that the pre-contractual information has been read by the customer is the acceptance checkbox (53%). The mandatory scroll-down of the document is referred to by 34% of the institutions. In the coming years, it is anticipated that most institutions will resort to checkbox confirmation and compulsory scroll-down, since 25% of institutions express their intention to use these mechanisms in the online channel. There is a small proportion of institutions that use the OTP to validate that customers have read the pre-contractual information (16%) and it is expected that this mechanism will continue to be rare in the coming years, since 72% of institutions have no plans to use it.

In **mobile applications**, the reading of pre-contractual information is confirmed by checkbox in 19% of institutions and the mandatory scroll-down is referred to by 10% of institutions. In the coming years it is anticipated that most institutions will resort to these mechanisms, with more than 40% of institutions expressing plans to use them in the mobile channel. In this channel, no institution uses the OTP as a means of confirming that the customer has read the information and 77% indicate that they have no plans to provide it.

In relation to pre-contractual information, all the validation mechanisms identified in the questionnaire are more frequent in the online channel, compared to mobile applications. However, growth prospects are higher in the latter.

Chart III.7.1 • Mechanisms for confirming the provision of pre-contractual information prior to concluding a consumer credit contract



Source: Banco de Portugal.

The mechanism most used by institutions to check that customers have read the contractual information documents is the checkbox, in both channels.

In the consumer credit process, the mechanisms used to confirm that the contractual information has been read are similar to those used in relation to the pre-contractual information.

In the **online channel**, 44% of institutions confirm that the contractual information documents have been read via the checkbox, 28% use the mandatory scroll-down and 19% use the OTP. It is anticipated that these mechanisms will be used by most institutions over the next few years, since about one-third of institutions indicate plans to use compulsory scroll-down, and more than 20% say they have plans to use the checkbox or the OTP.

In **mobile applications**, mechanisms to confirm that the contract has been read are rare. About 16% of institutions validate the reading of contractual information documents using checkbox acceptance, 13% use the mandatory scroll-down and no institution uses the OTP. Despite this, over the next two years, these reading validation mechanisms are expected to grow, with 42% of institutions intending to use the checkbox, the mandatory scroll-down or the OTP in their mobile applications.

Chart III.7.2 • Mechanisms for confirming the provision of contractual information prior to concluding the consumer credit contract



Source: Banco de Portugal.

8 Mechanisms for concluding the contract

In the questionnaire institutions were asked to identify the procedures available or to be made available in the future for the conclusion of the consumer credit contract in digital channels.

In both channels, the most used mechanisms to conclude the consumer credit contract are the OTP and the customer-defined password.

Concluding a consumer credit contract in a fully digital way, from the identification and verification of the customer's personal data, to the simulation of credit, presentation of pre-contractual and contractual information, and conclusion of the contract is possible in 19% of institutions in the online channel and in the mobile channel of one institution. Digital contracting may be possible in other institutions if there is a business relationship with the customer (e.g. a bank current account) where the identification and proof of identification has already been carried out previously.

In the **online channel**, the conclusion of the consumer credit agreement through an OTP is possible in 41% of institutions. Approximately 19% of institutions make it possible to sign the contract through a customer-defined password, 13% use the qualified digital signature and another 13% use the coordinates of the matrix card. It is expected that these mechanisms will continue to be the most common in the online channel in the coming years, since 31% of institutions have plans to provide the OTP or the qualified digital signature, and 16% have plans to use the customerdefined password. No institution uses the customer's biometric data, such as fingerprint or facial recognition, and most (78%) have no plans to make this mechanism available in the future.

In mobile applications, the conclusion of the consumer credit agreement is possible through all of the mechanisms identified in the questionnaire. The OTP is the most frequent mechanism in this channel, provided by 23% of institutions, followed by the customer-defined password (13%) and the biometric data (10%). The use of the OTP and the qualified digital signature is expected to grow, with more than 30% of institutions expressing the intention to provide these mechanisms in their mobile applications over the next two years.

All contract signing mechanisms are more frequent in the online channel, with the exception of the customer's biometric data, used only in mobile applications. In the coming years, this difference is expected to remain, since growth expectations do not differ significantly between the two channels.



Chart III.8.1 • Mechanisms used to conclude the consumer credit contract

Source: Banco de Portugal.

Customer support mechanisms

Institutions were asked about the customer support mechanisms available or to be made available in the future during the consumer credit process through digital channels.

The most common customer support mechanism provided by institutions is the call centre, both in the online channel and in the mobile channel.

In the **online channel**, the most common customer support mechanism in the consumer credit process is the call centre, indicated by 72% of institutions, followed by tooltip and FAQ, referred by 50% and 41% of institutions, respectively. Of these most frequent mechanisms in the online channel, the growth prospects of FAQ stand out, with about one third of the institutions expressing plans to provide this option in the coming years.

Chatbot and tutorial are used by only 9% of institutions, although 59% and 50% of institutions, respectively, plan to make them available in the future. Only one institution provides video conferencing and most institutions (69%) indicate that they have no plans to use it in the next two years.

In **mobile applications**, the most common customer support mechanism is the call centre (45% of institutions), followed by the tooltip (13%). The FAQs and the chatbot are used by only one institution, although about half of the institutions indicate plans to provide them in the future. Video conferencing is also provided by only one institution, and most institutions (71%) have no plans to make it available in the mobile channel. Currently, the tutorial is the only feature that is not provided by any institution in mobile applications, although 45% of institutions have plans to implement this functionality in the future.

The percentage of institutions that provide customer support mechanisms in the mobile channel is significantly lower than in the online channel, although it is expected that the difference between the two channels will lessen in the coming years.

According to the questionnaire responses, there is one institution that intends to provide support mechanisms based on co-browsing in both channels in the next two years.



Chart III.9.1 • Customer support mechanisms in the consumer credit process

Source: Banco de Portugal.

10 Constraints on the commercialisation of consumer credit products in digital channels

Financial institutions were asked about the main constraints on the development of the consumer credit process through digital channels.

The gathering and verification of the customer's personal data are the most commonly reported constraints.

Of the institutions surveyed, 22% mentioned aspects related to the gathering and verification of the customer's personal data, namely in the context of the solvency assessment. About 19% of institutions refer to the complexity of activating and using mechanisms that enable distance signature, such as the digital mobile key or the citizen card reader. According to the questionnaire responses, this complexity leads to low adoption rates of these mechanisms by customers. There are also two institutions that report the high costs associated with distance signing.

The requirements of providing pre-contractual and contractual information, in particular the extent of the information to be made available to customers and the need to prove the correct provision of the information by the institution, are mentioned by 13% of institutions. About 9% of institutions still refer the low digital literacy of customers.

IV Provision of payment services

1 Payment services in digital channels

2 Customer support mechanisms

3 Contraints on the provision of payment services in digital channels

This chapter considers the responses of 35 institutions, 20 banks, 10 specialised credit institutions, 4 payment institutions and 1 electronic money institution, whenever they provide or intend to provide their customers with the online channel or mobile channel. Specialised credit institutions were not considered in the analysis of issues relating to transfers, immediate transfers and direct debits.

1 Payment services in digital channels

In the questionnaire, institutions were asked to identify the payment services that they provide or plan to provide in the future in digital channels.

The provision of transfers, immediate transfers and direct debits is more common in the online channel than in mobile applications, with the biggest difference being direct debits.

All institutions allow for transfers in the online channel.

In the **online channel**, it is possible to make **transfers** in all banks, payment institutions and electronic money institutions.

The functionalities related to the management of **direct debits** are available in the online channel of 76% of institutions. The management of direct debits is possible in the online channel of 85% of banks and in two payment institutions.

Immediate transfers are possible in the online channel of 40% of institutions. All institutions that currently provide immediate transfers are banks. Immediate transfers are possible in the online channel of half of the banks. In the coming years, immediate transfers are expected to grow in the online channel, with 40% of institutions reporting plans to make them available. It is anticipated that this service will no longer be offered exclusively by banks, as there are two payment institutions and one electronic money institution with plans to make it available in the future.

Most institutions allow transfers to be made through their mobile applications.

In the **mobile channel**, most institutions (91%) allow to make **transfers**. Transfers are provided by 89% of banks. There are also three payment institutions and one electronic money institution that allow transfers in the mobile channel.

The functionalities related to **direct debit** management are provided in mobile applications by 52% of the institutions. Most banks (63%) provide this service.

Currently, only banks enable direct debit management, although there is one payment institution and one electronic money institution that plan to make this service available in the next two years. The direct debit management functionality is expected to increase in mobile applications, with 17% of institutions expressing their intention to make this service available in the future.

Immediate transfers in the mobile channel are provided by 39% of institutions. About 47% of banks provide this service. Although this service is currently only provided by banks, there is one payment institution and one electronic money institution with plans to offer it in the coming years.



Chart IV.1.1 • Direct debits and transfers in digital channels

Source: Banco de Portugal.

More than half of the institutions provide payment of services in both channels.

Most institutions (69%) enable their costumers to **pay for services** through the **online channel**. This service is provided by most banks (95%), half of the payment institutions, two specialised credit institutions and one electronic money institution.

In **mobile applications**, the **payment of services** is made available by more than half of the institutions (63%). Most banks (89%) offer this service through mobile applications. There are also two payment institutions and one electronic money institution that allow the payment of services in the mobile channel.

Approximately 16% of institutions plan to offer payment of services through mobile applications, a proportion that drops to 9% in the online channel.

Virtual cards are provided by about a third of the institutions, both in the online channel and in the mobile channel.

In the online channel, virtual cards are provided by about a third of the institutions (34%). Half of the banks issue these cards in the online channel. There is also one specialised credit institution and one electronic money institution that allow the creation of these cards. In the coming years, no significant growth in virtual cards is expected in the online channel, since only 14% of institutions express intentions to provide them to their customers.

The issuance of **virtual cards** through mobile applications is possible in 34% of institutions. Around 47% of banks provide this service. Although the cards are mostly provided by banks, there is also one payment institution and one electronic money institution that allow the issuance of virtual cards in their mobile applications. Over the next few years, 25% of institutions express their intention to make virtual cards available in the mobile channel.

Account information services and payment initiation services are those with the highest growth expectations in both channels.

At the time of the questionnaire, there were no institutions offering account information services and payment initiation services, provided for in the revised Payment Services Directive (DSP2). Growth expectations of these payment services for the next two years are similar in both channels. Approximately 60% of institutions plan to provide account information services or payment initiation services, in both channels. Banks represent most institutions with plans to make these payment services available both in the online channel and in mobile applications.



Chart IV.1.2 • Other payment services provided in digital channels

Source: Banco de Portugal.

2 Customer support mechanisms

Institutions were questioned about the mechanisms available or to be made available in the future to support customers in the use of payment services through digital channels.

Call centres, FAQs and tooltip are the most common support mechanisms in both channels.

Call centres and FAQs are the most common support mechanisms in the **online channel**, provided by 74% and 51% of institutions, respectively. Over the next two years, a more significant increase in the number of FAQs is expected, with 17% of institutions having plans to provide this support mechanism (compared to just 3% with plans to use call centres).

There is also a significant proportion of institutions (37%) that uses a tooltip to support their customers in the use of payment services and it is expected that this mechanism will grow in the future, with 14% of institutions expressing their intention to make it available in the next two years.

Customer support through tutorials is not very common in the online channel, being provided by 17% of institutions. Currently, the proportion of institutions that use a chatbot (11%) is the lowest, although this is the mechanism that has the greatest growth prospects in the online channel, with 43% of institutions expressing plans to make it available in the next two years.

In this channel, only two institutions use video conferencing to support their customers and the majority (80%) have no plans to do so in the future.

Chatbot is the support mechanism with the highest growth prospects in both channels.

In the **mobile channel**, the most frequent support mechanism is the call centre, referred by 63% of institutions. In the future, it is expected that institutions will continue to resort to this mechanism, with 13% expressing their intention to make it available in the next two years. The FAQs and the tooltip are provided by 25% and 22% of institutions, respectively. The growth prospects of the FAQs stand out, with 31% of institutions mentioning plans to use this mechanism in the coming years.

Currently, tutorials and chatbots are not very common in mobile applications, being referred by only 9% and 6% of institutions, respectively. However, the chatbot is expected to be a common support mechanism in the mobile channel in the coming years, since about half of the institutions express their intention to provide it. In contrast, video conferencing is used by only one institution and 81% have no plans to make this mechanism available in the future.

Customer support mechanisms are more often available in the online channel than in mobile applications, with emphasis on FAQs and tooltip. Over the next two years, this discrepancy is expected to narrow, as there are greater growth prospects for mobile applications.



Chart IV.2.1 • Customer support mechanisms in the usage of payment services

Source: Banco de Portugal.

3 Constraints on the provision of payment services in digital channels

Financial institutions were asked about the main constraints on the provision of payment services in digital channels.

The challenges associated with strong customer authentication in payment services are the main constraint referred by the institutions.

According to questionnaire responses, the main constraint identified by 23% of institutions has to do with the entry into force of the technical requirements complementary to the revised Payment Services Directive (DSP2), in particular regarding strong customer authentication¹. In this respect, most institutions refer to the need to develop and adapt systems, which leads to the intervention of specialised human resources and entails high costs.

^{1.} Commission Delegated Regulation (EU) 2018/389 of 27 November 2017 supplements the revised Payment Services Directive (DSP2) with regard to regulatory technical standards for strong customer authentication and common and secure open standards of communication. With the entry into force of this regulation, on 14 September 2019, payment service providers will be required to implement strong customer authentication, which is based on the use of two or more elements belonging to the following categories: (i) knowledge (something that only the user knows, such as a password); (ii) possession (something that only the user has, such as a mobile phone); and (iii) inherence (something inherent to the user and identifying him/her, such as a fingerprint). Strong customer authentication must be applied when a customer accesses his or her payment account online, initiates an electronic payment operation or performs an action through a remote channel that may involve a risk of payment fraud or other abuse. There are, however, concrete situations in which the service provider can forgo strong authentication.



V Provision of customer security procedures

1 Security risks

2 Mechanisms to mitigate security risks

3 Channels used to inform customers about security procedures in digital channels

The analysis carried out in this chapter considers the responses of 20 banks, 13 specialised credit institutions, 4 payment institutions and 1 electronic money institution, in a total of 38 institutions.

1 Security risks

In the questionnaire, financial institutions were asked to identify the three major security risks for customers related to the use of digital channels.

Phishing and malware attacks are identified as the main security risks associated with digital channels.

According to the questionnaire responses, **phishing** attacks are the most prominent security risks in the use of digital channels, reported by almost all institutions (87%). This is followed by **malware**, identified by 61% of institutions, and risks related to **theft**, **robbery or misappropriation of payment instruments** and **identity theft**, both identified by more than 40% of institutions.

Pharming and incidents related to the **unreliability of systems and infrastructures** are identified as the most relevant security risks by 24% and 16% of institutions, respectively. Only 11% of institutions consider SIM card swap as one of the most significant security risks and only two institutions report the risks associated with tracking or profiling.

Chart V.1.1 • Main security risks for customers in digital channels (multiple answer)

Source: Banco de Portugal.

Compared to 2016, in 2018 institutions considered the risks related to identity theft less important.

Security risks

Among the institutions that responded to both questionnaires, more importance was given to SIM card swap and the risks related to the misappropriation of payment instruments, each indicated in 2018 by three additional institutions. On the other hand, in 2018 there were seven less institutions that considered identity theft to be a significant security risk for customers.

2 Mechanisms to mitigate security risks

In the questionnaire, institutions were asked to indicate which mechanisms were implemented to mitigate security risks for bank customers, associated with digital channels.

Information encryption by institutions and session time-out due to inactivity are the most frequently used security mechanisms in digital channels.

Almost all institutions surveyed (92%) use **information encryption** and **time-out due to inactivity** as security mechanisms in digital channels.

Most institutions (83%) validate transactions performed by sending a random code (token/OTP) and 78% use features that record the date or time of the customer's last access. There is also a significant number of institutions that use alerts via SMS (64%) or security mechanisms based on biometrics (47%), such as digital printing.

In contrast, the security mechanism least used by institutions to mitigate customer security risks in digital channels is geo-location (25%).

Compared to 2016, in 2018 more institutions are using data encryption, recording the date or time of the last access and biometric data.

Among the institutions that responded both questionnaires, in 2018 the security mechanisms related to data encryption, the registration of the date and time of the last login and biometric data are reported by three more institutions than in 2016. There are also two more institutions referring to alerts via SMS and one more to time-out due to inactivity of the session.

Chart V.2.1 • Security mechanisms implemented in digital channels (multiple answer)

Source: Banco de Portugal.

Most institutions use five or more mechanisms simultaneously to mitigate security risks.

The adoption of several security mechanisms simultaneously contributes to a lower occurrence of incidents in the commercialisation of banking products and services through digital channels. Of the institutions surveyed, the majority (66%) adopt five or more security mechanisms and 30% use six or more security mechanisms simultaneously. There is also a significant proportion of institutions (28%) that simultaneously use three or four security procedures. The percentage of institutions that use only one or two security mechanisms is small (6%).

According to the questionnaire responses, banks are the type of institution that uses a greater number of security mechanisms (on average, five security mechanisms simultaneously). This is followed by payment institutions (on average, four mechanisms at the same time) and specialised credit institutions (on average, three security mechanisms simultaneously).

The average number of security mechanisms implemented by the institutions surveyed in digital channels increased from 4 in 2016 to 4.6 in 2018.

Chart V.2.2 • Number of security mechanisms implemented in digital channels

Source: Banco de Portugal.

2.1 Strong customer authentication

Institutions were also questioned about the security procedures they implement or intend to implement to ensure strong customer authentication in payment services or during the consumer credit process through digital channels. Strong customer authentication is based on two or more elements of the following categories: (i) something that only the customers knows, such as a customer-defined password; (ii) something that only the customer is, validated, for example, through biometric data; and (iii) something that only the customer has, such as an OTP or a token.

Most institutions ensure strong customer authentication through a password and an OTP/token.

Most institutions authenticate or have plans to authenticate customers by combining a customerdefined password (something that only the customer knows) and a random code (OTP/token) sent to the customer (something that only the customer has). However, there are also institutions that choose to use a combination of a password (something that only the customer knows) and a qualified digital signature (something that only the customer has) and institutions that mention the combination of a password (something that only the customer knows) and coordinates of the matrix card (something that only the customer has). According to the questionnaire responses, these are the mechanisms that are most frequently used in the online channel.

With regard to mobile applications, most institutions use or plan to use biometric data validation (something that only the customer is, such as fingerprint or face recognition), coupled with a random code (OTP/token) sent to the customer (something that only the customer has). There are also institutions that mention the use of a PIN or password (something that only the customer knows) in combination with the certification of the device used (something that only the customer has).
2.2 3D Secure Protocol

Institutions were asked how they implement or plan to implement 3D Secure technology in payment cards, in particular if the cards are issued with this mechanism pre-activated or if the technology is activated a posteriori by the customer. Institutions were also asked about the channels through which customers can activate 3D Secure and the channels they use to promote this protocol among bank customers.

This analysis took into account the answers given by the institutions that provide debit or credit cards. In the selected sample, this corresponds to 19 banks, 10 specialised credit institutions and one electronic money institution.

About a third of the institutions issue cards with the pre-activated 3D Secure protocol.

Most institutions (80%) provide the 3D Secure protocol in payments performed in digital channels. Only six institutions (three banks and three specialised credit institutions) do not currently provide this protocol. Of these, four (two banks and two specialised credit institutions) indicate that they do not have plans to provide this in the next two years, which is mainly related to the fact that, currently, they do not issue new payment cards.

The 3D Secure protocol can be automatically activated when the card is issued or activated later at the customer's request. According to the questionnaire responses, 37% of institutions issue their cards with the 3D Secure protocol pre-activated. In the future, it is anticipated that more than half of the institutions will opt for the pre-activation of this safety mechanism. Currently, only 21% of banks choose to pre-activate 3D Secure in the cards they issue, compared with 60% in specialised credit institutions.

About 43% of institutions issue payment cards without pre-activation of 3D Secure. Almost all of the institutions that offer this protocol without automatic activation are banks and there is only one specialised credit institution that issues cards without pre-activation of 3D Secure.



Chart V.2.3 • Implementation of the 3D Secure protocol in payment cards

Source: Banco de Portugal.

In most institutions, customers can activate or deactivate the 3D Secure protocol over the counter, through the call centre or through the online channel.

About half of the institutions allow the activation or management of the 3D Secure protocol at the branch, through the call centre or through its online channel. However, there are no growth prospects for these channels as only a small proportion of institutions indicate plans to provide them in the next two years.

Currently, only 17% of institutions allow the activation or management of the 3D Secure protocol in mobile applications. However, this is the channel with the greatest growth prospects and it is anticipated that in the future about half of the institutions will enable the activation or management of 3D Secure through mobile applications.





Source: Banco de Portugal.

Institutions rely mainly on campaigns on their websites to promote 3D Secure.

Institutions were also asked about the forms they use or intend to use to encourage the activation of 3D Secure by their customers.

Approximately 43% of institutions encourage customers to activate the 3D Secure protocol through campaigns on their websites and 37% do so via email. However, about half refer no plans to use these channels to promote 3D Secure.

The promotion of 3D Secure in branches or the promotion during shopping (promotion of the 3D Secure protocol in online sales sites) is used by 30% of institutions. However, there are no growth prospects for the use of these channels over the next two years, since most institutions (67% and 70%, respectively) say they have no plans to use them to promote 3D Secure.



Chart V.2.5 • Forms of encouraging the activation of the 3D Secure protocol by customers

Source: Banco de Portugal.

3 Channels used to inform customers about security procedures in digital channels

Institutions were asked about the channels used to inform customers about security procedures in digital channels.

Institutions frequently use pop-ups or informational banners in their homebanking or institutional website.

Most of the institutions surveyed (74%) disclose information about risks and safety procedures to their customers when they subscribe digital channels. Despite this, all institutions continue to provide this information to their customers on a later stage, namely through pop-ups or banners in the homebanking or institutional website (82%) or by sending emails or newsletters (45%). Around 24% of institutions also use social networks and 13% use the media.

Only 8% of institutions provide information brochures on security risks and procedures in digital channels at their branches.



Chart V.3.1 • Channels used to inform customers about security procedures in digital channels

Source: Banco de Portugal.

Compared to 2016, in 2018, institutions use social networks more often to disseminate information about security risks and procedures in digital channels.

Among the institutions that responded to both questionnaires, in 2018, the increase of the importance of social networks as a channel for disseminating information on security risks and procedures is highlighted, mentioned by four more institutions, in relation to 2016.

VI Annex 1: Glossary of terms associated with digital channels

Glossary of terms associated with digital channels

Term	Definition
3D Secure	A security protocol that enables cardholders to perform payment card transactions in digital channels in a safer way by entering a single-use code (one code per purchase) sent by SMS to the cardholder's phone.
Account information service	Online service consisting of providing consolidated information about one or more payment accounts held by the payment service user to (an)other payment service provider(s).
Арр	Short for Application. Typically, specialised software developed for a mobile device, such as a smartphone or tablet, for a specific purpose.
Artificial intelligence	Application of computational tools to perform tasks that traditionally require human sophistication.
Biometric reading systems	Technological tools that allow to measure the physical or behavioural characteristics of an individual as a way of identifying him or her (e.g. face recognition, voice recognition, fingerprint reading).
Certification of the device	The certification of the device is the registration by the financial institution of the identification of the customer computer or mobile phone, which can only use that device when accessing the online or mobile channel, respectively.
Chatbot	A computer program that simulates human language and aims to answer the questions posed by customers.
Co-browsing	Technology that allows the joint navigation between two or more people in the same web page.
Digital channel	Includes the online and mobile channel.
Digital Mobile Key	Supplementary and voluntary means of authentication of citizens in portals and websites and of qualified electronic signature, in accordance with Regulation (EU) No. 910/2014 of the European Parliament and of the Council of 23 July 2014.
Geo-location	Identification of the geographical location of an object, namely an Internet-connected device.
Homebanking	Service that provides access to a set of banking products and services (e.g., viewing balances and transactions and making credit transfers) through the internet. Homebanking is accessed through a browser (via smartphone, tablet or computer).
Identity theft	Misappropriation of personal information of the bank customer with a fraudulent purpose.
Immediate transfers	New payment subsystem of the Interbank Clearing System, recently launched by Banco de Portugal, which ensures the continuous processing of credit transfers, 24 hours a day, 7 days a week, 365 days a year, for a maximum amount of 15 thousand euros, with funds available in the beneficiaries' accounts, in a maximum of 10 seconds.
Information encryption	Security mechanism in which the information transmitted is encrypted, readable only by the respective parties and indecipherable for those who do not have access to the code (key).
Malware	Malicious software designed to affect the normal operation of devices (e.g., smartphone or computer) or to collect personal information of bank customers.
Mobile channel	Channel allowing customers to access banking products and services provided by the institution via APP.

Term	Definition
Online channel	Channel allowing customers to access the banking products and services provided by the institution via the internet (browser).
Other interoperability platforms between information systems issued by public services	Interoperability platforms provided for in Article 25 (2) (c) of Law No. 83/2017, of 18 August, excluding the interoperability platform of the Portuguese public administration that allows the electronic use of citizen cards.
Payment initiation service	A payment service which initiates a payment order at the request of the payment service user in relation to a payment account held by him or her in another payment service provider.
Pharming	Fraudulent method consisting of redirecting the bank customer to a false site or a 'false' APP with the appearance of a trusted site or APP ('mirror pages' or 'mirror APPs') with the intention of obtaining confidential customer information.
Phishing	A fraudulent method which is intended to persuade bank customers to provide confidential information, such as username, passwords and security credentials, in particular by sending apparently trustworthy emails or mobile messages (SMS).
Profiling	Aggregation of customers' personal data in order to identify their consumption habits, interests and other personal information for a fraudulent purpose.
Qualified trust service providers	A natural or legal person that provides one or more than one qualified trust service (e.g. creation, verification and validation of electronic signatures or certificates for website authentication) to which the qualified status is granted by the supervisory authority, as provided for in Regulation (EU) No. 910/2014 of the European Parliament and of the Council, of 23 July 2014 (eIDAS Regulation).
SIM card swap	Fraudulent method that occurs when the mobile bank customer device is attacked and the respective calls and SMS are redirected to the attacker's mobile device.
Strong customer authentication	An authentication based on the use of two or more elements belonging to the categories knowledge (something that only the user knows), possession (something that only the user owns) and inherence (something that the user is), which are independent, as far as that breach of one of them does not compromise the reliability of others and is designed to protect the confidentiality of the authentication data.
Time-out due to session inactivity	Time interval after which customers' logins expire due to session inactivity.
Tracking	Access to the bank customer's browsing history (e.g. using a persistent type of cookies) for fraudulent purposes.
Virtual card	Card that does not exist physically, which allows payments to be made in digital channels, sometimes showing a certain period of validity and a maximum amount of use. This card may be associated with a physical debit or credit card.

Source: Banco de Portugal

VII Annex 2: 2nd questionnaire on banking products and services in digital channels

Section 1 – Identification of the reporting institution

1.1 Institution

Designation Institution code

1.2 Spokesperson

Name		
Position/Unit		
Email		
Telephone		

1.3 Products commercialised

Mark with an "X" the categories of products and services provided to individual customers and companies, both through traditional channels and through digital channels.

	Individuals	Companies
Current account		
Consumer credit		
Payment services		

Section 2 – Development of digital channels

2.1 Mark with an "X" the digital channels provided to individual customers and companies.

		Individuals			Companies	
		Ν	0		Ν	0
	Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide
Online channel						
Mobile channel						

2.2 If you marked the answers "Yes" or "Plans to provide" in question 2.1, mark with an "X" the three main reasons that lead you to provide or plan to provide banking products and services in digital channels.

Increase in the volume of transactions
Attracting new customers
Provision of new products and services
Increase customer loyalty
Efficiency gains
Promotion of an image of innovation
Cost reduction
Other – Which? _____

2.3 If you answered "Yes" to question 2.1, mark with an "X" an estimate of the percentage of customers that have already subscribed to digital channels.

		Online channel	Mobile channel
	<5%		
Individuals	[5%; 25%]		
Individuals]25%; 50%]		
	>50%		
	<5%		
Componies	[5%; 25%]		
Companies]25%; 50%]		
	>50%		

2.4 If you answered "Yes" to question 2.1, mark with an "X" an estimate of the percentage of the institution's customers that have actually used digital channels in the last 3 months.

		Online channel	Mobile channel
	<5%		
Individuals	[5%; 25%]		
mumuuais]25%; 50%]		
	>50%		
	<5%		
Companies	[5%; 25%]		
Companies]25%; 50%]		
	>50%		

2.5 If you answered "Yes" to question 2.1, mark with an "X" your forecast regarding the growth of the number of customers that will use digital channels in the coming years.

		Online channel	Mobile channel
	<5%		
la di dala a la	[5%; 25%]		
Individuals]25%; 50%]		
	>50%		
	<5%		
Companies	[5%; 25%]		
Companies]25%; 50%]		
	>50%		

2.6 Mark with an "X" the three most relevant demand-side constraints on the expansion of digital channels.

Lack of knowledge of new technologies by bank customers

Lack of knowledge of customers on the new applicable legal framework

Lack of interest of customers

Lack of digital financial literacy of customers

Concerns related to the sharing of personal data

Security risks perceived by customers

Other(s): _

2.7 Mark with an "X" the customer authentication mechanisms available and/or to be made available in the future for access to digital channels.

		Online channel		Mobile channel		nel
		No			No	
	Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide
Certification of the device						
Access code defined by the institution						
Coordinates of the matrix card						
Fingerprint						
One-time password (OTP) /Token						
Customer-defined password						
PIN						
Facial recognition						
Other(s):						

Section 3 – Current bank account

In the process of opening a current account, mark with an "X" the procedures available and/or to be made available in the future in digital channels.

3.1 Identification and verification of the customer's personal data.

		Online char	inel		nnel	
-		No			No	
	Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide
Digital Mobile Key						
Manual introduction of personal data by the customer						
Reading of personal data through the Citizen Card chip (via the customer's device)						
Other interoperability platforms between information systems issued by public services						
Qualifed Trust Service Providers						
Assisted video conference						
Other(s):						

3.2 Upload of the documents necessary to open an account.

		Online channel		Mobile channel		
		No			No	
	Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide
Digitalisation						
Photograph						
Other(s):						

5.5 FTOVISION OF CONTRACTUAL AND PLE-CONTRACTUAL INFORMATION	3.3	Provision	of contractual	and	pre-contractual	information.
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		Online channel			Mobile channel		
			Ν	lo		No	
		Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide
Pre-contractual information	Automatic opening of information documents						
	Download or email						
	Viewing in the 'customer area'						
	Other(s):						
	Automatic opening of information documents						
Contractual	Download or email						
information	Viewing in the 'customer area'						
	Other(s):						

3.4 Mechanisms for confirming the provision of pre-contractual and contractual information

		Online channel			Mobile channel			
			Ν	lo		No		
		Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide	
	Acceptance checkbox							
Pre-contractual information	One-time password (OTP)							
	Mandatory scroll-down							
	Other(s):							
	Acceptance checkbox							
Contractual information	One-time password (OTP)							
	Mandatory scroll-down							
	Other(s):							

3.5 Mechanisms to conclude the contract.

	Online channel			Mobile channel		
		Ν	0		No	
	Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide
Qualified digital signature						
Coordinates of the matrix card						
Biometric data (fingerprint, facial recognition, etc.)						
One-time password (OTP)						
Customer-defined password						
Other(s):						

3.6 Customer support mechanisms.

		Online channel			Mobile channel			
		No			No			
	Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide		
Call centre								
Chatbot								
Video conference								
FAQs								
Tooltip								
Tutorial								
Other(s):								

3.7 Identify and describe possible constraints on opening a current account through digital channels.

3.8 With regard to the procedures of opening a current account in digital channels, do you resort to any external entity? If so, indicate in which procedures and which entity, as well as the type of information and customer data that is shared with the external entity.

Section 4 - Consumer credit

During the consumer credit process, mark with an "X" the procedures available and/or to be made available in the future in digital channels.

4.1 Assinale com um "X" os produtos de crédito aos consumidores disponibilizados e/ou a disponibilizar no futuro nos canais digitais.

		Online chan	nel	Mobile channel			
		No			No		
	Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide	
Personal loans							
Car loans							
Credit card							
Credit line							
Bank credit accounts							
Overdraft facilities							

4.2 Of the following stages of contracting consumer credit products, mark with an "X" those that you provide and/or plan to provide in the future in digital channels.

		Online chan	nel	Mobile channel			
		Ν	0		No		
	Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide	
Credit simulation							
Automatic gathering of customer data (e.g. Digital Mobile Key, Citizen Card)							
Assisted video conference							
Presentation and download of pre-contractual information documents							
Presentation and download of contractual information documents contractual							
Conclusion of the credit contract							
Other(s):							

		Online chan	nel	Mobile channel			
		N	D		No		
	Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide	
Digital Mobile Key							
IBAN of another credit institution with whom the customer already has a business relationship							
Manual introduction of personal data by the customer							
Reading of personal data through the Citizen Card chip (via the customer's device)							
Other interoperability platforms between information systems issued by public services							
Qualified trust service providers							
Assisted video conference							
Other(s):							

4.3 Identification and validation of the customer's identification details.

4.4 Upload of documents necessary for the consumer credit contract.

No No Yes Plans No plans			Online char	inel		Mobile channel		
Yes Plans No plans Yes Plans No plans		Yes	N	lo	Yes	No		
to provide to provide to provide to provide			Plans to provide	No plans to provide		Plans to provide	No plans to provide	
Digitalisation	Digitalisation							
Photograph	Photograph							
Other(s):	Other(s):							

4.5 Provision of	⁻ pre-contractua	l and contractual	information.
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			Online channel			Mobile channel		
			Ν	lo		No		
		Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide	
Pre-contractual information	Automatic opening of information documents							
	Download or email							
	Viewing in the 'customer area'							
	Other(s):							
	Automatic opening of information documents							
Contractual	Download or email							
information	Viewing in the 'customer area'							
	Other(s):							

4.6 Mechanisms to validate that the customer has read the pre-contractual and contractual information.

		Online channel			Mobile channel		
		Yes	Ν	lo		No	
			Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide
	Acceptance checkbox						
Pre-contractual information	One-time password (OTP)						
	Mandatory scroll-down						
	Other(s):						
	Acceptance checkbox						
Contractual information	One-time password (OTP)						
	Mandatory scroll-down						
	Other(s):						

4.7 Mechanisms to conclude the contract.

	Online channel			Mobile channel		
		No			No	
	Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide
Qualified digital signature						
Coordinates of the matrix card						
Biometric data (fingerprint, facial recognition, etc.)						
One-time password (OTP)						
Customer-defined password						
Other(s):						

4.8 Customer support mechanisms.

	Online channel		Mobile channel			
		No			No	
	Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide
Call centre						
Chatbot						
Video conference						
FAQs						
Tooltip						
Tutorial						
Other(s):						

4.9 Identify and describe possible constraints on the development of the process of contracting consumer credit products through digital channels.

4.10 With regard to the procedures of the consumer credit process in digital channels, do you resort to any external entity? If so, indicate in which procedures and which entity, as well as the type of information and customer data that is shared with the external entity.

Section 5 – Payment services

5.1 Of the following payment services, mark with an "X" those which you provide or plan to provide and, if applicable, indicate the respective business name.

In the column "D/C", mark D if the institution acts only as a distributor of payment services, or C if the institution is simultaneously responsible for the creation and distribution of this service.

			Provided		
	-		N	0	D/C
		Yes	Plans to provide	No plans to provide	
	Virtual card				
	Direct debits				
	Payment of services				
	Payment initiation service				
Online channel	Account information service				
	Transfers				
	Immediate transfers				
	Other(s):				
	Virtual card				
	Direct debits				
	Payment of services				
	Payment initiation service				
Mobile channel	Account information service				
	Transfers				
	Immediate transfers				
	Other(s):				

5.2 Mark with an "X" the customer support mechanisms that you provide, or intend to provide in the future, in the scope of the provision of payment services.

	Online channel		Mobile channel			
		No			No	
	Yes	Plans to provide	No plans to provide	Yes	Plans to provide	No plans to provide
Call centre						
Chatbot						
Video conference						
FAQs						
Tooltip						
Tutorial						
Other(s):						

5.3 Of the payment services that you indicated as having plans to provide in digital channels, describe any constraints that may hinder their implementation.

5.4 With regard to payment services, do you resort to any external entity? If so, indicate in which procedures and which entity, as well as the type of information and customer data that is shared with the external entity.

Section 6 - Security procedures provided to bank customers

6.1 Mark with an "X" the three main security risks related to the use of digital channels.

Theft/robbery or misappropriation of payment instruments	
Incidents related to the unreliability of systems and infrastructures	
Malware	
Pharming	
Phishing	
Profiling	
Identity theft	
SIM card swap	
Tracking	
Other(s), identify:	

6.2 Mark with an "X" the mechanisms implemented to mitigate the security risks for bank customers, associated with digital channels.

Alerts via SMS Biometric data (e.g. fingerprint, voice recognition) Encryption Geo-location Indication of the date/time of the last login Time-out due to session inactivity Validation by token/OTP Other(s), identify: _____

6.3 If applicable, mark with an "X" the channels used to inform customers about security procedures in digital channels (risks and ways to mitigate those risks).

Brochures provided in branches

Information to customers when subscribing to digital channels on secure procedures

Information through the media

Information through social networks

Newsletters/emails sent to customers

Pop-ups/information banners in the homebanking or institutional website

Other(s), identify: _

6.4 What mechanisms do you implement, or plan to implement, to ensure strong customer authentication in digital channels, in particular in the conclusion of consumer credit agreements and the contracting of payment services?

6.5 Mark with an "X" the way you implement, or intend to implement in the future, the 3D Secure protocol on the cards you issue.

	Yes	Ν	10	
		Plans to provide	No plans to provide	
ssuance of card with pre-activated 3D Secure				

I (no activation required by customer)

Issuance of card with no pre-activated 3D Secure (customer activation is required a posteriori)

6.6 If, in question 6.5, you answered that the 3D Secure protocol requires, or will require, the necessary activation by customers, identify whether or not there is a number and amount of payment transactions that customers can make before activating 3D Secure.

6.7 Identify the channels through which customers can activate or deactivate the 3D Secure protocol associated with payment cards.

		N	0
	Yes	Plans to provide	No plans to provide
Branch			
Call centre			
Online channel			
Mobile channel			
Other(s):			

6.8 What forms does the institution use, or intend to use, to encourage customers to activate the 3D Secure protocol?

	Yes	Ν	0
		Plans to provide	No plans to provide
Branch			
Campaigns on the institution's website			
E-mailing			
Promotion during shopping			
Other(s):			

www.bportugal.pt