

# Digital Economy Outlook

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# **Summary**

#### Internet availability in the Spanish households: Generational approach

**Internet availability at home by age and education.** Internet availability at home constitutes a relevant indicator that drives the expansion of Internet use and specialized services, such as electronic banking. An increase of the heterogeneity of such availability is observed over time from a generational point of view. Education level also constitutes a relevant issue in availability.

#### Alternative Lending: Product & Segment specialization

**Entering into the market through specific targets.** Lending product range is very diverse so, to be successful, alternative lenders have specialized in specific parts of the value chain, or they are offering specialized products to market niches.

#### Transatlantic data flows

In need of a new EU-US agreement. On October 6, the European Court of Justice invalidated the 'Safe Harbour' EU-US agreement on which thousands of firms relied for their transatlantic data flows. European and US authorities should now agree on a new legal framework that facilitates the flow of data, key for the digital economy, under appropriate data protection safeguards.

#### Financial Inclusion Data: Taking Stock

More data for financial inclusion analysis. The data we have on consumers helps to better understand how quickly financial inclusion is catching on and to tool financial services products appropriately to different market segments. Data at higher levels helps too: information about financial services providers is essential for regulators to monitor the market. Data matters, and it will shape the path of financial inclusion. The Digital transformation should help.

### Digital issues in the EC's work plan 2016

**Implementing the Digital Single Market Strategy.** On 27 October, the European Commission published its work program for the upcoming year. The main priorities continue to be those presented in May: pursue a Capital Markets Union, the Trade and Investment Strategy and the implementation of the Digital Single Market Strategy destined to enhance the growth and employment.



# 1 Internet availability in the Spanish households: generational approach

#### Internet availability at home by age and education

Internet availability at home constitutes a relevant indicator that drives the expansion of Internet use and specialized services, such as electronic banking. An increase of the heterogeneity of such availability is observed over time from a generational point of view. Education level also constitutes a relevant issue in availability.

#### Consumer generations

Using data from the Survey on Equipment and Use of Information and Communication Technologies in Households (ICT-Households) of the Spanish National Statistics Institute (INE) between 2003 and 2015, several groups of consumers above 15 years old in 2003 has been generated, in intervals of ten years except the last group, which includes people who are above 65. As from this classification for the year 2003, the age thresholds are moved from year to year for the use of more recent surveys. This exercise allows controlling the evolution and behaviour of this variable by generations.

Figure 1.1 shows the evolution of individuals surveyed who confirm Internet availability at home.

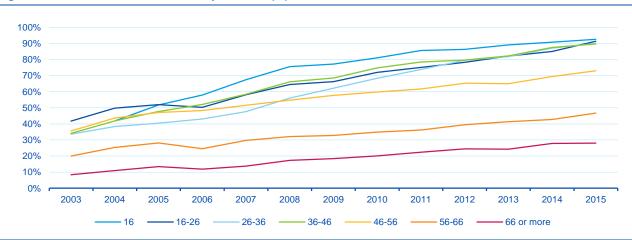


Figure 1.1 Age distribution of Internet availability at home (%), 2003-2015

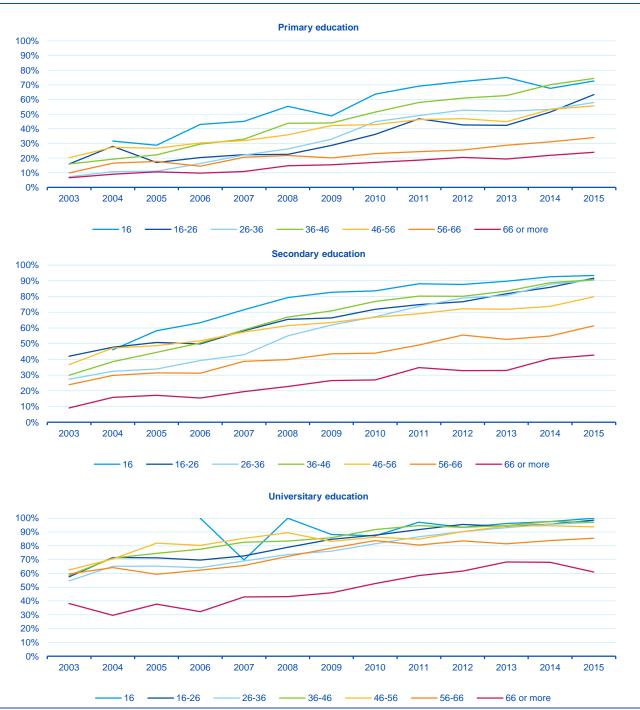
Source: BBVA Research based on ICT-Households (INE)

The results confirm a continuous increase in Internet availability at home in any age interval between 2003 and 2015. However, the growth rate has been more intensive for young and medium age collectives (below 46 years old in 2003) than for the older groups. In the case of people between 46 and 56 years old in 2003, who started in a higher comparative position, a similar evolution to older groups is observed. This fact suggests that the initial position is not relevant to define the future behaviour in Internet availability at home. It has been generated a dichotomous process of percentage concentrations between collectives below 46, and a distancing respect to the other groups. Therefore, an increase of the generation gap in the behaviour related to this variable is shown.

#### Education in Internet disposition at home

Three education levels are distinguished: Primary Education or lower, Secondary Education and University Education or upper. The results for each education level between 2003-1015 are shown in Figure 1.2.

Figure 1.2 Education and age distribution of the Internet availability at home (%), 2003-2015



Source: BBVA Research based on ICT-Households (INE)

A positive link exists between education level and percentage of people who have Internet at home, regardless of age. People with university education have reached maximum percentages in all age groups except in those above 56. The generational differences discussed above are shown in a very similar way in secondary education. Primary education provides different nuances: this group shows a similar result to secondary education in the dichotomy between younger and older than 56. However, the concentration process along time in the younger groups does not occur.



# 2 Alternative Lending: Product & Segment specialization

#### Entering into the market through specific targets

Lending product range is very diverse so, to be successful, alternative lenders have specialized in specific parts of the value chain, or they are offering specialized products to market niches.

#### Alternative Lending Landscape

Alternative lending is arguably one of the hottest topics in digital banking disruption today. This is because, for the first time, new non-banking competitors have started to successfully challenge a core competence of banks: lending, which amounts for a significant share of all banking profits. In this article we focus on the product and segment specialization approach taken by online alternative lenders, that is, lending business done by non-banks using Internet as main touch point with their customers.

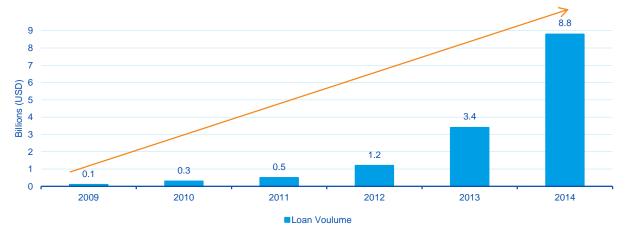
The financial crisis that the world entered in 2007 has impacted credit issuing as losses and new banking regulation required banks to increase and improve their capital levels, reducing credit profitability and sparking deleveraging during the last few years.

In addition, consumers and businesses are also evolving in their demands. The digital transformation that has affected other industries during the last 15 years, has also arrived to financial services. Almost all banking services could potentially be delivered digitally. In the case of lending, borrowers expect to be able to ask for a loan online through any of their devices, at any time, and obtain an approval or denial to their request in a short period, immediately if possible.

This context has facilitated the rise of new players entering the lending market. These new players are specializing in specific products and client segments, providing better user experience through online engagement and lower feedback time. In addition, they have focused on improving customer critical parts of the value chain, mainly on the origination processes, using new data sources, methods, and algorithms for credit decision.

Despite these new players are still small, in terms of total loan originations, some of them are growing fast with CAGRs of 130% during the last 5 years.





Source: Lending Club, Prosper, Funding Circle, Zopa, RateSetter, Liberum



#### Some examples of product and segment specialization

One of the segments with high traction in alternative lending is unsecured consumer loans. Main players here are Lending Club and Prosper in the US, and Zopa and Ratesetter in the UK. They offer term loans of 3 to 5 years, with an average loan size around \$15,000. They usually target good borrowers with prime FICO scores (US) to offer them debt refinance or consolidation (mainly credit card debt) at lower rates. Frictionless customer experience is also one of their key value propositions, with all the origination process managed through online channels.

The single product where alternative lenders are getting more market share is payday loans. This type of products are usually short term loans (less than 2 months) and low value (less than \$600). They are oriented to subprime customers that are not able to get approvals from traditional banks, so lenders apply huge yields, sometimes more than 1300% APR rates. Main players in this space include LendUp, Kreditech, and TrustBuddy, among others.

Another niche where alternative lenders are being successful is student loans, mainly in the USA, where college education is expensive. Alternative lenders use student performance and other complementary data like job history to assess risk so they could refinance government or college loans offering better terms and conditions to students. One of the main players in this space is SoFi and additional players include Upstart, Prodigy Finance, Pave, and CommonBond.

Other alternative lenders are focusing on SMEs. Bank credit, through term loans, is one of the main sources of external financing for small businesses and is key to help them maintain cash flow, purchase new inventory or equipment, hire new employees, and grow their business. There are a broad range of alternative models emerging in commercial finance, including receivables purchases and innovations in specialized lending by verticals. Alternative lenders are still small (around \$7B of \$700B outstanding small business loans in USA) but they are growing fast, registering triple digit year-over-year growth rates. Some of the main players here are OnDeck, Kabbage, Funding Circle, and CAN Capital.

Mortgages used to be one of the biggest lending pools dominated by banks. New digital lenders have not been very active in this space until now. But a few months ago SoFi entered into mortgage market and is looking to do \$1B of business by the end of 2015. Other non-bank originators, like Quicken Loans, PennyMac Financial or Freedom Mortgage, have been offering their services for a while. In fact, non-bank originators accounted for 38% of the \$1.2tn mortgage origination market in the US in 2014 up from a 27% the year before.

These are only some examples of how new online lenders are entering into the market, focusing in one specific customer segment or product at the beginning, and later on diversifying to other products for the same customers, so has done SoFi with mortgages; or extending customer reach as Lending Club, who began in the consumer segment and now offers loans to small businesses too. We will see in the coming years how these alternative lenders evolve.



# 3 Transatlantic data flows

#### In need of a new EU-US agreement

On October 6, the European Court of Justice invalidated the 'Safe Harbour' EU-US agreement on which thousands of firms relied for their transatlantic data flows. European and US authorities should now agree on a new legal framework that facilitates the flow of data, key for the digital economy, under appropriate data protection safeguards.

#### Background: the Data Protection Directive and the 'Safe Harbour' scheme

The 1995 EU Data Protection Directive forbids the transfer of personal data outside of the European Union unless the country receiving the data ensures an adequate level of protection. The adequacy must be assessed by the European Commission, which is empowered by the directive to decide whether a third country ensures an adequate level of protection by reason of its domestic law or of the international commitments it has entered into. Following this provision, the European Commission considered, in a decision adopted in 2000, that the US "Safe Harbour" scheme ensures an adequate level of protection. The "Safe Harbour" is a self-certifying mechanism, administered by the US Department of Commerce, that requires the participating firms to sign up to a set of data protection principles. This scheme has been used by thousands of companies (4484 are currently adhered) in the last 15 years as the legal basis for transferring personal data from the EU to the US.

#### The ruling of the EU Court of Justice

On 6 October 2015, the European Court of Justice (ECJ) declared invalid the Commission's Safe Harbour Decision on the grounds that the scheme compromises some EU fundamental rights such as the right to respect for private life. This is partly due to the US legislation – prevailing over the Safe Harbour scheme – that permits the public authorities to have general access to the content of electronic communications. Indeed, the ECJ judgement comes after an Austrian Facebook user addressed a complaint to the Irish Data Protection Commissioner arguing that, in the light of the revelations made in 2013 by Edward Snowden, the transfers of data from Facebook's Irish subsidiary to servers located in the US allowed surveillance by public authorities. After the ECJ judgment, the Safe Harbour scheme does not longer provide legal certainty for the transfer of personal data across the Atlantic, as national data protection authorities may now suspend these transfers. Therefore, firms previously relying on the Safe Harbour scheme as the legal basis for their data transfers are now moving to other (case-specific) legal mechanisms such as standard data protection clauses in contracts between companies or binding corporate rules in the case of intra-group transfers. In the absence of such formulas, legal uncertainty prevails until national authorities decide on the matter.

#### Looking forward: the need of a new EU-US framework

Since 2013, the European Commission is in negotiations with the US Department of Commerce to agree on a renewed legal framework for transatlantic data flows with a higher level of protection. According to the Commission's statements, this would imply going beyond a self-regulating mechanism (such as the invalidated Safe Harbour) to an oversight system backed up by significant enforcement. The ECJ ruling invalidating the existing framework makes even more urgent the need of a new EU-US agreement on the protection of personal data. The new framework has to be built not only on the ECJ judgment but also on the new EU General Data Protection Regulation – now under 'trilogue' negotiations – that will replace the 1995 directive. In the meantime, the Commission and the national data protection authorities have the responsibility to provide clarity to firms regarding the ECJ judgment and ensure a uniform approach to US data transfers across the EU. The use of data is one of the engines of the digital economy and has to be facilitated under a regulatory framework that provides certainty to firms as well as protection to consumers.



# 4 Financial Inclusion Data: Taking Stock

#### More data for financial inclusion analysis

The data we have on consumers helps to better understand how quickly financial inclusion is catching on and to tool financial services products appropriately to different market segments. Data at higher levels helps too: information about financial services providers is essential for regulators to monitor the market. Data matters, and it will shape the path of financial inclusion. The Digital transformation should help.

#### Why data is important for financial inclusion

You are a beneficiary of data. The materials in those shoes you are wearing were chosen over other materials because of data on cost, durability, and consumer opinion. When you go to the supermarket, you can easily find the chocolate bars because data told company marketers that if the chocolate bars are at the front of the store, consumers will be more likely to buy them. When you use public transportation, the fare you pay is based on data on the cost of the system and estimates of how many riders there will be.

Some people think data is boring. For those people, we say "tough luck." Data is inevitable. Data provides the information on which economic decisions are based. More data provides more knowledge, information and transparency, helping all economic agents make better decisions, and through this, increasing society's welfare.

It is no wonder, therefore, that data is critical for financial inclusion, as the financial services industry expands its focus toward harder to reach and lower income populations. The data we have on consumers helps to better understand how quickly financial inclusion is catching on and to tool financial services products appropriately to different market segments. Data at higher levels helps too: information about financial services providers is essential for regulators to monitor the market. Data matters, and it will shape the path of financial inclusion.

Last month at the invitation and of the Inter-American Development Bank we met at the IDB's Washington, D.C. headquarters with a group of people from many institutions across the financial services industry from large international organizations to small research institutions to global banks to take stock of what data is out there, how much information could be available, how it can best be used, and how data efforts can be improved. There have been strong efforts to improve data from the demand side (customers), such as the Global Findex. Despite many data collection initiatives on the supply side (providers), there are still gaps that could be important for improving and evaluating convenience and accessibility of potential financial services for those who are unbanked.

#### Major data sources for financial inclusion

In the last few years, the number of data sources measuring aspects of financial inclusion has risen dramatically. Organized into number of markets covered, here are some of our go-to datasets:

#### Large Scope: 50+ markets

The World Bank Global Findex: If you work in financial inclusion you probably already know about the Findex. Conducted in partnership with the Gallup World Poll, it's a demand-side look at how individuals save, borrow, make payments, and manage risks. Country-level data that was collected in 2014 are available and the 2014 microdata (at the individual level) will soon be released. The survey includes the results of interviews with approximately 150,000 adults in over 140 countries. Along with 2014, Findex data was collected in 2011.



The IMF Financial Access Survey: This database offers a country-level assessment of the supply side including indicators like bank branch and ATM density, number of active deposit and mobile money accounts, number of loans, and more. The data span 11 years (the most recent year available is currently 2014) and 189 countries.

**The Global Microscope**: This yearly publication and excel model, carried out by the EIU, examines and ranks the environments for financial inclusion in 55 countries, an effort that has been refined since 2007 when it was focused exclusively on the environment for microfinance in Latin America. The data cover policy, government capacity, infrastructure, and stability, and provide deeper market-level insights in the publicly available Microscope Model.

**The World Bank Enterprise Surveys**: These surveys are conducted on 130,000 small and medium-size businesses in 135 countries, varying in quality, depth, and most recent year. Since about a decade ago, data collection was centralized within the Enterprise Analysis Unit in the World Bank, with a prescribed methodology. Questions relevant to financial inclusion include access to finance and informal sector practices.

**MixMarket**: This source remains the most reliable source on MFIs, including financial and social performance data submissions from over 2000 individual MFIs, covering over 100 markets. Some indepth information requires a paid subscription, but for many users the free data are enough for research. Data go back as far as the early 2000s.

**Microinsurance Landscape Surveys**: The only major source of data on microinsurance that we could find when CFI wrote its 'By the Numbers' report, these surveys on insurance policy are conducted in a different region each year, and allow for comparison across regions to better understand what types of microinsurance are being used. The most recent data are from 2014. Microdata are not available to our knowledge.

The GSMA Global Adoption Survey of Mobile Financial Services: This survey, with its participants including the major telcos who are GSMA members, looks at mobile money: credit, insurance, and savings. For those members who contribute data, GSMA provides an individual benchmarking report to show how the provider fares against its industry peers. For non-participants, a subscription is required to access market-level insights.

The World Bank Global Payment Systems Survey: While only conducted in 2008 and 2010, this seems to be the most comprehensive data available on payment systems worldwide. It covers 120 countries, with data dating back in many countries to 2004. The data cover volume and number of transactions in payment and settlement systems and have guided reform efforts in payments policy and regulation.

#### Small To Medium Scope: Up to 50 markets

**The OECD Pisa Assessment**: Every three years, this survey is conducted to assess the education level, including the financial literacy, of 15 year-olds in over 70 economies. The Financial Literacy Module is available in 18 countries. The most recent survey was conducted in 2012.

**The FinScope Survey**: This survey has been conducted by Finmark Trust in 21 countries, primarily in Africa, to better understand the demand side of financial services (primarily banking). Data can be obtained for a fee in some cases.

**FinAccess**: This survey, conducted by FSD Kenya, was a 2013 deep-dive into financial services access and usage in Kenya. It covers similar information to the FinScope survey, but is conducted by a different institution.



**Financial Inclusion Tracker Survey**: Conducted by InterMedia, this survey and analysis focused on tracking whether and how mobile financial services improve people's lives over time.

**Finclusion.org**: A project of InterMedia, these data include time-series market deep-dives in Bangladesh, India, Indonesia, Kenya, Nigeria, Pakistan, Tanzania, and Uganda. The survey is a comprehensive and reliable source for understanding uptake and use of mobile money services, and the analysis is linked to qualitative research as well.

**FINclusion Lab**: This resource, which is part of the MIX, allows users to see supply-side data on a geospatial map, covering topics at the microdata level in 22 countries. The data come from both public sources, national governments, and industry insights, with MIX actively working with all data providers to ensure accurate and complete information.

The Brookings Financial and Digital Inclusion Project: The most recent addition to this list, this dataset assesses and ranks both the environment for and the uptake of mobile money in 21 countries. It uses existing data combined with its own assessment to better understand country commitment, mobile capacity, the regulatory environment, and the adoption of traditional and digital financial services.

#### Major uses of data for financial inclusion: A bank's perspective

BBVA Research is an enthusiastic consumer of the data produced by the institutions listed above. When coupled with BBVA's internally-generated data, the result is a resource that helps the bank shape its financial inclusion strategy in new and innovative ways. And, of course, this resource is also a contribution for policy makers and those interested in better understanding the challenges of including those who are not participating in the financial system.

BBVA Research has explored the public information on financial inclusion. Some of this was already detailed and systematized information in the form of microdata, but other portions were scattered data, captured in different disorganized databases. Through BBVA Research's effort to collect and organize this data, the most comprehensive global data base for bank agents (also known as "banking correspondents") has been constructed. This information is considered key in assessing the current status of financial access and inclusion, especially in emerging economies.

Also, by this combining of relevant data bases, BBVA Research was able to construct an influential financial inclusion index, the BBVA Research Multidimensional Financial Index for Financial Inclusion. The BBVA Research index measures the efforts of more than 80 countries on financial inclusion. It considers three key financial inclusion dimensions: access, use, and barriers to use. The first dimension measures all the efforts made by financial institutions to provide different channels for financial intermediation. The second dimension takes into account the current participation of people in the financial system by using the channels available. The third dimension considers the structural factors that block efforts for expanding financial deepening. Variables such as trust of financial institutions, documentary burden for opening an account, cost of financial intermediation, and difficulties for accessing financial channels are some of the most relevant.

Currently, BBVA Research is working on new efforts to improve financial inclusion data by implementing SMS message-based randomized control trials on mobile money, taking advantage of the increasing use of mobile phones in emerging economies and the growing interaction with banking services. The experiment is being applied to BBVA clients considered part of the financial inclusion segment in order to understand how they save and the factors that might be important to improving money management behaviors. The results will contribute to strengthening BBVA's services offerings, and expand the status of data for financial inclusion.



# 5 Digital issues in the EC's work plan 2016

#### Implementing the Digital Single Market Strategy

On 27 October, the European Commission published its work program for the upcoming year. The main priorities continue to be those presented in May: pursue a Capital Markets Union, the Trade and Investment Strategy and the implementation of the Digital Single Market Strategy destined to enhance the growth and employment.

#### Main goals of the Digital Single Market Strategy

Given that Information and Communication Technology (ICT) are part of an increasingly important sector of the economy and have become fundamental for improving the quality of life and work of individuals, the European Commission is convinced of the necessity of a common and coordinated EU digital framework. The purpose is to reduce barriers and support the change that is happening in the digital arena and is extending to other sectors, and could be essential for economic growth and employment generation going forward.

The goal is based on three pillars and is expected to provide, once all policy measures have been fully and properly implemented, an additional EUR 415 billion to Europe's GDP per year, roughly equivalent to adding Belgium's GDP, and over 223,000 new jobs created by 2020<sup>1</sup>:

- 1. Improve consumers and businesses access to online services and goods across Europe.
- 2. Create adequate conditions for digital networks and services improvement.
- 3. Maximize the growth potential of the European Digital Economy.

The strategy, by implementing 16 measures, is to be achieved by the end of 2016. It is focused on the reduction of the administrative burden on businesses arising from differentiated VAT regimes, a reform of current telecom rules and initiatives on data ownership, free flow of data throughout the EU, and on establishing a European Cloud. All of these measures, including the new initiatives, are aimed to i) tackle barriers for free movement of data within EU, ii) ensure competition and transparency in the digital word, iii) harmonize rules on contracts and consumer protection and iv) promote cross-border online sales.

#### Work program updates

The European Commission includes in its program for next year's legislative process proposals on portability, copyright, digital contract rights, geo-blocking and the free flow of data. They also include a review of the telecoms regulatory framework, the Satellite and Cable Directive, the Audiovisual and Media Services Directive, the VAT for electronic commerce and the regulation regarding consumer protection. With the cooperation of legislators an agreement is expected to be reached by the end of the year on Data Protection Reform and on the Network and Information Security Directive, both are key to ensure the trust and security of the digital single market.

The implementation of the Digital Single Market Strategy will not be easy because it requires a high level of coherence and consistency with the rest of EU initiatives aimed to achieve a complete banking union. But it is a step in the right direction.

<sup>1:</sup> Information obtained from the Document "Mapping the Cost of Non-Europe, 2014 - 19". For additional data consult the Document "A Digital Single Market Strategy for Europe - Analysis and Evidence".

# Digital news



#### CJ rules that Bitcoin purchases and sales are VAT exempted

On 22 October, the European Court of Justice (ECJ) ruled that the exchange of traditional currencies for units of the 'bitcoin' virtual currency must be exempt from VAT. The ECJ judgement is based on an exemption provision in the VAT directive concerning transactions relating to 'currency, bank notes and coins used as legal tender'. The Court takes thus the view that the bitcoin is a mean of payment used in a similar way to legal means of payments.

#### WEF reports on the future of FinTech



The World Economic Forum (WEF) analyses in a report a stock of what the finance industry has provided to date and how the FinTech industry has taken over some of the funding with its innovative business models and products. Because FinTech solutions are efficient and effective at lower scale, small and medium-sized businesses will be one of the main beneficiaries of FinTech's disruptive power. This new industry provides credit and financial services using technology and big data, and filling a gap left by traditional financial services providers.

#### IIF work on Regtech



The Institute of International Finance (IIF) has launched a regtech work stream to foster dialogue between the financial services industry and the technology and regulatory communities. The aim of the work steam is to analyze the most pressing needs of financial services firms and, together with regtech companies, facilitate potential technology-driven solutions to compliance, reporting and supervisory requests. These solutions have the potential to solve regulatory and compliance burdens more effectively and efficiently.

#### The European Parliament approved ban on roaming fees



On 27 October, The European Parliament (EP) approved a complete ban of roaming charges for using mobile phones abroad in the EU, as part of the new telecoms package. This package also includes EU-wide rules on net neutrality that oblige firms offering internet access to treat all traffic equally. These steps are taken as part of the 'Connected Continent' proposal for a single telecoms market, aimed to tackle existing bottleneck hindering the development of the Digital Single Market (DSM).



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# **Digital Economy** Outlook

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