

A photograph of two women in a cafe setting. The woman in the foreground is holding a black mobile payment terminal with a white smartphone attached to it. She is smiling and looking towards the camera. The woman in the background is also smiling and looking towards the camera. The background is blurred, showing a cafe interior with warm lighting and shelves with various items.

# Tech in banking: in strong demand but adopted with care

ING International Survey - New Technologies 2019

thinkforward



This survey was conducted  
by Ipsos on behalf of ING



# Natural caution aside, consumers are embracing banking technology

A lot is changing in banking. With data sharing, automation, fintechs and more, consumer choice has never been greater.

ING's 7<sup>th</sup> annual survey on attitudes towards financial technologies is a story of the steady adoption of mobile banking, albeit with some natural hesitation, and a continued consumer interest in tech.

Meanwhile, there is room for new players to enter the field. Even though many consumers remain with just one bank, a similar amount now use additional financial service providers, too. New players are often heavily focused on tech and could further boost the use of new banking technologies.

## The curve of adoption

Findings collected over the past five years demonstrate that we have become increasingly active in managing our money on the go. Since 2014, we have seen the use of mobile banking follow a general bell curve – rising from the first few early users (or 'early adopters') to a peak of adoption where it entered the mainstream, and back down.

Now we face new technologies and opportunities: more ways to share data, financial technology companies (fintechs) providing specialised services, automated advisors, and new security systems such as voice, face and fingerprint recognition.

We asked how people feel about these changes and how they are already integrating them into their lives. What we found suggests many are enthusiastic about banks providing new technologies, yet in some cases we are too early on in the adoption phase for widespread acceptance.

## Data sharing

The European Union's new Payments Services Directive (PSD2) allows for the sharing of financial data by institutions with consumer permission, but given it is still in its infancy, it's no surprise that few in Europe (32%) say they are aware of this service. And while some countries show relative enthusiasm, such as Germany where 61% of those who have heard of the service say they like the idea, it is not universal. For example, 63% of the Dutch who have heard of it say they would not want their data to be shared.

Academic research suggests more than awareness is needed to determine whether people will adopt such new technology. It needs to be useful, compatible with lifestyles, easy to use, quick to work, and to be seen to be used by others.

## Automated Banking

There is reluctance to handing over financial decisions to a computer, although people are more open to having a computer program analyse their spending habits and recommend improvements. Some 61% of Europeans said they would not be happy to have an automated program make investment decisions on their behalf. That number dropped to 35% when it came to being given advice.

But while we are wary of some technology, we are keen to have the latest options available: around three-quarters (73%) of Europeans want their financial service providers to deliver the goods, agreeing banks should deliver the latest tech.

## FinTech

Most people are loyal to their main financial institution, but 45% of Europeans and 49% of Americans also use alternative providers to supplement their money management activity. These providers, along with banks, are delivering environments for further technology adoption.

The same can be said for security. Mechanisms that are considered secure tend to be those that have been around for longer – a case of familiarity not breeding contempt. Newer methods of identification, such as voice recognition, will take time to be accepted. Though their inclusion in some of the latest flagship smartphones could speed up the process.

Mobile banking is now a habit for many people, but it did not happen overnight. New systems such as automatic (robo) advice and data sharing may follow the same pattern: slow initial acceptance followed by widespread uptake. And fast growth of technological advancements, coupled with market disruption by fintechs, could see new technologies entering the mainstream more quickly than in the past.



Jessica Exton, behavioural scientist

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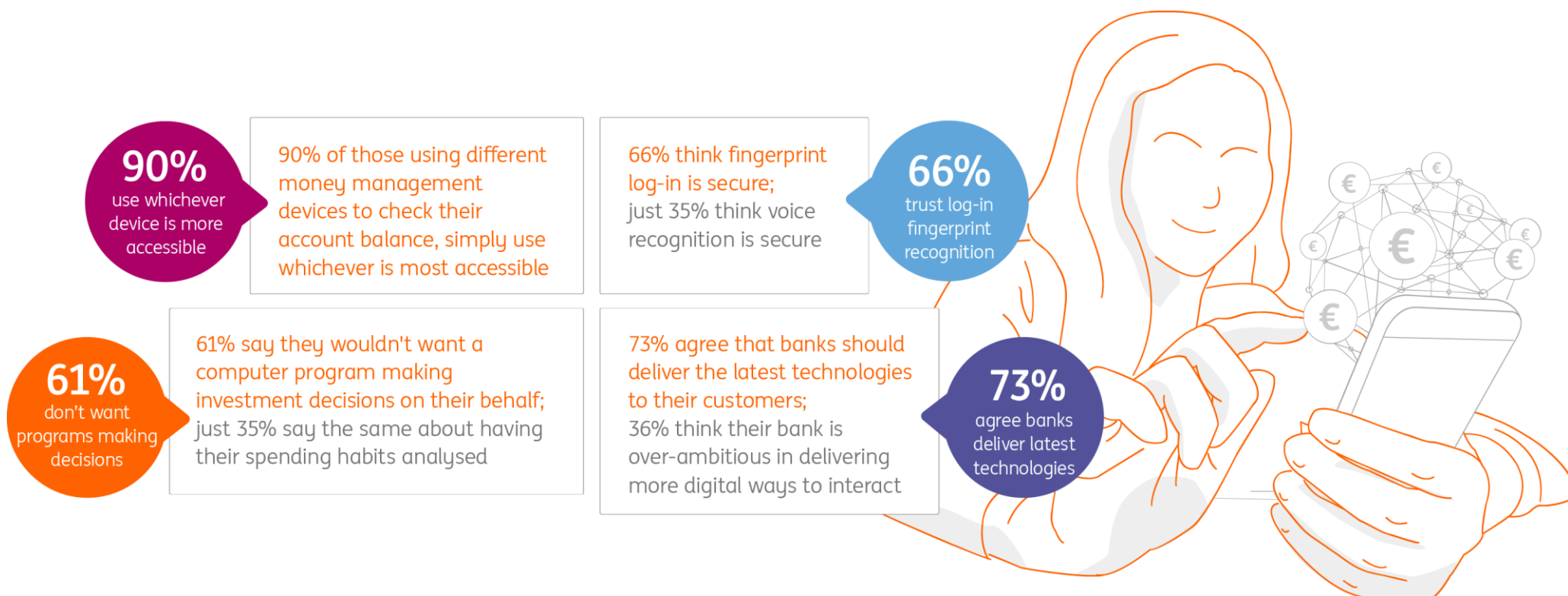
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# More banking tech? Yes – if we're in control

People need time to adopt new technology. That's true for banking tech as well – nobody likes to rush into changing financial habits. But once people are familiar with new tech, embracing it can make sense.

ING's new technologies survey 2019 shows that consumers want their banks to keep coming up with new ways to manage money, even if most won't immediately start using it. They prefer to let early adopters test the waters.

The survey also shows people want to stay in control of their money. While they're happy to accept recommendations from robo-advisors, they're not willing to give up the driver's seat.





A person wearing a blue denim jacket is holding a silver smartphone with both hands. In the foreground, a tablet with a blue case lies on a wooden table. The background is blurred, showing an indoor setting.

Seamless use  
across multiple  
devices a must

# Mobile banking: now a standard for many

Europeans are increasingly using smartphones and other forms of mobile technology to do their banking. We see this in a series of responses to our surveys going back to 2014.

We are not alone in mapping the rising use of smartphones for banking. U.S. Federal Reserve researchers reported (1) in 2017 that 51% of all U.S. adults with a bank account used mobile banking. This was steadily up from 38% in 2015 and 35% in 2014.

Some of this may reflect the continuing rise in people using the internet in general, which is now in the high 80% region in most developed economies, according to Pew Research Center research (2). But it also reflects a willingness to change and learn: people are adopting to new ways of living online when presented with the chance.

Our research suggests that the percentage of people starting to engage in mobile banking has followed the general bell curve of adoption. Here, a small set of early adopters first starts using new tech, followed by a major uptake as it enters the mainstream market, before the number of new users falls back down as it reaches the late adopters.

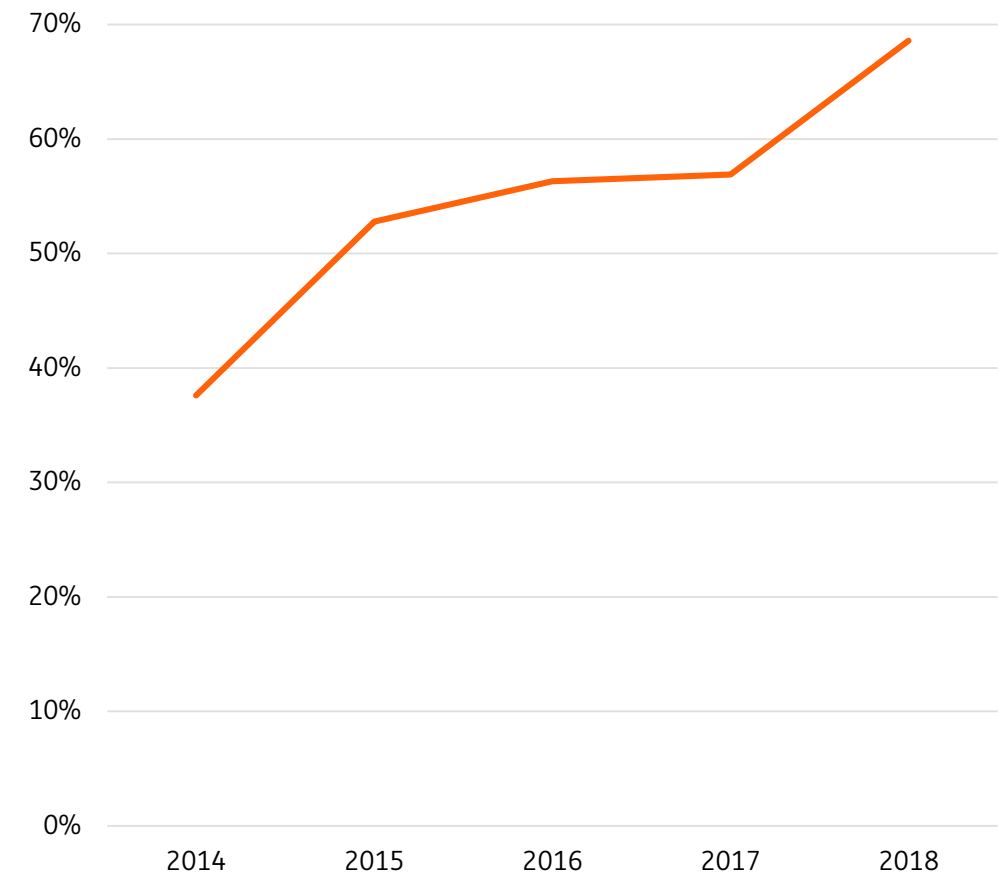
Indeed, we saw that more than half of people who have done their banking on the go began doing so between 2014 and 2015. While initial uptake was relatively slow, a majority followed in a few short years.

As financial technology is really only in its early stages – with many recent advancements like automated advising and data sharing moving into the early adoption stage – we will likely see more bell curves ahead. The question that remains is: how fast will they happen?

The question

Do you use mobile banking? / Have you ever done your banking on a smartphone?

European consumers only. Those who responded 'Yes'. Note: we asked 'Do you use mobile banking?' in 2014, '15 and '16, in 2017 and '18 the question was 'Have you ever done your banking on a 'Smartphone?'.



Sample Size: 12,403 (2014) 10,169 (2015) 11,012 (2016) 10,745 (2017) 11,475 (2018)

(1) <https://www.federalreserve.gov/econres/notes/feds-notes/mobile-banking-a-closer-look-at-survey-measures-accessible-20180327.htm#fig1>

(2) [https://www.pewglobal.org/2018/06/19/social-media-use-continues-to-rise-in-developing-countries-but-plateaus-across-developed-ones/pg\\_2018-06-19\\_global-tech\\_0-00/](https://www.pewglobal.org/2018/06/19/social-media-use-continues-to-rise-in-developing-countries-but-plateaus-across-developed-ones/pg_2018-06-19_global-tech_0-00/)

## Those who use many devices say they have no preference

When it comes to using multiple devices to manage money, it appears that the vast majority who already use different devices do not care which one they use. Responses suggest that this group, an average of 32% of Europeans across the different activities, are “tech-agnostic”. Their main requirement is accessibility.

Between 87% and 90% of European respondents who say they use multiple devices to manage their money just grabbed what was nearest to check their balances, transfer money, pay a bill or send money to family and friends.

However, additional analysis of our results shows interesting country differences in how many people use multiple devices for the one activity: smaller numbers in the UK (28%) and Germany (29%) use multiple devices to check their account balance, while larger groups do so in Turkey (56%) and Poland (56%).

Grabbing what is nearest does depend on what is there. Ninety-one percent of respondents in Europe say they have a smartphone and 89% have a laptop or desktop computer. By contrast, only 14% have a wearable device like a smartwatch that could do the job.

We were broad in our definition of “devices”, including mobile phones, tablets, computers and smartwatches, and allowing for access via app, web page and messaging, among other techniques.

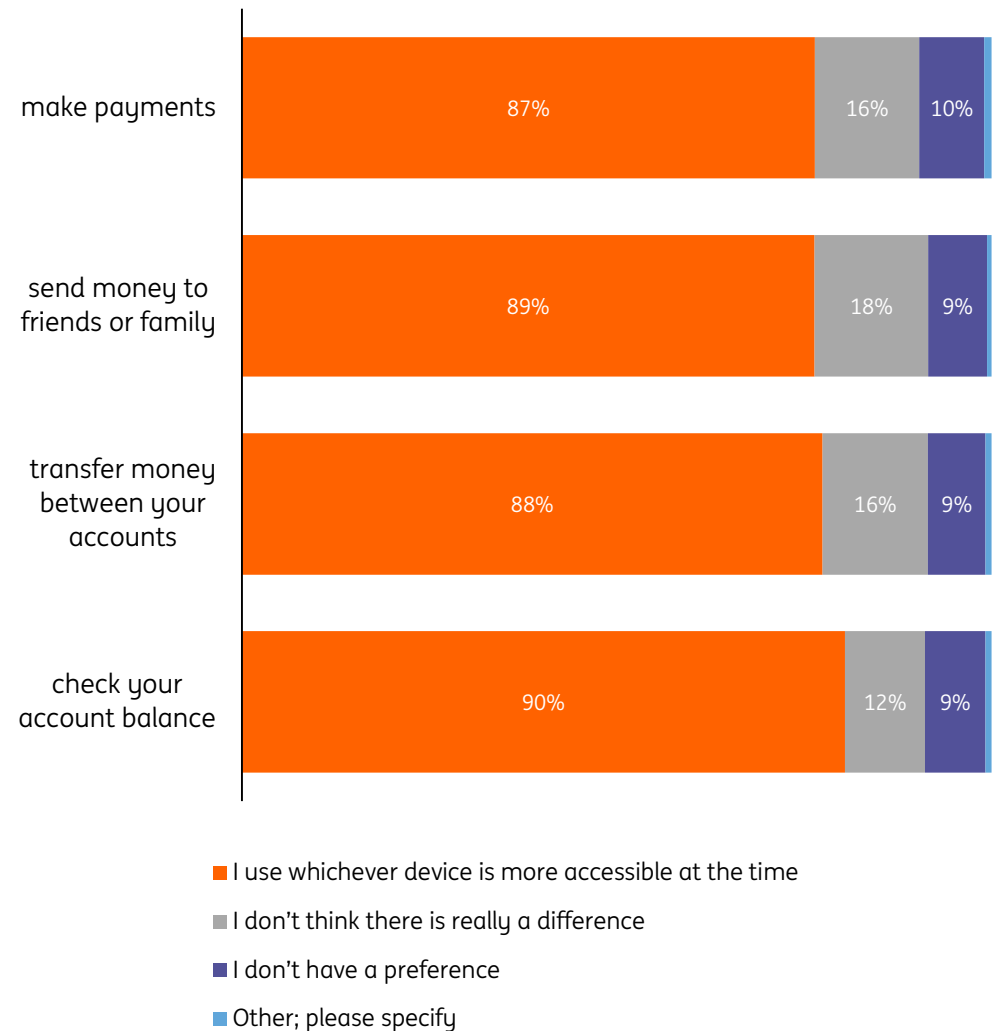
Different forms of technology are clearly becoming embedded in everyday life and, at least when it comes to banking, the tech-agnosticism points to an openness to different methods of money management.

Moreover, this could suggest that advancements in banking tech are allowing people to seamlessly move between devices for their banking activities, making adoption smoother and, potentially, faster.

The question

### Why do you use different devices to...

European consumers only. Asked only to those who said they use multiple devices for these activities.  
Multiple responses possible.



Sample size: 5,809 (check account balance) 3,369 (transfer money) 4,182 (make payments) 3,225 (send money)

# Two-factor authentication rated safe by largest group

Consumers are highly conscious of security when they manage their money using devices, and there is no consensus that one method is completely safe.

Not surprisingly, newer, less familiar methods score lower on ratings of security. Not only do we have an inclination to believe what we are already doing is effective, especially if we never had security issues, but we also tend to feel safe sticking to what we know.

The survey suggests that two-factor authentication, fingerprint recognition and a simple password are seen as most secure, with the largest groups scoring them 4 (secure) or 5 (very secure). Relatively new technologies such as face recognition, an implanted computer chip and voice recognition scored lower.

But nothing was seen as truly safe. Even two-factor authentication - using two completely different types of secure credential, such as a password and receiving a text message with an additional code word or number - was only rated secure by 70% in Europe (69% in the United States).

And just two-thirds of Europeans (62%) and Americans (60%) rated a password as secure or very secure.

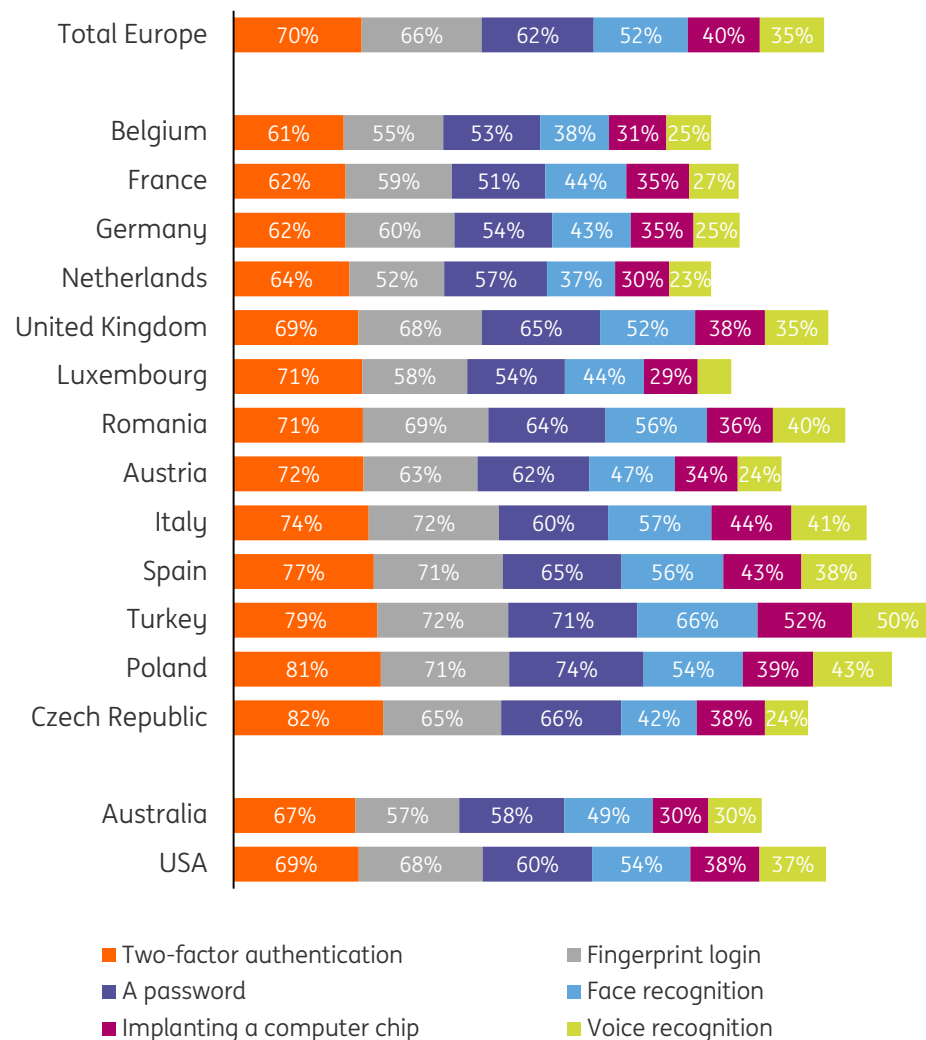
This may reflect users' own tendency for choosing predictable passwords. Carnegie Mellon University (1) researchers found in 2016 that people knew what made a password harder to crack, but tended not to follow through when it came to their own encryptions.

If financial technology is to grow and develop, service providers will need to stay on top of consumer concerns about security, especially with threats becoming ever more sophisticated.

The question

## How secure do you think this tool is?

Asked to everyone. Responses are on a scale from 5 (very secure) to 1 (not secure), level 4 and 5 shown here. Other possible response was 'Don't know'.



Sample size: 14,824

(1) <https://www.blaseur.com/papers/chi16-pwperceptions.pdf>





Many linking in  
with new  
financial services

## Some stick to their bank only, others diversify

Some 49% of Europeans and 48% of Americans say they do not use any financial service providers other than their main bank. But 45% of Europeans and 49% of Americans use more than one provider.

Such other providers might be different banks, apps on a phone or online services that can assist money management, for example, facilitating international transfers, sharing money between friends, tracking spending, storing money or lending funds.

The divide may have been exaggerated by the fact that it was up to respondents to decide what their main bank was and what counted as an alternative provider.

But the findings are consistent with those from our 2018 mobile banking survey, when we asked people whether, in the previous 12 months, they had used any organisation other than their main bank to access money services. Most – 58% of Europeans and 54% of Americans – had not. But that still left a large group that had.

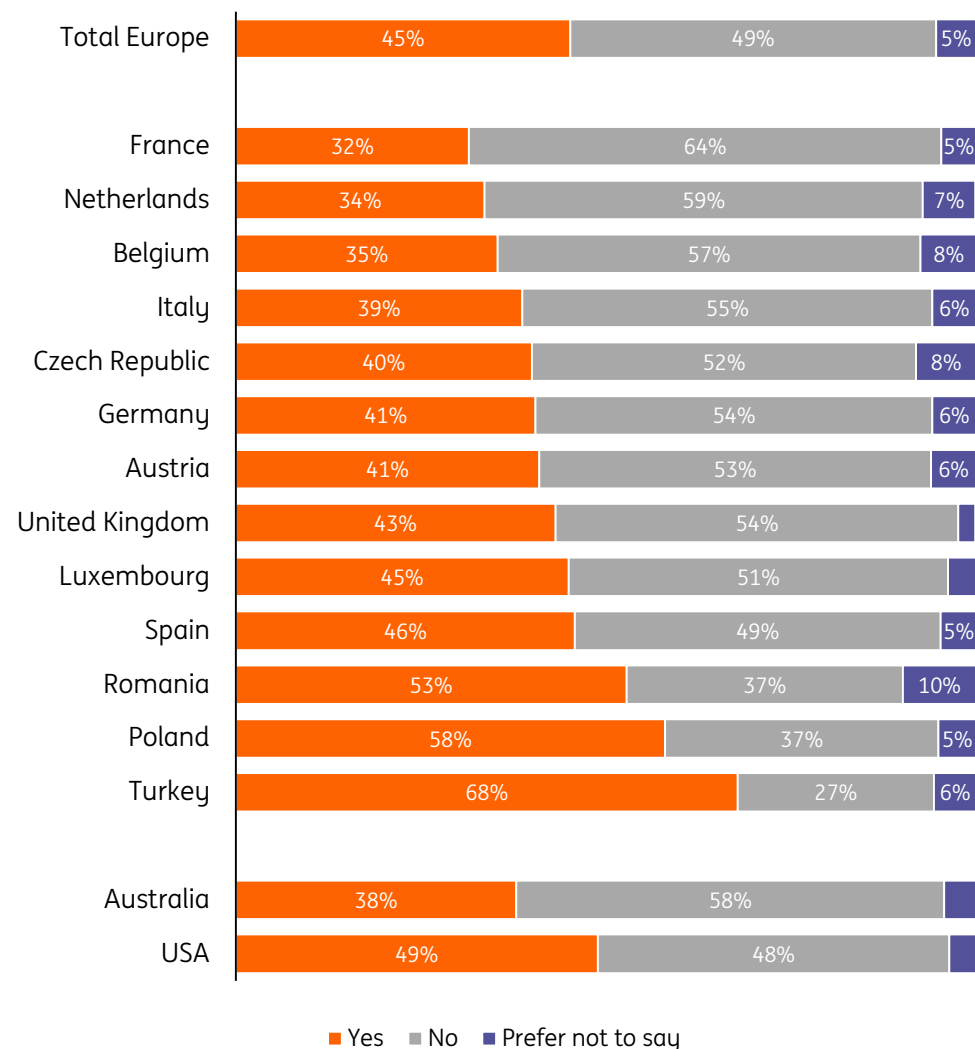
There is also a wide divide among countries, ranging from just 32% of people in France saying they use providers in addition to their main bank, to 68% of people in Turkey.

Overall, this implies a certain degree of customer stickiness when it comes to banking – through loyalty or just plain inertia. But with the fintech market growing, banks should not be overly complacent about keeping their customers satisfied.

The question

Do you use any other financial service providers other than your main bank?

Asked to everyone.



Sample size: 14,824

# Demand for multiple access points from all providers

People are increasingly using an array of methods to access financial services, ranging from going into a bank branch to using a voice-enabled device such as Amazon's Alexa.

The least-used methods are those that are fairly new. Possibly surprising, we didn't see significant age trends in the responses.

But it is clear that many consumers are open to tech. Using an app to find information is as popular as picking up the phone (65% vs 64% for a main bank, 69% vs 63% for other financial providers).

The use of social media to contact a provider or access information is, however, a laggard. Twenty-four percent of people or less say they contact service providers via social media, even using private messaging.

We didn't collect data on frequency, however, so people could be going into the bank once a year, for example, and using the app daily.

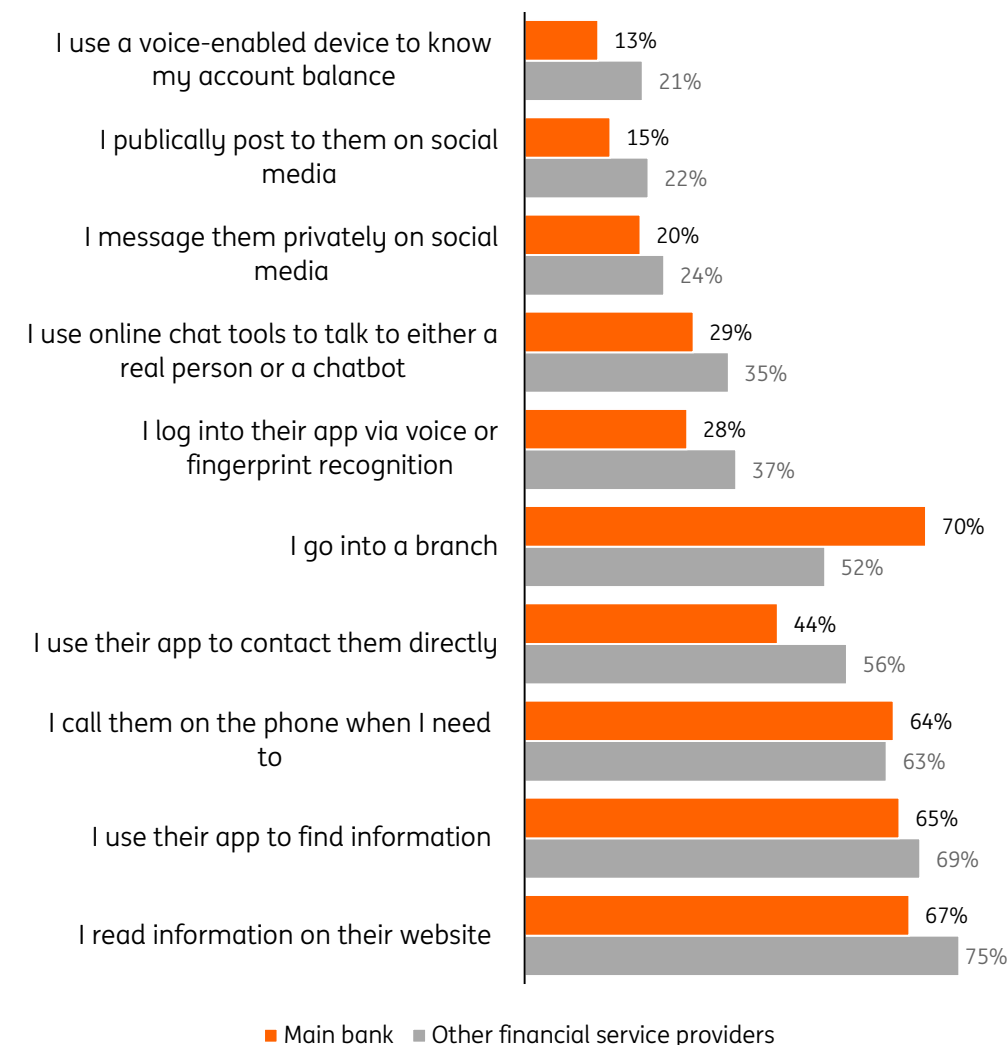
## Still going to the branch

Despite the plethora of digital and online methods available, many people still like physically popping into branches. The survey shows that 70% of consumers say they access banking services by going into their main bank's branch. Yet 52% say the same when it comes to other financial service providers. Perhaps this is because many fintech companies often set up without a physical presence.

The question

## How do you access services from....

Main bank asked to all Europeans, other financial service provider asked only to those in Europe who said they used them. Responses for 'I do this' shown. Other possible responses were, 'I used to do this but not anymore' and 'I have never done this'.



Sample size: 12,813 (main bank) 5,670 (other financial services provider)

## Keeping closer track of finances with devices

The use of devices such as tablets, phones or wearables is associated with checking account balances more frequently for 63% of European consumers, and with understanding their financial goals more clearly for 43%. A third in Europe (33%) also think about money more often since they started using devices to manage their finances.

Those checking balances more often could be in for a nice surprise. Separate research (1) by the Think Forward Initiative, using data from Icelandic software program Meniga, found that merely paying more attention to bank balances, credit card debt and overdrafts can change spending and savings habits. It calculated that for Icelandic people using the app, each check led to an average \$2.24 saving in bank fees and a \$1.77 saving in debt expenses.

However, the lack of perceived change is also interesting here. More than half (52%) don't think the use of money management devices has changed how frequently they think about money, or how much risk they take. Just under half (46%) say devices haven't changed the clarity of their financial goals or the time they spend making financial decisions.

### Less risk?

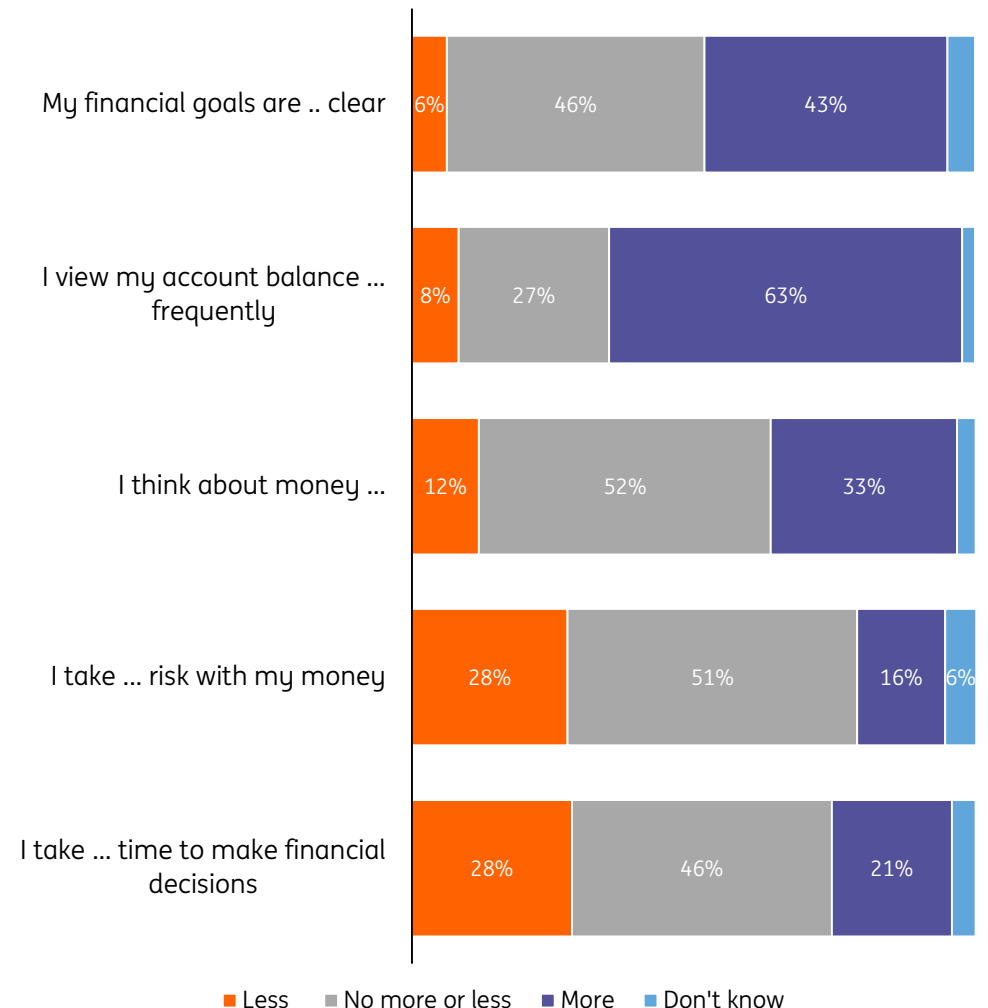
While half (51%) of those questioned say their risk behaviour has not changed, one in four (28%) say they take less risk with their money as a result of using devices and 16% say they take more. Risk aversion has been shown to play a significant role in financial decision-making, but whether taking more or less risk is a good thing is reliant on the individual.

(1) <https://think.ing.com/articles/why-consumer-finance-apps-save-you-money/>

The question

### Since I started using devices to manage my money....

European responses shown. Asked only those who said they use at least one of the following devices to check account balance, transfer money, make payments or send money to friends/family; smartphone, tablet, smart TV, mobile phone, wearable devices, voice controlled home system/virtual assistance or computer.



Sample size: 11,902





Initial hesitance  
to open data  
sharing

# Many not aware of option to bring financial data together

The European Union's new Payments Services Directive, or PSD2, sets a legal groundwork for the sharing of financial data including consumer protections.

Open Banking is an innovation which enables financial service providers to access an individual's financial information held by another organisation if their permission is given, and is an example of the potential impact of PSD2.

There are many possible benefits to this form of data sharing: one example would allow financial information in different places to be combined and viewed within a single interface so that consumers can view all their accounts in one place.

Still in its infancy, most people have not heard of it. But that may change as financial institutions continue to implement the new service. Some 55% of Europeans tell us they aren't aware of this concept of data sharing, while another 13% are not sure, leaving a third (32%) confirming they are aware of it.

This does not mean this practice will not become a major part of the banking landscape: given its newness and the fact that it is still in development in most places, the findings are not altogether surprising.

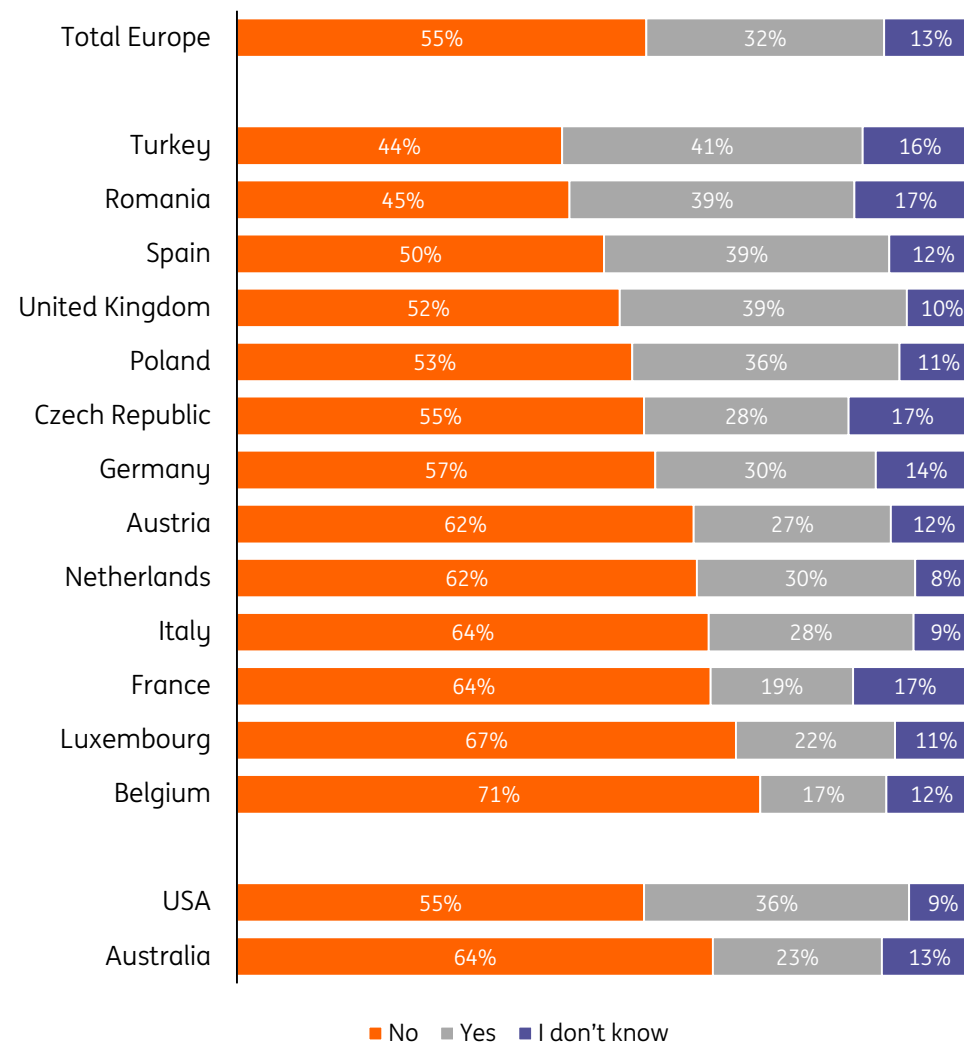
One factor for providers may be that allowing financial information held by one company to be shared by others necessitates a high degree of consumer trust. Another is bank loyalty. Findings from both this survey and our 2017 survey suggest people are strongly attached to their main bank.

Together these would imply that widespread adoption may come more rapidly if existing financial institutions promote them.

The question

In some parts of the world, it is possible for financial providers to access your financial information held by other companies: 'Were you aware they could do this?'

Asked to everyone.



Sample size: 14,824

## Awareness doesn't always drive acceptance

At least for now, consumers appear hesitant to let companies share their financial data. This graph shows the responses from those who note that they are aware of the option to give permission for their data to be shared – 32% in Europe, 36% in the USA and 23% in Australia.

Four in ten (41%) Europeans who note they are aware of this option, say they would be happy for companies to share their data this way, versus 47% who say they would not. Twelve percent are not sure.

Such hesitance is not surprising with new technology. Elsewhere in this survey, consumers show initial reluctance towards new methods of mobile banking. For example we see hesitance around rating new tools such as voice and facial recognition as secure.

The late sociologist Everett Rogers (1) outlined in his book “Diffusion of Innovations” five things new innovations need for them to be adopted: are they an improvement, are they compatible with lifestyles, how easy are they to use, how quickly does it take to get them working, and can others be seen using them? None of these should, on the face of it, be a hurdle for data sharing innovations over time.

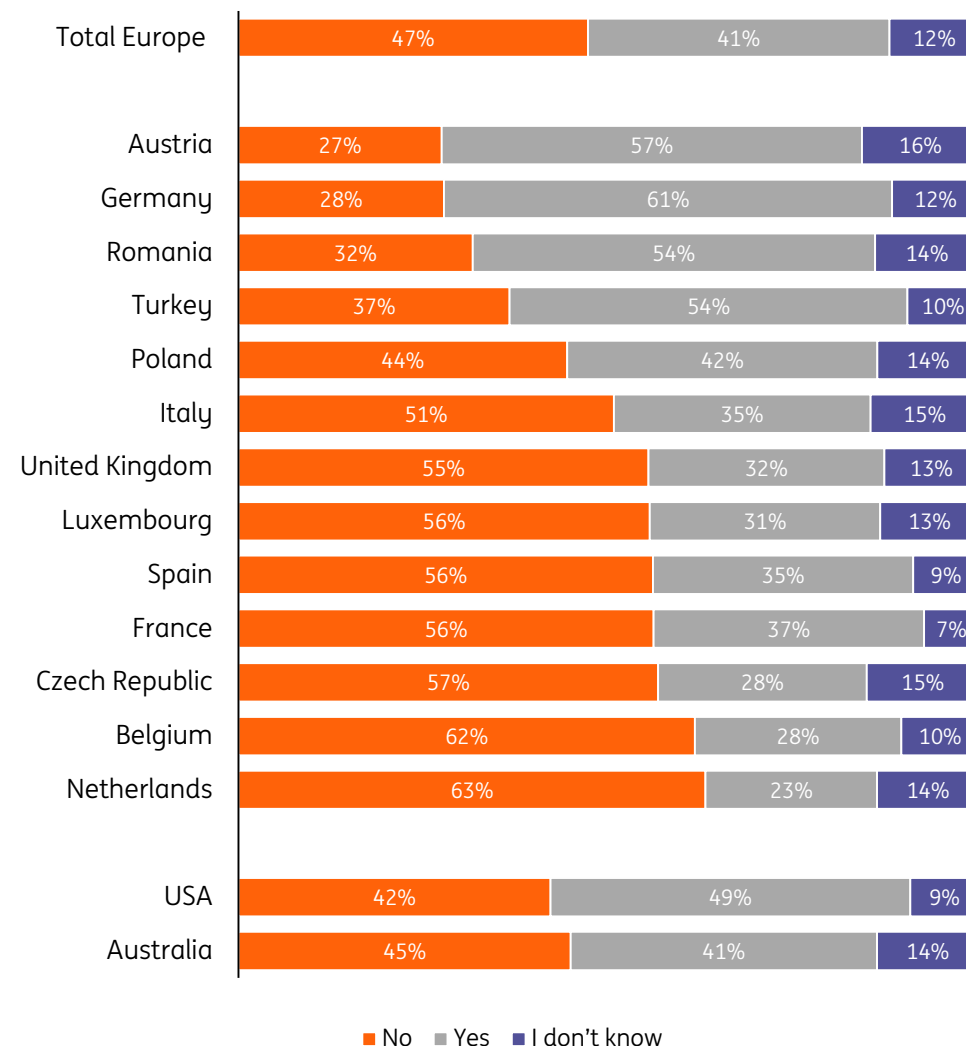
### Degrees of wariness

There is a wide range of willingness towards sharing financial data among different European countries. And levels of awareness appear to influence countries differently. At one end, Germans and Austrians who are aware of the option are most open to using it (61%, 57%); at the other end, Belgians and the Dutch who are aware remain highly sceptical (28%, 23%).

The question

Would you be happy for companies to share your information in this way, if you gave consent?

Showing responses only from those who said they are aware of these data sharing capabilities (from previous page).



■ No ■ Yes ■ I don't know

Sample size: 4,459



Auto-investing  
still a no go, but  
many excited by  
tech



## Three in five say no to auto investment decisions

At least for now, there is little appetite among consumers for computer programs that make investment decisions for them – the new tech of ‘robo-investing’.

Only 18% of Europeans say they would be happy for a computer to analyse their finances and make an investment for them accordingly. Some 61% say no, with the rest not sure.

This fits with behavioural science’s control premium theory. It suggests that people are prepared to give up rewards or benefits in order to keep control. Sometimes this can be a negative, as in the case of refusing to delegate in business.

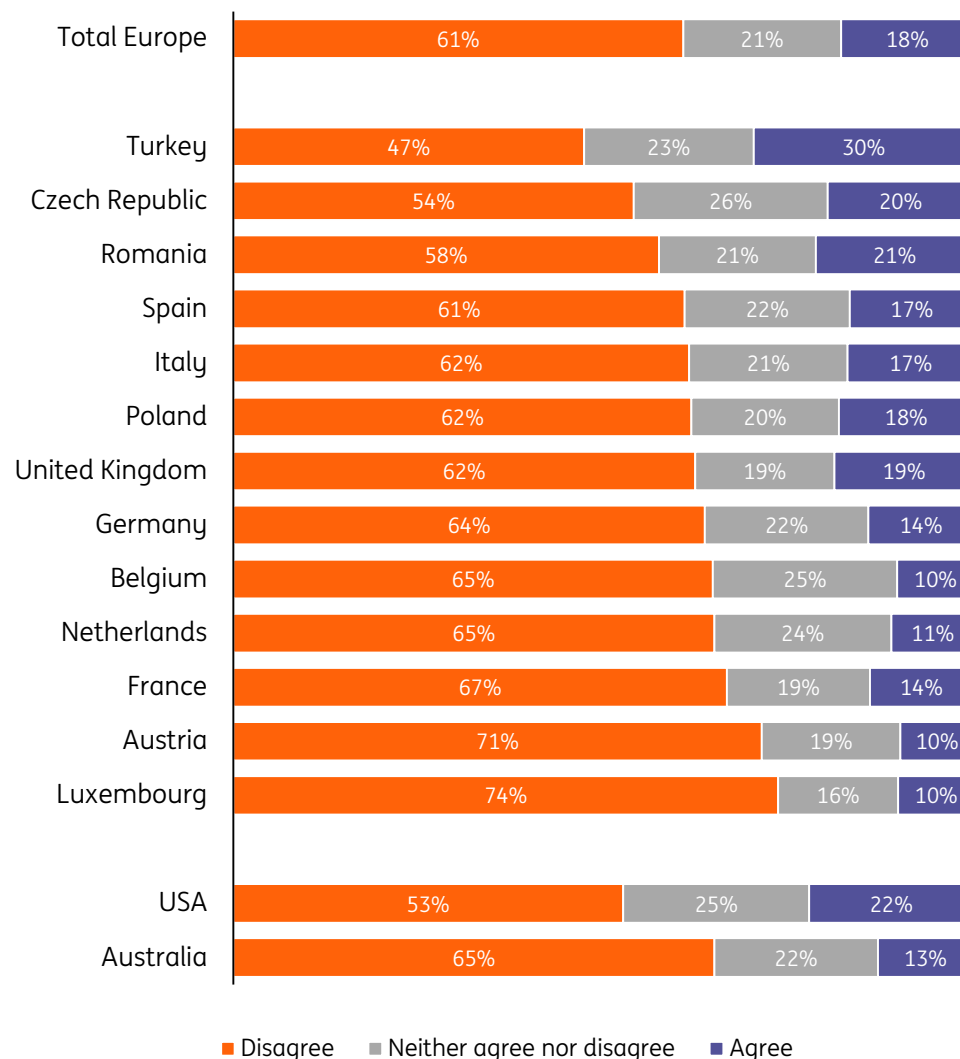
The latest findings also gel with a question asked in our 2017 mobile banking survey. We found then that 65% of people did not want computers making automatic decisions for them, although some (26%) were open to the idea if allowing for a final – human – decision.

Whether this will change is crucial to hopes for a burgeoning financial sector. In 2016, Deloitte cited estimates that between \$2.2 trillion and \$3.7 trillion in assets will be managed with the support of robo-advisors by next year, rising to projections of more than \$16 trillion by 2025.

The question

I would be happy for a computer program to make investment decisions on my behalf.

Asked to everyone. ‘Strongly Agree’ responses combined with ‘Agree’, ‘Strongly Disagree’ responses combined with ‘Disagree’.



Sample size: 14,824

(1) <https://www2.deloitte.com/content/dam/Deloitte/de/Documents/financial-services/Deloitte-Robo-safe.pdf>

# I want control, but am open to taking robo-advice

Reluctance to engage with automation eases when the emphasis is on a computer program making suggestions regarding spending habits rather than making decisions about investments.

Some 38% of Europeans say they are ok with this (compared to only 18% who approve the idea of a decision being made for them). But 35% still don't like the idea and 27% are not sure.

Automated advising is relatively new technology for most people so it is natural that there is some hesitation. But reluctance does appear to be fairly embedded: in our similar question in 2017, 36% of people said they did not want automated financial activities at all (about the same as those against in this latest survey).

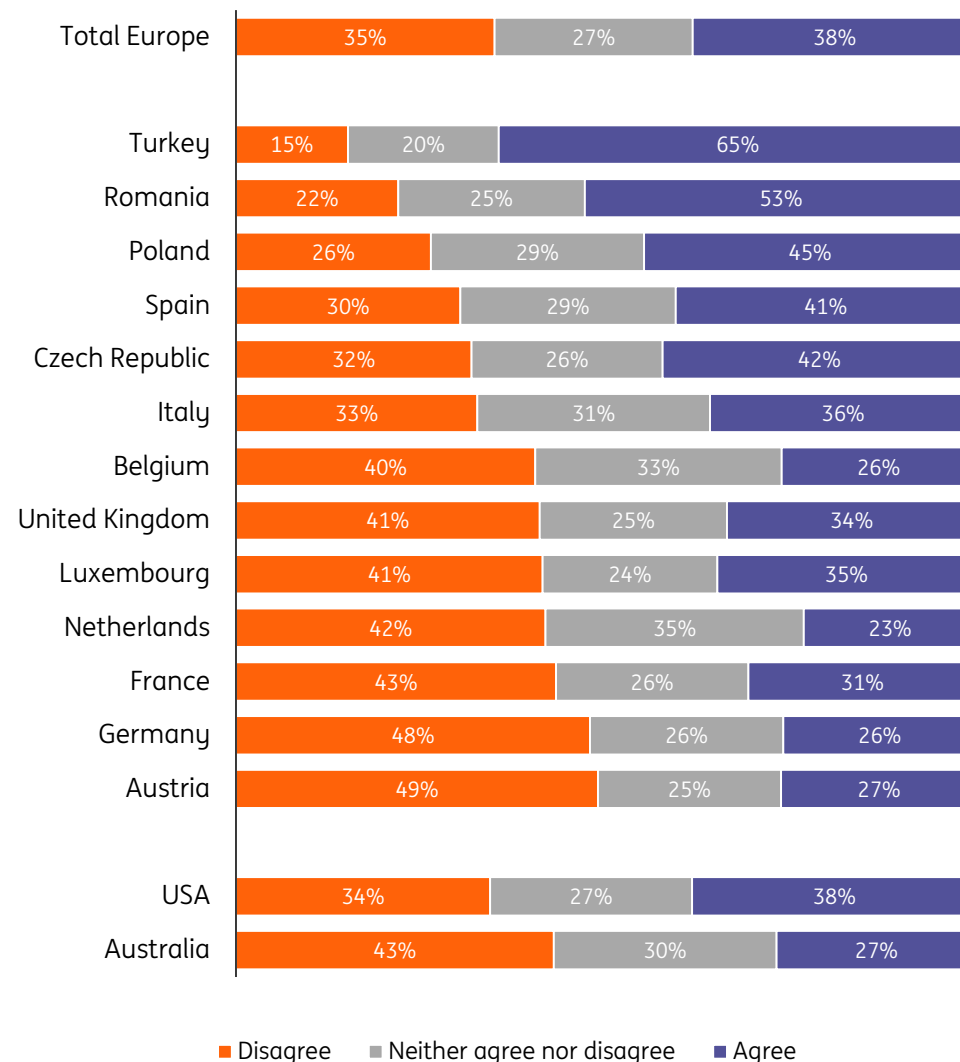
The goal of new banking tech is to help people manage their money, so each person is likely to use it in their own way. Enabling people to make the most of what's available in a personalised way will be key.

One way of doing this is by bringing information about spending front of mind. Salience bias refers to our tendency to act on easily recalled information and when we have spending information at our fingertips, it can contribute to financial decisions. Automated data analysis can help reveal and remind us of our spending patterns, making them easier to understand and, if needed, to change.

The question

I would be happy for a computer program to analyse my spending habits and recommend improvements.

Asked to everyone. 'Strongly Agree' responses combined with 'Agree', 'Strongly Disagree' responses combined with 'Disagree'.



Sample size: 14,824

## Attitudes go both ways on banking tech efforts

It takes time for people to get used to new tech and some say they don't care about it. But that may be a reflection of the early-days phase in which the latest tech finds itself, or the fast rate of change in the financial technology space.

Just over a third (36%) of Europeans say their main bank is being over-ambitious in introducing services on different devices, saying they do not want or need more ways to interact. Another 39% are ambivalent, not knowing or caring. Twenty-two percent say their bank is too conservative about the services they offer, wanting more ways to interact using devices.

Our definition of “devices” is broad. It includes mobile phones, tablets, smart watches and computers, and allows for access via everything from (now traditional) websites, through apps, to voice-activated systems.

Our overall findings are that adoption of new tech is gradual at first, then fast. Given this, ambivalence would be expected: the take-off, or inflection point, for a lot of new financial technology has not yet been reached.

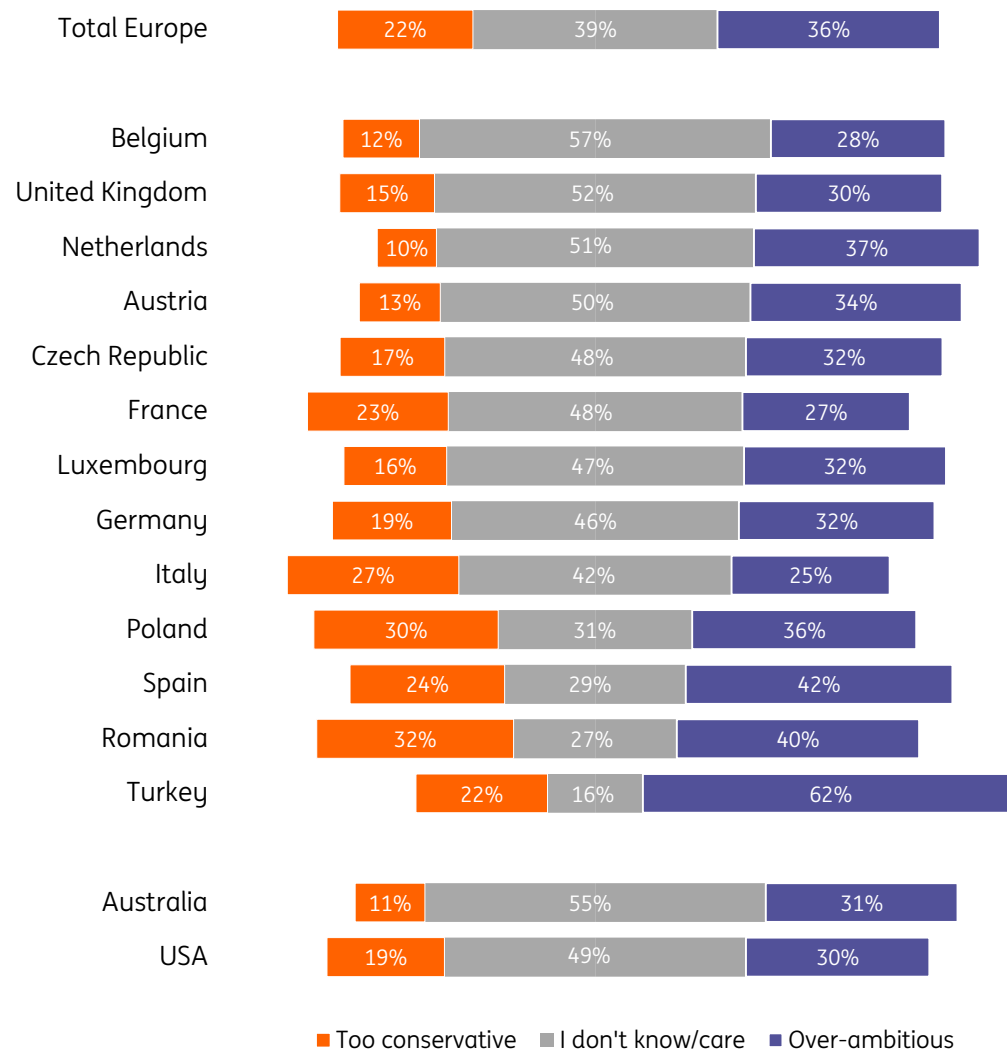
### Risk perception at play

We also asked people general questions about their perception of using devices to manage their money. Overwhelming majorities across Europe say using devices is easy (84%) rather than difficult (18%), smart (79%) rather than dumb (17%) and enjoyable (76%) rather than annoying (17%). However, when we asked whether using devices is safe or risky, people are more divided. Sixty-seven percent say it is safe, while 42% labels it as risky.

The question

When it comes to services offered on devices, my main bank is...

Asked to everyone. Other possible response was 'Other'.



Sample size: 14,824

## People want tech choice, even if not early adopters

Despite concerns about maintaining control and some hesitation to take up new financial technology, consumers want to be offered technology options. And they want everything to work seamlessly.

A large majority of people (73% in Europe, 71% in the United States) says banks should offer the latest technologies to their customers.

While some of those answering positively may have done so from a belief that they *should* want this, the overwhelming percentage wanting to be offered the latest tech suggests potential widespread adoption (even if not immediately).

There is, meanwhile, a broad consensus that banking tech should work across platforms and across the world. Asked whether the latest payment systems should work everywhere, 77% in Europe say they should.

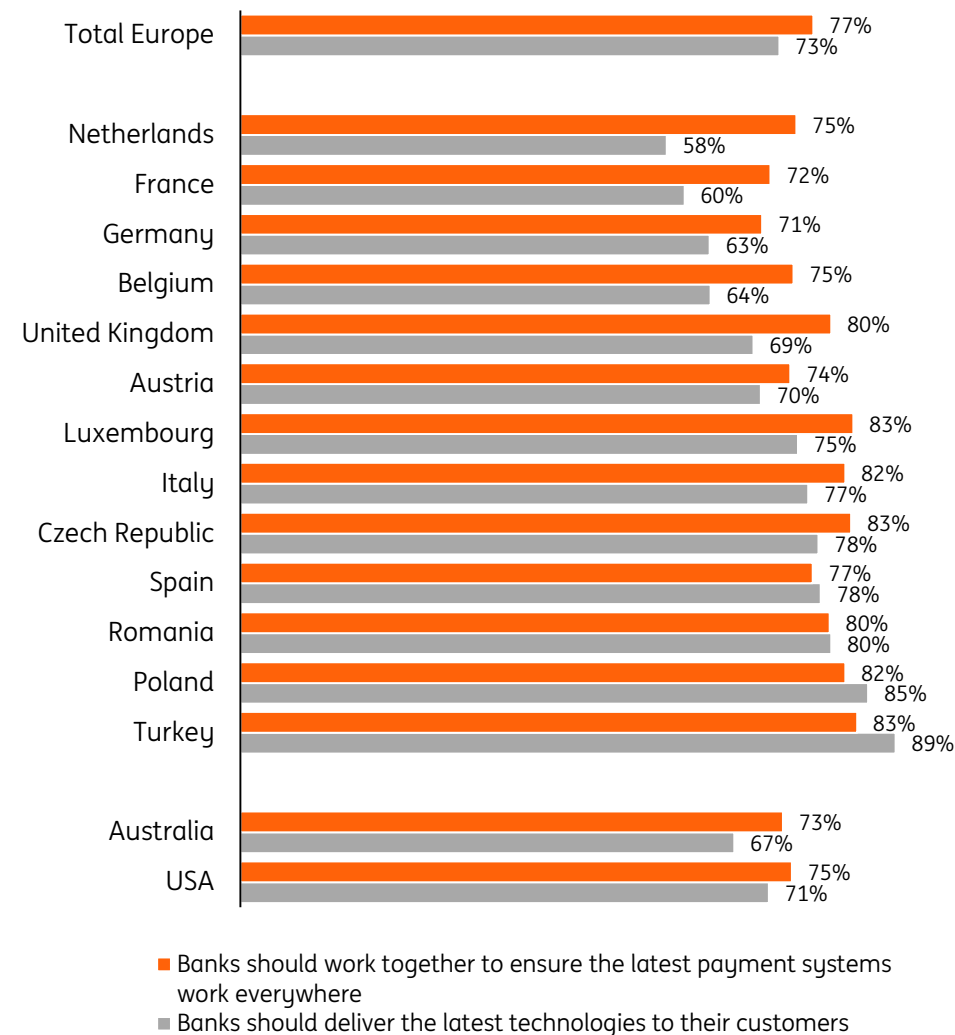
This implies very strongly that consumers want banks and other financial institutions to work together on systems. No incompatibility, please.

This finding should resonate with advocates and developers of data sharing systems that can allow consumers to manage their finances in one place, no matter which banks or institutions they use.

The question

**Banks should: work together to ensure the latest payment systems work everywhere / deliver the latest technologies to their customers.**

Asked to everyone. Combination of 'Agree' and 'Strongly Agree' responses shown. Other possible responses included 'Neither agree nor disagree', 'Disagree' and 'Strongly Disagree'.



Sample size: 14,824



# About the ING International Survey

The ING International Survey promotes a better understanding of how people around the globe spend, save, invest and feel about money. It is conducted several times a year, with reports hosted at [www.ezonomics.com/iis](http://www.ezonomics.com/iis).

This online survey was carried out by Ipsos from 30 January to 11 February 2019.

Sampling reflects gender ratios and age distribution, selecting from pools of possible respondents furnished by panel providers in each country. European consumer figures are an average, weighted to take country population into account.

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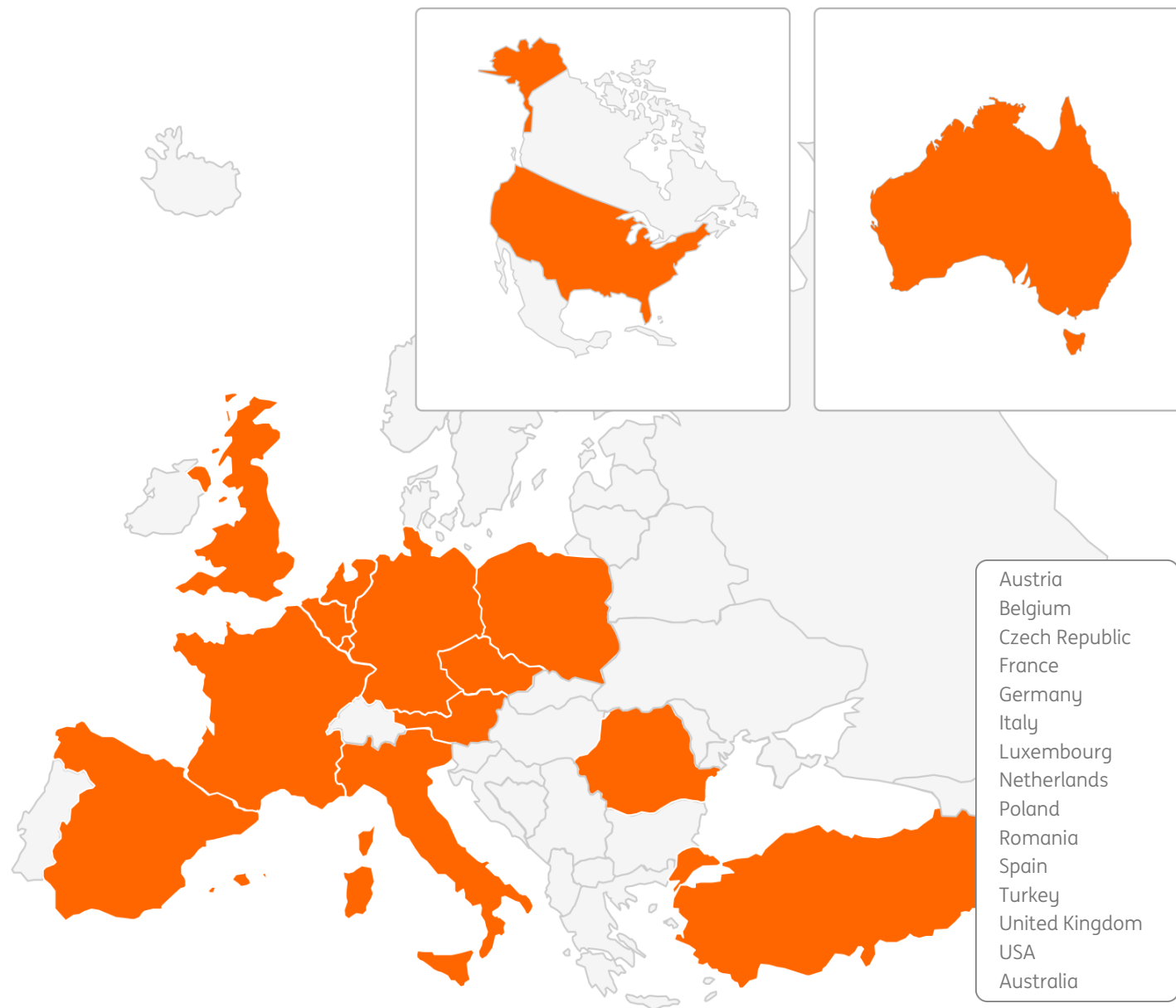
countries are compared in this report.

1,000

respondents on average were surveyed in each, apart from Luxembourg, with 500.

14,824

is the total sample size of this report.



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