

PSD2 and Open Banking

Revolution or evolution?





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Introduction by KPMG

We are pleased to present this report, which aims to give a picture of the Polish banking sector on the eve of the entry into force of regulatory technical standards (RTS) concerning the PSD2 Directive, which may become a catalyst of changes in the financial services market not only in Poland, but also in the European Union as a whole. The newly introduced regulations are both an opportunity and a challenge for banks, which will have to face increasing competition not only from other banks, but also from technology companies, i.e. new players in the financial market. This is also an opportunity for companies from outside the banking sector that have not yet considered offering financial services to customers. PSD2 has the potential of opening up new opportunities and ways to support the customers.

Aware of the major changes that the new regulation is likely to bring about, we decided to check the opinions of consumers, financial institutions and other companies from outside the banking sector. Our survey has clearly shown that banks are now confidence leaders among individual customers. Poles are most likely to entrust their money to banks and want to use the financial services of these organisations.

However, this does not change the fact that the entry into force of the PSD2 Directive may potentially change consumer habits and the market structure. Banks do notice a threat posed by the emergence of financial services provided by new entities. Most of them believe that the new regulations will have a significant impact on the market. There are also additional concerns about the security of data accessed by non-banks.

We would like to extend our thanks to all the companies, organisations and individuals who were involved in the preparation of this report. We hope it will provide a pleasant read and inspire interesting reflections. All readers wishing to share their insights and conclusions are welcome to contact us. PSD2 is just the first step towards open banking. With this report, we want to start a discussion on the future of the financial market, the role of banks and other entities that already exist or will soon appear on this market.



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Introduction by the Polish Bank Association

Open banking is a relatively new phenomenon and, as everything in this area, is framed by the law. In the European Union, regulations seem to be the main catalyst for its growth. The legal act which sanctions the existence of open banking is the Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, or the so called 'PSD2'. In the Polish law, the Directive was implemented through the Act of 10 May 2018 amending the Act on Payment Services and Certain Other Acts.

The PSD2 Directive, the Act amending the Act on Payment Services as well as related acts of law (including, in particular, the Commission Delegated Regulation (EU) 2018/389 of 27 November 2017 supplementing Directive (EU) 2015/2366 of the European Parliament and of the Council with regard to regulatory technical standards for strong customer authentication and common and secure open standards of communication, the so called RTS) introduce many new services, definitions and obligations for market participants.

It is the new services and obligations that raise concerns among some market participants, while some others have hopes for the development of new business models, flexibility and innovation. In order to organise the knowledge on the topic, we decided to organise a wide-ranging market survey, targeting not only companies directly interested in the availability and use of the services introduced by PSD2, but also consumers. Thanks to our cooperation with KPMG in Poland, we managed to collect very interesting data on the opportunities and threats posed by the new regulations and services.

Activities undertaken jointly by the payment sector, i.e. banks, fintech companies, infrastructure companies, and industry organisations, notably the initiative to build a standard of communication via software interfaces (PolishAPI), are aimed at ensuring a customer-friendly and secure environment, conducive for the development of open banking. In fact, security is particularly important to all of us. This is also confirmed by opinion surveys conducted with customers of financial institutions.

We are facing major changes in the payments market, both in Poland and across Europe. Our role is to ensure that these changes have no negative impact on the security and convenience for customers of banks and other financial companies.



Włodzimierz Kiciński
Deputy President
of the Polish Bank
Association

Key findings

The results of our survey seem to confirm that there is a consensus as to how representatives of banks and TPPs (Third Party Providers) see the future ahead. It is worth looking at some conclusions that emerge from the survey responses received.

The first interesting trend that can be noticed is the banks' perception of who will compete with them in the short, medium and long term. More than 40% of the respondents representing banks perceive other banks as their competitors in the first year after the implementation of PSD2. However, this indicator decreases significantly in the medium term (21%), dropping to reach 9% in the long term. As time goes by, banks begin to perceive technology companies and GAFA (Google, Apple, Facebook, Amazon) as increasingly competing with them. In addition, in the short term, 21% of the surveyed bank employees do not see any major competitive challenges. Therefore, it can be concluded that the enormous trust that customers have in banks (41% of the respondents), combined with the awareness of being a public trust institution where customers' deposits are protected by the Bank Guarantee Fund, and the experience of implementing open banking in the UK market mean that banks perceive the coming year as a time to look for new ideas on how to leverage the new regulations for their business. Within the next few years, the majority of bank representatives (53%) believe that GAFA will become more active and become their competitors. This view is justified given that the Directive and standardisation offer the possibility of making a simultaneous entry into all the EU markets, which could potentially be of interest to GAFA.

The second important finding is that trust in a company does not necessarily entail the willingness to entrust it with bank login data or give it access to transaction data. This is a very interesting observation, given that conclusions about the new fintech companies entering the market are drawn, among others, on the basis of questions about trust. Meanwhile, consumers trust banks (41%), Google (38%) or Facebook (22%) to a considerable extent. On the other hand, significantly different percentages of the respondents would be willing to provide these companies with transactional data: banks (32%), Google (3%), Facebook (2%). In this situation, is there any room for new financial products based on open banking and provided by non-banking entities?

It turns out that the answer may be affirmative in the longer run and this is another important conclusion to be drawn from our survey. In the longer term, the generational difference may also be significant. This is best illustrated by the perception of technology companies by people aged 18–24 compared to the older generation. The very example of sharing transaction data shows how differently the two groups approach this issue. For example, more than 9% of 18–24 year olds will share their data with Google, with 4% among 25–39-year-olds, 3% of 40–59-year-olds and 1% of the respondents aged over 60. This means that in a few years' time there may indeed be a market for some of the GAFA companies to provide open banking services. The banks only confirm this point of view in their replies.

Trying to answer the question posed in the title, i.e. whether or not PSD2 and Open Banking will be a revolution or evolution, it seems that it will be an evolution that will significantly change the banking sector and the financial services market in Poland, the European Union and the world in the long run. All market participants who took part in the survey, i.e. banks, co operative banks, TPP and customers, seem to confirm this.

Despite the entry into force of new regulations, as many as

61%

of the consumers surveyed will not share their transaction history with other entities, even in exchange for a more advantageous financial offer

Among the representatives of banks and cooperative banks,

34% perceive PSD2 as an opportunity, and

26% see it as a threat



96%

of the respondents from non-banking institutions believe that PSD2 will lead to the development of new innovative financial services on the Polish market



44%

of the respondents representing banks are afraid of the outflow of customers to other banks due to the entry of PSD2 into force

53%

of the surveyed banks are afraid of GAFA companies (Google, Apple, Facebook, Amazon) entering the market in the long run

Only

9%

of banks believe that third parties will be able to protect customer data as well as banks do

91%

of the respondents from banks are convinced there is a need to standardise the API* in connection with the implementation of PSD2

* API - Application Programming Interface

1

Open banking

Open banking is a broad term that covers all processes, technologies and related services as well as products with one common denominator: all are based on open APIs. They allow access to some of the data collected by banks so that other companies can create new products and services. Over time, an ecosystem of entities offering new solutions for customers should emerge around banks.

Impact on the financial market

Open APIs have been used by technology companies such as Facebook, Google and Amazon for many years. Thanks to their use, corporations are able to offer a number of services that they could not develop by themselves. These additional services, for example, helped Facebook to retain current users and to acquire new ones. On the one hand, technology companies are beneficiaries of Open APIs but, on the other hand, they are service providers used by other companies to build an advantage. Uber is the best example here: it used Google maps and their open interface. As a result, Uber was able to implement the idea of creating a taxi corporation without taxis or taxi drivers. Uber drivers do not need to know the city they work in because the route will be suggested by the app. Google plays the same role as banks in the open banking ecosystem, while Uber is a technology

company, called a fintech in the open banking ecosystem.

Notably, banks themselves can be beneficiaries of open banking, using data and services provided by other banks via APIs. This gives them access to even more information about their customers: knowledge not only about the products held by customers at other banks, but also about payment transactions. The effects can be twofold. On the one hand, banks will try to attract customers by offering products that are available from other banks, and, on the other, with better customer insights, new products, more suited to customers' needs, should emerge.



PSD2

The idea of open banking is still a matter of the future. In a highly regulated market, banks would not be able to share data through Open APIs even if they wanted to do so. The change was brought about by Directive 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market (hereafter 'PSD2'). This Directive is a catalyst for change towards open banking. It introduces a new category of service

providers in the payment services market, called a Third Party Provider (TPP). TPPs get the opportunity to offer new services, the two most important ones being Payment Initiation Service (PIS) and Account Information Service (AIS). Enabling new entities to offer services based on the customer's transaction history is an important first step towards open banking and the emergence of a completely new ecosystem based on innovative financial products.

Survey objectives

Thanks to regulatory changes, the idea of open banking should begin to materialise. However, it is still not clear whether this will be the case and how quickly the changes will take place. The implementation of the Directive is a major challenge for banks as it affects many aspects of their business: legal, compliance, cybersecurity, operational efficiency or IT. On the other hand, regulatory changes allow entities from outside the banking sector to enter the market of financial services. To what extent will banks, which have had to deal with this major undertaking, benefit from the new regulations? To what extent can non-banking players become beneficiaries of the new regulations?

KPMG, together with the Polish Bank Association (ZBP), decided to explore how banks, cooperative banks and entities that may become TPP in Poland perceive the regulatory change. The questions concerned implementation, security and business issues in different time frames.

The survey also covered customers since the idea of open banking would make no sense without them. Will they trust the new market players by entrusting their transaction data with them in the name of a 'better' offer? Can banks feel threatened? Is there any room or a need for new solutions or new companies?

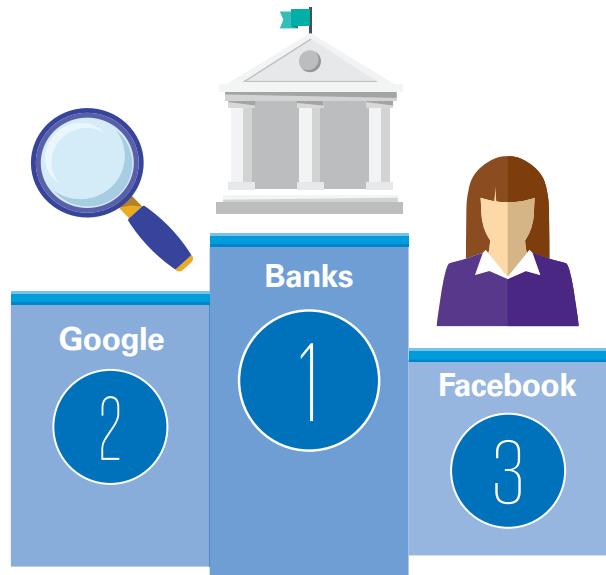
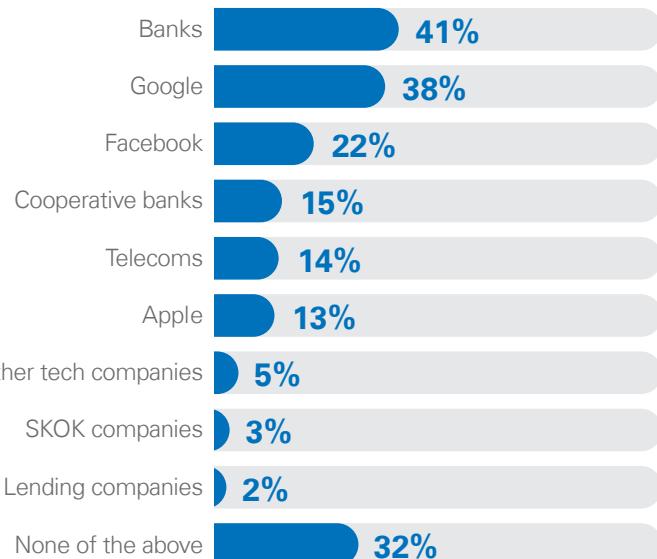
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PSD2 through consumers' eyes

Poles are increasingly eager to use new financial technologies such as mobile banking, contactless payments and mobile payments (known as Blik). Despite their high openness, Poles are sceptical and distrustful of new actors that could provide financial services.

Trust

Institutions trusted by Poles



Source: KPMG based on a questionnaire survey.

Winning customers' trust is a long-term process and the success depends, among other things, on reliable service provision, data security and commitment to the customer. However, trust can be undermined very soon if customers are exposed to losses or inconveniences as a result of an error.

Our survey has shown that banks enjoy a relatively high degree of trust in comparison to their competitors, which are trusted by more than 41% of all the respondents. The second position was taken by Google, trusted by 38% of the respondents, followed by Facebook with a score of 22%. A large proportion of the respondents (as many as one in three) do not trust any of the companies listed in the survey.

Google and Facebook enjoy significantly greater trust among young people aged 18–24 (56% and 51% respectively). This is related to the widespread use of apps from those companies among young people and the positive user experience. Interestingly, as many as 49% of young respondents also trust banks.



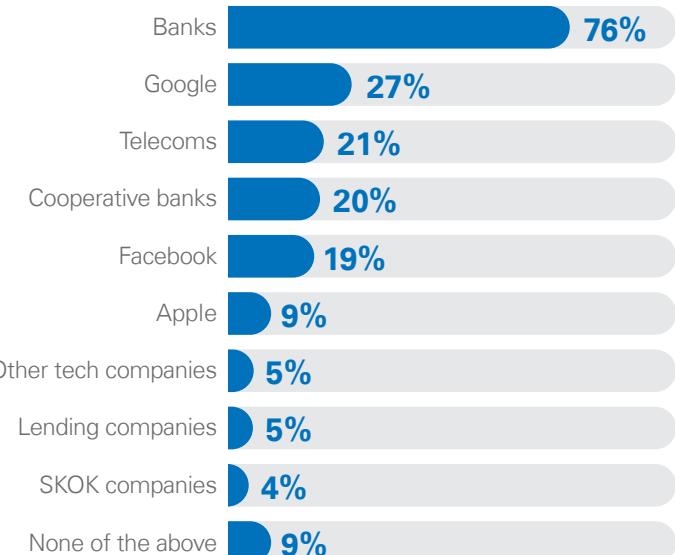
Services



Source: KPMG based on a questionnaire survey.

The level of trust in a company is reflected in the declared readiness to use its financial services. Nearly 76% of the respondents said that they would be willing to use banks. The financial services of technological giants such as Google and Facebook would be chosen by much fewer respondents: 27% and 19% respectively. A similar percentage of the respondents would use financial

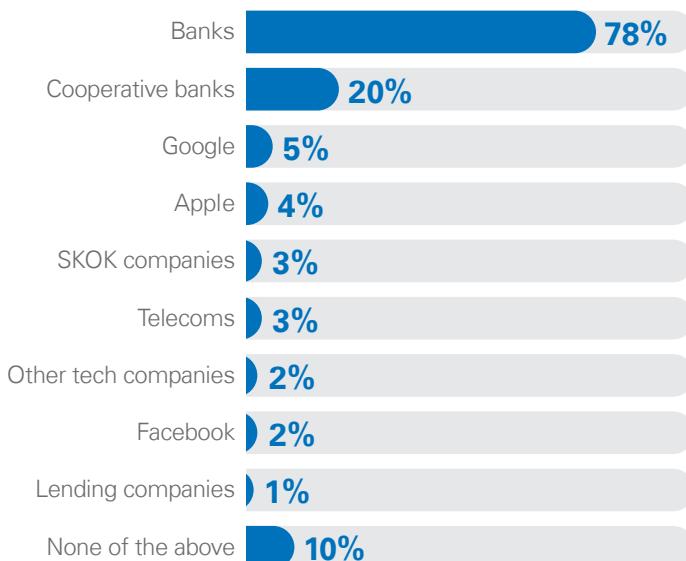
Institutions Poles would choose for financial services



services of telecoms and cooperative banks (21% and 20% respectively). The study has also revealed a generational change. Young people, aged 18–24, are more likely to consider financial services from Google or Facebook (41% and 36% respectively). Notably, compared to the total sample, this age group is less willing (66%) to use financial services from banks.

Money

Institutions Poles would entrust their money to



Source: KPMG based on a questionnaire survey.

We usually entrust our money to banks. Knowing that these institutions are supervised by the Polish Financial Supervision Authority and that the deposited funds are protected by the Bank Guarantee Fund, we can live without worries. For this reason, nearly 80% of the respondents would entrust their savings to bank. However, security measures are not everything. Although cooperative banks and SKOK

companies (credit unions) are covered by the same protection, only 20% and 3% of the respondents respectively would entrust their money to these organisations.

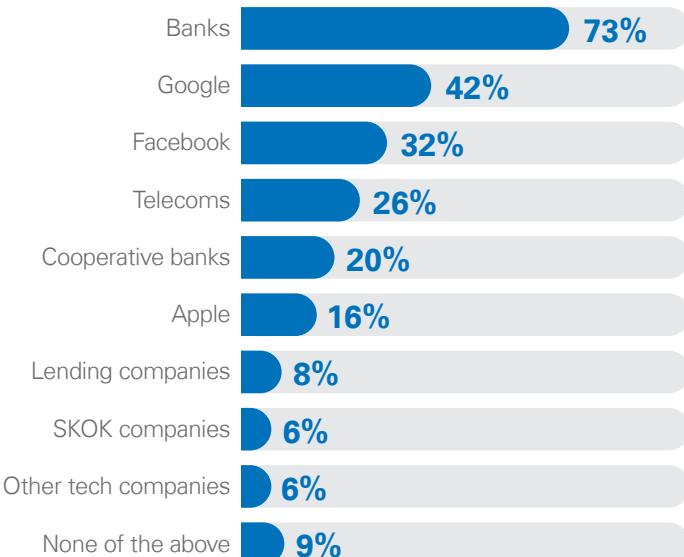
Interestingly, the younger the respondents, the more willing they are to entrust their financial resources to a cooperative bank (24% in the 18–24 age group compared to 18% among

the respondents aged over 60). In general, however, the respondents are reluctant about entrusting their savings to non-banking entities. Here, however, a generational change is also noticeable. For example, nearly 13% of the respondents aged 18–24 would entrust their funds to Google, while the respective percentages for those aged 25–39, 40–59 and over 60 are 7%, 5% and 2%.

Convenience of services



Institutions offering convenient services



Source: KPMG based on a questionnaire survey.

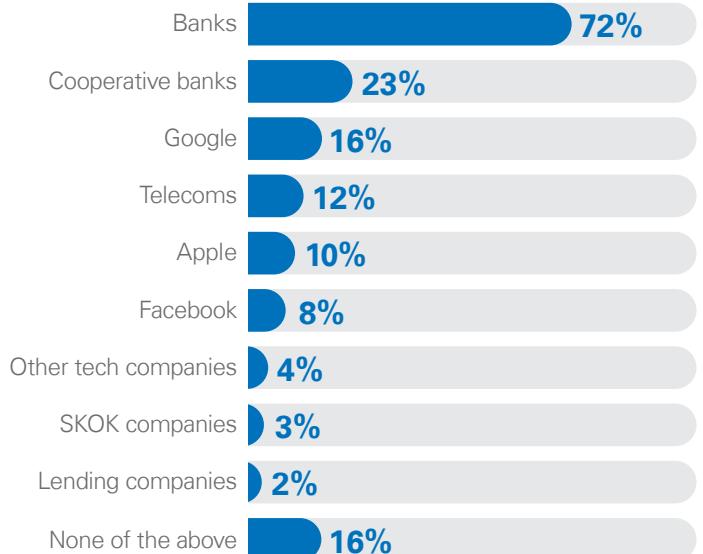
Intuitive and convenient use of services is becoming increasingly important for customers. This entails increasing competition between companies in this sphere. According to our survey, 73% of the respondents believe that banks are convenient to use. This opinion is mostly shared by people aged 40–59. Google and Facebook ranked just behind banks: 42% and 32% of the respondents, respectively, said that the services of

those companies were convenient to use. This opinion was predominant among young people aged 18–24. The least favourable results were recorded by SKOK companies and other tech companies: in both cases only 6% of the respondents stated that their services were convenient to use.

Security



Institutions considered to be secure



Source: KPMG based on a questionnaire survey.

Security is among the most important aspects for users of financial services. According to the majority of our respondents (72%), security of services is guaranteed by banks. Interestingly, the better educated the respondents, the more positive their opinion about banks. Nearly one in four respondents had the same opinion about cooperative banks.

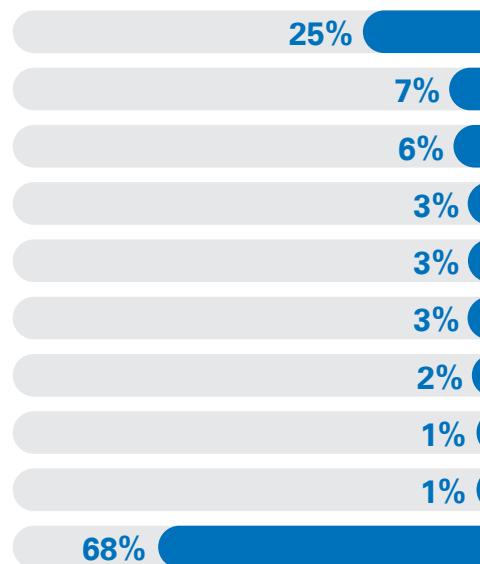
A certain regularity can be noticed here as well. The respondents believe

that it is the banks that guarantee the highest security of services and the highest percentage of the respondents are willing to entrust their money to banks.

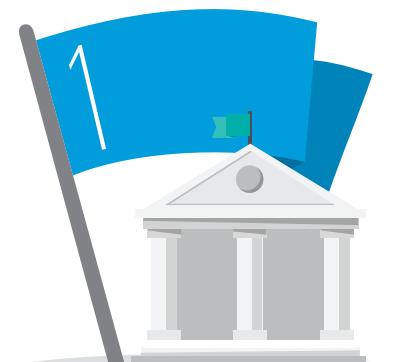
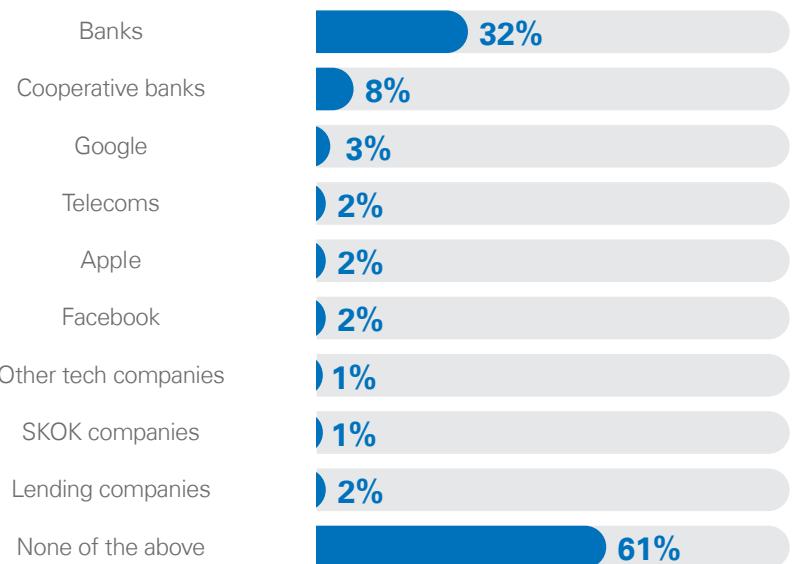
Google obtained a slightly lower score (16%) than cooperative banks. The group that believes most strongly in the security of its services are men aged 18–24.

Transmission of e-banking information

Login data



Transaction history



Banks



Cooperative banks



Google

Source: KPMG based on a questionnaire survey.

Any Internet user should take care to protect sensitive data. Particular security should be ensured when it comes to login data to the bank where our savings are kept. The risk of theft of confidential information, including the risk of losing money, means that nearly 70% of the respondents would not share their bank login data with any company. Only 25% of the respondents would entrust their login data to banks. Respondents expressed similar opinions with regard to sharing their transaction history. Older respondents are more distrustful and less likely to share such information.

More than 60% of the respondents would not make such data available to any third party. Only one third of the respondents would provide their transaction history to another bank.

Compared to the answers to the question of trust in institutions, these results show that trust in a company does not entail willingness to share login data or transaction history.



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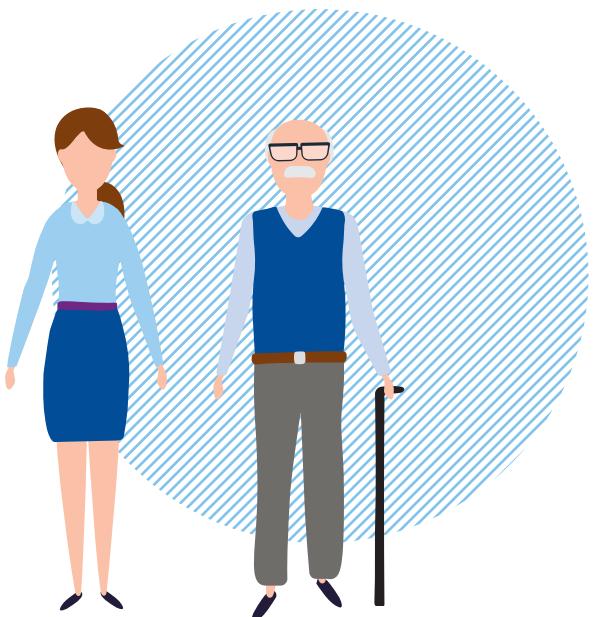
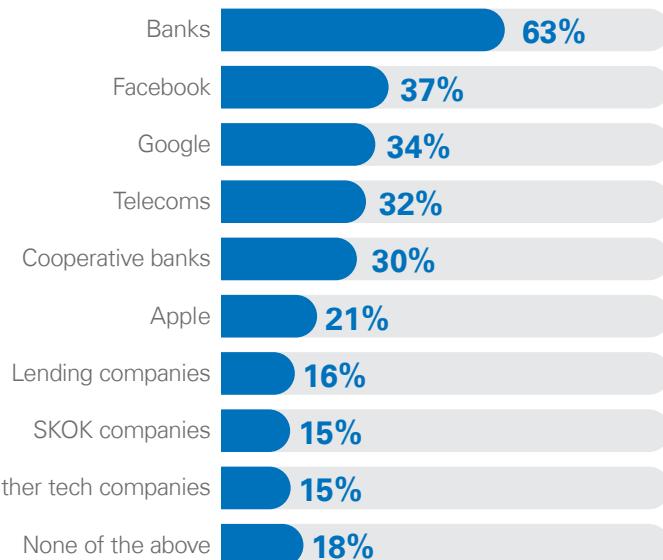
The survey confirms certain trends that have been noticeable for some time and that deserve attention. We can see that trust will be the key to the development of open banking and to customers' willingness to embrace financial services based on this concept. The average bank user may be afraid to share their bank account details with third parties. Interestingly, it turns out that banks, as already trusted institutions, that will have the greatest chance of convincing customers to share such sensitive data with them. This supports the recent claim that traditional banks may turn out to be the major beneficiaries of open banking. At least in the short run.

However, customers' attitudes may change over time. If we had asked the average Internet user before Facebook if they were willing to share their feelings or photos online, we would have probably received a negative answer. Therefore, institutions with a more progressive strategy may want to try to influence customers' attitudes and convince them to use open banking. Looking at the licenses already obtained in Europe, we can already see that companies such as Google will not let the grass grow under their feet.



Willingness to share private data in exchange for an individually tailored financial offer

Information on age and gender



Source: KPMG based on a questionnaire survey.

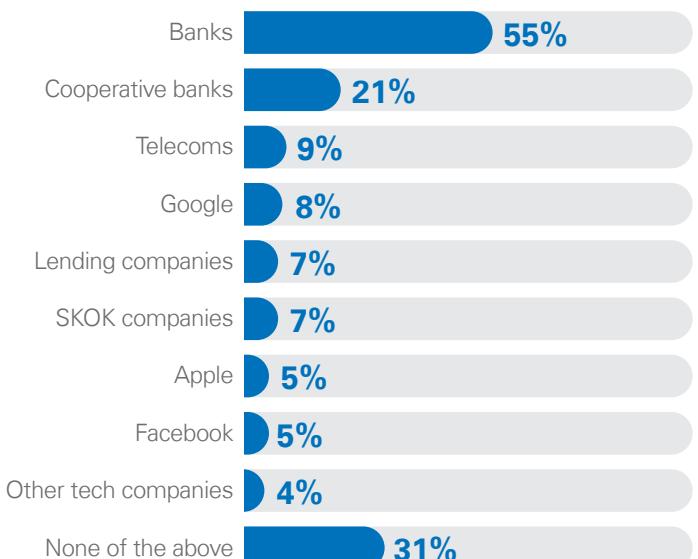
Customer data, including age and gender information, are not as sensitive and confidential from a security perspective as bank login data, for instance. The majority of the respondents would make such data available to banks (63%) in exchange for an individually tailored financial offer.

In addition, about one third of the respondents would share their gender and age information with organisations such as Facebook, Google, telecoms and cooperative banks. It can be noted that the younger the respondents, the more willing they are to share their gender and age. We share this

information in order to obtain a better financial offer from companies that already have this information to some extent.



Income information



Source: KPMG based on a questionnaire survey.

Although income information seems to be among the most confidential data, only 31% of the respondents declare that they would not provide such data to any of the listed companies, even in exchange for a more tailored financial offer. Banks and cooperative banks are trusted most in this respect: 55% and 21% of customers respectively would provide information about their income

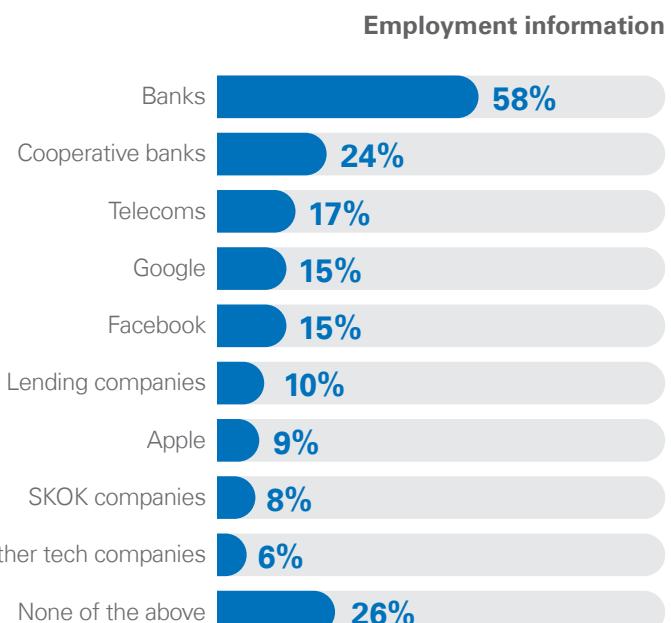
to those types of institutions. The remaining entities would receive income data from less than 10% of the respondents, mostly from young people.



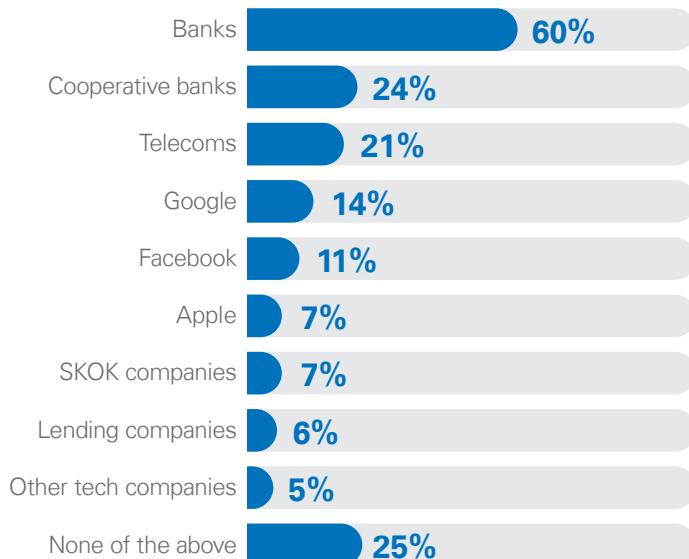
Source: KPMG based on a questionnaire survey.

Employment data tend to go hand in hand with income information, which is why similar opinions can be expected from respondents as to whether they will make such data available. One in four people would not provide such information to any of the listed companies, and would rather give up the benefits of a more tailored financial offer.

The banks would receive employment data from nearly 6 out of 10 consumers surveyed, i.e. a similar percentage as in the case of income information. Nearly one in four respondents would reveal information about their workplace to cooperative banks. In comparison with income data, a slightly higher percentage of the respondents would provide employment information to companies such as Google and Facebook.



Address data



Source: KPMG based on a questionnaire survey.

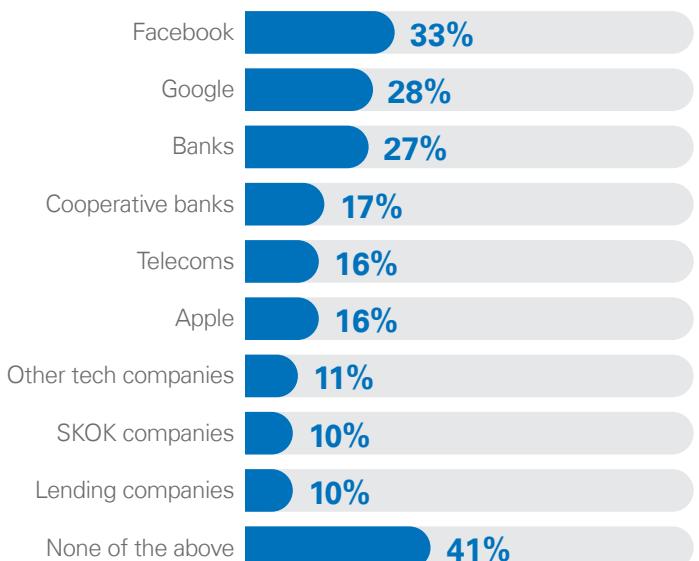
Address data are not as closely guarded by the respondents as income information. In many cases, people are required to share their address when dealing with everyday matters or formalities (receiving correspondence, bills, services). One in four respondents would not share this information with any of the listed

companies. The possibility of receiving an individually tailored financial offer means that the majority of the respondents (60%) would entrust their address data to banks. Interestingly, this percentage increases with respondents' age. Cooperative banks and telecoms would be likely to receive such data from more than

20% of the respondents in exchange for individually tailored financial offer. Companies such as Google, Apple and Facebook would receive address data from between 7% and 14% of the respondents, mainly young people who are more familiar with technologies.



Information on interests and hobbies



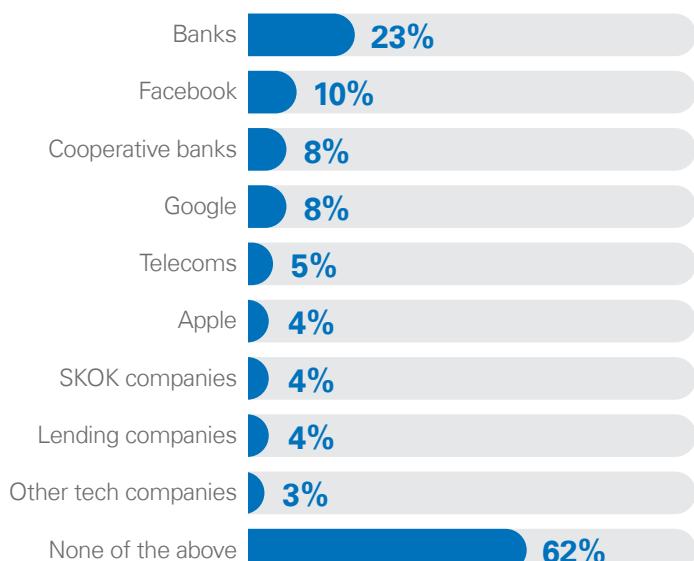
Source: KPMG based on a questionnaire survey.

Interests and hobbies are not among confidential data, and respondents' willingness to share such data depends on the recipient profile. The respondents often do not see the need to provide such information, and as many as 41% would not make it available to any of the companies, even in exchange for a more favourable financial offering. In this respect, technology companies are most popular: the question of interests and hobbies (mainly in social media) may seem more justified here than in the case of other companies.

The respondents are most likely to share information about their interests and hobbies with Facebook (33%) and Google (28%). One in ten people would provide information about their interests to lending companies and SKOK companies. Interestingly, young people are much more willing to share information about their hobbies than older people are.



Information on family

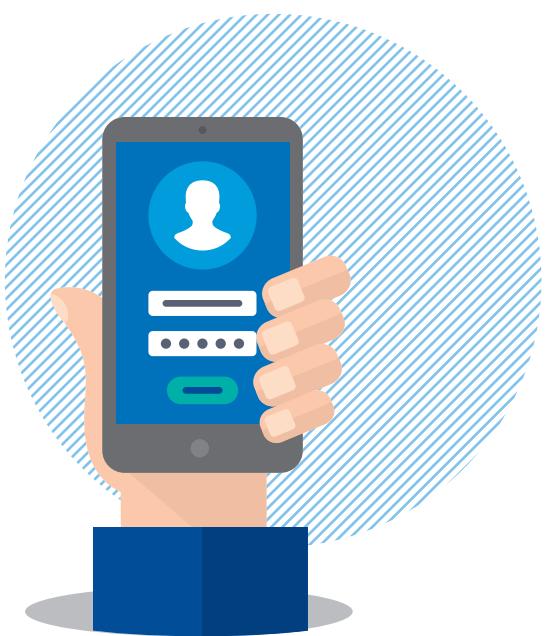
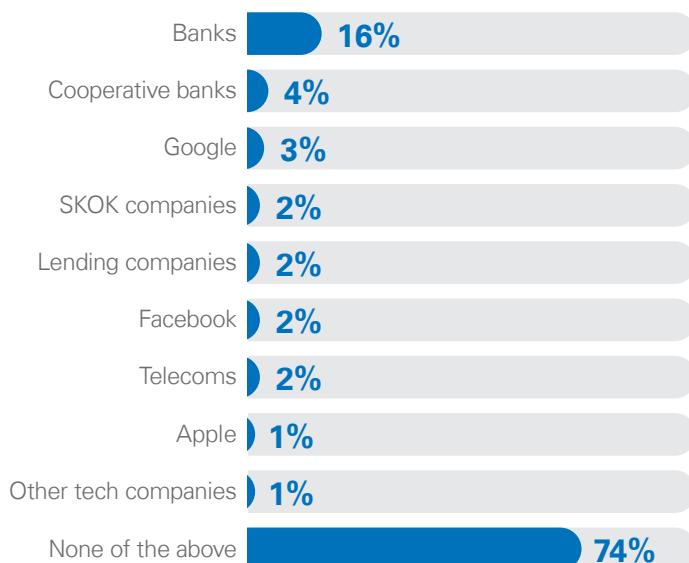


Source: KPMG based on a questionnaire survey.

Family is one of the most important spheres of life for the Polish people. To provide companies with information about the family, one needs to know why such data are collected and to have a guarantee of confidentiality. The vast majority of the respondents (62%) would not trust any of the companies in this respect, even in exchange of a better financial offer. Banks enjoy most trust in this category: one in four men and one

in five women would reveal this information to banks. The low rank of technology companies is surprising. Less than 10% of people would provide information about their family to Facebook, with 8% to Google and 4% to Apple.

Login and password



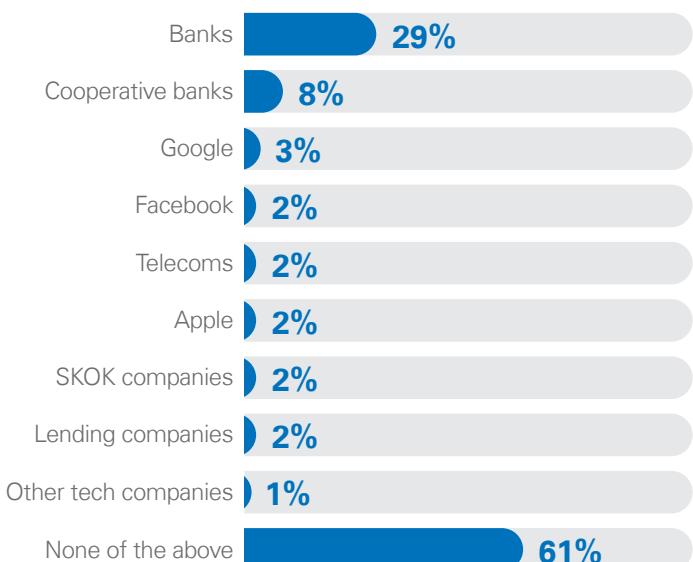
Source: KPMG based on a questionnaire survey.

Bank login and password are among the most confidential data, determining the security of money accumulated at a bank. Hence, despite the possibility of receiving an individually tailored financial offer, nearly three out of four respondents would not provide such information to any of the listed entities. Only 16%

would have confidence in banks. The remaining other companies would obtain information from less than 5% of the respondents, mainly from young people.



Transaction history



Source: KPMG based on a questionnaire survey.

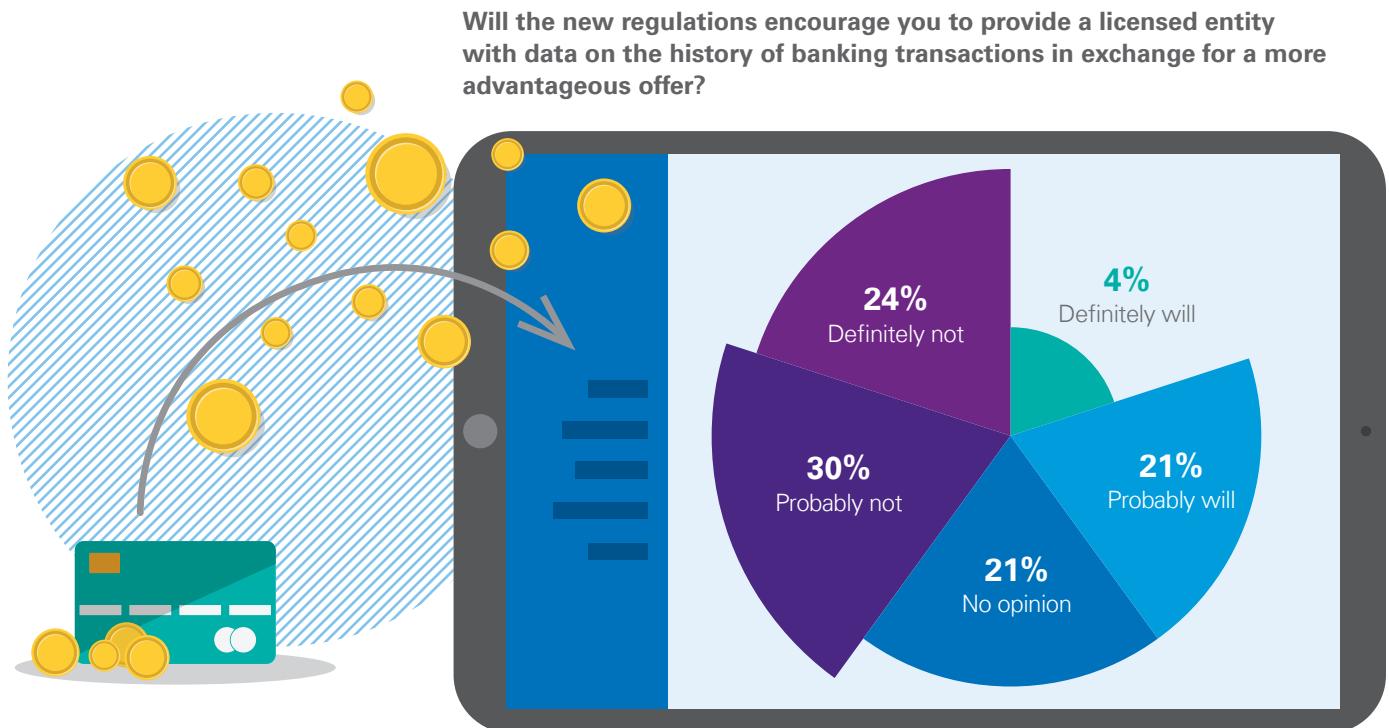
The history of banking transactions among the least shared data. It is hard to find a logical reason why most entities operating on the market would require us to provide such data.

As in most categories, banks enjoy the greatest trust, partly because they already possess such information. Overall, 29% of the respondents are willing to share transaction data.

Cooperative banks were ranked second with a much lower score (8%).

None of the other entities surpassed the 4% threshold, while six out of ten people said they would not share their banking transaction history with any of the companies mentioned in the question.

Transmission of e-banking information



Source: KPMG based on a questionnaire survey.

With the entry of the new regulations allowing modern forms of payment, only one in four people are willing to provide their transaction history data to an entity licensed in the EU in order to obtain significant benefits (e.g. a lower price for a service). As many as 21% have no opinion on the subject, and 54% do not intend to share such history.

When comparing these answers with the responses to a similar question

about sharing transaction history across different types of entities, the word 'licensed' has a very significant impact on the perception of institutions by Poles. The respondents are more likely to share information about their transactions with licensed entities. The awareness that a company is subject to regulations and supervision directly influences its business opportunities.

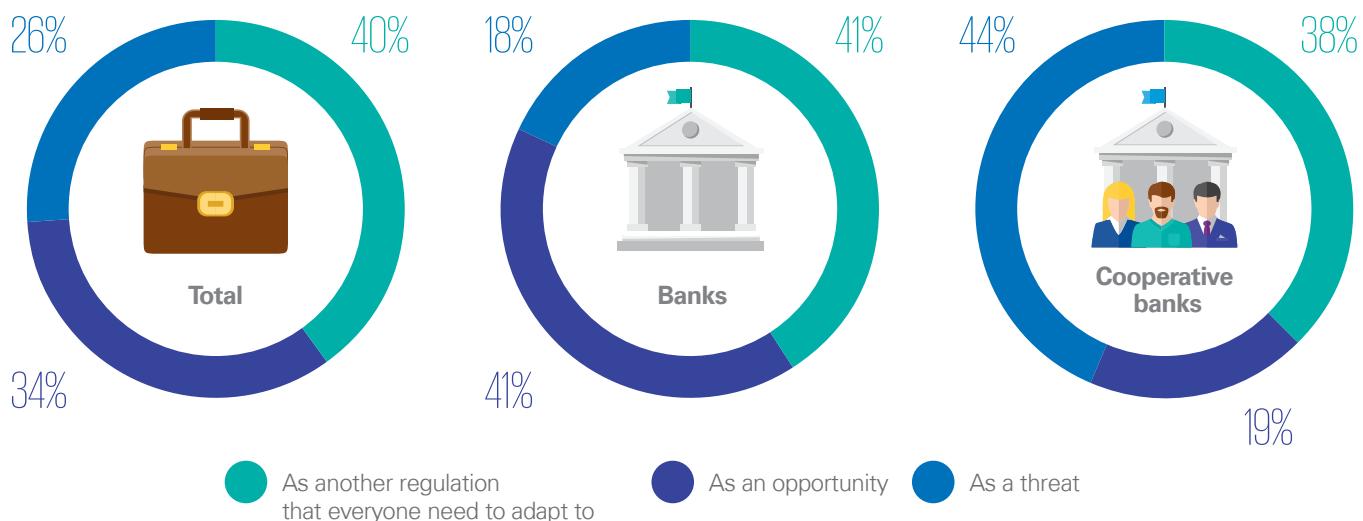
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Impact of PSD2 on financial services

Financial institutions have had mixed opinions as to the entry into force of the PSD2 Directive. The greatest scepticism and anxiety can be noticed among cooperative banks, while non-banking companies see it as an opportunity to grow and expand their services. There is also a common concern about ensuring the security of customer data, especially among respondents from banks.

Opinions on PSD2

How is the PSD2 Directive perceived?



Source: KPMG based on a questionnaire survey.

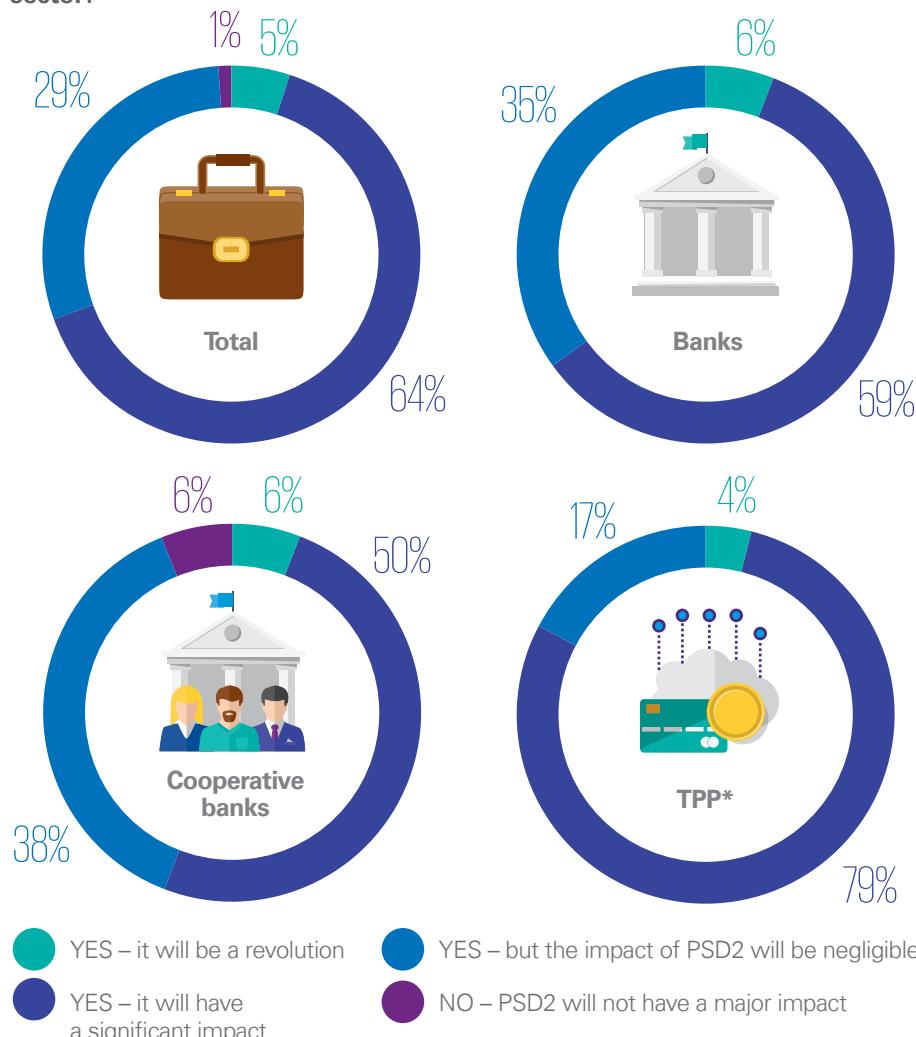
The results of the study show differing opinions on the new Directive. Although most respondents perceive it as a rather burdensome regulation that forces them to introduce changes, more than a third of the respondents also see it as an opportunity for growing their business.

The respondents from cooperative banks are more pessimistic about the changes: as many as 44% of them believe that PSD2 will be a threat to their company, and nearly 38% treat it as another regulation they need to adapt to. The respondents representing banks expressed

a different opinion. More than 40% of them say that the new regulations introducing changes in banking will be an opportunity for their institutions. The same percentage believe that this is another regulation that needs to be adapted to.



Will the entry into force of the PSD2 contribute to changes in the financial sector?



I do not expect a revolution, but maybe we will see some interesting projects. I certainly do not assume that the most 'trivial' cases of use will make a big difference, e.g. initiation of payments, or aggregation of accounts.

Anonymous respondent
Representative of a bank

Source: KPMG based on a questionnaire survey.

*TPP - Third Party Provider

A half of the respondents representing cooperative banks and nearly 60% of bank employees surveyed believe that the entry into force of PSD2 will entail significant changes in the financial sector. More than 80% of the

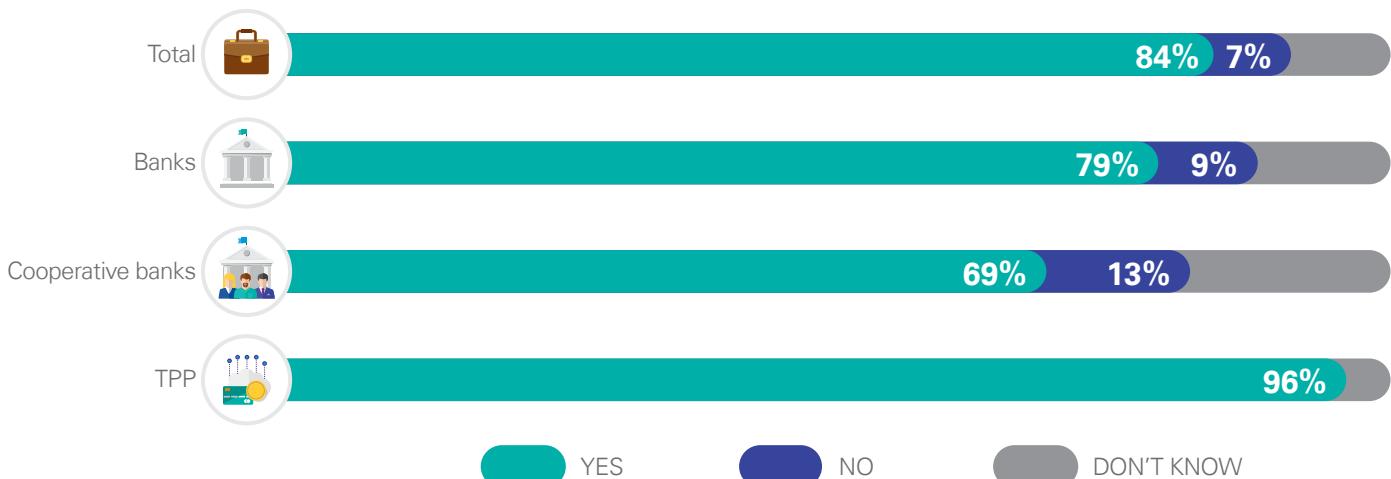
respondents from TPP companies also anticipate a major impact of the new regulations on the banking sector.

The respondents mostly believe that the introduction of new requirements

will change the banking landscape as we know it today, but it will not be a revolutionary change, but, rather, gradual developments.

Development

In your opinion, will the implementation of PSD2 on the Polish market result in the development of new, innovative financial services and products?

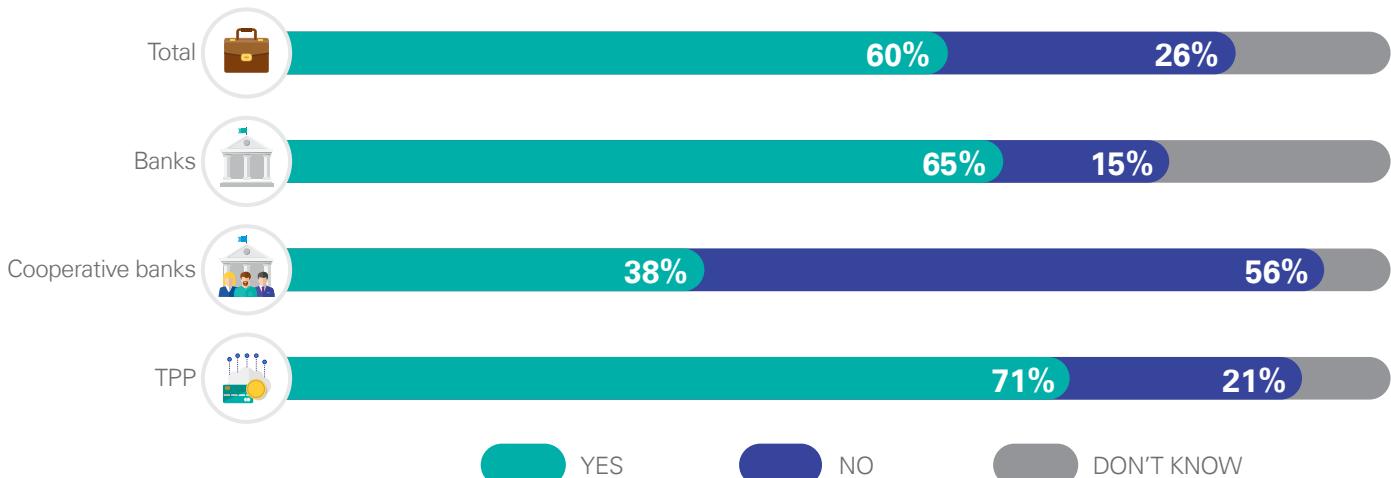


In addition to an increased level of security in the payment services market, the PSD2 also aims to enable non-banks to operate in the sphere of banking or financial services. The changes introduced by the new Directive are noticeable for representatives of banking institutions. For 84% of the respondents, the

implementation of the PSD2 on the Polish market will result in the development of new, innovative financial services and products. This opinion is shared by nearly 80% of bank representatives and 69% of employees of cooperative banks. In addition to these two groups of entities, answers were also provided

by payment institutions, technology companies, clearing houses and an e commerce platform. Out of this group, as many as 96% agreed that the implementation of the PSD2 on the Polish market would be a step towards innovation.

Do you think that further development towards Open Banking (sharing information on other banking products, e.g. information on loans) would be beneficial for the banking sector?



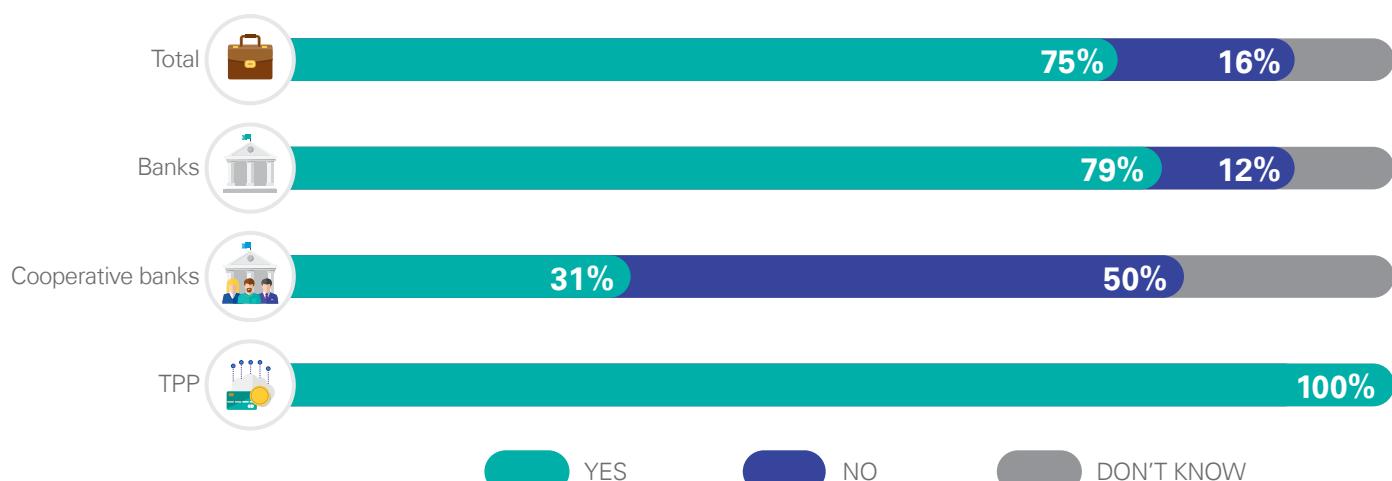
The introduction of new regulations will entail an increasing use of open banking. This is a concept whereby information on other banking products is shared with external parties, upon customer's consent, in order to boost the efficiency of financial management.

Six out of ten respondents believe that further development towards Open Banking would be beneficial for the banking sector while 75% believe that the open banking concept would be beneficial for the non-banking sector.

The opinion on the positive impact of Open Banking on the banking and non-banking sectors is shared by 65%

and 79% of bank representatives, respectively. On the other hand, cooperative banks are more pessimistic: 56% of the respondents from this sector believe that these developments will not be beneficial for the banking sector, with 50% saying it will not benefit the non-banking sector.

Do you think that further development towards Open Banking (sharing information on other banking products, e.g. information on loans) would be beneficial for the non-banking sector?



Source: KPMG based on a questionnaire survey.

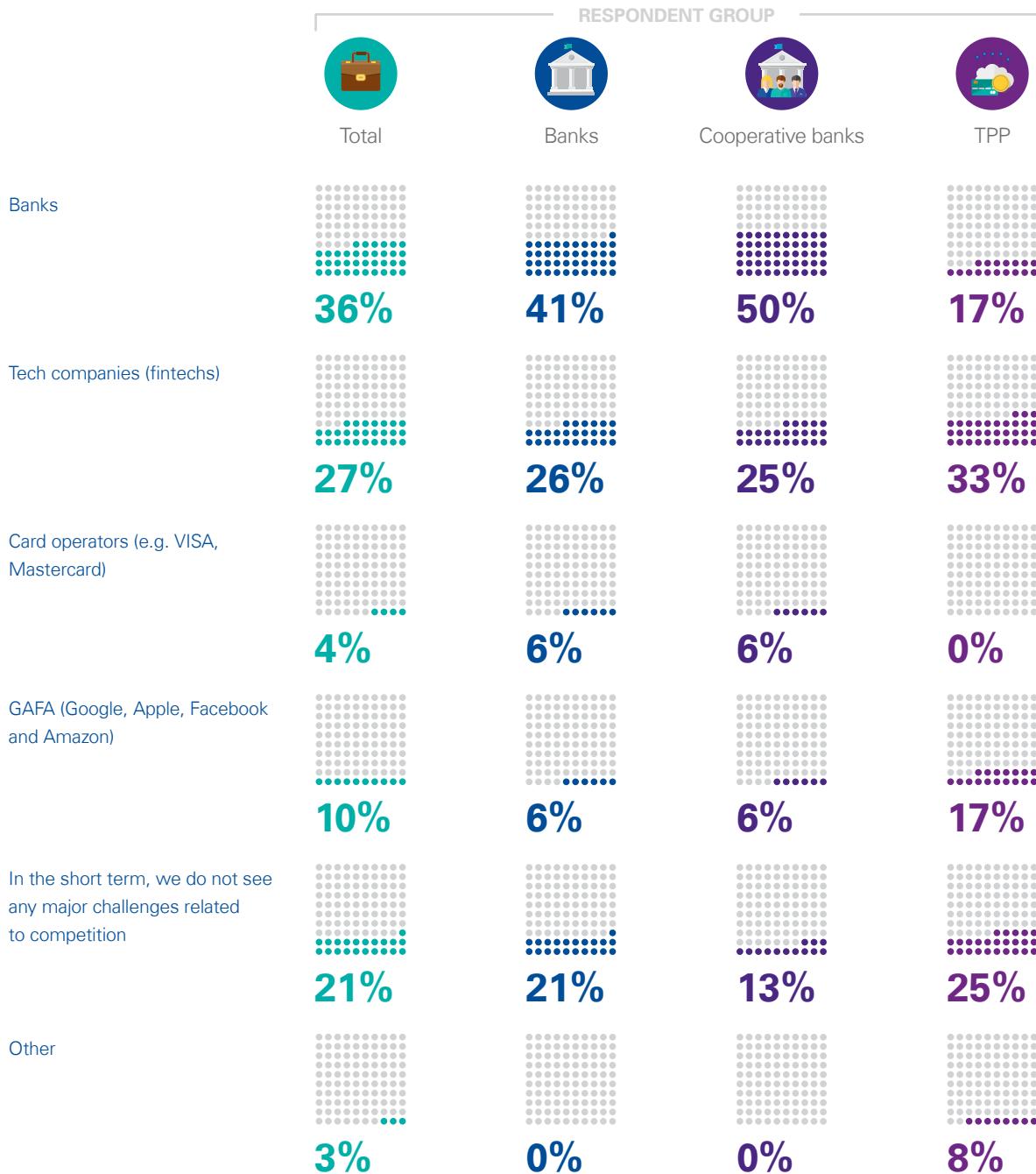


Wojciech Pantkowski
Director of the Payment
Systems and Electronic
Banking Team
Polish Bank Association

The survey answers reveal an interesting picture as to how respondents see the developments in the financial market in the near future. Interestingly, the first entities to use open banking will be banks, which will use it more than fintechs, which were supposed to pose a threat to the banks. In the longer term, however, GAFA companies are expected to have a say, with the competition between banks is expected to decline significantly. However, it is difficult to clearly say why customers should choose non-banking companies since this sector enjoys the highest level of trust among the surveyed entities, and customers are satisfied with the services offered by banks. Another noteworthy issue is the future of open banking among bank customers. The survey responses indicate a high degree of caution regarding the potential sharing of sensitive data with third parties.

Competition

Competition from which entities will pose the greatest challenge for you in the short term (up to 1 year) after the implementation of the PSD2 Directive?



Source: KPMG based on a questionnaire survey.

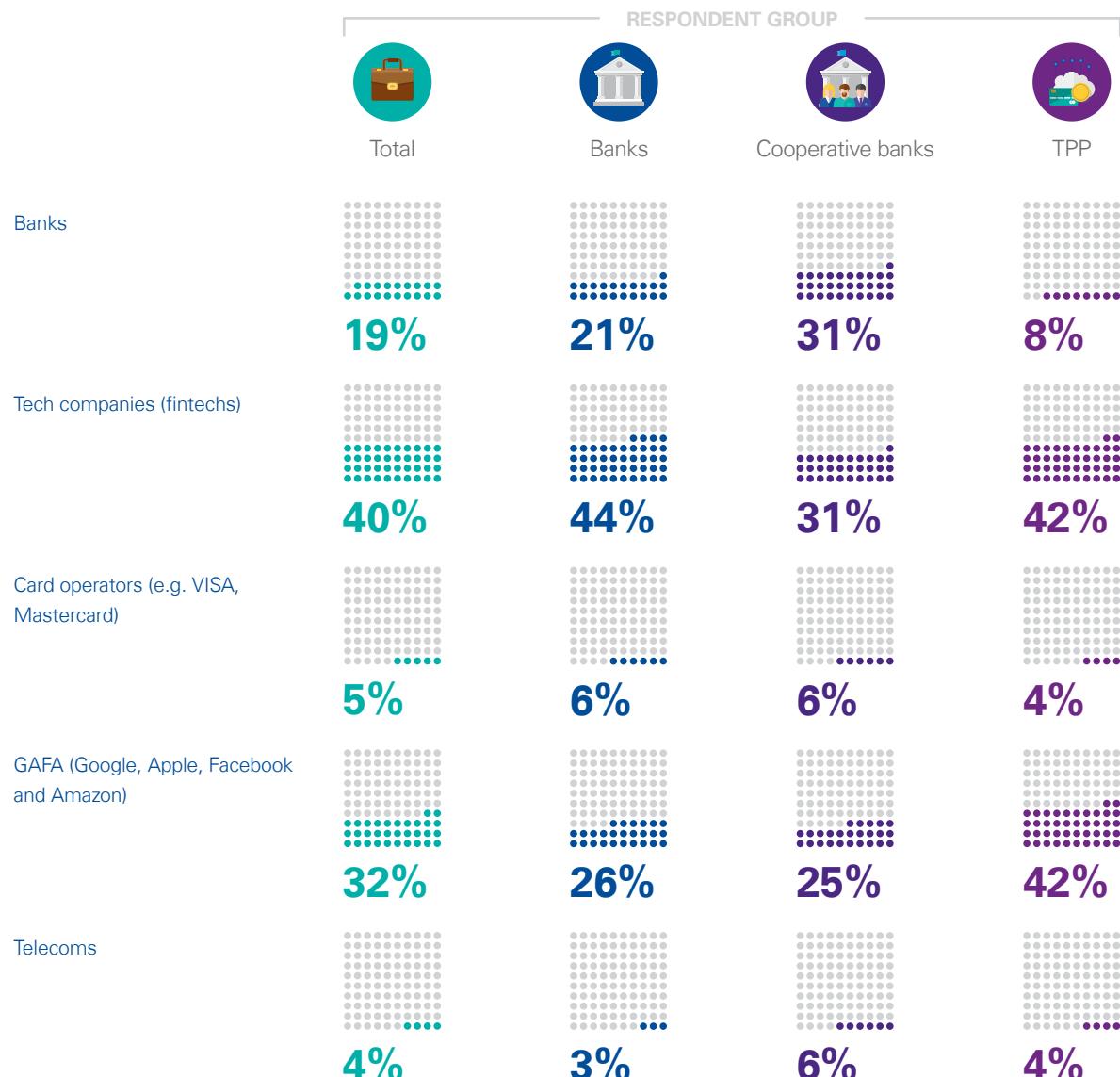
Companies are aware of the upcoming changes related to the introduction of the PSD2 and its new rules, and the impact of the new Directive on competitors' growth or changes. In the short run, up to one year after the introduction of the Directive, the respondents are worried

about competition mainly from banks (36%) and technology companies (27%).

One in five respondents stated that there will be no challenges related to growing competition in the near future. This opinion is mainly expressed by the respondents from banks and TPP.

According to 41% of the respondents from the former group, the largest threat within a year after the introduction of the PSD2 will come from other banks, while 26% see it coming from technology companies (fintechs). Most of the other respondents do not express concerns about the competition.

Competition from which entities will pose the greatest challenge for you in the medium term (2 to 3 years) after the implementation of the PSD2 Directive?



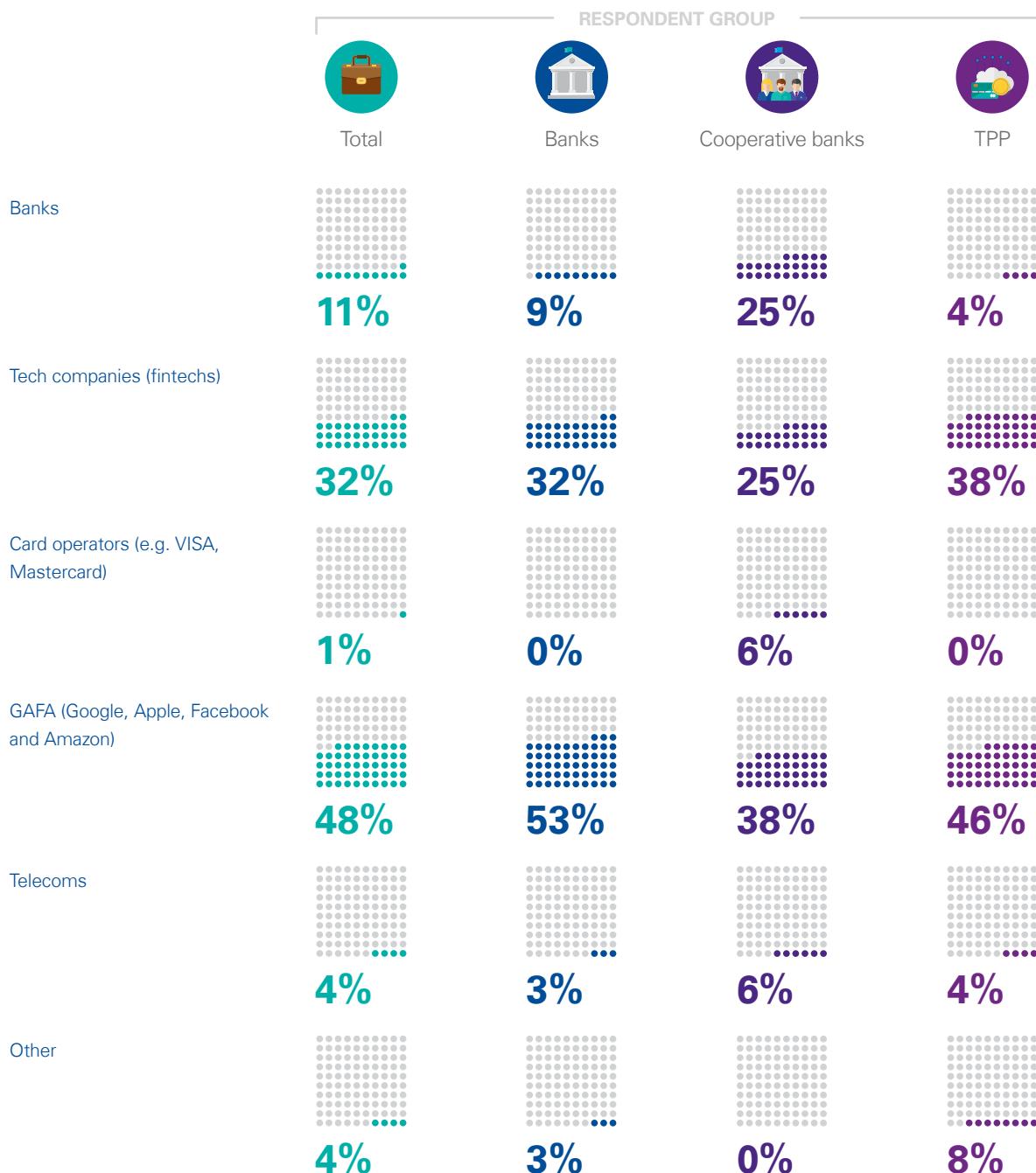
Source: KPMG based on a questionnaire survey.



Marcin Chruściel
Director of Orange Finanse

The presented survey results show that the main battle for customers in the short term will be fought among banks. This may result from the low activity of global fintech and GAFA companies in the banking sector in Poland. Over time, however, this will change and players from outside the industry will be more willing to enter banking thanks to the solutions offered by open banking, in order to provide comprehensive services, including those in banking. In my opinion, customers will open up to new solutions over time, especially when they see convenience and real value for themselves.

Competition from which entities will pose the greatest challenge for you in the long term (over 3 years) after the implementation of the PSD2 Directive?



Source: KPMG based on a questionnaire survey.

In the medium term, i.e. within 2–3 years after the introduction of the PSD2, the respondents are less concerned about increasing competition from banks, and expect increased competition from technology companies (40%) and from GAFA (32%).

Opinions on the impact of PSD2 on driving competition in the long term vary. More than half of the respondents from banks expect strong competition from GAFA. One in three respondents from banks is concerned about the growing importance of technology companies.

The respondents from cooperative banks expect competition mainly from GAFA (38%) as well as banks and technology companies: 25% each. The respondents from TPP also stated that competition from GAFA (46%) and fintechs (38%) may occur in the long term.

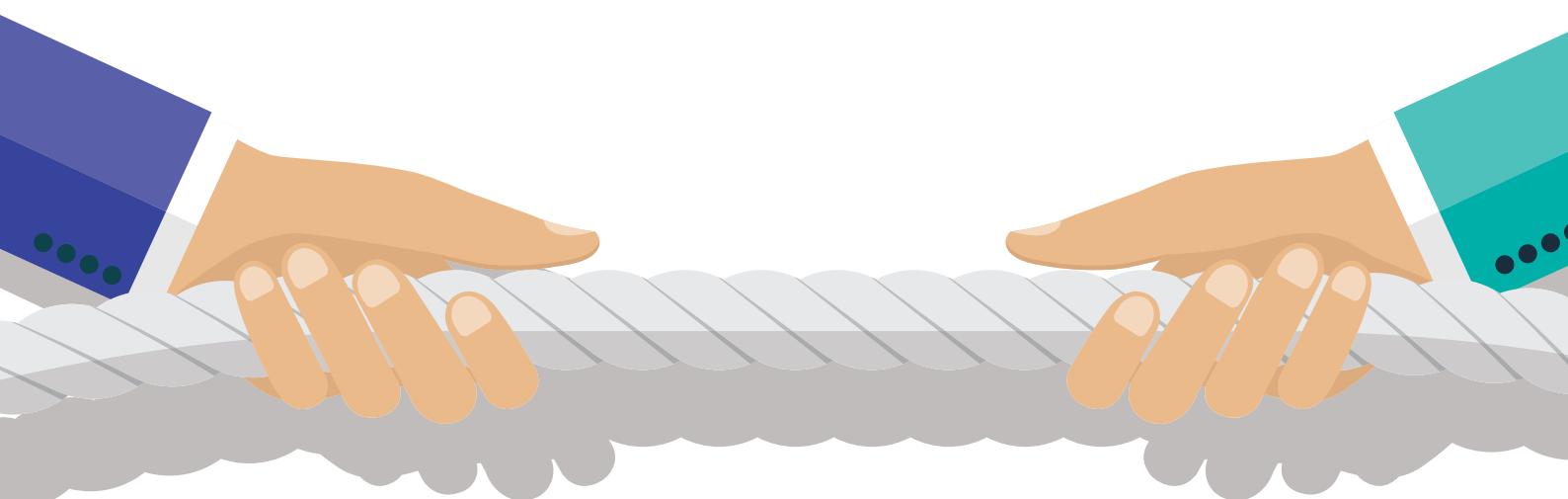


Bartosz Zborowski

Director of the Innovation and
Payments Department

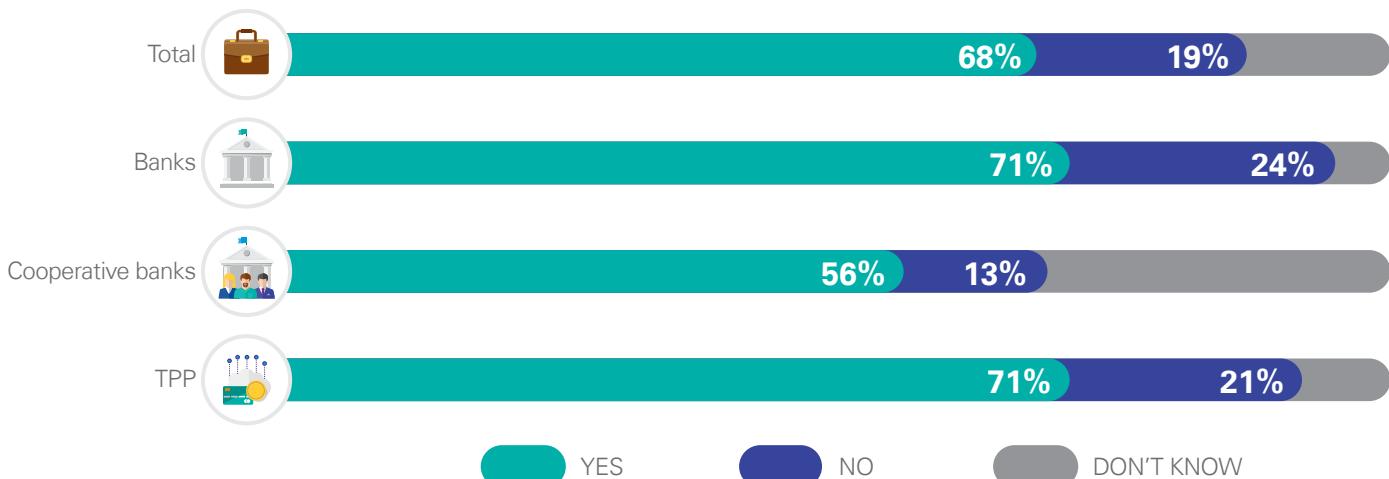
Bank Pekao S.A.

There is no doubt that PSD2 will change the landscape of financial services in the long run. For many years, the Polish banking sector has been trying to implement innovative products and services that are convenient for customers in order to minimize the risk of customers leaving for fintechs. The key argument in this contest is, first and foremost, consumer confidence in the security guaranteed by banks.



Concerns

Do you think that companies from outside the banking sector can ‘take over’ the relations between the customer and the bank by using the possibilities opened by the PSD2?



Source: KPMG based on a questionnaire survey.

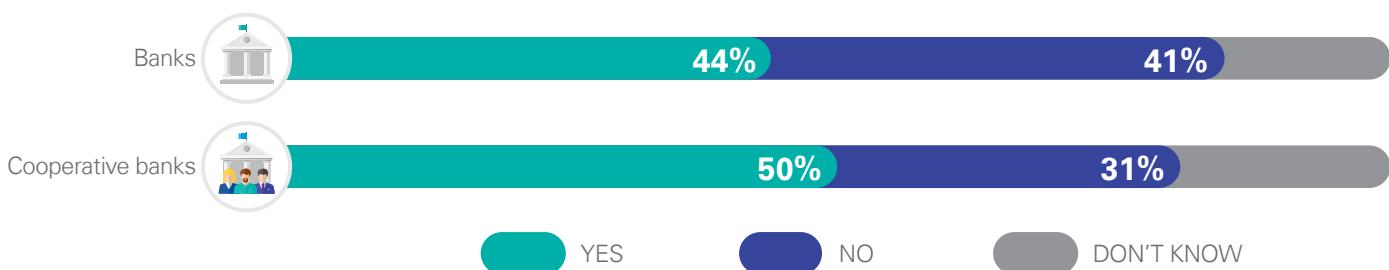
The PSD2 allows other companies, from outside the banking sector, to provide financial services and, consequently, to take over customers who previously used banks only. Naturally, the possibility does not mean that this will necessarily happen. According to 68% of the respondents,

banks may lose some customer relations to other companies that offer financing services.

The respondents are also aware of the high trust enjoyed by banks among their customers. Other companies do not have such a comfortable situation,

at least for the moment. This may result in a situation where consumers will use only certain segments of non-banking services.

Are you afraid of losing customers to other banks in connection with the PSD2?

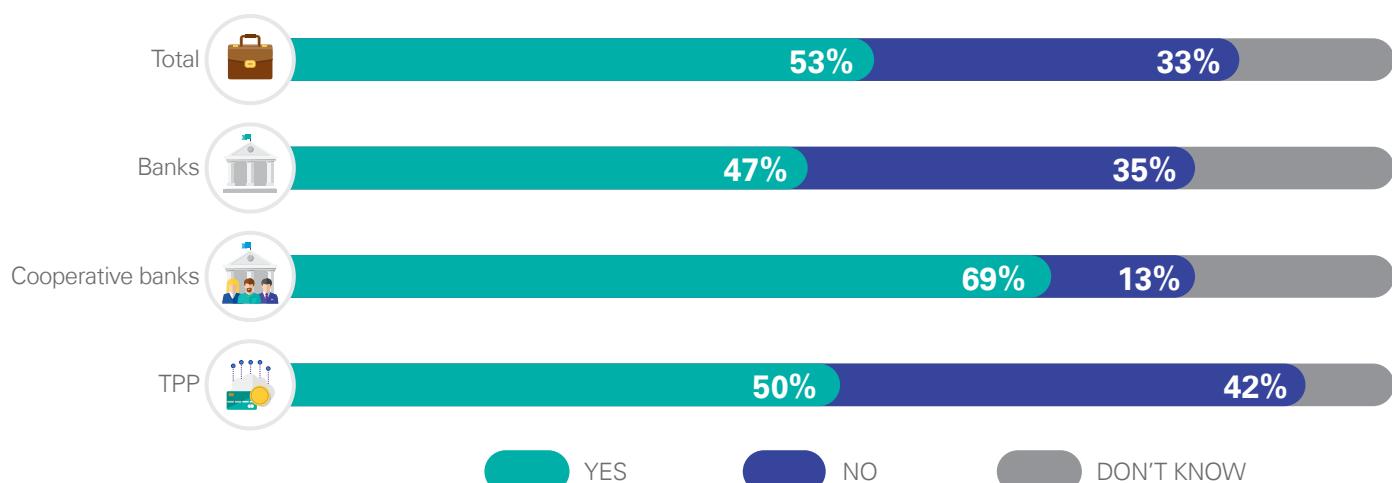


Source: KPMG based on a questionnaire survey.

The risk of customers being taken over by non-banking companies means that banks will try to introduce new or upgraded services for their customers in order to retain their business. This is conducive to competition between

banks who will need to fight for customers. Concerns about possible customer outflow to other banks are expressed by every other respondent working in a cooperative bank.

Are you afraid of companies such as Google, Apple, Facebook and Amazon (GAFA) entering the banking market?



Source: KPMG based on a questionnaire survey.

In the long term, the respondents predict a strong increase in the share held by companies such as Google, Apple, Facebook and Amazon in the financial services market following the introduction of the PSD2

Directive. Their entry into the market is a source of concern for about a half of the respondents from banks and companies that plan to provide financial services (TPP). Respondents from cooperative bank are more likely

to express concern: seven out of ten respondents from these institutions think that GAFA may be a threat.

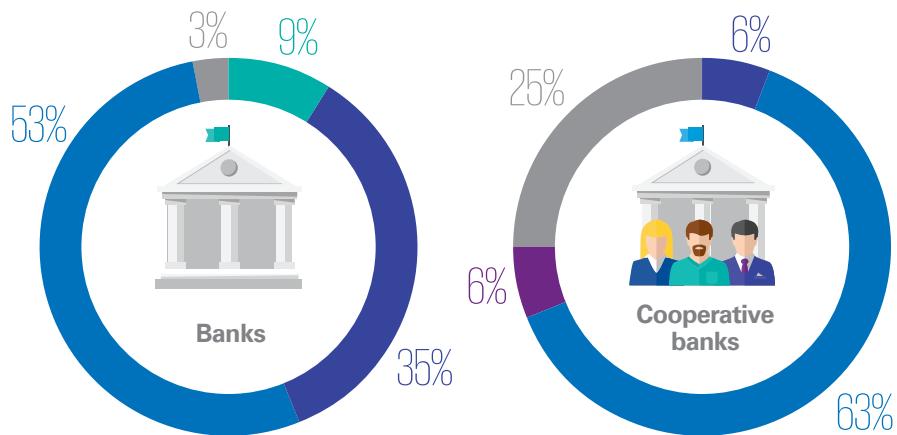


Piotr Alicki
President of the Management
Board of KIR S.A.

All financial institutions should be afraid of GAFAA, not because each of these companies can enter the financial market (because they have the necessary capital), but because now it has become profitable for them. The new regulations and the resulting standardisation open up access to the entire EU market, including the Polish market, for companies such as Google, Amazon or Alipay. The way they see it, they are not entering the Polish market, they are entering the European market. However, from the perspective of Polish financial institutions they will certainly represent serious competitors.

Changes

Has the implementation of the PSD2 helped to initiate the digital transformation at your bank?



- YES – without the PSD2, the digital transformation would not have been initiated so soon
- NO – these are two separate projects which have no connection with each other
- NO – PSD2 implementation is only a part of the ongoing digital transformation at our bank
- NO – we do not plan a digital transition at our bank
- DON'T KNOW

Source: KPMG based on a questionnaire survey.

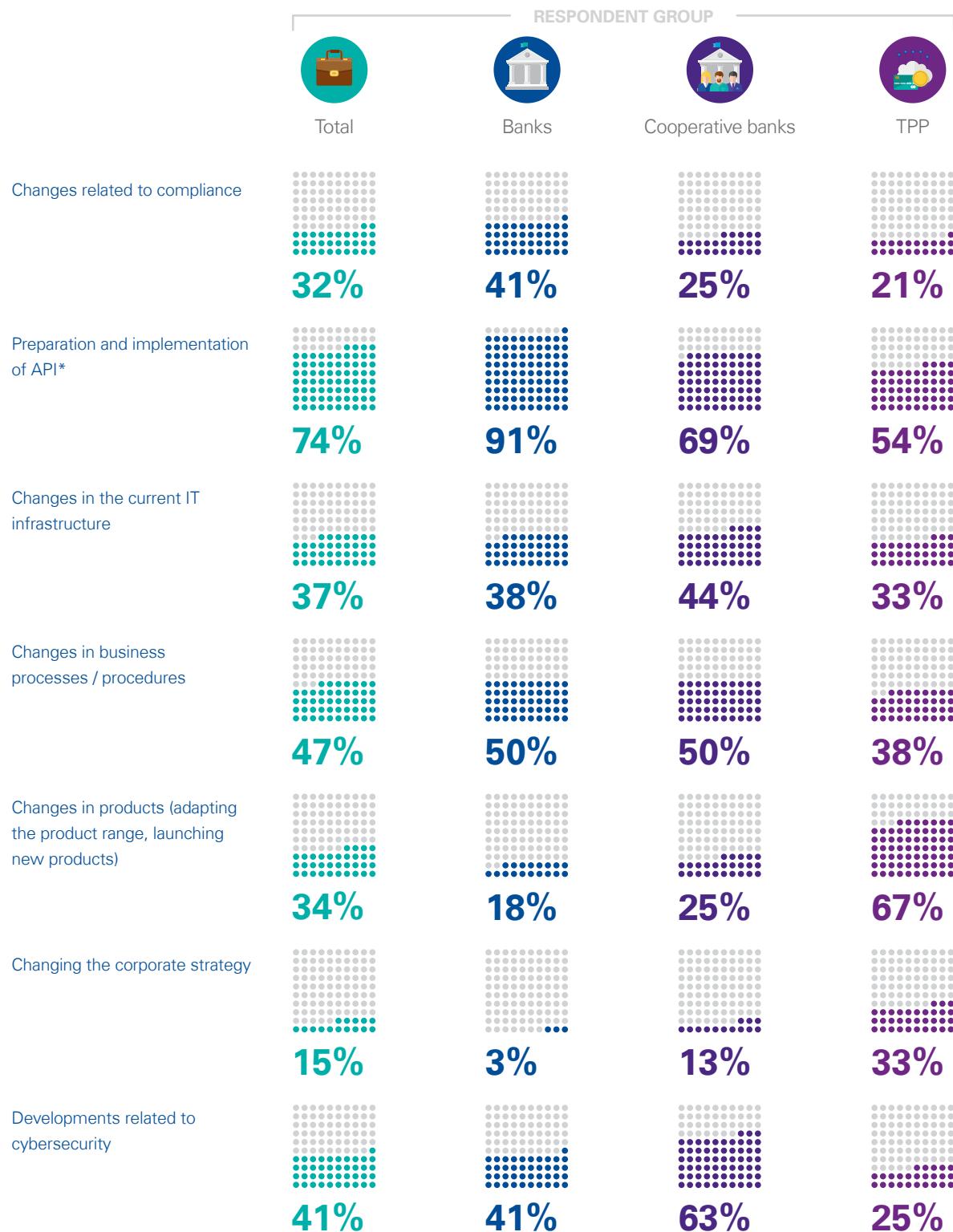
The development of modern enterprises is largely based on their ability to innovate. Many banks undertake a process of digital transformation, which helps them to adapt to the needs of today's markets. For the majority of respondents from banks, the introduction of the new PSD2 rules was not a reason to start this transformation, but is only a part of the process. This view was declared by 53% of the respondents from banks and 63% of those employed at cooperative banks. In addition, 35% of bank representatives believe that the digital transformation and the implementation of the PSD2 can be considered as two separate projects, not interrelated.

The changes that companies have to implement due to the entry of PSD2 include the preparation and implementation of the API (74%). This opinion is expressed by the majority of the respondents from banks and cooperative banks.

In addition, the respondents employed at banks and cooperative banks confirmed that their institutions would need to implement changes in business processes (50% each) and changes related to cybersecurity (41% and 63% respectively). Cooperative banks also focus on implementing changes related to the current IT infrastructure (44%), while banks focus on changes related to compliance (41%). The surveyed representatives of TPPs focus primarily on introducing changes to products, understood as adaptation of existing products or launches of entirely new products.



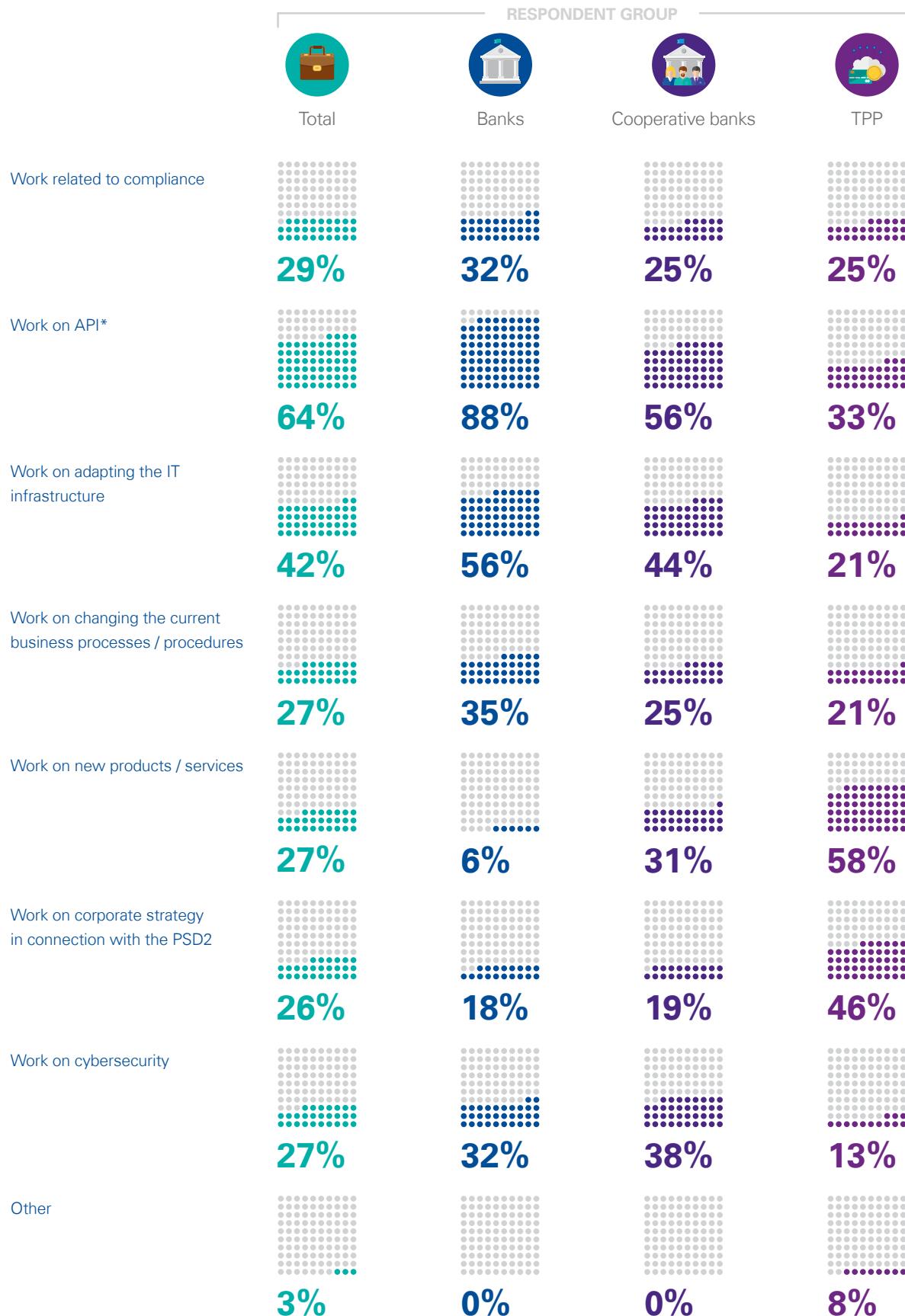
What are the major changes in your organisation that are required by the PSD2 entering into force (please select a maximum of three that seem necessary)?



Source: KPMG based on a questionnaire survey.

*API - Application Programming Interface

What are the major measures that have been taken in your organisation in connection with adapting to the PSD2 or leveraging the potential offered by the PSD2?



Source: KPMG based on a questionnaire survey.

Nearly 90% of the respondents representing banks confirmed that their organisations had started work on API. In addition, according to a half of them, work is underway to adapt the IT infrastructure. Similar measures

had been taken by cooperative banks. Respondents from TPPs are currently working on new services and products and on corporate strategy that would be adapted to the new reality.



Michał Podgajny

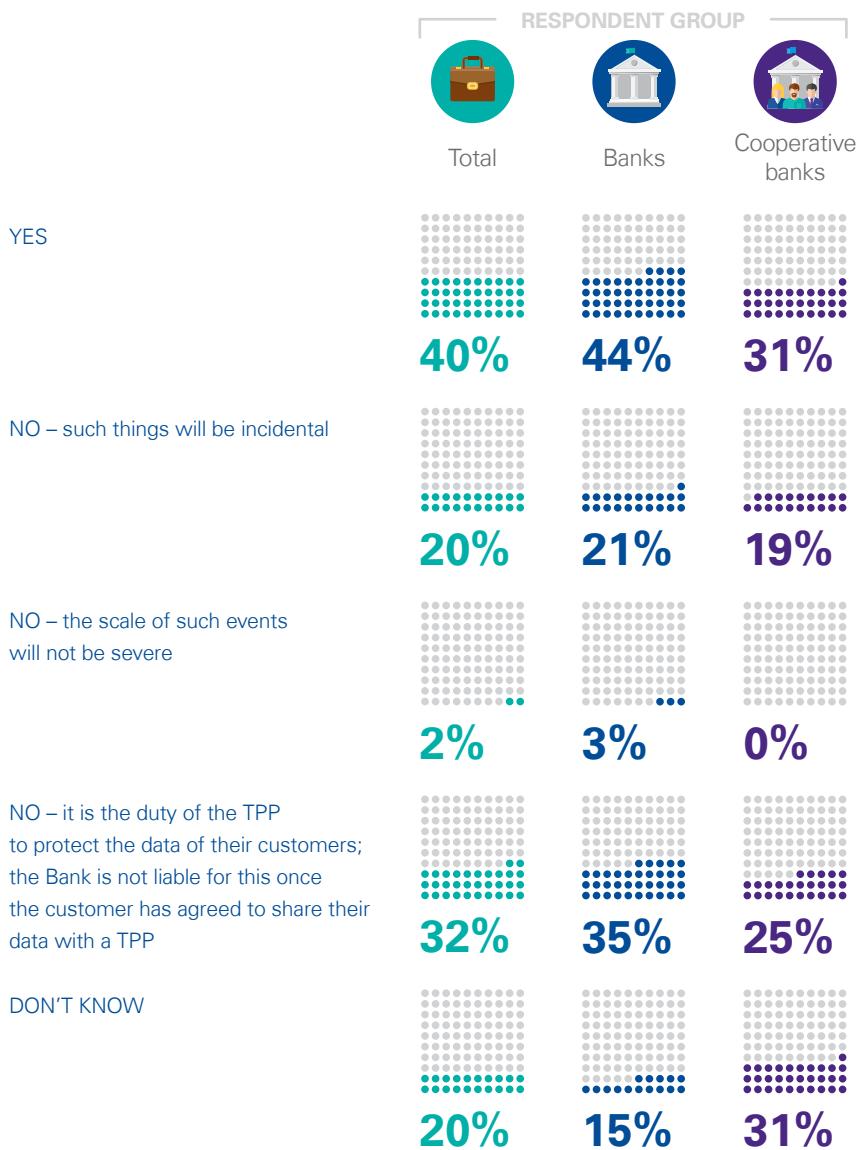
Director of KPMG, Open Banking Lead

The implementation of the PSD2 Directive in banks and the road towards Open Banking will take place in four stages, possibly mutually overlapping. At the first stage, which is currently underway, most banks focus on the implementation of APIs and on compliance issues. At the second stage, banks will look for ways to monetise the opportunities offered by the PSD2, including the provision of the so-called premium services. The third stage involves banks taking an active role as an AISP/PISP player by creating new products and services based on their own products and those offered by third parties, in order to provide personalised services to customers. The fourth stage is based on the analytics of bank-as-a-service data. Each stage will require banks to change their business models and operational models, which means that the digital transformation of banks has only just begun.



Data security

Are you afraid of your customers' data leaking in connection with their disclosure to third parties?



Source: KPMG based on a questionnaire survey.

The example of a recent leakage of credit card data from one of the major tech companies shows that other institutions are not prepared as well as banks are.

Anonymous respondent
Representative of a TPP

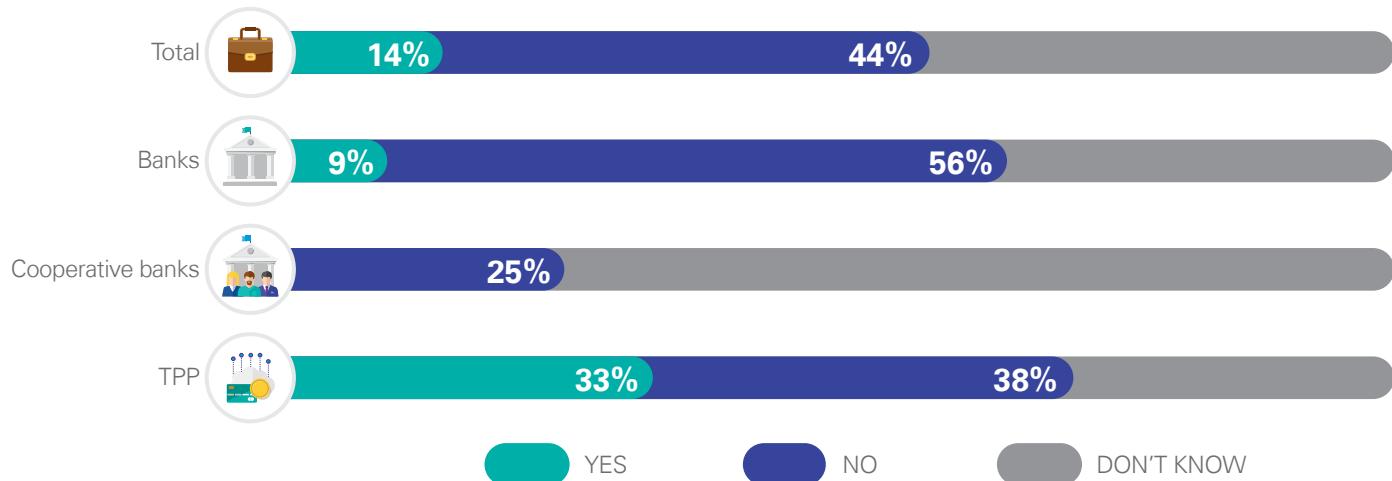
The security of customer data is among the priorities for data processors. There is an increasing flow of news on data leaks or hacking attacks that result in sensitive data being posted on the Internet. This problem also affects large technology companies, which are sometimes accused of violating data protection regulations.

With this in mind, it is not surprising that as many as 40% of the respondents from banks and cooperative banks are afraid of their customers' data leaking in connection with sharing such data with third parties. Nearly a third of the respondents claim this is not a cause for concern, as data security will not be their responsibility. More than 20% of the respondents believe that data leaks will be incidental. Only 2% of the representatives of banking institutions believe that the scale of this phenomenon will not be severe.

Each year, banks invest millions of zlotys in providing cybersecurity, and they are also subject to many restrictive regulations in this respect. As many as 44% of the respondents believe that third parties which gain access to bank customers' data will not be able to protect such data as well as banks do. Only 14% of the respondents are of the opposite view. Clearly, the respondents from banks do not believe that third parties will be equally effective in securing their customers' data: 56% of the respondents believe that such external actors do not guarantee security.

Most respondents from cooperative banks are not convinced that TPP companies will be able to protect customers' data as well as banks do. People working in non-banking companies are more optimistic about data security: 33% of the respondents say that their companies are able to provide the same level of security, while 38% are of the opposite opinion.

Do you think that third parties which will gain access to bank customer data will be able to protect the data in the same way as banks do?



Source: KPMG based on a questionnaire survey.



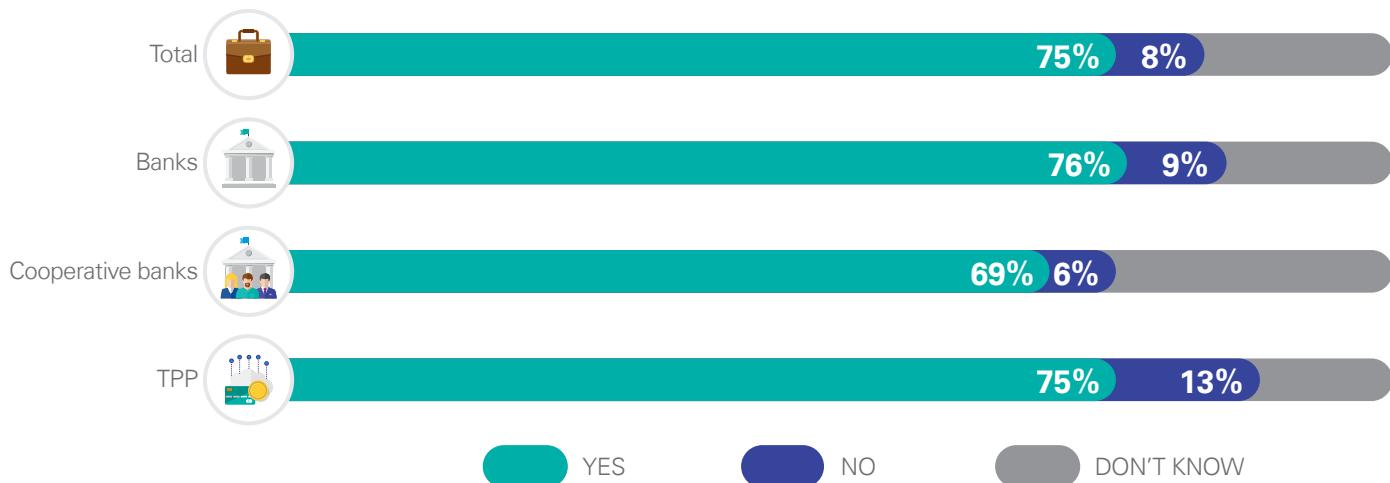
Michał Kurek

KPMG Partner, Head of the
Cybersecurity Team

The PSD2 Directive represents a whole new set of rules for the banking sector and enormous challenges in terms of ensuring data security. The new business models will involve vectors of cyber attacks and financial fraud that are difficult to predict at this point. For this reason, it is not enough to ensure the best practices of preventive security measures when implementing Open Banking solutions. Mechanisms will have to be put in place to identify fraud as soon as possible and to respond effectively to emerging incidents.



Are you concerned about an increased number of cyber attacks following the implementation of the PSD2 Directive?



Source: KPMG based on a questionnaire survey.

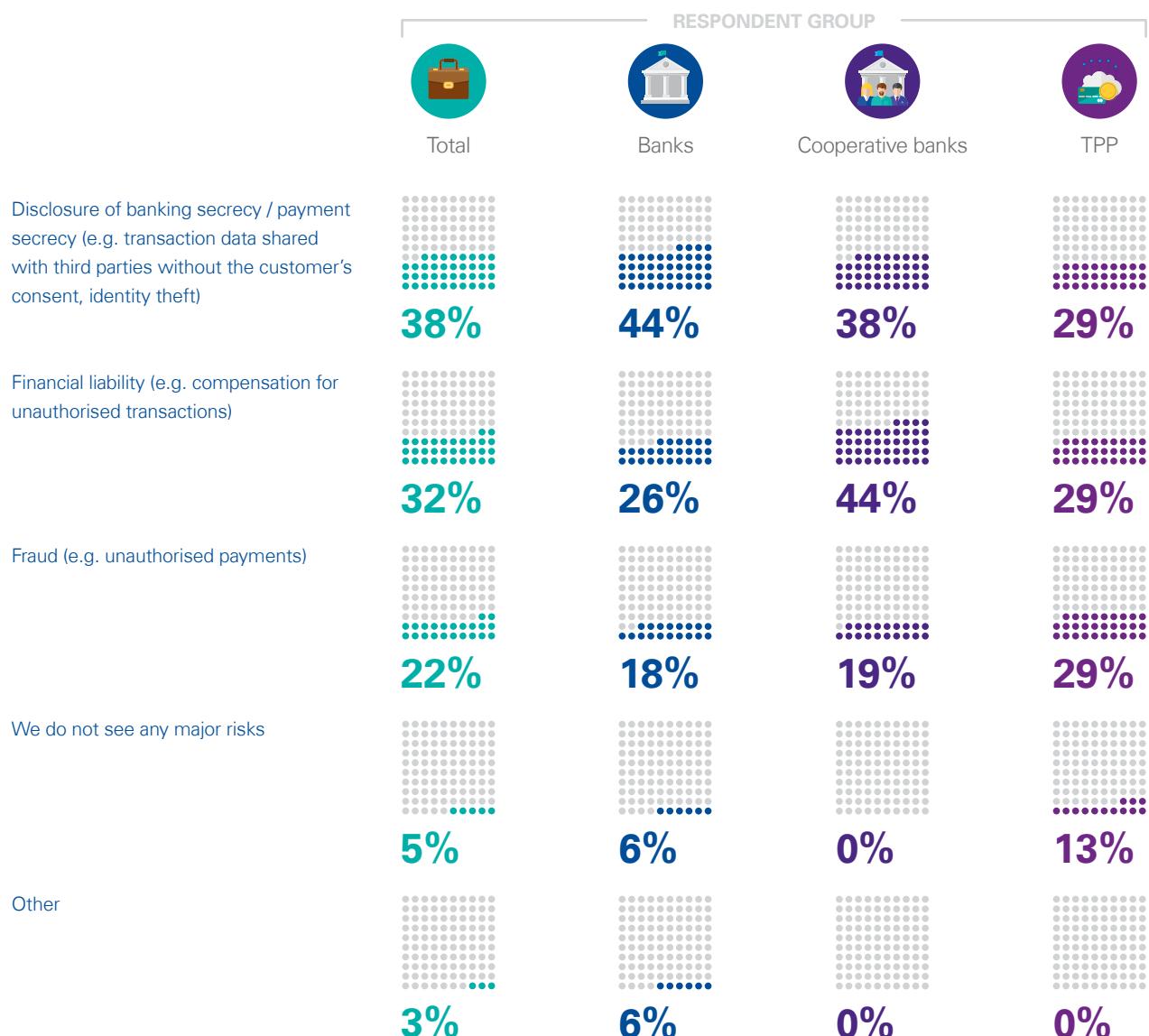
Three quarters of those surveyed were concerned about an increased number of cyber attacks following the implementation of the PSD2 Directive. Including ever new intermediaries in the data flow significantly increases exposure to attacks. Hackers may impersonate a TPP company or create false app and steal data in this way.

One additional problem is the lack of possibilities to prosecute this type of crimes when they are committed from countries where law enforcement is difficult. Only 8% of the respondents are not afraid of data leaks after the introduction of the Directive.

Apart from the recommendation to standardise the services, the existing legislative solutions do not support technological consistency in the market. When it comes to TPP access to accounts, the PSD2 Directive generates many new cybersecurity risks that can, and should, be addressed by building joint sector-wide solutions such as a PSD2 HUB.

Anonymous respondent
Representative of a TPP

What are the major risks associated with the implementation of the PSD2?



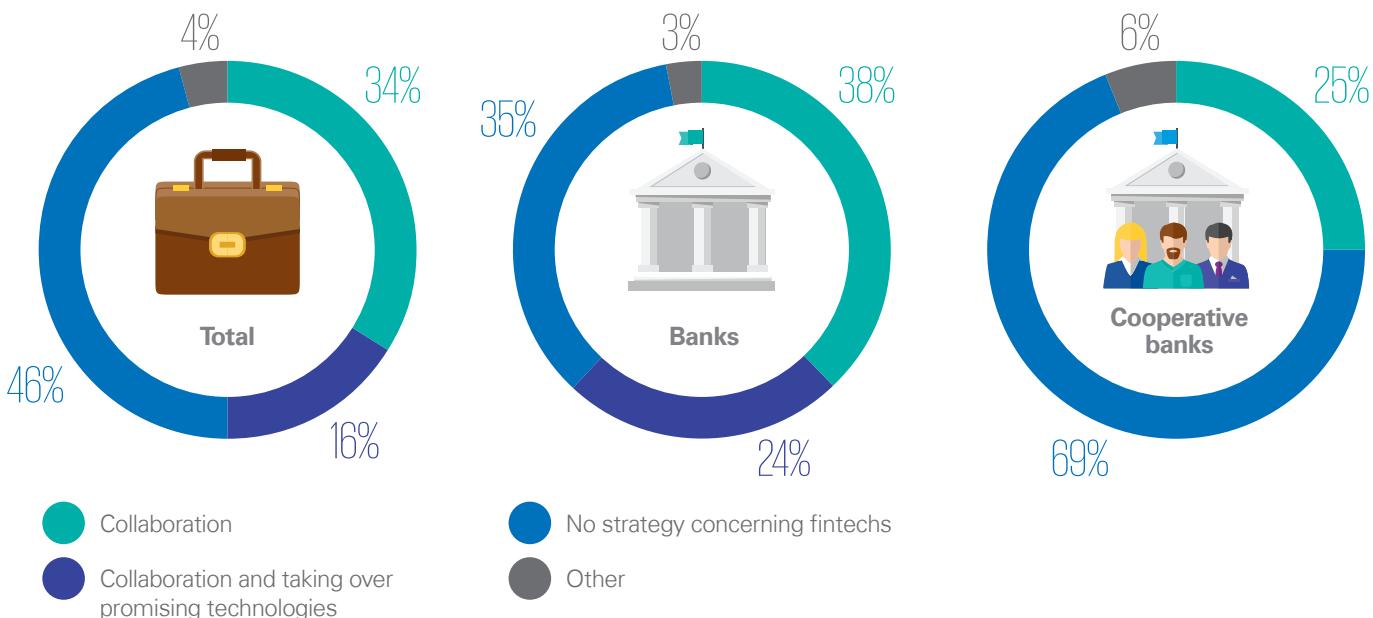
Source: KPMG based on a questionnaire survey.

Nearly four out of ten respondents said that the biggest risk associated with the PSD2 was linked with the disclosure of banking secrecy/payment secrecy (e.g. identity theft, sharing transaction history with third parties). Nearly one in three respondents fears financial liability, e.g. compensation for unauthorised transactions, while

22% of the respondents are afraid of fraud, e.g. unauthorised execution of payments. Among other risks, the respondents also mention impersonating a TPP in order to extract data under false pretences. Only 5% of the respondents reported no concerns.

Strategy of cooperation with companies providing other services

What is your bank's strategy concerning fintechs?



Source: KPMG based on a questionnaire survey.

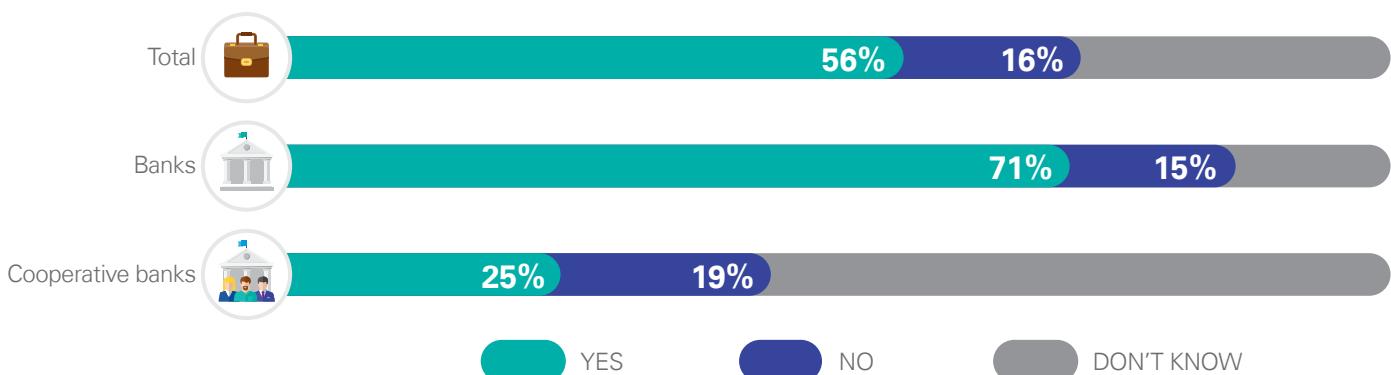
Fintech activities consists mostly in the development of new financial technologies, such as mobile banking, crypto currencies or payment sites. With the adoption of the PSD2, fintech activities and cooperation with fintechs will become increasingly important. In total, 34% of the respondents from banks and cooperative banks declare their

willingness to cooperate with fintechs, while 16% declare their willingness to cooperate and take over promising technologies. On the other hand, nearly a half of the respondents do not have any specific strategy concerning fintechs.

The new opportunities opened up by the introduction of the PSD2

will be actively used by 56% of the respondents, while the group of those with different plans is three and a half times smaller. The percentage of bank representatives who see growth opportunities and the possibility to offer new services is even higher: 71%. Only 15% of the respondents do not intend to take advantage of this opportunity.

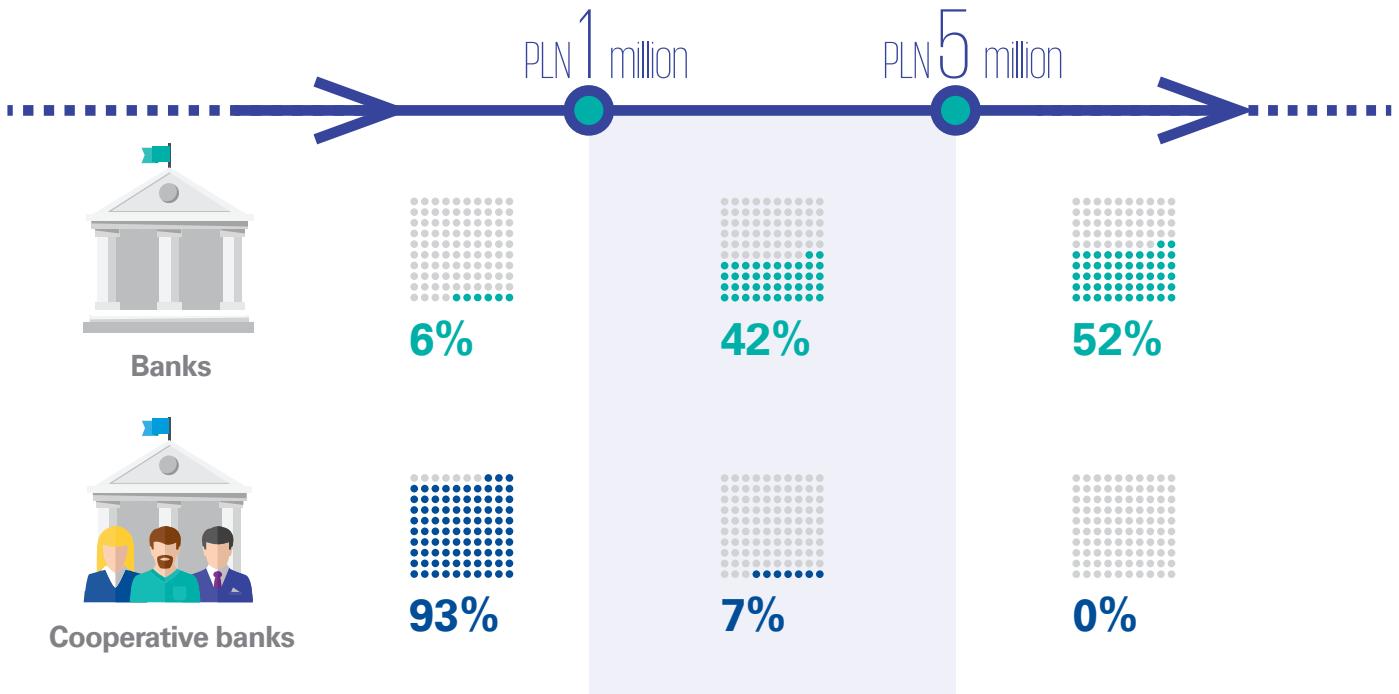
Do you intend to make active use of the opportunities offered by the PSD2 (in particular those arising from being a TPP)?



Source: KPMG based on a questionnaire survey.

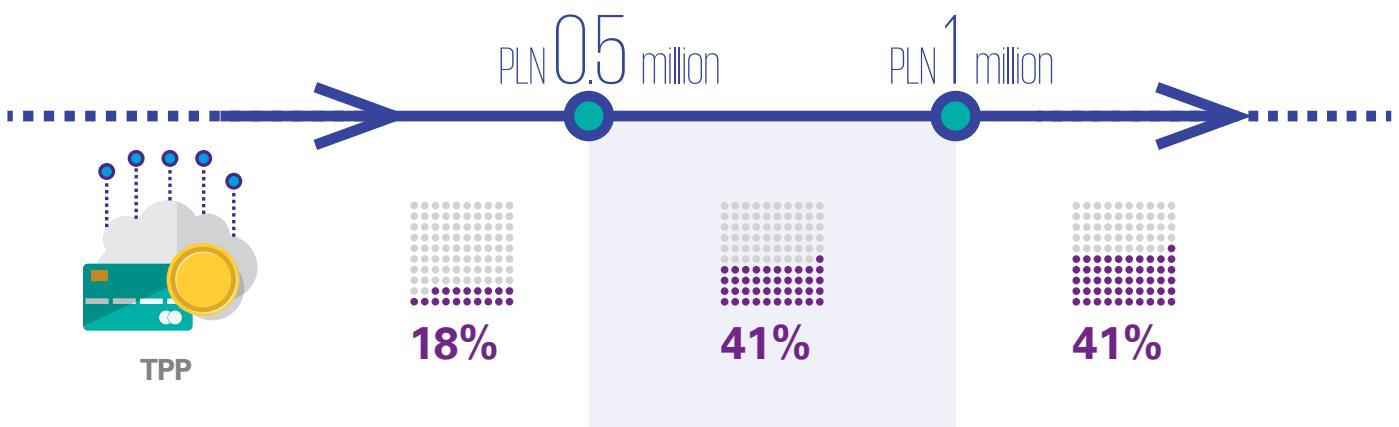
Investment expenditure

What is the expected investment expenditure needed to implement the PSD2 at your bank?



Source: KPMG based on a questionnaire survey.

What is the expected investment expenditure needed to implement the PSD2 at your company?



Source: KPMG based on a questionnaire survey.

The costs incurred by banks and companies in adapting and implementing the new Directive vary considerably, depending on the type of organisation. Banks anticipate by far the largest financial outlays needed to implement the PSD2 Directive. Over 52% of the respondents from those institutions estimate that the outlays will exceed PLN 5 million, 42% believe that their organisation will incur

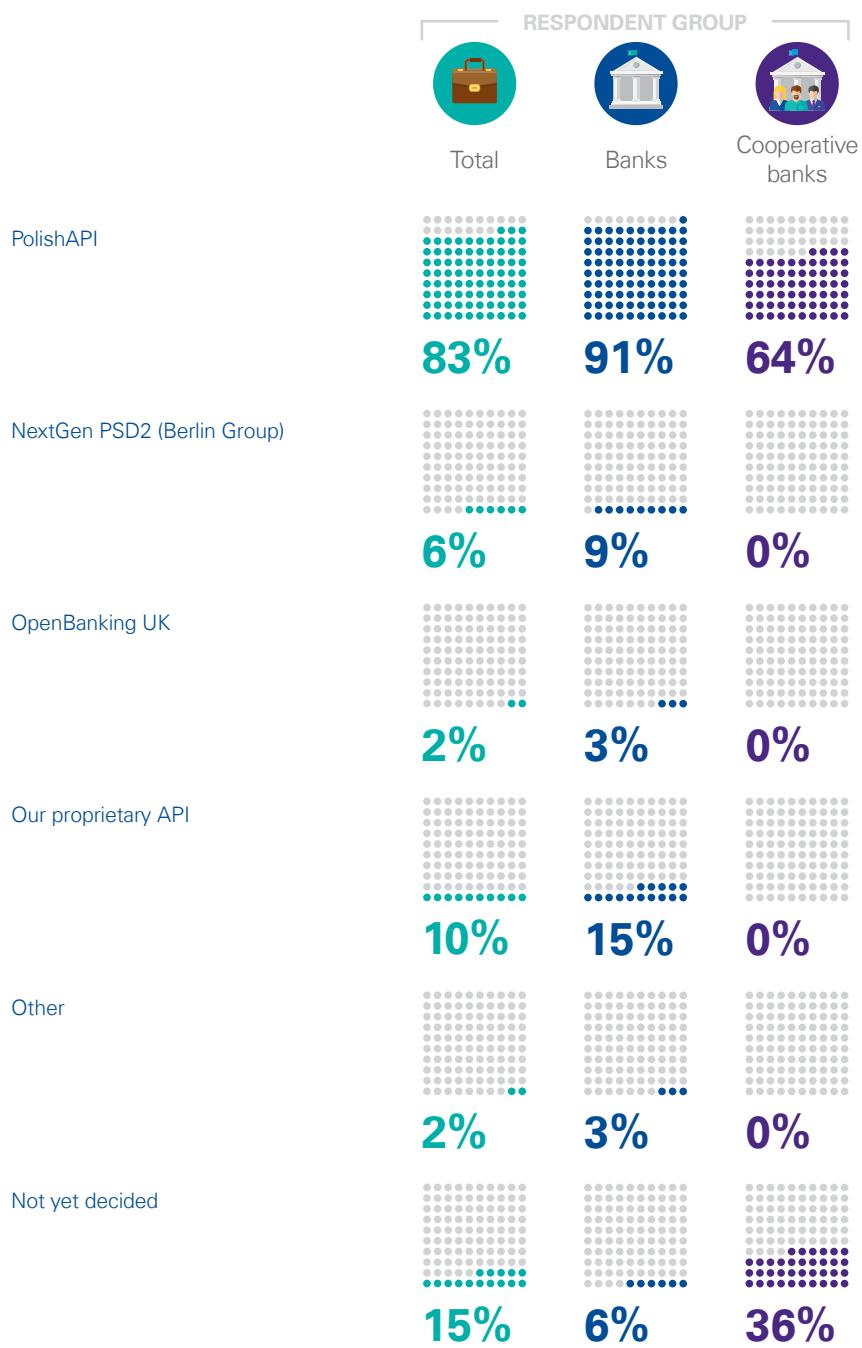
costs between PLN 1 and 5 million, and only 6% say that the outlays will be under PLN 1 million. Among cooperative banks, as many as 93% of the respondents anticipate that their company will not spend more than PLN 1 million, while 7% estimate the costs at between PLN 1 and 5 million.

The respondents from TPP companies anticipate outlays that are much

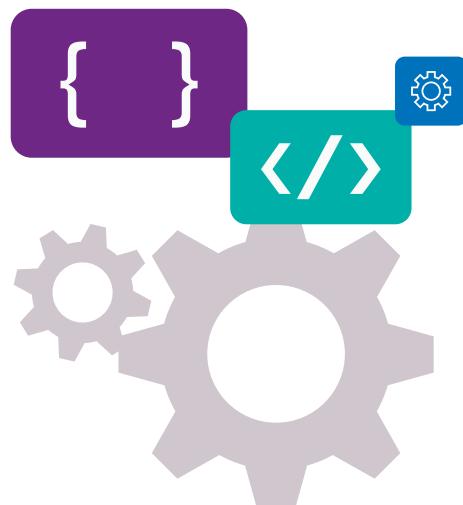
lower than those expected by banks. A group of 41% of the respondents indicated costs ranging from PLN 0.5 million to 1 million and a similar group anticipated the costs to run over PLN 1 million. On the other hand, the smallest subgroup of the respondents expect the costs to fall under PLN 500,000 (nearly one in five respondents).

API

Which API standard do you intend to implement?



API (Application Programming Interface) is a set of rules and descriptions enabling programs to communicate with each other. In connection with the implementation of the PSD2, as many as nine out of ten respondents claim that API standardisation is needed. Standardisation supports a consistent approach to the most important topic, i.e. cybersecurity. Without standardisation, the benefits of open banking will be difficult to achieve. The vast majority of those surveyed indicate PolishAPI (83%) as the standard they intend to implement. Other standards are much less popular: proprietary API standards (10%) and NextGen PSD2 (6%). At the end of January 2019, not everyone knew which API standard they would implement (15%).



Source: KPMG based on a questionnaire survey.

Is there a need for API standardisation in connection with the PSD2 implementation?



Source: KPMG based on a questionnaire survey.



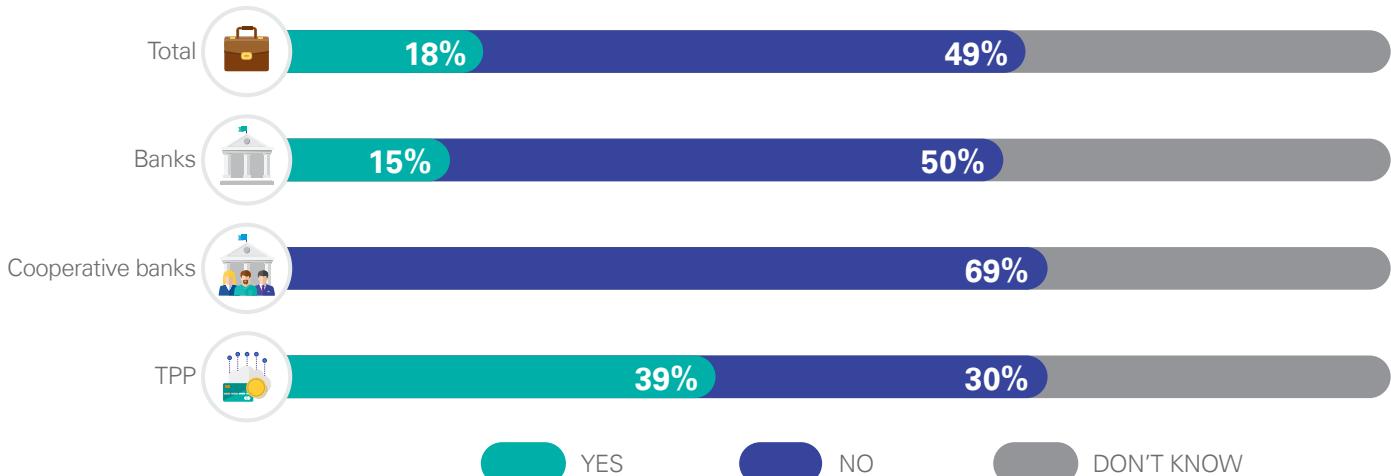
Maciej Kostro
PolishAPI Project Leader
Polish Bank Association

Any new things and changes arouse concerns and that's a natural thing. Some time ago, we took steps to prepare for this situation and to give a secure form of communication between the players of the payment market after the entry of PSD2 into force. Since the very beginning, the PolishAPI standardisation initiative, a unique undertaking in the European market, brought together banks and non-banking payment institutions, future TPPs and other entities from the sector. We are pleased to see strong support for the PolishAPI standard, because this is how I interpret the answers given to the question about the planned interface implementation at banks.

Taking into account other responses from survey participants, I would like to emphasise that, as part of our work on developing the standard, we will try to keep pace with the growing business needs and address the challenges in communication security. The good news is that consumers have high awareness when it comes to data confidentiality. Building customer trust is certainly a serious challenge for all companies entering the payment market following the new regulations. I look forward with great curiosity to new and convenient solutions for everyday services and the ones that are less customary, from banks and fintechs.

Opportunities arising from the PSD2

Are you considering an expansion into the European market, levering the potential of the PSD2?



Source: KPMG based on a questionnaire survey.

Given Poland's EU membership, the expansion into the European market is easier than into other markets, yet the vast majority of the respondents do not plan to expand their business in this direction. Only 18% of the respondents intend to leverage the potential of PSD2 and take this step. Others say they are considering this possibility, but not in the first years

after the entry into force of the new legislation.

The respondents from companies and banks who see a business opportunity related to the PSD2 believe that the greatest opportunities for business growth lie in data analysis services (75%), personal finances, e.g. household budget management (64%)

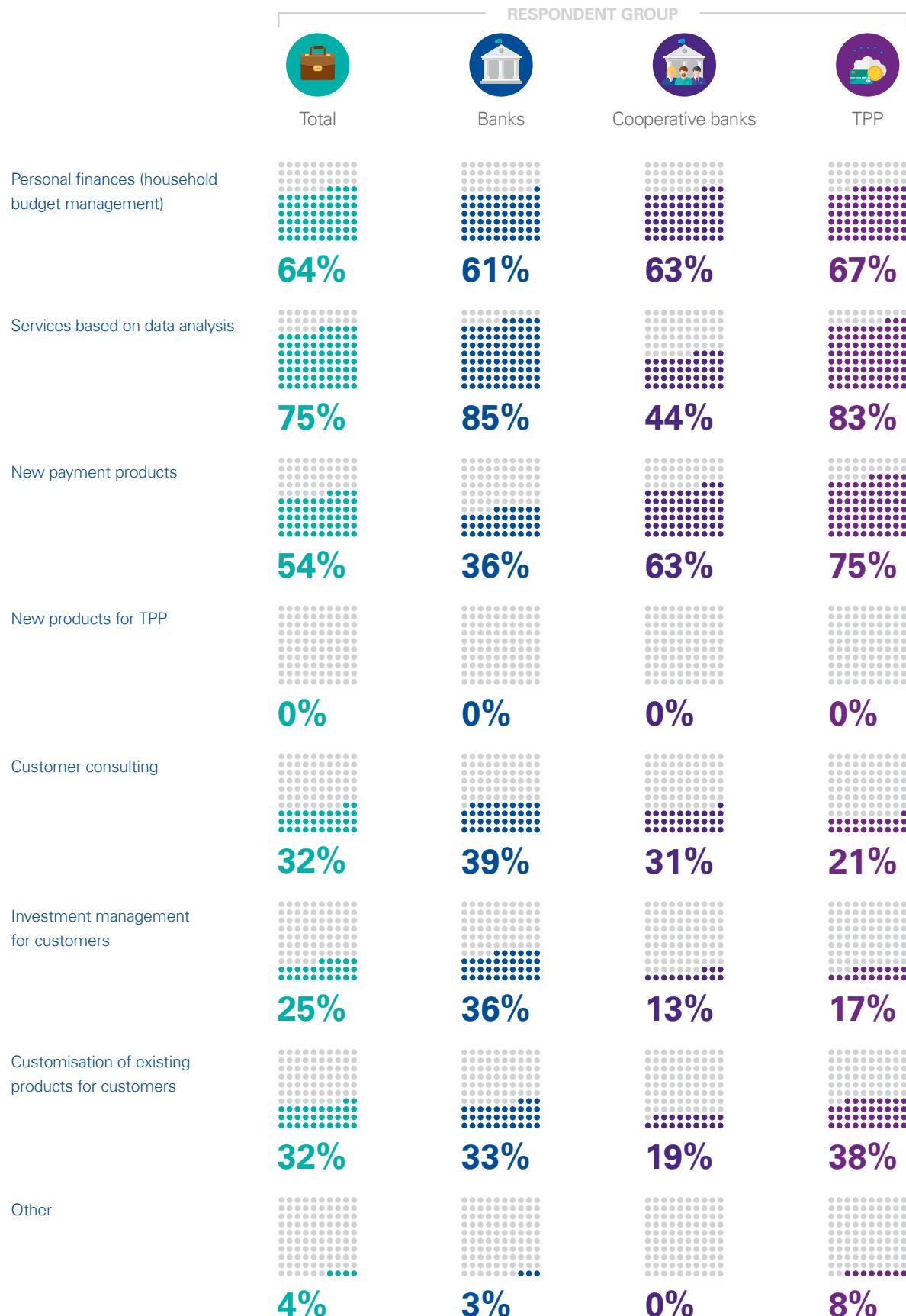
and new payment products (54%). They see less potential in customer consulting and customisation of existing products (32%) as well as in investment management (25%).



Marcin Jankowski
Associate Director, KPMG

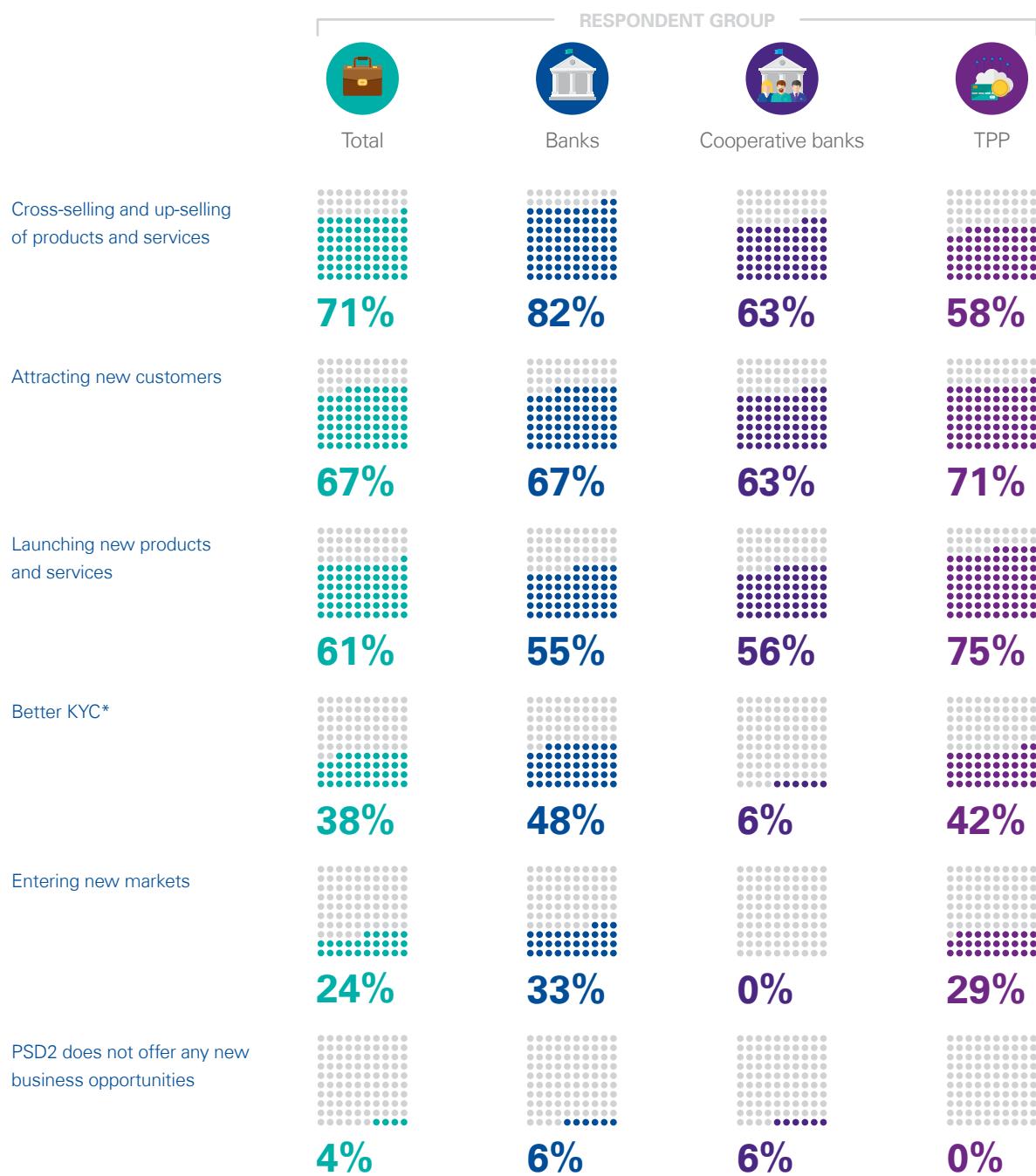
The low percentage of institutions that consider expanding into the European market based on the potential offered by the PSD2 is puzzling. To some extent, this can be explained by the fact that some banks have their parent companies outside Poland. However, it is also worth noting that only 26% of the respondents have undertaken any steps to develop a corporate strategy in this context. The percentage of companies that have taken steps to develop changes in their current business processes is similar. Looking at the areas where the market wants to develop its products, the majority of the respondents mention popular areas related to personal finance or services based on data analysis. In my opinion, the conclusion is that so far everyone has focused on compliance issues, paying little attention to business areas. The coming years will prove how well the financial institutions can adapt to the changing business environment in terms of their strategy, products and unique business proposition.

Which areas do you see as offering the greatest opportunities to develop PSD2- based services and products for customers?



Source: KPMG based on a questionnaire survey.

What kind of new business opportunities does the PSD2 offer?



Source: KPMG based on a questionnaire survey.

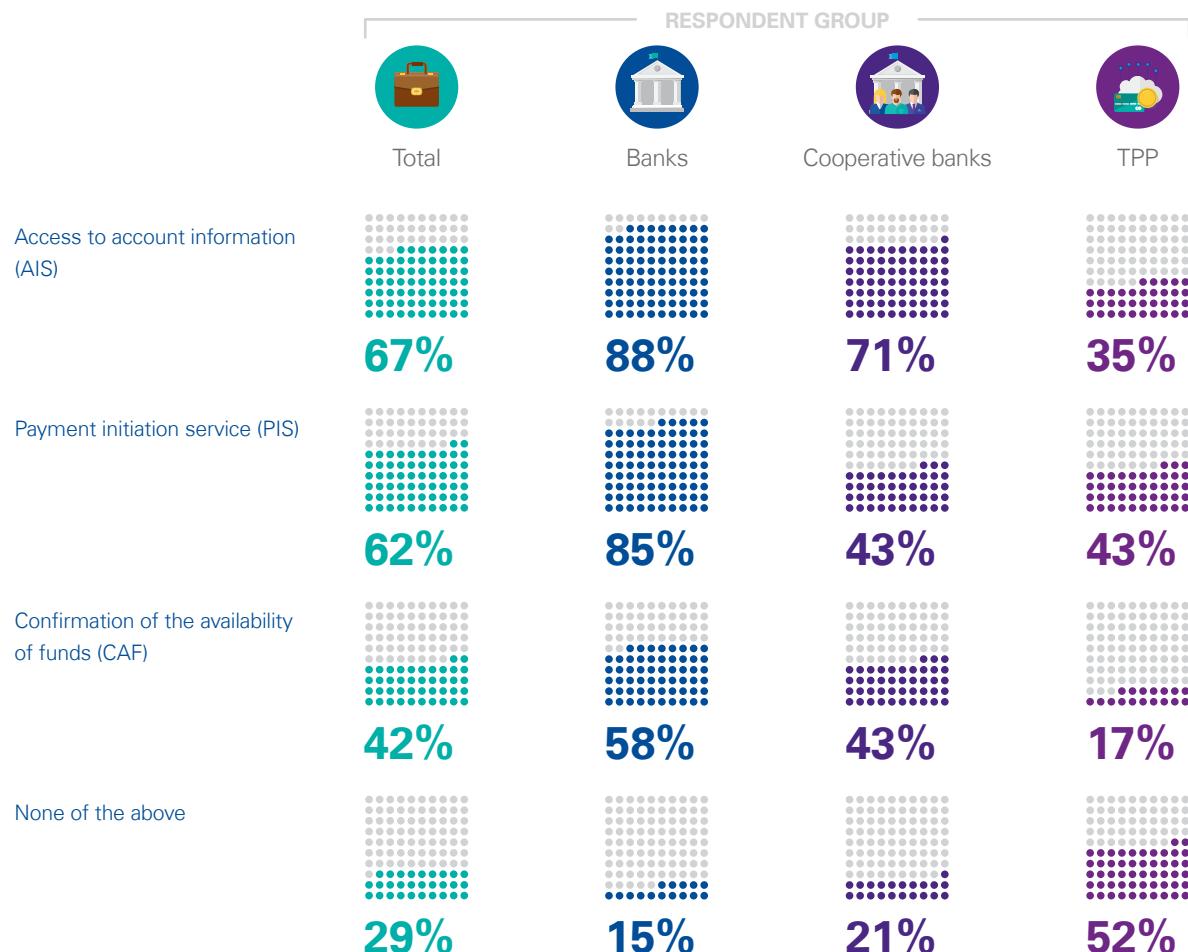
*KYC - Know Your Customer

The PSD2 Directive offers new opportunities for innovative players that are already introducing technological innovations at their banks/companies. The new business opportunities most frequently mentioned by the respondents include cross-selling and up-selling of products and services, indicated by seven out of ten respondents. Two-thirds

of the respondents see opportunities to attract new customers while 61% mention opportunities to launch new products and services. Nearly one in four organisations intends to use the PSD2 to enter new markets, while only 4% of the respondents believe that the PSD2 does not offer any new business opportunities.

The respondents most commonly mentioned access to account information (AIS, 67%) as a service they intend to provide thanks to the PSD2. The payment initiation service (PIS, 62%) ranked second, followed by the confirmation of the availability of funds (42%).

What kind of services based on the PSD2 do you intend to offer?



Source: KPMG based on a questionnaire survey.



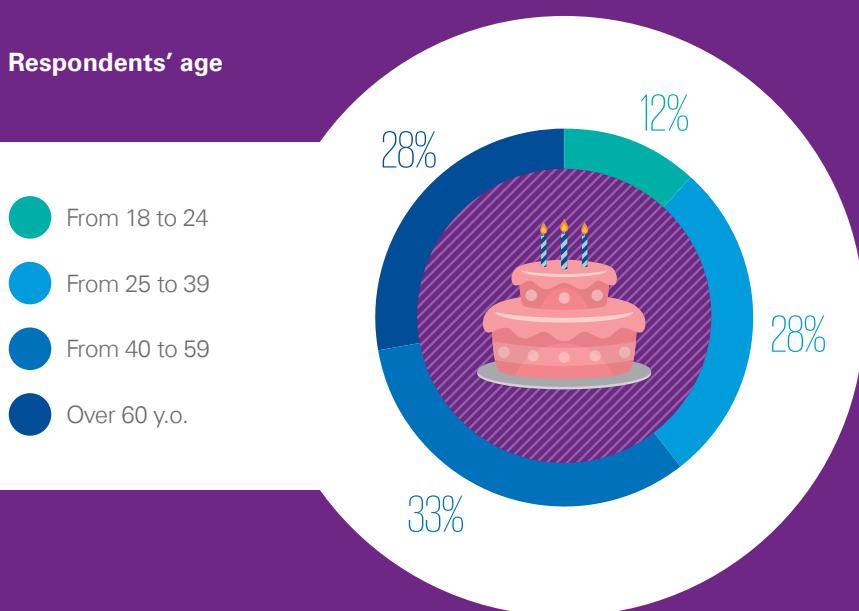
Joanna Erdman
Director for Strategic Projects
mBank S.A.

I expect the implementation of the PSD2 requirements to be followed by three phases: Storming, Forming, and Performing. The first period is needed to fulfill the API and SCA requirements. At this phase, a number of standards will emerge on the market, and time will be needed to adapt to them. At the second phase, the first TPP will emerge, offering simple payment and aggregation services, and a group of standard integrators, or HUBs, will emerge. At the next phase, we can expect further market developments with more innovative services based on API, on a large scale, as well as banks enhancing their cooperation with fintechs.

As regards consumers, the first phase will be mainly informative, the second phase will consist in early adoption of the first services aimed at innovators. And only the third phase is likely to bring new business models based on Banking API. They will be embraced depending on customers' age propensity to innovate and, above all, on the genuine benefits for customers.

Methodology

Respondents' age



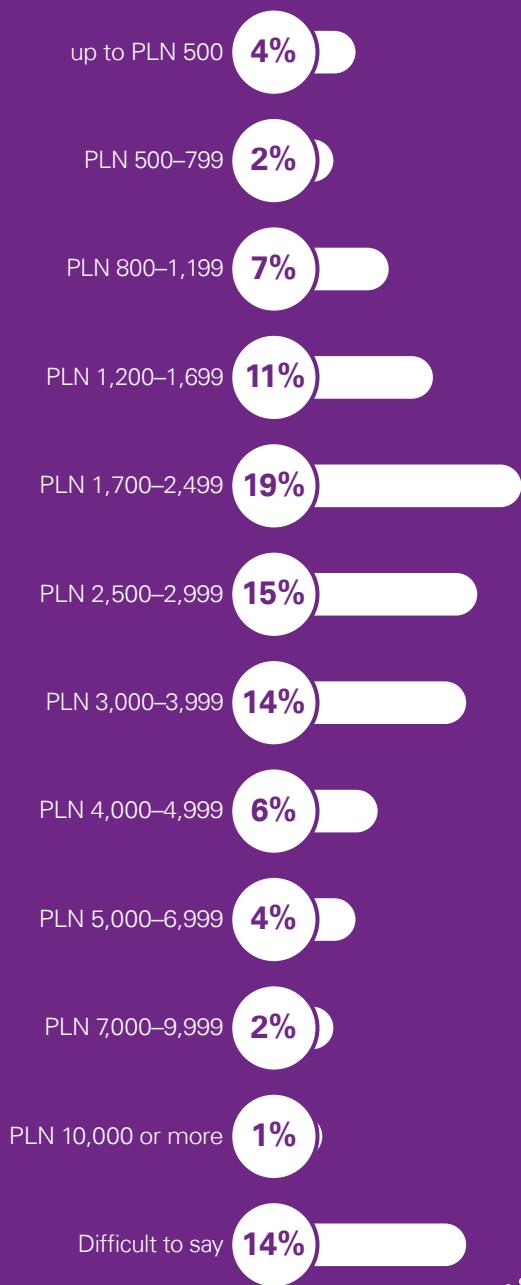
Place of residence



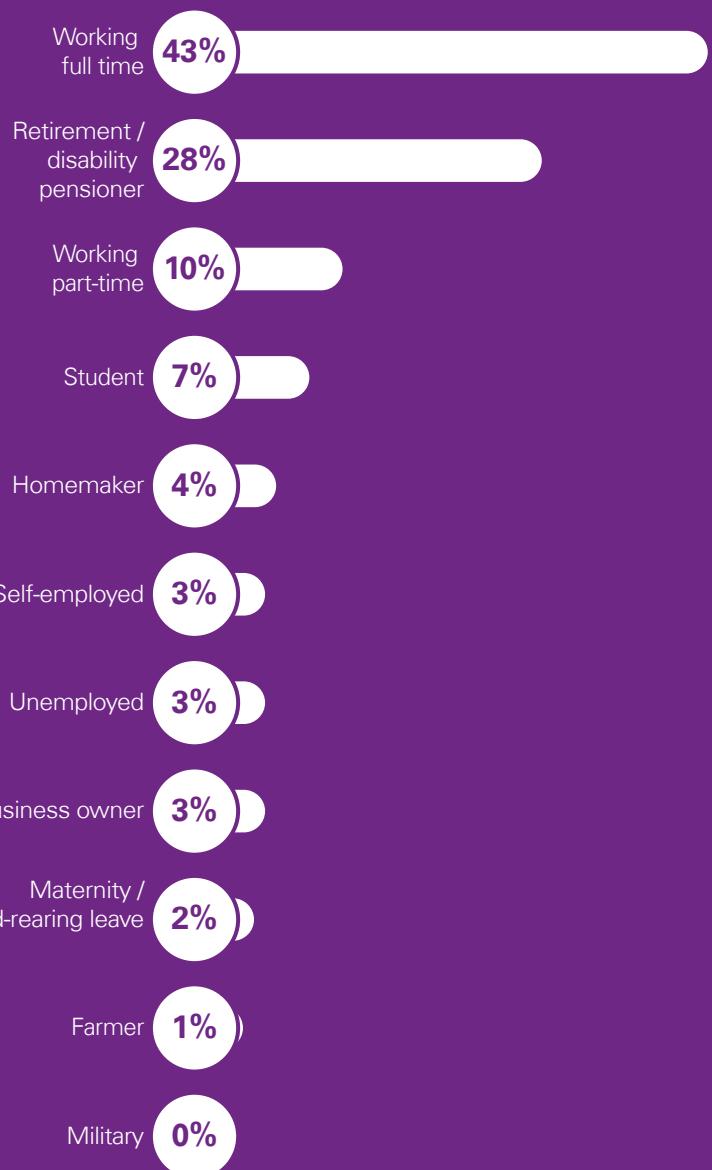
The customer survey was carried out by Norstat using the CATI methodology (Computer Assisted Telephone Interviews), in December 2018.

The consumer survey was conducted on a sample of 1,210 respondents, of which 47% were female and 53% were male. The largest group were aged 40–59 (33%). The respondents aged 25–39 and 60+ each represented 28% of the sample. The respondents aged 18–24 were the smallest group. In terms of place of residence, as many as 38% of the respondents lived in rural areas while 13% lived in cities with over 500,000 inhabitants. The respondents' monthly earning most often fell between PLN 1,700 and 2,499 net (19%), between PLN 2,500 and 2,999 (15%) as well as between PLN 3,000 and 3,999 (14%). People in full-time employment were by far the most numerous group (43%), followed by pensioners (28%).

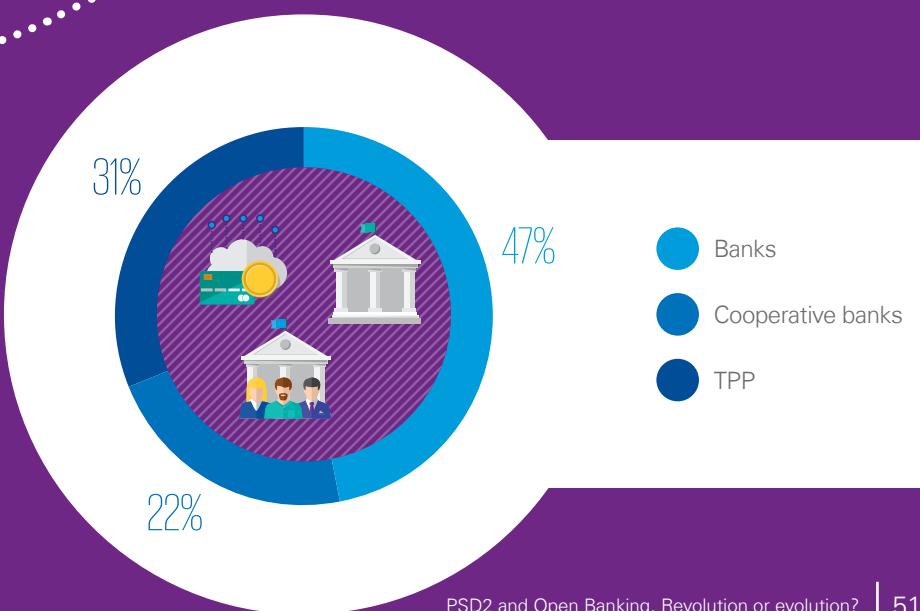
Net monthly income



Work status



The second part of the survey, which aimed to explore the opinions of people working for banks, cooperative banks and non-banking companies, was conducted by KPMG on a sample of 73 people. Nearly a half of them worked at banks, 22% were employed at cooperative banks and 31% worked for TPPs (e.g. payment institutions and fintechs). Respondents' areas of responsibility: business, IT, compliance, risk, security, strategy, innovation and law.



Notes

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