



WHITE PAPER

Open Banking in Germany Part II: Willingness to pay & the question of profits in Open Banking

MARCH 2021



Foreword



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Open Banking is no doubt one of the topics that are shaping the world of finance and payments today. It is a global phenomenon and yet happening in different ways and at different paces in various geographies. In fact, the COVID crisis has exposed the great need for further digitization, and Open Banking may well be an important tool to achieve that goal. Regardless of how the Open Banking trend materializes, we at Mastercard believe that it will fundamentally change the way consumers interact with their financial lives and with the service providers that help them.

As part of our multirail strategy, Mastercard is committed to supporting payments and data flows on all rails, for all users and all use cases everywhere in a safe, secure and efficient manner. Therefore, it is only natural for us to be keenly interested and engaged in the advancement of the Open Banking ecosystem. To this end, we have developed a comprehensive suite of services that cover the key needs of all participants in the ecosystem:

connectivity, protection from fraud and data compromise, advisory services and various additional value-added features.

To underscore our commitment, we want to make two contributions specifically to the German market as we believe that this market is next to take off after the UK when it comes to the Open Banking revolution.

First, we have initiated this research that you find before you today. Structured into two parts, it closes a number of gaps as it provides specific insights into the relevance of Open Banking services to consumers and their willingness to pay for such services. A number of our clients and partners participated as interview partners and we hereby thank all participants for their insights. With this research, we aim to provide additional inspiration and impetus for all ecosystem participants to develop superior products and services that will enhance the value propositions that they are able to offer to their customers.

Second, it is our mission to facilitate the execution of any transaction in a fast, secure and efficient manner. This holds equally for the world of cards as it does for account to account payments and a rapidly evolving Open Banking ecosystem. Our Open Banking Connect Service enables us to access the APIs of the major European Banks. Open Banking Protect ensures that only third-party providers with a valid license and certificate access client data held by banks and will be extended by fraud-prevention mechanisms that are ready

for the challenges of this new ecosystem. Please contact us if you would like to learn more about our service offering.

Best wishes,

Peter Bakenecker

Division President

Mastercard Germany and Switzerland

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Introduction



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Welcome to the second part of our two-part series on the Open Banking landscape in Germany. In the first part of this series, we found that Germany is likely in for a rapid expansion of Open Banking-related services in the near future.

As financial service providers – emerging and incumbent alike – realize that the age of Open Banking has ushered in a new contest for the customer interface, new products and services will start to abound. Leaders will reap pioneering profits in terms of increased loyalty and winning new customers, the laggards will find themselves playing catch-up to an ecosystem where many Open Banking-related services are table stakes with little return accruing to required investments. The prize is the business and loyalty of especially interesting customer groups – more affluent, younger ones.

The question we were left with towards the end of part I was that of monetization: Is there an opportunity to monetize certain Open Banking-related services and which ones are particularly attractive in this regard?

How can money be made with Open Banking?

Probably the most relevant question around Open Banking is: How can money be made with Open Banking services and which services would customers be most likely to pay for?



We aim to answer this question in this second part of our paper. For this purpose, we ran consumer market research¹ with 1,241 consumers in Germany together with the market research agency LINK, consisting of a descriptive analysis and a conjoint analysis. On that basis, we investigated a set of common Open Banking value propositions and found a clear indication that these are relevant to consumers and that certain consumer groups will be willing to pay for such services. In a competitive environment, where Open Banking services have become common, not having the most important ones on offer means significant disadvantages. Moreover, the barriers to entry might be limited. We find that consumers prefer a manageable number of Open Banking-related services and that they have a preference for less complex, easy-to-understand functionalities².

Thus, even if financial service providers do not see themselves as leaders in the Open Banking field, ignoring the trend and not expanding one's own product offering is not an option for those who do not wish to be left behind.

We organize the remainder of this paper as follows: While we spoke in broader terms about the digital and Open Banking readiness in Germany in the first part of our paper, we now zoom in on stated consumer preferences in the first chapter. The second chapter provides the bulk of our findings on the opportunities for monetizing Open Banking services. Here we add some further nuances to this analysis by considering the behavior of certain subsets of consumers and the effect of bundles of services. The third chapter concludes part II.

¹ Target group: women and men in Germany aged 18 to 74 who use the internet for private purposes at least once a week and who own a smartphone and use it daily; fieldwork: November 25th – December 1st, 2020; methodology: computer-assisted web interviews.

² We thank the LINK Institute for their support in conducting the field research. Further thanks go to clients and partners in Germany who shared valuable insights in a series of interviews and to Mastercard Advisors for support with structuring and analytics.

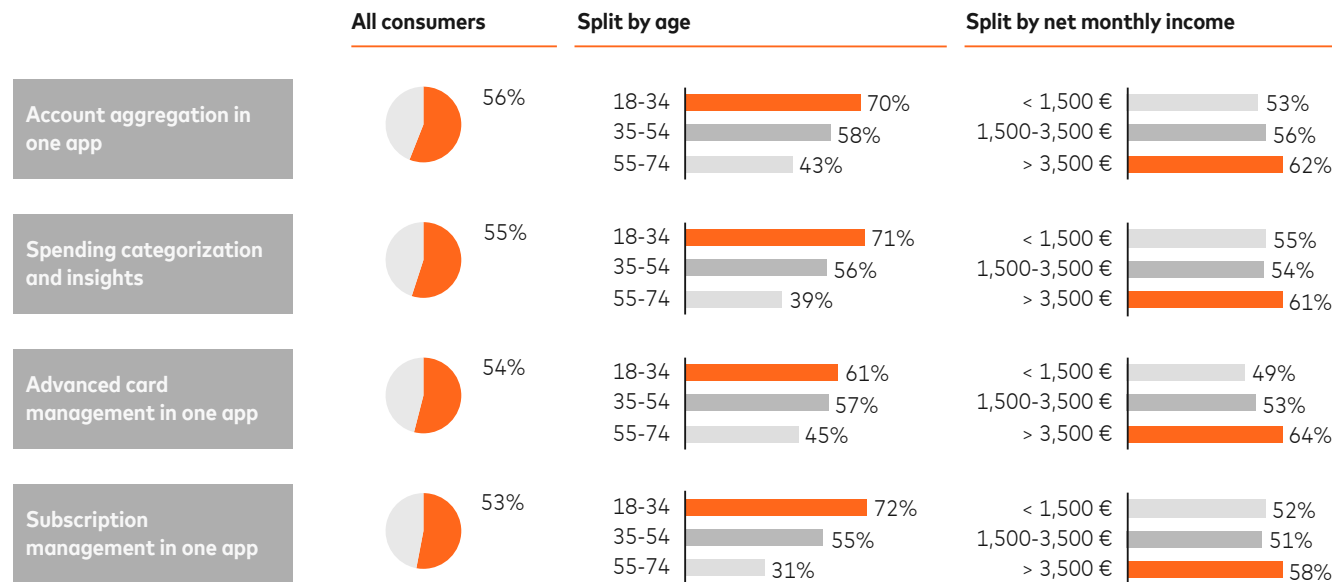
Consumer attitudes towards Open Banking

To better structure the subsequent conjoint analysis related to consumers' willingness to pay for Open Banking, we first want to understand consumers' attitudes towards Open Banking-related features based on a descriptive analysis.

We selected 10 commonly discussed Open Banking-related services as the baseline. This selection is certainly not exhaustive but it reflects our experience with current and emerging offerings in Germany and the rest of Europe. To reiterate: Our understanding of Open Banking goes beyond what is possible with just PSD2, therefore not all of the services investigated are strictly tied to PSD2 or even necessarily in existence today.

Account aggregation in one app	Customers can get an aggregated view of all their accounts at different banks in one single app (e.g. aggregated transaction history & balance)
Spending categorization and insights	Customers can see how much they spend across all their bank accounts in different categories, compare their expenses between periods, get personalized tips on where it is possible to save money and get alerts when they are overspending
Advanced card management in one app	Customers can disable, enable or entirely block any of their cards as well as change the limits (e.g. ATM, contactless spend limit) for all their cards at different banks in one single app
Subscription management in one app	Customers can track and manage all their subscriptions (e.g. Netflix, Spotify, newspapers) in one single app, monitor how much they are charged on a monthly basis, start / cancel subscriptions
Credit transfers from one app	Customers can initiate credit transfers from all their accounts at different banks from one single app
Single sign on (SSO)	Customers can log in to different platforms (e.g. government platforms) with their mobile / online banking login credentials; they do not need to remember another password for the platform
Fast-track credit product application	Customers can apply for a credit product online and get an instant credit assessment and decision; they do not need to submit data in paper or PDF format
Fast-track switching of bank accounts	Customers can switch their bank account from one bank to another within minutes, incl. transferring payment partners / recurring payments / direct debit payments to the new account and informing payment partners about the switch
Bill splitting	Customers can split their expenses with friends by using their mobile banking app even if their friends are not customers of the same bank; the mobile banking app creates a link that customers can send to their friends to request a payment
Personalized offers and insights	Customers can get personalized offers and discounts based on their spending habits and financial situation (e.g. retail offers, lower cost electricity / gas providers, financial offers such as lower rate credit products, etc.)

Share of consumers who would use a corresponding Open Banking service³



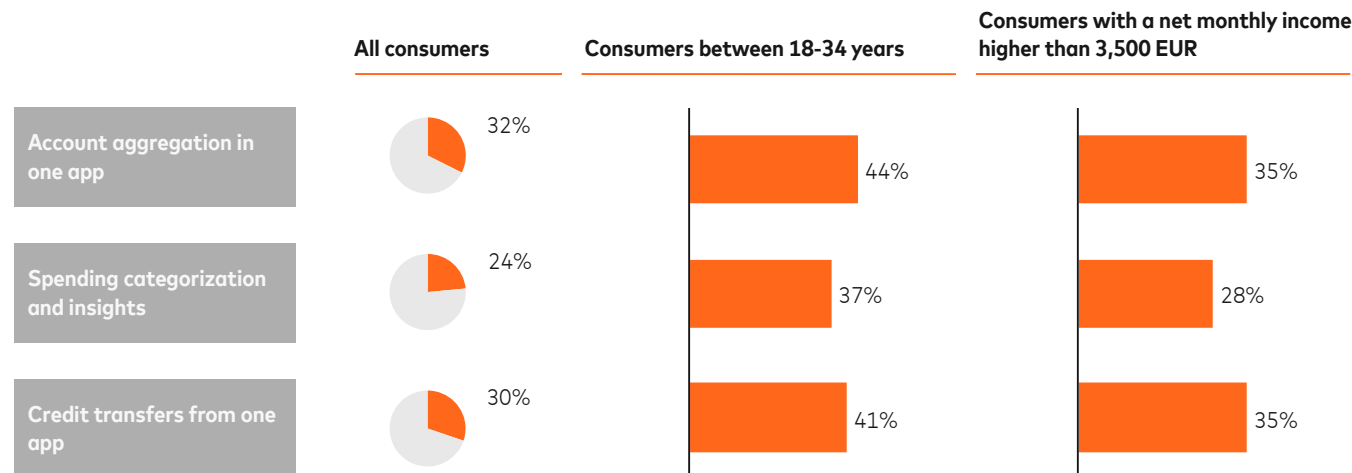
As part of the descriptive analysis, consumers told us in their responses that they clearly prefer four services: account aggregation in one app (56%), spending categorization and insights (55%), advanced card management in one app (54%) and subscription management in one app (53%). Interestingly, speeding up processes or personalized offers did not make the cut which leads us to believe that consumers prefer simpler, more tangible services over more abstract and complex ones. This pattern is not only strikingly consistent across age groups, but we also find confirmation of what we already hinted at in the first part of our paper: Younger, more affluent customers are much more interested in these types of services than older, less affluent ones. This underscores the importance of innovative Open Banking-related services for conquering and retaining these highly attractive customer groups.

³ Question: "How extensively do you think that you would use the following service?"; percentages correspond to the answers "I definitely think I would use it" and "I think I might use it".



Share of consumers who would change their primary bank under equal conditions

How likely would you be to switch your primary bank if another bank offered the following service that your primary bank did not offer?⁴



A corollary of this finding is the influence that features such as these have on consumers' propensity to switch banks. Thus, for instance, nearly one third of consumers state that they would consider switching banks if their primary bank did not offer a service like account aggregation. And again, it is the younger and more affluent consumers who would consider doing so with a greater likelihood than others.

Finally, the clear message from consumers is that an Open Banking offering does not need to be hugely complex. When asked to indicate their optimal combination of features, consumers respond that 2-3 key features make up the optimal value proposition for them. On average 2.4 features are selected.⁵

⁴ Only the top 3 services with the highest likelihood to switch the primary bank for (based on the responses of all consumers) are visualized here.

⁵ Question: "Imagine for a moment that you were free to choose the services you wanted. What would your optimal combination look like?"

Opportunities for monetization

One of the key challenges for Open Banking value propositions is monetization. In an unaided question about consumers' willingness to pay, we learn that, yes, consumers would pay for Open Banking services on a monthly basis.



2/3

of consumers would pay a monthly fee for Open Banking services⁶

While about one third of consumers have no willingness to pay whatsoever, 20% indicate that monthly prices of up to 2 EUR would be considered and the remaining 50% report a payment willingness that is even higher. Especially younger age groups are willing to pay more than older ones. Interestingly, income does not play a role here. This is a striking result – an intuitive first assessment might be that this willingness to pay is fairly high. After all, an average bank account along with a payment card in Germany can range anywhere between 0 and 20 EUR per year with numerous even more expensive offerings.

We are aware that open questions of this nature face methodological challenges. Therefore, to better understand what drives consumers' willingness to pay and how high it really is, we expand our analysis by a more sophisticated research design, using conjoint analysis.

→ Conjoint Analysis

The conjoint analysis is a method that is used to elicit consumer preferences implicitly. Within the analysis, each respondent completed 10 choice situations in which he / she had to decide between 3 different bundles of Open Banking-related services. The bundles encompassed a different number of services (maximum of 8) and had correspondingly different prices. To avoid bias in the data, the respondent also had the option of choosing none of the bundles in each choice situation ('none option'). The combination of bundles and choice situation was defined as an experimental design. The price per bundle was derived from the sum of the price of the included Open Banking-related services (between 0 and 2 EUR per service per month) – also varied along a price range to allow some flexibility in later price optimization.

While not without criticism, we feel that this approach will give us a solid understanding of consumer preferences regarding Open Banking-related products and services.

⁶ Calculated based on the question: "What maximum monthly fee (in €) would you be willing to pay for Open Banking services?"

„Customers have very different preferences when it comes to Open Banking services: some are fans, others are hard to convince.“

The remarkable consistency of findings between the conjoint and the descriptive analysis in terms of the willingness to pay and the selection of features further bolsters our confidence in the approach. As an additional safeguard to the quality of results we used LINK's 'switching factor'. It was calculated for each respondent separately based on questions related to the frequency at which the respondent switched his / her health insurance provider, dentist, internet provider, etc. within the last 5 years. The special cultural characteristics in Germany were taken into account in the weighting of the different switches when calculating the switching factor.

In the conjoint simulations, the probability with which a participant decides in favor of a 'new' product is then weighted with his / her individual switching factor. This reduces the possible overestimation of the purchase probability that can arise in the hypothetical conjoint survey. By weighting the conjoint outcomes with the individual switching factor, we ensured a conservative modeling.

Moreover, to refine our ability to obtain valid insights, we clus-

tered the population of consumers into four distinct groups. These groups, one compared to the other, are as heterogeneous as possible along a number of demographic characteristics, while being as homogeneous as possible within the group. We capture four types: sceptics, price-conscious proponents, price sensitives and fans.

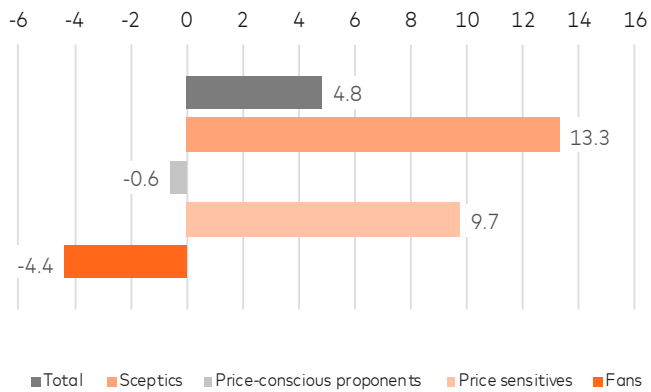
As results will show, sceptics tend to be older and less educated and have a very low interest in Open Banking-related products. Price-conscious proponents tend to have a lower-than-average income. However, they are interested in Open Banking services and will pay for the right bundle of functionalities. Price sensitives define their attitude towards Open Banking mainly through price. They are more often male and better educated and will rarely consider paying for a bundle of features that costs upwards of 0.50 EUR per feature per month. Finally, there is a clearly delineated group of fans – consumers who have a strong interest in Open Banking. They are younger and are willing to pay a premium price for a more complex bundle of features. They are highly digital with prolific usage of mobile apps and e- and m-commerce.

A first set of insights: In which features do customers recognize an added value?

To get an initial understanding of the results, we consider the cross section of all consumers and ask what quality a product must have in order to be selected. In the cross section we find that the so-called 'none' value is fairly high.

The Open Banking product thus needs to be well-tailored to customer preferences to be preferred over no product at all. However, it becomes immediately clear that the result is driven by the heterogeneity of the sample. For fans and price-conscious proponents the value is negative, indicating that a very loose set of services will already fit the bill and be chosen.

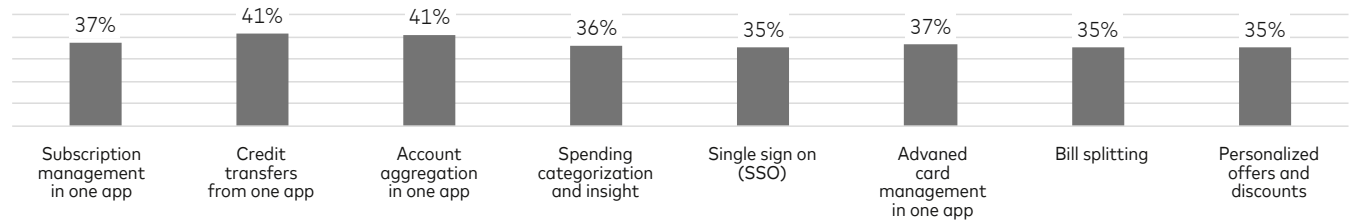
None value: Indicator for the enthusiasm of customers.
 Low values = easy to inspire, high values = difficult to inspire



Before we dive deeper into the different need types, we want to understand in greater detail the willingness to pay in the cross section of consumers. Assuming that individual features are priced at 0.50 EUR per month, we find that at least 35% of consumers would opt for each feature considered in the conjoint analysis. This is substantial if we keep in mind that about 2/5ths of consumers (the sceptics) expressed reluctance or doubts about Open Banking services altogether.

Consistently, for a bundle of four services that were chosen as optimal by consumers at a price point of 0 EUR per service per month (i.e. subscription management in one app, credit transfers from one app, account aggregation in one app and spending categorization and insights), the monthly willingness to pay reaches 2 EUR per month before dropping off sharply.

Share of consumers who would pay 0.50 EUR per month for a corresponding Open Banking service⁷



⁷In the descriptive analysis, two additional Open Banking-related services were considered compared to the conjoint analysis: fast-track credit product application and fast-track bank account switching. These two services were excluded from the conjoint analysis due to the low likelihood for consumers to pay for them.

„These first-cut results show that there is a willingness among consumers to pay for services driven by Open Banking.“

Taken together, these first-cut results show that there is a willingness among consumers to pay for services driven by Open Banking. This is consistent with the descriptive statistics that willingness is greater for the simpler of the services which we investigated and underscores the preliminary conclusion that not

offering these services is not an option for ASPSPs. However, aggregate results are a rough measure of the market. How can we understand in more detail what ASPSPs and TTPs need to focus on to maximize their chances of success and thus return on investment in Open Banking services?

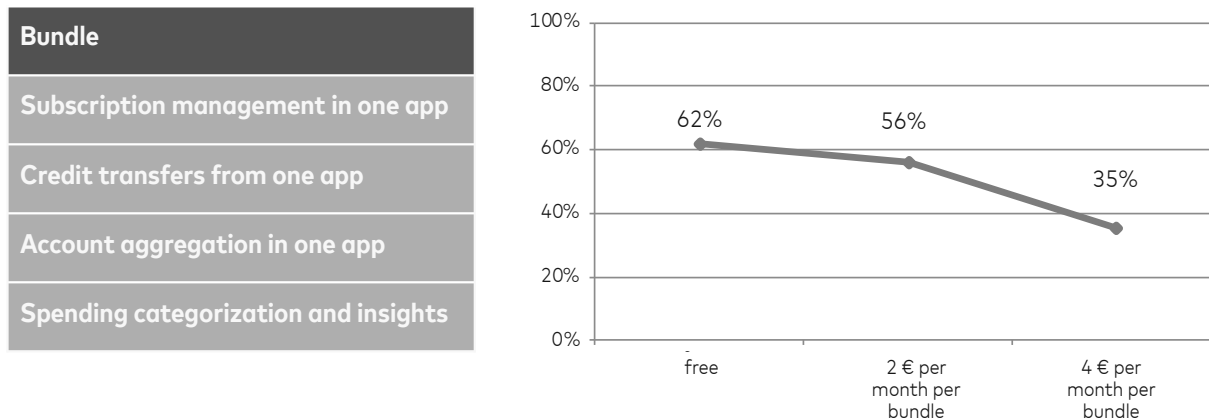
To explore this further, we investigated two additional aspects: characteristics and behaviour of consumers subsets and portfolios of services that compete against one another.

Customer need types

As already hinted at in the previous section, the most interesting need types are the price-conscious proponents and fans (together making up about 48% of consumers). These two groups express a high interest in value propositions linked to Open Banking. This is directly reflected in their levels of interest expressed in our set of services at different price points.

When we consider individual services, 53% – 78% of consumers from these two groups would choose an Open Banking value proposition if it were available for free – regardless of which service is being considered. Moreover, as the monthly price per service is increased to 0.50 EUR and 1 EUR, the average interest drops only marginally to 53% – 77% and 51% – 69%, respectively.

Take rate for a bundle consisting of 4 Open Banking-related services at different price points (across all consumers)



Results are similar for a bundle of services. If we consider our top 4 services⁸, we find a high price tolerance for such a bundle of up to 4 EUR per month which corresponds to about 1 EUR per feature per month. Beyond this price point, only fans maintain an interest in the bundle and thus display a very high willingness to pay.

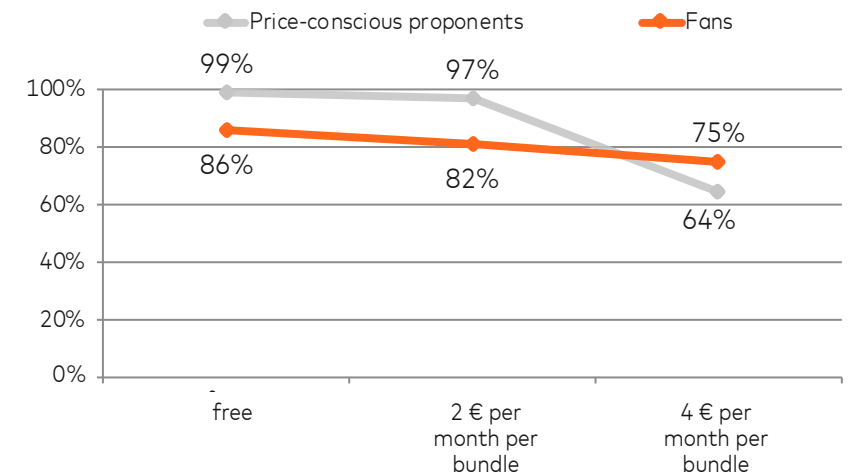
Portfolios of services

Clearly, services or bundles do not exist in a vacuum. There is usually some alternative product available at a different price point. The question that we want to answer in this final deep-dive analysis, therefore, is how the willingness to pay for a premium bundle of Open Banking services changes when it exists within a portfolio of bundles. In other words, is a premium bundle of Open Banking-related services still monetizable in the presence of other bundles, some of which might have a lesser functional scope but might also be available at lower price points?

We use the findings of our conjoint analysis to derive precisely this

Take rate for a bundle consisting of 4 Open Banking-related services at different price points (across price-conscious proponents and fans)

Bundle
Subscription management in one app
Credit transfers from one app
Account aggregation in one app
Spending categorization and insights



result. Specifically, we consider three bundles: First, a basic bundle with only account aggregation, which is always available for free; second, a bundle that reflects the simplest Open Banking services, account aggregation and payment initiation from one app, together at a variable price; and finally, a premium bundle made up of the four most preferred Open Banking services, also sold at a variable price. We observe that even with an account aggregation service that is always free, some consumers would still opt

for the premium bundle, mostly at a monthly price of 0.50 EUR per service included in the bundle. At this price point, a very large proportion of the price-conscious proponents would choose the premium bundle (83%). However, the take rate for the premium bundle among price-conscious proponents sharply decreases at a monthly price of 1 EUR per service included in the bundle, and at price points above 1 EUR, there is no willingness to pay for the premium bundle at all. Among fans, the take rate for the premi-

⁸The 4 services considered optimal at a price point of 0 EUR per service per month.

Scenarios for analyzing willingness to pay for three bundles of Open Banking features at different price points

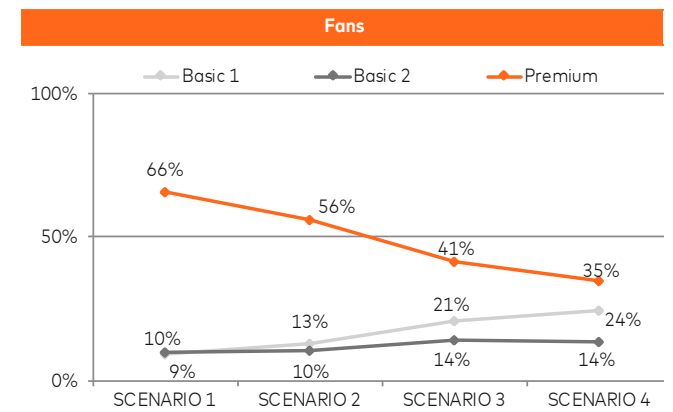
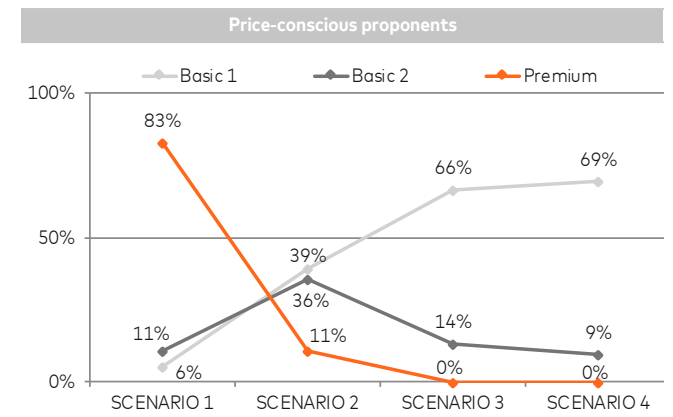
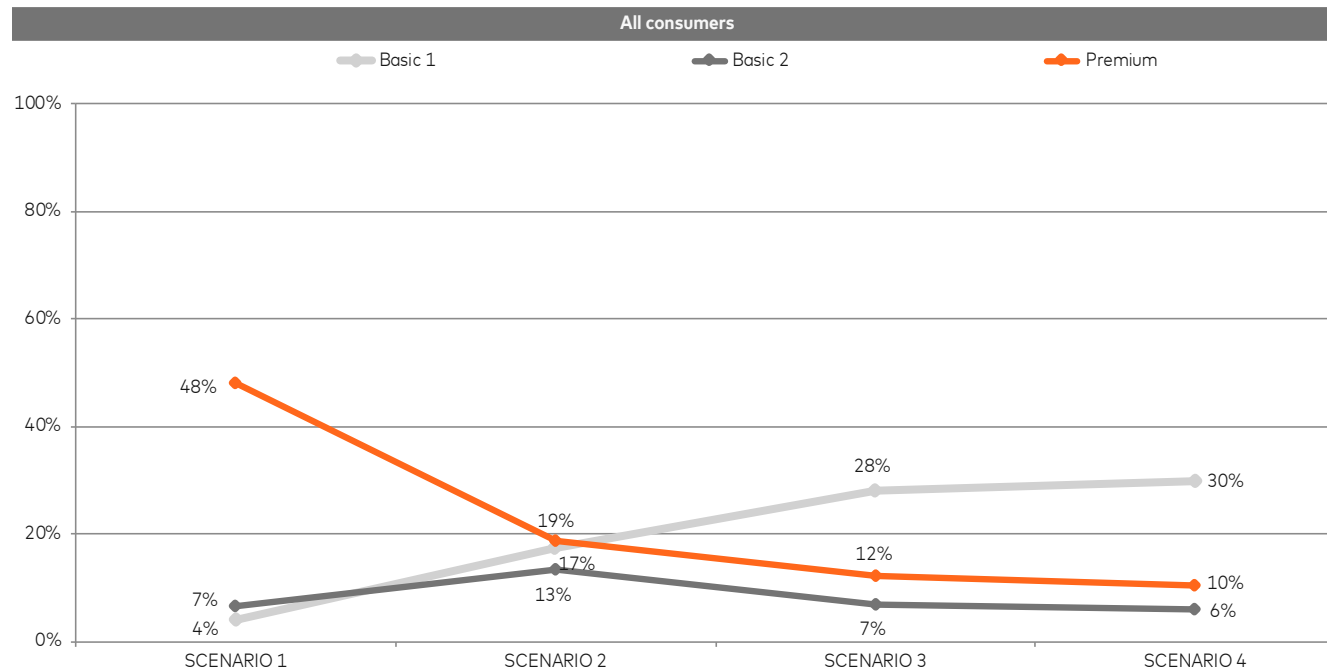
	SCENARIO 1			SCENARIO 2			SCENARIO 3			SCENARIO 4		
	Basic 1 bundle	Basic 2 bundle	Premium bundle	Basic 1 bundle	Basic 2 bundle	Premium bundle	Basic 1 bundle	Basic 2 bundle	Premium bundle	Basic 1 bundle	Basic 2 bundle	Premium bundle
Subscription management in one app	-	-	0.5 €	-	-	1 €	-	-	1.5 €	-	-	2 €
Credit transfers from one app	-	0.5 €	0.5 €	-	1 €	1 €	-	1.5 €	1.5 €	-	2 €	2 €
Account aggregation in one app	free	free	free	free	free	free	free	free	free	free	free	free
Spending categorization and insights	-	-	0.5 €	-	-	1 €	-	-	1.5 €	-	-	2 €

um bundle is much more stable across monthly prices between 0.50 and 2 EUR per included service. Even at a monthly price of 2 EUR, 35% of the fans would opt for the premium bundle and disregard the simpler, cheaper options available in the market.

even greater profit can be extracted at a price point of 2 EUR per feature per month. However, results show that such a high price is off-putting for the majority of consumers who would then gravitate towards cheaper, simpler products.

These results show that for an untargeted mass-market product, a price point of 0.50 EUR per feature per month is attainable and optimal for a well-designed bundle of features. There are groups of consumers with an even higher willingness to pay (fans), where

Willingness to pay for three bundles of Open Banking features at different price points (all consumers, price-conscious proponents, fans)



„Yes, consumers are willing to pay for Open Banking services, even if there are competing offers available market at lower prices.“

In sum, our findings show that consumers are willing to pay for the right combination of Open Banking services – willingness to pay differs between consumer groups.

What we do not mean to say with our findings is that it is realistic to expect ASPSPs to begin pricing for existing Open Banking services in existing customer relationships or to do so in a sweeping manner.

We do understand our findings as a clear indication that consumers attribute value to Open Banking services, a value that can be expressed in monetary units.

We also contend that consumers however will pay for Open Banking services which they have consciously selected. Thus, ASPSPs wanting to use Open Banking services for more than the protection of their existing customer relationships must do three things: a) develop and offer novel and relevant features, b) bundle these in a meaningful way and c) address the right subsets of their client base in order to reap pioneering profits from Open Banking.

→ A note on methodology and findings

At the outset of this paper, we found a fairly high willingness to pay for Open Banking services. This high willingness to pay did not conform to our intuition and therefore promoted our methodological refinement using conjoint analysis. While a conjoint analysis is also not free from methodological challenges, we find a striking consistency between our findings.

For instance, consider the following points that are consistent across the conjoint analysis and the questionnaire analysis: First, 30% of customers tell us in the questionnaire that they would not be willing to share their data to use Open Banking services regardless of the level of disclosure regarding personal data usage. Compare this with 37% of sceptics who, in the conjoint analysis, tell us that they would have little to no interest in Open

Banking services. Second, the selection of preferred Open Banking services is largely consistent across the questionnaire analysis and the conjoint analysis (3/4 of top features are identical). Third, compare the willingness to pay 3 EUR stated in the questionnaire with the steep decline in take rates for Open Banking bundles at a price of monthly 2-4 EUR in the conjoint analysis. Finally, keep in mind that we used LINK's 'switching factor' to capture behavioral and cultural differences that might account for consumer willingness to pay.

This set of consistent findings boosts our confidence in our interpretation. At a very minimum, readers should feel confident in interpreting the findings on consumers' willingness to pay for Open Banking services directionally: Yes, consumers are willing to pay for these services, even in the presence of competition.

Conclusion: Open Banking services can be monetized

This concludes our two-part analysis of the German market readiness and attractiveness for Open Banking-related services. As was foreshadowed in the first part, a detailed analysis of consumer preferences coupled with a conjoint analysis of consumer willingness to pay has shown a number of important facts.

Conclusions part II

- 1 Consumers care about Open Banking-related services, and these services play an important part in the decisions that consumers make about their primary banking relationship – this holds in particular for more affluent and younger consumers.
- 2 Even in the cross section of consumers, there is a clear willingness to pay for Open Banking-related services. This holds both in isolation for individual services, for service bundles and for bundles of services that compete in the market – however, the price for an individual service should not exceed 0.50 EUR per month.
- 3 The demand for Open Banking-related services is driven by clearly defined subsets of the customer population, and there is also a subset which has absolutely no interest in these services. Market participants will therefore do well to tailor their offering to the needs of their customers.

Overall, our analysis shows that offering Open Banking-related services is not an optional luxury that ASPSPs can consider in Germany. It is a necessity that drives competitive advantage and – when done right and at the right time – offers monetization opportunities. Conversely, ASPSPs not offering the most important set of services place themselves at risk of disruption – especially with respect to their ability to win over attractive customer groups.

We have shown that pioneering profits are available in the market to players offering the right bundle of Open Banking services. This is the case even in the presence of free, simpler

products. In the future we need to ask: How persistent are these pioneering profits? Answering this question would help us gain a deeper understanding of the rewards of a more risky technology and thought leadership strategy that first-movers in the space might adopt.

Moreover, as additional features based on Open Banking come into the marketplace, these should be investigated with respect to their economic potential and appeal. Finally, our focus has been on consumer value propositions. For future analysis, it would be relevant to also investigate the market situation for products focusing on the needs of small and medium enterprises.

„Our analysis has shown that players who put together the right package of Open Banking features in good time can achieve pioneering profits.“

Conclusions part I

- 1 We should expect a rapid evolution of Open Banking-based use cases in Germany over the next 12-18 months as functional improvements in the performance of APIs facilitate go-to-market solutions. This supply, in turn, will create its own demand.
- 2 This demand is most likely to take effect among younger and more affluent consumers – arguably some of the most attractive customer groups out there.
- 3 Increased demand for Open Banking-based services will increase the load on exposed APIs and will also drive further need for ASPSPs to have well-established processes to ensure the safety of their data as the number of TPPs accessing it grows.
- 4 Banks are well-positioned in terms of customer trust – an important factor for many to share their data – but their innovation pace will need to pick up in order to translate this advantage into business success. Collaboration is the name of the game when it comes to (re-)claiming the right to win the consumer interface in the Open Banking ecosystem.

Appendix

1,241 consumers, who use the internet for private purposes at least once a week and who own a smartphone and use it daily, were questioned in a field research from November 25 to December 1, 2020. The computer assisted web interviews were conducted by LINK Institute.

