

OPEN BANKING

THE OPEN BANKING IMPACT REPORT: MARCH 2023

In our fourth Impact Report, we examine the continued expansion and availability of open banking products and services in the UK. This latest research shows an increased adoption rate by the UK's small businesses, as well as the expansion of services in key areas such as borrowing, payment choice, and financial decision-making.

Contents

1. Executive summary	3
2. Introduction and approach	4
3. Outputs (availability)	6
Headlines	6
Availability analysis – regulated TPPs in the Open Banking Directory	6
4. Intermediate outcomes 1 (adoption)	15
Headlines	15
Open banking penetration	15
Usage for data versus payments	17
Successful open banking payments	18
Overall shape of the open banking ecosystem	20
APPENDIX 1: Scope of Ecosystem Audit	23
APPENDIX 2: Outcome areas	24
APPENDIX 3: Theory of Change Model	25

This report is intended to provide regular insights into the development of open banking in the UK, focusing on outcomes for end users. It is built using a methodology developed by the Personal Finance Research Centre at the University of Bristol. The insights are based on several data sources and research studies which are detailed in the methodology sections. Because of the fast pace of change and difficulty in definitively establishing end user outcomes, findings are indicative and should be used for information purposes only.

1. Executive summary

The Open Banking Implementation Entity (OBIE) produces the Open Banking Impact Report¹ every six months to support greater understanding of how open banking is evolving and the extent to which it may be helping the UK's consumers and small businesses.

The approach to the report is underpinned by a comprehensive Theory of Change. This is based on the premise that the ultimate success of open banking depends on:

- the availability of different types of open banking-enabled services
- whether these are adopted
- the extent to which users have a positive experience of them
- if and how consumers and small businesses are actually benefiting from open banking-enabled services.

Our three previous Impact Reports each provided incremental insights into different aspects of this Theory of Change. For this report, we have not commissioned specific end-user research on particular open banking use cases. We intend to commission new research, which provides outcomes-related insights, for future reports.

The key insights in this Impact Report are:

Availability of open banking services

- Availability of services continues to expand, however, growth is increasingly coming from participants which are not regulated as TPPs, such as agents.
- We have a significant number of services in three outcome areas:
 - financial decision-making
 - payments
 - borrowing.

These account for 76% of all propositions offered by TPPs and their agents.

Adoption of open banking services

- Adoption has continued to grow, with 10 – 11% of digitally-enabled consumers now estimated to be active users of at least one open banking service. This is up from 7 – 8% in December 2021.

¹ The Revised Roadmap refers to the delivery of a Consumer Evaluation Framework (or CEF). For publication purposes we refer to this as the Open Banking Impact Report

2. Introduction and approach

We are committed to periodically publishing a report examining progress towards meeting the policy objectives of open banking, and the extent to which it is delivering the intended outcomes for the UK's consumers and small businesses.

This is the fourth Open Banking Impact Report. These reports are published in a six-monthly cycle, but on this occasion, we have adjusted the reporting cycle so that this and future reports are based on data up to the year end.

Open banking is a complex policy initiative with a range of impacts and external factors influencing its success. For that reason, we developed a framework for measuring consumer outcomes from open banking in 2020. This framework and its components are summarised in Appendix 5 and continue to underpin our approach to this evaluation.

It is complex to measure most of the components and the data presented is directional in some places. We have had to rely on several underlying assumptions, which are transparently stated in the report.

The focus of the initial Open Banking Impact Reports was on:

1. **Outputs:** the availability of open banking-enabled propositions.
2. **Intermediate outcomes:** levels of customer adoption and other metrics related to adoption.
3. **Intermediate outcomes:** an indicative view on the value of such services to end-users.

This fourth report focuses exclusively on availability and adoption. Previous Impact Reports included findings from bespoke research exercises evaluating the impacts that certain open banking-enabled services were delivering to consumers and SMEs.

Figure 1: Evolution of analytical components

FRAME WORK AREA	FIRST REPORT (APR 2021)	SECOND REPORT (NOV 2021)	THIRD REPORT (MAY 2022)	FOURTH REPORT (MAR 2023)
Availability	Established Ecosystem Audit to analyse TPP propositions by outcome area.	Updated with current data	Updated with current data and enhanced with data on agents of TPPs.	Updated with current data including analysis of agents of TPPs.
Awareness	Not included.	Not included.	Not included.	Not included. ²
Adoption	Analysis from OBIE management information (MI), but with some caveats. Initial data of adoption by outcome area.	Same methodology employed, but with improved data.	Same methodology. Now includes split between consumers and small businesses, and data and payments.	Updated and enhanced. Now includes an initial open banking usage classification .
Experience	Analysis of online review sites and ratings.	Replaced with findings from new Consumer Experience Research for a subset of outcome areas.	Replaced with findings from new Small Business Experience Research for a subset of outcome areas.	Not included
Outcomes	Not included.	Included for the first time, using new Consumer Experience Research for a subset of outcome areas.	Included, using new Small Business Experience Research for a subset of outcome areas.	Not included

² Based on feedback from the Expert Group we convened to feed back on the Framework, it was agreed that awareness was complex to track and not necessarily helpful given that many users of open banking may not be aware that the service they have signed up to uses open banking. We will review whether to include in future reports.

3. Outputs (availability)

Headlines

- As of December 2022, there were **159** fully regulated firms with live-to-market open banking-enabled products and services.
- This figure has remained broadly flat since March 2022, with **three** new services launching and **five** exiting the market. Reasons for exit include acquisition, and services leaving the market.
- The fully regulated market remains dominated by propositions addressing improved financial decision-making (**49**), expanded payments choice (**45**) and better borrowing (**27**).
- The availability of products and services offered by agents of regulated TPPs has increased by **33** since the end of March 2022. There were **173** such firms with live-to-market services at the end of 2022.
- Most agent propositions are clustered around improved financial decision-making (**68**), expanded payments choice (**29**) and better borrowing (**32**). However, this market sector is highly innovative with unique propositions to meet specific market needs,
- Overall, our six outcome areas continue to cover most propositions in the market. We now have 20 participants that fall outside these categories and will continue to monitor this carefully.

Availability analysis – regulated TPPs in the Open Banking Directory

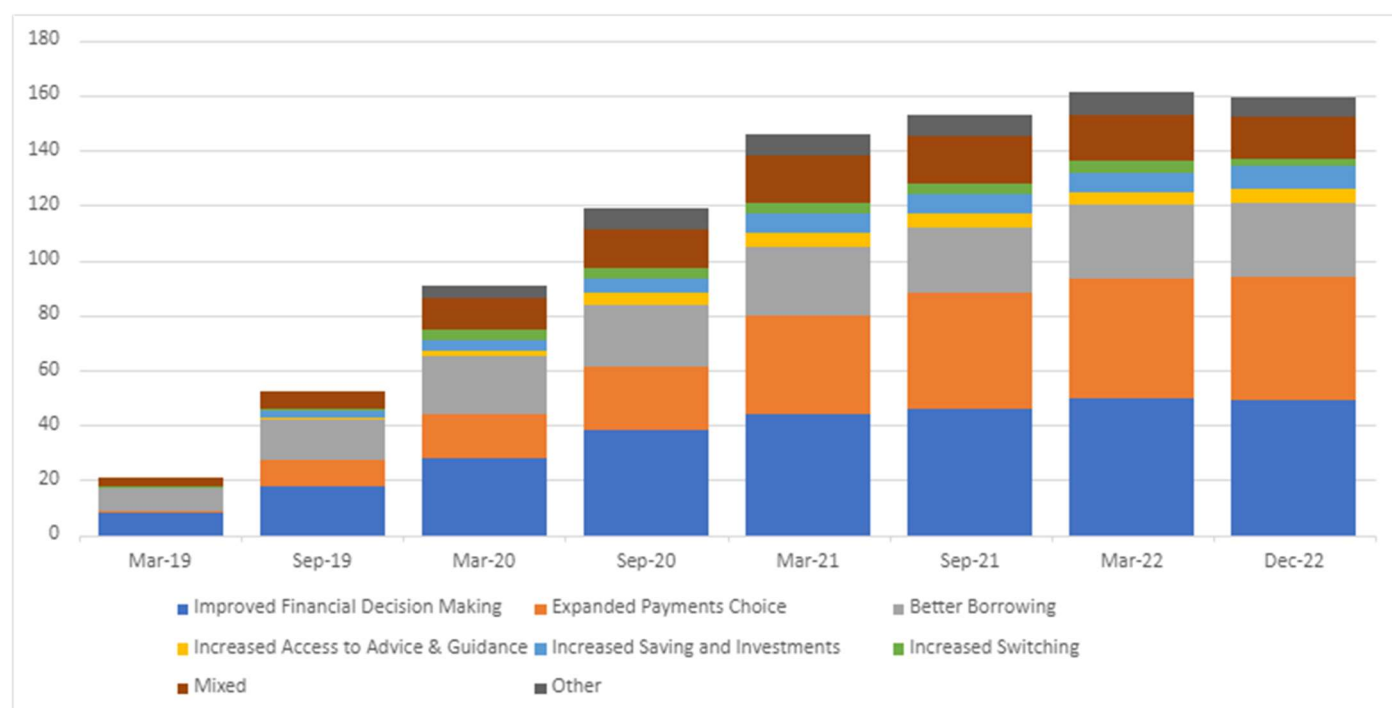
In this edition of the report, 159 TPPs were identified as being live to market in December 2022, two fewer than in March 2022. There were three new additions and five exiting.

Of the five exits, two exited the market completely, two were acquired, and one removed the open banking component of its proposition.

We have segmented these TPPs by the type of service they offer, using the six outcome areas identified in the Customer Evaluation Framework (figures 2 and 3). We provide full descriptions of the agreed outcome areas, including examples of propositions allocated to each category, in Appendix 2.

Figure 2: Live-to-market open banking-enabled services, by principal outcome area

Principal outcome area	Mar-19	Sep-19	Mar-20	Sep-20	Mar-21	Sep-21	Mar-22	Dec-22	% of Total
Improved financial decision making	8	18	29	39	45	47	51	49	31%
Expanded payments choice	1	9	16	23	36	42	43	45	28%
Better borrowing	8	15	21	23	25	24	27	27	17%
Increased access to advice and guidance	0	1	2	4	4	4	4	5	3%
Increased saving and investments	0	2	4	5	7	7	7	8	5%
Increased switching	1	1	4	4	4	4	4	3	2%
Mixed	3	6	10	12	14	14	15	15	9%
Other	0	0	4	6	6	6	6	7	4%
Total	21	52	91	118	145	153	161	159	



Source: OBIE analysis, 2022. Includes live-to-market entities regulated as TPPs only. See explanatory note after Figure 4.

Figure 3: Live-to-market open banking-enabled products and services, over time by type of customer

	Mar-19	Sep-19	Mar-20	Sep-20	Mar-21	Sep-21	Mar-22	Dec-22
Consumer	8	21	36	45	49	48	52	48
Small business	6	11	18	25	29	31	34	35
Both	7	20	37	48	68	75	76	76
Total	21	52	91	118	145	153	161	159

Figure 4: Live-to-market open banking-enabled products and services, over time by route to market

	Mar-19	Sep-19	Mar-20	Sep-20	Mar-21	Sep-21	Mar-22	Dec-22
AISP enabler / Platform AISPs	8	14	26	31	42	45	46	45
AISP direct to customer	12	29	49	66	74	76	83	82
Payments providers	1	9	16	21	29	32	32	32
Total	21	52	91	118	145	153	161	159

See notes below³.

³ **Note:** this analysis differentiates between AISPs which are offering services direct to customer, versus those which are primarily enablers of other propositions. These are effectively 'platform AISPs'. This distinction isn't helpful in payments propositions as a PISP will in many cases be enabling a merchant to accept open banking payments, as well as offering that service direct to customers. We therefore report payments providers separately.

Methodology notes for availability analysis

Firms included: this analysis is based on data collected by OBIE on the number of TPPs which are regulated, active in the Sandbox or Production and who have a live-to-market service. Any double counting has been stripped out.

Allocation to outcome area: The 162 entities were analysed using publicly available information (including participant websites and press articles). The analysis identified which of the six outcome areas the primary proposition fell into (see Appendix 1 for full details of the six outcome areas).

Growth of regulated TPPs has plateaued

In the early roll-out phase we saw strong growth in services:

- Year to September 2020 = 131% growth
- Year to September 2021 = 28% growth
- Period to December 2022 = 4% growth.

It is clear that this growth has now plateaued and the number of active TPPs has remained largely static, although with some churn. Since March 2022, there has been an overall reduction of two TPPs.

Key outcome areas

Consistently, the three most common outcome areas remain:

- 1. Improved financial decision-making – 31%**
- 2. Expanded payments choice – 28%**
- 3. Better borrowing – 17%.**

Together these three areas represent 121 of the 159 firms included in the analysis. To date, few firms have come to market with products or services focused on the switching (three) or access to advice (five) areas. We now have eight live services focusing on increasing savings and investments.

Most firms can be clearly allocated to one of the six outcome areas. Only seven could not be allocated. These firms are offering:

- Identity services (one)
- Charity round-ups (one)
- Audit services (one)
- Account verification (one)
- Support with tax calculations (one)
- Open banking as a small component in a private banking proposition (two).

Mixed and other: As well as the six outcome areas defined in the Framework Methodology, we used two additional tags. 'Mixed' was used where an enabling firm was supporting multiple outcome areas. 'Other' was used for participants who did not fit any of the categories. This was rare (8 participants). As the Impact Report progresses, we may need to create new categories for these participants.

Data on live to market firms is collected by the OBIE Participant Support team. It is relatively common for new live-to-market firms to be identified, which have already been live-to-market for a period of time. In such situations the newly identified firm is retrospectively added to the previous totals. This explains why the total for previous periods has changed: for example, in March 2022 the total number of live-to-market TPPs was 128. This has now been restated to 162, as an additional 34 TPPs which were live in March 2022 have subsequently been identified and retrospectively added.

We expect to see innovative new and unanticipated products and services using open banking. We will monitor whether there are sufficient uncategorised propositions to create new or revised outcome areas, or whether the definitions should be updated.

The analysis of the primary target audience demonstrates that most providers are targeting both consumers and small businesses (48%), whereas 30% focus exclusively on consumers, and 22% focus on small businesses only. There has been no significant change in the composition over the past year.

Availability analysis – agents of regulated TPPs

A key objective of the Impact Report is to better understand the number and range of organisations using open banking data.

In previous reports we have limited our analysis to regulated TPPs live in the Open Banking Directory. We note that this metric, which only includes providers which are regulated actors, provides a partial picture.

Diverse ecosystem

To help demonstrate the value of open banking to the UK economy and society, it is important that we show the availability and diversity of the full open banking ecosystem. This is vital as there is good evidence that new open banking service providers are increasingly choosing to utilise the services of platform Account Information Service Providers (AISPs) which provide data to other parties, rather than become regulated under the Payment Services Regulations (PSRs)⁴ themselves. There are cost and time to market advantages of these alternative approaches. See figure 5 for a summary of these options.

Figure 5: Three high-level options for launching a service using open banking data

Model	Description
Regulated AISP	An entity becomes regulated by the FCA for the provision of Account Information Services under the PSRs 2017. All AISPs are listed on the FCA Register.
Agent of AISP	An entity becomes an agent of a regulated AISP and, as part of its proposition to customers, can offer the AIS service of the regulated AISP. The AISP lists all its agents on the FCA Register.
Other parties	An entity enters a commercial agreement with a regulated AISP, so that, with the customer's agreement, the AISP passes account data to this other party. There is no agreed language to describe these parties: sometimes referred to as a 'Third party not providing AIS' or TPNPA. In this report, they are referred to as 'other parties'. There is also no agreed language to describe AISPs which operate this model. In this report, we refer to them as 'platform AISPs'. There is no official reporting or tracking of these entities.

⁴ Payment Services Regulations, 2017

In this report we include new data on the second of these categories – agents of regulated TPPs – but we are not yet able to provide insights or analysis of other parties⁵.

Figure 6: Agents of regulated TPPs offering open banking-enabled products and services split by outcome area

Principal outcome area	Mar-22	Dec-22	%	Change
Improved financial decision-making	55	67	39%	+12
Increased access to advice and guidance	13	15	9%	+2
Better borrowing	25	32	19%	+7
Increased saving and investments	11	14	8%	+3
Expanded payments choice	26	29	17%	+3
Increased switching	2	2	1%	0
Other	9	13	8%	+4
TOTAL	141	172		+31

Figure 7: Agents of regulated TPPs offering open banking-enabled products and services split by primary end-user type

Customer type	Mar- 22	Dec-22	%
Consumer	64	85	49%
Small businesses	50	56	33%
Both	12	11	6%
N/A	15	20	12%
TOTAL	141	172	

This component of the market is highly dynamic, providing an incubator-like vehicle for firms to bring innovative and differentiated services to market. Overall, the number of firms acting as agents increased by 31 between March and December 2022. We break down the categories in Figure 8.

⁵ As agreements between platform AISPs and other parties are commercially sensitive and not published or reported, there is no market data on the number or types of services in market using open banking data under this model. In contrast, both TPPs and agents of AISPs are recorded in the FCA Register. We have gathered some data from selected platform AISPs, which gives us anecdotal insights into the number and types of 'other parties' with services in market using open banking data.

However, we are not yet in a position where we can publish insights into the number or type of such services. We hope to work with the platform AISPs in the market to gather data for the next reporting cycle as this remains a key gap in the availability analysis: for example, many lenders, letting agents, gambling companies and even debt advice providers are likely to be operating as 'other parties' and are therefore excluded from our analysis.

Figure 8: Changes in agents of regulated TPPs offering open banking-enabled products between March and December 2022

Category	Change
Agent @ March 22 now live to market	+11
New agent since March 22 live to market	+33
Agent @ March 22 ceased to be agent	-13
Net Change	+31

Propositions offered by agents

Our analysis identified 172 agents of AISP with live-to-market propositions. As with the propositions offered by directly regulated TPPs, the three most common outcome areas are:

1. **Improved financial decision-making – 39%**
2. **Expanded payments choice – 17%**
3. **Better borrowing – 19%.**

However, there is also a significant number of propositions in the 'Increased access to advice and guidance' outcome area (15), including propositions that aim to produce insights on the environmental impact of financial behaviour, or to help users shop with accredited ethical businesses.

Unique propositions

The agent market is an innovative part of the ecosystem, with small firms developing unique propositions for specific market needs that fall outside the current outcome areas.

Interesting examples of new propositions that have come to market since March 2022 include:

ABAKA – uses artificial financial intelligence solutions to enable financial institutions to deliver intelligent behavioural nudges, and conversational AI on retirement, savings and investments to its retail and wealth customers. It also offers a digital financial dashboard and an account consolidation service using open banking.

CIRCA5000 – uses open banking to access bank account information on the value of purchases, rounding up transactions to invest the spare change from the purchases to make investments.

Claro Money – a subscription service that allows customers to control their finances by tracking spending and setting goals, as well as providing access to an expert financial coach. It uses open banking to access bank information, providing a linked overview of spending by category or merchant each month.

Joinmyworld – an app that uses purchase and movement data to track customers' daily eco-actions and rewards customers making greener choices.

Octopus Energy – this energy company uses open banking to assess the financial status of financially vulnerable customers and increase efficiency in the process of conducting eligibility checks for its social tariffs.

Pardna – an informal collaborative saving and lending app where a group of people – typically friends and family – come together and agree to submit a fixed amount every week or month to a central pot. The person managing this central pot will then arrange for one person in the group to receive all the cash in the central pot.

SuperFi – uses open banking combined with proprietary algorithms to analyse an individual customer's financial situation to deliver personalised debt advice and access to integrated debt reduction tools/services. Customers can download their categorisation of income and expenditure and use it to seek help from debt charities.

Availability – conclusions

This analysis shows that the availability of services by regulated TPPs has again slightly reduced at 159 (vs 161 in March 2022). It appears, however, that the agent market continues to expand, with 172 (vs 141 in March 2022) live-to-market agent services⁶.

The structure of the market continues to evolve. There is a growing trend towards a smaller number of platform AISPs supporting other parties providing services to end-users as agents.

Evolution of the ecosystem

These alternative regulatory routes to market are providing a vehicle for firms to bring innovative and differentiated services to market. This is a dynamic market with companies launching services to test the commercial viability of embryonic propositions. For example, 33 new propositions came to market between March 2022 and the end of the year – a 24% increase, but conversely a significant number of firms exited the market over the same period (9%).

The other area of activity and development is in the “other providers” market. There is still no accepted data on the number of “other providers” using open banking data although we note that our estimate of ~1,000 in the March 2022 report has not been challenged by the Platform AISPs which are the only players able to understand this segment the market.

Although there are significant challenges in gathering this data, we will also work with platform AISPs to understand the number and type of other parties operating in the market.

However, we are not currently able to provide a more accurate number of “other providers” in the market beyond the March 2022 estimate of ~1,000.

⁶ This is the first time this analysis has been completed and we do not have time series data at this stage. However, many of the agent propositions we analysed were new, leading us to conclude that this part of the market is likely to have grown.

4. Intermediate outcomes 1 (adoption)

Headlines

- We estimate that **10 – 11%** of digitally-enabled consumers and small businesses used open banking during December 2022.
- This figure has increased from **9 – 10%** in March 2022
- Small business penetration (**16%**) is significantly higher than consumer (**10%**), with the gap continuing to widen slightly.
- The split between types of usage is **64% data, 30% payments with 6% of customers using both**, however business users are more strongly skewed to data.
- In the six months to March 2022, there were **21.1m** open banking payments, compared with **6.1m** in the same period the previous year. Month-on-month growth is running at around **10%**.

Open banking penetration

Using data submitted to the OBIE by the CMA9⁷, we have estimated the penetration of open banking in the total base of digitally-enabled consumers and small businesses. This analysis should be considered directional only. Please see figure 9.

Figure 9: Estimated penetration of open banking into the broader digitally-enabled population

ESTIMATED PENETRATION OF CMA9 DIGITALLY-ENABLED USER BASE						
	MAR 2020	SEP 2020	MAR 2021	SEP 2021	MAR 2022	DEC 2022
Estimated penetration	2.5 – 3.5%	3.5 – 4.5%	5.5 – 6.5%	7.0 – 8.0%	9.0 – 10.0%	10.0 – 11.0%
1 in x	1 in 32	1 in 27	1 in 16	1 in 14	1 in 11	1 in 9

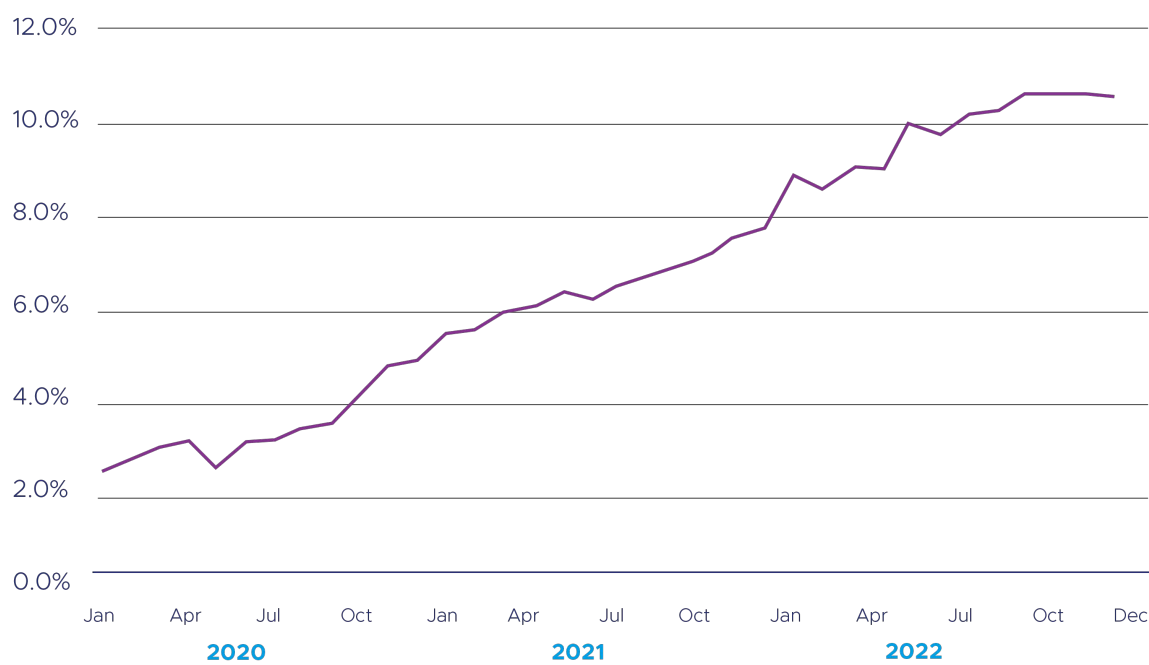
⁷ **Source:** the OBIE estimates based on CMA9 ASPSP submissions, corroborated against BEIS, ONS, Eurostat and UK Finance.

Note: This data is based on submissions of active user numbers (active defined as active in the last month) and digitally active end users by the CMA9. It therefore only represents penetration within the CMA9 digital customer bases, although this is a significant share of the UK population. This data has been corroborated against data on the total adults and small businesses currently using internet banking, derived from ONS, Eurostat and UK Finance. Note that some data has been rebased, based on additional data received about the growth in the number of digital accounts, which has slightly reduced previously reported numbers in March 2021, September 2021 and March 2022.

Recognising the limitations of the underlying data, we estimate that one in nine digitally-enabled end-users were using at least one open banking-enabled product or service in December 2022. This figure has increased from one in 11 in March 2022.

While we can see a clear progression in the penetration of open banking, it is noticeable that, since September 2022, penetration has plateaued at around 10.5%. It will be necessary to wait for additional data in 2023 to understand whether this is a temporary phenomenon or a longer-term trend.

Figure 10: Estimated open banking end-user adoption⁸



Gap between business and retail penetration has widened

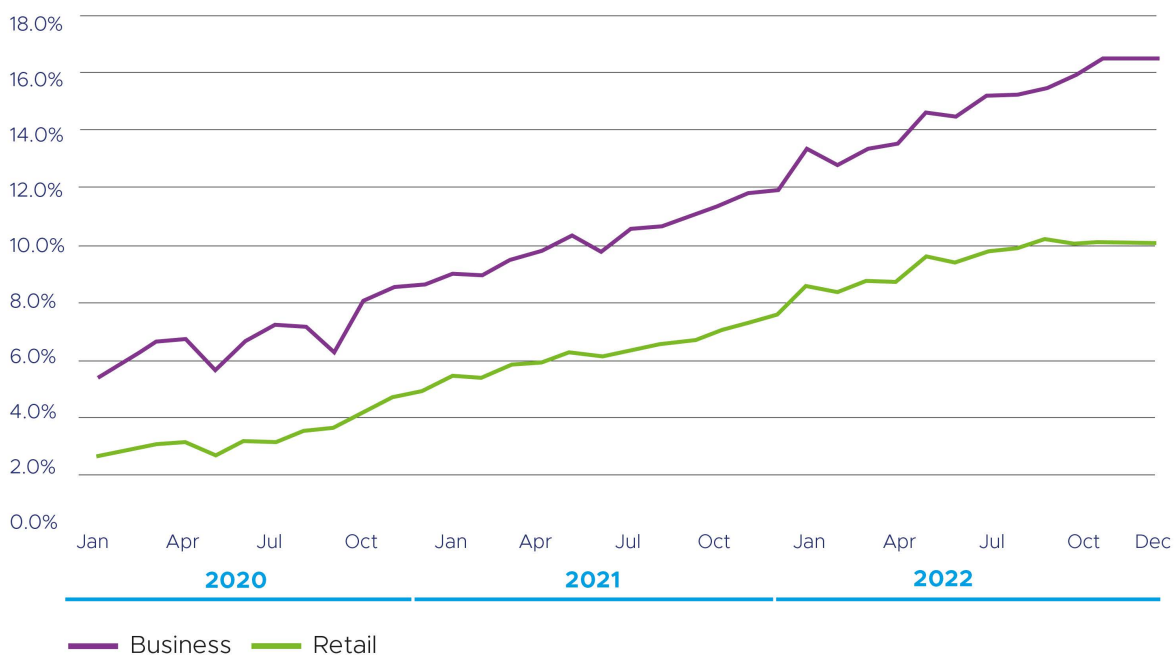
⁸ **Source:** the OBIE estimates based on CMA9 ASPSP submissions, corroborated against BEIS, ONS, Eurostat and UK Finance. Represents the % of CMA9 digitally-enabled end users with active open banking connections in the previous month.

Note: This data is based on submissions of active user numbers and digitally active end users by the CMA9. Active is defined as having been active within the past month. It therefore only represents penetration within the CMA9 digital customer bases, although this is a significant share of the UK population. This data has been corroborated against data on the total adults and small businesses currently using internet banking, derived from ONS, Eurostat and UK Finance.

When we break this penetration down by account type, we see that, proportionally speaking, more small businesses are active users than consumers, and that this gap has started to widen. Please note that this data has been rebased since the last report.

This shows that just over 16% of small businesses are estimated to be active open banking users, particularly driven by the growing adoption of cloud accounting and its migration towards open banking. In contrast, around 10% of consumers are using open banking.

Figure 11: Estimated open banking end-user adoption (retail versus business)



Usage for data versus payments

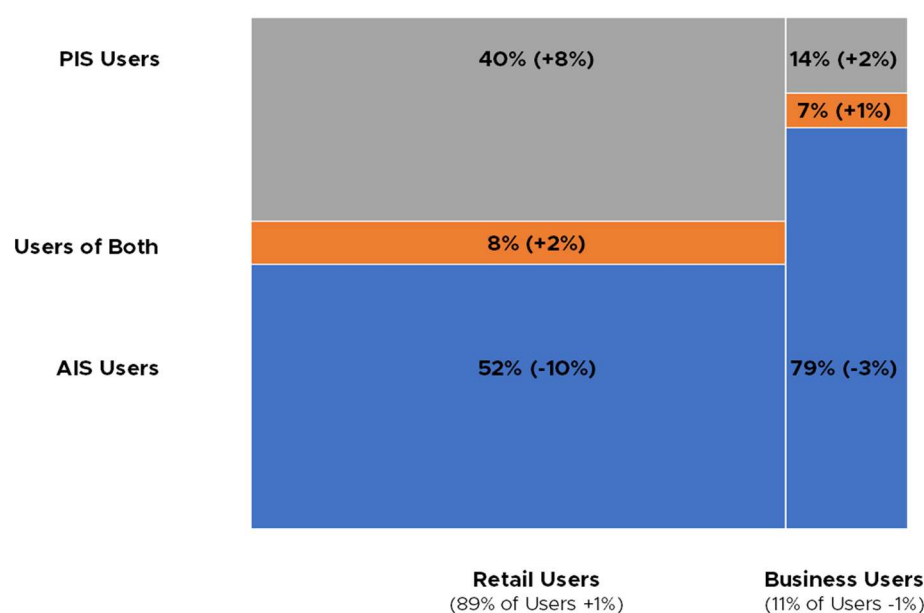
We can also provide estimated splits between use of open banking to provide access to transactions: account information services (AIS) and open banking payment initiation services (PIS).

When we look at all users of open banking, 89% are retail customers. This is not surprising as there are significantly more consumers than small businesses in the UK.

However, there is a clear difference in usage patterns, with small businesses strongly skewed to AIS usage (accounting for 79% of users, with an additional 7% using both AIS and PIS), versus consumers who are 52% users of AIS (with an additional 8% who are users of both services) and 40% who are PIS users.

Since we last reported in March 2022, the clear shift has been towards PIS, with 50% of consumers active in PIS, up from 38% in March 2022. There has been some shift in small business towards payments, but to a lesser degree. This is displayed in Figure 12.

Figure 12: Split of active users between retail and business, AIS and PIS (Dec 2022). The number in brackets is % change since March 2022.



(Figure in brackets is % change since March 22)

Successful open banking payments

Open banking payments are becoming important for retail customers as large companies and major institutions roll out these options. These include tax payments, charity donations, the settlement of credit card bills and the funding of digital wallets and other account top-ups. A total of 41.2m open banking payments were reported to the OBIE between July 2022 and December 2022 (see figure 13).

In December 2022, there were 7.7m open banking payments, and in 2022 there were 68m payments. This represents growth of significantly more than 100% year on year.

Figure 13: Number of successful payments

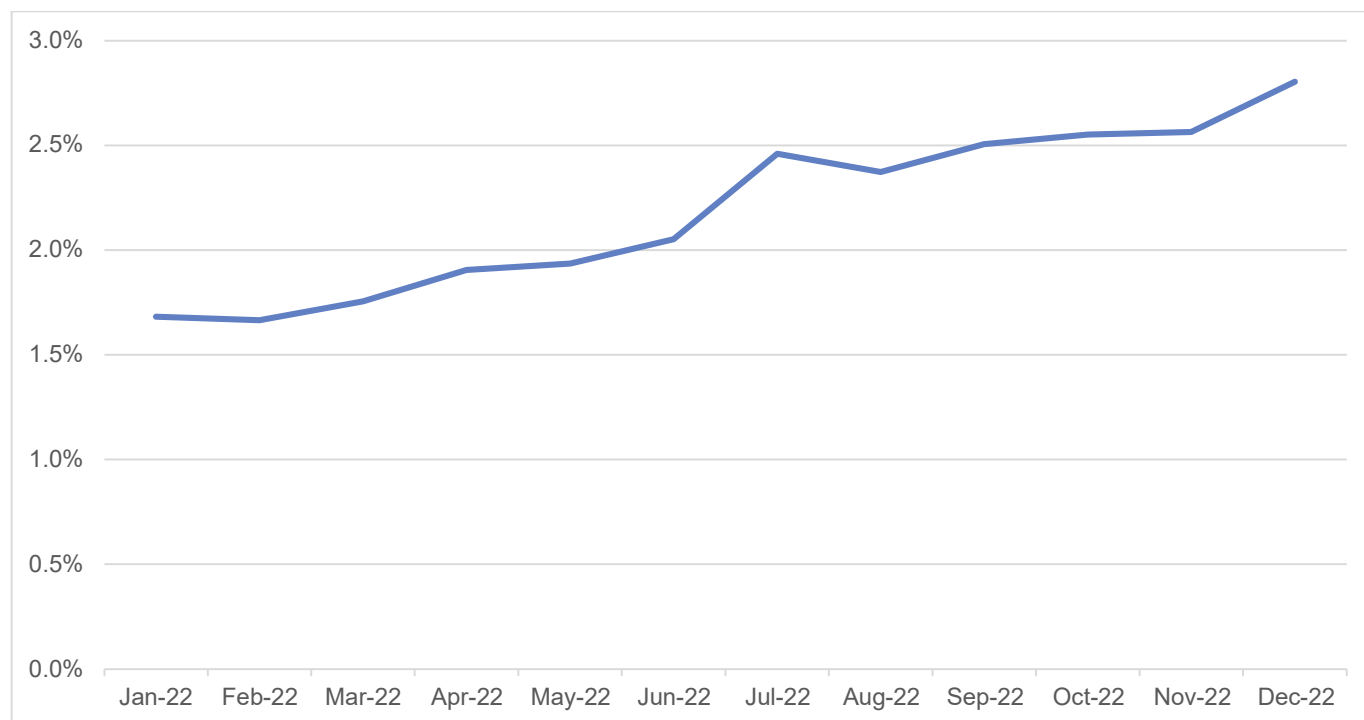
Six months to	No. of payments (million). From CMA9 only	Year-on-year growth
Jun 2021	9.0	-
Dec 2021	16.2	
Jun 2022	27.0	200%
Dec 2022	41.2	154%

Source: OBIE analysis of CMA9 data submissions.

Note: Successful payments initiated by third party providers using Open Banking API, based on data submitted by account providers (ASPSPs) to open banking. There is no data prior to July 2020. Includes data from nine providers and 19 brands.

For comparison, we can show open banking payments as a percentage of overall Faster Payments Single Immediate Payments. This shows that open banking payments now represent around 2.8% of these payments. See Figure 14.

Figure 14: Open banking payments as a % of Faster Payments Single Immediate Payments



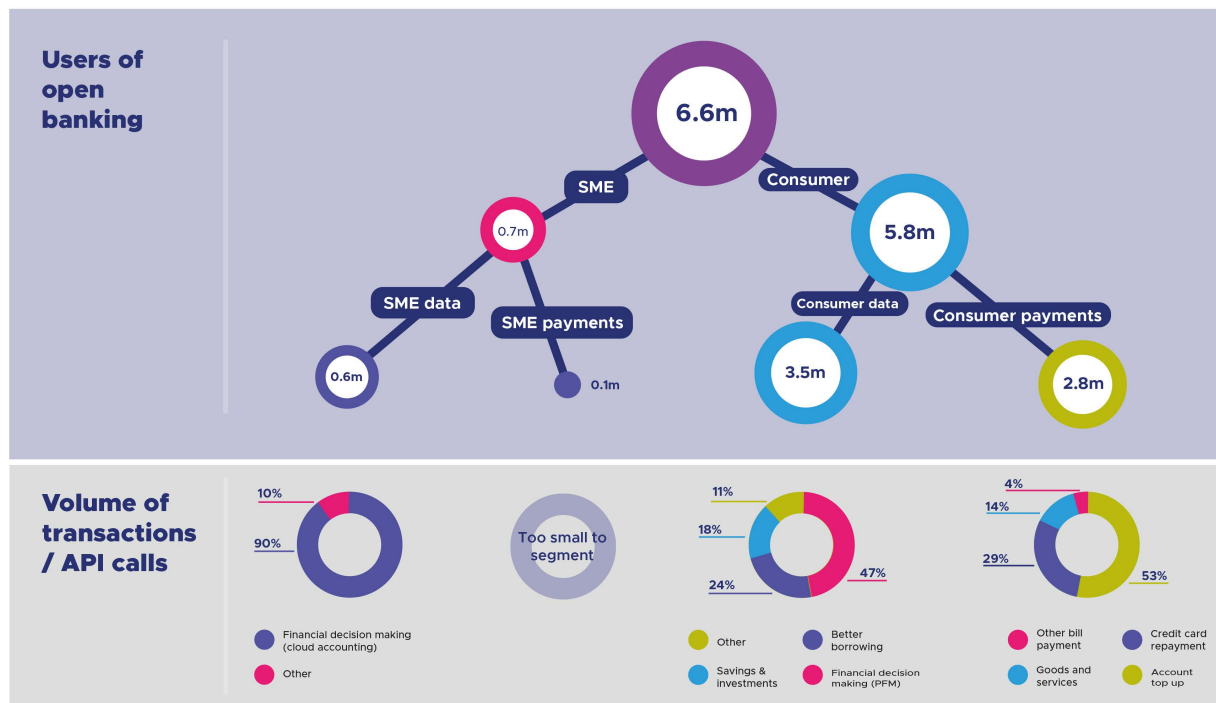
Source: OBIE analysis of CMA9 data submissions and Pay.UK statistics on Faster Payments.

We can also draw some interesting observations on the number of payments made by open banking users. In December 2022, there were 2.96m active payments users and a total of 7.7m payments, suggesting that on average an active customer is making 2.6 payments during December. Additional research would be useful to understand whether this suggests a degree of satisfaction or habit forming among these active users.

Overall shape of the open banking ecosystem

The OBIE has some data on API calls which enables us to broadly estimate what type of service users are engaging with or which types of payments they are making. This data is directional only and should be used with caution. However, it does show some interesting patterns. We have overlaid it with the PSU data presented earlier in figure 15 below:

Figure 15: Open banking ecosystem overview – users and API volumes (December 2022)



Source: OBIE analysis of CMA9 data submissions.

Note: this analysis is directional as it is not always possible to allocate API calls or payments to a proposition or outcome area. It should be used with care and will be subject to revision as new data is received.

On the SME side, we know that data usage dominates, and cloud accounting propositions are the key driver within this sector, representing the vast majority of API calls. SME payments remain small.

On the consumer side, data services see a very strong dominance of API calls related to financial decision-making services, mainly personal finance manager solutions or account aggregation offerings (for example, banks offering consumers the ability to view account balances from other banks within their banking apps). This represented around half of API calls in December 2022. 'Better borrowing' and 'Increased savings' represented most of the rest of the volume of API calls.

It is interesting to compare the number of providers by outcome area with their share of API calls:

- **Better financial decision-making:** 23 firms, 47% of API calls
- **Better borrowing:** 11 firms, 24% of API calls
- **Increased savings and investment:** five firms, 18% of API calls.

The savings and investment services are interesting to note here. This is a less developed proposition in terms of number of providers, but seems to be slightly larger than their counterparts in terms of API calls.

On the consumer payments side, we can see the strong share of account top-ups, representing over half of payment volumes. These are propositions where consumers are moving their own money into another of their own accounts, for example to manage spending or to exchange currency.

The next most significant payment type is credit card repayment, with several large credit cards now offering the option to use open banking payments to settle the bill. Finally, we have goods and services and other types of bill payments, which would include HMRC payments. It is worth noting that this analysis was completed in December 2022, and with the seasonal spike in HMRC payments with the self-assessment deadline we would expect a different picture in January 2023.

APPENDIX 1: Scope of Ecosystem Audit

The Ecosystem Audit is a core part of the analysis driving the immediate outcomes and is summarised in Section 3. This appendix provides additional detail on the scope.

It is clear the open banking ecosystem is becoming more complex, and several models are used to bring products and services to market. Our analysis focuses on one part of this market. Other parts of the market which are not included are:

- **Agents:** there are several agents of AISP's registered with the FCA (although not all of these may be live-to-market). Operating as an agent of an AISP provides an alternative route to market for some participants.
- **Third Parties Not Providing AIS (TPNPA):** Several TPNPAs have been provisionally identified. These firms receive data from regulated AISP's, but do not act as regulated AISP's themselves.
- **Technical Service Providers (TSPs):** TSPs do not offer a service to the end-user, so are not included in this analysis. It is, however, clearly a powerful enabler of market development that these firms support regulated parties bringing products and services to market.

We do not include agents, as they are not on the Directory. TPNPAs are not included in this analysis as there is no available data source which would allow us to quantify their role or the number of products and services which they provide. Any arrangement between an AISP and a TPNPA to onward share data is confidential.

TSPs are excluded as they do not provide a product or service to the end-user, but they are nonetheless important enablers of ecosystem growth.

In future iterations, the Impact Report could be expanded to include agents and TPNPAs. However, there are practical constraints in doing so which would need to be overcome. This limitation should be considered in reviewing the results in Section 3.

APPENDIX 2: Outcome areas

OUTCOME AREA	CUSTOMER FOCUSED ULTIMATE OUTCOME	DIRECTLY RELATED PROPOSITIONS
Improved financial decision-making	Individuals and small businesses are actively engaged with their finances and routinely use open banking-enabled account services to review and control their finances seamlessly.	Personal finance manager Income and expenditure analysis Small business financial management
Increased access to advice and guidance	Individuals and small businesses conveniently access timely debt advice, financial advice or help with tax or welfare.	Legal Aid and welfare support services Income maximisation IFA services Roboadvice Tax advice Referrals to Money Helper Cashflow management
Better borrowing	Individuals and small businesses benefit from using open banking-enabled cost-effective credit when they need it and can manage the burden of any debts they have.	Consumer lending Invoice financing Asset financing Alternative small business finance Debt advice Automatic overdraft lending Affordability analysis Account sweeping Affordable credit
Increased saving and investments	Individuals and small businesses are actively engaged in using open banking to help them with saving and asset-building. They put money aside, maximise their balances and/or returns by accessing the most appropriate savings and investment products and tools.	Micro savings Non-advised savings/investment Account sweeping
Expanded payments choice	Individuals and small businesses are using the best open banking-enabled payment solutions meeting their needs for low cost, speed, convenience, control, visibility and security.	E-Commerce payments and refunds P2P payments International payments Card top-ups Request to pay Bill payment Fraud detection Rewards and loyalty management
Increased switching	Individuals and small businesses are getting better deals by confidently comparing financial services and household bills and subscriptions. They receive reminders and nudges to shop around, as a result of easier and more convenient personalised propositions	Subscription management Financial product comparison services Bill comparison and switch services Other product comparison services

APPENDIX 3: Theory of Change Model

The Impact Report is based on a Theory of Change – consistent with methodological approaches used to evaluate the intended impacts of policy interventions. It helpfully illustrates the progressive intermediate steps required to achieve the ultimate desired goals. The Theory of Change established three key components that it is important to measure:

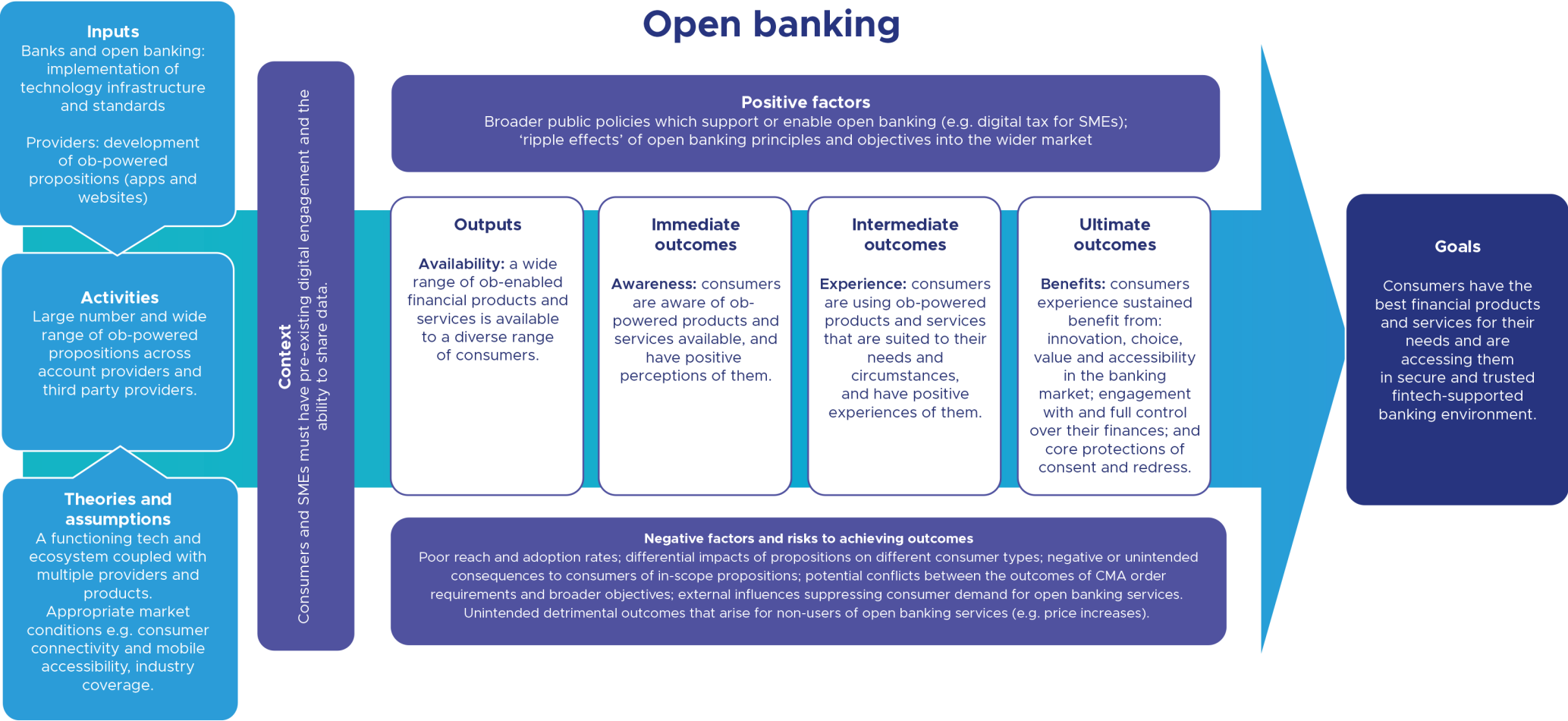
- 1) **Outputs and immediate outcomes (availability and awareness):** a necessary first step to achieving ultimate outcomes is availability, awareness and positive perceptions of open banking-enabled products and services. However, there is consensus that customer awareness of open banking technology is less important than awareness of open banking-enabled propositions and services.
- 2) **Intermediate outcomes (experience):** the second step is customer adoption and a positive experience of open banking-enabled products and services that meet their needs.
- 3) **Ultimate outcomes (benefits):** the third step is that customers experience sustained benefits from being able to access and use open banking-enabled products and services in a way that improves their financial position.

In the first Impact Report, we set out six customer outcome areas that provide a comprehensive, but concise categorisation of the customer objectives of open banking, as set out in the CMA Order.

Our Ecosystem Audit analysis continues to demonstrate that, with very few exceptions, the propositions in market consistently fall within these categories. These outcome areas are shown in Appendix 4.

We anticipate that the accuracy of the measures will improve in future Impact Reports as we develop new data sets, commission additional research, and with the continued growth of the ecosystem. A critical mass of customers using open banking-enabled services is a key prerequisite to drawing any reliable conclusions as to ultimate customer outcomes.

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