

Final stage Impact Assessment – Smart Data primary legislation

Title: Regulatory Powers for Smart Data IA No: BEIS059(F)-22-CCP RPC Reference No: RPC-BEIS-5009(2) Lead department or agency: BEIS Other departments or agencies:	Impact Assessment (IA)		
	Date: 18/07/2022		
	Stage: Final		
	Source of intervention: Domestic		
	Type of measure: Primary legislation		
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Summary: Intervention and Options			RPC Opinion: GREEN

Cost of Preferred (or more likely) Option (in 2019 prices)

Total Net Present Social Value	Business Net Present Value	Net cost to business per year	Business Impact Target Status Non qualifying provision
N/Q	N/Q	N/Q	

What is the problem under consideration? Why is government action or intervention necessary?

Multiple problems across markets exist which Smart Data could help to address, however current market incentives and powers are insufficient to deliver Smart Data alone. UK GDPR created a right to data portability but does not enable data sharing as envisaged for Smart Data, lacking strong standards and secure data sharing requirements. Many markets currently face low levels of consumer engagement. Consumers are unable to navigate these markets easily resulting in negative outcomes such as the 'loyalty penalty', low switching rates, poor satisfaction, and subscription traps. These negative outcomes are further exacerbated for vulnerable consumers who may have further disabilities to access and engage. Alongside low consumer engagement is a lack of trust and empowerment to utilise their own data in markets, increasing their cost of informed decision making. Where already sharing data, some customers are currently using less secure methods, such as 'screen scraping', which can lead to direct harm if this data is mishandled. Evidence also shows that in digital markets there is increasing concern that access to data is a significant barrier to entry. We believe intervention is necessary to help address the issues arising in these markets and to alleviate wider market failures.

What are the policy objectives of the action or intervention and the intended effects?

The objective of our policy is to enable new, and accelerate existing, Smart Data schemes, and create a common framework to increase legislative consistency for schemes. This is intended to improve poor consumer and business outcomes, increase competition, create greater opportunities for innovation, produce time saving for users, reduce costs, increase the quality of services, improve the security of data sharing, and increase the trust in data sharing mechanisms.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Option 0: Do nothing. BEIS would neither pursue, nor give support to, legislative changes regarding Smart Data.

Option 1: Pursue non-legislative alternatives.

Option 2: Support sector regulators to independently pursue legislative alternatives.

Option 3: Introduction of primary legislation, creating new "regulation-making" powers to enable Smart Data schemes to be introduced in any given sector.

Option 4: Introduction of regulation-making powers, with expiry dates.

Option 3 is preferred option. This enables faster delivery of and greater consistency between different schemes. It has the additional benefits of encouraging greater coordination between schemes and reducing the risk of delay and regulatory duplication. Option 3 is also more efficient than the development of unique primary legislation for each sector.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: 5 years post implementation

Is this measure likely to impact on international trade and investment?	No		
Are any of these organisations in scope?	Micro	Yes	Large
	Yes	Yes	Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)	Traded:		Non-traded:

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the Jane Hunt MP, Parliamentary
Under-Secretary of State at BEIS

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Date:

----- 20/07/2022 -----

Summary: Analysis & Evidence

Policy Option 3

Description:

FULL ECONOMIC ASSESSMENT

Price Base Year 2019	PV Base Year 2020	Time Period Years	Net Benefit (Present Value (PV)) (£m)		
			Low: Optional	High: Optional	Best Estimate:

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)		
Low	Optional		Optional		Optional
High	Optional		Optional		Optional
Best	N/Q				

Description and scale of key monetised costs by 'main affected groups'

Minimal direct costs would be incurred from the primary legislation; instead, direct costs would occur when the Smart Data powers are put into practice via secondary regulations. Our analysis focusses on the indirect implications of bringing forward the costs of implementing the schemes and additional years of costs when the schemes are operational. Within the Impact Assessment indicative estimates, based on Open banking costs, have been produced for the indirect costs of expediting the implementation of a telecommunications Smart Data scheme.

Other key non-monetised costs by 'main affected groups'

At the secondary regulations stage, the main affected groups facing monetised costs of Smart Data schemes themselves will be data holders and scheme administrators. Third Party Providers (TPPs) are also expected to face costs to participate in Smart Data schemes, however their participation will not be mandated. The main costs for scheme administrators will be to operationalise schemes and ensure adequate regulatory oversight. For data holders and TPPs this includes costs to implement and familiarise with legislation, ongoing costs to continue compliance with regulations, which could include upgrading technical infrastructure to facilitate secure data sharing, and ongoing accreditation for TPPs. Some costs may be seen in the form of 'transfer benefits' from one group to another. This mainly affects large incumbent data holders, who may see historic advantages start to weaken as a result of increasing competition and innovation in markets.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition)	Total Benefit (Present Value)		
Low	Optional		Optional		Optional
High	Optional		Optional		Optional
Best					

Description and scale of key monetised benefits by 'main affected groups'

By accelerating the implementation of Smart Data schemes consumers would realise the benefits sooner. Customers, TPPs and wider society are the main groups who could see benefits from Smart Data schemes. Indicative analysis within the Impact Assessment has provided estimated benefits associated with speeding up the implementation of a telecommunications Smart Data scheme. Modelling of the impact of legislation by Frontier estimates average productivity to be 7.8% higher for new TPPs using Smart Data than TPPs not using Smart Data, and 0.5% higher for existing TPPs than it would have been without Smart Data. It also suggests cost savings for SMFs over five years could be £35bn across existing banking, and new finance, energy and communications sector schemes. Other monetised benefits to customers and TPPs include switching savings, lower prices due to increased competition and fraud reduction savings.

Other key non-monetised benefits by 'main affected groups'

Other non-monetised benefits of Smart Data schemes may be seen by customers, TPPs, wider society and data holders. Society can expect to benefit from the increasing value of the data economy, a stronger international fintech advantage and increased competition and innovation. Customers, data holders and TPPs can all expect to see the benefits from either accessing, or creating, new and innovative Smart Data tools and services across sectors. Other non-monetised benefits include money and time savings, for consumers when understanding their data and looking for better deals, and for data holders by reducing the time and resource sent dealing with fraudulent activity. Indicative estimates for these have been included throughout the IA based on specific sector context and similar interventions.

Key assumptions/sensitivities/risks

The key primary assumptions of this analysis are that the relevant departments use the regulation-making powers in policy option 3 and implement necessary secondary legislation to operationalise their Smart Data scheme. The analysis for estimating the implications of speeding up the implementation of Smart Data schemes is assumptions-based and should be regarded as indicative.

The primary risk is that these acceleration benefits are not realised. Another risk is that implementation of schemes will be inconsistent, and the design of secondary regulation will limit the potential for coordination. Some further risks associated with Smart Data schemes themselves could include potentially worsening inequalities, reduced competition, and a lack of uptake and demand of Smart Data schemes and services.

BUSINESS ASSESSMENT (Option 3)

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m:
Costs:	N/Q	Benefits: N/Q	

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Background

What is Smart Data?

1. The 2019 Smart Data Review¹ explored how to best enable ‘Smart Data’. Smart Data is the secure sharing of customer data with authorised third-party providers (TPPs),² upon the customer’s request. These providers then use this data to provide innovative services for the consumer or business user, such as automatic switching or better account management.
2. Smart Data goes beyond the “right to data portability” under the UK General Data Protection Regulation (GDPR) by requiring data holders to:
 - Provide data to TPPs immediately following a request from a customer, rather than the 30 days permitted in the right to data portability.
 - Share data securely via Application Programming Interfaces (APIs), or equivalent secure methods, and only once the TPP has authenticated the customers’ identity and received their consent.
 - Provide, subject to the customer’s consent and only where required for the service, ongoing access to data between data holders and TPPs rather than a one-off transfer.
 - Adhere to common or consistent technical standards or guidelines, data formats, and definitions to ensure interoperability and to minimise barriers for TPPs.
 - Provide product and performance data, such as tariffs or geographical availability of services, in addition to customer data to enable innovation.
3. By combining customer data with product and performance data, facilitated by an interoperable framework for data sharing, innovators will have the opportunity to develop new ways for consumers and businesses to benefit from their data.
4. Throughout this IA, we refer to innovation as one of the overarching benefits of Smart Data. When referring to innovation, we define this as the introduction of new and improved products and services brought to the market, which make use of data.

¹ BEIS (June 2019) – “[Smart Data Review](#)”

² A TPP is any authorised business or organisation that a user gives permission to access their data or with which they interact to help them navigate the market, other than their data holder(s) in that market. TPPs cover a wide range of organisation types, examples of TPPs include but aren’t limited to read-access user facing TPPs, write-access user facing TPPs and Technical Service providers (TSPs).

Smart Data schemes

5. Public sector-led Smart Data schemes exist at varying stages of development. Crucially, the schemes that are already in place are underpinned by a legislative mandate for industry participation – Open Banking (under the CMA Retail Banking Order³) and the Pensions Dashboard (under The Pension Schemes Act 2021⁴).

Open Banking: the most advanced and only live Smart Data scheme. It enables customers to share payment accounts data with TPPs, typically including current and credit card accounts, as well as some savings accounts. It gained momentum in 2018 because of the Payment Services Regulations, transposing the EU's Second Payment Services Directive (PSD2) in the UK and the Competition and Markets Authority's (CMA) Retail Banking Order⁵ which mandated participation for the nine largest UK banks.

Pensions Dashboard (providing read-only functionality initially): announced in 2016 by the Department for Work and Pensions (DWP), this scheme will enable consumers to view all their existing pension pots in one clear dashboard format. The Pension Schemes Act 2021⁶ amends the Pensions Act 2004 to make it mandatory for pension providers and schemes to connect to pension dashboards. DWP are now working on introducing secondary legislation.

The Money and Pensions Service⁷ will be required to provide a dashboard, however this does not inhibit the creation of further dashboards. For example, data aggregation platform Investnet | Yodlee and pension fintech The Pensions Lab have partnered to create a pensions dashboard for their employees.⁸

Open Finance: The Financial Conduct Authority (FCA) committed to lead this scheme in June 2019, building on Open Banking and covering a wider range of services (such as savings, mortgages, consumer credit, investments, and insurance). A feedback statement to an initial call for input was published in March 2021 and the FCA committed to work with BEIS and HMT in considering the feasibility, timing and design of any future legislation relating to Open Finance.⁹

Open Communications: an equivalent scheme for the retail telecoms market. In July 2021 Ofcom published a feedback statement to their initial consultation, showing that most groups were supportive of the scheme, with the exception of large communications providers.¹⁰ Further consultation on proposals to deliver

³ CMA (2017): [Retail Banking Order](#)

⁴ The Pension Schemes Act 2021: Part 4 – [Pensions Dashboards](#)

⁵ CMA (2017): [Retail Banking Order](#)

⁶ The Pension Schemes Act 2021: Part 4 – [Pensions Dashboards](#)

⁷ MaPS – [Pensions dashboards](#)

⁸ Open Banking Expo (January 2022): [“Investnet | Yodlee collaborates with The Pensions Lab for pensions dashboard”](#)

⁹ FCA (March 2021): [“FS21/7: Open finance – feedback statement”](#)

¹⁰ Ofcom (July 2021): [Open Communications consultation feedback statement](#)

Open Communications would be required before a final decision on implementation is made.

midata: first announced in 2011, aims to enable services such as faster and more accurate energy tariff comparisons. The scheme has not been introduced and is currently paused by Ofgem, who recognise there are a number of programmes in train across the industry that will also impact industry data availability and quality, such as the electricity settlement reform¹¹. midata remains a valuable workstream in the context of Ofgem’s strategic work to transform the retail energy market.¹²

6. Schemes are also being developed by the private sector. For example, Open Energy¹³ is developing a membership-style framework to share industry-level data, and Open Transport¹⁴ has developed open standards for secure and interoperable data sharing. Engagement with both schemes has highlighted a lack of incentives for industry engagement as a likely barrier as these schemes develop.
7. Many other countries are developing similar schemes – with significant progress made in Australia and Europe. The Australian Consumer Data Right¹⁵ legislation demonstrates how economy wide powers can be introduced, and then put into practice sequentially in different sectors. The Australian government has committed to introduce a new sector scheme each year, starting with banking in 2021, with energy and telecoms scheduled to follow. This demonstrates the pace at which schemes can be rolled out once the enabling legislative framework is in place. The EU is similarly developing an economy-wide Data Governance Act¹⁶ and Data Act¹⁷ which aim to foster the availability of data by increasing trust in data intermediaries and strengthen data sharing across the EU and between sectors, businesses, and governments. These acts underpin plans in 2022 to legislate for a European Health Data Space,¹⁸ the first of nine planned sectoral data spaces, which will promote better exchange and access to different types of data for individual and societal benefit. While Australia and the EU provide useful international comparators to Smart Data in the UK, there are limitations in the comparisons that can be drawn between countries due to unique regulatory landscapes within specific sectors.
8. The UK was the global lead in Open Banking, with equivalent schemes now being delivered in over a dozen jurisdictions worldwide, including in Brazil and Nigeria, and we have an opportunity to extend this lead to other Smart Data sectors. This creates greater scope for compatibility between the UK and other countries, while UK businesses with experience in Smart Data can more easily

¹¹ Ofgem (active): [Electricity Settlement Reform](#)

¹² Ofgem (May, 2020): [Update on midata](#)

¹³ Icebreaker One – [Open Energy](#)

¹⁴ [Open Transport](#)

¹⁵ [Australian Government Consumer Data Right Rollout](#)

¹⁶ [European data governance \(Data Governance Act\)](#)

¹⁷ [Data Act](#)

¹⁸ [European Health Data Space](#)

expand internationally and strengthen the UK's global trade. Similar effects have been seen with 'Fintech Bridges' established between the UK with Hong Kong, China, South Korea, Australia, and Singapore¹⁹ that intend to boost exports of Fintech services and bolster digital trade. The Kalifa Review of UK FinTech²⁰ recommends delivering a strong regulatory strategy and international action plan to build a leading position for UK FinTech. Smart Data can help enable this.

Smart Data use cases

9. Examples of use cases which have emerged from Open Banking can be found on the Open Banking Directory²¹ and include:

Open Banking use cases

Viewing multiple bank accounts in a single app: integrated into most high-street banking apps, and also provided by start-ups like Bippit and Yolt.

Account sweeping tools to maximise interest: 'sweeping services' such as Moneybox move money in a user's accounts to products offering higher interest rates.

Support with loan application: NestEgg make it easy for people to apply and get accepted for affordable loans. In July 2021 NestEgg's decision engine reviewed over £100m loan applications. 75% of applicants were financially excluded.²²

Simplifying everyday tasks: Ordo has removed the need to enter banking credentials to complete transactions

Helping SMEs with financial management: start-ups, like ANNA Business Banking & Invoicing, help SMEs manage payslips and make cash flow projections.

Financial safeguarding: Bopp uses Open Banking tools to alert family, friends or financial professionals of unusual changes in spending that could be related to fraud against financially vulnerable people.

Automated tax payments: HMRC have introduced open banking-enabled tax payment options, and more than £2.4 billion in tax has been paid through this method since its introduction in March 2021.²³

¹⁹ S&P Global (Oct, 2020): "[UK aims to shape global fintech regulation as it bridges EU divorce](#)"

²⁰ Kalifa Review (2021): "[Kalifa Review of UK Fintech](#)". Recommendations to Government from the review include prioritising Smart Data

²¹ [Open Banking Apps](#)

²² NestEgg (July 2021): "[£100m of loan applications](#)"

²³ Open Banking (January 2022): "[UK open banking marks fourth year milestone with over 4 million users](#)"

10. Smart Data looks to enable this type of innovation in additional sectors, most immediately finance and communications. Some key anticipated new developments in services that could be facilitated by Smart Data include:

- Holistic personal Financial Management platforms which improve understanding and engagement with customers' financial situations.
- Helping users on irregular incomes, including the almost 3,000,000 full time self-employed workers,²⁴ plan their finances better by using Open Banking data alongside data from other markets.
- Bill splitting services for Houses in Multiple Occupation (HMO), making it easier to split utilities bills for those in an estimated 500,000 HMOs.²⁵
- Automatic switching services enabling consumers to set their preferences and automatically switch (e.g., utilities providers) if a better deal appears.
- Advanced comparison tools allowing consumers to find the best deal based on factors such as historical usage, location, or service quality.
- Bundle Management services to help consumers better understand their bundles and the possible alternatives.
- Improved and more efficient credit checks by enhancing credit information and alternative credit scoring methods (e.g., for those with a thin credit file), and identifying alternatives to high-cost credit.

Smart Data legislation

11. Government committed in its Smart Data Review consultation response²⁶ to introduce primary legislation creating order-making powers for new Smart Data schemes to be introduced with mandated industry participation.

12. The key barrier this legislation aims to overcome is the lack of incentives for data holders to share data with TPPs. This is set out in more detail in subsequent sections. Potential future sector schemes, such as Open Finance and Open Communications, will likely require primary legislation to enable government to mandate participation.

13. There are existing statutory powers under the Enterprise and Regulatory Reform Act 2013 (ERRA) which could be used to mandate that firms participate in sharing consumer data.²⁷ However we do not consider these powers enough to deliver the full benefits – and safeguards - we consider necessary. For example, existing powers do not include the sharing of product data, or sufficient safeguards to protect consumers and businesses.

²⁴ ONS (October 2021): [“LFS: Self-employed: Full-time: UK: All: Thousands: SA”](#)

²⁵ House of Commons (September 2019): [“Houses in Multiple Occupation \(HMOs\) England and Wales”](#)

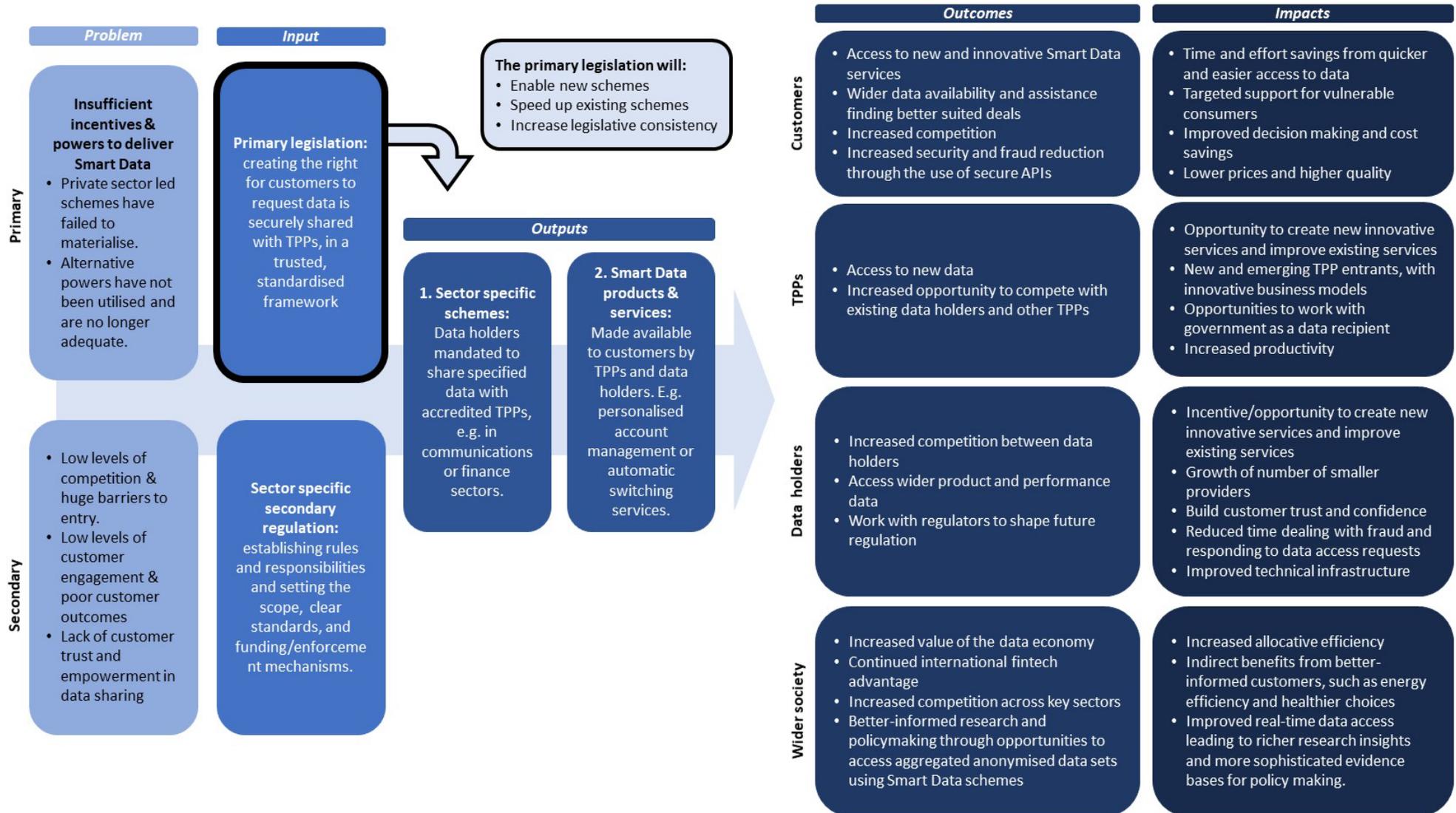
²⁶ BEIS (September 2020): [“Next Steps for Smart Data” Publication](#)

²⁷ Enterprise and Regulatory Reform Act 2013: [Sections 89-91](#)

14. The Smart Data powers could be used via sector specific secondary regulations made by the relevant Secretary of State or the Treasury, for example the Treasury would lead on Open Finance and DCMS Secretary of State for Open Communications.
15. There will be minimal direct costs or benefits from the introduction of primary legislation, however the impacts that will occur at secondary stage when a scheme is created cannot be accurately appraised at this stage due to several uncertainties.
16. Policy decisions for individual Smart Data schemes will not be made until the secondary legislation stage, and there are many uncertainties surrounding the scale of both costs and benefits. For example, it is currently unknown which, and how many data holders will be in scope of each scheme, and how many customers they have. The scope of data for each scheme is also unknown until further policy decisions are made, including details on how many products and services this data relates to. There is also uncertainty regarding the timing of any use of powers.
17. Evidence is limited, and the impacts of Open Banking are not wholly comparable to other schemes. It is the first of its kind, banking specific and also underpinned by European legislation and a CMA order, rather than primary legislation. International comparators are also limited in their applicability due to varying economic and regulatory context.
18. As the benefits and costs from Smart Data schemes will vary in magnitude and accrue across varying timescales and markets, it has not been possible to make an overall estimated annual net direct cost or benefit. Indicative analysis has been produced though to indicate the potential implications of speeding up the implementation of Smart Data schemes through the primary legislation.
19. In line with RPC case history guidance for primary legislation,²⁸ where a department is unable to provide a robust assessment for validation until the secondary legislation stage, for reasons explained above, this Impact Assessment focusses on providing an indicative appraisal of impacts that could arise from future schemes. This analysis builds on the experience of Open Banking (as the only live Smart Data scheme) and evidence from other sectors (finance, communications, energy, and pensions). Detailed sector specific assessments of costs and benefits will be required at the secondary stage.
20. There could be benefits and potential for a Smart Data scheme in any sector where a user is unable to easily use data held about themselves. There would be scope for the Smart Data powers to be used in wider sectors in future and they will not be narrowed for use in specific, named sectors.

²⁸ RPC (August 2019): "[RPC case histories – primary legislation IAs, August 2019](#)"

Theory of change



Problem under consideration

21. Multiple problems exist across markets which Smart Data could help to address. It may not be the single solution; however, it could help alleviate the following challenges.

Primary barrier to overcome: Insufficient incentives or powers to deliver Smart Data

22. This is the key focus of the Smart Data legislation. Private sector led schemes, with clear and widely adopted standards for customers to share data with third parties, have failed to materialise in key markets. This is likely due to insufficient incentives, where customers and new market entrants would benefit, but also as implementation costs would primarily fall on incumbent data holders.

23. UK GDPR created a right to data portability, allowing individuals to obtain and reuse their personal data for their own purposes across different services. This compels businesses, when requested by a customer, to provide personal data in an electronically readable format. However, this does not enable data sharing as envisaged for Smart Data:

- a. Requested data does not have to be shared immediately (only within 30 days) and secure data sharing (such as APIs)²⁹ are not required.
- b. Lack of standardised formats for both the data and how it is shared. This limits consumer and TPPs ability to make effective comparisons.
- c. Onus remains on individuals to access their data and work out what it means.

24. There are alternative legislative powers that could attempt to deliver improved data sharing, such as the powers set out in ERA 2013 or existing regulatory powers (such as licence conditions in energy markets). However, these alternatives have not been utilised and, as set out above, the ERA powers are no longer adequate to deliver robust Smart Data schemes.

Secondary barriers to overcome

Low levels of competition

25. Strong competition drives innovation, high quality, and low prices. Innovative services can help consumers and businesses make better informed decisions in increasingly complex markets. We have seen this emerge in Open Banking.³⁰ However, if the innovative third parties cannot access data, this limits innovation, and customers will miss out on new and improved products and services. This may also mean customers are not able to meaningfully participate in the market as a rational actor.

²⁹ Wong & Henderson (2018): "[How Portable is Portable? Exercising the GDPR's Right to Data Portability](#)", Jeni Tennison (December 2017): "[Data portability](#)", ODI (February 2018): "[Will GDPR and data portability support innovation?](#)", Jason Furman & Digital Competition Expert Panel (March 2019): "[Unlocking digital competition](#)"

³⁰ See 'Open Banking use cases' box above.

26. Ineffective competition was the motivation for the CMA's Retail Banking Market Investigation Order and the Government's price cap in retail energy.³¹ In digital markets there is increasing concern that access to data is a huge barrier to entry and this leads to concentrated benefits for the small number of businesses with data access, highlighted in CMA's Online platforms and digital advertising interim report. It is believed that relying on pure market mechanisms for increased data sharing/access is unlikely to lead to sufficient solutions for these problems. Government intervention is necessary to address this market failure, as discussed in the Furman Review.³²

Low levels of consumer engagement

27. Strong competition is dependent on customers being engaged and making informed decisions. Across markets, technology has enabled businesses to derive detailed insights on customer characteristics and behaviour – furthering an asymmetry of information where data holders can gain at the customers expense.³³

28. Without innovative services to help customers navigate complex markets, many customers will either spend a lot of time searching for deals or make uninformed decisions, paying more for a service or paying for a service that is poorly suited to their needs. This is demonstrated by outcomes in regulated markets:

- The **“loyalty penalty”**, where in 2020 28.6 million long-standing customers paid around £3.4 billion per year more than new customers across 5 essential markets.³⁴ Sector regulators have made progress to reduce this since the original super-complaint from Citizen's Advice in 2018. For example, the FCA and Ofcom's measures are expected to reduce the loyalty penalty by £630 million and £332 million respectively each year.³⁵ Smart Data could help reduce this further and the FCA have posed Open Finance as a potential long-term solution to the loyalty penalty and associated low consumer engagement³⁶ (e.g., consumers able to monitor offers available on the market and compare them against the services provided by their existing supplier).
- **Low switching rates.** Switching remains low across many essential markets, despite the evidenced benefits of switching.^{37 38} For example, over 20 million telecommunication customers are out of their initial

³¹ CMA (February 2017): [“Retail Banking Market Investigation Order 2017”](#) & BEIS (July 2019): [“Victory for consumers as cap on energy tariffs to become law”](#)

³² Jason Furman & Digital Competition Expert Panel (March 2019): [“Unlocking digital competition”](#)

³³ As explored further in Fingleton (December 2019): [“Can Open Energy replace price caps?”](#)

³⁴ Citizens Advice (September 2020): [“The loyalty penalty in essential markets: Two years since the super-complaint”](#) – Markets include: Mobile, Broadband, Home insurance, Cash savings, and Mortgages

³⁵ Citizens Advice (September 2020): [“The loyalty penalty in essential markets: Two years since the super-complaint”](#)

³⁶ FCA (December 2019): [“Call for Input: Open Finance”](#)

³⁷ CMA (December 2018): [“Response to super-complaint, Annex B”](#)

³⁸ BEIS (December 2021): [“BEIS Public Attitudes Tracker: Autumn 2021”](#)

contract period, and are paying more for their services than they need to.³⁹ Around 1 in 4 consumers have also found their ability to switch in an essential market to be impacted by the coronavirus lockdown.⁴⁰ Studies of low switching⁴¹ suggest that customers are uncertain or unaware of the savings they could make from switching and consider the process time-consuming. In the energy sector, consumers can save £264 per year, by switching to a cheaper deal, once their initial contract term ends.⁴²

- **Poor customer satisfaction**, 11 of the worst 15 consumer markets ranked by quality are regulated by an economic regulator;⁴³ energy and communications rank among the worst for consumer service.⁴⁴ Citizens Advice research⁴⁵ highlights that increased engagement lowers satisfaction even further as consumers realise the inadequacy of their choice.

29. Smart Data may also help increase consumer engagement in unregulated markets. Consumers may be stuck with subscription services they do not want due to the financial commitment not being clearly communicated upfront or barriers to unsubscribing. Complex terms and conditions can make it difficult for consumers to understand what financial commitments they enter into, when they become due and how they can change. Barriers to unsubscribing create a time cost for consumers, delaying their decision to unsubscribe up to a point where the endowment effect and default bias reduced their price-sensitivity. The exploitation of such behavioural biases limits consumer engagement and efficient allocation of consumer spending. This in turn dampens competition and thus reduces incentives for firms to become more efficient and innovative.⁴⁶

30. Many of the challenges associated with market engagement are exacerbated for vulnerable consumers. Vulnerability is often multi-layered, but the FCA define a vulnerable customer as someone who, due to their personal circumstances, is especially susceptible to harm, and are often significantly less able to represent their own interests. They may have different needs and have more behavioural biases that negatively impact their decision making. As of October 2020, 53% of all adults in the UK showed characteristics of vulnerability.⁴⁷

³⁹ Ofcom (December 2021): "[Are you in or out of contract?](#)"

⁴⁰ Citizens Advice (September 2020) : "[The loyalty penalty in essential markets: Two years since the super-complaint](#)"

⁴¹ Professor Amelia Fletcher for Which? (November 2016): "[The Role of Demand-Side Remedies in Driving Effective Competition](#)" Study, & Professor Catherine Waddams Price (2016): "[Empirical Evidence of Consumer Response in Regulated Markets](#)"

⁴² Which (2021): "[Six reasons to switch energy supplier](#)"

⁴³ European Commission (2016): "[Consumer Markets Scoreboard](#)"

⁴⁴ Institute of Customer Service, (2020): "[UK Customer Satisfaction Index](#)"

⁴⁵ Citizens Advice (November 2016): "[Citizens Advice "Against the Clock: Why more time isn't the answer for consumers"](#)"

⁴⁶ EU Commission (September 2017): "[Misleading free trials & subscription traps for consumers in the EU](#)"

⁴⁷ FCA (February 2021): "[Financial Lives survey](#)"

31. Research on vulnerable consumers highlights that a consumer's ability to make simple calculations is lower than assumed or accounted for. For example, low-income households were found to pay a 'poverty premium' of £478 more for essentials like energy, credit and insurance.⁴⁸ Consumers who are digitally excluded, such as the elderly, may also experience the 'poverty premium' due to their inability to access and engage with the market effectively. Citizens Advice also found that for those on the lowest incomes, the loyalty penalty could comprise 8% of their annual expenditure.⁴⁹

Customer trust and empowerment

32. If customers are better empowered to use and share their own data, the cost of making informed choices is lowered. This is achieved by enhancing the ease and effectiveness by which consumers can compare different products and services and receive new data-driven insights into their own preferences. Ofgem research into the use of price comparison websites found that consumers have to manually enter their energy usage data - many did not have the correct data or know where to find it, meaning some resorted to estimates while others stopped using the service entirely.⁵⁰

33. A lack of trust can be a significant barrier to data sharing, as highlighted in the National Data Strategy.⁵¹ A survey⁵² of transport organisations by Frontier Economics found that risks around transport data being breached and used maliciously was the main reason for not sharing data among industry respondents.⁵³ Lack of clarity on the data that will be shared and how it will be used could stop customers from using a service. In 2020 Ofcom found that consumers believe the most important factor when using a price comparison website (PCW) is that their personal information is protected, but with 35% of people surveyed disagreeing or unsure whether PCWs did protect their personal information. The majority of customers said they would not or were unsure whether they would share personal details with third-party services.⁵⁴

34. However, the use of apps and FinTech more generally is increasing. Consumer FinTech adoption amongst the digitally active population in the UK was 71% in 2019, significantly higher than 14% in 2015.⁵⁵ This ranked the UK above the average global FinTech adoption rate of 64%.

⁴⁸ Fair By Design: "Low income consumers pay a poverty premium equivalent to three months' worth of food"

⁴⁹ Citizens Advice (April 2021): "Finishing the job on the loyalty penalty: the mortgage and mobile handset markets"

⁵⁰ Ofgem (October 2020): "Midata Discovery and Proof of Concept User Research Findings"

⁵¹ DCMS (November 2021): "National Data Strategy Mission 1 Policy Framework: Unlocking the value of data across the economy"

⁵² Transport Systems Catapult (2017): "Increasing access to data across the economy – Annex A"

⁵³ Frontier Economics commissioned by DCMS (March 2021): "Increasing access to data across the economy"

⁵⁴ Ofcom (August 2020): "Open Communications 2020 survey"

⁵⁵ EY (August 2020): "EY Global FinTech Adoption Index 2019"

35. A survey conducted in North America⁵⁶ also found that consumers are far more likely to share personal data now that it is a necessary part of their interactions with organisations. The Financial Services sector was found as the joint most trusted sector in protecting privacy and data, (joint with healthcare).

Security

36. Without a secure way to share data, consumers currently use less secure alternatives such as “screen scraping”, where user credentials are shared to unaccredited third parties to log in and access data on the consumer’s behalf.⁵⁷

37. There are a number of issues with screen scraping, for example:

- Can lead to direct harm if sensitive consumer credentials are mishandled by third parties.
- Does not have relevant controls to monitor and revoke consent, meaning consumers may not be able to stop sharing data.
- Normalises sharing of credentials, enabling fraudulent practices such as “phishing”.⁵⁸
- May lead to a poor customer experience, if the screen scraping technology has to be constantly adapted to extract the relevant data once again.

Rationale for intervention

38. There is a failure of existing regulation to enable robust Smart Data schemes that would enable easy and secure data portability. This failure is a result of several regulatory gaps emerging between the UK GDPR & ERRA as detailed above – notably insufficient powers to mandate industry participation to share data.

39. This legislative gap has delayed progress for existing Smart Data schemes in the energy, communications, and finance markets and would delay the creation of future schemes in other markets. We believe a regulatory intervention extending beyond GDPR is required to overcome this. Respondents to the Smart Data Review consultation agreed that it is important to have a strong mechanism to incentivise industry to deliver Smart Data initiatives. Except for some communications providers, the proposal to legislate to mandate industry involvement in communications specifically was broadly supported by respondents.⁵⁹

40. As outlined above, there are currently several problems across markets leading to inefficient outcomes which Smart Data could help to address. Addressing this

⁵⁶ McKinsey & Company (April 2020): [“The consumer-data opportunity and the privacy imperative”](#)

⁵⁷ GoCardless (July 2017): [“Screen Scraping 100: Who, What, Where, When?”](#) Blog

⁵⁸ The fraudulent practice of sending emails purporting to be from reputable companies in order to induce individuals to reveal personal information, such as passwords and credit card numbers.

⁵⁹ BEIS (2020) – [Next steps for Smart Data](#)

legislative gap will in turn help address these problems and help alleviate wider market failures.

41. We have identified three key market failures that indicate a role for government to take action:

- a. **Information asymmetry**, where data holders know significantly more than customers and can make gains at the customer's expense. Smart Data aims to make this data more easily accessible and usable for customers.
- b. **Imperfect information**, where some parties have incomplete levels of information, e.g. where customers are missing information regarding what personal data businesses collect on them, and how they can access and use it themselves. Smart Data could help customers to more easily access and use their own information to make better informed decisions.
- c. **Network failure**, where there is insufficient cooperation between companies to create and utilise standards. While cooperation between firms can sometimes harm consumers (e.g., through collusion on price⁶⁰), cooperation can also be helpful. Smart Data schemes could ensure standards for sharing data consider interests beyond those of the firms that currently hold the data and facilitate cross-sector innovation.
- d. **Market power**, where competition is weak, for example due to disengaged customers or natural monopolies, firms can gain at the expense of customers (reduced consumer surplus) and society (deadweight loss). Enhanced customer rights and data empowerment can encourage entry and expansion both by TPPs and small service providers who may find it easier to acquire customers with new data services. It can improve competition by making consumers better informed when choosing between service providers and offerings. Service providers are also incentivised to compete for the more engaged customers.

42. For Smart Data schemes to be successful, incumbent data holders need to participate by providing relevant data in a secure, efficient and consistent manner. The UK Banking industry has been subject to many reviews, several concerning competition in retail banking. These reviews stem as far back as 2000.⁶¹ Yet the key impetus for Open Banking was a CMA order under Part 4 (market studies and market investigations) of the Enterprise Act 2002 on competition grounds requiring banks to participate and fund an implementation body. Similarly in the pensions market it has been necessary for DWP to create new primary powers to mandate industry participation. This highlights the inadequacy of existing regulatory options to deliver Smart Data schemes.

⁶⁰ We assess the risk of collusion to be low, as in regulated markets there are numerous customer types, tariffs and opportunities for providers to provide discounts in non-transparent ways. If further evidence suggests that collusion is an issue, Smart Data schemes can take steps to mitigate this (i.e., selecting which data fields can be shared or by imposing restrictions on data retention and usage).

⁶¹ CMA (August 2016): "[Retail banking market investigation](#)"

43. Smart Data has the potential to address insufficient data empowerment and trust issues, by establishing a standardised framework that enables customers to securely share their data with third parties. Government-coordinated standards have been found to facilitate growth and innovation more commonly than they inhibited it, provided the standard was well designed.⁶² Standards have led to significant economic growth in the UK, with an estimated 23% of all GDP growth since 2000 attributable to the impact of standards.⁶³

Policy objective

44. Our main policy objectives are:

- To enable new, and accelerate adoption of, existing Smart Data schemes.
- To create a common legislative framework for Smart Data schemes that will support consistency between schemes; and
- To encourage greater data sharing to deliver benefits for consumers, TPPs, data holders and society. In particular, improving poor consumer and business outcomes which are in part caused by insufficient consumer data empowerment.

45. Delivering these objectives will make possible a range of improvements for consumer and business which include cost, effort and time savings for customers using Smart Data products and services, lower prices and an increase in the quality of goods and services due to increased competition and innovation. Realising the objectives above will also encourage wider improvements including better security and fraud reduction, and increased trust in secure data sharing mechanisms.

46. The success of this legislation will be measured against the objectives set out in the '*Monitoring and Evaluation*' section of this IA. In the first instance, an indicator for success of this legislation will be whether the Smart Data powers are used to introduce new schemes. Further objectives of the primary legislation which should be evaluated include:

- Reduction in regulatory duplication
- Acceleration of schemes
- Cross-sector coordination

47. The monitoring and evaluation of Smart Data schemes themselves will be the responsibility of the departments or regulators who introduce secondary legislation for their scheme. Individual scheme outcomes and objectives can and should be measured with monitoring and evaluation plans in accompanying secondary legislation.

⁶² BIS (2010): "[Economics of standardisation](#)"

⁶³ BSI (2022): ""

48. DCMS have indicated an interest in using the powers. Other regulators have recently started to develop and consult on data sharing schemes.⁶⁴⁶⁵⁶⁶ We expect that this legislation will speed up the implementation of Smart Data schemes.
49. BEIS led primary powers provide a consistent regulatory framework from which Smart Data schemes can be developed, and therefore should provide a clear route for Smart Data scheme implementation, making the objectives set out above realistic for this legislation.
50. In order to further increase coordination and interoperability of Smart Data schemes, BEIS is undertaking work aimed at convening a BEIS-led Smart Data Council⁶⁷ with the intention that OGDs, industry, regulators and experts from across the ecosystem will be involved.
51. The Council will provide strategic coordination for existing and future Smart Data schemes by bringing together industry, consumer and government sector actors to provide cross-sectoral leadership, engage markets and enable knowledge sharing. A Smart Data Council will establish key cross-sector principles and will promote cross-sector use cases and delivery models for key groups such as vulnerable consumers.
52. The 2021 Smart Data Working Group Spring Report⁶⁸ highlighted the need for further effort to ensure better coordination and collaboration between schemes and set out four key principles that should inform the design of any arrangements to achieve this. Those principles were:
- Sectors working together: That arrangements should bring together all bodies leading sectoral delivery of Smart Data with industry and government to enable greater coordination, with a clear understanding of their respective activities and responsibilities.
 - Develop the Smart Data ecosystem: That coordination should provide opportunities to develop a body of knowledge and network to support the delivery of new Smart Data schemes to unlock innovation and growth.
 - Enable interoperability: That greater cross-sector collaboration should find practical ways to increase interoperability between sectors.
 - Inform the ongoing evolution of Smart Data: That arrangements should ensure that the ecosystem remains responsive to changing user

⁶⁴ Ofcom (July 2021): "[Statement: Update on Open Communications – Enabling people to share data with innovative services](#)"

⁶⁵ Ofcom (March 2021): "[Ofcom’s plan of work 2021/22](#)"

⁶⁶ FCA (March 2021): "[Open Finance – feedback statement](#)"

⁶⁷ BEIS (September 2020): "[Next Steps for Smart Data](#)" Publication

⁶⁸ BEIS (2021): "[Smart Data Working Group: Spring 2021 report](#)"

attitudes and technological developments in order to identify and consider emerging opportunities and challenges.

53. Stakeholders have broadly welcomed the creation of a Smart Data Council able to achieve these aims, and we are now designing and developing plans for the Council, involving OGDs and stakeholders from our existing Smart Data working group. The intention will be to establish in 2022 Terms of Reference for the Council and a first-year work plan. BEIS will provide the initial secretariat for the Council which will focus on identifying the key issues that schemes should be collaborating on and establishing the presence of the Council.

Options considered

Option 0: Do nothing

54. The do nothing option would be for BEIS to neither pursue, nor give support to, any further legislative changes regarding Smart Data. This would leave other departments to mandate industry involvement in Smart Data schemes by independently seeking primary legislation, developing alternatives to legislation, or attempting to support schemes without mandating participation.

55. Without legislative change, departments would either pursue Smart Data schemes on a voluntary basis or let the private sector independently develop standards. As a standard, industry led schemes should always be pursued in the first instance and government intervention beyond this can only be justified when a voluntary scheme has not materialised or is not achieving the desired aims for the scheme.

56. Whilst there have been attempts at voluntary schemes – such as the Data Transfer Project⁶⁹ and Open Transport⁷⁰ – limited progress has been made. Taking a voluntary approach risks further delay, as there is limited incentive for data holders to share data. As data holders are likely to bear much of the cost of Smart Data, there is a high risk that no schemes will emerge on a wide scale when voluntary. We are already seeing this delay across regulated sectors:

- The UK Banking industry has been subject to many reviews, several concerning competition in retail banking. These reviews stem as far back as 2000.⁷¹ Yet the key impetus for Open Banking and the subsequent innovation, was from a CMA order under Part 4 (market studies and market investigations) of the Enterprise Act 2002 on competition grounds requiring banks to participate and fund an implementation body. The CMA initiated their market investigation in 2014, before implementing their Order in 2017. The introduction of PSD2 in 2018 further enabled the use and growth of Open Banking.

⁶⁹ Data Transfer Project (July 2018): "[Data Transfer Project Whitepaper: Overview & Fundamentals](#)"

⁷⁰ Intelligent Transport (January 2020): "[Open Transport Initiative launches open standard for transport interoperability](#)"

⁷¹ CMA (August 2016): "[Retail banking market investigation](#)"

- Based on the experience of Open Banking, with adoption only accelerating following a CMA order and mandate, it is reasonable to assume the risk that Open Finance is unlikely to emerge naturally. Moreover, there is a lack of incentives within the private sector to voluntarily introduce schemes, as data holders are the main cost recipient, and no mechanism to hold data holders to account for delivery. A variety of industry stakeholders have informally raised similar concerns. Similarly, in the Open Finance consultation response, FCA said that a legislative framework would be needed for Open Finance to develop fully beyond the scope of the Part 4 order.⁷²
- The midata scheme in energy was first publicly discussed in November 2011 and is yet to be introduced.
- In response to the Smart Data Review consultation, in June 2019 several communications providers argued Open Communications did not require legislation, and instead schemes should be left for industry to develop.⁷³ One respondent said that although they see the benefits of introducing a Smart Data initiative in the communications sector, an intervention similar to the Open Banking order wouldn't deliver the right outcomes for telecoms consumers. It was argued that the low levels of competition and innovation, and high barriers of entry resulting in expensive retail banking products and poor service quality, were not issues identified in the communications sector; it would therefore be more effective for industry to develop a solution.
 - However 3 years on, no progress has been made. Without government intervention, DCMS believe that the telecoms industry is unlikely to take forward a voluntary scheme that affords consumers easy access to, and the sharing of, their data, at this time. Intervention would be required to deliver a cross-sector approach, with standardised data sets and sharing processes.
 - In the Open Communications consultation response, Ofcom agreed; Ofcom do not envisage that industry would introduce customer data mobility voluntarily.⁷⁴ The proposal to legislate to mandate industry involvement in communications specifically was broadly supported by respondents, with respondents agreeing that it is important to have a strong mechanism to incentivise industry to deliver Smart Data initiatives.
 - Feedback to the Smart Data Working Group Spring 2021 report⁷⁵ was also broadly supportive of legislation, with one respondent saying that creating a Smart Data eco-system requires central coordination backed by legislation or

⁷² FCA (March 2021): "[Open finance – feedback statement](#)"

⁷³ BEIS (September 2020): "[Next steps for Smart Data](#)"

⁷⁴ Ofcom (July 2021): "[Update on Open Communications: Enabling people to share data with innovative services](#)"

⁷⁵ BEIS (June 2021): "[Smart Data Working Group: Spring 2021 report](#)"

regulation to mandate participation, and that legislative support can co-ordinate activity and ensure successful implementation of underlying infrastructure to achieve the benefits expected.

57. For the reasons explained above, and as can be seen by the current delays across sectors, in particular energy and banking, voluntary schemes have not been progressing due to limited incentives, and these delays would therefore likely continue for voluntary schemes. Based on this, we assume that under this option schemes would not emerge in the next 10 years.⁷⁶ It may be that schemes do not emerge at all; however, we cannot presume this when the data and tech landscape may have significantly changed over the next decade.
58. A further risk is that schemes emerge without a clear, consistent framework, and lacking regulatory oversight. This can be seen in the US, with a market-led scheme where the use of standardised APIs is not mandatory. However, a US Treasury report has recommended the development of a regulatory approach to enable secure data sharing in the financial services.⁷⁷ A survey by the Financial Data Exchange found that between 65 to 85 million US consumers still use services in banking that rely on unregulated and less secure data sharing methods, including screen scraping and password sharing.⁷⁸
59. The Smart Data consultation response⁷⁹ discussed the risks of slow progress, duplication, and limited future interoperability that may be seen from a lack of consistency and co-ordination between schemes.

Option 1: Pursue non-legislative alternatives

60. If voluntary industry-led schemes were to emerge, there would still be a potential role for BEIS in communicating with and coordinating across schemes.
61. A non-legislative approach would involve BEIS providing some support to departments and sectors to independently develop data sharing initiatives and encourage greater collaboration. For example, BEIS could seek to coordinate and collaborate across schemes in different sectors, using forums such as the new Smart Data Council.⁸⁰
62. Doing so would create valuable opportunities for different sectors to come together and share expertise. However, this approach suffers from a number of drawbacks.
63. BEIS would be committing ongoing resources to delivering this option but with no clear mandate or timeline. Without the necessary incentives, there could be limited rationale for departments and sectors to prioritise their own resources and involvement.

⁷⁶ As discussed later in the Impact Assessment, this 10 year period has been used as a base scenario for the indicative analysis for expediting the implementation of Smart Data schemes.

⁷⁷ Deloitte: [“Open Banking around the world”](#)

⁷⁸ Financial Data Exchange (2020): [Consumer Access to Financial Records](#)

⁷⁹ BEIS (September 2020): [“Next steps for Smart Data: putting consumers in control of their data and enabling innovation – government response”](#)

⁸⁰ BEIS (September 2020): [“Next Steps for Smart Data”](#) Publication

64. There is evidence of many attempts at voluntary Smart Data schemes over the years – the Data Transfer Project,⁸¹ midata⁸² and Open Transport.⁸³ These attempts have faced a range of challenges and have so far not delivered data sharing. In banking, Smart Data developments were achieved through the CMA’s banking market study order which mandated a common framework and led to Open banking.
65. However, the risk that initiatives fail to overcome differences in stakeholder opinion and that they fragment would be high. As this would be a purely voluntary, non-legislative approach, sectoral regulators could face challenge on the basis of not having a clear mandate to coordinate or intervene.
66. In addition, if initiatives did develop, the lack of a common legislative approach would make coordinating a range of different voluntary sectoral initiatives enormously difficult. Each sector would look to use its current legislative and regulatory frameworks which vary from sector to sector. Sectors could decide to forgo any efficiency, innovation or functionality benefits from coordinating with other initiatives and instead focus on narrow, bespoke approaches.
67. Some sectoral schemes could still emerge from a non-legislative approach. However, the opportunity for cross-sectoral data sharing and use cases would be greatly diminished as there would be few incentives within individual sectors to prioritise and secure cross-sector interoperability.
68. Given the evidence from previous initiatives and the different sectoral dynamics involved, it is unlikely this option would achieve the stated aims. It would not realise the scale and spread of data sharing schemes envisaged, and at a speed that would benefit sectors and consumers, and not without large inefficiencies.

Option 2: Support sector regulators to independently pursue regulatory alternatives

69. This approach would improve on Option 1, by supporting sector regulators to independently use their existing powers to facilitate data sharing. This would require the use of existing regulatory powers where possible, for instance, licensing requirements. This approach would provide sectors with a clear starting point and an initial regulatory framework. However, it would depend on appropriate regulatory powers already existing and being applicable.
70. BEIS’ role would be to support departments and regulators, encouraging greater coordination, where possible, across schemes. This option would result in a smaller range of sectors able to implement Smart Data. In addition, the following issues could still occur:
- **Delays**, from pursuing multiple pieces of regulatory powers (despite being quicker than ‘doing nothing’).

⁸¹ Data Transfer Project (July 2018): “[Data Transfer Project Whitepaper: Overview & Fundamentals](#)”

⁸² Midata (November 2011): “[The midata vision of consumer empowerment](#)”

⁸³ Intelligent Transport (January 2020): “[Open Transport Initiative launches open standard for transport interoperability](#)”

- **Regulatory duplication**, especially for firms looking to share data across a number of sectors.
- **Poorer quality**, the pursuit of multiple regulatory approaches may lead to contradictions and limit the potential benefits from data portability.

Option 3: Introduction of primary legislation [Preferred] ⁸⁴

71. Our preferred option would be new “regulation-making powers” to enable Smart Data schemes to be introduced in any given sector. Key features would include:

- Create a right for customers to request that data holders securely share their data, along with product and performance data, with accredited TPPs
- Enabling secondary regulations to specify clear data standards including what data can be shared and how, who with, and how it can be used
- Funding mechanisms enabling the costs of schemes to be apportioned to industry players
- Range of enforcement mechanisms to ensure industry compliance

72. The powers could then be exercised through sector specific secondary regulations, led by the relevant department (for example DCMS may introduce regulations in the telecommunications markets, while HMT may introduce regulations in the financial services markets). This would be more efficient than the development of unique primary legislation for each sector and is likely to minimise the delays set out under ‘Do nothing’, while reducing the risk of regulatory duplication and lower quality schemes.

73. BEIS led primary powers provide a consistent regulatory framework from which schemes can be developed. This will encourage coordination and opportunities for interoperability. However, there remains significant flexibility in the design of schemes at the sector level. BEIS expects to play a coordination role across schemes, alongside the introduction of legislation, to help mitigate this. Secondary regulations will also be subject to the affirmative procedure.

74. A risk with this option is that the powers are not exercised. However, this is considered unlikely as DCMS have indicated their interest in using the powers, and both Ofcom⁸⁵⁸⁶ and the FCA’s consultations refer to the Smart Data legislation as an option for implementation, with the FCA going further and committing to support government to consider the timing, scope, and nature of legislation.⁸⁷

Option 4: Introduction of regulation-making powers, with expiry dates

75. A further option would be extending Option 3 to include a “sunset clause” to incentivise departments to exercise the new Smart Data powers, with a set

⁸⁴ Whether the ERRA powers are extended directly or whether new primary legislation is more appropriate will be subject to the discretion of the Parliamentary Business and Legislation Committee of the Cabinet.

⁸⁵ Ofcom (July 2021): “[Statement: Update on Open Communications – Enabling people to share data with innovative services](#)”

⁸⁶ Ofcom (March 2021): “[Ofcom’s plan of work 2021/22](#)”

⁸⁷ FCA (March 2021): “[Open Finance – feedback statement](#)”

expiry date for the powers. This could help mitigate the risk that, like the existing ERRA powers, they go unexercised.

76. There is a possibility that this option may lead to faster progress, helping accelerate Smart Data. However, it also carries increased risk that the powers will expire unexercised, putting further pressure on limited parliamentary time. Additionally, this time pressure could risk rushed policy development, leading to lower quality schemes.
77. Expiry of the powers may also limit the scope for future amendments or for this legislation to enable Smart Data schemes in markets beyond the immediately planned regulated sectors.
78. In practice an expiry date would need to be sufficiently long (several years) to enable schemes to properly develop. However, that could equally provide a perverse incentive for schemes to delay development either until successful schemes emerge that can be emulated or because of other perceived priorities. The result could be that the majority of schemes defer development until near any expiry date.

Preferred option

79. Option 3 is preferred as this enables faster delivery of and greater consistency between different schemes. It has the additional benefits of reducing the risk of delay, encourage greater coordination between schemes and reduce regulatory duplication, and is more efficient than the development of unique primary legislation for each sector.
80. Our preferred option will also enable new sector and cross-sector schemes beyond the immediately planned regulated sectors to evolve and develop using the same legislative framework and expanding experience of existing sectors.
81. The assessment of alternative options above further underscores the reasons why option 3 represents the best approach for achieving our intended policy aim:
 - The evidence is that the absence of any intervention (Option 0) we would not see voluntary initiatives naturally emerge and successfully deliver data mobility in the foreseeable future, even in sectors with clear incentives for improving data mobility for consumers and small businesses.
 - A dependence on voluntary, industry-led and non-legislative schemes (Option 1) would risk ongoing delays as sectors manage differing viewpoints and an unclear mandate. Experience from existing voluntary-based initiatives indicate that a clear risk that schemes fail to get off the ground and deliver any benefits.
 - Supporting regulators to use their existing regulatory powers to increase data sharing (Option 2) would see schemes emerge in those sectors where the existing regulatory framework could facilitate it. However, it is likely that this represents a much narrower range of sectors than hoped for. In addition, the opportunities for greater cross-sector data sharing would likely diminish as narrow, bespoke sectoral schemes emerge.

- Finally, providing legislative powers but with a clear expiry date (Option 4) would overcome several of the challenges faced by earlier options. It would benefit from a clear legislative mandate and support greater consistency between sectoral schemes. However, any expiry date could encourage delays in sectors either until successful schemes emerge that can be emulated or because of other competing priorities.

Analysis

82. In line with the preferred option, the subsequent analysis focusses on Option 3: Introduction of primary legislation.

Impacts at the primary legislation stage

83. The additional impacts of the primary legislation compared to the ‘do nothing’ scenario are expected to be:

- **Speeding up the delivery of Smart Data schemes:** bringing forward the benefits and the costs highlighted in the following sections.
- **Increasing legislative consistency:** increasing the overall benefit through more consistent schemes, with increased opportunity for interoperability and cross-sector innovation.
- **Enabling new schemes:** creating new benefits for customers, new opportunities for businesses to innovate but also new costs for industry to operationalise the schemes.

84. We expect minimal direct impacts to businesses from the primary legislation alone. While the primary legislation enables government to mandate the participation of data holders, the secondary legislation will make use of the power to mandate. There will be no immediate implications to the data holders until the secondary legislation utilises the powers. The primary legislation could potentially have a signalling impact if businesses respond in advance of secondary legislation. For example, by preparing for data sharing by upgrading technology, which would incur a cost to the business.

85. However, indirectly we expect that there will be impacts as a result of bringing forward the implementation and running of the schemes for additional time. When presenting the impacts below, we have aimed to isolate the *additional* impact of our proposed options. With this in mind we have assessed the relative impacts of the expedited implementation assumptions against a baseline implementation period.

86. As highlighted in the options section above, there have been attempts at voluntary Smart Data schemes – such as the Data Transfer Project,⁸⁸ midata⁸⁹ and Open Transport.⁹⁰ There have also been further Smart Data developments through the CMA’s banking market study order which has led to Open Banking.

⁸⁸ Data Transfer Project (July 2018): “[Data Transfer Project Whitepaper: Overview & Fundamentals](#)”

⁸⁹ [Midata \(November 2011\)](#)

⁹⁰ Intelligent Transport (January 2020): “[Open Transport Initiative launches open standard for transport interoperability](#)”

With the emergence of such schemes previously, we believe it would not be appropriate to assume that Smart Data projects would not happen in the absence of this primary legislation. Instead, as a base case scenario, we assume that Smart Data schemes would otherwise start to be implemented in 10 years. This assumption is discussed and varied in the 'Key assumptions and sensitivity for primary legislation impacts' section.

87. An appraisal period of 20 years is considered appropriate for this analysis.⁹¹ It is considered that the longer appraisal period would better incorporate the realisation of the costs and benefits in all of the various implementation scenarios. This choice of appraisal period, and its impact on the calculations, is discussed further in the 'Key assumptions and sensitivity for primary legislation impacts' section.

88. The telecommunications industry has been used to provide an indicative assessment of the impacts of accelerating the implementation of Smart Data schemes against the base case scenario of these being otherwise implemented in 10 years. This analysis is assumptions based and should be viewed as a high-level indicative estimate of the implications of bringing the implementation of such a Smart Data scheme forward as a result of the primary legislation.

89. Given the indicative nature of this assessment and the uncertainty regarding the number of Smart Data schemes which could be expedited, it was thought that this assessment would be inappropriate to include in the summary sheets of the Impact Assessment, or the associated summary calculations (BIT, EANDCB, etc).

Primary legislation costs

90. When Smart Data schemes are introduced via secondary regulations, there will be costs incurred to operationalise the schemes successfully, and to ensure adequate regulatory oversight. These costs will initially fall on the sector regulator, or any other administrator, who will be named in the secondary regulations as responsible for specific roles. Resources to cover the costs incurred by regulators and scheme administrators will not come from central government, and instead they will be recouped from industry via charges or using the sector regulators existing levy raising mechanisms.

91. The costs incurred from Smart Data can therefore be separated into two categories:

- Costs incurred by regulators and scheme administrators which are then recouped from industry via charges and levies (referred to in this IA as 'implementation costs').
- Costs incurred directly by data holders and TPPs to participate in the Smart Data scheme

⁹¹ This approach is also in line with [RPC guidance](#) as the relevant costs and benefits of the option extend beyond the standard 10-year appraisal period.

92. As discussed throughout this IA, due to several uncertainties it is not possible to isolate or predict the costs of potential future Smart Data schemes. The full impacts of future Smart Data schemes would be detailed and analysed when these specific schemes are introduced in secondary legislation.

93. However, to give an indication of the costs that could arise from further data sharing schemes, and the impacts that there could be as a result of expediting their implementation, the costs of Open Banking have been used as the basis for estimating the associated costs for other Smart Data schemes. We would expect the ‘implementation costs’ for future schemes to be lower than those incurred by Open Banking as a result of technical differences between schemes, and learnings from Open Banking.⁹²

94. BEIS conducted a small survey to collect more evidence on the costs of Open Banking, the first mandated data sharing scheme, and how these would relate to the costs of other schemes. Specifically, questions were asked in relation to the implementation and ongoing running costs associated with Open banking and whether the costs of open banking would be comparable to the costs of implementing other Smart Data schemes. This survey was run anonymously with members of the Open Banking directory. We received responses from 11 members.

95. To estimate the total open banking costs, we used primarily the information from those who self-identified as part of the CMA9,⁹³ collectively these 9 banking firms account for 90% of the total current accounts in the UK.⁹⁴ We then uprated the costs that were provided by these firms to the whole current account market to provide a total cost for open banking⁹⁵. These estimated costs are shown in the table below. Wider results from the survey have been included throughout this Impact Assessment to provide an indication of the costs for Smart Data schemes.

Table 1 – Estimated implementation and ongoing costs for Open Banking (2021 prices)

	Cost scenario (£millions)		
	Best estimate ⁹⁶	Low	High
Implementation	1,250	1,100	1,500

⁹² Ofcom (July 2021): “[Statement: Update on Open Communications: Enabling people to share data with innovative services](#)”

⁹³ [CMA9 definition](#)

⁹⁴ When the CMA first announced the Open Banking initiative back in August 2016, nine major banks were identified and required to create open-source Open Banking. These nine banks were chosen due to their large combined market share of over 90% of the UK’s consumer and small business bank accounts.

⁹⁵ The Open Banking Order also applies to a limited number of lending products (loans of up to £25k) for SMEs. For this analysis personal and business current account markets have been used to provide the best representation of Open Banking.

⁹⁶ The mean of the relevant responses was used to estimate the best estimate cost scenario.

Ongoing annual costs	109	100	118
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96. To estimate the costs for a Smart Data scheme in telecommunications, we used a ratio of the Gross Value-Added for Open Banking to the Gross Value Added for telecommunications.⁹⁷ Through comparing these sectors, the applicable costs for a Smart Data scheme in telecommunications are assumed to be 49% of that for Open Banking. The assumed telecommunication implementation and ongoing costs are below.

Table 2 – Assumed implementation and ongoing costs for telecommunications (2021 prices)

	Cost scenario (£millions)		
	Best estimate	Low	High
Implementation	610	537	732
Ongoing annual costs	53	49	58

97. The lower assumed costs for telecommunications compared to open banking is consistent with the survey respondents' feedback. The majority highlighted that the costs for a telecommunication Smart Data scheme would be less than those for Open Banking. Many in the sector, as included below, have highlighted that the costs for Open Communications are likely to be substantially less than for Open Banking.

98. An example is from OBIE's response to Ofcom's Open Communications consultation. They also said they believed that Open Communications would not require costly payment initiation standards or the real time information that was a necessity for Open Banking. In addition, both the OBIE and the ODI noted that costs could be minimised by utilising the OBIE's existing standards and assets rather than starting from scratch reducing the overall costs.⁹⁸

99. BT estimated that Open Communications would cost them between £40m-£100m,⁹⁹ representing 0.19-0.47% of BT Group revenue in 2021, £21.3bn.¹⁰⁰ Assuming this is attributable to the six biggest telecommunications providers in the UK,¹⁰¹ the total cost for the biggest telecommunications providers would be between £240m-£600m. Although this indicates that the likely Open Communications could be lower than our current estimates, as this is based on estimates from one firm, it is thought that the costs to the sector are better estimated through our current approach.

⁹⁷ ONS (May 2021): "[Regional gross value added \(balanced\) by industry: all ITL regions](#)" - Standard industrial classification (SIC) 64 was used as a proxy for open banking and SIC 61 was used as a proxy for telecommunications.

⁹⁸ Ofcom (July 2021): "[Statement: Update on Open Communications: Enabling people to share data with innovative services](#)"

⁹⁹ BT (February 2021) - [BT response to Open Communications consultation](#)

¹⁰⁰ BT (2021) – [BT Group Annual Report 2021](#)

¹⁰¹ [Statista](#) (May 2020) – Vodafone, Sky, 3, O2, BT, and EE

100. DCMS expects the direct cost to business of Open Communications to be lower than comparable estimates of Open Banking, for reasons as explained above including technical differences between the schemes. It is therefore considered that the indicative estimates, which are based on the Open Banking costs, represent a very high upper bound for the potential costs of Open Communications. The cost estimates included for Open Communications here purely represent indicative figures to highlight the implications of the primary legislation. Furthermore, a formal Government consultation on the scheme would be required to further consider the potential benefits of Open Communications, the design and scope of a scheme, and how to manage potential impacts on the market and ensure outcomes can be met without onerous costs to business. Full analysis of the specific scheme impacts would be provided if and when the relevant secondary legislation is presented.

101. As a direct result of primary legislation, it is assumed that the rollout of the Smart Data schemes, such as in the telecommunications sector, would be accelerated. Therefore, while the costs of the schemes would not be as a direct result of the legislation, the time preference impacts of bringing forward the costs should be attributed to the primary legislation.¹⁰² To estimate this impact, we have assessed the cost difference between accelerated implementation scenarios (of implementation from year 3 and implementation from year 5) and the base scenario that there would be some Smart Data schemes rolled out in some form from year 10 without legislation. This base case assumption is discussed previously in the opening of the impacts section.

Table 3 – Indicative non-discounted costs from the implementation of telecommunications Smart Data schemes (Best estimate cost scenario - 2021 prices)

Implementation scenarios	Non-discounted costs (£millions)	
	Total	Difference to the baseline scenario
Implementation starts in year 3	1,462	373
Implementation starts in year 5	1,355	266
Implementation starts in year 10 (baseline scenario)	1,089	-

102. For these calculations we have assumed that the implementation costs would be spread over two years and that following this implementation period the costs of running the scheme would then be incurred. In all scenarios the same costs have been used and the costs vary by the number of years that the Smart

¹⁰² Time preference is the concept where generally people prefer value now rather than later.

Data scheme is operational.¹⁰³ To fully assess the impact of bringing forward these costs the present value costs have been estimated.¹⁰⁴

Table 4 – Present value costs from the implementation of telecommunications Smart Data schemes (Best estimate cost scenario - 2021 prices)

Implementation scenarios	Present value costs (£millions)	
	Total	Difference to the baseline scenario
Implementation starts in year 3	1,141	413
Implementation starts in year 5	1,012	285
Implementation starts in year 10 (baseline scenario)	727	-

103. As can be seen from the table above, as expected, the present value cost differences, between the expedited implementation scenarios and the base scenario, are greater than the nominal estimates. The increase between the nominal and present value costs is greater the more the implementation period is expedited.

104. The respective estimates for the low and high-cost scenarios are presented below.

Table 5 – Present value costs from the implementation of telecommunications Smart Data schemes (Low and High Smart Data scheme cost scenarios - 2021 prices)¹⁰⁵

Implementation scenarios	Difference to the baseline, 10-year implementation, scenario (£millions)	
	Low	High
Implementation starts in year 3	375	462
Implementation starts in year 5	258	318

Primary legislation benefits

105. BEIS has also modelled the acceleration of benefits which could emerge because of Smart Data legislation. As a result of the Smart Data legislation, it is

¹⁰³ The same costs have been assumed for all scenarios. We have not made assumptions regarding how the costs may change over time through technological or other advances.

¹⁰⁴ In line with [The Green Book](#), 3.5% annual present value discount rate has been assumed.

¹⁰⁵ The Low and high-cost scenarios used for these scenarios are those included in Table 2 of this Impact Assessment.

assumed that there would now be additional years where the benefits of Smart Data are realised.

106. Greater productivity and competition benefits enabled by personal data mobility have been estimated to increase UK GDP by £30.5bn per annum.¹⁰⁶¹⁰⁷¹⁰⁸ This figure, as reported by Ctrl-Shift, has been quantified by aggregating the estimated value of data mobility for a wide range of sectors. For this analysis we have assumed that the benefits are spread evenly across the economy and therefore we have used this estimated annual GDP uplift as a basis for these benefit calculations.

107. To provide an indicative estimate of the potential benefits we have focussed on the potential benefits associated with introducing Smart Data schemes in the telecommunications sector. In 2019, this sector accounted for around 1.8% of the total general value added in the UK.¹⁰⁹ From this we can assume an annual benefit of £543m per annum, at full rollout of Smart Data schemes that facilitate greater personal data mobility.

108. We do not consider that these benefits will be fully realised immediately after implementation of the schemes, which as discussed in the section above is assumed to progress over 2 years. We have therefore made conservative estimates of the benefits growth following implementation based on the growth of Open Banking users.¹¹⁰ Up to year four the user percentages are based on actual user data. Following this we have assumed a flat rate of 2% of additional users are now utilising the Smart Data schemes up to year 10 where this is then assumed that the number of users will settle at this rate.¹¹¹ These usage figures are then applied to the GDP uplift estimates to estimate the benefits of Smart Data schemes in the telecommunications sector.

¹⁰⁶ Ctrl-Shift (2018): "Data mobility: The personal data portability growth opportunity for the UK economy", £27.8bn based on 2017 GDP estimates. The GDP estimates have been updated to 2021 prices. The economic estimates were developed using a GDP wide modelling approach, as such the accuracy of the impact on specific sectors is prone to significant discrepancies due to the differing use of and commercial and economic impact of personal data within each sector.

¹⁰⁷

This estimate was also sense checked against a McKinsey data mobility benefit figure. This highlighted that open financial data has the opportunity to impact GDP by 1-1.5% by 2030.

¹⁰⁸This figure, as reported by Ctrl-Shift, has been quantified by estimating the value of data mobility for a wide range of sectors as a proportion of GDP, adjusting this for the impact of that sector and applying the adjusted impact rate to economy-wide GDP. This quantification for data mobility is anchored in the financial services sector.

¹⁰⁹ ONS (11 June 2021): "Regional gross value added (balanced) by industry: all ITL regions". SIC07 code 61 was used for this purpose.

¹¹⁰ Open Banking (October 2021): "The Open Banking Impact Report"

¹¹¹ We have used these estimates to provide a conservative estimate of the associated benefits of Smart Data schemes. We would expect there to be exponential growth in later years following the implementation as more become aware of the process and opportunities that arise from the Smart Data schemes.

Table 6 – Indicative benefits realisation, following implementation, of Smart Data in telecommunications

Year following implementation	1	2	3	4	5	6	7	8	9	10
Percentage of users assumed to use the Smart Data scheme ¹¹²	1%	3%	6%	8.5%	10.5%	12.5%	14.5%	16.5%	18.5%	20.5%
Estimated Benefit (£millions)	5	16	33	46	57	68	79	90	100	111

109. As a direct result of primary legislation, it is assumed that the rollout of the Smart Data schemes, such as in telecommunications, would be accelerated. Therefore, we are not assuming that all the benefits above are as a direct result of the primary legislation. Instead, the difference between the total benefits between the accelerated implementation scenarios (of implementation from year 3 and implementation from year 5) and the base scenario that there would be some Smart Data schemes rolled out in some form from year 10 without legislation.

110. As the benefits would be realised at different time horizons it is important that the present value implications are considered. The table below highlights the significant indicative present value benefits that may be realised from expediting the implementation of telecommunication Smart Data schemes.

Table 7 – Present value benefits from the implementation of telecommunications Smart Data schemes

Implementation scenarios	Present value benefits (£millions)	
	Total	Difference to the baseline scenario
Implementation starts in year 3	808	527
Implementation starts in year 5	645	363
Implementation starts in year 10 (baseline scenario)	281	-

111. In addition to accelerated benefits from greater productivity and competition that could be achieved via legislation, the Smart Data consultation response¹¹³ discussed the risks of slow progress, duplication, and limited future interoperability that may be seen from a lack of consistency and co-ordination

¹¹² The user figures have been based on the percentage of digitally enabled consumers and SMEs using Open Banking services in the years following its implementation.

¹¹³ BEIS (September 2020): “[Next steps for Smart Data: putting consumers in control of their data and enabling innovation – government response](#)”

between schemes. This primary legislation will provide a framework by which other Smart Data schemes can operate providing consistency across the different schemes.

112. The Smart Data powers will also lay the framework for secure data sharing, based on clear standards. As discussed in the National Data Strategy (NDS) Mission One Policy Framework, it is important to develop and adopt good data standards to enable increased interoperability, innovation and data exchange. The cost of data sharing can be reduced through better data foundations such as supporting more efficient data sharing solutions as well as developing and using standards.¹¹⁴ Evidence suggests that standards have delivered large benefits to the UK economy.¹¹⁵

Net impacts of the primary legislation

113. This analysis has estimated the associated costs and benefits of expediting the implementation of a hypothetical Smart Data scheme in the telecommunications sector. When these impacts are analysed together there is an overall indicative net benefit from the policy as highlighted in the tables below (**PV costs minus PV benefits - negative values indicate overall benefits**). The overall benefits are reduced when the higher cost estimates are assumed.

Table 8 – Net present value impact from the expedited implementation of telecommunication Smart Data schemes from the baseline scenario (£millions)

Implementation scenarios	Cost scenario		
	Best estimate	Low	High
Implementation starts in year 3	-114	-152	-65
Implementation starts in year 5	-78	-105	-45

103. Based on the indicative analysis, over a 20-year appraisal period, if the implementation of a telecommunications Smart Data scheme is expedited to start in year 3 or 5, as opposed to a baseline scenario of implementation from year 10, the net benefits are expected to range between £65m - £152m and £45m - £105m respectively.

104. This indicative analysis highlights the scope of the primary legislation to realise the benefits of Smart Data schemes quicker than if these were to be taken forward on a voluntary basis. As a result, the overall benefits to society as a result will increase. It cannot be estimated how many Smart Data schemes could be expedited in this regard, but this analysis provides an overview of the expected implications from faster implementation of the Smart Data schemes

¹¹⁴ DCMS (November 2021): “[National Data Strategy Mission 1 Policy Framework: Unlocking the value of data across the economy](#)”

¹¹⁵ BSI (2021): “[BSI Standards Conference 2021 – Economic Impact of Standards](#)”

compared to a baseline assumption that these would otherwise be implemented in 10 years.

Key assumptions and sensitivity for primary legislation impacts

105. A series of assumptions have been used to provide an indicative quantification of the expected implications of this primary legislation. **It is important to note that detailed analysis of the impacts for specific Smart Data schemes will be produced when secondary legislation is introduced.** The main assumptions and their impact to the indicative estimates are discussed below.

Costs

106. The costs of Open Banking have been estimated and applied, in a scaled way, to the telecommunications sector. Through the BEIS led survey, most respondents highlighted that they believed the costs of a telecommunications Smart Data scheme would be lower than comparable estimates for Open Banking. Open Communications is unlikely to require payment initiation standards, or the same degree of dynamic real-time time data as required by Open Banking, as highlighted by OBIE¹¹⁶. Furthermore, the cost estimates used for Open Banking included IT upgrades which may have been implemented outside of the Open Banking scheme.

107. Over the appraisal period there may be efficiencies in the implementation or ongoing costs which mean that it could be comparatively cheaper to delay the implementation of Smart Data schemes. This could be because technological advances. However, we have not attempted to apply a cost reduction to account for this eventuality. It was believed that any such assumption would be arbitrary and could likely be misleading.

108. This analysis assumes that the respective Open Banking costs would be comparable to Smart Data schemes in other sectors, relative to the size of the markets themselves. For this analysis the comparable sector scales have been assumed through Gross Value Added (GVA) sector breakdowns. Another sector size indicator that was explored for this purpose was the number of businesses through the business population estimates.¹¹⁷ For the equivalent sectors, based on the total number of businesses or number of businesses with employees, for open banking and telecommunications this resulted in respective sector ratios of 1:0.39 or 1:0.63. As the 1:0.49 GVA ratio fell firmly within this range it was seen as appropriate. However, if other ratios were to be used there would be corresponding impacts to the estimated implementation and ongoing costs of the scheme.

109. To estimate the market sizes Standard Industrial Classification (SIC) codes needed to be relied upon. A general drawback of this approach is the consideration whether the applicable SIC sectors accurately represent the industries of interest for this analysis. Given the lack of further disaggregation of

¹¹⁶ Ofcom (August 2020): "Open Communications: Enabling people to share data with innovative services"

¹¹⁷ BEIS (October 2021): "Business population estimates 2021"

data by further subsectors this approach has been assumed as the most appropriate proxy to use.

110. The analysis also assumes that the costs are consistent through the years. There have been no estimates regarding any potential practical or technical solutions in later years than may result in the implementation and running costs of Smart Data schemes varying over the appraisal period. It was thought that any such assumption would lead to a level of specificity that would be inappropriate for these calculations.
111. The specific costs of the Smart Data schemes will be analysed in detail when secondary legislation is introduced. The aim for this analysis was to provide an indication of the impacts of bringing forward the implementation of Smart Data schemes.

Benefits

112. Benefits are assumed to be spread consistently across the economy by the scale of the various sectors. This assumes that the Smart Data benefits that could be realised in some sectors are not disproportionate to others. This assumption may not stand in reality as some sectors could utilise Smart Data schemes to a greater extent eliciting a greater benefit in those sectors. It should also be noted that the benefit profiles will vary by schemes, as an example it is not anticipated that Open Communications will lead to lower levels of market power in fixed and mobile broadband. This simplified assumption was used to provide an indicative benefit assessment for the telecommunications.
113. Data from the number of digitally enabled consumers and SMEs using open Banking services was used as a proxy to demonstrate the potential benefits realisation profile of other Smart Data schemes. While it is likely that Smart Data schemes will not realise their full benefits immediately after they have been implemented the profile of the benefits realisation for different schemes is uncertain. For this indicative analysis we have assumed conservatively a flat number of total user increase per year. A consistent benefits realisation rate has then been assumed from 10 years after implementation. We believe it is likely that the number of users for Smart Data schemes are likely to increase exponentially over the years due to additional products are developed and the understanding of the benefits of using Smart Data schemes are communicated. This change would have resulted in greater benefits.

Implementation periods

114. The counterfactual implementation period of Smart Data schemes is uncertain. This assumption has been based on the period of time when a retail banking solution was first considered to the time for a Smart Data scheme to be implemented (2000-2018) as well as the delays that have been observed through other voluntary Smart Data schemes. The other schemes are discussed in the options section. In particular, the midata scheme was originally proposed in 2011 but has not yet been introduced.
115. It may be that schemes do not emerge at all. However, we also recognise that there will likely be some quickening now that there is an operational Smart Data scheme (Open Banking). There would also be lessons learnt from this process and the technology landscape is likely to change in the coming years. Thus, we

have assumed that Smart Data schemes, in some form, would have been implemented from 10 years.

116. The implications of altering this assumption are demonstrated below. The later the base scenario the greater percentage of the costs and benefits would fall outside of the appraisal period (as an example in the 20-year implementation scenario there is only 1 year of implementation costs included and no benefit years). Therefore, if the base case implementation period is later there will likely be net costs included within the appraisal period.

117. The chosen implementation year scenario is key to the estimated NPV. The estimated NPV figures are determined by the interaction of the modelled cost and benefit profiles within the 20 year appraisal period. Modelled costs are weighted more towards the beginning of each cost-benefit profile due to the initial implementation costs (which are significantly larger than the assumed yearly ongoing costs). The modelled benefits are weighted more heavily towards later years as schemes operationalise and become more widely adopted. This means the net benefit to society will get smaller the later the implementation year is as the expected benefits are discounted more heavily than the expected costs within the 20 year time horizon.

118. With regards to the assumed implementation years, as a result of primary legislation, these periods were used to provide an indication of the impacts of speeding up the implementation of Smart Data schemes. These specific 3-year and 5-year implementation periods have not been based on underlying evidence but are to provide an indication of the effects of speeding up the implementation of the Smart Data schemes. If the implementation year was delayed the lower the overall NPV would be. In some scenarios the costs that fall within the appraisal period would not be counteracted by the additional years of benefit from the schemes.

Table 9 – Net present value differences (PV costs minus PV benefits) between alternative implementation scenarios, for the implementation of telecommunications Smart Data schemes (20-year appraisal period)

Best estimate cost scenario (£millions)		Assumed implementation year, with primary legislation			
		3	5	10	15
Baseline implementation year, without primary legislation	10	-114	-78	0	-
	15	-101	-66	12	0
	20	173	209	287	275

Appraisal period

119. The appraisal period is crucial to ensure that the realisation of the benefits in the different implementation periods is realised. As there is a long lead time for the benefits to accrue with a sizable implementation cost the longer the appraisal period the greater the overall benefits within the appraisal period. In the central case we assumed a 20-year appraisal period but as can be seen if this was altered the outcome of the analysis could lead to different conclusions.

Table 10 – Net present value differences (PV costs minus PV benefits) between alternative implementation scenarios, for the implementation of telecommunications Smart Data schemes (25-year appraisal period - £millions)

Best estimate cost scenario (£millions)		Assumed implementation year, with primary legislation			
		3	5	10	15
Baseline implementation year, without primary legislation	10	-114	-78	0	-
	15	-180	-144	-66	0
	20	-169	-134	-56	10

Table 11 – Net present value differences (PV costs minus PV benefits) between alternative implementation scenarios, for the implementation of telecommunications Smart Data schemes (15-year appraisal period - £millions)

Best estimate cost scenario (£millions)		Assumed implementation year, with primary legislation			
		3	5	10	15
Baseline implementation year, without primary legislation	10	-21	15	0	-
	15	306	341	326	0
	20	494	530	515	189 ¹¹⁸

Impacts at the secondary regulations stage

120. As stated above, we expect there will be minimal direct costs from the delivery of primary legislation alone. The following section sets out some of the potential costs and benefits that could emerge at the secondary stage, following the introduction of a sector scheme. This analysis builds on the experience of Open Banking (as the only live Smart Data scheme), and considers wider evidence from the finance, telecommunications, energy, and pension sectors.

121. The benefits and costs from Smart Data schemes will vary in magnitude and accrue across varying timescales, therefore it has not been possible to make an overall estimated annual net direct cost or benefit. The indicative evidence included in the following sections does however support the view that Smart Data benefits will outweigh the costs.

122. This analysis is not fully quantified given that:
- a. More detailed analysis will be required in future Impact Assessments alongside sector-specific secondary legislation.
 - b. Impacts will vary significantly across sectors, so until sector specific evidence has been collated and secondary Impact Assessments completed an overall assessment of the impact is not possible.

¹¹⁸ In this scenario only 1 year of implementation costs are included in the estimate with not years of benefit realisation.

123. As well as more detailed analysis at the secondary legislation stage, BEIS would expect additional research and further consultation for specific Smart Data schemes. This should include research into and further engagement with relevant stakeholders, including data holders, TPPs, consumer and business groups, social enterprises, and charities.

124. Initial consultations have already taken place for Open Finance and Open Communications, demonstrating the work already being done towards implementing Smart Data. DCMS will need to undertake a formal consultation on Open Communications before progressing any work in this area. .

Benefits summary

125. Multiple groups could see benefits from the introduction of Smart Data. These include customers (consumers and businesses), data holders, data recipients (TPPs), and wider society. In some cases, benefits are transfers from one economic agent to another. This is to be expected of Smart Data schemes as they aim to reallocate benefits from incumbent data holders to customers and smaller, new entrants to markets.

126. Further discussion and evidence on the benefits of Smart Data discussed in this section can be found in Annex A.

Customers – consumers and businesses	Data holders	Data recipients – third party providers
<ul style="list-style-type: none"> • Access to new and innovative services, within and across sectors • Save time and effort – e.g., quicker and easier to access data and understand what it means • Save money – e.g., help finding and switching to better suited deals • Lower prices and higher quality due to increased competition • Opportunities for targeted support for 	<ul style="list-style-type: none"> • Opportunity to create new innovative services and improve existing services • More effective growth and competition for smaller providers. • Reduced time and resources spent on dealing with fraudulent activity and responding to data access requests. • Opportunity to access wider product and performance data across the market e.g., can improve 	<ul style="list-style-type: none"> • Access to new data creating valuable new markets and reducing the cost of market access • Opportunity to create new innovative services and improve existing services • Opportunities to compete with existing data holders and other third-party providers • Opportunities for government as the data recipient – e.g., HMRC using Open Banking

<p>vulnerable consumers</p> <ul style="list-style-type: none"> Improved security and fraud reduction through the use of secure APIs 	<p>customer offer and market reach</p> <ul style="list-style-type: none"> Build customer trust and confidence through transparency Improve technical infrastructure for data sharing and for wider business use, helping create more revenue. For example, supply chain optimization. Opportunity to work collaboratively with regulators to shape future regulation 	<p>payment services for PAYE.</p> <ul style="list-style-type: none"> Potential for increased productivity for TPPs, and growth in the number of TPPs in the market.
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Benefits from Open Banking¹¹⁹

User benefits: Open Banking has a strong user uptake (as of February 2022 Open Banking had over 5 million regular consumer and business users¹²⁰ - It took 10 months to grow the number of users from 1 million to 2 million in 2020, whereas it has taken just four months to grow from 4 million to more than 5 million which demonstrates the increasing appetite for services to move, manage and make the most of customer's data and money. A TrueLayer and YouGov study found that 74% of merchants plan to offer instant bank payments via Open Banking¹²¹) and significant benefits can already be seen. In 2019 the Open Banking Implementation Entity (OBIE) estimated the potential annual benefit from Open Banking as £12bn for consumers, and £6bn for business users.¹²² 22% of customers using Open Banking savings apps are first time saving account users, which suggests a broadening of savings participation. 64% of customers also

¹¹⁹ Open Banking benefits have not been measured against a clear counterfactual and additional benefits cannot be isolated, although they are benefits from Open Banking enabled services.

¹²⁰ Open Banking (February 2022): "[Open banking passes the 5 million users milestone](#)"

¹²¹ Open Banking (July 2021): "[July 2021 Monthly Highlights](#)"

¹²² OBIE representatives (June 2019): "[Consumer Priorities for Open Banking](#)" - The consumer benefits are estimated based on the 'size of the prize' estimated in 6 areas including better current account deals, maximising interest on savings, currency savings, shopping around on household bills, personal finance manager and other non-quantified benefits. The business estimates takes the same approach and looks at 7 areas including Open Banking-enabled cloud accounting, personalised BCA comparison, optimising cashflow, domestic payments, international payments, card acquisition costs and other non-quantified benefits.

have reported that saving services helped them save more and build a financial cushion.¹²³

Vulnerable consumers: Open Banking already has several vulnerable consumer use cases. The Open Banking for Good initiative ran a £3 million challenge fund to design Open Banking apps enabling income smoothing, money management products, and streamlining of income and expenditure profiles.¹²⁴ “Overstretched consumers” could each save as much as £287 per year or 2.5% of their annual income from Open Banking-enabled services.¹²⁵ Improved financial decision-making represented 60-70% of successful API calls in August 2021.¹²⁶ In July 2021, the OBIE and techUK hosted a webinar discussion exploring financial inclusion, and how Open Banking can help with financial vulnerability.¹²⁷

Fintech opportunities: As of September 2021, there were 331 regulated providers with 114 of these with at least one live customer proposition.¹²⁸ There is evidence these applications have strong uptake, with 26.6 million Open Banking payments having been made by the end of 2021, an increase of more than 500% in 12 months.¹²⁹ The UK’s early adoption of Open Banking has been a contributing factor in making London a hub for tech and producing and attracting investment in ‘Fintech Unicorns’.¹³⁰ Investment into UK Fintech companies is second highest in the world, with \$4.57 billion of investment in 2020 and the UK ranks third in the world for its number of Fintech unicorns, reaching a total of 80 in 2020.¹³¹ Similar FinTech hubs are also emerging in other areas of the UK, such as in the West Midlands.¹³² In September 2021, regulated provider TrueLayer became one of the latest UK-based fintech to reach a valuation of over \$1 billion and earn ‘unicorn’ status, testament to growing industry demand for API banking.¹³³

Customers

127. As shown in the Smart Data Use Cases section, Smart Data schemes present the opportunity for the introduction of several new services. This includes examples such as viewing multiple bank accounts in a single app, account sweeping tools to maximize interest and automated tax payments.

¹²³ Open Banking (October 2021): “[The Open Banking Impact Report](#)”

¹²⁴ Nationwide - “[Nationwide partners with OpenWrks to help support member facing financial difficulty](#)”

¹²⁵ OBIE representatives (June 2019): “[Consumer Priorities for Open Banking](#)” - 18% of UK adults are considered to be “over-stretched”, and the term is described by “Consumers in this segment are in their family years, with an average age of 25-54 and typically employed. Over a third have mortgages but most rent. Consumers in this segment have an average of £9,000 in unsecured borrowing but have little or no financial buffer. They are regularly or always overdrawn, and many are juggling credit card debt as well. Making ends meet is challenging and most are dissatisfied with their circumstances.”

¹²⁶ Open Banking (October 2021): “[The Open Banking Impact Report](#)”

¹²⁷ techUK and the OBIE (July 2021): “[Financial inclusion and open banking with techUK and the OBIE](#)”

¹²⁸ Open Banking (September 2021): “[Open Banking Sep 2021 Highlights](#)”

¹²⁹ Open Banking (January 2022): “[UK open banking marks fourth year milestone with over 4 million users](#)”

¹³⁰ FinTech unicorns - new businesses who have obtained a valuation of \$1bn whilst remaining private

¹³¹ TechNation (2021): “[The future UK tech built](#)”

¹³² London Tech Week (March 2021): “[12 Clusters of Tech – West Midlands](#)”

¹³³ Open Banking (September 2021): “[Open Banking Sep 2021 Highlights](#)”

128. As a result, Smart Data tools and services can accrue several different benefits for customers. Some of the benefits include:

- a. **Time and effort savings**, from quicker and easier access to data. This will likely reduce search costs and time spent by both customers and advisors when signing up for accounts. Time and effort could be saved for example when using Smart Data tools to compare various services across different markets or receiving tailored advice. As a direct response to Covid-19, many SMEs saved time and money by using Open Banking for cloud accounting, cashflow forecasting and to access alternative credit providers, while consumers increasingly used Open banking to simplify and accelerate housing affordability checks, receive targeted debt advice etc.¹³⁴ Research for Open Communications found that one ‘key pain point’ that affected people and deterred engagement when searching for a deal was the time required, and overall the concept of Open Communications tackled a number of key pain points in the current ways of searching for a deal. The ease and speed of the process increased the appeal of Open Communications, and potential time savings were particularly important to participants who were engaged, those considered to be financially vulnerable, and SMEs.¹³⁵
- b. It is expected that through the sharing of their data, customers will be better placed for **informed decision making**. Smart Data would help make wider product and performance data more easily available, including other non-price factors that may not currently be available to customers and businesses without Smart Data.¹³⁶
- c. **Cost savings**, from assistance in finding and switching to better suited deals. Consumers who do not switch or recontract with their provider collectively pay an estimated £3.4 billion per year more than other customers across five essential markets, known as the ‘loyalty penalty’.¹³⁷
- d. As demonstrated by Open Banking, Smart Data can open up new opportunities to **support vulnerable consumers**. As of October 2020, 27.7 million people in the UK displayed one or more characteristics of vulnerability.¹³⁸ Consumer insights from Ofcom’s qualitative studies¹³⁹ showed that participants who suffered from mental health conditions felt that Open Communications would enable them to understand their needs and usage without needing to approach their provider.

¹³⁴ BEIS (May 2021): “[Smart Data Working Group](#)”

¹³⁵ Ofcom (August 2020): “[Open Communications qualitative research](#)”

¹³⁶ Ofcom (August 2020) “[Open Communications: Enabling people to share data with innovative services](#)”

¹³⁷ Citizens Advice (October 2020): “[The loyalty penalty in essential markets: Two years since the super-complaint](#)” Five markets considered = mobile, broadband, home insurance, cash savings and mortgages.

¹³⁸ FCA (February 2021): “[Financial Lives survey](#)”

¹³⁹ Ofcom (August 2020) “[Open Communications: Enabling people to share data with innovative services](#)”

- e. **Lower prices and higher quality**, due to increased competition.¹⁴⁰ Active consumers will act as a driver for increased innovation and competition in the market.¹⁴¹ Increased competition will drive direct benefit through a reduction of societal “deadweight loss”.
- f. **Increased security and fraud reduction**, through the use of standardised and secure APIs, enabling specific information to be shared securely and directly with TPPs at the customer’s request and with their informed consent. Smart Data may entirely displace screen scraping, a less secure data sharing method, which has largely been the case with Open Banking where the practice is planned to be outlawed.¹⁴² HMRC became the first Government department in the world to allow users to make Open Banking payments in 2021, demonstrating the level of security Smart Data provides.¹⁴³

Third Party Providers (TPPs)

129. Smart Data is expected to facilitate innovation by enabling new TPPs to enter the market, provide new and innovative services through access to new data, and drive productivity and growth in relevant sectors, competing with existing data holders and other TPPs. Open Banking demonstrates the real benefit to businesses (see ‘Benefits from Open Banking box for more detail), and the potential for growth in the number of TPPs entering the market.¹⁴⁴
130. As has been seen with HMRC using Open Banking payment options, there is also an increased opportunity for TPPs to broaden their customer reach to the government as a data recipient and help provide better quality data to inform Government policy.
131. Frontier Economics conducted analysis into the benefits of Smart Data to small and micro businesses and TPPs.¹⁴⁵ Under their central scenario, they estimated average productivity to be 7.8% higher for new TPPs using Smart Data than TPPs not using Smart Data, and 0.5% for existing TPPs than it would have been without Smart Data,¹⁴⁶ when looking at the potential benefits over 5 years across banking, finance, energy and communications.

¹⁴⁰ This is a transfer benefit from provider to customer.

¹⁴¹ As referenced in BIS (2012): “[Order making power for midata](#)”

¹⁴² Pinsent Masons (September 2019): “[PSD2: FCA gives temporary lifeline to screen scrapers](#)”

¹⁴³ Open Banking (January 2022): “[UK open banking marks fourth year milestone with over 4 million users](#)”

¹⁴⁴ Number of TPPs entering Open Banking has grown by 80% in just under 2 years, [134 TPPs \(2019\)](#) and [245 TPPs \(December 2020\)](#).

¹⁴⁵ BEIS commissioned research (July 2022): “[Frontier Economics: Estimating benefits of Smart Data to SMFs and TPPs](#)”

¹⁴⁶ Broadly, the benefits for TPPs were calculated by estimating the productivity gains in a given sector. The productivity gains for a given sector were calculated by multiplying the number of TPPs by the additional average productivity gain per TPP in a given sector. The analysis splits TPPs into new TPPs entering the market over the specified timeframe, and existing TPPs.

Data holders

132. The opportunity to innovate with Smart Data is not limited to third parties – many account service providers are also implementing new features using Open Banking. With access to wider product and performance data, data holders can have the opportunity to improve their customer offer and increase their market reach.
133. Smart Data could also help smaller providers grow and compete more effectively, as highlighted by Ofcom regarding Open Communications.¹⁴⁷ ¹⁴⁸ FCA have already reported that growing competition has seen a shift from large banks to small businesses, and that the share of personal and micro-business current accounts held by digital challengers rose between 2020 and 2021.¹⁴⁹ ¹⁵⁰ ¹⁵¹
134. Data holders could also see benefits including improved technical infrastructure for wider business use. Respondents to an anonymous survey ran by BEIS to the Open Banking Directory said that Open Banking has been a catalyst for organisations to become more API enabled, created a movement towards better UI and cloud infrastructure, and over 35% of respondents agreed that the changes they made to implement Open Banking also benefitted their wider organisation. More detail on this survey can be found in ‘Primary Legislation Costs’.
135. There is also an indirect benefit in the reduced amount of time and resources incumbent data holders spend preventing and dealing with fraudulent activity, with fraud costing businesses and individuals £137 billion each year in the UK.¹⁵¹ McKinsey estimated that the potential gains from open financial data from fraud cost savings could be as large as 0.7% of banking revenue by 2030.¹⁵² As well as security and fraud savings, data holders are able to build customer trust and confidence through transparency and the increased security from Smart Data.

Wider society

136. Benefits expected to accrue to society could include:
- a. **Value of the data economy**, a report by Ctrl-Shift on data mobility found that data mobility has the potential to increase GDP by £27.8b (£30.5b uprated to 2021 prices), not including the effects of increased

¹⁴⁷ This is a transfer benefit from existing larger providers to new entrants.

¹⁴⁸ Ofcom (August 2020) [“Open Communications: Enabling people to share data with innovative services”](#)

¹⁴⁹ This is a transfer benefit from existing larger providers to new entrants.

¹⁵⁰ FT Adviser (January 2022): [“FCA review finds competition is growing in retail banking”](#)

¹⁵¹ Crowe and the University of Portsmouth (June 2021): [“The financial cost of fraud 2021”](#)

¹⁵² McKinsey (June 2021): [“Financial data unbound: The value of open data for individuals and institutions”](#)

innovation.¹⁵³ More detail on this figure can be found in ‘Primary legislation benefits’.

- b. **International fintech advantage**, as Smart Data helps to establish the UK as a leader in data portability, FinTech and data technology. Securing the ongoing growth in the UK’s Fintech sector will require, amongst other things, sufficient access to data to develop innovative products. Creating a solid base for safe and responsible data sharing through Smart Data will support the scaling up of innovations, both within the FinTech sector and the economy more widely.¹⁵⁴
- c. **Increased competition**, as increased data sharing reduces the market power of incumbent data holders and provides the opportunity for new and innovative services.
- d. **Allocative efficiency**, as greater access to data will allow services to be provided closer to marginal costs.
- e. **Better-informed research and policymaking**, with universities and the public sector benefitting from the improved quality of data sets as a result of Smart Data. The creation of Open Banking has required banks to invest and upgrade their digital infrastructure to facilitate real-time data sharing, and a benefit of this has been to allow banks to engage in data sharing initiatives like the GOFCoE partnership.¹⁵⁵

Costs summary

137. Various groups could see costs from the introduction of Smart Data. These include regulators/other scheme administrators, data holders and data recipients (TPPs). Further discussion and evidence on the costs of Smart Data discussed in this section can be found in Annex B.

¹⁵³ Ctrl-Shift (2018): [“Data mobility: the personal data portability growth opportunity for the UK economy”](#)

¹⁵⁴ Kalifa Review (2021): [“Kalifa Review of UK Fintech”](#). Recommendations to Government from the review include prioritising Smart Data.

¹⁵⁵ This is the Global Open Finance Centre of Excellence created by the University of Edinburgh in collaboration with partners. Through the partnership, greater insights into the financial impact of disruptions, such as those that accompanied Covid-19, have been illuminated.

Regulators/Other scheme administrators	Data holders	Data recipients – third party providers
<ul style="list-style-type: none"> Regulation and enforcement of Smart Data schemes. <p>NOTE – Smart Data schemes are intended to be self-financing and should not require funding from existing government funds</p>	<ul style="list-style-type: none"> Initial implementation of Smart Data scheme. Familiarising employees with regulations. Upgrading or improving technical and system infrastructure Ongoing costs to comply with regulations. 	<ul style="list-style-type: none"> Familiarising employees with regulations. TPPs face the cost of accreditation, to be authorised to handle and use customer data. Setting up and running technical infrastructure e.g., APIs and customer interface. <p>NOTE – TPPs will not be mandated to participate in a Smart Data scheme, therefore any costs that they incur will be at their own discretion.</p>

Costs of Open Banking

The costs the OBIE have faced in Open Banking can be used to provide an indication of the costs potential future schemes could face in pursuing an implementation entity model.

OBIE’s annual report states that its net operating costs for 2020 was £32.7m. This was a 30% reduction in year-on-year net costs from 2019, when the OBIE’s net cost position was £47.6m suggesting the strong potential for diminishing ongoing costs to an implementation entity as participation grows.¹⁵⁶

OBIE’s total costs for 2020 was £36.1m,¹⁵⁷ which is funded by the CMA9 (the 9 largest banks mandated to participate in Open Banking). OBIE received £2.3m in fee income in 2020 from non-CMA9 participants, which is what non-CMA9 ecosystem participants pay primarily for membership and use OBIE services. This figure increased from £0.6m in 2019 due to a growth in the number of participants utilising open banking services.

For the PSD2 part of Open Banking, HMT estimated one-off accreditation/authorisation/registration application and compliance firm support costs for 175 relevant credentialled providers to be at £2.9m.¹⁵⁸

¹⁵⁶ Open Banking (2021): “[2020 Financial Report](#)”

¹⁵⁷ Open Banking (2021): “[2020 Financial Report](#)”

¹⁵⁸HM Treasury (February 2017): “[Implementation of the revised EU PSDII](#)” IA

Regulators/other scheme administrators

138. When Smart Data schemes are introduced via secondary regulations, there will be costs incurred to operationalise the schemes successfully, and to ensure adequate regulatory oversight. Although these costs will initially fall on the sector regulator, or any other administrator named in the secondary regulations, resources to cover the costs will be recouped from industry via charges or using the sector regulators existing levy raising mechanisms, not from central government.
139. The costs incurred from Smart Data can be separated into two categories:
- a. Costs incurred by regulators and scheme administrators which are then recouped from industry via charges and levies (referred to in this IA as 'implementation costs').
 - b. Costs incurred directly by data holders and TPPs to participate in the Smart Data scheme
140. As discussed in the Open Communications consultation response,¹⁵⁹ it is reasonable to expect the 'implementation costs' for future schemes to be lower than those incurred by Open Banking as a result of technical differences between schemes, and learnings from Open Banking. In addition, both OBIE and ODI noted that costs could also be minimised by utilising the OBIE's existing standards and assets rather than starting from scratch.
141. For the Open Energy scheme, Icebreaker One¹⁶⁰ who lead on the scheme have confirmed that it will take an estimated 3 years for memberships to reach the level where Open Energy can be self-funding, and it is estimated that £10 million over the next 3 years will be needed to bridge this gap and get the scheme up and running.¹⁶¹ This is significantly less than was spent setting up the Open Banking scheme.
142. BEIS' anonymous Open Banking survey asked the respondents whether they believed a scheme in various sectors would cost more, less or the same as Open Banking. Across all the sectors identified, the most popular answer by respondents was that those schemes would cost less than Open Banking, particularly for the telecommunications and mortgages markets. However, most respondents thought the insurance market would cost either more or the same as Open Banking. It was flagged that in markets generally less digitalisation compared to the banking market prior to Open Banking, this could potentially cost

¹⁵⁹ Ofcom (July 2021): "Statement: Update on Open Communications: Enabling people to share data with innovative services", OBIE and ODI response

¹⁶⁰ Icebreaker One

¹⁶¹ Icebreaker One (July 2022): "Open Energy 2022 Business Model"

cause them to cost more. More detail on this survey can be found in 'Primary Legislation Costs'.

Data holders

143. In addition to the 'implementation costs' which will be claimed back by the sector regulator and/or other scheme administrators, data holders will incur wider costs as a result of Smart Data schemes, including:

- a. **Familiarisation costs**, to understand and familiarise with Smart Data regulatory requirements. DWP's analysis in the IA¹⁶² accompanying the Pensions Dashboard primary legislation estimates total familiarisation costs for all 40,272 private sector schemes to be £2m in the first year of introduction, assuming two trustees per scheme to familiarise with new legislation. Results of BEIS' Open Banking survey highlights that these costs may vary between businesses, with one CMA9 firm providing an estimate for their total one-off familiarisation cost to be c.£5m, a medium firm estimating £500,000 and one micro firm estimating £5,000.
- b. **Technical and system costs**, to ensure customer data can be appropriately shared. This is expected to be particularly relevant to large incumbent data holders, with insufficient legacy IT infrastructure. Smaller data holders and new entrants with greater flexibility are expected to be better adapted to handling Smart Data. Typical technical and system costs could include database standardisation and consolidation, upgrades to IT infrastructure and the cost of developing or contracting a dedicated interface.¹⁶³
- c. **Ongoing costs**, to remain compliant with legislation over time. This could include but not limited to the maintenance and running of IT infrastructure, the costs of secure data transfers and database consolidation. The IA for the Pensions Dashboard primary legislation estimates the total ongoing costs to be £245 million - £1,480 million over 10 years.¹⁶⁴

144. This list is not exhaustive of the costs that might be incurred, for example the evidence from banking also shows there may be resource and customer engagement costs beyond this.

Third Party Providers (TPPs)

¹⁶² DWP (February 2019): "[Pensions Dashboards Impact Assessment](#)"

¹⁶³ The cost to develop or contract a dedicated interface would include the cost of singular APIs and providing an authentication service.

¹⁶⁴ DWP (February 2019): "[Pensions Dashboards Impact Assessment](#)"

145. TPPs will not be mandated to participate in a Smart Data scheme, therefore it is expected that TPPs will only choose to participate where they expect their individual benefits to exceed the costs.
146. If choosing to participate TPPs would face implementation and ongoing costs, such as but not limited to costs of familiarisation, accreditation, setting up and running technical infrastructure, and may also face the cost of a 'membership fee' as seen in Open Banking.
147. Technical Service Provider (TSP) response to BEIS' Open Banking survey showed that one micro-TSP had a total cost of £5,000 to implement Open Banking, and another small TSP said this cost was £200,000. This small firm also shared that their estimated annual ongoing costs were £50,000, while the micro-TSP estimated ongoing costs to be between £75,000 to £199,000. More detail on this survey can be found in 'Primary Legislation Costs'.
148. To access customer data, TPPs should be expected to meet specified requirements to ensure they are deemed appropriate to handle the data. This is referred to as 'accreditation'. The accreditation criteria and those that must comply with this will depend on sector specific schemes and will be set out in secondary regulations.
149. HM Treasury's analysis of PSD2¹⁶⁵ estimated that one-off accreditation/authorisation/registration application and compliance firm support for 175 relevant credentialed providers would cost £2.9m, with annual costs totalling £12.8m per year in their middle scenario. In response to BEIS' anonymous Open Banking survey, one small TSP also estimated that their one-off and ongoing costs to be authorised to participate in Open Banking each cost £500.

Small and Micro Business Assessment (SaMBA)

150. As defined by the better regulation framework guidance,¹⁶⁶ a small business is defined as those employing between 10 and 49 full-time equivalent (FTE) employees, and micro businesses are those employing between 1 and 9 employees. In this IA, the impacts on Small and Micro firms (SMFs) have been considered for telecommunications, one of the main Smart Data schemes currently in scope.
151. Using telecommunications to provide an example of the amount of SMFs that could be in scope of legislation, currently in the UK 97% of businesses in the

¹⁶⁵ HM Treasury (February 2017): "[Implementation of the revised EU PSDII](#)" IA

¹⁶⁶ RPC case histories (August 2019): "[Small and Micro Business Assessment \(SaMBA\)](#)"

telecommunications sector are defined as having below 49 employees.¹⁶⁷ Whether these sectors are in scope of this scheme will depend on the scope and thresholds set in secondary regulation.

152. The specific thresholds for mandatory participation will be decided for individual schemes to reflect differing market structures and will be set out in secondary regulations. We expect Smart Data to be mandatory for medium/large, incumbent data holders in scope of the regulations, with smaller data holders and TPPs choosing to participate on a voluntary basis. We would therefore expect SMFs to participate where they see the benefits to exceed the costs for their business.

153. If DCMS consult on an Open Communication schemes, they will seek input on businesses in scope for requirements, including whether smaller businesses should be exempt from requirements.

Cost savings

154. As discussed in TPP benefits, Frontier Economics conducted analysis into the benefits of Smart Data to small and micro businesses and TPPs.¹⁶⁸ A full methodology explanation and set of assumptions can be found in their research note.¹⁶⁹ This work indicates the potential benefits over 5 years across banking, finance, energy and communications. For TPPs, the estimates focus on potential productivity gains and growth in the number of TPPs. For SMF users of Smart Data, the estimates focus on potential cost savings.

155. Sensitivity tests were used to demonstrate the range of potential benefits, as there remains uncertainty about potential use cases and uptake of these services across the sectors.

Table 12 – Estimated cost savings for small and micro businesses from Smart Data schemes¹⁷⁰

Sector	Cost Savings (rounded to the nearest £10m, 2019 prices net present value for 5 years)
Banking	£ 29,450m

¹⁶⁷ ONS (October 2021): "[Business population estimates 2021](#)", using SIC code 61, table 6 registered employees only. Estimates of unregistered business numbers are less reliable for these divisions, so have not been included in these figures.

¹⁶⁸ BEIS commissioned research (July 2022): "[Frontier Economics: Estimating benefits of Smart Data to SMFs and TPPs](#)"

¹⁶⁹ BEIS commissioned research (July 2022): "[Frontier Economics: Estimating benefits of Smart Data to SMFs and TPPs](#)"

¹⁷⁰ The benefits for SMFs were calculated by multiplying the number of SMFs adopting services by the average cost saving per SMF in a given sector. The average cost savings per SMF was estimated from stakeholder interviews and literature reviews.

Finance	£	5,610m
Energy	£	70m
Communications	£	10m
Total	£	35,150m

156. The costs savings to SMFs in energy and communications are significantly lower than those in banking and finance. This takes into account the smaller number of SMF users for these services and their overall expenditure in communications and energy sectors is far lower than that in banking, and this is a component of the calculation used to assess relative size of the sectors. Use cases in energy and communications were restricted to those which resulted in increased switching to better tariffs for SMFs, which naturally have a lower value than the wider range of use cases in banking and finance (such as cloud accounting) – which were also estimated to provide much more value.

Costs

157. As previously discussed, BEIS conducted a survey to collect evidence on the costs of Open Banking. Focusing on the costs currently faced by organisations with less than 49 employees can provide an illustration of the costs faced by SMFs to participate in a mandated data sharing scheme. We found that the majority of small and micro firms faced implementation costs below £200,000. This ranged from £5,000 to £200,000. No SMFs estimated their total one-off implementation costs to be above £2m. The majority of SMFs estimated their annual ongoing costs to be below £75,000 per annum. From those who provided firm estimates, this ranged from £50,000 down to £10,000 per annum. No SMFs estimated ongoing costs to be above £200,000. More detail on this survey can be found in 'Primary Legislation Costs'.

Conclusion on costs and benefits

158. Due to incomplete, non-comparable data and a risk of double counting, it is not possible to directly compare the costs and benefits of future Smart Data schemes. Based on the evidence which has been set out, it is expected that Smart Data as a whole and specific Smart Data schemes will have a net benefit to society and these benefits will be accelerated and increased as a consequence of primary Smart Data legislation.

159. Open Banking was enabled through its own specific legal mechanism and will not be affected by this proposal, but it helps indicate the potential costs and benefits for future similar schemes. It is estimated that Open Banking has provided a net benefit to society. Despite Open Banking only being mandatory for the CMA9, many smaller challenger banks have voluntarily entered the Open Banking ecosystem, demonstrating the scale of benefits the scheme offers.

160. The main benefits of Smart Data will be realised by TPPs and the consumer and business users, a proportion of which will be transferred from businesses. For example, cost and time savings could result from increased customer engagement and better-informed decision making.
161. The costs of Smart Data are likely to fall on incumbent data holders in the market. Consequently, incumbent data holders have limited incentives to implement Smart Data, and they may also benefit from not sharing data and maintaining a competitive advantage. Nonetheless, some of the large implementation costs such as upgrading legacy IT infrastructure may have happened regardless of Smart Data and benefit other areas of their business.
162. While there is limited evidence on potential costs for SMFs and TPPs, the general consensus amongst stakeholders is that these groups will likely only enter the market if the benefits outweigh the costs.
163. Further consultations and Impact Assessments will be required alongside any sector specific secondary regulations to implement a Smart Data scheme. This will ensure the decision to take forward a specific scheme will be subject to more detailed consideration of both potential costs and benefits, along with wider considerations such as the impact on competition and innovation.

Key risks

164. The proposed preferred option assumes that BEIS' intervention will both speed up and increase the quality of Smart Data schemes. The primary risks associated with the introduction of new Smart Data powers are:
- a. The powers are not used to introduce schemes and no acceleration benefits are realised.
 - b. Inconsistent implementation and design of secondary regulations limits the potential for coordination, efficiencies, and interoperability
165. BEIS to date has engaged extensively with relevant stakeholders to mitigate these risks. For example, the Smart Data working group was established to bring together government departments and regulators with the aim to:
- a. support the development and delivery of Smart Data infrastructure and standards for the benefit of consumers, particularly vulnerable consumers
 - b. where appropriate encourage commonality or consistency of approach across Smart Data initiatives to enable interoperability and cross-sector innovations
 - c. improve efficiency by reducing duplication across Smart Data initiatives and re-using assets or resources from prior smart-data initiatives
166. BEIS will continue to drive cooperation and coordination across sectors in future. We intend to build on the work undertaken by the Smart Data Working Group, to develop an active ecosystem for Smart Data and support greater collaboration and coordination. As part of this we will look to identify a variety of

use cases, find ways to encourage greater cross-sector data sharing, and support wider sectors explore future Smart Data schemes.

167. To identify and mitigate against any risks or unintended consequences, any secondary regulations using the Smart Data powers will go through the affirmative procedure to ensure there is robust legislative scrutiny of the measures. As part of this, a proportionate Impact Assessment and relevant Post Implementation Review requirements would need to be produced.

168. The remainder of this section sets out further the risks associated with Smart Data schemes.

Reduced competition

169. There is risk that Smart Data may unintentionally harm competition. For example:

- a. **Too strenuous compliance obligations for data holders or third parties**, leading to increased barriers to entry and reduced competition. A consultation prior to secondary legislation will help minimise this risk.
- b. **Data mobility providing dominant incumbent data holders with more market power**. Emerging research¹⁷¹ suggests that increased data mobility could lead to customers becoming increasingly attracted to their existing, dominant providers who can utilise product/performance data from other providers to their advantage. However, Open Banking has been recognised by the CMA as a key step towards unlocking competition in retail banking and the evolution of the UK's fast-growing fintech sector.¹⁷² This is evidenced in the continued growth of the Open Banking ecosystem.¹⁷³ Smart Data schemes can minimise these effects (for example by providing exemptions for smaller providers) and existing competition law should mitigate the potential for excessive market power.
- c. **Damaged incentives to differentiate on privacy and security** if government mandate interoperability, which is a key source of competition in markets such as digital platforms.¹⁷⁴ Using the tiering of standards, for instance based on risk factors or the nature of the data involved, or specific exemptions could mitigate this by ensuring proportionate approaches are used.

¹⁷¹ BoE (December 2019): "[Platform competition and incumbency advantage under heterogeneous switching cost — exploring the impact of data portability](#)" paper, & Stratechery (May '18): "[The Bill Gates line](#)" article

¹⁷² CMA (November 2021): "[Update on Open Banking](#)"

¹⁷³ Number of TPPs entering Open Banking has grown by 80% in just under 2 years, [134 TPPs \(2019\)](#) and [245 TPPs \(December 2020\)](#).

¹⁷⁴ FT (October 2017): "[Privacy is a competitive advantage](#)" article, among other examples such as [Signal](#), [DuckDuckGo](#) etc.

- d. ***Lock-in to a suboptimal standard specified by government.*** This risks constraining industry from innovating beyond the standards which could improve Smart Data schemes. To minimise this risk, broad stakeholder engagement will be required when designing future schemes.

Reduced data holder incentives

170. If data holders have to share their collected data with TPPs, they may be less likely to recover the cost of data collection in the first place as any competitive advantage may be lost. This could present a free rider problem, where TPPs benefit from data collection without contributing to its provision. This risk is minimised by the fact that the majority of data in-scope of Smart Data is personal and product data, which will have been collected regardless of intervention. This risk is further minimised by the UK GDPR's data minimisation principle.

Poor security

171. Smart Data is expected to benefit consumer data security by creating strong standards and displacing less secure practices such as screen scraping. However, if security considerations behind the standards are weak, this could risk decreased security of customer data, including leakage of data.

172. In addition, increasing the use of digital services and enabling new intermediaries could present new opportunities for security risks as data is more readily transferred from one place to another. However, accreditation requirements, that would likely include security requirements, would help ensure that participants in the Smart Data ecosystem have adequate security and are trustworthy. Accreditation requirements are also expected to aid consumers, reducing the need for time spent understanding which agents are legitimate and which are not.

Lack of uptake of Smart Data schemes

173. The benefits of Smart Data would be reduced, yet the majority of costs would still be incurred, if there is a lack of uptake of Smart Data schemes. This may be because of a lack of trust in the ecosystem, a perception that there is no benefit of Smart Data enabled services, or a lack of awareness these services exist. Examining public attitudes towards potential Smart Data schemes, the Centre for Data Ethics and Innovation (CDEI) found that schemes will need to overcome initial consumer uncertainty about the direct benefits of data sharing and concerns about potential risks. Schemes will also need to win the trust of a full range of consumers, both those hesitant about using digital tools and those that are more digitally engaged. In addition, they found that consumers tend to stick with banking and telecommunications services providers that they know and have

used, but that having positive previous experience with Smart Data services increased consumers' support for these types of services.

174. However, over recent years we have seen exponential growth in Open Banking users. The pandemic has also been a catalyst for a step- change in digital skills for some participants, as internet access across the UK increased from 89% in March 2020 to 94% in March 2021.¹⁷⁵ Furthermore, 83% of internet users used online banking,¹⁷⁶ up from 51% in 2019,¹⁷⁷ much of which is likely facilitated by Open Banking and APIs.

Lack of demand for Smart Data services

175. Related to low user uptake is the assumption that Smart Data will enable products that customers will want to use and an ecosystem TPPs want to join.

176. Evidence from banking shows the wide-ranging innovations offered by TPPs and high user demand for these services. There are several other examples in the energy sector:

- a. The collective switching energy trial¹⁷⁸ featured a simplified switching process, similar to potential Smart Data use case, and found a “substantial impact on switching among customers who have not switched energy tariff for many years and can be delivered at scale”.
- b. Ofgem user research on midata¹⁷⁹ tested a functional prototype of a price comparison website. Participants were less concerned about sharing their energy data than their financial data but were generally comfortable with sharing data when it is clear what they are consenting to. A key takeaway from this research is that clear communication and messaging is required to drive adoption, particularly around consent.
- c. The midata¹⁸⁰ IA contains surveys showing demand for a better system for consumers to be informed by their own data. For example, 43% found the prospect of easy access to personal data extremely appealing, and a further 47% were found it appealing. Further research from Ofcom highlights that only 40% of surveyed internet users were

¹⁷⁵ Ofcom (April 2021): [“Adults' media use and attitudes report 2020/21”](#)

¹⁷⁶ Ofcom (April 2021): [“Adults' media use and attitudes report 2020/21”](#)

¹⁷⁷ Ofcom (May 2019): [“Online Nation 2019 report”](#)

¹⁷⁸ Ofgem (August 2018): [“Eight times as many people get a better deal in Ofgem’s collective switch trial”](#) Press Release

¹⁷⁹ Ofgem (October 2020): [“Midata Discovery and Proof of Concept User Research Findings”](#)

¹⁸⁰ Referenced in the BIS (2012): [“Order making power for midata”](#)

aware of all the ways in which online companies can collect their personal information.¹⁸¹

Changing prices for consumers

177. It is unclear how incumbent data holders will amend their pricing strategy in response to Smart Data schemes. Costs could potentially be passed onto customers, an uncertainty which Ofcom noted but stated they see no immediate competition concerns arising from Open Communications.¹⁸²

Misuse of customer data

178. As a result of increased data sharing, there is a potential for an increase in the misuse of customer data. This could include potential risks such as an increase in 'nuisance' calls and contact, or unwelcome selling-on data.

179. However, standards and security requirements would ensure that customer data can only be used for purposes as specifically requested by the consumer. There is a potential for agents to sell on customer data, but it would be at the customer's discretion whether they consent for their data to be used for these purposes.

Wider impacts

Public Sector Equalities Duty

180. The Department is required to comply with the public-sector equality duty (PSED) set out in the Equality Act 2010 ("the Act"). The PSED requires the Minister to have due regard to the need to advance equality of opportunity, hinder discrimination and foster good relations between those with and without certain protected characteristics. This due regard is taken to eliminate unlawful discrimination and to tackle prejudice and promote understanding. The characteristics that are protected by the Act are: age, disability, gender reassignment, marriage or civil partnership (in employment only), pregnancy and maternity, race, religion or belief, sex and sexual orientation.¹⁸³

181. Smart Data is intended to improve equality, however there is a risk that not all groups will benefit. For example, the less digitally engaged, such as the elderly, may not use Smart Data enabled services which would mean they do not fully realise the associated benefits.¹⁸⁴

¹⁸¹ Ofcom (April 2021): "Adults' media use and attitudes report 2020/21"

¹⁸² Ofcom (August 2020) "Open Communications: Enabling people to share data with innovative services"

¹⁸³ HM Government, Discrimination: your rights

¹⁸⁴ Fair By Design: "Low income consumers pay a poverty premium equivalent to three months' worth of food", being on the best energy prepayment tariff still could be £131 more expensive than the best online-only one.

182. Smart Data has a particular interest in vulnerable consumers, a category of consumers who find it difficult to engage in a given market. There is no universal definition of vulnerable consumers, as vulnerability can mean different things depending on the sector in question. The Financial Conduct Authority perceives vulnerability as a spectrum of risk; while all customers are at risk, certain characteristics or drivers increase this risk. These drivers include poor health, cognitive impairment, life events e.g., new caring responsibilities, and low ability, such as poor literacy.¹⁸⁵
183. There is moderate overlap between the broad definitions of vulnerability and protected characteristics. Some protected characteristics are harder to assess than others. Secondary data often doesn't include sexual orientation, pregnancy or religious belief as standard socio-demographic variables. Nonetheless, it is possible to draw inferences from the correlation between some protected characteristics and the drivers of vulnerability. For instance, if we consider low income as a driver of vulnerability – in the 3 years to March 2019, an average of 76% of Pakistani households were in the lowest 2 income quintiles, compared to 42% of White British households who were in the highest 2 income quintiles.¹⁸⁶
184. Research on vulnerable consumers highlights that consumers who are digitally excluded may experience a 'poverty premium' due to their inability to access and engage with the market effectively.¹⁸⁷ Over 2021, 5% of the population remained digitally excluded,¹⁸⁸ and as of October 2020, 53% of all adults in the UK showed characteristics of vulnerability.¹⁸⁹
185. However, Open Banking has already demonstrated the types of innovative services and tools that could be used to benefit vulnerable and currently excluded consumers, and the new opportunities it can create. From financial safeguarding and support to the simplification of everyday tasks, there is a number of current use cases targeted at identifying and supporting vulnerable consumers. For example, by combining Open Banking data with data from other sectors a person in financial difficulty could share their utilities or wider financial data to improve the effectiveness of bill management and payment scheduling apps currently operational under Open Banking.
186. OBIE and techUK hosted a webinar discussion in 2021 exploring financial inclusion.¹⁹⁰ A panel of experts in financial inclusion and vulnerability discussed areas that Open Banking can help with, including financial vulnerability, access to

¹⁸⁵ FCA (July 2021): "[Guidance for firms on the fair treatment of vulnerable customers](#)"

¹⁸⁶ [Income distribution, September 2020](#)

¹⁸⁷ Fair By Design: "[Low income consumers pay a poverty premium equivalent to three months' worth of food](#)"

¹⁸⁸ Lloyds Bank (2021): "[UK Consumer Digital Index 2021](#)"

¹⁸⁹ FCA (February 2021): "[Financial Lives survey](#)"

¹⁹⁰ techUK and the OBIE (July 2021): "[Financial inclusion and open banking with techUK and the OBIE](#)"

services and support for the ‘unbanked’ and reducing the poverty premium. Ofcom’s qualitative studies¹⁹¹ also showed that participants who suffered from mental health conditions felt that Open Communications would enable them to understand their needs and usage without needing to approach their provider.

187. As well as benefitting from services and tools aiming to improve financial decision-making and increased access to advice and guidance, increased competition as a result of Smart Data could also lead to better prices for unengaged as well as engaged consumers.¹⁹²
188. In 2020, 85% of all UK adults used a smartphone, and a smartphone was reported to be the device most likely used to go online with 85% of internet users using a smartphone for this purpose.¹⁹³ Smartphone penetration and usage is likely to increase further, providing an ever-growing opportunity for more people to be included in Smart Data schemes.
189. Several actions will be taken to reduce the risk of worsening inequalities in vulnerable consumer groups. Broadly, BEIS will coordinate across sectors to identify opportunities that ensure Smart Data is utilised by unengaged and less engaged consumers. In parallel, departments looking to develop secondary Smart Data legislation will be responsible for identifying the impact of Smart Data on consumers, particularly vulnerable consumers. Measures should include:
- a. Departments should conduct demographic analysis to better understand different groups, levels of engagement and those most at risk. A good example of this is the midata QR codes proposal analysis for energy bills.¹⁹⁴ The BIS QR code working group concluded that QR codes on energy bills may be a useful channel to improve engagement; with widespread ownership of smartphones, and many smartphones being capable of reading QR codes. The QR codes could direct the user to a tariff comparison page.
 - b. BEIS and relevant departments should consider interventions targeted at vulnerable consumers to help encourage innovative services aimed at providing tangible solutions to meet consumers’ needs. There are also sector specific challenge funds such as Open Banking for Good (OB4G);¹⁹⁵ OB4G aimed to help create and scale Open Banking apps and online services to benefit customers on low income or otherwise

¹⁹¹ Ofcom (August 2020) “[Open Communications: Enabling people to share data with innovative services](#)”

¹⁹² For example, it may be the case that “the profits that businesses make on consumers later in their tenure are competed away through fierce competition to win the customer in the first place (the ‘waterbed effect’)” from [CMA response to super complaint](#).

¹⁹³ Ofcom (April 2021): “[Adults' media use and attitudes report 2020/21](#)”

¹⁹⁴ BIS (January 2014): “[QR code use in energy sector: midata programme study](#)”

¹⁹⁵ Nationwide - “[Nationwide partners with OpenWrks to help support member facing financial difficulty](#)”

financially vulnerable. A report from Bristol University suggests OB4G largely met its expectations and enabled innovations that tackled real issues for people who were ‘financially squeezed’.¹⁹⁶

- c. All relevant departments should aim to conduct additional research into vulnerable and digitally excluded consumers, and how to improve equality and avoid disempowering these groups through the increased use of Smart Data schemes, both within and across the sectors. This should build off the important work of regulators, for example the UK Regulator Network’s research with Revealing Reality into the attitudes of vulnerable consumers to data sharing.¹⁹⁷

Trade impacts

190. Being the global lead in Open Banking, the UK has an opportunity to extend this lead to other Smart Data sectors, where UK businesses with experience in Smart Data may have the ability to expand internationally more easily and strengthening the UK’s global trade.
191. By furthering the UK’s leading approach towards data portability with initiatives such as Smart Data, we can expect to see further opportunity to extend the UK’s tech leadership, and by providing an opportunity for international firms to expand into the UK, attracting further foreign direct investment while increasing competition for domestic firms with knock-on benefits for customers.
192. The Kalifa Review of UK FinTech¹⁹⁸ recommends delivering a strong regulatory strategy and international action plan to build a leading position for UK FinTech, which Smart Data can help enable.

Monitoring and Evaluation

Primary legislation

193. DCMS is planning and will be leading the bill-wide post legislative scrutiny, including monitoring and Evaluation. In line with best practice and to ensure the legislation is having the envisaged impact, DCMS have committed to conduct a proportionate post implementation review within 5 years of implementation. Specifically, to monitor and evaluate the impact of the Smart Data primary legislation, an evaluation which is based on the underlying theory of change for the measure will be undertaken.

¹⁹⁶ Collard and Evans, University of Bristol (March 2021): [“Open Banking for Good: Making a difference?”](#)

¹⁹⁷ UKRN (November 2020): [“How can we help you?”](#)

¹⁹⁸ Kalifa Review (2021): [“Kalifa Review of UK Fintech”](#). Recommendations to Government from the review include prioritising Smart Data

194. The impact of the legislation will be assessed against the key objectives of the legislation:

- a. **Reduction in regulatory duplication:** This should be measured by the number of Smart Data schemes using the primary legislation
- b. **Acceleration of schemes:** The length of time taken for BEIS to develop primary legislation could be taken as a proxy for the amount of time saved for relevant sectors, assuming sectors would have independently sought primary legislation otherwise.
- c. **Cross-sector coordination:** This could be measured by the number of TPPs operating successfully across multiple sectors, or the marginal costs to TPPs entering a second scheme, compared to the counterfactual.

195. Across all these objectives, and in evaluating the quality of Smart Data schemes, a key challenge is establishing a robust counterfactual for what would have occurred in the absence of primary legislation. There is no plausible way to separate what extent of the scheme's outcomes are a result of the coordinating work of Smart Data and what are the results of the scheme itself.

196. The counterfactual will vary by scheme and should reflect the sector specific circumstances. While Open Banking could be used as an example, it is not underpinned by this primary legislation, and it is expected that learnings from Open Banking can help accelerate the implementation of other Smart Data schemes. Examples of schemes where the counterfactual is likely no scheme emerging:

- a. **Open Finance** - In the Open Finance consultation response,¹⁹⁹ FCA said that a legislative framework would be needed for Open Finance to develop fully. In this consultation response, respondents also pointed out that coverage for existing initiatives for Open Finance-type arrangements will inevitably be partial, limiting the potential benefits.
- b. **Open Communications** – Without government intervention, DCMS do not think industry would take forward the development of a voluntary scheme in the foreseeable future, that affords consumers easy access to, and the sharing of their data. The scale and persistence of consumer issues in telecoms, such as low levels of switching due to market complexity, and subsequent loyalty penalties, are unlikely to be addressed by a voluntary industry scheme. Intervention is required to help address some of this complexity by making it easier for consumers to understand and access information on their usage, ensure that relevant data sets and types are in open formats, and to standards which would allow effective use by third-party providers. In the Open Communications consultation response, Ofcom said that they

¹⁹⁹ FCA (March 2021): "[Open finance – feedback statement](#)"

did not envisage that industry would introduce customer data mobility voluntarily.²⁰⁰

197. Additionally, Smart Data forms a critical part of the government's National Data Strategy, Mission One: Unlocking the value of data across the economy. A monitoring and evaluation framework has been published to evaluate the effectiveness of the five missions in delivering their objectives. As part of this work, DCMS has also undertaken a call for evidence to identify high-level 'indicators' to assess opportunities and track success, including indicators for data use in organisations and productivity.²⁰¹ Whether the Smart Data powers are used to introduce new schemes will be an indicator of the success of this legislation.

198. Further information on the monitoring and evaluation plans for the bill will be included in the bill-wide Impact Assessment.

Secondary regulations

199. The day-to-day impact of the legislation lies in the regulations made by the powers in secondary legislation, rather than the powers themselves. Individual scheme outcomes can and should be measured with monitoring and evaluation plans in accompanying secondary legislation. Each Smart Data scheme should have plans for a full Post Implementation Review, in line with HMT Green Book, HMT Magenta Book and The Better Regulation Framework guidance. This will include process evaluations, to check how the schemes are being implemented to improve the implementation of future reforms, and impact evaluations, to assess the scale of effects caused by the planned changes, compared to the initial ambition of the measure.

200. A 5-year review and publication of a report are already required by law (unless appropriate not to do so) and this is undertaken where the secondary regulations have a +/- £5million (net annualised) regulatory effect on business.²⁰² This would consider the objectives of the legislation, an assessment of whether those objectives remain appropriate and, if they do, an assessment of the extent to which they could be achieved in another way which involves less onerous regulatory provision.

201. It would not be appropriate to evaluate the impact of the Smart Data schemes against the indicative estimates that have been included in this Impact Assessment. Rather the impacts analysed through the implementation of the secondary legislation should be used for the purpose of monitoring and evaluation.

²⁰⁰ Ofcom (July 2021): "Update on Open Communications: Enabling people to share data with innovative services"

²⁰¹ DCMS (September 2021): "National Data Strategy monitoring and evaluation framework"

²⁰² Sections 28 to 32 (secondary legislation: duty to review) of the Small Business, Enterprise and Employment Act 2015 ("SBEEA")

202. Given the nature of the Smart Data schemes, particular attention should be given to the potential differences in impacts for vulnerable consumers and those with protected characteristics.
203. To ensure cohesion and appropriate alignment with the sector-specific monitoring and evaluation work, BEIS will aim to provide a coordinating function. However, this is dependant, on resourcing and business planning outcomes.
204. There are existing monitoring and evaluation plans for Open Banking which future Smart Data schemes could look to as an exemplar. The OBIE have a Customer Evaluation Framework to monitor and evaluate live Open Banking-enabled products and services, for all regulated TPPs. The OBIE monitoring function undertook a detailed and evidence-based review of individual CMA 9 API performances throughout 2020. Where performance was not sufficiently robust, individual improvement plans were designed and actioned. As a result, OBIE “saw a significant uplift in conformance, availability, and performance” during this time.²⁰³
205. Additionally, Smart Data schemes should look to complement and enhance the monitoring and evaluation work being undertaken as part of the NDS monitoring and evaluation framework.

²⁰³ Open Banking (2020): “[Annual Report 2020](#)”

Annex A – Further Smart Data benefits information

Summary

206. As discussed in the secondary regulation benefits section of this Impact Assessment, multiple groups could see benefits from the introduction of Smart Data and this annex provides additional detail on these benefits.

Detail on benefits

207. These benefits have not been collated as they may double count; across most of these benefits it is not possible to estimate an accurate counterfactual in the absence of Smart Data as the design and progress of schemes across multiple sectors is uncertain. For example, it is uncertain how many, and which, sectors would implement Smart Data schemes in the absence of Smart Data.

Customer benefits

Time savings – additional information

208. Smart Data schemes can help customers reduce the time spent signing up for accounts, making service comparisons or receiving tailored advice. This will likely reduce search costs and time spent by both customers and advisors.²⁰⁴ To provide an indication of the time savings by using services detailed in ‘Customer benefits – Time and effort savings’, if we assume that 20 minutes²⁰⁵ of time can be saved for the 5 million current Open Banking users²⁰⁶ and their time is valued between £4.54²⁰⁷ and £13 an hour,²⁰⁸ this would be between a £7.6 million and £21.7 million per annum benefit.

209. Using an alternative method, and assuming the UK rate of consumer FinTech adoption is a suitable proxy²⁰⁹ for the rate of Smart Data adoption and applying this to the 49 million internet users in the UK,²¹⁰ an approximate £52 - £151 million of benefit could be realised for customers saving 20 minutes²¹¹ a year from

²⁰⁴ DWP (October 2019): “[Pension Schemes Bill 2019 Impact Assessment](#)”

²⁰⁵ There is no evidential basis behind this figure. It has been used to provide an indication of the amount of time and the benefits of saving time using Smart Data tools and services, such as comparison or advice tools. More detail on Open Banking use cases can be found in ‘Open Banking use cases’ box.

²⁰⁶ Open Banking (February 2022): “[Open banking passes the 5 million users milestone](#)”

²⁰⁷ TAG data book - [hour of leisure time assessed at £4.54 \(table A 1.3.1: Values of Non-Working Time by Trip Purpose\)](#)

²⁰⁸ Assuming £13 hourly average compensation as used by the FCA in “[Pension reforms – proposed changes to our rules and guidance](#)”

²⁰⁹ EY (August 2020): “[EY Global FinTech Adoption Index 2019](#)”

²¹⁰ ONS (April 2021): “[Internet users](#)”, persons aged 16 and over, used in the last 3 months. Note, as this figure includes persons 16 and over, could expect a smaller proportion of 16 – 18-year-olds to use Smart Data services.

²¹¹ There is no evidence behind this figure, it has instead been used to provide an indication of the amount of time and the benefits of saving time using Smart Data tools and services, such as comparison or advice tools. More detail on Open Banking use cases can be found in ‘Open Banking use cases’ box.

using Smart Data services.^{212 213 214} This figure considers the potential impact only on individual consumers but small businesses using Smart Data would likely realise similar benefits, however similar quantitative estimates for the size of the potential benefit to small businesses are not available.

Informed decision making – additional information

210. It is expected that when customers are better informed, through the sharing of their data, they will make different consumption choices. These different choices will result in benefits not captured by loyalty penalty estimates. Customers being informed does not necessarily mean they will choose the cheapest deal, but customers may choose the deal that is best suited to them.

211. For example, Ofcom found that 71% of people who changed mobile phone provider in the last 12 months did not consider mobile phone signal strength as a factor when making this decision. Of these respondents, 20% stated this was because it did not occur to them, 9% said they did not know where to find the information, and 7% said it was too much hassle.²¹⁵ Smart Data would help make wider product and performance data such as this more easily available. Similar non-price factors are also important to businesses, and this type of comparable information may not be available for them without Smart Data.²¹⁶

212. A 2018 study by uSwitch found phone owners were paying for an extra 3.4GB of data every month. It states that 21% of customers don't know their data allowance (26% for over-55s), and 36% do not keep track of their data usage.²¹⁷ Sky Mobile, a service which lets customers save up unused data for later, found that customers saved £36 million by rolling over 5.4 million GB of unused data between March and May 2020.²¹⁸

213. 'Improved financial decision-making' already has 38 live to market Open Banking-enabled products and services, making it the largest outcome area that the OBIE's Customer Evaluation Framework monitors. This is closely followed by expanded payment choice (29) and better borrowing (22) products and

²¹² Methodology: Applying the UK's fintech adoption rate of 71% to the digitally active (regular internet user) population yields 34,819,110 Fintech adopters in the UK. If it is assumed Smart Data schemes increase time savings for Fintech adopters in the UK (as a proxy for digitally engaged consumers) to 20 minutes a year, using an hour of leisure valued at £4.54 (see footnote 183) ranging to time valued at £13 an hour (see footnote 184), this results in an approximate £52 to £151 million per annum benefit.

²¹³ TAG Data Book (Nov 2021)

²¹⁴ Assuming £13 hourly average compensation as used by the FCA in "Pension reforms – proposed changes to our rules and guidance"

²¹⁵ Ofcom (August 2020) "Open Communications: Enabling people to share data with innovative services"

²¹⁶ Ofcom (August 2020) "Open Communications: Enabling people to share data with innovative services"

²¹⁷ Mobile Marketing (February 2018): "UK mobile users wasting 143 GB of data every month, uSwitch study finds"

²¹⁸ What Mobile article (2020): "Sky Mobile offers its customers the chance to rollover unused mobile data"

services.²¹⁹ Improved decision-making continued to represent an estimated 60-70% of successful API calls in August 2021.²²⁰

214. In Ofcom's consultation response, data holder BT suggested that Open Communications could help people to make decisions on a range of metrics that are important to them, rather than focusing on price and speed or coverage.²²¹

Cost savings from increased switching²²² – additional information

215. A 2020 Ofcom survey on the consumer use of third-party intermediaries (TPIs)²²³ found that 61% of adults used a price comparison website (PCW) in 2019. Including 48% for insurance, 30% for energy and 28% for communication services. The BEIS Public Attitudes Tracker found that 23% of people said they had never switched gas or electricity supplier.²²⁴ This shows that there is an appetite amongst consumers to seek alternative deals, but there is more to be done to help highlight the benefits of switching. Open Banking has already seen the emergence of services which analyse transactions in real-time, identify services use and prompt consumers to investigate where future savings could be made. Future Smart Data schemes will help to provide more accurate information than PCWs and would help to facilitate switching across sectors based on more personalised comparisons.

Support for vulnerable consumers – additional information

216. Consumer insights from Ofcom's qualitative studies²²⁵ also showed that Account aggregators (who bring together information about the accounts and products held with different providers in one place) could also benefit those with power of attorney.

217. Combining Open Banking data with data from other sectors opens up new opportunities. For example, a person in financial difficulty could share their utilities or wider financial data to improve debt management services and improve the effectiveness of bill management and payment scheduling apps currently operational under Open Banking.

Increased competition²²⁶ – additional information

Smart Data is expected to increase the number of active, engaged consumers. As the midata literature review²²⁷ notes, "enhanced decision-making by active

²¹⁹ Open Banking (October 2021): "[The Open Banking Impact Report](#)"

²²⁰ Open Banking (October 2021): "[The Open Banking Impact Report](#)"

²²¹ Ofcom (July 2021): "[Update on Open Communications: Enabling people to share data with innovative services](#)"

²²² This is a transfer benefit from provider to customer.

²²³ Ofcom (August 2020): "[Open Communications 2020 survey](#)"

²²⁴ BEIS (May 2021): "[BEIS Public Attitudes Tracker: Wave 37 – Key findings](#)"

²²⁵ Ofcom (August 2020) "[Open Communications: Enabling people to share data with innovative services](#)"

²²⁶ This is a transfer benefit from provider to customer.

²²⁷ As referenced in BIS (2012): "[Order making power for midata](#)"

consumers with the confidence to engage in markets can have a significant impact on the competitiveness of the economy, by acting as a driver for long term economic growth through intensifying competition and innovation”.

218. Consumers are expected to make better decisions when informed by their data. It is assumed this will result in consumers accessing services from a greater number of data holders, compared to a select few incumbent data holders with high market power.

Increased security

219. Without Smart Data schemes providing consumers with a secure way to share data, consumers currently use less secure alternatives. As discussed previously, “screen scraping” is an example of this, where user credentials are shared to unaccredited third parties to log in and access data on the consumer’s behalf.²²⁸

220. Emerging evidence from Open Banking shows that verifiable bank statement data shared via APIs is a key selling point for those wanting to verify incomes or make credit decisions.²²⁹

221. HMRC’s open banking-enabled tax payment options significantly reduces the risk of fraud, customer error and reduces transaction cost, and demonstrates the level of security Smart Data provides.²³⁰

222. In the US, where the use of standardised APIs is not mandatory, screen scraping still takes place. A survey by the Financial Data Exchange found that between 65 to 85 million US consumers still use services in banking that rely on unregulated and less secure data sharing methods, including screen scraping and password sharing.²³¹

TPP benefits

223. Similar growth is being seen for TPPs across the UK. London-based Vyne received significant seed funding of \$15.5 million, marking the largest seed funding round in the UK Open Banking market to date,²³² and Clearscore secured \$200 million of investment to ease consumer access to credit through Open Banking.²³³

²²⁸ GoCardless (July 2017): “[Screen Scraping 100: Who, What, Where, When?](#)” Blog

²²⁹ Credit Kudos (2020): “[Business: Fraud Prevention](#)”

²³⁰ Open Banking (January 2022): “[UK open banking marks fourth year milestone with over 4 million users](#)”

²³¹ Financial Data Exchange (2020): “[Consumer Access to Financial Records](#)”

²³² Vyne (September 2021): “[Vyne raises \\$15.5 million in seed funding to build challenger payment platform for merchants](#)”

²³³ Open Banking (June 2021): “[June 2021 Monthly Highlights](#)”

224. TPP services such as digital comparison tools and PCWs are already in use in sectors such as communications and finance, and Smart Data is expected to assist further innovation, growth and market engagement for these services. According to Ofcom's consultation response, digital comparison tools were among the groups who were generally supportive of intervention to establish an Open Communications initiative and agreed that they could use the data to innovate.²³⁴

Access to new data – additional information

225. The ability to access new data creates valuable new markets and reduces the cost of market access. Mobile price comparison and switching website BillMonitor have argued that accessing customer and product data is currently expensive and difficult, and felt that Open Communications could help them to provide a more personalised service that would benefit customers.²³⁵

226. For example, in response to the Open Communications consultation G.Network said that there's demand for better information about broadband reliability, speed and service quality among customers which third parties could provide if they had access to better data.²³⁶ Some other examples of data TPPs could have access to with Open Communications include information about users' current packages, expenditure on communications services and their usage.²³⁷

227. FCA's call for input set out various use cases for Open Finance, and detailed the data that would need to be shared to facilitate them. Some examples of the data not currently available in the Finance sector included:²³⁸

- Access to information about product features, consumer circumstances and consumer use of product across sectors.
- TPP access to all customers' savings, investments and debt and related information in a consistent format in the investment sector.
- TPP access to all pension and payment information in one place in the pension sector.
- Mortgage product and payment history data, data on payment/current/savings account and other income in the mortgage sector.

²³⁴ Ofcom (July 2021): "[Update on Open Communications: Enabling people to share data with innovative services](#)"

²³⁵ Ofcom (July 2021): "[Update on Open Communications: Enabling people to share data with innovative services](#)"

²³⁶ Ofcom (July 2021): "[Update on Open Communications: Enabling people to share data with innovative services](#)"

²³⁷ Ofcom (July 2021): "[Update on Open Communications: Enabling people to share data with innovative services](#)"

²³⁸ FCA (December 2019): "[Call for Input: Open Finance](#)"

New and improved services – additional information

228. Smart Data schemes allow the opportunity for TPPs to create new innovative services and improve existing services. Examples have already been seen in Open Banking, with TPPs offering innovative new tools to help customers with financial management, simplifying everyday tasks and supporting vulnerable customers.

Increased competition²³⁹ – additional information

229. Smart Data schemes in further sectors beyond Banking will increase opportunities for TPPs to compete with existing data holders and other third-party providers.

230. In 2018, the Competition and Markets Authority (CMA) recommended that Ofcom should seek to increase the engagement and awareness of consumers by pushing forward with implementing Smart Data, as a remedy for tackling the loyalty penalty in the mobile and broadband markets. Giving customers the support and tools to make active and informed choices ensures that businesses are put under continued and greater competitive pressure.²⁴⁰

Broaden customer reach to Government – additional information

231. In the finance sector, Smart Data could enable HRMC to expand the range of financial data and tools used to support the delivery of their services, providing simpler and safer services for customers.

232. Smart Data also provides the opportunity for sectors such as communications to aid Government, for example by providing better quality data about communications infrastructure and coverage to help inform Government policy.

233. HMRC told the OBIE “Effective collaboration to turn open banking data into services that are good to use and offer real value to customers and businesses. HMRC wants to be a big part of that, and we will be inviting interest in a number of open banking-related proofs of concept, such as splitting VAT at source.”²⁴¹

Increased productivity – additional information

234. A full methodology explanation and set of assumptions for Frontier Economics analysis into the benefits of Smart Data to small and micro businesses and TPPs²⁴² can be found in their research note.²⁴³ Sensitivity tests were used to demonstrate the range of potential benefits, as there remains uncertainty about potential use cases and uptake of these services across the sectors. For TPPs,

²³⁹ This is potentially a transfer benefit between existing and new TPPs.

²⁴⁰ CMA (December 2018): “[Tackling the loyalty penalty](#)”

²⁴¹ Open Banking [Insight](#)

²⁴² BEIS commissioned research (July 2022): “[Frontier Economics: Estimating benefits of Smart Data to SMFs and TPPs](#)”

²⁴³ BEIS commissioned research (July 2022): “[Frontier Economics: Estimating benefits of Smart Data to SMFs and TPPs](#)”

the estimates focus on potential productivity gains and growth in the number of TPPs.

Data holder benefits

235. Despite the CMA only mandating 9 banks to partake in Open Banking, as of November 2021 82 more account providers have got involved voluntarily in order to take advantage of the benefits.²⁴⁴

236. The opportunity to access wider product and performance data gives data holders the opportunity to improve their customer offer and increase their market reach. Ofcom expect that Open Communications could offer similar scope for innovation in the communications sector and augment existing Open Banking services, for example enabling new attentive, predictive, and tailored services.²⁴⁵

237. Ofcom highlighted that Open Communications could help smaller providers grow and compete more effectively.^{246 247} For example, better comparison of non-price factors (e.g., broadband speed and reliability) could help raise awareness amongst consumers of the quality of providers, especially lesser-known providers. Evidence from further Ofcom research²⁴⁸ suggests that when businesses have switched to smaller providers, they have higher satisfaction rates and tend not to switch back, demonstrating there is value for businesses in moving away from the major communications providers.

238. Improvements to technical infrastructure to facilitate data sharing can also benefit data holders for wider business use, helping generate further revenue. Examples of wider benefits include supply chain optimisation and reduced cost of serving individual data access requests.

239. A McKinsey paper reported that financial data sharing helps avoid multiple manual data handoffs that lead to errors, rework, and less efficient outcomes, and it significantly reduces the costs associated with remediating bad customer relationship management data, currently estimated at 20% of a typical financial institution's income.²⁴⁹

240. Real-time access to customer data can support advanced techniques to identify and reduce costs related to fraud. Sharing data provides more evidence

²⁴⁴ OBIE (November 2021): [The OBIE highlights – November 2021](#)

²⁴⁵ Ofcom (August 2020) "[Open Communications: Enabling people to share data with innovative services](#)"

²⁴⁶ This is a transfer benefit from existing larger providers to new entrants.

²⁴⁷ Ofcom (August 2020) "[Open Communications: Enabling people to share data with innovative services](#)"

²⁴⁸ Ofcom (Apr 2018): "[SMEs Communication Needs](#)", Slides 23 and 24

²⁴⁹ McKinsey & Company (June 2021): "[Financial data unbound: The value of open data for individuals and institutions](#)"

and clues with which to flag suspicious activity and this can help data holders build out their predictive modelling of fraud and catch cases earlier.²⁵⁰

241. Before schemes come into effect, relevant stakeholders will have the opportunity to respond to regulator consultations. This will ensure that a range of stakeholders will have the opportunity to help shape the design of future schemes. This will be of particular interest to data holders who will be directly affected by the regulations.

242. Fixed broadband provider BT said they strongly support Open Communications” and will consider using Open Communications as a TPP to offer new services or enhance their existing offerings. BT said they believe that Open Communications can support informing customers to make better purchase decisions and noted the rules and regulatory framework that should be in place to mitigate any risks.²⁵¹ Data holder G.Network were also broadly supportive of the idea of Open Communications according to the consultation response, subject to Ofcom first considering other options.²⁵² Respondents to the FCA’s call for inputs on Open Finance noted the potential for wider firm benefits, including cross-sectoral use cases, cross-selling and opportunities to charge for use/services. Some respondents also highlighted the benefits to firms and their customers of increased digitisation and overall modernisation of systems.²⁵³

Wider societal benefits

Value of the data economy – additional information

243. Ctrl-Shift’s report on data mobility that found that data mobility has the potential to increase GDP by £27.8bn²⁵⁴ (£30.5bn uprated to 2021 prices), quantified by estimating the value of data mobility for a sector as a proportion of GDP, adjusting this for the impact of that sector and applying the adjusted impact rate to economy-wide GDP. This quantification for data mobility is anchored in the financial services sector and highlights the value of the benefits that have been set out above.

²⁵⁰ McKinsey & Company (June 2021): [“Financial data unbound: The value of open data for individuals and institutions”](#)

²⁵¹ BT (February 2021): [“Open Communications BT Consultation Response”](#)

²⁵² Ofcom (July 2021): [“Update on Open Communications: Enabling people to share data with innovative services”](#)

²⁵³ FCA (March 2021): [“Open Finance: Feedback Statement”](#)

²⁵⁴ Ctrl-Shift (2018): [“Data mobility: the personal data portability growth opportunity for the UK economy”](#)

244. In 2020, the UK's data economy represented 4% of GDP²⁵⁵ and 5% of the workforce²⁵⁶ being employed in the sector.²⁵⁷ Additionally, as of 2020 the UK was the largest data market in Europe.²⁵⁸

International fintech advantage – additional information

245. We expect trade benefits as a result of the UK furthering its leading approach towards data portability with initiatives like Smart Data. Building on Open Banking's enabling role for UK fintech, Smart Data provides a further opportunity to extend the UK's tech leadership into further sectors, for example finance, communications and energy sectors, and attract further foreign investment.

246. The UK being a global leader in Open Banking and potentially future Smart Data schemes also provides greater scope for regulatory compatibility between the UK and other countries. We have seen similar effects with the UK's FinTech bridge initiative. These are a series of bilateral agreements with APAC countries that are designed to help build closer and stronger collaboration between different countries governments, financial regulators and Fintech industries. The UK has currently agreed Fintech bridges with Singapore, South Korea, China, Hong Kong, and Australia.²⁵⁹

247. This provides an opportunity for UK firms with Smart Data expertise to expand internationally more easily and strengthen the UK's global trade position. On the other hand, this will also provide an opportunity for international firms to expand into the UK, bringing both foreign direct investment and increased competition for domestic firms with knock-on benefits for customers.

Increased competition – additional information

248. Increased competition could lead indirectly to a reduced need for heavier handed regulation, such as price caps. This was suggested as a likely outcome of midata by Nobel Prize winning economist Richard Thaler.²⁶⁰

Allocative efficiency – additional information

249. More transparency in markets as a consequence of enhanced data mobility will lead to increased allocative efficiency. One example of this could be more accurate credit scores as a result of Open Banking, data sharing from wider finance sectors or from across other sectors such as transport and employment. This will allow for credit to be priced closer to or equal to marginal cost. The Centre for Economics and Business Research, an economic consultancy,

²⁵⁵ Data Landscape (2020): "[The European Data Market Monitoring Tool](#)". Using January 2020 UK GDP 2,229,094m (GDP) and UK data economy value EUR 88,816m (indicator 5.2).

²⁵⁶ Defined as "data professional"

²⁵⁷ Data Landscape (2020): "[The European Data Market Monitoring Tool](#)" (indicator 1.2)

²⁵⁸ Data Landscape (2020): "[The European Data Market Monitoring Tool](#)" (indicator 4.1)

²⁵⁹S&P Global (Oct, 2020): "[UK aims to shape global fintech regulation as it bridges EU divorce](#)"

²⁶⁰ Richard Thaler, as quoted in BIS (April 2011): "[Better Choices Better Deals](#)"

estimates that this effect could contribute an additional £1bn to UK GDP annually.²⁶¹

250. We can expect further allocative efficiency as Smart Data extends beyond payment account data (as planned under Open Finance) and enables financial institutions to consider information like energy and communications data (as planned under midata and Open Communications) to better determine a consumer's credit worthiness.

Better-informed research and policymaking – additional information

251. Smart Data will lead to standardised datasets with more consistent data quality. A secondary use of these improved and more accessible datasets could be by the public sector and academics, for example in research. Access to access aggregated anonymised data sets using Smart Data schemes could lead to richer consumer research insights and a more sophisticated evidence base for policy making in a variety of areas.

252. There is currently no requirement under Open Banking to share data directly with the public sector or universities, but alternative data sharing arrangements have been made. For example, the University of Edinburgh has collaborated with partners to create the Global Open Finance Centre of Excellence (GOFCoE), which has partnered with Natwest and Royal Bank of Scotland to provide insights into the financial impact of disruptions, such as those that accompanied Covid-19. This is made possible by combining real-time anonymised banking data with data from digital accountancy software, based on bilateral legal agreements with banks. These new detailed insights offer the possibility of more timely, accurate and data-driven policymaking by government in supporting businesses.²⁶²

Other wider society benefits – additional information

253. Indirect benefits from better-informed customers could include increasing energy efficiency and healthier choices, leading to carbon savings and improved health outcomes.

254. Recent research²⁶³ has highlighted large potential for Smart Data to support environmental policies, particularly when extended to include industry data. Example use cases include effective management of carbon footprints in supply chains, apps to help consumers identify the most efficient port to charge their electric vehicle and 'Sustainability capital' enabling Fintech investors to prioritise environmentally sustainable projects across the economy, including TPPs in the Smart Data ecosystem.

²⁶¹ Freshbusinessstinking.com – "Open Banking expected to contribute over £1 Billion annually to UK economy supporting 17,000 new jobs"

²⁶² Government Computing (June 2020) "GOFCoE fintech hub in Edinburgh secures £22.5m funding from UKRI"

²⁶³ Icebreaker One (April 2021): "How can Smart Data help unlock a Green Economy"

Annex B – Further Smart Data costs information

Summary

255. As discussed in the secondary regulation costs section of this Impact Assessment, various groups could see costs from the introduction of Smart Data and this annex provides additional detail on these costs.

Detail on costs

256. The following costs have not been collated as many would double count. Across most of these costs it is also not possible to estimate an accurate counterfactual as the design and progress of schemes across multiple sectors is uncertain. For example, it is uncertain how much industry would spend on related IT upgrades and other data programmes in the absence of Smart Data.

Cost to regulators and scheme administrators – additional information

257. Example activities requiring funding include:

- A. Establishing and running a delivery team
- B. Ongoing compliance monitoring
- C. Developing and updating standards (e.g., technical specifications)
- D. Regulation and enforcement action

258. These costs will initially fall on the sector regulator, or any other administrator, who will be named in the secondary regulations as responsible for specific roles, for example determining who is eligible to participate in the scheme, subject to requirements set out in the regulations. It is likely that existing regulators would lead on regulation and enforcement. More detail on this and potential impacts on the justice system will be included in a Justice Impact Test at the secondary regulations stage, when the specifics on potential breaches and the related enforcement mechanisms are known.

259. The scale of costs and who bears the burden will depend on the specific funding model pursued in secondary regulations, and for example how the charges and levy will apply to data holders and TPPs. Examples could include (and are not mutually exclusive):

- a. Levy on data holders – e.g., to fund an implementation team, taking a similar approach to Open Banking.
- b. Charges on TPPs – e.g., for accreditation or as a ‘membership fee’ for participation in the ecosystem

260. We would expect the ‘implementation costs’ for future schemes to be lower than those incurred by Open Banking as a result of learnings from this scheme, as noted by the OBIE responded to Ofcom’s consultation²⁶⁴ directly and argued against using Open Banking as a benchmark for costing Open Communications, in part due to several potential technical differences. It stated that Open Communications would not require costly payment initiation standards or functionality (including the high-cost security, performance and resilience framework associated with this), or the real time information that was a necessity for Open Banking. In addition, the OBIE stated that some of the costs attributed to Open Banking included costs associated with the upgrading of core technology assets, which banks would have had to undertake in any scenario. The OBIE cost should therefore be taken as a rough high estimate for future schemes.

261. Certain ‘implementation costs’ may also be for activities that are currently being carried out by firms and trade bodies pursuing voluntary data sharing schemes. As a result, part of the overall cost may be considered as a transfer, rather than an additional cost for some industry players.

262. As discussed throughout this IA, due to several uncertainties, it is not possible to isolate or predict the costs of potential future Smart Data schemes. However, in an effort to give an indication of the costs that could arise from further data sharing schemes, BEIS has conducted a survey to collect more evidence on the costs of Open Banking, the first mandated data sharing scheme. More detail on this survey can be found in ‘Primary Legislation Costs’.

263. BEIS asked the survey respondents their views on the cost of future data sharing schemes in a variety of sectors. In particular we asked whether they believed each scheme would cost more, less or the same as Open Banking.

264. One respondent said that in markets such as savings, mortgages and consumer credit they would expect synergies with Open Banking and therefore reduced implementation costs.

265. One respondent explained that market variability in the insurance market could potentially make it costly to deliver.

Cost to data holders – *additional information*

266. It is important to distinguish between:
- a. Costs that would have been incurred by the business anyway, for example upgrades to IT systems and technical infrastructure.
 - b. Smart Data specific costs.

²⁶⁴ Ofcom (August 2020): [“Open Communications: Enabling people to share data with innovative services”](#)

267. There is limited evidence which makes this distinction, however BEIS' Open Banking survey asked respondents about the costs they faced that they think would have been incurred in the absence of Open Banking. Some respondents said that of the implementation and ongoing costs they faced as a result of Open Banking, they do believe they would have faced a proportion of these costs in the absence of Open Banking. One explained that without Open Banking they would need to use legacy screen-scraping technology to acquire the data needed for their business model.

268. Wider work is also already being done within sectors to help facilitate and ensure the interoperability of Smart Data. Open Energy is an example where progress has been made and investment into infrastructure could be built upon in the energy sector.

269. In the Finance sector, FCA have proposed rules for pension providers to help deliver Pensions Dashboards, which requires pension providers to be ready to receive requests to find pensions and search records for data matches, as well as supply specified information for consumers to view on their chosen dashboard,²⁶⁵ changes which would likely be made under an Open Pensions scheme. FCA are also currently leading several projects which aim to ensure customers are empowered, better informed and have access to the best data.²⁶⁶

270. In the telecoms sector, as a result of the European Electronic Communications Code (EECC), Ofcom has implemented regulatory rules for communications providers to help protect end-user rights. These new requirements complement changes which would likely be required for Open Communications, they include:²⁶⁷

- Increasing the information that providers must publish on their websites to promote transparency and help customers make more informed choices.
- Internet and phone providers must make information available to qualifying third parties, free of charge and in open data formats. This is to provide comparison tools and ensuring consumers have clear and comparable information.
- All customer billing information must now be “up-to-date”, and customers are to be advised when a service has been fully used up and of the charges they will incur. This aims to help customers manage their consumption and avoid bill shock.

²⁶⁵ FCA (Feb 2022): [“FCA proposes rules for pension providers to help deliver Pensions Dashboards”](#)

²⁶⁶ FCA financial promotions rules, review wholesale data markets, new consumer duty.

²⁶⁷ Ofcom (October 2020): [“Implementation of the European Electronic Communications Code \(EECC\)”](#)

271. In Ofcom's Open Communications consultation document²⁶⁸ they highlight the areas of expected costs to data holders.²⁶⁹ In response to this consultation,²⁷⁰ the OBIE argued against using Open Banking as a benchmark for costing Open Communications, in part due to several potential technical differences.

272. BT estimated that Open Communications would cost them between £40m-£100m²⁷¹ (including 'implementation costs'), representing 0.19-0.47% of BT Group revenue in 2021, £21.3bn.²⁷² Assuming this is attributable to the six biggest telecommunications providers in the UK,²⁷³ the total cost for the biggest telecommunications providers would be between £240m-£600m. However, large incumbent data holders may overstate potential costs, given that they are likely to bear the burden of the cost (as with the CMA9) and these schemes could diminish their market power.

273. The IA for the Pensions Dashboard primary legislation estimates that the total fixed implementation costs for the Pensions Dashboard programme to private sector pension schemes will be £200 million - £580 million over ten years, not including micro schemes.²⁷⁴

274. In relation to the costs of Open Finance, FCA said that the implementation of Open Finance should be proportionate, phased and ideally driven by consideration of credible consumer propositions and use-cases, and they do not think a 'big bang' approach to Open Finance is feasible or desirable.²⁷⁵

275. BEIS' Open Banking survey asked the Open Banking directory to estimate their total one-off implementation costs. All of the CMA9 firms who responded estimated costs within the range of £110m to £150m. Other small and micro firms estimated costs to be ranging from £100,000 to £1.49m. One medium firm estimated their total one-off cost as being between £3m to £4.9m, and a globally large firm estimated their costs between £10m to £19.9m.

276. BEIS also asked the Open Banking directory about their annual ongoing costs. All of the CMA9 firms who responded to the survey provided estimated costs of between £10m to £12m, and the majority of small and micro firms provided estimates between £10,000 to £75,000. A medium firm estimated their

²⁶⁸ Ofcom (August 2020): "[Open Communications: Enabling people to share data with innovative services](#)"

²⁶⁹ This includes the costs of generating and sharing Open Communications data (e.g., API development) and the costs of enabling and providing services using Open Communications data (e.g., registering as an accredited provider)

²⁷⁰ Ofcom (August 2020): "[Open Communications: Enabling people to share data with innovative services](#)"

²⁷¹ BT (February 2021) - [BT response to Open Communications consultation](#)

²⁷² BT (2021) – [BT Group Annual Report 2021](#)

²⁷³ [Statista](#) (May 2020) – Vodafone, Sky, 3, O2, BT, and EE

²⁷⁴ DWP (February 2019): "[Pensions Dashboards Impact Assessment](#)"

²⁷⁵ FCA (March 2021): "[Open finance – feedback statement](#)"

ongoing costs to be between £450,000 to £749,000, and a globally large firm estimated their costs between £750,000 to £1.49m.

277. The following section provides a more detailed breakdown of the total cost to data holders. The costs provided are not an exhaustive list of the costs that might be incurred, for example the evidence from banking also shows there may be resource and customer engagement costs beyond this.

Familiarisation costs – additional information

278. This could include the costs of staff to read and understand regulation, staff training, external advice, dissemination and policy negotiation.

279. Smart Data primary legislation is expected to be relatively brief. As such, the costs are negligible. Further analysis should be conducted to understand the familiarisation costs associated with secondary legislation.

Technical and system costs – additional information

280. Data holders may also need to undertake IT or organisational changes to ensure consumers' data can be appropriately shared. This is expected to be particularly relevant to large incumbent data holders, as smaller incumbent data holders and new entrants to be better adapted to handling Smart Data, assuming they have greater flexibility and ability to adapt their IT infrastructure accordingly or already have the required infrastructure in place.

281. BEIS' Open Banking survey found that technical and systems costs, for a large CMA9 firm with c.9 million customers, was c.£65m for technology implementation. This firm also agreed that changes made to implement Open Banking had benefitted their organisation outside of Open Banking, as it has been a catalyst for them to become more API enabled and to re-use APIs in digital journeys. A micro AISP estimated technical and system costs to be around £20,000, this included the costs to implement and maintain their API connection and developer time to work with the API.

282. Other large CMA9 firms provided estimates for the cost of building or contracting out a dedicated interface, one firm estimated over £15m, another c.£85m. This firm provided their dedicated interface directly, without using a TSP. A small AISP and PISP estimated this cost to be between £100,000 and £149,000.

Ongoing costs – additional information

283. The midata Impact Assessment analysis²⁷⁶ collated evidence on the retail, personal current accounts, energy and mobile contracts markets, and estimated

²⁷⁶ BIS (2012): "Order making power for midata" IA

implementation and ongoing compliance cost to business (separate estimates are not included) ranges from £1.3 million per annum for energy, up to £1.9 million per annum for mobile contracts. However, as noted with the benefits previously, these estimates are from 2012 and likely outdated so should be considered as a lower bound estimate.

284. Some ongoing costs that data holders may face include the maintenance and running of IT infrastructure, the costs of secure data transfers, and database consolidation. Looking at BEIS' Open Banking survey, some examples of ongoing costs faced by data holders include the cost to monitor and upgrade dedicated interfaces. One CMA9 firm estimated this cost as c.£250,000, another as £8m. Another key identified cost was the cost of authorisation to participate in Open Banking, the majority of respondents said these ongoing costs were over £10,000 per annum, with a medium AISP estimating it costs them £20,000 per annum and explained that this is split by £10,000 towards FCA licensing and £19,000 for PII insurance.

285. Respondents of the survey also identified some other ongoing cost areas as the cost of acquisitions, marketing, product design, communication with TPPs, and call centre/communications costs. One AISP estimated their call centre and communications costs to be £200,000.

Costs to TPPs

Familiarisation costs – additional information

286. TPPs may also face some familiarisation costs to participate in Smart Data schemes, they must first understand and familiarise themselves with Smart Data regulatory requirements. This could include the costs of staff to read and understand regulation, staff training, external advice, dissemination and policy negotiation.

287. As discussed previously, Smart Data primary legislation is expected to be relatively brief. As such, the costs are negligible. Further analysis should be conducted to understand the familiarisation costs associated with expectedly larger secondary legislation.

Accreditation – additional information

288. 'Accreditation' communicates to all parties in the system that the TPP has met specific requirements set out in the regulations. It is envisaged accreditation will apply primarily to TPPs, although there could be flexibility for the requirements to apply to data holders. The accreditation criteria and those that must comply with this will depend on sector specific schemes and will be set out in secondary regulations.

Setting up and running technical infrastructure – additional information

289. To access and use customer data, TPPs will also face costs to set up and run the required technical infrastructure to facilitate secure data access. This could include the costs to build and monitor any connections or integrations to data holder APIs or interfaces.

290. BEIS' Open Banking survey asked respondents about the costs they faced to build or contract out the building of a dedicated interface. One TSP estimated this cost them within the range of £50,000 to £99,000. The same organisation estimated their ongoing costs to monitor and upgrade a dedicated interface for Open Banking was between £20,000 and £39,000.

Premium APIs – additional information

291. There would be an opportunity for data holders to make data available beyond mandated data fields, charging TPPs for access to these 'premium APIs'. This has already emerged in the banking sector and is an effective way to stimulate further innovation, while also offering a mechanism for data holders to recoup some of their costs from implementing Smart Data. Developments like this will further stimulate new TPP business models and the design of consumer-focused services. Given the risk that charging for additional functionality could develop into barriers to market access, this will require ongoing assessment as commercial negotiations evolve and this new market of services matures.