Digital Markets Taskforce Call for Information

BT Group response

24 August 2020

Executive Summary

The Digital Markets Taskforce's call for information takes forward recommendations from the Digital Competition Expert Panel and the CMA's digital advertising market study. As a major telecoms provider that interacts with global technology firms along multiple dimensions, we welcome the opportunity to help shape the ex-ante regulatory regime that the Digital Markets Taskforce is proposing to apply to firms with 'strategic market status' (SMS).

The new digital regulator will use SMS as the tool to identify those digital firms with enduring market power over a relevant market. The broad criteria the CMA proposed in its digital advertising market study to designate SMS are appropriate for other digital markets, but should be supplemented with two others.

Firstly, digital markets exhibit strong network effects, derived from economies of scale that are often global, and multi-sided markets where each side of the market benefits from growth on the other sides. Strong network effects in such markets increases the chance of the market tipping in favour of one or few players. The CMA has already found that search and display advertising markets have tipped in favour of Google and Facebook resulting in entrenched market positions.

Secondly, large digital firms operate across an 'ecosystem' of adjacent markets that gives them access to unique data. Unique data is extremely valuable in digital markets because it helps firms build a richer picture of user behaviour and interactions. This helps the firm with market power consolidate its position across the entire ecosystem and leverage into other markets to expand the ecosystem even further, in a way that limits rival firms' ability to compete on fair terms. Some of these incentives to innovate in new markets depend on the ability to monetise and leverage unique data, but regulation should ensure the firm does not have the right to exploit its advantage from access to unique data, and proprietary techniques for gaining insights from this data, for longer than the period needed to generate the benefits of innovation.

The criteria for designating SMS should reflect both of the above features of digital markets: the strength of network effects making it likely the market will tip and access to unique data that cannot readily be replicated. The new digital regulator will need to then apply specific metrics and thresholds building on these broader criteria when looking at individual digital markets to identify firms with SMS in those markets.

The Taskforce is requesting input on digital markets that should be examined under the proposed regime. Digital markets change rapidly, so the Taskforce cannot fully pre-empt which digital markets in future could have competition problems. The Taskforce should therefore recommend a framework today that is sufficiently flexible to be applied as digital markets evolve.

Notwithstanding the need for flexibility, there are certain markets and services today that may exhibit competition problems in future. We highlight some examples in network edge and e-SIMs, which exhibit several properties similar to other digital markets where there are already competition problems. In network edge, network effects are strong because of the global economies of scale and the multi-sidedness of the market. Access to unique data also provides a competitive advantage, as it helps develop a platform suited for the applications that deliver using the network edge. Together, these factors could mean the market tips in favour of one or few players in future.

Markets tipping in favour of one or few players can lead to consumer harm along multiple dimensions in digital markets, including higher prices, lower quality, compromise to data privacy, reduced innovation or online harms. Equally, harms can arise where a firm is able to leverage market power from a primary market into an adjacent market, foreclosing rivals through unfair commercial practices. The digital regulator should also consider the ability of a firm with SMS to impose unfair or onerous terms on partners or suppliers, which limits the ability of others in the value chain to innovate.

To address the harms arising from a firm having SMS, the Taskforce is proposing to apply a Code of Conduct based on the principles of fair trading, open choices and trust and transparency. We agree that these principles could be an effective means of preventing firms with SMS from engaging in harmful commercial practices. The onus should be on firms with SMS to demonstrate why their commercial practices are consistent with these principles, for example by showing why specific terms are objectively justifiable and consistent with fair trading.

In addition to the Code of Conduct, mergers and acquisitions by firms with SMS should be scrutinised more closely. In assessing such mergers, the regulator should be mindful of the unique features of digital markets and

theories of harm, such as digital firms leveraging their power into adjacent markets through acquisition. Authorities should also ensure they have a full understanding of the commercial rationale for the acquisition, including the monetisation strategy.

We also support some of the data remedies proposed by the Taskforce, which tackle sources of market power in digital markets. Data mobility and interoperability will lower barriers to entry for rival firms, enabling them to compete on level terms with firms with SMS. These remedies could also help intermediary firms to create solutions that give consumers more control over their data and choice over how to monetise it.

We agree with the Taskforce that the procedural structure of the new regulatory regime should be based on the principles of speed, flexibility, clarity and legal certainty. These should be complemented by principles of proportionality, effectiveness, and ensuring due process through consultation and appropriate rights of appeal. The new digital regulator will also need to learn and adapt over time, based on reviews of whether regulation is having the desired effects. In this regard, we suggest that the new digital regulator follows the principles of 'anticipatory regulation', set out by Nesta, which provides regulators with a set of tools and behaviours to respond to emerging technologies and regulatory challenges.

Our main messages

Strategic market status

1. The criteria for designating SMS should include the scale of network effects leading to 'tipping' in favour of one or few players, and access to unique data that cannot be replicated by rivals.
2. SMP, as applied in telecoms regulation, is not appropriate for identifying firms with market power in digital markets.
3. SMS should apply to the corporate group as a whole to capture the ability of a firm with SMS to leverage its market power across different markets within its 'ecosystem'.

Code of Conduct

4. The objectives of 'fair dealing', 'open choices' and 'trust and transparency' in the Code of Conduct are appropriate for tackling harm arising from market power in digital markets.
5. The onus should be on firms with SMS to demonstrate why their commercial practices fulfil these objectives.

Digital mergers

6. When assessing digital mergers, authorities should be mindful of the unique features of digital markets, and take account of the digital firm's commercial rationale for the transaction.

Remedies to tackle sources of market power

7. Data mobility and interoperability applied to firms with SMS can tackle sources of market power, and enable smaller rivals to compete with firms with SMS on more level terms.

Procedural aspects

8. The digital regulator should apply the principles of proportionality, effectiveness, and ensuring due process through consultation and appropriate rights of appeal.
9. The digital regulator should adopt principles of 'anticipatory regulation', allowing it to respond effectively to emerging technologies and regulatory challenges.

Contents

1 Strategic Market Status

The Furman report describes 'strategic market status' (SMS) as the ability of a firm to exercise market power over a gateway or bottleneck in a digital market, where they control others' market access.[1] This concept of SMS is distinct from other concepts of market power in existing competition law, as it attempts to reflect how market power in digital markets can have unique features.

In the final report of its digital advertising market study, the CMA described how SMS might be designated in digital advertising. The CMA considered a range of evidence specific to digital advertising markets, and concluded that Google and Facebook would be highly likely to fulfil any criteria for designating SMS.[2]

1.1 Criteria to assess whether a firm has SMS

The Furman report developed the concept of SMS to identify the digital firms that have a position of market power that makes them capable of anti-competitive conduct, and should be subject to a Code of Conduct. We agree with the CMA's broad set of criteria in the digital advertising market study:[3]

- the platform has enduring market power over a relevant market;
- the platform acts as an important gateway for businesses to access a significant portion of consumers; and
- businesses depend on the platform to access users on 'other' side of the market.

These criteria attempt to capture features of digital markets that mean one or few players can quickly gain a position of enduring market power. Many digital markets exhibit strong network effects, where businesses or users of a digital platform benefit from other businesses or users being on that same platform. The scale of network effects in digital markets means that the market can 'tip' in favour of one or few players very quickly, such that the winner of that market can more easily maintain a position of market power.

The CMA's criteria partly capture these features, with the latter two criteria reflecting the multi-sided markets many digital firms operate in. These multi-sided markets are particularly likely to exhibit strong network effects because businesses on one side of the market benefit from more users being on the other side of the market, and vice versa. In the case of e-commerce platforms, for example, end consumers benefit from greater choice if there are more businesses using a particular e-commerce platform, whilst businesses benefit from a greater pool of potential customers if there are more end consumers shopping via the platform.

However, the CMA's criteria do not adequately reflect all features of digital markets that could result in market power.

1.1.1 The scale of network effects

First, the criteria for designating SMS should include the likelihood of the market to tip in favour of one or few players due to the presence of network effects.

The existing set of criteria proposed in the CMA's digital advertising market study does not explicitly recognise the implications of network effects in digital markets; specifically, the likelihood that a market 'tips' in favour of one or few players. These network effects (reflecting economies of scale and market two-sidedness) are important enablers for one or few digital players to gain a position of market power. Whilst network effects on their own do not mean there is harm to consumers, they increase the minimum efficient scale - i.e. the scale (in terms of users and businesses using that platform) needed for a firm to be commercially sustainable. The absence of such strong network effects lessens the ability of digital firms to gain and maintain a position of strong incumbency.

We acknowledge that the presence of strong network effects can have strong pro-competitive impacts. The potential for a market to 'tip' can give rise to aggressive competition *for* the market, where several firms attempt to bring valuable innovation to businesses and users, often at low or even free prices. However, once

[1] Digital Competition Expert Panel, March 2019. Unlocking digital competition. paragraph 2.10, p55.
[2] CMA, 1 July 2020. Online platforms and digital advertising – Market study final report. paragraph 7.57, p336.
[3] Ibid. paragraphs 7.14, 7.55, p326, 336.

the market has tipped, the winner may find ways to entrench its position, with adverse consequences for dynamic competition, innovation and end-user benefits which it drives.

In online search, for example, Google has maintained a market share of around 90% or more for over ten years, well after the market tipped in its favour.[4] Whilst new markets and products may have emerged, there is little sign of a 'tip' away from Google suggesting an entrenched position. Such an entrenched position may lead to excessive profitability, above the level typically achieved in a competitive market. The CMA has observed both Google and Facebook to have high levels of profitability in digital advertising markets.

Considering this, benefits need to be weighed against potential harms, in order to determine what remedies, if any, are appropriate for a particular market. Potential harms will be better captured in this assessment if the criteria for designating SMS includes *the* likelihood of a market to tip (for those cases where tipping has not yet occurred).

Whilst economies of scale and network effects also exist in other markets, such as utilities or airports, the network effects in digital markets are typically global in scale.[5] Businesses that depend on these digital platforms are often seeking to access a global customer base. End users of platforms also benefit from more users on that platform globally. Mobile app stores, for example, allow app developers to benefit from having a global reach by using an Apple service. Equally, local businesses can reach customers in other countries by using a global e-commerce platform. Any criteria for designating SMS should, therefore, consider the scale of such network effects, and whether the presence of global network effects makes it more likely for a market to tip in favour of one or few players.

A criterion on the likelihood of a market to tip would be forward-looking – it foresees the possibility of a market tipping in favour of one player, albeit with other players still operating in the market. In such cases, the new digital regulator would assess how close the market is to tipping, and if it does tip, who the likely winners are.

Given the nature of digital markets, the new regulator will need to be comfortable with forward looking assessments and with accepting more uncertainty. Our suggestion is consistent with this. The CMA's recent work shows how assessments can be done rapidly using available evidence and a degree of judgment. A new digital regulator should also be able to form a view on likely market developments – for example by considering the pace at which the leading firm's market share has been growing in a market; and whether that leading firm already has SMS in an adjacent market that provides it with competitive advantages in the relevant market that cannot be replicated by other firms.

If SMS is found, remedies can still be flexed to reflect uncertainty about who will benefit from a market tipping. For example, a remedy of fair trading in any Code of Conduct could be modified depending on whether a market is likely to tip versus a market that has already tipped. In short, this will allow the digital regulator to establish appropriate 'rules of the game' which allow potential competitors to succeed. This would go a long way towards keeping markets open.

1.1.2 Access to data

The criteria for designating SMS should also consider whether a digital player could use unique data acquired in a principal market to leverage into an adjacent market. The Furman report and the CMA's digital advertising market study have described in some detail the market power that can arise from access to valuable data. For example, in search advertising, the CMA describes how Google's extensive first-party data is likely to give it substantial advantage over smaller players, creating a barrier to entry for potential rivals.[6]

Given the integral role data can play in contributing to the market power of digital firms, any criteria used to designate SMS should include explicit reference to the competitive advantages access to data can provide.

Data has several dimensions. It can be permanent or transitory (for example, date of birth versus location), unique or generic (national insurance number versus current employer), and anonymised or personal (NHS COVID tracing app data versus online shopping history). Along all these dimensions, the ability of a new entrant to compete with an existing digital firm with access to large datasets, depends on the ability of that

[4] CMA, 1 July 2020. Online platforms and digital advertising – Market study final report. paragraph 7.60, p336.

[5] It is the combination of global network effects, high barriers to entry and expansion, consumer biases towards defaults and unique access to data that is unique to digital markets, and distinguishes them from other markets that are susceptible to ex-ante regulation.

[6] Ibid. paragraph 5.307, p291.

rival to replicate their data. Replicating data may be possible through asking consent from consumers/businesses that use the existing firms' platforms in exchange for a service, and/or by providing services that generate such data. But in many cases, the ability to replicate the data held by a global online platform is an insurmountable barrier to entry, for the following reasons:

- **Presence of network effects that create a barrier to switching**: In markets where users benefit from other users being on the same platform, a new entrant faces strong inertia when trying to attract users because many consumers regard certain services as digital 'must haves'.[7] This limits the ability of that new entrant to collect valuable data about users to improve the quality of, and better target, its service offering.
- **Technical standards set by online platforms**: Large online platforms often determine the technical standards on which the platform operates. These platforms may set technical standards in a way that makes it more difficult for users to move their data to rival platforms. The CMA's digital advertising market study describes how Google's decision to phase out 3rd party cookies on Chrome means small publishers will have less access to data that Google already has access to.[8]
- **Ecosystems of data**: Large digital platforms have built datasets across multiple adjacent markets. Data collected across multiple markets generates positive externalities for that firm, because it helps the firm build a richer picture of its users and customers from multiple sources. For example, Google's recent acquisition of Fitbit has attracted regulatory scrutiny, as Google's ability to acquire Fitbit's data could strengthen its position in its core market (digital advertising) and in adjacent digital health and fitness markets. This could make the Google ecosystem impenetrable for smaller rivals who do not have access to the same breadth of data.[9] Business models that rely on data tend to evolve into ecosystems to realise the positive externalities of data, which then creates further barriers to consumers switching away from the ecosystem.
- **Global data economies of scale**: Small digital firms that enter the market on a national scale do not have access to the data large global platforms can collect on a global scale. Global online platforms can collect data in one national market that may be of relevance in another market, which cannot be replicated by new entrants operating on a local scale.

These barriers to entry mean large online platforms can maintain, and indeed entrench, their position of market power through their access to data, insulating them from competition from new, or established, rivals that cannot replicate their data. Designation of SMS should therefore capture the degree to which a digital player has access to non-replicable data (including access to multiple sources of data from different markets that generates positive externalities for the firm), allowing a regulator to intervene where this is contributing to adverse competition effects in certain markets (including adjacent markets).

Access to data that cannot be replicated by other firms could result in competition on unfair terms in an adjacent market. A large online platform can leverage the data it has in a primary market to enter into an adjacent market, with the primary motivation of gaining more user attention and data to monetise in the primary market. One such practice may be 'privacy policy tying', where the digital firm requests consumers' consent to use data in a primary market where it has market power to leverage into an adjacent market.[10] Such entry into an adjacent market can harm competition in that adjacent market.

This ultimately helps the large online platform to enhance the 'feedback loop', where data collected in the adjacent market helps improve the service in the primary market or create entirely new services. The improvements in service or new services are then monetised and reinvested to attract even more users from the adjacent market or indeed other adjacent markets. This creates an expanding feedback loop, as the digital firm enters more and more markets, building on the data it has to access more data. The Furman report described this feedback loop as an important enabler for large online platforms to maintain and expand their dominant position.

The designation of SMS should, therefore, recognise the central importance of data as a source of digital players' market power as well as a source of unfair competition in adjacent markets.

[7] Ibid. paragraphs 4.117-4.118, p180.
[8] Ibid. paragraphs 5.321-5.328, p294-296.
[9] Reuters, 13 July 2020. Google offers data pledge in bid to win EU okay for Fitbit buy.
[10] Condorelli, D, Padilla, J, 6 March 2020. Harnessing Platform Envelopment through Privacy Policy Tying. Working paper.

1.1.3 Evidence used to designate SMS

The above criteria for designating SMS would be common to all digital markets. However, the digital regulator should then apply these criteria at a more granular level in each digital market where it considers there may be competition problems.

The regulator would have to develop a more detailed set of metrics and thresholds specific to each digital market. This approach is consistent with the specific metrics the CMA has already applied in the digital advertising market.

Figure 1 summarises how we see the framework for designating SMS being applied in different digital markets.

Figure 1 – Framework for designating SMS in different illustrative digital markets

Broad Criteria	1. Platform has enduring market power over a relevant market		
	2. Platform acts as an important gateway for businesses to access a significant portion of consumers		
	3. Businesses depend on the platform to access users on 'other' side of the market		
	4. Market is likely to or already has tipped in favour of one or few players due to strong network effects		
	5. Platform has access to unique data which can be used to entrench a competitive advantage and/or be leveraged in an adjacent market		
Example digital markets	**Digital Advertising**	**E-Commerce**	**Mobile App Stores**
Illustrative evidence specific to each digital market	Shares of supply in the consumer-facing market	Shares of supply in e-commerce market	Shares of supply in mobile applications
	Extent of reach across consumers, based on proportion of users who make use of the search/social media platform	Proportion of consumers that make use of the relevant e-commerce platform	Proportion of consumers that only access apps through the relevant app store
	Share of digital advertising revenues	Share of businesses that primarily access consumers through the relevant e-commerce platform	Shares of app developers that can only access mobile consumers through the relevant app store
	Control over rules or standards applied in the market, including sharing data outside the firm's ecosystem	Ability to freely set the terms under which businesses sell through the platform	Control over terms under which app developers can supply over the relevant app store
	Ability to obtain and control data that is applicable outside of the market	Ability to obtain data on consumers and businesses that could be used in adjacent markets	Ability to obtain data on apps and users that is relevant in adjacent markets

Of the five broad criteria listed above, we expect the first four to be applied cumulatively – in other words, they must all be satisfied to some degree to designate a firm with SMS. The final criteria relating to unique access to data may be a standalone criterion, as it may be sufficient in some markets to create market power by itself, even in the absence of some of the other criteria, such as the platform being an important gateway, being satisfied.

Whilst the broad set of criteria for designating SMS may not require much change over time, the specific application of those criteria to each individual digital market may require more regular review as digital markets evolve. For example, business models may change such that digital markets monetise from a different side of a two-sided market, and the evidence used to assess market power needs to reflect the side in which the firm monetises its services.

1.1.4 Relevance of SMP in digital markets

The Digital Markets Taskforce's call for information asks whether other concepts of dominance, such as significant market power (SMP) in telecoms is relevant for digital markets.

We do not think the concept of SMP, as used in telecoms, is appropriate for digital platform markets. SMS applied in digital markets is the tool for regulating the online platforms and adjacent markets where the market power is leveraged to create unfair barriers/trading conditions whilst reflecting their systemic or strategic status in a single or ecosystem of digital market(s). This is not the same as other types of ex-ante regulation such as SMP, where the regulator considers whether a firm has market power in *a relevant market*. The concept of SMS is intended to capture the unique features of digital markets, which includes digital platforms' operation in a wide ecosystem of adjacent activities, rather than a single relevant market.

Successful use of the SMP framework in telecoms relies on a formal market definition exercise and application of the three criteria test. The European Commission's recommendation for applying the three criteria test in telecoms markets includes the following criteria for assessing whether ex-ante regulation is needed:[11]

- The presence of high and non-transitory barriers to entry;
- A market structure that does not tend towards effective competition within the relevant time horizon; and
- Insufficiency of competition law alone to address the market failure(s) concerned.

A formal market definition exercise is challenging in digital markets, where markets are often two-sided and the true competitive price on one side of the market may be zero or even negative. In telecoms, markets are often defined using a hypothetical monopolist test, which identifies the relevant market as the smallest group of products in which a hypothetical monopolist would impose and sustainably maintain a small but significant and non-transitory price increase above competitive levels. This test can be applied in telecoms using quantitative (and other) evidence on firms' actual prices and quantities sold in the market.

However, in two-sided platform markets, where the competitive price may be zero or negative, such a quantitative application of the hypothetical monopolist test cannot be applied. Some practitioners have suggested alternatives such as a hypothetical monopolist test based on a small but significant non-transitory *decrease in quality*, in order to reflect the value exchange in digital markets. But this approach raises other challenges. Quality in digital markets has several dimensions, including the type of service being offered, protection of privacy and ability to register complaints. None of these can be easily measured in the way price changes can. A formal market definition exercise as applied in telecoms is therefore not practicable in digital markets.

We therefore do not consider SMP, as applied in telecoms with a formal market definition exercise is appropriate for digital markets. Instead, the concept of SMS offers a nimbler and more effective route to identifying those firms with market power.

In addition, if the Taskforce imports or explicitly builds on the concept of SMP in telecoms, it may create expectations about the analytical framework and remedies that will be applied. These expectations may unhelpfully limit the scope for regulation in digital markets. By adopting a distinct concept of SMS rather than SMP, as applied in telecoms, the digital regulator will not be restricted by established practices in telecoms regulation, and can tackle the specific competition problems in digital markets with the required tools.

[11] European Commission, 9 October 2014. Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex-ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services. Explanatory note. p8-10.

1.2 Implications for firms with SMS

The Digital Markets Unit should have robust powers to ensure that SMS platforms act in a pro-competitive and pro-consumer way. This includes powers to apply the Code of Conduct, as well as other appropriate remedies beyond the Code (such as data access or interoperability remedies, as further discussed in section 3.4 of this response). However, the power to impose such remedies beyond the Code should only apply to firms designated with SMS. For further discussion on this point, please see our response to the CMA's interim report in its digital advertising market study.[12]

SMS status should apply to the corporate group. This allows the regime to capture those activities which enable a firm with SMS to leverage its market power across different markets within its 'ecosystem' (even though its activities, when viewed on distinct markets, might not indicate market power). It is important that a platform's ability to leverage its market power across its ecosystem is captured because it tends to consolidate and proliferate its market power (e.g. by building customer loyalty across its ecosystem). For further discussion on leveraging, see sections 1.1.2, 2.1, 2.2 and 3.1 of this response and our response the CMA's interim report on the digital advertising market study.[13]

In line with the CMA Final Report's recommendations, the implications of SMS status should apply to both:

1. the firm's core markets (i.e. those markets in which the firm has market power and on the basis of which the SMS designation is made), and
2. adjacent markets (i.e. markets or activities into which that market power can be leveraged, for example due to the platforms' unique access to data and/or consumer attention).

For firms designated with SMS, both the Code and remedies beyond the Code, should apply in core and adjacent markets, where market power is (or could be) leveraged, to the detriment of consumers.

[12] BT, 12 February 2020. CMA online platforms and digital advertising market study BT response to interim report. paragraph 3.6, p10.
[13] Ibid. paragraphs 2.11-2.12, 3.10-3.11, p7, 10.

2 Future developments in digital markets

The pace of change in digital markets means the Digital Markets Taskforce cannot fully pre-empt which digital markets in future could have competition problems. It's important for the Taskforce to recommend a framework today that is sufficiently flexible to be applied as digital markets evolve.

Notwithstanding the need for flexibility, there are certain markets that may be susceptible to competition problems in future. The likelihood of competition problems in future depends on the strength of network effects today, which means it is more likely for the market to 'tip' in favour of one or few players and for these 'winners' to be insulated from competition which might emerge subsequently.

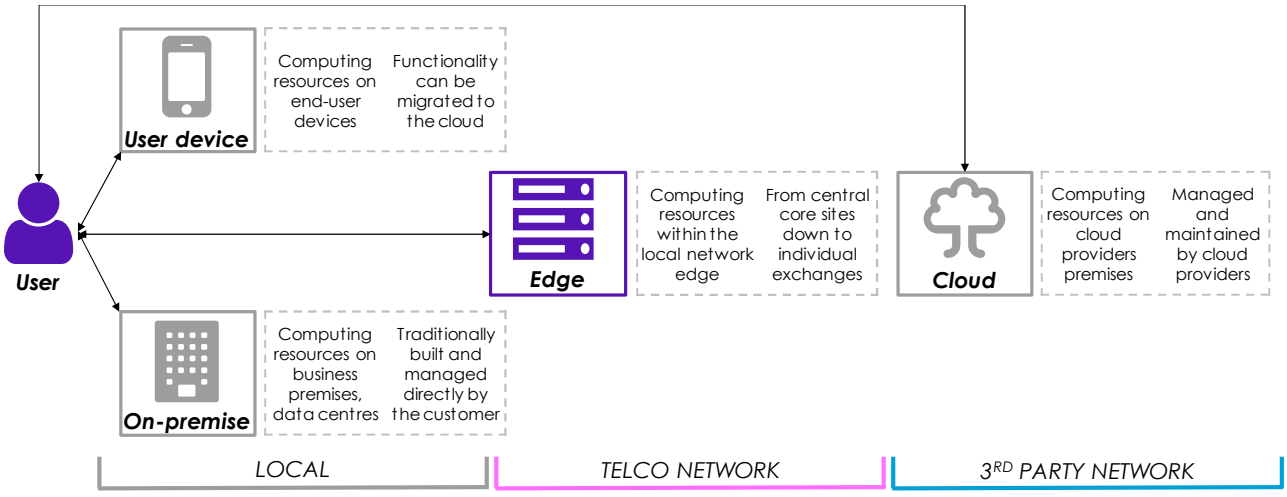
In this section, we describe a few examples of digital markets that exhibit features such as network effects that could lead to the market tipping in favour of one or few players.

2.1 Network edge

Network edge computing is a fast-growing digital market, where edge platforms provide applications closer to the end user, with benefits to end users in terms of lower latency, higher bandwidth and greater security. The demand for edge computing is expected to grow rapidly, in part because of the vast amount of traffic that is expected to be generated by Internet of Things (IoT) devices and other applications such as self-driving cars and robotics. These devices and applications are increasingly placed at the edge of computing networks, which avoids the need to carry all information across the whole network. For example, data from sensors in factories can be analysed at the edge of the network in critical industrial systems where low latency is essential.

Figure 2 shows how computing capabilities can be hosted at different locations, and how network edge compares to other forms of hosting.

Figure 2 – Hosting in the network edge as opposed to locally or on 3rd party networks



Hosting computing capabilities at the network edge has several advantages over the alternatives:

- Latency: Applications hosted at the network edge improve the performance of latency sensitive applications, such as in gaming or in machine sensors.
- Bandwidth: Delivering services closer to the end customer reduces core network contention and increases available bandwidth.
- Security: Processing sensitive data at the network edge means it is exposed to fewer external threats via the internet.

In order to deliver a network edge service, a provider must integrate a range of different capabilities across the edge value chain, as described in Figure 3 below.

Figure 3 – Capabilities in the edge value chain

Capabilities	Description	Players in market
Applications	End user software that serves a customer need	Ambient.ai, Microsoft, G Suite, X CLOUD
Platform	Scale-able 'Sandbox' capability for application developers	Windows Azure, amazon web services, Elastic Beanstalk, Anthos, MobiledgeX
Middleware (Operating System, Virtualisation)	Compatible operating system that integrates with multiple platforms	CANONICAL, Windows Server, Linux
Hardware (Server, Storage, Networking)	White-label hardware with multi-platform capability	DELL, cisco, hp, intel
Real Estate (Connectivity, Cooling, Power, Space)	Infrastructure and access to network edge	BT, vodafone, 3, O2

Note: This figure is intended to provide a description of the various capability in the edge value chain, and list some of the main players in the value chain. It is not intended to provide a comprehensive list of all players in each layer of the value chain.

Figure 3 shows the role digital platforms play in the network edge value chain. The likes of AWS and Google Anthos provide a scalable platform for application developers to reach end users. This relationship highlights certain features of the network edge market:

- **Multi-sided market**: The platform layer in the edge value chain connects applications to end users. In this sense, it is a multi-sided market because the platform can monetise on either side of the market. In reality, network edge services are currently monetised principally by selling to applications rather than to end users. For example, Mapbox is a location and data platform for mobile web developers and depends on live information that is constantly updated in real time, relying on network edge services. Mapbox purchases these network edge services from AWS.[14]
- **Network effects potentially leading to tipping**: Applications are likely to seek access to a large (potentially global) market, and benefit from using a single platform to provide network edge services. Using a single platform means the application may benefit from lower costs, less complexity of using multiple interfaces/APIs and unified security across its software. This leads to network effects, as the platform attracts more applications as it grows bigger and reaches global scale. It is no surprise that the leading network edge platforms today are global technology firms like Amazon and Google. Over time, the strength of network effects in network edge could lead to further concentration in the market, and tipping towards one or few players.
- **Ability to leverage from/to adjacent markets**: Network edge platforms have close links with cloud computing, as the respective platforms share similar software and engineering capabilities. Applications interested in network edge often purchase cloud computing services simultaneously. Cloud computing purchased alongside network edge services means applications can benefit from both low latency and access to data in a centralised location, including the capability to conduct big data analytics. Any competitive advantages built in cloud are likely to provide a competitive advantage in the adjacent network edge market. The leading position of AWS, Google and Microsoft both in network edge and cloud computing shows how competitive advantages in cloud can be leveraged into network edge in a manner that rivals not active in cloud computing cannot replicate. Rivals not active in cloud computing cannot replicate the scale, APIs and access to relevant data that large tech firms active in cloud computing have.

[14] Silconangle, 13 December 2019. As computing explodes at the network edge, cloud providers and telcos jockey for the lead.

As a result, entry into network edge by the global tech firms represents an extension of their closed ecosystems, building on their strength in cloud computing.

These features of the network edge market are similar to the features described by the Furman report in other digital markets, such as digital advertising or e-commerce. Whilst the network edge platform layer in the value chain has multiple players today, the features above mean the market could tip in favour of one player. The network edge market could develop in a way that creates competition concerns, and which may need to be reviewed under the ex-ante regulatory framework proposed by the Digital Markets Taskforce.

Digital platforms have already partnered with a number of telecoms operators to provide network edge services. Recent examples include partnerships AWS have agreed with Verizon and Vodafone.[15] In these partnerships, the telecoms provider typically provides infrastructure and access to the network edge, including connectivity and space in local exchanges and sites. If the network edge market tips in favour of one or two players, telecoms providers are left with less choice of partners, weakening their bargaining position when trying to partner. Ultimately this harms competition and end users, as telecoms providers have less incentive to invest in their part of the network edge value chain.

We also note Deutsche Telekom's presence in the network edge market as a platform, as opposed to providing just the real estate layer in the value chain. Deutsche Telekom's MobileEdgeX platform is a marketplace of edge resources and services that connects app developers with the world's largest mobile networks to power the next generation of applications and devices. In this regard, Deutsche Telekom is competing directly with the global tech firms as network edge platform.

Similarly, VMware operates in network edge as a software-defined edge platform, providing a combined edge and cloud capability for applications in IoT.[16] VMware chooses to partner with a variety of suppliers to provide a combined offering to customers, and minimise the number of interfaces that applications have to interact with. We note that one of VMware's partners is Microsoft, which suggests that smaller rivals may not be able to avoid partnering with large global firms when entering some digital markets where there are strong network effects.[17]

Deutsche Telekom and VMware's presence in this layer of the network edge platform is pro-competitive and enhances customers' and partners' choice in the market. The ex-ante regulatory framework being developed by the Digital Markets Taskforce should seek to enable such entry in digital markets, and ensure that existing players that have global scale do not engage in practices that deter or inhibit competition from smaller rivals. Indeed, these examples of entry reinforce the need to facilitate the potential for similar entry, both today and over time.

In section 3, we describe how the proposed Code of Conduct applied to firms with SMS could enable such forms of pro-competitive entry into the market.

2.2 e-SIMs

Another development in digital markets relevant to telecoms firms is the growth of e-SIMs. e-SIMs integrate the SIM as a module built into a mobile device. The SIM is embedded in the device and can be configured to connect to different networks without the need to replace any physical SIM card from the device. This means the SIM becomes reprogrammable and agnostic to the telecoms provider, and can be updated to connect to different networks as and when needed.

e-SIMs can bring tangible benefits to end users. They may provide customers with greater choice in terms of mobile coverage and flexibility, improving the service they receive. They also facilitate growth in the IoT market, where e-SIMs enable the growth of smaller connected devices because of their smaller size and lower energy requirement. Counterpoint Research estimates that global shipments of e-SIM devices will increase from 364m in 2018, up to almost 2bn devices by 2025.[18]

[15] Businesswire, AWS and Verizon team up to deliver 5G edge cloud computing. Vodafone, Vodafone Business and Amazon Web Services to bring edge computing closer to customers.
[16] VMware Edge™ – Innovate at the Edge.
[17] VMware IoT Partners.
[18] Counterpoint, 2 July 2019. Shipments of eSIM-based Devices to Reach Nearly 2 Billion Units by 2025.

Mobile device manufacturers are interested in e-SIMs in order to shift to a more subscription-based business model. As consumers of mobile handsets pay more for high-end devices, but expect them to last longer, device manufacturers may focus on subscription revenues to manage their returns from handset investment.

The growth of e-SIMs could create competition concerns that lead to consumer harm. If a global tech firm with market power in its primary market chooses to provide mobile services using e-SIMs, it may be able to leverage market power into the adjacent mobile market. In this scenario, the global tech firm could bundle services in its primary market with mobile services (delivered through e-SIMs). Bundling mobile services with services in other adjacent markets could provide the tech firm with incentives that do not ultimately benefit customers in the long run.

For example, the tech firm could structure its bundle in a manner that promotes the services in its primary market, with less focus on mobile services. Such a bundle may promote a mobile handset and accessories, with connectivity included as a supplementary benefit within the headline price. Consumers purchasing such a bundle may then be able to exercise less choice on mobile services, including on network coverage and customer service.

The tech firm could also present itself as a price-comparison agent, asking its customers who are purchasing the bundle to select their preferred network just on the basis of price. Whilst this could help the tech firm minimise its mobile network costs, the customer would not be able to exert its preferences over the quality of the network, along dimensions such as network coverage, quality of service, and speed. In this regard, the tech firm's incentive to minimise costs and promote price as the only dimension of choice in mobile networks is inconsistent with consumers' long-term interest in improving quality of service.

This misalignment in incentives may lead to consumer harms over time, as mobile network operators (MNOs) will not be able to compete effectively on the quality of service, rendering investment in the network less profitable. In a market where Ofcom is currently seeking to promote investment in 5G networks, bundling practices by global tech firms that encompass mobile could hinder MNOs' ability to invest in the network.

We note that certain forms of tying/bundling practices could be considered anti-competitive under existing competition law. However, we consider an ex-ante regulatory in fast-moving digital markets would allow swifter and more effective enforcement.

In the absence of effective ex ante regulation, other non-SMS companies would have no choice but to contract with the SMS companies on their terms, which would ultimately harm consumers.

2.3 Partnerships with Government during COVID-19

Finally, in light of COVID-19, we note the Government has engaged in a number of partnerships with large global tech firms:

- Track and trace app: Apple and Google have partnered with a number of governments and health authorities to develop an app to enable contact tracing.[19]
- Mobility data: The UK Government has been using mobility data from Google and Apple to monitor compliance with lockdown measures during COVID-19.[20] (E.g. on development of track and trace app, use of Google mobility data).

These partnerships should ensure users' data is safeguarded and competition concerns as a result of holding unique data across multiple markets are not amplified. If the data Google and Apple acquire from these Government partnerships can be combined with existing data they hold from other markets, they can be combined to generate further positive externalities for those firms. As discussed in section 1.1.2, such ability to combine data across multiple markets may make the digital ecosystem more impenetrable for smaller rivals who do not have similar data.

As discussed in section 3.4, the data remedies that the Digital Markets Taskforce is considering could help prevent this. For example, data mobility and interoperability measures could ensure the data collected by global tech firms during COVID-19 can be more easily transferred to other firms at a user's request. This would

[19] Apple, Apple and Google partner on COVID-19 contact tracing technology.
[20] Greater London Authority Covid-19 Mobility Report.

then limit the ability of firms with SMS to gain further competitive advantages that they have developed as a result of Government interventions during COVID-19.

A recent report by Lord Tyrie also predicts greater concentration in digital markets following COVID-19.[21] The rising number of business insolvencies alongside the possibility for anti-competitive mergers could lead to more concentration in many markets. For example, concentration is likely to increase in online retail markets as consumers change shopping habits following COVID-19. Amazon is especially well-placed to take advantage of this change, building on its existing presence as a large e-commerce retailer.

We agree with this assessment of how COVID-19 could affect competition in many markets, and how competition policy could help contribute towards the economic recovery, including:

- Robust merger control: Review 'failing firm' mergers with the right degree of scrutiny and prevent 'killer acquisitions' that substantially lessen competition.
- Stronger need for regulatory oversight of digital platforms: Develop the regulatory tools needed to address concentration in digital markets, particularly in e-commerce, where concentration is likely to increase following changes in consumers habits after COVID-19.

[21] The Rt Hon. Lord Tyrie, July 2020. How should competition policy react to coronavirus?. Discussion paper.

3 Remedies applying to SMS firms for addressing harm

3.1 The anticompetitive effects

The CMA's digital advertising market study has described the types of harm that may occur in digital advertising markets as a result of Google and Facebook having market power. The CMA identifies a range of consumer harms including reduction in innovation and quality, higher prices paid for goods and services, negative impacts on privacy and data collection and other broader societal harms such as online harms.

The CMA's description of harms could apply in other digital markets, including the ones described above in section 2. We describe two forms of harm that could arise in other digital markets.

3.1.1 Leveraging across adjacent markets

Digital firms with SMS often operate across multiple adjacent markets, within an 'ecosystem' of products and services. As described in section 2.1, SMS designation should reflect a platform's ability to leverage its market power across its ecosystem, which allows platforms with market power in one market to consolidate and proliferate their market power across adjacent markets, leading to worse outcomes for consumers.

The practice of leveraging market power across adjacent markets can impose harms on consumers and competitors in these adjacent markets. Where a competitor in the adjacent market cannot replicate the offering of the large platform that is entering the market, the competitor may have to exit. This could happen in instances where the large platform has unconstrained market power in its primary market, which means smaller competitors in the adjacent market cannot replicate the offering of the larger platform.

Even in cases where the digital regulator elects to impose remedies that tackle some of the sources of market power in certain digital markets, for example imposing data remedies, these may be insufficient to prevent the firm with SMS from leveraging market power across adjacent markets. The market may already have tipped in favour of one or few players, and data remedies to tackle the source of market power could take time to be effective. During this period, the firm with SMS could still enter adjacent markets and engage in strategies that lead to competitors exiting the adjacent market.

Firms with SMS can leverage market power unfairly into adjacent markets in several ways:

- Pricing below cost: A firm with SMS in a primary market could use profits in that market to enter into an adjacent market and set prices below cost in that adjacent market, below what could be sustainably achieved by rivals in the adjacent market.
- Using data in primary market to unfairly gain advantage in adjacent market: Firms with SMS in digital markets often acquire data about users and customers that is unique and cannot be replicated by other firms. Much of this data is relevant in adjacent markets and allows firms with SMS to target or sell to customers in a way that other rivals that do not have this data cannot.
- Tying/bundling: Firms with SMS could tie or bundle services across multiple adjacent markets and include the product/service in which it has market power. Such a bundled product cannot be replicated by other rivals who do not have such unconstrained market power in the SMS firm's primary market.

The above strategies could lead to foreclosure of rivals. Ultimately such behaviour is likely to harm consumers. If rivals are forced to exit the market, the resulting increase in market concentration may raise prices, worsen quality, compromise data privacy and reduce the incentives for further innovation.

Whilst existing competition law addresses such foreclosure strategies, the process for bringing cases under existing competition law could be improved to make it more timely. We therefore believe an ex-ante regulatory framework that builds on competition law principles would protect consumers and competitors from unfair leveraging practices.

The Digital Markets Taskforce asks for examples of the harm from anti-competitive behaviour in digital markets. Some illustrative examples of harm that may arise from anti-competitive behaviour in new digital markets include:

- Network edge: A firm with SMS in cloud computing leveraging its market power in cloud to provide services in network edge at below the price of an efficient rival in network edge. This could lead to the firm with SMS gaining an unfair advantage in network edge, with potentially higher customer prices and less innovation in the long run.
- IoT: A firm with SMS in e-commerce leveraging its market power to bundle services across e-commerce and IoT devices in a manner that cannot be replicated by rivals. Other providers of IoT products and services would be unable to replicate such a bundle on the same terms and may have to exit the market.
- e-SIMS: A firm with SMS in mobile app stores leveraging its market power by offering e-SIM connectivity alongside other devices and services, without providing customers with much choice over the connectivity provider. By disintermediating the customer from the connectivity provider, the customer is no longer able to exercise its connectivity preferences (including on dimensions such as network coverage and customer service), which inhibits fair competition among connectivity providers. This could ultimately lower the incentives for connectivity providers to invest in the network.

3.1.2 Onerous or unfair terms

Digital firms with SMS can also exercise their market power within the market in which they have acquired SMS. The Furman report and the CMA's digital advertising market study describe the harms on users and customers if a firm has SMS.

In addition to the direct harms on users and customers, there are also indirect harms that could arise out of the behaviour of a firm with SMS in relation to its partners and suppliers. In some markets digital firms seek to partner with other firms in a different part of the value chain. If a digital firm has SMS in one part of the value chain in a particular market, it could abuse its position through the commercial relationships it strikes with partners in other parts of the value chain. The CMA has already discussed such behaviour by firms with SMS in the digital advertising value chain.

When a firm with SMS chooses to partner with another firm, it could impose onerous or unfair terms on that partner. This could include excessive pricing, skewed commercials in favour of the SMS firm, exclusivity conditions, most-favoured nation clauses or broad information sharing requirements. The partner may not be able to negotiate freely with the SMS firm, as its bargaining power will be limited by the lack of choice of alternatives to the SMS firm. By contrast, the SMS firm benefits from much greater negotiating power as it can choose between multiple potential partners.

The ability of an SMS firm to impose onerous or unfair terms on its suppliers or partners harms consumers because it limits the competitive pressure from the partners and harms incentives to invest. We illustrate this with a few examples:

- Cloud gaming: A telecoms provider could partner with a large digital firm to provide cloud gaming services. In such a partnership, the telecoms provider may distribute the service to its existing and new customers, whilst the digital firm provides the cloud gaming platform. If the digital platform grows to have SMS status in cloud (including in gaming), it could impose unfair terms on the telecoms firm. Ultimately this could harm the telecoms firms' incentives to invest in connectivity to support cloud gaming, harming consumer outcomes.
- Network edge: Telecoms firms are already engaging in partnerships with large digital firms to provide mobile network edge services. The commercial terms in these partnerships are often revenue-sharing models, where each party receives a proportion of the sales they contribute. If the large digital firm has SMS in providing network edge platforms, it could impose terms with skewed commercials in favour of the digital firm or impose exclusivity such that the partner could not partner with other firms. This would raise barriers to entry for new network edge platforms, reducing innovation over time to the detriment of consumers.

3.2 The Code of Conduct

We explain the benefits of, and our support for, a Code in our response to the CMA's study on digital advertising at section 3. The Code represents a proportionate means to regulate SMS firms' wide-ranging activities in their core platforms and adjacent markets where they could leverage their power, whilst leaving significant scope for these firms to continue to innovate. The objectives of 'fair dealing', 'open choices' and 'trust and transparency' are sufficiently broad to tackle the harmful effects that may arise, provided that it is

understood that these apply to conduct vis-a-vis businesses and consumers. The onus would be on the regulated firms to demonstrate their compliance i.e. why their conduct is objectively justifiable. The objective of 'fair dealing' benefits from the fact that what is 'fair' will be context specific, enabling differing market dynamics to be considered, but is sufficiently well recognised in numerous regulatory contexts to provide meaning.

As part of demonstrating their compliance with the Code of Conduct, firms with SMS should be expected to provide assurance about the principles and processes that have been built into their day-to-day operations to comply with the Code. For example, the digital regulator could review the firm's governance processes to see if they are consistent with the principles of the Code. By assessing the process of how the firm conducts its operations, the regulator can minimise the lag between examining certain business practices and enforcement of the Code.

As described in section 2, future developments in network edge and e-SIM may give rise to consumer harm. Taking the example of network edge, we envisage that as the market begins to tip, over multiple rounds of negotiations, price and non-price terms are likely to become significantly less favourable to telecoms operators. As the market power of the platform operator grows it will become well positioned to accelerate its grip on the market though clauses such as exclusive supply, preventing the telecoms operator from dealing with multiple edge platforms and in time weakening the competitive dynamics as alternative providers are unable to compete. The Code could condition the platform businesses to hold back from requests targeted at weakening their competitors or partners. Other contractual terms such as unreasonable requirements to hand over data could also be outlawed.

Another means of assessing the Code's effectiveness is to re-appraise what may have happened in relation to the abuses found in the anti-trust investigations against the platform firms had a Code been in place. Taking the Google Android investigation as an example the three abuses were:

- requiring manufacturers to pre-install the Google Search app and browser app (Chrome), as a condition for licensing Google's app store (the Play Store);
- making payments to certain large manufacturers and mobile network operators on condition that they exclusively pre-installed the Google Search app on their devices; and
- preventing manufacturers wishing to pre-install Google apps from selling even a single smart mobile device running on alternative versions of Android that were not approved by Google (so-called "Android forks").

All of these issues could fall foul of the fair dealing objective (or possible open choices) with the advantage that, rather than being arbitrated on after the harm had arisen, the Code would have enabled a decision at the time the issues had real relevance to the development of the market in question.

3.3 Mergers involving SMS firms

Acquisitions by SMS platforms can give rise to harms given their increased size, reach and spending power, and the increased risk of harm from incorrect clearances (false negatives) in the digital sphere.[22] We therefore agree that there should be heightened scrutiny of acquisitions by SMS firms. With respect to the substantive components of such a regime, we suggest the following:

- The substantive framework of assessment should remain the same, i.e. 'significant lessening of competition' test. In applying this framework to digital markets, however, the Taskforce should be particularly mindful of the unique features of digital markets and theories of harm e.g. digital firms leveraging their power into adjacent markets through acquisition or using acquisition to reinforce systemic or strategic status in a single or ecosystem of digital market(s). Mergers may allow SMS platforms to leverage their market power by e.g. facilitating anti-competitive tying/bundling practices or allowing them to leverage their unique access to data into an adjacent market in a way that existing competitors cannot compete with.[23] The framework

[22] See e.g. the LEAR report on Ex-post Assessment of Merger control decisions in digital markets: "Network effects often make the structure of digital markets quite concentrated and barriers to entry rather high, making competition for the market the main mechanism left to discipline incumbents and potential competitors particularly valuable. Thus, the social costs of an incorrect clearance may be higher in digital markets than they are in traditional markets, which may justify a different approach to digital markets." (p. xiv) See also Mike Walker, 2020. Competition policy and digital platforms: six uncontroversial propositions, European Competition Journal. 16:1, 1-10, p6-7 ("Walker paper")

[23] See our response to the CMA call for information on digital mergers of 12 July 2019, linked to this response for reference.

should also be applied in a way that is forward-looking so to capture the rapid changes that occur in digital markets.[24]

- Digital mergers often involve complex and rapidly changing business models that make it difficult to assess the competitive effects. Authorities can reduce this uncertainty by making sure they have a full understanding of the commercial rationale for the acquisition. This includes the immediate monetisation strategy and the medium to long-term strategy for the entire combined business, to assess whether the transaction is intended to create a wider ecosystem of capabilities by combining datasets from different markets.[25] By taking account of the full commercial rationale for the transaction, the merger assessment fully takes into account the value of the target as part of a strategy of leveraging market power into adjacent markets through acquisition, as discussed above.
- The regime should support an assessment of non-competition concerns such as data protection, in a similar way to the European Commission's analysis in *Microsoft/LinkedIn* (2017) and in consultation with the ICO where appropriate.[26] In that case, the Commission found that data privacy was an important parameter of competition between professional social networks on the market, which could have been negatively affected by the transaction.

3.4 Remedies to tackle sources of market power

The Furman report described several reasons why some digital firms may have acquired and maintained their market power, one being the data advantage of these firms. A firm that has acquired valuable data can cement its position in the market by making use of data feedback loops. The Furman report distinguished between two different types of feedback loops:[27]

- User feedback loops: Firms collecting data about their users/customers can use the data to improve the quality of their service, thereby attracting more users/customers. This creates networks effects as described in section 1.1 above.
- Monetisation feedback loops: Revenues generated from customers can be reinvested to attract more users. This feedback loop continues even as user adoption slows because it only relies on surplus profits from customers to be reinvested.

The possession of unique data amplifies both of these feedback loops, and helps maintain a digital firm's competitive advantage in a market. By holding valuable data that rival firms cannot access or readily replicate, barriers to entry and expansion in the market remain high, meaning the incumbent firm is less likely to be challenged in future. The CMA's digital advertising market study demonstrates how unique access to data has helped Google and Facebook maintain very high market shares in search and display advertising markets for a long period of time.

The Digital Markets Taskforce is asking what remedies could help tackle the sources of market power digital firms have. Given the importance of data feedback loops, remedies must focus on tackling them so that barriers to entry in digital markets can be lowered. We discuss two of the data remedies proposed by the Furman report and the CMA's digital advertising market study, and how they can address sources of market power in digital markets.

We note that pre-emptive measures may be necessary in some instances to prevent harms in markets that tip. However, they should be based on clear evidentiary thresholds that balance the benefits to consumers of using one platform against the cost and harms associated with greater market power. Where the digital regulator is unsure whether additional remedies are necessary to tackle sources of market power, they may be better addressed by the Code of Conduct for firms with SMS. In these markets, the risk of a firm with SMS abusing its position is more likely to exceed the risk of reducing the incentives of incumbents to innovate.

[24] Ibid.
[25] Mike Walker, 2020. Competition policy and digital platforms: six uncontroversial propositions, European Competition Journal. 16:1, 1-10, p8.
[26] COMP M. 8124, Microsoft/LinkedIn, 20 January 2017.
[27] Digital Competition Expert Panel, March 2019. Unlocking digital competition. paragraph 1.73, p33.

3.4.1 Data mobility

The CMA's digital advertising market study proposed that the new digital regulator should have the power to impose data mobility to address sources of market power in digital markets. Data mobility would be applied to firms with SMS and would allow consumers to share the data platforms hold about them with other platforms, including new entrants. This could improve competition by lowering data-related barriers to entry, and help consumers achieve greater benefits from the value of their data.

We support a data mobility remedy applied to firms with SMS. But such a remedy will only be effective if the regulator makes the user experience central in designing the remedy. If users cannot seamlessly exert their preferences about how to move their data to a 3rd party, the data mobility remedy will be ineffective.

Users and customers of SMS firms trust them to hold their data securely and not to share it with 3rd parties without their consent. The terms of this relationship in digital markets is blurred by the nature of the value exchange between digital firms and end users. End users in digital markets often do not pay a positive monetary price to access a service, and instead provide their data in exchange for the service. However, consumers in digital markets often have limited control about how much data they share, or how it is then used by the digital firm. The value exchange in digital markets is often opaque and does not allow the end user to fully control and exercise choice over how their data is used. Both the Furman report and the CMA's digital advertising market study highlighted the lack of consumer control over data as being a factor in creating competition problems in digital markets.

We see a data mobility remedy as an enabler of greater consumer control over their data. Data mobility applied to SMS firms enables innovation that allows customers to exert more choice over how their data is shared, monetised and kept private.

We already see some products in the market that allow consumers to secure their data and choose which commercial entities can have access to their data. Companies such as Yoti, Jumio, Trulioo and Veridu provide a range of digital identity services, that provide users with greater control over their digital identity and data. Regulators and industry bodies have highlighted these Personal Information Management Systems (PIMS) as potentially offering individuals more control over their personal data.[28]

The size of this market is currently limited by the ability of consumers to exercise choice and their concerns about doing so. The potential for PIMS to transform consumer control over data was noted as long ago as 2011,[29] yet the market has not yet reached its potential.

Data mobility could help these intermediaries ensure consumers can achieve a fair exchange of data for the services offered by digital platforms. By requiring firms with SMS to move user data to another platform upon user request, intermediaries can assist users with that process and compete to provide it in a secure way whilst protecting users' privacy. This role should not be ring-fenced to the larger tech players who, as noted by the CMA can end up "*acting in a quasi-regulatory capacity in relation to data protection considerations, setting the rules around data sharing not just within their own ecosystems, but for other market participants*".[30]

A report commissioned by DCMS estimated data mobility could provide productivity and efficiency gains equivalent to a £27.8bn increase in GDP.[31] This estimate did not fully reflect the benefits of improvements in competition in digital markets enabled by data mobility, which were described in the report but not quantified. We consider the consumer benefits resulting from enhancement to competition arising from data mobility could contribute further to the UK economy.

3.4.2 Interoperability

Closely linked to data remedies, the Furman report and the CMA's digital advertising market study also considered interoperability remedies. Systems of open standards that enable interoperability support innovation that is compatible with existing technologies and platforms, which helps spread the benefits of that innovation. It enables new entrants to create services that are compatible with existing large platforms, providing access to a larger market to test the value of a new proposition.

[28] See for example comments from the European Data Protection Supervisor and Ctrl+Shift.
[29] Ctrl+Shift, 2 September 2011. The opportunity of the century.
[30] CMA, 1 July 2020. Online platforms and digital advertising – Market study final report. paragraph 47, p16.
[31] Ctrl+Shift, 2018. Data Mobility: The personal data portability growth opportunity for the UK economy. p10.

In the telecoms industry, the International Telecommunication Union (ITU) helps develop the technical standards that ensure networks and technologies seamlessly interconnect, many of which are built on open standards.

The ITU's role in setting these standards means there isn't a costly international battle over preferred technologies. The ITU encourages a contribution-led, consensus-based approach to standards development, where all countries and firms, regardless of their size, are afforded equal rights to influence the development of those standards.

Communications firms have strong incentives to facilitate the development of these standards as it aids faster adoption of new technologies and enables cross-border interconnection. Moreover, no single communications firm has a position of market power internationally to dictate the way in which these terms should be set. As a result, the private sector works through collaboration to develop standards efficiently. The positive engagement of communications firms is demonstrated by the fact that 90% of the ITU's standards are adopted by industry participants. A recent example of development of such technical standards relates to approval of the 3rd Generation Partnership Project (3GPP) 5G technology as an international 5G standard, supporting diverse 5G applications.[32]

Systems of open standards that enable interoperability can also bring considerable benefits in digital markets, particularly given the scope for innovation enabled by interoperability in digital markets. However, in digital markets where a firm may have SMS, that firm does not have the incentive to ensure standards are open. The CMA's digital advertising market study noted that firms with SMS may entrench their competitive advantage by denying third parties access to data, whilst maintaining their own right to use this data within their 'walled gardens'.[33] Therefore, regulatory intervention is required in digital markets to develop systems with open standards.

The Furman report noted that IoT could be an area of digital services where systems of open standards could boost innovation.[34] BT is active in these markets, designing new IoT solutions for our customers using our converged fixed and mobile networks.[35] These include Machine to Machine technologies, where BT uses its network to provide automated solutions, for example sensors in a supermarket van measuring food temperature or a microchip in a car monitoring fuel.

In many of these markets we choose to partner and collaborate with other firms,[36] with specialist expertise. However, if the IoT market evolves in a way where one or few existing global digital firms grow their position to the level of having SMS, smaller rivals may be left with little choice of partners and a poor negotiating position. If smaller rivals are unable to monetise valuable innovations they bring to the market, the incentives for future innovation in IoT would be weaker, to the detriment of consumers.

Systems with open standards could therefore lower the barriers to entry and enable smaller firms to enter the market and bring innovations that seamlessly interconnect with existing platforms. They also enable firms pooling data from different sources to generate positive externalities, and thereby bring further innovation to consumers.

[32] Capacity Media, 17 July 2020. ITU endorses 3GPP 5G as 5G standard.
[33] CMA, 1 July 2020. Online platforms and digital advertising – Market study final report. paragraph 48, p16.
[34] Digital Competition Expert Panel, March 2019. Unlocking digital competition. Box 2.G, p73.
[35] BT. The Internet of Things. About us.
[36] BT. The Internet of Things. Our Partners.

4 Procedure and structure of new competition approach

The characteristics of speed, flexibility, clarity and legal certainty are important for the substantive and procedural structure of the new regulatory regime. These should be complemented by principles of proportionality, effectiveness, and ensuring due process through consultation and rights of appeal for both the platforms and materially affected persons.

The Taskforce must ensure that the new regulatory framework allows timely designation of firms with SMS, effective investigation and enforcement powers and rights of appeal.

In particular, we support the proposals in the CMA's Final Report for a statutory deadline for a formal investigation under the Code (para.7.96), and for a power to impose substantial financial penalties (para.7.100) to deter breaches of the Code, in line with general competition law principles.

We also refer the Taskforce to the principles of 'anticipatory regulation', developed by Nesta.[37] Anticipatory regulation provides regulators with a set of behaviours and tools to help identify, build and test solutions to emerging regulatory challenges. The principles of anticipatory regulation are set out in Figure 4.

Figure 4 – Principles of anticipatory regulation

Source: Nesta, Anticipatory regulation

Central to the principles of anticipatory regulation is that regulatory analysis is forward-facing, and embraces the challenge of making regulatory decisions in the face of greater uncertainty, less evidence and a greater number of risks.[38] This approach requires wider inclusion and engagement and a willingness to test and evolve regulation, for example through regulatory sandboxes.

We also note that the new digital regulator should have the requisite information-gathering powers to understand the business models and rationale behind different commercial practices. Whilst some of this information be subject to the jurisdiction of the new digital regulator in the UK, much of this may be outside its jurisdiction in other countries. In such cases, the regulator will have to resort to public sources of information. The regulator should have the ability to apply regulation on the basis of such public information, if it cannot access privately held information outside of its national jurisdiction.

[37] Nesta. Anticipatory regulation.
[38] Nesta, November 2017. A working model for anticipatory regulation. A working paper. P8.

The new ex-ante regulatory regime should complement existing regulatory regimes, including sector specific ex-ante regulatory regimes and general competition law. However, the regime should avoid creating an additional layer of ex-ante regulation where sector specific regulation (such as telecommunications regulation) already exists.

Data protection and privacy law already promotes fairness, transparency and consumer choice – any new approach should leverage rather than duplicate this regime.

For more detail, see our CMA response,[39] including at paras 1.7 and 2.10 (relationship with existing regulation), 2.13 (timeframes and periodic review of designation) and 3.5 (powers to impose Code of Conduct and other remedies).

[39] BT, 12 February 2020. CMA online platforms and digital advertising market study BT response to interim report.

Appendix A CMA questions

Question number	Relevant section in our response
1	1.1
2	1.2
3	1.1
4	2
5	3.1
6	3.2
7	3.3
8	3.4
9	3.4
10	4
11	4
12	4

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