

Unlocking digital competition

Report of the Digital Competition Expert Panel



March 2019

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Expert Panel

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The Rt Hon Philip Hammond MP

Chancellor of the Exchequer

The Rt Hon Greg Clark MP

Secretary of State for Business, Energy and Industrial Strategy

Dear Chancellor of the Exchequer and Secretary of State for Business, Energy and Industrial Strategy,

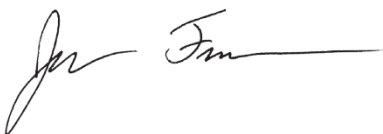
Thank you so much for asking me to lead a review to make recommendations on changes to competition and pro-competition policy to help unlock the opportunities of the digital economy. I began the project with a firm conviction of the importance of the question and an open mind as to the answers. An intensive process of evidence gathering, discussion and debate has led the Panel to a set of conclusions about the path forward. These policies would create substantial benefits for UK consumers, businesses trying to start up and scale up in the UK, and greater predictability for the major digital companies. Effective implementation in the UK could also serve as a model for the many governments around the world wrestling with these same questions.

We believe the standard tools of competition policy, evaluating whether mergers can proceed and whether antitrust action is warranted to remedy abuses by companies, can play a role in helping to promote competition and the associated better outcomes for consumers and innovation. To do so, competition policy will need to be updated to address the novel challenges posed by the digital economy. Some of these updates can happen within current powers, but legal changes are important to ensure that this job can be done effectively.

The biggest gains, however, will come from going beyond these tools to focus on policies that actively promote competition, foster entry by new competitors, and benefit consumers. This will entail a code of conduct for the most significant digital platforms, measures to promote data mobility and systems with open standards, and expanding data openness. By working with businesses and other stakeholders to set up predictable rules in advance, this can create a regime that allows competition and innovation to thrive.

This report is the result of a fruitful collaboration. My fellow panel members Diane Coyle, Amelia Fletcher, Philip Marsden and Derek McAuley brought invaluable expertise in economics, law and computer science. The secretariat staff was tireless and greatly exceeded the high expectations I had for the UK civil service under the leadership of Dominic Curran and including Mark Anderson, Catherine Batchelor, Joe Downie, Tom Fish, Henry Smith, and Geoffrey Thornton. Keldon Bester, Mitchel Gainer and Wilson Powell III at the Harvard Kennedy School also provided excellent research assistance. Government was co-operative throughout this review, providing both support and ideas while giving us the space to make our own independent recommendations. Finally, I hope you will indulge me in letting me thank my wife Eve Gerber and children Henry, Louisa and Felix for putting up with my many trips to the UK and other work in the course of this review.

Yours sincerely,



Jason Furman

Chair, Digital Competition Expert Panel

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Introduction from the Expert Panel

The United Kingdom has an opportunity to seize the full potential of the digital sector, increasing the benefits for consumers and fostering an even more vibrant ecosystem for businesses. Competition should be at the heart of this strategy, leading companies to produce better outcomes for consumers, helping new companies enter and grow, and continuing to encourage existing companies to innovate.

Some people argue that digital platforms are natural monopolies where only a small number of firms can succeed, making competition impossible. The logical conclusion of that view is utility-like regulation of the type used for electricity distributors. Others believe there is already adequate competition and no policy changes are needed to maintain it. We disagree with both views, seeing greater competition among digital platforms as not only necessary but also possible – provided the right policies are in place.

The biggest missing set of policies are ones that would actively help foster competition. Instead of just relying on traditional competition tools, the UK should take a forward-looking approach that creates and enforces a clear set of rules to limit anti-competitive actions by the most significant digital platforms while also reducing structural barriers that currently hinder effective competition. These rules should be based on generally agreed principles and developed into more specific codes of conduct with the participation of a wide range of stakeholders. Active efforts should also make it easier for consumers to move their data across digital services, to build systems around open standards, and to make data available for competitors, offering benefits to consumers and also facilitating the entry of new businesses. Implemented effectively, this approach would be more flexible, predictable and timely than the current system.

The existing competition tools also need to be updated to more effectively address the changing economy. Ensuring that competition is vibrant requires ensuring that there are competitors. Merger control has long had this role and in the context of the digital economy it needs to become more active with an approach that is more forward-looking and more focused on innovation and the overall economic impact of mergers. Even with clearer *ex ante* rules, *ex post* antitrust enforcement will remain an important backstop – but it needs to be conducted in a faster and more effective manner for the benefit of all of the parties.

Many countries are considering policy changes in this area. The United Kingdom has the opportunity to lead by example, by helping to stimulate a global discussion that is based on the shared premise that competition is beneficial, competition is possible,

but that we need to update our policies to protect and expand this competition for the sake of consumers and vibrant, dynamic economies.

The work of the Expert Panel

The Digital Competition Expert Panel was established in September 2018. Our terms of reference asked us to:

- consider the potential opportunities and challenges the emerging digital economy may pose for competition and pro-competition policy, and to make recommendations on any changes that may be needed

In particular, we were asked to examine:

- the impacts of the emergence of a small number of big players in digital markets such as social media, e-commerce, search, and online advertising
- appropriate approaches to mergers, takeovers and anticompetitive practices in digital markets
- opportunities to enhance competition, to increase business innovation and expand consumer choice
- how best to assess consumer impacts in ad-funded products and services that are 'free' to consumers

Underpinning our approach is the written evidence we have taken, submitted by over 60 experts and stakeholders, and gathered through 11 round tables, and further consultations with businesses, economists, lawyers, and UK and international government departments and agencies.

Within a complex and often contested field, we have sought to undertake an independent, expert-led assessment of the available evidence in order to provide government with a reasoned judgement on the best way forward.

The approach has been to review the evidence with an open mind, sift and weigh which interpretations better fit the facts, and which policy proposals provide the most convincing route to addressing the issues found. This has involved judgement and the conclusions reached will inevitably and rightly provoke further debate. The Panel has been able to develop this assessment drawing on its members' interdisciplinary mix of expertise, drawn from economics, law, computer science and competition policy.

The general propositions that guide our recommendations

Our policy recommendations are based on the following general propositions:

- 1 **The digital economy is creating substantial benefits.** The digital economy has benefited consumers by creating entirely new categories of products and services. Many of these products and services are high-quality with low prices, in many cases a monetary price of zero. It has also benefited businesses by lowering the cost of starting a business and scaling up through cloud computing, access to platforms, and digital comparison tools. In some areas this has facilitated greater competition, enabling more entry of new businesses, growth of existing businesses, and facilitating multi-homing and digital comparison tools that allow users to make better-informed choices to switch between businesses or use multiple platforms simultaneously.

- 2 **In many cases, digital markets are subject to ‘tipping’ in which a winner will take most of the market.** Digital markets vary greatly so no general rules apply to all of them. But in many cases tipping can occur once a certain scale is reached, driven by a combination of economies of scale and scope; network externalities whether on the side of the consumer or seller; integration of products, services and hardware; behavioural limitations on the part of consumers for whom defaults and prominence are very important; difficulty in raising capital; and the importance of brands.
- 3 **Concentration in digital markets can have benefits but also can give rise to substantial costs.** A large part of the reason for the emergence of one or a small number of dominant firms is that it is more efficient and thus better for consumers or businesses. That may be because a firm grows because it offers better, more innovative products or provides integration that benefits consumers. It also may be because it is more efficient to have one firm with substantial scope of network benefits instead of many firms. But concentration can have substantial downsides as well. It can raise effective prices for consumers, reduce choice, or impact quality. Even when consumers do not have to pay anything for the service, it might have been that with more competition consumers would have given up less in terms of privacy or might even have been paid for their data. It can be harder for new companies to enter or scale up. Most concerning, it could impede innovation as larger companies have less to fear from new entrants and new entrants have a harder time bringing their products to market – creating a trade-off where the potential dynamic costs of concentration outweigh any static benefits.
- 4 **Competition for the market cannot be counted on, by itself, to solve the problems associated with market tipping and ‘winner-takes-most’.** Many of the dominant technology companies of the past seemed unassailable but then faced unexpected competition due to technological changes that created new markets and new companies. For example, IBM’s dominance of hardware in the 1960s and early 1970s was rendered less important by the emergence of the PC and software. Microsoft’s dominance of operating systems and browsers gave way to a shift to the internet and an expansion of choice. But these changes were facilitated, in part, by government policy – in particular antitrust cases against these companies, without which the changes may never have happened. Today, network effects and returns to scale of data appear to be even more entrenched and the market seems to have stabilised quickly compared to the much larger degree of churn in the early days of the World Wide Web. Moreover, to the degree that the next technological revolution centres around artificial intelligence and machine learning, then the companies most able to take advantage of it may well be the existing large companies because of the importance of data for the successful use of these tools. New entry may still be possible in some markets, but to the degree that entrants are acquired by the largest companies – with little or no scrutiny – that channel is also not operative.
- 5 **Government policy and regulation also has limitations.** Policy change and enforcement can be slow and unpredictable, which is even more costly than normal in rapidly evolving technology markets. Government and regulators are at an enormous informational disadvantage relative to technology

companies. Like consumers, they can also be subject to behavioural biases. Regulators may be captured by the companies they are regulating. Any approach to policy needs to be mindful of these downsides and make sure that it is designed to encourage competition, while increasing the speed and predictability of enforcement.

The Panel believes that competition policy should be given the tools to tackle new challenges, not radically shifted away from its established basis. In particular, policy should remain based on careful weighing of economic evidence and models. Consumer welfare is the appropriate perspective to motivate competition policy and a completely new approach is not needed. This approach is flexible and can take into account broader considerations than price, narrowly defined, and also include choice, quality and innovation, among other areas. We have developed a set of policy, legal and regulatory proposals that would help achieve these goals.

Our proposals

Our central conclusion is that digital markets will only work well if they are supported with strong pro-competition policies that open up opportunities for innovation, and counter the forces that can lead to high concentration and a single winner.

Solely relying on merger and antitrust enforcement can create delays and uncertainty that can be bad for large incumbents and small entrants alike. Neither is well designed for the intensive and ongoing work that needs to be done to facilitate competition and entry through making it easier for consumers to move and control their data, and for new digital businesses to interoperate with established platforms. An approach that uses these pro-competition tools can make it easier for new businesses to enter digital markets, give more predictability to all companies about the rules and standards that apply, spur innovation and provide consumers with higher quality and greater choice.

This is why the Panel is recommending the establishment of a **digital markets unit**, given a remit to use tools and frameworks that will support greater competition and consumer choice in digital markets, and backed by new powers in legislation to ensure they are effective.

This unit would have three functions. **First**, it would develop a **code of competitive conduct**, with the participation of stakeholders. This would be applied only to particularly powerful companies, those deemed to have 'strategic market status', in order to avoid creating new burdens or barriers for smaller firms.

Second, the digital markets unit would be charged with enabling **greater personal data mobility and systems with open standards** where these tools will increase competition and consumer choice. Some companies are already making substantial efforts in this regard, like the Data Transfer Project that includes Microsoft, Google, Facebook and Twitter. In some cases the obstacles to interoperability are technical, in some cases due to lack of co-ordination; but in other cases the obstacles are due to misaligned incentives as such interoperability might have broader benefits but to the cost of the dominant companies. Email standards emerged due to co-operation but phone number portability only came about when it was required by regulators. Private efforts by digital platforms will be similarly hampered by misaligned incentives. Open Banking provides an instructive example of how policy intervention can overcome technical and co-ordination challenges and misaligned incentives by creating an

adequately funded body with the teeth to drive development and implementation by the nine largest financial institutions.

Third, the digital markets unit would be able to advance **data openness** where access to non-personal or anonymised data will tackle the key barrier to entry in a digital market, while protecting privacy.

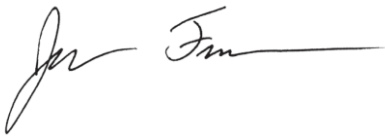
Our recommendations also update **merger policy** to protect consumers and innovation, preserving competition for the market. Central to updating merger policy is ensuring that it can be more forward-looking and take better account of technological developments. This will require updated guidance about how to conduct these assessments based on the latest economic understanding, and updated legislation clarifying the standards for blocking or conditioning a merger. We believe that the correct application of economic analysis would result in more merger enforcement. This would be welcome given that historically there has been little scrutiny and no blocking of an acquisition by the major digital platforms. This suggests that previous practice has not had any 'false positives', blocking mergers that should have been allowed, while it may well have had 'false negatives', approving mergers that should not have been allowed.

Merger control can only address the use of acquisitions to expand the scale and scope of the incumbent digital companies but cannot address their existing scale and scope. Doing this requires **antitrust policy**. There is nothing inherently wrong about being a large company or a monopoly and, in fact, in many cases this may reflect efficiencies and benefits for consumers or businesses. But dominant companies have a particular responsibility not to abuse their position by unfairly protecting, extending or exploiting it. Existing antitrust enforcement, however, can often be slow, cumbersome, and unpredictable. This can be especially problematic in the fast-moving digital sector. That is why we are recommending changes that would enable more use of interim measures to prevent damage to competition while a case is ongoing, and adjusting appeal standards to balance protecting parties' interests with the need for the competition authority to have usable tools and an appropriate margin of judgement. The goal is to place less reliance on large fines and drawn-out procedures, instead enabling faster action that more directly targets and remedies the problematic behavior.

As a Panel we have not been asked to consider wider social questions around digital markets and our recommendations do not specifically address privacy, harmful online content and other issues. However, it is clear that well-functioning competitive digital markets have the potential to develop new solutions and increased choice for consumers, where privacy and quality of service can be differentiating factors. The digital markets unit could also work with others to secure wider policy goals, using its technical expertise, engagement with markets and competition-first approach to solve problems.

Clearer principles, rules and standards can support and enhance competitiveness and success in the global economic arena. For example, the UK is a leader in global banking in part thanks to its regulatory environment. The UK is a great place to start a FinTech company in part because of Open Banking, and the approach of the Financial Conduct Authority and the Payment Systems Regulator. Applying similar regulatory principles can improve the economic environment in the UK for digital start-ups and scale-ups while creating more predictability for large incumbent firms.

Many digital policies would ideally be globally co-ordinated and enforced. In practice this is often not feasible. If policy cannot be fully co-ordinated, then countries can at least learn from each other to work out how best to preserve and expand the enormous benefits economies around the world have gained from the digital sector and take advantage of the great additional potential that it still has. Global dialogue and sharing of ideas and co-ordinating on merger enforcement and other policy actions would help. **Global leadership** can also play an important role by developing and demonstrating improved models to approach policy. The UK's long tradition of rule of law, a business-friendly environment, and expert independent enforcers and regulators give it the potential to play this global leadership role by adopting the recommended strategic approaches and specific actions put forward by the Panel.



Jason Furman



Diane Coyle CBE



Amelia Fletcher OBE



Derek McAuley



Philip Marsden

Summary and rationale for recommendations

The Panel believes that greater competition in digital markets would create benefits for consumers, that competition is currently insufficient with winner-takes-most dynamics in many markets, and that competition is possible with the right set of policies. The introduction presented the Panel's high-level thinking on the context for its recommendations and the full set of evidence and conclusions is set out in the report, especially Chapter 1 on the benefits and challenges in digital markets.

Building consumer choice and competition into digital markets

A pro-competition approach

The central conclusion of the review is that competition in digital markets should be sustained and promoted through a new approach, alongside the core conventional competition tools of merger control and antitrust enforcement. Chapter 2 sets out how.

The challenges to effective competition in digital markets do not come about solely because of platforms' anti-competitive behaviour and acquisition strategies. Their network-based and data-driven platform business models also tend to tip markets towards a single winner. To make competition effective requires policy that changes that dynamic and creates space for businesses to start, compete and grow alongside and around the big platforms.

This can be achieved through a pro-competition approach that sets rules and standards to change how a digital market works and creates new opportunities for competition, innovation and consumer choice. To deliver this, the report calls for a new digital markets unit with capabilities and resourcing to deliver greater competition, backed by new powers to set and enforce competition-enhancing rules.

Strategic recommendation A: To sustain and promote effective competition in digital markets, government should establish and resource a pro-competition digital markets unit, tasked with securing competition, innovation, and beneficial outcomes for consumers and businesses.

Functions to boost competition and choice

The report describes three functions for the digital markets unit that will deliver more effective competition.

First, agreeing and setting out upfront a code of conduct to complement antitrust enforcement with a clearer and more easily applied set of standards that define the boundaries of anti-competitive conduct in digital markets. Establishing such rules can give all businesses, including the large platforms, clarity on the rules, rather than relying on antitrust judgements that can be hard to apply beyond the specifics of an individual case. Where disputes do arise, a code of conduct can resolve them and enforce solutions more rapidly

Recommended action 1: The digital markets unit should work with industry and stakeholders to establish a digital platform code of conduct, based on a set of core principles. The code would apply to conduct by digital platforms that have been designated as having a strategic market status.

Second, the report describes a powerful set of tools that the digital markets unit should use to give consumers greater effective choice over their digital services, allowing new opportunities for competition where there are currently closed systems.

Personal data mobility means agreeing common standards to give consumers greater control of their personal data so they can choose for it to be moved or shared between the digital platform currently holding it and alternative new services. By making this easy, consumers could, for example, move across to a new social network without losing what they have built up on a platform, manage through a single service what personal data they hold and share, or try out an innovative digital service that uses their information in a new way. Open Banking has shown the potential for data mobility to provide new opportunities to compete and innovate in this way.

Similar competitive opportunities could be created through developing more systems based on open standards. Open standards lie behind the internet itself, email, and other services where innovation and competition have flourished on the basis of a common interoperating core.

Data mobility and open standards are tools with great potential to secure greater competition. Where these solutions are not voluntarily agreed, deciding whether and how to require data mobility or open standards in a digital market will take engagement, expert skills, and careful analysis by the unit to decide when they will be proportionate and effective.

Recommended action 2: The digital markets unit should pursue personal data mobility and systems with open standards where these will deliver greater competition and innovation.

Third, the central importance of data as a driver of concentration and barrier to competition in digital markets is a key theme of the evidence gathered by the review. There may be situations where opening up some of the data held by digital businesses and providing access on reasonable terms is the essential and justified step needed to unlock competition. Any remedy of this kind would need to protect personal privacy and consider carefully whether the benefits justified the impact on the business holding the data. But the ability to pursue data openness is an essential tool for the unit.

Recommended action 3: The digital markets unit should use data openness as a tool to promote competition, where it determines this is necessary and proportionate to achieve its aims.

How to make the digital markets unit work

Chapter 2 also outlines the capabilities, powers and approach that would enable the digital markets unit to carry out its role effectively.

The role of the unit would have important links to functions and expert skills within the Competition and Markets Authority (CMA) and The Office of Communications (Ofcom). The unit could be an independent body linking to both, or it could be a function of either. Its role also links to other potential functions currently under consideration to tackle separate but related issues such as harmful online content, the relationship between digital platforms and the news media, and open data in regulated utilities. Finally, the unit would need a strong relationship with the Information Commissioner's Office, as the UK's data privacy regulator. Government is best placed to reach a decision in the round on the best set of institutions to tackle these issues while avoiding a cluttered regulatory landscape for businesses.

Whatever the institutional format, co-operation and consultation with business and other stakeholders will be essential. The unit will be most effective if its functions are designed and delivered through participation, balancing the interests of major platforms and newer and smaller tech companies to ultimately benefit the consumer, and translating this into codes and standards that can be understood and used. At the same time, it is clear that a voluntary approach would be insufficient – businesses' natural incentives do not line up with delivering these functions. So it will need new regulatory powers, beyond those currently in statute, to set solutions.

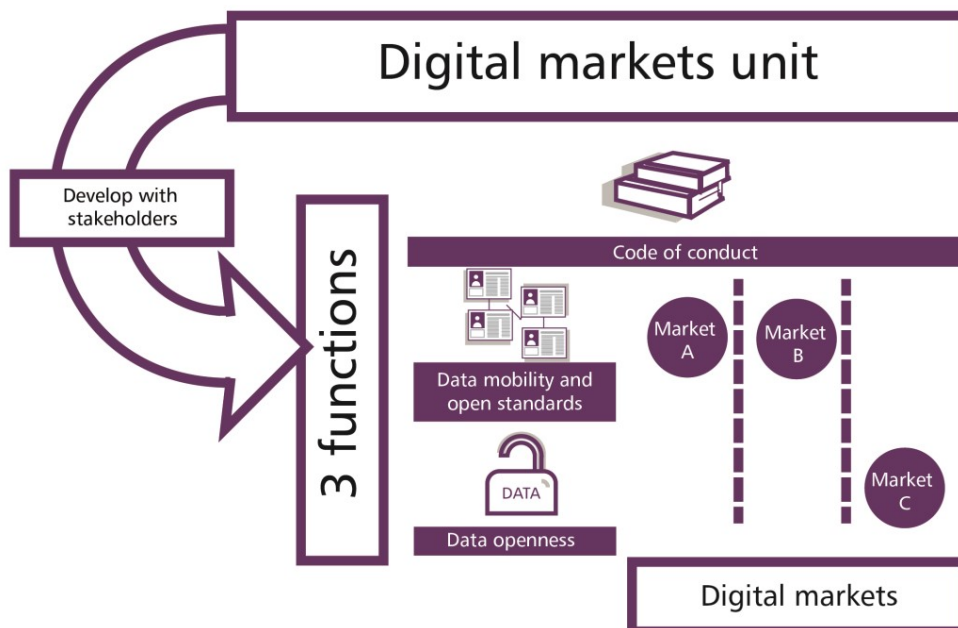
Recommended action 4: The digital markets unit should co-operate with a wide range of stakeholders in fulfilling its role, but with new powers available to impose solutions and to monitor, investigate and penalise non-compliance.

The review has also considered how to focus interventions by the digital markets unit and define where they can be imposed. The scope should be kept narrow, to minimise the burden of compliance on smaller businesses and in markets where competition will work effectively without intervention. It will also need to flex with time, as new digital markets arise and existing ones tip to a winner or diversify with new entrants. A good approach that combines these would be to define and periodically assess which companies hold a position of enduring market power, and limit mandatory solutions to these.

Recommended action 5: To account for future technological change and market dynamics, the digital markets unit should be able to impose measures where a company holds a strategic market status – with enduring market power over a strategic bottleneck market.

Finally, it is clear that the digital markets unit will have a key role in the new economy. The opportunity is huge, but to succeed in boosting competition, market-driven innovation and consumer choice in complex and evolving markets will need significant resourcing, leadership, and technical, economic and behavioural expertise.

Recommended action 6: Government should ensure the unit has the specialist skills, capabilities and funding needed to deliver its functions successfully.



Optimising the competition system for a digital world

While an *ex ante* approach to building competition into digital markets can do much, refreshing and strengthening core competition policy for digital markets is also essential. Chapter 3 makes a set of recommendations on how to make more effective use of existing powers, and what new ones are needed to address gaps.

The CMA is in a strong position to lead international action. It is able to consider any anti-competitive merger or conduct where the companies involved provide services in the UK, even if headquartered elsewhere. It is an authority respected internationally, with growing data capability.

The review is recommending a number of changes. Some can be done within the existing legal framework; but the Panel's full recommendations, and the full associated benefits, require additional targeted legislation. In all cases these changes should be applied universally rather than carving out digital markets as a distinctive system. The changes proposed are particularly relevant for issues seen in digital markets, but they are likely to be beneficial where similar challenges occur elsewhere.

Decisions on digital mergers

The CMA is responsible for identifying and blocking anti-competitive mergers. The largest digital companies have made extensive use of mergers, as their market shares have grown. Acquisitions have included buying businesses that could have become competitors to the acquiring company (for example Facebook's acquisition of Instagram), businesses that have given a platform a strong position in a related market (for example Google's acquisition of DoubleClick, the advertising technology business), and data-driven businesses in related markets which may cement the acquirer's strong position in both markets (Google/YouTube, Facebook/WhatsApp).

Over the last 10 years the 5 largest firms have made over 400 acquisitions globally. None has been blocked and very few have had conditions attached to approval, in the UK or elsewhere, or even been scrutinised by competition authorities.

Decisions on whether to approve mergers, by the CMA and other authorities, have often focused on short-term impacts. In dynamic digital markets, long-run effects are key to whether a merger will harm competition and consumers. Could the company that is being bought grow into a competitor to the platform? Is the source of its value an innovation that, under alternative ownership, could make the market less concentrated? Is it being bought for access to consumer data that will make the platform harder to challenge? In principle, all of these questions can inform merger decisions within the current, mainstream framework for competition, centred on consumer welfare. There is no need to shift away from this, or implement a blanket presumption against digital mergers, many of which may benefit consumers. Instead, these issues need to be considered more consistently and effectively in practice.

Strategic recommendation B: Merger assessment in digital markets needs a reset. The CMA should take more frequent and firmer action to challenge mergers that could be detrimental to consumer welfare through reducing future levels of innovation and competition, supported by changes to legislation where necessary.

In part the CMA can achieve this through giving a higher priority to merger decisions in digital markets. These cases can be complex, but they affect markets that are critically important to consumers, providing services that shape the digital economy.

Recommended action 7: The CMA should further prioritise scrutiny of mergers in digital markets and closely consider harm to innovation and impacts on potential competition in its case selection and in its assessment of such cases.

The largest digital companies conduct a high volume of acquisitions. It is voluntary whether they notify the CMA of the merger. Requiring digital companies that hold a strategic market status to make the CMA aware of their intended acquisitions will allow the CMA to determine in a timely manner which cases warrant more detailed scrutiny.

Recommended action 8: Digital companies that have been designated with a strategic market status should be required to make the CMA aware of all intended acquisitions.

To assess mergers in digital markets and reach decisions in the best interests of consumers, competition authorities can draw upon the significant progress made in recent years in analysing factors particularly relevant to determining whether mergers in digital markets will benefit or damage competition and consumers. The report identifies a set of changes that should be made to the Merger Assessment Guidelines that determines how mergers are considered.

Recommended action 9: The CMA's Merger Assessment Guidelines should be updated to reflect the features and dynamics of modern digital markets, to improve effectiveness and address underenforcement in the sector.

These changes to how the CMA administers the merger regime as it stands are important. But no other competition authority internationally has had significantly

greater success in identifying and preventing future harm to competition or consumers in digital markets. The review recommends a further, legislative change to the merger regime to provide a better and firmer legal basis for decision-making.

At present, merger assessment only considers how likely a merger is to reduce competition. If a substantial lessening of competition is more likely than not to result, a merger may be blocked. Although in many situations this is a reasonable approach, it does not adequately allow the scale of any harm (or benefits) to be accounted for alongside their likelihood as they would be in economically sound cost-benefit analysis.

For digital mergers, this can be a crucial gap. For example, take a large platform seeking to acquire a smaller tech company based on an attractive innovation that gives it a real chance of competing for consumers. For the sake of the example, assume that if the companies merge, there would only be a modest efficiency benefit. But if the smaller company would otherwise have become a serious and innovative competitor, the resulting competition would have generated far greater consumer benefits. The Panel is concerned that, under the system as it stands, the CMA could only block the merger if it considered the smaller company more likely than not to be able to succeed as a competitor. This is unduly cautious.

The report recommends that assessment should be able to test whether a merger is expected to be on balance beneficial or harmful, taking into account the scale of impacts as well as their likelihood. This change would move these merger decisions to a more economically rational basis, and allow big impacts with a credible and plausible prospect of occurring – critical in digital markets – to be taken properly into account.

Recommended action 10: A change should be made to legislation to allow the CMA to use a ‘balance of harms’ approach which takes into account the scale as well as the likelihood of harm in merger cases involving potential competition and harm to innovation.

Tackling anti-competitive conduct in digital markets

The second arm of competition policy is antitrust enforcement. The CMA and other competition authorities are tasked with protecting consumers and businesses from collusion and anti-competitive conduct. In particular, where a business dominates a market, a stronger set of legal standards apply to prevent that dominance being abused.

Where digital markets are liable to tip to a single dominant company, this provides an important set of tools to protect competition. The tools and frameworks within existing antitrust law are appropriate – and where they have limitations, a pro-competition approach will provide better solutions. The key weaknesses of antitrust in digital markets are instead that it has been used very infrequently and cases have moved too slowly.

Strategic recommendation C: The CMA’s enforcement tools against anti-competitive conduct should be updated and effectively used, to help them play their important role in protecting and promoting competition in the digital economy.

Looking back at past decisions provides a way for competition authorities to learn from experience. The CMA does so effectively with merger decisions. For abuse of dominance, however, there are few cases in digital markets to consider. Examining the evolution of markets where cases that were considered but not brought may, however, provide retrospective lessons to inform when and how abuse of dominance could be more effectively applied in future

Recommended action 11: The CMA should perform a retrospective evaluation of selected cases not brought and decisions not taken, where infringements were suspected or complaints received, to assess how markets have subsequently evolved and what impact this has had on consumer welfare.

Where antitrust cases may take years to resolve, the CMA can impose interim measures to restrain a suspected anti-competitive practice, if those affected by it would otherwise be significantly harmed. This is particularly important in digital markets, where cases are likely to be complex but markets can move fast and tip to a winner before a final decision is reached. The CMA has been given expanded powers in this area, but has not yet used them. Current CMA procedures and administrative rules make interim measures difficult to use. This should be addressed.

Recommended action 12: To facilitate greater and quicker use of interim measures to protect rivals against significant harm, the CMA's processes should be streamlined.

The ability for an affected company to appeal a decision or an interim measure is a vital safeguard of their rights, and a check on the quality of CMA decision-making. Appeals processes need to strike a balance between protecting those affected by any unjustified decision and ensuring that CMA powers can be exercised effectively to protect those who would be left exposed by underenforcement or undue delay. This is particularly important for digital markets. Cases may necessarily involve a degree of expert judgement as to the future effects of a practice, be particularly complex, and be addressing issues in markets where underenforcement or undue delay could cause irreversible harm to competition.

The competition framework would be improved for digital markets by focusing appeals on testing the reasonableness of CMA judgement, that procedure has been appropriately followed, and that decisions are not based on material errors of fact or law – a standard more closely relating to that of judicial review. As a counterpart to this change, the CMA's structures for antitrust cases should enhance the role of the independent members of its decision-making panels, to safeguard decisions against the potential for executive overreach.

Recommended action 13: The review applied by the Competition Appeal Tribunal to antitrust cases, including interim measures, should be changed to more limited standards and grounds.

Recommended action 14: The government should introduce more independent CMA decision-making structures for antitrust enforcement cases, if appeal standards are changed.

Capabilities and focus to support digital competition

In order to carry out these vital functions, the CMA needs access to appropriate digital information. Where there are any gaps in current powers, they should be filled.

Recommended action 15: The government should ensure those authorities responsible for enforcing competition and consumer law have sufficient and proportionate information gathering powers to enable them to carry out their functions in the digital economy.

Similarly, the CMA has been active and effective in using its consumer law powers to protect consumers in digital markets. This can support competition aims and should be continued, with consideration given if there are gaps in current powers.

Recommended action 16: The CMA should continue to prioritise consumer enforcement work in digital markets, and alert government to any areas where the law is insufficiently robust.

There are more specific ways that digital technologies could negatively affect competition and consumers. There has been significant analysis and debate around whether there is increased potential for collusion where prices are set using algorithms. Digital markets could also support greater use of personalisation, in particular personalised pricing, where companies use their data-driven insights into consumers to set prices according to the individual's willingness to pay. Such personalisation can be beneficial, allowing companies to serve more customers and price fairly and efficiently, but in some cases it can be abused. At present, it is hard to predict whether greater use of algorithms will lead to algorithmic collusion or personalised pricing in future, and there is no evidence that harmful personalised pricing is widespread. But these are areas with potential to move fast, where it will be important to stay alert to potential harms.

Strategic recommendation D: The government, CMA and the Centre for Data Ethics and Innovation should continue to monitor how use of machine learning algorithms and artificial intelligence evolves to ensure it does not lead to anti-competitive activity or consumer detriment, in particular to vulnerable consumers.

Finally, the third chapter of the report discusses the operation of the digital advertising market. This is a key component of the digital market ecosystem, providing the revenue-generating side of many platforms. Digital advertising is increasingly driven by the use of consumers' personal data for targeting. This in turn drives the competitive advantage for platforms able to learn more about more users' identity, location and preferences. The market operates through a complex chain of advertising technology layers, where subsidiaries of the major platforms compete on opaque terms with third party businesses. This report joins the Cairncross Review and Digital, Culture, Media and Sport Committee in calling for the CMA to use its investigatory capabilities and powers to examine whether actors in these markets are operating appropriately to deliver effective competition and consumer benefit.

Strategic recommendation E: The CMA should conduct a market study into the digital advertising market encompassing the entire value chain, using its investigatory powers to examine whether competition is working effectively and whether consumer harms are arising.

An agenda for international leadership

The review's main focus has been on increasing competition in the UK's digital markets. Acting here will be beneficial for UK consumers, the tech sector and the economy as a whole. It can also give the UK a basis to lead international action.

Competition policy is already an international strength for the UK, with capable, respected enforcement and a legislative framework that allows a wide range of potentially anti-competitive mergers to be examined. By implementing the approach set out in this review, the UK can also lead on solutions to issues that competition policy is grappling with across advanced economies. Given the international nature of many digital markets, leading international co-ordination in these areas will also be beneficial for businesses, allowing solutions to be established and adopted that work across national boundaries. Chapter 4 describes the set of actions that the UK can take a lead on advocating and developing internationally.

Strategic recommendation F: Government should engage internationally on the recommendations it chooses to adopt from this review, encouraging closer cross-border co-operation between competition authorities in sharing best practice and developing a common approach to issues across international digital markets.

Recommended action 17: Government should promote the UK's existing competition policy tools, including its market studies and investigation powers, as flexible tools that other countries may benefit from adopting.

Recommended action 18: The UK should use its voice internationally to prevent patent rights being extended into parts of the digital economy where they are not currently available.

Recommended action 19: Government should support closer co-operation between national competition authorities in the monitoring of potential anti-competitive practices arising from new technologies and in developing remedies to cross-border digital mergers.

Recommended action 20: To ensure platforms and businesses have a simple landscape in which to operate, government should encourage countries to consider using pro-competition tools in digital markets. As part of this work, government should work with industry to explore options for setting and managing common data standards.

Chapter 1

The benefits and challenges of digital markets

- 1.1 Digital technology is providing substantial benefits to consumers and the economy. But digital markets are still not living up to their potential. A set of powerful economic factors have acted both to limit competition in the market at any point in time and also to limit sequential competition for the market in which new companies would overthrow the currently dominant ones. This means that consumers are missing out on the full benefits and innovations competition can bring.
- 1.2 Some of these economic factors are common to many markets, digital and otherwise. Some are natural, unchangeable and even desirable – like consumers benefiting from economies of scale. But some are the result of deliberate choices by the major platforms, including choices about acquisitions, standards, access to data and other practices, that could be remedied by effective policies that would unlock more of the potential for competition.
- 1.3 This chapter provides an overview of the benefits and challenges of digital markets, focusing on diagnosing the challenges to competition. The Panel believes that with the right policies, competition would be both possible and desirable, a topic that is discussed in Chapters 2 and 3.

Introduction

- 1.4 Digital technology is transforming much of the economy. The combination of computing power, big data, networked processing and cloud-based systems has created entirely new markets and opened up an array of opportunities across existing industries.
- 1.5 Within the digital economy, markets based on platforms that connect different groups of users have played a prominent and distinctive role. Online search, social media, digital mapping and other applications frequently provide consumers with services at no monetary cost while often matching them with advertisement content based upon their interests and characteristics. Digital marketplaces and price-comparison websites link sellers with customers.
- 1.6 A distinctive feature of these digital platform companies is the reach and scale of the services they offer. Globally, Facebook has over 2.3 billion active users,¹

¹ According to [Facebook Newsroom](#) it had 2.32 billion monthly active users globally as of 31 December 2018.

and in the UK in 2018, it was visited monthly by 95% of the adult internet audience. For Google, the figure was 99%.² The UK population spent around 4 billion hours online per month in 2018, of which more than 1.4 billion hours were spent on Facebook and Google sites combined.³

- 1.7 Having companies operating at such scale and across multiple digital markets delivers substantial benefits for consumers and the UK economy. At the same time, this scale, combined with a unique set of market features, also presents challenges for competition and traditional competition policy.
- 1.8 Competition is a process of rivalry between firms seeking to win consumers' business. It is the process at the heart of the market economy and has been hugely successful in delivering growth and rising living standards in the UK and many other economies around the world.
- 1.9 Competition creates incentives for firms to strive to provide what consumers want, thereby ensuring that prices stay low and that goods and services are a high quality, with variety to match varying consumer tastes. Competitive markets are also key in driving productivity, compelling firms to make the best use of their resources, allocating market share and resources to the most productive firms, and creating an incentive for both incumbent firms to innovate over time and innovative new firms to enter.⁴
- 1.10 This dynamic, innovative aspect of competition in the digital economy is of particular interest to the Panel. Ensuring innovation continues at the pace the digital economy has previously delivered it is central to the Panel's desire to make the most of the benefits digitalisation offers to the UK economy and to address the challenges it may also bring.
- 1.11 This chapter summarises these benefits and challenges in the following sections:
 - the benefits brought by the digital economy
 - distinctive features of digital markets
 - evidence of concentration in digital markets
 - the causes of concentration in digital markets
 - persistent dominance and market power
 - the impacts of limited competition for consumers
- 1.12 The chapter then concludes by highlighting important areas of public interest that overlap with this review.

² Ofcom, [Communications Market Report](#), 2018. Report cites data from Comscore MMX Multi-Platform, March 2018, UK.

³ Comscore MMX Multi-Platform, June 2018, Desktop age 6+, Mobile age 18+, UK.

⁴ CMA, [Productivity and competition: A summary of the evidence](#), July 2015.

The benefits brought by the digital economy

Consumer benefits

- 1.13 The widespread use of digital services is a testament to their popularity and the benefits they offer. In the UK, 76% of internet users report using a search engine every day or almost every day, and 95% of users report usually finding what they are looking for. Half of UK internet users visit a social network site each day, and more than a sixth visit an online market place each day.⁵
- 1.14 According to research published in 2018, a typical adult in the United States values digital services for which they frequently pay no monetary price such as internet search engines, email, and digital maps, at several thousand dollars a year. Access to video streaming and e-commerce were each assigned lower, but still significant values.⁶ There is no reason to suppose UK consumers value these services any less. The fact that these services are used so frequently and valued so highly, while being provided at no monetary cost to hundreds of millions of consumers worldwide, strongly suggests that the consumer welfare benefits from the digital economy are large.

Efficiency and growth

- 1.15 The digital revolution is a powerful driver of growth for the UK and global economy. Innovative businesses in competitive markets drive this success, delivering the combination of private and public benefits that have characterised the modern market economy.
- 1.16 The provision of online platforms and intermediary services has delivered efficiencies and improvements in the matching of buyers and sellers around the world. These services have lowered the barriers posed by geography and imperfect information, making possible economic exchanges and utilising individuals' and companies' assets in ways previously impossible. By improving this matching process, online services are increasing the value of economic activity and leading to more efficient use of resources, undoubtedly to the benefit of consumers.
- 1.17 According to the industry body Tech Nation, the digital technology sector contributed nearly £184 billion value added to UK economy in 2017, up from £170 billion in 2016, and is expanding 2.6 times faster than the rest of the UK economy. The number of jobs in the digital sector reportedly rose at 5 times the rate of the rest of the economy in 2017.⁷
- 1.18 The 12 most digitally intensive industries collectively account for 16% of domestic output, 10% of employment (nearly three million people), and around a quarter of total UK exports.⁸
- 1.19 The contribution of the major digital platforms to these positive economic trends is significant. For example, enterprises selling on Amazon Marketplace

⁵ TNS opinion and social survey at the request of the European Commission, [Special Eurobarometer 447 Report – Online Platforms](#), April 2016.

⁶ Brynjolfsson, Eggers, and Gannamaneni, [Using massive online choice experiments to measure changes in well-being](#), National Bureau of Economic Research, Working Paper 24514, April 2018.

⁷ [information-age.com](#) article summarising Tech Nation 2018 report.

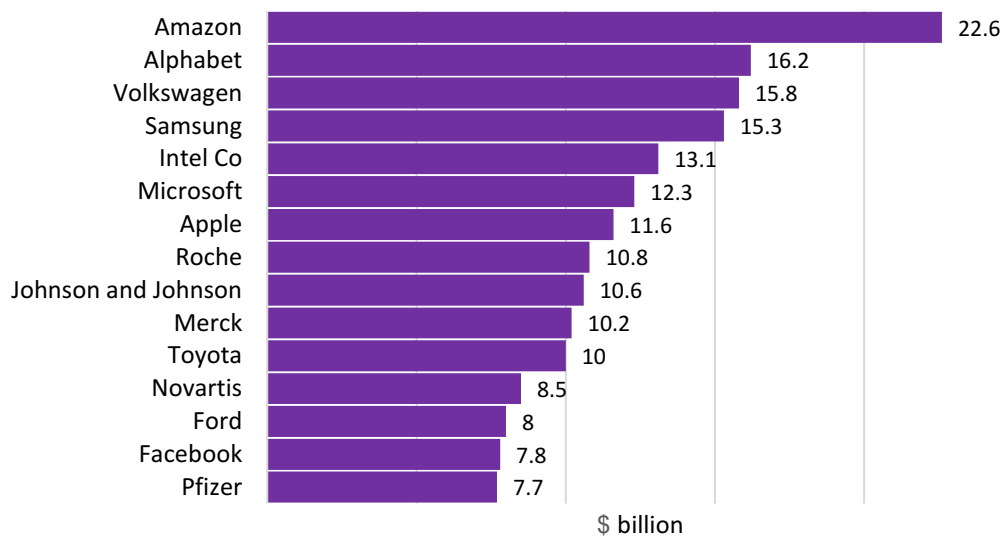
⁸ Tech UK, [The UK digital sectors after Brexit, January 2017](#).

employ more than 85,000 people in the UK, with UK businesses achieving more than £2.3 billion of exports in 2017.⁹

Innovation

1.20 Digital companies invest large sums in research and development. Chart 1.A shows that Amazon, Alphabet (the parent company of Google),¹⁰ Microsoft and Apple all featured in the top 10 companies for global spending on research in 2018, with Facebook not much further behind in 14th.^{11,12} These high levels of investment in research and innovation will deliver significant benefits for these businesses, their consumers, and society as a whole.

Chart 1.A: Top 15 companies for global spending on research and development



Source: PwC 2018 Global Innovation 1000 study¹³

1.21 UK tech companies have received over £5 billion in venture capital funding since June 2016, which is more than France (£1.55 billion), Germany (£2.15 billion) and Sweden (£644 million) combined. Recent figures also show that the UK leads the way in Europe for funding into fast growing sectors such as artificial intelligence, cyber security and FinTech.¹⁴

1.22 Companies such as Uber and Zipcar in transportation, Airbnb in hotel and hospitality, and Deliveroo and Uber Eats in takeaway food delivery, are just a few examples of firms that have each used digital technology to innovate within areas of existing service provision. Growing user numbers suggest these transformative changes are hugely popular with consumers.

⁹ Amazon, [press release on increased UK investment](#), October 2018.

¹⁰ For simplicity, this report generally refers solely to Google from here onwards.

¹¹ PwC [2018 Global Innovation 1000 study](#) data for the companies with the highest spending on research and development in 2018.

¹² Data on UK R&D spending was not available to the Panel.

¹³ PwC [2018 Global Innovation 1000 study](#), values are R&D Expense of public companies during the last fiscal year, as of June 30, 2018.

¹⁴ Figures from [London and Partners](#) with reference to data from PitchBook 2018.

- 1.23 Technologies such as artificial intelligence and machine learning are increasingly being adopted by businesses both within the digital economy and beyond. In healthcare, artificial intelligence is being used to collect and evaluate patient data and drive improvements in diagnostics and treatment, while in the energy industry, behavioural algorithms are being used to improve energy efficiency using smart thermostats and lighting. Such developments can continue to bring benefits to consumers and competition in the form of lower costs for suppliers, better service, better product availability, and an improved customer experience.

Distinctive features of digital markets

- 1.24 The Expert Panel was tasked by the government 'to consider the potential opportunities and challenges the emerging digital economy may pose for competition and pro-competition policy.'¹⁵ Digital technology is permeating all aspects of our lives. Firms in all sectors are increasingly using technology and the internet, for example for payment systems, online sales, communications, online cloud services, and advertising. Similarly, many firms that are widely identified as operating primarily online also need to cross over into traditional operating methods, such as having physical shops or distribution systems.
- 1.25 Over time, more firms are likely to transition to using digital systems and technologies in place of traditional methods. For example, many retailers that have physical stores are increasingly strengthening their online presence as technology and consumers' preferences evolve. Just as a company can sell groceries and financial services at the same time, a company can also operate in both the digital and non-digital economy simultaneously. The use of digital technology by itself does not necessarily change the fundamental way in which competition operates.
- 1.26 The Panel has not sought to define the digital economy, and has instead interpreted its terms of reference by looking at areas where the intensive use of digital technology is central to the business models of the firms that operate primarily within them and where this raises challenges for competition. Online platform markets and companies with significant accumulations of data have been of particular interest in this regard.
- 1.27 The Panel has not extensively examined markets for production or creation of digital technology products, such as video games or computer-aided industrial design. In some cases, it has been appropriate to consider how positions in markets for smart phones, smart speakers, or virtual reality headsets may contribute to a wider anti-competitive strategy. Many of the specific recommendations in this report, especially those in Chapter 3, are not limited to any particular sector but would likely be particularly relevant for digital platform companies.

Online platform markets

- 1.28 Online platforms are central to the digital economy, and to the Panel's interests within this review. One helpful definition states that online platforms 'share key characteristics including the use of information and communication

¹⁵ [DCEP terms of reference](#).

technologies to facilitate interactions (including commercial transactions) between users, collection and use of data about these interactions, and network effects which make the use of the platforms with most users most valuable to other users'.¹⁶ Online platforms can be strong drivers of innovation, and the services they provide to consumers are frequently free at the point of use.

- 1.29 Examples of activities falling within this description include online search engines, social media and creative content outlets, online marketplaces, platforms for the collaborative economy, price comparison websites, and app stores. The digital advertising market, as a key funding stream for many of these platforms, has also been in scope of the Panel's review.
- 1.30 Several of these markets, despite the major differences in the types of goods or services they offer, have a number of common and distinctive features that pose unique challenges for competition and pro-competition policy. Many are dominated globally by one or two of the same 5 large digital companies: Amazon, Apple, Facebook, Google and Microsoft. These firms were notably the top 5 most valuable companies in the world during parts of 2018.¹⁷
- 1.31 This persistent concentration amongst a small number of firms is a result of several economic features of these markets, as well as in some cases behaviour of the incumbents. These factors are discussed later in this chapter.

Zero monetary price to the consumer

- 1.32 Services provided by online platforms are frequently provided to the consumer at no monetary cost. For example, individual consumers are not charged a fee directly for searching the internet, connecting with friends on social networks, or accessing sellers through online marketplaces. As will be discussed subsequently, the absence of a monetary price that can be measured provides a challenge for traditional competition policy analysis.
- 1.33 Online services that have no monetary price are funded through commissions paid by business users of platforms, or through advertising. For example, sellers on Amazon or providers on price comparison sites pay commissions and sites such as YouTube sell advertising space. Consumers themselves also create value for the platforms, for example by creating content.
- 1.34 Where commissions are paid, these may ultimately be passed through to consumers in the prices they pay for goods and services, for example, for products purchased online, or for taxi rides through ride hailing apps.
- 1.35 For services funded through advertising, consumers will pay through provision of their data – which has value to advertisers and developers of new services. Many platforms are often described as operating in the attention market, whereby they provide valued services in exchange for their users' time and attention, while selling access to this time to companies for targeted advertising. Many consumers are typically not consciously participating in this exchange, or do not appreciate the value of the attention they are providing.

¹⁶ European Commission, [Digital Single Market: Online Platforms, May 2018](#).

¹⁷ [Statista data for the 100 largest companies in the world by market value in 2018](#).

1.36 Monetary costs to consumers being zero is a therefore a distinctive feature of digital platforms, and has a number of implications, which are discussed later in this chapter.

The importance of data to online platforms

1.37 There is nothing novel about businesses seeking to understand consumers' preferences to enable them to offer more targeted products and services at the right price. However, the scale and breadth of data that large digital companies have been able to amass, usually generated as a by-product of an activity, is unprecedented. Moreover, the centrality of this data to their business models is unique.

1.38 Such detailed knowledge about consumers' behaviour or purchasing intentions, in some cases held in near-real time, can be valuable. This data makes targeted advertising possible, for example to be deployed when a consumer is considering making a purchase. It also allows services to be tailored towards groups or individuals.

1.39 Many consumers are not aware of the extent or value of their data which they are providing nor do they usually read terms and conditions for online platforms.

1.40 Access to data enables companies to engage in data-driven innovation which helps them improve their understanding of customers' demands, habits and needs, thus cementing their advantage. Some studies have found that companies that use data-driven innovation have experienced between 5% and 10% faster productivity growth than companies that do not.¹⁸ The new insights gained from data can improve decision making in a variety of ways, across industries, and can lead to a wide range of benefits, such as:

- improvements to the quality of products or services – through a greater understanding of feedback, explicitly through comments and implicitly through what customers buy
- improvements to productivity – an increased ability to forecast demand and market trends enables organisations to produce and distribute their goods and services in a more efficient manner
- exploitation of new business opportunities – data gathered in the context of one service can be reused for a different purpose, which may lead to a more efficient understanding of gaps in supply
- more target-oriented business models – for example personalised promotions

1.41 Datasets are non-rivalrous, meaning that opening them up to additional users does not deplete the volume of data available for the original users or owners. Unlike a physical asset, data are easily duplicated so can be accessible and useful to multiple users simultaneously. However, they are excludable by contract, technical barriers, or regulation, meaning those that gather or acquire valuable consumer data do not need, or may not be able, to share it

¹⁸ OECD, [Big data: bringing competition policy to the digital era](#), November 2016.

with others. The comparative advantage that data can offer to incumbent firms in digital markets is discussed in more detail later in this chapter.

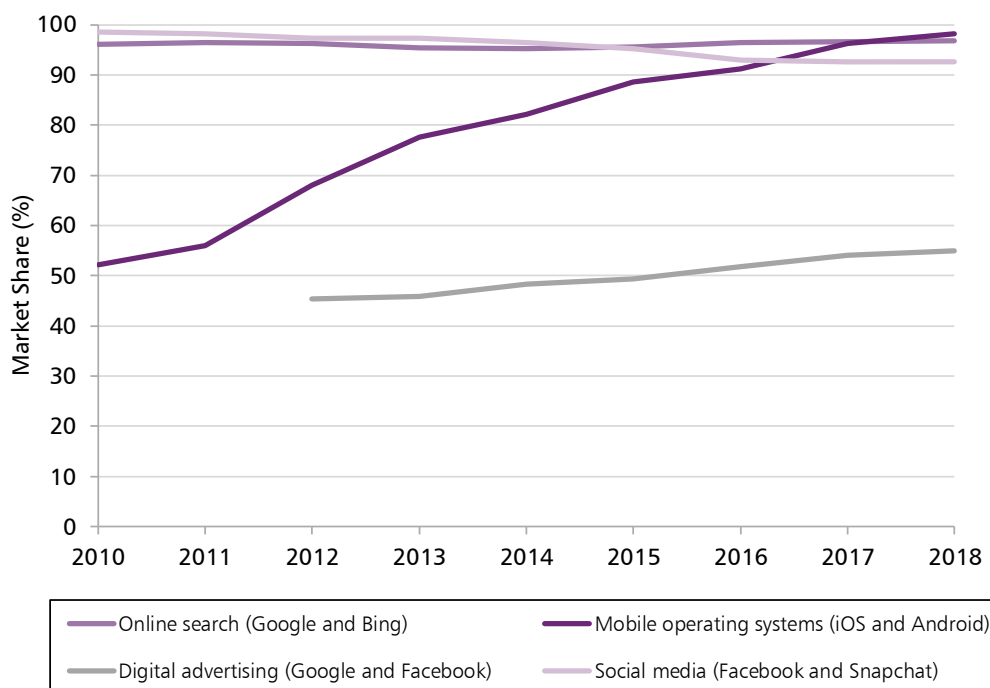
Evidence of concentration in digital markets

- 1.42 Concentration is a concept which describes how shares of production and sales in a market are divided between the companies within it. It is closely related to competition as when more companies are present – meaning markets are unconcentrated – participants tend to compete closely as they seek to maintain or increase their market share. Unconcentrated, competitive markets more frequently provide the good outcomes described earlier in this chapter, of low consumer prices, good quality products or services, and continued innovation.¹⁹
- 1.43 Measuring concentration involves defining markets. While intuitively simple, arriving at an agreed market definition is a matter of serious consideration in competition casework. It is hard to be definitive on what is in or out of scope without detailed work. Despite this, a high-level assessment gives a useful picture of the widespread concentration in many digital platform markets. As shown by Chart 1.B, several digital platform markets are highly concentrated at the two-firm level.²⁰

¹⁹ Scherer, *Technological Innovation and Monopolization*, 2007, includes case studies of concentrated markets in which incumbents innovate more slowly than when facing competition.

²⁰ In-depth assessment to establish market definitions and do full market share analysis has not been possible within the timeframe of this review. Available data on a range of metrics are used to illustrate the level of concentration in some of the largest digital markets.

Chart 1.B: Combined indicative market shares of current leading two companies in selected UK digital markets



Sources: StatCounter,²¹ Comscore,²² and eMarketer and company reports²³

1.44 The trends shown in Chart 1.B of concentrated market outcomes in online search, mobile operating systems, social media and digital advertising correspond to qualitative evidence received by the review and to findings in digital markets in other jurisdictions outside the UK. Specific concentrated digital markets are considered in more detail below.

Online search

1.45 Google has held a high market share in the general online search market in the UK, and globally, for more than a decade. In December 2018, over 92% of UK online page views that originated from a search engine were estimated to come from Google.²⁴ The European Commission reached similar conclusions in its 2017 assessment of Google’s position in the general online search market throughout the EU, finding evidence of consistently very high market shares throughout the EU dating back to 2008.²⁵

²¹ Statcounter data on the origin of page views has been used to illustrate market share for online search, and mobile operating systems.

²² Social media data trendline based on Comscore MMX Multi-Platform, total minutes spent by UK internet users on selected social media services, April 2010 – April 2018, UK. Top two companies are Facebook (combined with Instagram), and Snapchat Inc. Universe defined as Facebook, Instagram, Snapchat Inc, Twitter, Pinterest, Myspace, and Friends Reunited Group.

²³ eMarketer and company reports data for shares of digital advertising revenue were taken from various online articles (2012-2014, 2015-2016, 2017, 2018 (forecast)).

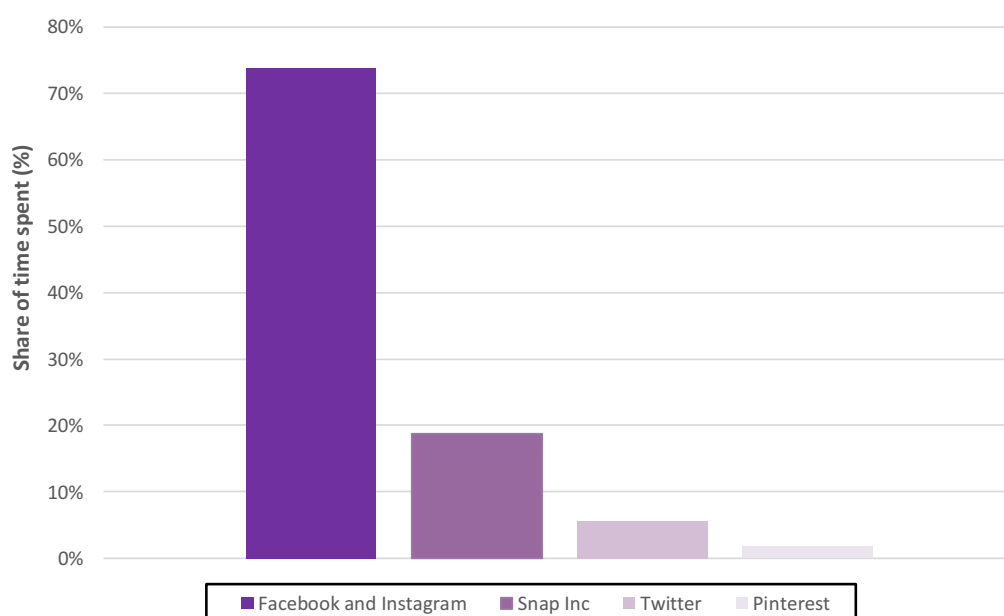
²⁴ statcounter GlobalStats data for UK search engine market share.

²⁵ European Commission, Antitrust procedure: Google Search (shopping), June 2017.

Social media

- 1.46 There are various ways of defining social media that could include slightly different sets of companies. There are also a number of metrics that could be used to indicate the level of concentration, such as user numbers, traffic generation, and time spent using each service. In terms of its user base, services owned by Facebook have over 42 million active users in the UK, while Twitter has around 28 million and Snapchat has around 24 million.²⁶ Facebook sites also generate far more traffic for other pages than other social media sites. Over 73% of page views originating from a social media site came from Facebook or Instagram in December 2018.²⁷
- 1.47 Total time spent on social media services provides a useful indication of market share in this area. Chart 1.C sets out the share of total time spent by UK internet users in April 2018 on a selection of the most popular social media services.

Chart 1.C: Share of time spent on selected popular social media services in April 2018.



Source: Comscore²⁸

- 1.48 Facebook's share has fallen over the last few years, down from 92% in 2015, with users spending an increasing share of time on Snapchat since then.²⁹ However, Snapchat's active user numbers,³⁰ and also its share price,³¹ fell over

²⁶ Comscore MMX Multi-Platform, Desktop age 6+, Mobile age 18+, June 2018, UK.

²⁷ [statcounter GlobalStats data for share of page views originating from a social media site.](#)

²⁸ Comscore MMX Multi-Platform, custom-defined list that includes Facebook, Instagram, Snapchat Inc, Twitter, Pinterest, Myspace, Friends Reunited Group, Total Minutes, April 2010 – April 2018, UK.

²⁹ Ibid.

³⁰ Statista, [Has Snapchat peaked too early?](#), October 2018.

³¹ [Google Finance – Snap Inc share price.](#)

the second half of 2018, suggesting its growth in the market may already have peaked.

- 1.49 These figures also highlight the importance of large incumbents' acquisition strategies. Facebook has offset some of the decline in its share of social media users' attention through strategic acquisitions, such as that of Instagram in 2012, and also arguably the messenger service WhatsApp in 2014. Moreover, it may have avoided the decline altogether if it had been successful in its attempt to buy Snapchat for \$3 billion in 2013, an offer that was rejected.³²

Digital advertising

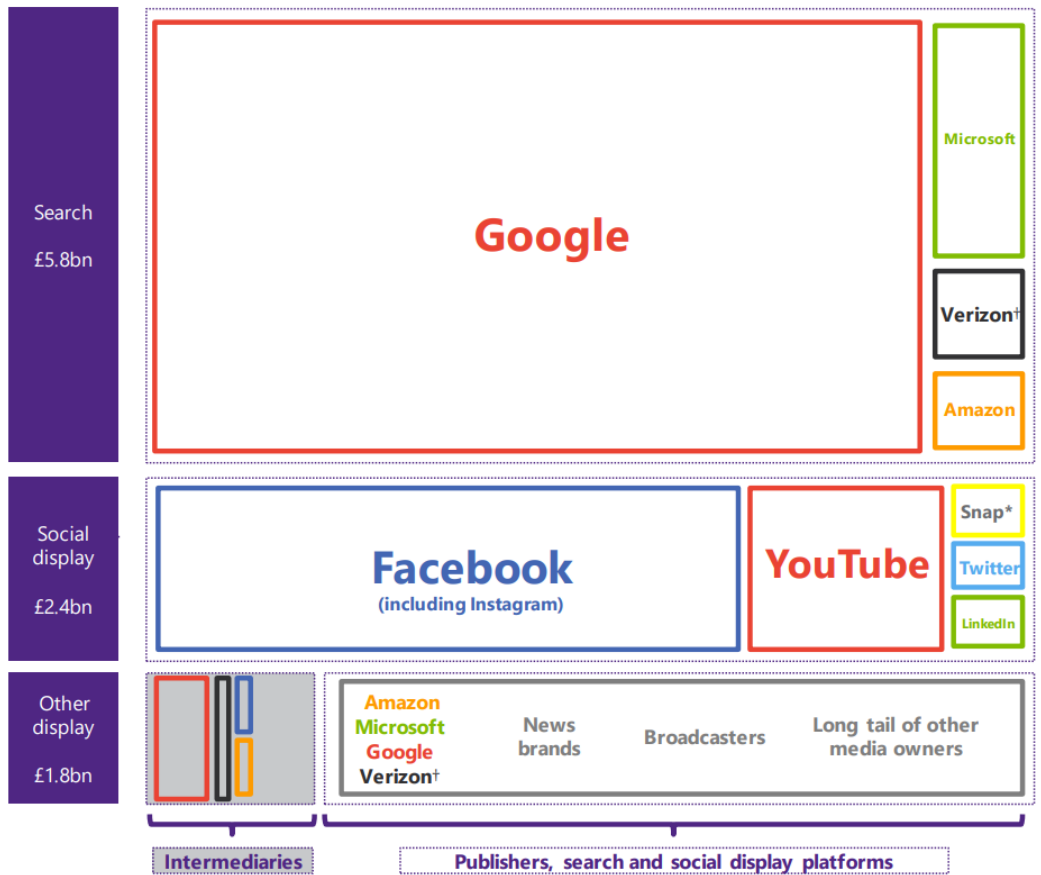
- 1.50 In 2017, UK digital advertising spend was estimated to be worth £11.55 billion,³³ of which Google and Facebook combined were expected to have earned 54%.³⁴
- 1.51 A recent report commissioned by the Department for Digital, Culture, Media and Sport (DCMS) on online advertising in the UK, shows the relative scale of major competitors in different sections of the digital advertising market. This is reproduced in Figure 1.A below.

³² Forbes, [Facebook tried to buy Snapchat for \\$3bn in cash. Here's why](#), November 2013.

³³ Internet Advertising Bureau, [2017 digital Adspend results](#).

³⁴ eMarketer, [Digital duopoly to remain dominant in UK ad race, September 2017](#).

Figure 1.A: Indicative market share of online advertising expenditure by major competitors, 2017



Ownership: = Google = Facebook = Microsoft = Verizon = Amazon = Snap = Twitter = Other

* Snap is generally included in the social display category, although it describes itself as a camera and communications company.
 † Verizon Media Group (formerly Oath)

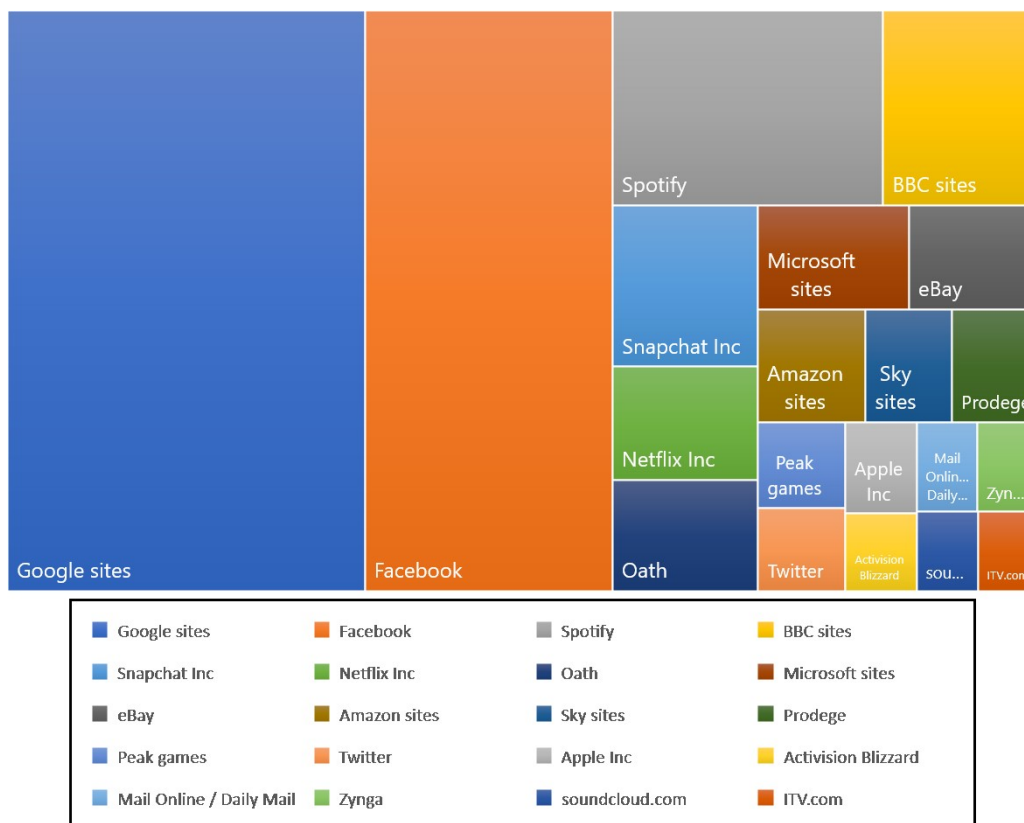
Source: Plum Consulting ³⁵

- 1.52 It is not clear to what extent the search, social display and ‘other display’ categories analysed by the DCMS report are separate markets, but it is clear that Google and Facebook have significant market shares and the market is concentrated towards them.
- 1.53 This dominance in digital advertising revenues is linked to the dominance of these two companies in the attention market. In the UK, internet users spend over a third of their time online on sites owned by Google and Facebook.³⁶ Chart 1.D illustrates how dominant Google and Facebook are over their main rivals in capturing UK consumers’ attention.

³⁵ Plum Consulting report commissioned by DCMS, [Online advertising in the UK](#), January 2019. This diagram excludes the classified advertising category, which is why the value of the three categories in the diagram do not sum to £11.55 billion referenced above.

³⁶ Comscore MMX Multi-Platform, Desktop age 6+, Mobile age 18+, June 2018, UK.

Chart 1.D: Share of time spent on top 20 sites by UK users



Source: Comscore³⁷

Mobile operating systems and app stores

- 1.54 However market shares are measured, Google (Android) and Apple (iOS) have a global duopoly over mobile phone operating systems. Determining what proportion of consumers use each system is less straightforward. A measure of active handsets would be ideal, but is not available.³⁸ Data on the systems being used when accessing online pages suggests that Google and Apple have each hovered around 50% in the UK over the last year.³⁹
- 1.55 As a result of their shares of mobile operating systems, and the fact that app stores come pre-installed upon them with no option to switch, almost all mobile app downloads are made through the App Store, on iOS devices, or Google Play, on Android devices. Due to their duopoly in the mobile operating system market, Apple and Google each occupy gateway positions between app developers and consumers. In this context, it is clear there is little incentive for app developers to go to the trouble and expense of ensuring their apps work on any smaller rival operating systems, as the potential target market will be so small.

³⁷ Ibid.

³⁸ Referring to sales of new handsets is imperfect, as it neglects the handsets already in use. Referring to total handsets sold over a longer period would include handsets that are no longer in use.

³⁹ [statcounter GlobalStats data for mobile operating system market share of online page views.](#)

Online marketplaces

- 1.56 A third (33.5%) of all UK e-commerce transactions went through Amazon in 2018.⁴⁰ The Panel has not seen evidence of Amazon's share of transactions made through online marketplaces, but it is likely to be considerably higher than this. There is some evidence that it is has become the default online option for many shoppers, with 59% of 16 to 36-year olds in the UK 'always' or 'often' starting their online shopping journeys on Amazon.⁴¹
- 1.57 It is a source of debate what the relevant market definition is for online retail or marketplaces, with a strong degree of differentiation between services. The right definition could include offline physical stores and online retailers selling direct from their own websites. However, in the view of the Panel it is likely Amazon is dominant in a meaningfully distinct sector of online retail, for example as an online marketplace, particularly for relatively low-value and/or homogenous products. To illustrate, the total value of sales processed globally in 2017 through eBay's marketplace, arguably Amazon's largest and closest competitor outside of China, was \$84 billion.⁴² Over the same period, the value of sales processed through Amazon's UK marketplace alone was reportedly around \$60 billion.⁴³ In the e-book market, Amazon was reported in February 2017 to account for around 88% of total annual unit sales.⁴⁴
- 1.58 Regardless of the view on dominance over a particular defined market, it is clear that for thousands of smaller independent online sellers in particular, Amazon's marketplace is a strategically important gateway to consumers.
- 1.59 Details of Amazon's financial performance suggests this situation will endure. In January 2019, Amazon became the most valuable company in the world, based on its share price valuation.⁴⁵ This is despite it having made losses or relatively meagre profits until 2016, and still having a higher price-to-earnings ratio than many other companies with high valuations. This suggests investors are expecting it to retain its dominant position, and to earn significantly higher profits in future. There are signs that it has begun this process, with profit of \$10 billion in the 2018 calendar year. Although this is a small proportion of the \$233 billion it earned in revenue, this represented a 232% increase in profits from the previous 12 months.⁴⁶ This chapter assesses later on how such increased value capture could indirectly harm consumers.

High-technology consumer hardware

- 1.60 Businesses based around digital platforms have also made successful moves into a range of high-technology consumer hardware products such as home voice assistants and virtual reality headsets. Amazon and Google have a combined share of more than 90% of the home voice assistant market in the

⁴⁰ Tamebay, [A third of UK ecommerce comes through Amazon, July 2018](#).

⁴¹ Inviqa, [What millennials want: online retail in the Amazon era](#), September 2018.

⁴² eBay Inc., [Fourth quarter and full year 2017 results](#).

⁴³ Tamebay, [A third of UK ecommerce comes through Amazon, July 2018](#).

⁴⁴ AuthorEarnings, [Big, Bad, Wide & International Report: covering Amazon, Apple, B&N, and Kobo ebook sales in the US, UK, Canada, Australia, and New Zealand, February 2017](#).

⁴⁵ BBC News, [Amazon becomes world's most valuable public company](#), January 2019.

⁴⁶ Macrotrends, [Amazon revenue 2006 to 2018](#).

UK.⁴⁷ There is potential for an interaction between the strength of companies in high-technology consumer hardware markets and their strong position in other markets. For example, they may tie their services or set them as defaults for popular hardware such as with smart phones, mobile operating systems, and app stores. This dynamic could be particularly powerful for voice activated services, where consumers will have a lower tolerance for extensive choice than they do when products and services are presented on a screen.

Concentration within the digital economy as a whole

1.61 Where competition does exist in digital markets, this is frequently between a small subset of the 5 largest digital companies. This is evident in the following markets:

- online search is dominated by Google, with some competition from Microsoft (Bing)
- social media is dominated by Facebook or services it owns, with some competition from Twitter and Snapchat
- digital advertising revenues are dominated by Google and Facebook
- the mobile app downloads market is a duopoly between Apple (App Store) and Google (Google Play)
- e-commerce through online marketplaces is dominated by Amazon, with eBay providing some competition

1.62 Varying subsets of the same 5 largest digital companies are also the main competitors in a number of other digital markets that have been less studied by the Panel, including cloud computing, autonomous vehicles, browsers, digital maps, and office tools. There are some exceptions to this pattern, including ride sharing, online travel agents, and online food ordering.

1.63 There is some evidence of a trend in this direction, and the large digital companies entering newly-developing markets can have a positive impact on competition, at least initially. This argument was supported by several respondents to the Panel's call for evidence, including a number of digital companies, as well as the American Chamber of Commerce to the European Union.

1.64 Many stakeholders also submitted evidence to the Panel arguing that such a trend can be harmful to competition. In particular, that this strategy can create barriers to entry, as new firms need to offer an entire ecosystem by competing across a range of related markets to survive. Others argued that where multi-market firms hold a strategic gateway position in one market, they are then able to leverage that position in adjacent markets, give themselves an advantage through self-preferencing, and obtain an unfair advantage through holding of data and imitation of rivals' innovations.

⁴⁷ Tamebay, [Apple HomePod smart speaker wins just 2% UK market share, May 2018](#).

The causes of concentration in digital markets

- 1.65 Digital markets have features that can increase competition relative to traditional markets. These include the ability for consumers to use multiple platforms simultaneously, the removal of some barriers to switching, and the ability to use digital tools to compare prices and features. Digital markets also have features that heighten concentration, including economies of scale and scope, a data advantage for incumbents, network effects, limitations to switching and multi-homing including behavioural factors, and access to finance and intangible capital.
- 1.66 The relative importance of these factors varies from market to market but in many digital markets, the forces for concentration appear to have a strong cumulative effect and thus predominate. Many of these factors, however, are not inherent in the market and with different technological choices greater competition would be possible.
- 1.67 This section sets out the Panel's thinking in this area, which has been influenced by the economic literature by Tirole,⁴⁸ Armstrong and Wright,⁴⁹ Evans and Schmalensee,⁵⁰ and others.

Economies of scale and scope

- 1.68 Digital platform markets are characterised by strong economies of scale, where the high up-front investment and fixed costs of creating a valued service are coupled with low or near-zero marginal costs of additional users. As digital platform companies' user bases get larger, their average costs reduce significantly. This clearly creates strong user benefits in terms of efficiency and low costs, even if it is not conducive to competition.
- 1.69 The truly global nature of these markets is significant. In traditional markets, where economies of scale have most typically been linked with physical production, the scope for such efficiencies has been constrained by location and transport costs. As geographical barriers and constraints are broadly irrelevant to digital markets, economies of scale support concentration on a global rather than national or regional scale.
- 1.70 There are also features of digital markets that mean costs can be reduced, or service quality can be increased, by operating simultaneously across multiple adjacent markets. These economies of scope can be derived through use of existing customer and supplier relationships, branding, sharing of technical expertise, and possibly most importantly, the sharing and merging of consumer data. These strong economies of scope are one reason why the same small number of large digital companies have successfully built ecosystems across several adjacent markets.

The data advantage for incumbents

- 1.71 Economies of scale and scope appear to be particularly strong in relation to the accumulation and use of data relating to consumer behaviour. According

⁴⁸ Rochet, Jean-Charles and Jean Tirole (2003b), [Platform Competition in Two-Sided markets](#), Journal of the European Economic Association, 1(4): 990-1029.

⁴⁹ Armstrong and Wright, [Two-sided markets, competitive bottlenecks and exclusive contracts](#), August 2007.

⁵⁰ Evans, David S, and Richard Schmalensee, [The antitrust analysis of multi-sided platform businesses](#), February 2013.

to Rubinfeld and Gal (2016): ‘those who enjoy more portholes from which to gather data, who have a substantial database to which they can compare new data, or who possess unique data synthesis and analysis tools, may enjoy a competitive comparative advantage.’⁵¹

1.72 Many commentators and respondents to the Panel’s call for evidence have viewed the significant amounts of data held by incumbent firms to be the single biggest barrier to entry in the digital economy, although that view is not universally accepted. According to Arete Research Services, ‘[there] is little doubt that the scale of the datasets aggregated by multiple services offered by the Internet giants... constitute a material barrier to entry to smaller firms.’ The Panel shares this assessment.

1.73 Data can act as a barrier to entry in digital markets. A data-rich incumbent is able to cement its position by improving its service and making it more targeted for users, as well as making more money by better targeting its advertising. The mechanism through which data provide incumbent businesses with a competitive advantage is known as a feedback loop. There are two distinct types:⁵²

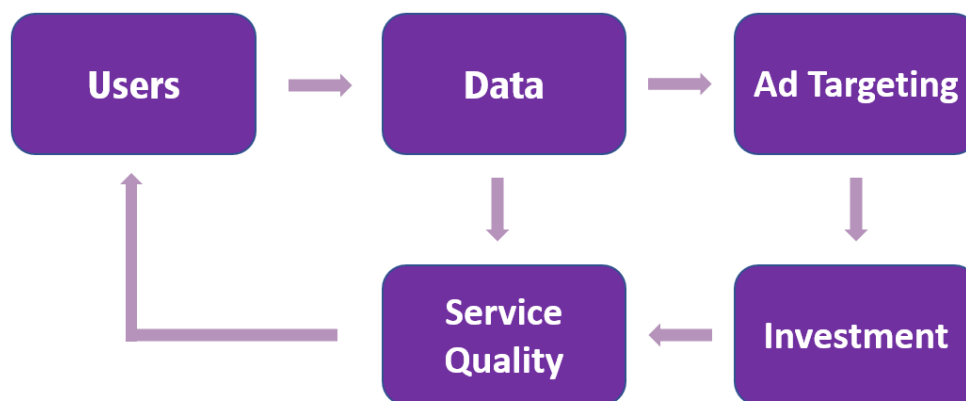
- user feedback loops occur when companies collect data from users which they use to improve the quality of their product or service, which then draws in more users, creating a virtuous circle
- monetisation feedback loops enable revenues generated from business users (such as for targeted advertising) to be reinvested in improving the quality of service and attracting more users

1.74 User feedback loops are also driven by the acquisition of incremental users, demonstrating similar characteristics to network effects, which are discussed below. Monetisation feedback loops only require revenue generated from existing users to be reinvested, and thus benefits continue to accrue even after user adoption slows. Feedback loops are illustrated in Figure 1.B.

⁵¹ Rubinfeld and Gal, [Access to barriers to big data](#), 2016.

⁵² OECD, [Big data: bringing competition policy to the digital era](#), November 2016.

Figure 1.B: Feedback loops



Source: OECD ⁵³

- 1.75 Exclusive possession of data, combined with a lack of engagement by consumers, can lead to a lack of competitive pressure within those markets. In turn, this could prevent the benefits from feedback loops from being fully realised or shared with consumers.
- 1.76 The extent to which data are of central importance to the offer but inaccessible to competitors, in terms of volume, velocity or variety, may confer a form of unmatched advantage on the incumbent business, making successful rivalry less likely.
- 1.77 This competitive advantage can arise across many digital markets. In online search, a potential rival with fewer queries to process and with less data for its algorithms to learn responsive search results from will generate less accurate results. This will be most evident for less frequently searched queries.⁵⁴ Consequently, users are more likely to use the incumbent platform (thereby exacerbating the competition problem). The persistent dominance of Google in the face of competition from Bing provides some support for this theory. That said, the available evidence on this subject is somewhat mixed. Some studies have found that larger datasets can be valuable assets for predictive analysis, despite ultimately reaching a point at which the returns from data collection start to diminish.⁵⁵ Others, such as analysis of Netflix, suggest that in some markets the returns to scale for data may be rapidly diminishing.⁵⁶
- 1.78 If the provider of an online platform also operates as a competitor to its business users, it will have a unique advantage in terms of the knowledge and data it holds about its rival business users and their customers.
- 1.79 The importance of data as a barrier to entry has been a common and convincing feature in evidence reviewed by the Panel from experts and

⁵³ Figure adapted from OECD, *Big data: bringing competition policy to the digital era*, November 2016. The left-hand loop represents user feedback; the right-hand loop monetisation.

⁵⁴ Bourreau, de Steel, and Graef, *Big data and competition policy: market power, personalised pricing and advertising*, February 2017.

⁵⁵ Junque de Fortuny et al, *Predictive modelling with big data: is bigger really better?*, December 2013.

⁵⁶ Xavier Amatriain, *10 lessons learned from building machine learning systems*, 2014.

industry stakeholders. In response to the Panel's call for evidence, the Law Society of Scotland said that 'as data is power, those already large, often global, businesses which are able to utilise existing data effectively, have advantages in terms of maintaining their existing position and further increasing their market share. This will inevitably pose a barrier to new entrants (without any such data) or even smaller competitors.'

Network effects

- 1.80 Another key feature of digital platform markets is the strong network effects that many exhibit. Network effects are not unique to digital markets, nor are they the same in each market, but they are key to understanding the competitive dynamics in the markets where they occur. There are two types of network effects:
- Direct network effects occur when the benefits to a user increase as the number of users increases. For example, having a telephone became increasingly valuable to households as additional homes were connected. These effects are strong for social networks, messaging services, dating services, and customer review sites. They are also relevant for online search, which can be improved through experience, and data, from more users.
 - Indirect network effects occur when the benefits to users on one side of a platform market increase with the number of users on the other side of the market. These are high for users on both sides of online market places, streaming services, and app stores, and are also high for advertisers.
- 1.81 Network effects mean that platforms become more valuable to their users as they grow, which in turn makes them a more attractive proposition to further prospective users. The reverse of this is that if a platform's user growth stagnates, or the number of users falls, then the quality of the service offered will fall. Many academics have concluded that 'platform businesses typically need to attain critical mass when they are launched in order even to survive.'⁵⁷ These dynamics can naturally lead to a winner-takes-most environment and discourage market entry thereafter.
- 1.82 Network effects do not guarantee concentration, as they can be overcome where consumers and businesses have the freedom to either switch between services, or use multiple services simultaneously. The latter is commonly referred to as multi-homing.
- 1.83 Network effects are not necessarily natural features of a market but can be the result of technological design decisions, such as whether to facilitate data mobility and systems with open standards – issues discussed further in Chapter 2.

Limitations to switching and multi-homing

- 1.84 In some markets, for example where services are all essentially the same, or engaging with another service provider is particularly time consuming, consumers will not use multiple services simultaneously. Consumers will therefore single-home. Effective competition under single-homing conditions

⁵⁷ Evans, David S., and Richard Schmalensee, [Failure to Launch: Critical Mass in Platform Businesses](#), Review of Network Economics 9.4, 2010.

relies on consumers being willing and able to switch to an alternative service provider if it has a superior offering.

- 1.85 In other markets, such as those where meaningfully differentiated products and services are available, and their use does not require a significant investment, users on each side of platforms may have the capacity and desire to multi-home. This could mean a consumer having several apps for a similar service downloaded onto their smart phone or a business user selling their services or products on multiple rival platforms simultaneously.
- 1.86 Freedom of all parties to either switch or multi-home between platforms ensures that there is more than one credible route to market for independent online businesses, and as a result the bargaining power of individual platform companies is reduced.
- 1.87 There are several limitations evident in multiple digital platform markets that prevent consumers and businesses from freely adopting these behaviours. Some of these constraints are inherent to the markets, but others reflect choices by the incumbent companies. These limitations include:
- Loss of personal data – consumers moving to a new service will typically be unable to take their history with them. This could mean loss of photos, search history, apps, or the history of tracked activities such as exercise.
 - Loss of reputation – endorsements such as consumer feedback, ratings or trust scores can be very important to independent businesses operating through online platforms.
 - Anti-competitive terms – dominant platform businesses have strong bargaining power over their business users. They might use this to enforce unfair or anti-competitive terms onto them, with the effect of entrenching their position. Price-parity or exclusivity clauses are examples of these kinds of terms.
 - Technical barriers – in many cases the systems and technical standards applied to competing platforms differ. This means that the services are not interoperable. For example, a user of a particular mobile messaging app can only communicate with their contacts that also use the same app and not users of other services.
 - Tying of services – another semi-technical barrier to switching and multi-homing is the tying of services to other services or hardware. In many cases, this inability for tied systems and services to interoperate may have been introduced by design.
 - Inertia – consumers in digital markets display strong preferences for default options and loyalty to brands they know. The value of default roles in digital markets was illustrated by Google’s agreement to reportedly pay \$1 billion to Apple to be the default search engine on the iPhone, despite little effort being required of consumers to switch.⁵⁸ These tendencies will be exaggerated where services are provided at no monetary cost to consumers, as the incentive to take action may not be apparent to the consumer.

⁵⁸ BBC News, [Google 'paid Apple \\$1bn in 2014 to keep search on iPhone'](#), January 2016.

- 1.88 Switching and multi-homing by users of platforms can be the antidote to strong network effects, but in many digital markets a combination of the above restrictions means that these competitive dynamics are limited.

Access to finance and intangible capital

- 1.89 Within the non-digital economy, large, successful firms will often have an advantage due to their ability to self-finance investment at lower cost. However, this may be particularly acute in digital markets because a higher proportion of investment is in intangible capital.⁵⁹ This form of capital is difficult to finance through debt as assets do not have value for alternative uses and so cannot be held as collateral. This problem is exacerbated by the fact that digital companies will usually make losses for a number of years until they achieve a critical mass of users. Significant funding is required to absorb these early losses in the hope of future returns.
- 1.90 The Panel has also heard views from independent digital companies that investors may be less enthusiastic about backing a new product or service in a similar space to an existing large incumbent due to the perceived risk that the incumbent might seek to replicate it or kill it off.

The cumulative effects of these features

- 1.91 Although many of these features are evident in non-digital markets, the combination and strength of them in digital markets is unique. As set out in the Centre for Competition Policy's response to the Panel's call for evidence:

'there is a major qualitative difference in that so many of these characteristics are combined in digital settings. In particular, digital technology can be used globally without transport costs, marginal costs are often close to zero, and a very small number of platforms become both first-choice access points for time-constrained consumers and the core route to market for many suppliers. Consequently, network and other effects become hugely exaggerated, resulting in dominant firms, even at a global level.'

- 1.92 The combined features of economies of scale and scope, strong network effects, and restrictions to consumer switching and multi-homing mean that many digital platform markets have tended towards high levels of concentration.

Variation between markets

- 1.93 At the same time, it is clear that digital platform markets differ significantly and that 'digital' doesn't automatically mean high levels of concentration. Many responses to the Panel's call for evidence made the point that individual markets vary in the presence and strength of the factors that can lead to concentration:
- Facebook's persistent dominance is supported by strong direct network effects. Its strong position in the attention market has enabled it to grow its share of the digital advertising market to challenge Google.

⁵⁹ The increasing importance of intangible assets to the economy are explained by Haskell and Westlake, [Capitalism without capital](#), 2017.

- Amazon’s position as an online marketplace has been achieved through offering a fast, efficient and low-cost service that consumers value highly. Strong indirect network effects due to having achieved a critical mass of buyers and sellers as well as strong economies of scale and scope with regards to its logistics operations are part of this.
- Google took over from rivals such as Lycos, AltaVista, and Yahoo as the leading search engine because it offered users faster and more relevant search results. Its position since then has been supported by user and monetisation feedback loops, which smaller competitors cannot match.

1.94 Not all digital platform markets are concentrated to just one or two main firms. The price comparison market for financial services, for example, appears to have strong competition between 5 firms that have high-profile advertising campaigns. Online dating has a range of competitors, seemingly able to coexist due to the ability and desire of users to multi-home and use differentiated services.

Persistent dominance and market power

1.95 An important question is whether the largest incumbents of digital markets are constrained by competition ‘for the market’, and could be unseated by innovative entrants in the future. Although the dominant players continue to innovate and compete, there is reason to be sceptical of the notion that they face serious threats to their dominant positions in the future, unless there are changes to the current policy framework.

Competition for the market

1.96 Concentrated market shares at a single point in time do not necessarily mean inadequate competition. This is because having one or two companies controlling high levels of market share is only an indication that there is a low level of competition ‘in the market’.

1.97 An alternative constraint on the behaviour of firms towards their customers can occur through competition for the market. When this form of competition takes place, the benefits of highly competitive markets are felt due to markets being contestable.⁶⁰ So long as a market is contestable, a firm in a monopoly position will know it must work hard to meet consumers needs and stay ahead of potential rivals.

1.98 One argument that the Panel received in evidence is that the largest incumbents in digital markets are driven to constantly improve their service, invest, and innovate due to the threat of being replaced by a new entrant, as Facebook once did to MySpace and Google to AltaVista, Lycos and Yahoo. These are not the only examples of powerful incumbents in technology-driven markets being replaced by innovative rivals. For example, Nokia appeared to have an unassailable position in the mobile phone handset market in the late 1990s, until it was left behind by the smart phone revolution a decade later.

1.99 Nevertheless, there are a number of reasons to believe that these historical arguments do not apply today, and, absent the policy changes discussed in

⁶⁰ Baumol, Panzar, and Willig, [Contestable markets: an uprising in the theory of industry structure](#), March 1982.

Chapters 2 and 3, there will be much more limited competition for the market going forward.

Persistence

- 1.100 Reports vary as to when Google officially became the most popular search engine, but it was certainly more than a decade ago. According to the European Commission's report for the Google Shopping antitrust case, 'Google has enjoyed high market shares across the EEA for a longer period than AltaVista and Lycos, which maintained their leading position for 2 years (1997 to 1999) and 1 year (1999 to 2000) respectively.'⁶¹
- 1.101 Facebook has been dominant for over a decade. Prior to this, Myspace was the most popular social network for no more than a few years.

Scale

- 1.102 The level of dominance achieved by the early leaders in markets such as social networks and online search is not comparable to the scale and reach that has been achieved by Facebook and Google. For example, the number of monthly unique global visitors to Myspace peaked at around 100 million,⁶² and it was valued at \$580 million when it was purchased by News Corporation in 2005.⁶³ In comparison, Facebook reportedly has over two billion monthly active users,⁶⁴ with over 40 million in the UK alone,⁶⁵ and was valued at more than \$470 billion in February 2019.⁶⁶ It is possible that companies such as Myspace never achieved the critical mass necessary to secure the market.
- 1.103 In 2001, when Google would have been of similar scale and popularity to its closest rivals, it received more than 55 billion search queries per year.⁶⁷ The annual volume of Google searches is now reportedly in the trillions.⁶⁸

Personalisation and the value of user data

- 1.104 Myspace and early web search engines were not gathering consumer behavioural data in the same way digital companies do today. The services and advertising that the earlier internet companies provided was far less personalised, and so behavioural data had significantly less value. Machine learning was reportedly not introduced by general search engines until 2003, meaning that scale was far less pertinent for competition until that point.⁶⁹
- 1.105 Consumer behavioural data held by the current incumbents therefore acts as far more of a barrier to entry and expansion for potential rivals than it ever did when they were starting out.

⁶¹ European Commission, '[Antitrust procedure: Google Search \(shopping\)](#)', June 2017.

⁶² News Corporation's [Annual Report](#), 2010.

⁶³ Startupbros blog: [Myspace – the rise, fall, and rise again?](#).

⁶⁴ According to [Facebook Newsroom](#) it had 2.32 billion monthly active users globally as of 31 December 2018.

⁶⁵ Comscore MMX Multi-Platform, June 2018, Desktop age 6+, Mobile age 18+.

⁶⁶ [Facebook Inc historical market cap data](#).

⁶⁷ Google, [2001 year-end Google Zeitgeist](#).

⁶⁸ Search Engine Land, [Google now handles at least 2 trillion searches per year](#), May 2016.

⁶⁹ European Commission, [Antitrust procedure: Google Search \(shopping\)](#), June 2017.

Importance of the ecosystem

1.106 The ecosystems around some products makes their persistence more likely. When Nokia was overthrown as the dominant mobile phone producer, independently produced apps were not a part of the mobile experience, and so it was easier for new entrants to offer a rival product. Now there are millions of apps that have been written for Apple's iOS and Google's Android, making it hard for a new entrant mobile operating system to offer a competitive and attractive product. When Microsoft announced in 2017 that it would not release any more smartphones, it was reported that one factor behind the lack of success had been app developers' reluctance to develop apps for the Windows operating system because they were already making apps for two larger operating systems.⁷⁰

Strategic investment

1.107 It is likely that large digital companies have learned lessons from the experience of the rivals they replaced. The threat of competition for the market may well encourage incumbent companies to invest in research and development, but such investment may be targeted towards a form of technology and innovation that solidifies their position and makes successful entry less likely, rather than being aligned with a strategy that would maximise consumer welfare.

1.108 The large digital companies have also used acquisitions to develop strong ecosystems across multiple layers of value chains in order to cement their position in their main market, though this is not to say that every acquisition should be viewed from this perspective.

1.109 A concept widely discussed by commentators is that large incumbent firms in digital markets act in a way which, at best, absorbs innovation to protect themselves from potential competition and, at worst, uses acquisitions to kill off or distort innovation, creating a 'killzone' around their positions.

1.110 The Panel is of the view that most acquisitions made by digital companies are likely to be benign or beneficial to consumers due to efficiencies, and the potential for innovative products and services to be brought more quickly to market. However, a minority of acquisitions are likely to have been anti-competitive. The Panel's reasoning for this view is set out later in this chapter.

1.111 There have been several cases over the last decade where relatively small digital companies have been purchased for prices of large multiples of their earnings and gone on to play a market role which suggests a potential to have acted as competitors. It is possible that some of these products or services may have failed to develop to their full potential without the expertise, experience, and finance from the acquiring company. However, it nonetheless appears their eventual success has acted to solidify the positions of the incumbents. Analysis of the social media market earlier in this chapter highlights how strategic acquisitions can be used to protect a dominant position.

⁷⁰ The Telegraph, [Microsoft is finally killing off the Windows Phone, October 2017.](#)

Summing up: market power

- 1.112 The barriers to entry that exist in established digital platform markets mean that they cannot generally be considered freely contestable, and as such the largest incumbents' positions are not imminently under threat. This means that they can exert significant market power over their users, meaning they are not required to deliver the same level of positive outcomes as they would if facing normal competitive market conditions.
- 1.113 The Australian Competition and Consumer Commission (ACCC) reached the same conclusion in their preliminary report on digital platforms, published in December 2018: 'The ACCC considers that, like Google, to a large extent, Facebook is insulated from dynamic competition by barriers to entry and expansion, advantages of scope, and its acquisition strategies.'⁷¹
- 1.114 There are a number of *a priori* economic reasons to believe that this market power could be persistent under the current policy regime. The more rapid turnover in the earlier days of the consumer expansion of the internet has given way to a greater degree of stability and continued consolidation in market shares in the major activities.
- 1.115 It is impossible to assess and predict future technologies and how they might affect the current incumbents. But in general, it appears that the large incumbent digital companies are in the best position to lead in the next waves of technologies as well, with many of them likely to be based on machine learning and artificial intelligence that is powered by the large data sets that the incumbents have greatest access to. This includes technologies like smart speakers and other Internet of Things devices as well as technologies like voice and image recognition.
- 1.116 Investor reports provided to the Panel are consistent with this view. They suggest that the largest digital firms have growing market capitalisation, the highest expenditure on new technology, and an increasing share of app downloads since 2010. This suggests the position of the largest firms is getting stronger, and this strength can be expected to lead to increasing profitability over time. Markets do not appear to be pricing in a significant likelihood that any of the currently successful companies will lose a battle for the market in the foreseeable future.
- 1.117 Regardless of the route that many platforms have taken to achieve and cement their dominance, the result is that one, or in some cases two firms in certain digital markets have a high degree of control and influence over the relationship between buyers and sellers, or over access by advertisers to potential buyers. As these markets are frequently important routes to market, or gateways for other firms, such platforms are then able to act as a gatekeeper between businesses and their prospective customers. This gives the platforms three distinct forms of power: the ability to control access and charge high fees; the ability to manipulate rankings or prominence; and the ability to control reputations.⁷² A strong concern for the Panel is where a

⁷¹ Australian Competition and Consumer Commission, [Digital Platforms Inquiry – Preliminary Report](#), December 2018.

⁷² Rahman, [Regulating informational infrastructure: Internet platforms as the new public utilities](#), 2018.

dominant platform has such a strategic market status, with buyers or sellers dependent on them in some form.

The impacts of limited competition on consumers

- 1.118 Although many digital markets tend towards concentration, the welfare effects are not entirely clear. As economies of scale reduce costs for larger firms, and network effects raise the benefits of single platforms being used, then a concentrated market may be an efficient outcome. However, this is only satisfactory if consumers receive a sufficient share of the benefits of these efficiencies. When a single platform faces limited competition for the market and many fragmented users with limited bargaining power, this is unlikely to be the case over the long term.
- 1.119 Absent an effective competitive constraint on the market, economic theory suggests that optimal decisions by a dominant platform will not consistently deliver optimal outcomes for consumers. This can affect consumers directly, through variation of prices and quality of services provided by platforms to consumers. Or, it might result in indirect consumer impacts, as the effects of unfair terms and unfair access for business users of platforms filter through to consumers in the prices, quality, and range of services they receive from those businesses.
- 1.120 The direct and indirect potential sources of harm to consumers are assessed below, followed by a summary of evidence that points to the dominant platforms' power over their dependent business users, and to their behaviour towards innovation.

Direct consumer impacts

- 1.121 Consumers are generally able to access digital platforms at no monetary cost, and prices for products and services acquired on those platforms are generally low. It is in the interest of platforms to deliver fast, efficient, and free services to consumers as these are metrics that they can easily identify, compare, and relate to.
- 1.122 As discussed above, there is significant value for consumers in these positive outcomes. At the same time, they do not always tell the full story. In particular, the amount of data given in exchange for a service, the privacy and security with which data are treated, the density of advertising and usefulness of search and other rankings are all relevant aspects to take into account when considering the performance of the digital economy.
- 1.123 Although accessing services for free may appear to be an attractive proposition, this zero-price may in fact be too high, as consumers could be extracting greater value in return for their data. For example, they could even be paid for the use of their data, and so effectively receive a negative price. Research into the value consumers place on internet services suggests they consider access to email almost 30 times more valuable than access to social media.⁷³ And yet they pay the same zero monetary price and may potentially

⁷³ Brynjolfsson, Eggers, and Gannamaneni, [Using massive online choice experiments to measure changes in well-being](#), National Bureau of Economic Research, Working Paper 24514, April 2018.

give up more data in return in the latter case, suggesting they may not be getting such a good deal as they could.⁷⁴

- 1.124 There have been some high-profile cases in recent years, for example the Facebook and Cambridge Analytica scandal in 2018, that show some digital companies have not historically taken issues of privacy and treatment of consumer data as seriously as consumers would like.
- 1.125 The Digital, Culture, Media and Sport Committee was robust in its assessment of Facebook's business model and the challenges it poses in its February 2019 report. It stated that the evidence the committee obtained 'from the Six4Three court documents indicates that Facebook was willing to override its users' privacy settings in order to transfer data to some app developers, to charge high prices in advertising to some developers, for the exchange of that data, and to starve some developers – such as Six4Three – of that data, thereby causing them to lose their business.'⁷⁵
- 1.126 The introduction of the General Data Protection Regulation (GDPR) in Europe in 2018 was a positive step in terms of setting the boundaries for legal treatment of consumer and personal data going forwards. However, it has been argued that these new, firmer boundaries could support the position of the incumbents, as potential rivals will (rightly) face more restrictions than the incumbents themselves faced in their infancy.
- 1.127 Within these boundaries there will still be scope for the bulk collection and use of personal data that consumers might be uncomfortable with if they are aware. The German competition authority's recent decision⁷⁶ to impose restrictions on Facebook's collection and combination of user data without explicit consent is evidence that privacy issues remain with GDPR in place.
- 1.128 Although privacy is not directly within the scope of the Panel's review, the misuse of consumer data and harm to privacy is arguably an indicator of low quality caused by a lack of competition. It may also be a method for achieving and cementing market power. This link between misuse of consumer data and competition concerns is highlighted by the Committee's report, which invited further scrutiny over 'whether Facebook is unfairly using its dominant market position in social media to decide which businesses should succeed or fail.'⁷⁷
- 1.129 Another indicator of the quality of services provided by online platforms is the density of advertising that consumers see in return for the valued service and content. As advertising revenues of Google, Facebook, and more recently Amazon increase, there are signs that the volume of advertising consumers are exposed to is also on the rise.⁷⁸

⁷⁴ Tim Harford, [Treat social media like email and search engines](#), April 2018.

⁷⁵ House of Commons Digital, Culture, Media and Sport Select Committee, [Disinformation and 'fake news': Final Report](#), February 2019.

⁷⁶ Bundeskartellamt, [Announcement of decision to prohibit Facebook from combining user data from different sources](#), February 2019.

⁷⁷ House of Commons Digital, Culture, Media and Sport Select Committee, [Disinformation and 'fake news': Final Report](#), February 2019.

⁷⁸ Quartz, [Google has been quietly placing more ads in search results](#), February 2017.

- 1.130 In markets where monetary prices are typically zero, firms might be expected to compete more vigorously on all aspects of quality. This does not appear to be the case in terms of privacy or advertising exposure.
- 1.131 Some evidence suggests that search algorithms do not always rank results based purely on relevance to the consumer. One high-profile example of this is Google being found to be giving favourable positioning and display of its own comparison shopping service in its search results pages. It was fined €2.4 billion by the European Commission for this conduct, though this judgement has been appealed by Google.⁷⁹ In June 2018, the Competition and Markets Authority (CMA) launched enforcement action against hotel booking sites for various breaches of consumer protection law, including search results, and their framing, being influenced by factors that may not be relevant to the customer's requirements. Undertakings were accepted from the 6 major parties in February 2019.⁸⁰
- 1.132 Where the presentation of search results is influenced by factors unrelated to consumers' preferences, consumer welfare is unlikely to be maximised, as purchasing decisions could be distorted by imperfect or misleading framing of information. In the UK, 65% of internet users are reported to feel that the ordering of search results has an effect on their behaviour.⁸¹
- 1.133 Companies will naturally seek to maximise the returns they make on their significant investment by seeking to optimise the elements of their products and services that they know their customers are most conscious of. Companies will perhaps understandably not be encouraged to offer high quality for elements of their service that consumers are less aware of.

Indirect consumer impacts

- 1.134 In addition to the impacts of platforms that consumers experience directly, they can also be expected to feel the effects of harm inflicted on the businesses they interact with. Where fees and commissions are higher than they would be if markets were competitive, then these will be passed through to consumers to some degree. Quality and choice may also be reduced as the costs cut into dependent companies' margins. Over the longer term, these conditions are likely to constrain the ability of these companies to invest in new ideas and their own growth. Consumers will miss out on innovative new products and services as a result.
- 1.135 Evidence reviewed by the Panel suggests digital platform companies are able to exert significant control over their business users or potential rivals, and that there is substantial risk of harm to consumers via the business side of platforms. By aggregating a large proportion of consumer demand on one side of the market, platforms have strong bargaining power over the long tail of business users that are dependent on the platform as a route to market.

⁷⁹ European Commission press release, [Antitrust: Commission fines Google €2.42 billion for abusing dominance as search engine, June 2017](#).

⁸⁰ CMA, [Online hotel booking](#), February 2019.

⁸¹ TNS opinion and social survey at the request of the European Commission, [Special Eurobarometer 447 Report – Online Platforms](#), April 2016.

- 1.136 One example of this is in the digital advertising market. A report commissioned by DCMS found that as ‘a consequence of their high market share, ownership of key technologies and strong user data assets, Google and Facebook are, to some extent, able to set their own terms to advertisers and publishers.’⁸²
- 1.137 The following forms of conduct by large digital platforms towards smaller firms could indirectly lead to consumer harm:
- Business users of strategically important platforms can be charged unfair access fees, commissions, or be required to accept other unfair contractual terms. This conduct might also have an exclusionary effect if the platform is itself competing with its own business users to supply via its platforms, as the high charges can limit its rivals’ ability to compete.
 - Businesses may not be given fair access to consumers, either because they are denied access to the platform entirely, or through an unbalanced ranking structure, which can distort competition and result in sub-optimal outcomes for consumers. Business users may also be restricted from competing freely elsewhere through anti-competitive conduct or clauses in contracts.
 - Strategically important platforms could have scoring power over their users, meaning they are able to influence their reputation.
 - Potential rivals to large digital platforms can be removed or absorbed through a strategy of killer acquisitions. Resisting such acquisitions may be particularly challenging for firms that are dependent on some part of the platform’s ecosystem.
- 1.138 Behaviour by platforms that restricts the margins of smaller businesses could limit their ability to invest and innovate. Restricting the growth of businesses users can also limit their potential to become direct competitors over time. Consumers could ultimately be expected to face higher prices, lower quality, or reduced choice in future as a result.
- 1.139 The Panel is aware of a number of examples where authorities have taken action against incumbent firms for anti-competitive conduct, or are currently investigating where they suspect such conduct may have taken place. It has also been made aware of a wider range of more anecdotal evidence to suggest that anti-competitive or generally unfair behaviour may be occurring beyond competition enforcement cases in the public domain.
- 1.140 There has been sufficient evidence to convince the EU to take action, with its proposed regulations of online platforms that are expected to be introduced in 2019. It found in a 2017 study that 75% of businesses with a heavy use of online platforms⁸³ had experienced problems in their relationships with such platforms, with 33% experiencing them often.⁸⁴ The European Commission stated within its policy proposals that ‘the dependence of businesses on certain online services implies that the providers of such online intermediation

⁸² Plum Consulting report commissioned by DCMS, [Online advertising in the UK](#), January 2019.

⁸³ Those businesses that generate more than half of their revenue via online platforms.

⁸⁴ European Commission, [Business-to-business relations in the online platform environment](#), May 2017.

services have a scope to engage in a number of potentially harmful trading practices which limit business users' sales through them and risk undermining their trust.⁸⁵

Unfair terms for business users of platforms

- 1.141 Profitability can be the return to risk-taking and the reward for innovation by firms. At the same time, persistent significant profits are frequently the result of weak competition, and represent a transfer of value from consumers and smaller businesses to incumbents. Stock market valuations frequently reflect high profits, or expectations of high profits. As noted earlier in the chapter, Google, Amazon, Facebook, Apple, and Microsoft were at times in 2018 the top 5 most valuable companies in the world. They also reportedly made combined profits in excess of \$150 billion in the 2018 calendar year, although over a third of this was earned by Apple.⁸⁶
- 1.142 Apple has recently been defending itself in an ongoing case brought to the U.S. Supreme Court by consumers and purchasers of mobile apps through its App Store.⁸⁷ The case is complicated by the question as to whether Apple can be held responsible by consumers for the price of the apps. But the complaint itself is centred on the commissions of 30% that Apple is able to take from app developers' revenues. The app buyers have argued that they would face lower prices for the apps in a competitive market and that Apple is abusing its position.
- 1.143 There are signs of value capture by Google and Facebook in the digital advertising market. The Panel received strong representations from news publishers that the opacity of the digital advertising supply chain, coupled with Google's dominance, means that they are unable to achieve a fair return from digital advertising associated with their content. Evidence suggests there can be wide variation in the proportion of advertising revenue that reaches publishers.
- 1.144 The Guardian⁸⁸ and The Daily Mail Group⁸⁹ have each previously estimated that they receive just 30% of the advertising revenue in some cases, though more recently The Guardian has indicated it is content with the figure it now receives.⁹⁰ Google suggests the figure is closer to 70%. A study commissioned by DCMS found that the figure is likely to vary depending on the circumstances, within a range of 43% to 72%, though it presented an estimate of 62% in an 'idealised scenario'.⁹¹ This uncertainty underlines the lack of transparency in the market, and suggests there is at least scope for advertisers and publishers to be getting an unfair deal.

⁸⁵ European Commission, [Regulation on promoting fairness and transparency for business users of online intermediation services](#), April 2018.

⁸⁶ [Macrotrends](#) data on net income for Google, Amazon, Facebook, Apple, Microsoft.

⁸⁷ The New York Times, [You should have the right to sue Apple](#), December 2018.

⁸⁸ Mediatel, [Where did the money go? Guardian buys its own ad inventory](#), October 2016.

⁸⁹ The Cairncross Review, [A sustainable future for journalism](#), February 2019.

⁹⁰ Digiday UK, [GDPR will ultimately be good for the industry': Guardian CRO Hamish Nicklin on 2019 plans](#), December 2018.

⁹¹ Plum Consulting report commissioned by DCMS, [Online advertising in the UK](#), January 2019.

- 1.145 The House of Lords Communications Committee’s report on the UK digital advertising market recommended that the CMA should undertake a market study to test whether the market is working fairly for businesses and consumers.⁹² High levels of value capture by platforms and intermediaries within the digital advertising supply chain can ultimately be expected to harm consumers. High commissions may be passed through to consumers in higher prices for the goods and services being advertised, and lower advertising revenues reaching publishers could harm the quality of content viewed by consumers.
- 1.146 The European Commission revealed in September 2018 that it is gathering information on Amazon’s use of data from sellers on its site.⁹³ This follows from the concern that it might use this information to boost its own retail sales. No case has yet been brought, but the Commission is probing whether the data is being gathered for legitimate purposes, like helping Amazon improve its service to the other sellers. The Commission is reportedly seeking evidence from sellers on whether Amazon has in recent years started to sell under its own brand identical, or very similar products to ones merchants have offered on the marketplace.⁹⁴
- 1.147 There are also signs of platforms enforcing unfair terms on business users in the collaborative economy, with high-profile cases of service providers through platforms taking legal action to seek improved terms and stronger bargaining rights.^{95,96}

Unfair access to consumers through platforms

- 1.148 Google was found by the European Commission to be giving favourable positioning and display of its own comparison shopping service in its general search results pages and was fined €2.4 billion for anti-competitive conduct.⁹⁷ It was also fined €4.34 billion by the European Commission in 2018 for placing illegal restrictions on Android device manufacturers and mobile network operators to cement its dominant position in general internet search. Commissioner Margrethe Vestager, in charge of competition policy, said ‘Google has used Android as a vehicle to cement the dominance of its search engine. These practices have denied rivals the chance to innovate and compete on the merits. They have denied European consumers the benefits of effective competition in the important mobile sphere.’⁹⁸ These cases are both under appeal, but illustrate in principle how a platform can use its gatekeeper power in one market to strengthen its position in another.

⁹² House of Lords Select Committee on Communications, [UK advertising in a digital age, April 2018](#).

⁹³ Bloomberg, [Amazon probed by EU on data collection from rival retailers, September 2018](#).

⁹⁴ Bloomberg, [Is Amazon unfairly copying products? EU quizzes merchants, September 2018](#).

⁹⁵ The Independent, [Uber drivers are entitled to workers' rights, Court of Appeal says in landmark gig economy ruling, December 2018](#).

⁹⁶ BBC News, [Deliveroo wins latest court battle over rider rights, December 2018](#).

⁹⁷ European Commission press release, [Antitrust: Commission fines Google €2.42 billion for abusing dominance as search engine, June 2017](#).

⁹⁸ European Commission press release, [Antitrust: Commission fines Google €4.34 billion for illegal practices regarding Android mobile devices to strengthen dominance of Google's search engine, July 2018](#).

1.149 In November 2018, Germany's competition authority the Bundeskartellamt initiated an abuse proceeding against Amazon to examine its terms of business and practices towards sellers on its German marketplace. Andreas Mundt, President of the Bundeskartellamt, said 'Amazon functions as a kind of "gatekeeper" for customers. Its double role as the largest retailer and largest marketplace has the potential to hinder other sellers on its platform. Because of the many complaints we have received we will examine whether Amazon is abusing its market position to the detriment of sellers active on its marketplace.'⁹⁹ The investigation will scrutinise Amazon for a range of potential exploitative terms, as well as considering issues of exclusion through the non-transparent termination of sellers' accounts.

Unfair restrictions on the use of alternative platforms

1.150 Price parity clauses, or most-favoured nation clauses, have been used in the past by some platforms to prevent their business users from offering their goods or services for better terms elsewhere. These terms can constrain business users' ability to operate effectively elsewhere in the market, limiting the incentive for business users and consumers to multi-home. In 2013, Amazon committed to ceasing this practice in the EU, as UK and German competition authorities were simultaneously investigating it. The investigations were then dropped.¹⁰⁰

1.151 However, in 2015, the European Commission opened an investigation into Amazon because it had concerns about clauses included in Amazon's e-books distribution agreements. These most-favoured nation clauses required publishers to offer Amazon similar (or better) terms as those offered to its competitors, or to inform Amazon about more favourable terms given to its competitors. The Commission accepted legally binding commitments from Amazon in 2017 to bring such practices to an end.¹⁰¹

1.152 Price parity clauses were also used by large online travel agent platforms such as Booking.com until 2015, when they came under pressure in several EU countries to drop them, including France where the clauses were subsequently banned explicitly by law.¹⁰² The European Competition Network (ECN), which includes the UK's CMA, continued to monitor the market, publishing a report in April 2017.¹⁰³

Incumbent behaviour relating to innovation

1.153 The dominance of platforms over their business users will constrain those businesses' ability to grow and develop their own products or services, but ultimately also their ability to invest in transformative innovation. The acquisition strategy of dominant platforms towards potential rivals can also have a more direct impact on disruptive innovation.

⁹⁹ Bundeskartellamt, [Announcement that Bundeskartellamt initiates abuse proceeding against Amazon, November 2018](#).

¹⁰⁰ Bundeskartellamt, [Amazon abandons price parity clauses for good](#), November 2013.

¹⁰¹ European Commission press release, [Antitrust: Commission accepts commitments from Amazon on e-books, May 2017](#).

¹⁰² Latham & Watkins, [The Macron Law modifies French competition rules and procedures](#), August 2015.

¹⁰³ European Commission Network, [Report on ECN monitoring exercise in the online hotel booking sector, March 2017](#).

1.154 Quantitative evidence on the effects of mergers in the digital economy is limited. While many mergers may be expected to be benign, recent robust analysis of the pharmaceutical sector, also characterised by competition for the market and the centrality of innovation, estimated that more than 6% of acquisitions every year in that sector are ‘killer acquisitions’. The report highlights that this is likely to be a lower bound.¹⁰⁴ In the absence of any detailed analysis of the digital sector, these results can be roughly informative.

1.155 This research, in combination with wider-ranging evidence gathered through extensive consultation with experts, supports the Panel’s expectation that at least some of the acquisitions that have been made by large digital companies will have been problematic. Where these occur, the implications for long-term competition and consumer welfare will be significant. Some of the highest value acquisitions by large digital companies are set out in Table 1.A.

Table 1.A: Examples of high value acquisitions by large digital companies

Year	Acquirer	Company acquired	Transaction value (\$million)
2006	Google	YouTube	1,650
2007	Google	DoubleClick	3,100
2011	Microsoft	Skype Technologies	8,500
2011	Google	Motorola Mobility	12,500
2012	Facebook	Instagram	1,000
2012	Microsoft	Yammer	1,200
2013	Google	Waze	970
2014	Apple	Beats Electronics	3,000
2014	Google	Nest Labs	3,200
2014	Google	Deepmind Technologies	625
2014	Facebook	WhatsApp	19,000
2014	Facebook	Oculus	2,000
2016	Microsoft	LinkedIn	26,200
2017	Apple	Shazam	400
2018	Amazon	Ring	1,000

Source: IG Group¹⁰⁵

1.156 The Panel has received a significant volume of evidence indicating that the prospect of being bought out by one of the major digital companies acts as an important incentive for innovative start-ups to enter the market, as well as

¹⁰⁴ Cunningham, Ederer, and Ma, *Killer Acquisitions*, 2018.

¹⁰⁵ ig.com, interactive source of publicly-known tech acquisitions completed since 1991.

for investors to back them. While accepting this may well be correct, this dynamic itself has pros and cons.

- 1.157 It can drive innovation by increasing incentives for start-ups and providing a mechanism for integrating their technology and delivering it to market more rapidly. However, it can also have the effect of distorting innovation. If innovators and their investors have learned that the biggest payoff is through creating something that complements the status quo, rather than seeking to disrupt or replace the incumbents, then funding will naturally feed through to this form of research. These dynamics may not result in the optimal form of investment and innovation that will maximise consumer welfare.
- 1.158 The challenges that mergers and acquisitions in digital markets can pose within the existing competition policy framework are considered in Chapter 3.

Summing up: the impacts of limited competition on consumers

- 1.159 The Panel has concluded through its review that while digital markets provide considerable benefits for consumers, a number of digital markets are dominated by one or two powerful platform companies, and that this dominance is persistent. Consumers can face less beneficial direct outcomes than they should as a result of this dominance, for example with quality potentially affected by privacy and data security issues, increased advertising, and lower levels of innovation than under more a more competitive situation.
- 1.160 Harm to consumers is also likely to come indirectly. This could come from unfair treatment of business users, and the wider chilling effects that large digital companies could have on disruptive innovation. The Panel is concerned that consumers will ultimately lose out as future competition and innovation from these dependent companies will be constrained.
- 1.161 A small number of large digital companies occupy strategically important gateway positions in digital markets, wielding significant bargaining power over their business users as a result. Whether a result of a conscious anti-competitive strategy or not, these market dynamics will lead to business users of platforms accepting worse terms than they would face if multiple platforms were competing with one another in each market. The consequences of these terms will ultimately feed through to consumers in the prices they pay, the quality they receive, and the range of innovative new products and services they are able to choose from.

The policy context for the review

- 1.162 This review comes at a time when debates are taking place around the world on the challenges posed by the emerging digital economy. The implications of digitalisation for taxation and work, the protection of individuals' privacy and consumer rights, the sustainability of a free and independent press, the spreading of misinformation and the removal of harmful online content are just some of the issues that have featured prominently in recent times.
- 1.163 There are clear opportunities too: rapid advances in artificial intelligence and machine learning have the potential to transform business models across many sectors, finding better ways of performing complex tasks. New technology has the potential to transform our quality of life, from

improvements to the quality of infrastructure that underpins daily life through to faster diagnosis and treatment for medical conditions.

- 1.164 While the Panel's terms of reference were clear in stating that its review should not attempt to provide answers to wider social questions – which are rightly being examined in other fora – there are nonetheless a number of intersections between competition law and other areas of policy. Set out below are some of the areas where the challenges posed by digital markets are the subject of ongoing policy development or active initiatives across government.
- 1.165 By remaining mindful of the interactions between digital markets and other sectors, and the economy-wide reach of competition policy, the Panel has sought to guard against the risk of developing recommendations in isolation from wider public policy.

The digital economy and competitive markets

- 1.166 Underpinning its approach to developing the UK's digital economy, the government's Digital Strategy makes clear that strong competition can help ensure the private sector meets consumers' needs by keeping pace with technological change.¹⁰⁶ It also acknowledges that empowering consumers with better information can help individuals to make more informed choices and so deliver more competitive outcomes.
- 1.167 Investing in science and research to ensure the UK remains at the forefront of developing new technologies has been a focus of the government's modern industrial strategy. The creation of 1,000 new PhD places across the UK to support the next generation of artificial intelligence has underlined the potential for new technologies to boost innovation across the economy, helping to develop new products and services while at the same time expanding consumer choice.¹⁰⁷ The challenges for competition policy arising from changes in how information is shared are considered later in this report (see Chapter 2).
- 1.168 In setting the direction of future economic policy, the government has sought to harness the potential of new technologies to support the UK's growing digital economy. From boosting innovation funding for successful catapult centres to improving the availability of long-term finance for innovative new firms, government has played an active role in laying the foundations for a thriving digital economy.^{108,109} A range of additional measures have also been introduced aimed at supporting start-ups and scale-ups.¹¹⁰
- 1.169 Alongside this work the launch of a Regulators' Pioneer Fund and recent establishment of a ministerial working group on future regulation have

¹⁰⁶ DCMS, [UK Digital Strategy](#), 2017.

¹⁰⁷ BEIS and DCMS, [Artificial Intelligence Sector Deal](#), 2018.

¹⁰⁸ GOV.UK press release, [Billion-pound backing for British innovation](#), 10 August 2018.

¹⁰⁹ HM Treasury, [Patient Capital Review](#), 2017.

¹¹⁰ These measures include the establishment of 10 tech hubs across the UK; the introduction of a new 'start-up' visa from Spring 2019; and the launch of a British Patient Capital programme to support UK companies with high growth potential to access the long-term finance.

demonstrated a willingness to ensure that regulations keep pace with technological advances and remain favourable to innovation.¹¹¹

Modernising consumer markets

1.170 In response to changing consumer markets, the government published a Green Paper in April 2018 seeking views on how well equipped the UK's existing regulatory and competition framework was to manage emerging challenges across a range of sectors, including digital markets.¹¹² The paper launched a formal call for evidence to support a statutory review of competition powers introduced through the Enterprise and Regulatory Reform Act 2013. The findings of the Digital Competition Expert Panel are expected to inform the development of further policy proposals by the Department for Business, Energy and Industrial Strategy, including through its review of competition law.

The importance of data in digital markets

1.171 The importance of data in sustaining and supporting competitive digital markets has been widely recognised.¹¹³ In particular, the development of a National Data Strategy is aimed at unlocking the power of data for society and the wider economy.¹¹⁴ At the same time, there is a growing recognition that for the full benefits of data to be realised, consumers must have trust and confidence in how their data is used.

1.172 The Centre for Data Ethics and Innovation was established by the government in 2018 to provide advice on measures to enable safe, ethical and innovative uses of data-driven technologies. It is currently reviewing the use of data in shaping peoples' online experiences and the potential for bias in algorithmic decision-making.¹¹⁵ A parallel government review into smart data is exploring how data portability can improve the consumer experience in regulated utility markets through the use of innovative intermediaries and other services.¹¹⁶

Sustaining high-quality journalism

1.173 The wider democratic importance of sustaining high-quality journalism, and ensuring the public retains access to a diverse range of views and opinions, has been the focus of a recent government-sponsored review, led by Dame Frances Cairncross.¹¹⁷

1.174 The growing importance of online platforms and intermediaries in the distribution of news, has led to major changes in new media markets in recent years. In response, the Cairncross Review has put forward a wide-ranging set of recommendations aimed at sustaining the production of high-quality

¹¹¹ GOV.UK press release, [Business Secretary hosts first cross-government working group on future regulation](#), 24 October 2018.

¹¹² BEIS, [Consumer green paper: 'Modernising Consumer Markets](#), 2018.

¹¹³ HM Treasury, [The economic value of data: discussion paper](#), 2018.

¹¹⁴ GOV.UK press release, [Huge boost to UK's data capability as big business backs world-first AI talent scheme and chair of data ethics and innovation centre is confirmed](#), 13 June 2018.

¹¹⁵ GOV.UK press release, [Stellar new board appointed to lead world-first Centre for Data Ethics and Innovation](#), 20 November 2018.

¹¹⁶ BEIS and DCMS, [Smart Data Review: terms of reference](#), 2018.

¹¹⁷ DCMS, [The Cairncross Review: a sustainable future for journalism](#), 2018.

journalism – achieved in part through rebalancing the relationship between platforms and publishers. Dame Frances’ call for the CMA to review digital advertising markets, and for codes of conduct to be drawn up to ensure fair terms of trade where platforms are dominant, align closely with the findings of this review. There is scope for government in responding to both reviews to consider many of the recommendations in parallel. The recent announcement by DCMS of a review into how online advertising is regulated is a positive first step.¹¹⁸

Protecting internet users from online harms

1.175 Lastly, through its Digital Charter, the government has set out a programme of work to agree the norms and rules for the online world with the aim of increasing public confidence in new technologies.¹¹⁹ As part of this work, DCMS and the Home Office have committed to publish a White Paper setting out a range of new measures to keep UK citizens safe from online harms, with clear responsibilities for technology companies.

¹¹⁸ [Statement by the Secretary of State for Digital, Culture, Media and Sport on The Cairncross Review](#), made in the House of Commons on 12 February 2019.

¹¹⁹ HM Government, [‘Digital Charter’](#), 2018.

Chapter 2

Building consumer choice and competition into digital services

- 2.1 The key features of platform-based digital markets were analysed in Chapter 1. They have delivered significant benefits to consumers and the UK economy. However, the economic characteristics of many digital markets, combined with the business strategies of key market participants, have led them to tend towards being dominated by one or a small number of companies, limiting the level of competition upon which a market economy relies.
- 2.2 Updated policies have the potential to foster expanded competition. The Panel began its work by considering traditional competition law tools to meet the challenges of the digital economy, including merger and antitrust enforcement. It concluded these policies are important but that there is a limit to how much they can accomplish. Moreover, trying to address the issues identified in digital markets by strengthening these traditional tools beyond what the Panel recommends in Chapter 3 could have unintended and undesirable side effects.
- 2.3 This is why the Panel is also recommending pro-competition measures. Rather than only focusing on harmful mergers or actions by firms after they occur, these would actively build competition into digital markets upfront, creating frameworks, rules and standards that create space for new companies to innovate and that ensure fair treatment of competitors.

Introduction

- 2.4 Some assessments see digital markets as raising no particular issues and needing nothing beyond existing competition frameworks to continue delivering the benefits of well-functioning markets. Others have argued they are natural monopolies that need regulating in the same way as electricity, gas or railway networks.
- 2.5 The Panel's assessment is that, while they share some important characteristics with natural monopolies, it is too early to conclude that competition within and for digital markets cannot be achieved. Opening these markets up with pro-competition tools that tackle the features that can tip them to a single winner is needed to secure the benefits that effective competition can deliver.
- 2.6 To make this happen, the chapter proposes creating a digital markets unit that can design and implement pro-competition rules. The unit will take a co-operative approach, working with platforms, other businesses and other

stakeholders to agree rules, standards and solutions. It also needs to be backed with new regulatory powers, so it can impose and enforce these solutions if necessary.

Strategic recommendation A: To sustain and promote effective competition in digital markets, government should establish and resource a pro-competition digital markets unit, tasked with securing competition, innovation, and beneficial outcomes for consumers and businesses.

- 2.7 The design of the digital markets unit is set out fully later in the chapter but the essence of the model proposed is as follows.
- 2.8 Strengthened antitrust enforcement, although having an important role, moves too slowly and, intentionally, resolves only issues narrowly focused on a specific case. In digital markets this has not established clear and generalisable rules and principles to give businesses certainty about the boundaries of acceptable competitive conduct. Meanwhile elements that could make up a pro-competition approach exist within the powers of The Office of Communications (Ofcom), the Information Commissioner’s Office (ICO) and the Competition and Market Authority (CMA), but these are fragmented and have not been designed to deliver a coherent, ongoing, engaged pro-competition policy approach across digital markets.
- 2.9 A new digital markets unit would be able and necessary to deliver this, spurring competition and innovation, offering businesses participation in designing rules along with more certainty and swifter resolution once they are set. The Panel is not making a specific recommendation as to where the digital markets unit should be located or whether it should be a new institution. This decision needs to be made by government, consistent with an overall coherent and uncluttered institutional landscape to address the issues raised by this review and other policy considerations.
- 2.10 The unit’s approach should combine participation and consultation with the scope for regulatory enforcement that will be necessary to overcome incentives against compliance and make its solutions operate effectively and quickly. It should only intervene where doing so is effective and proportionate to achieve competitive aims. And to avoid burdens on smaller companies, its enforcement powers should be focused on companies with ‘strategic market status,’ those in a position to exercise market power over a gateway or bottleneck in a digital market, where they control others’ market access.
- 2.11 This chapter:
- sets out the benefits of moving beyond core competition and using pro-competition approaches
 - describes the three key pro-competition functions that can deliver these benefits: (i) a binding pro-competitive code of conduct, (ii) personal data mobility and systems with open standards and (iii) data openness
 - outlines the digital markets unit as an institution that can make them happen

Why use pro-competition frameworks?

Why digital markets behave differently to traditional markets

- 2.12 When a market's characteristics mean it tends towards one or only a few firms, policy interventions beyond standard competition policy are often required. Over the past 40 years, the UK has led the way in developing frameworks of rules, structures and enforceable norms which have allowed competition to flourish where it otherwise would not. Examples of this are the rules that govern the supply of energy into the wholesale generation market, requirements that mobile phone operators connect calls from users of other services, or requirements for financial services firms to disclose proper information to consumers of their products.
- 2.13 Markets based upon digital platforms, with network-based and data-driven business models, show a tendency to tip towards a single winner. That dominance can be abused in a way that antitrust can seek to address. But even where conscious abuse does not occur, markets can produce better outcomes if they are less concentrated, more contested and more dynamic.
- 2.14 In some situations, contesting the market can be an unrealistic goal. Many utilities networks involve such large upfront build costs relative to their running cost that constructing a rival network would not be a viable business proposition or an economically beneficial outcome. Instead utilities regulation typically allows a regulated rate of return for the monopoly operator, and seeks to ensure open and fair access that allows competition in markets that rely upon the network.
- 2.15 But utilities regulation of this kind involves trade-offs: it accepts the monopoly position of the utility operator while looking to minimise the resulting consequences for competition and consumers. The approach this review recommends is instead to use pro-competition policy tools to provide every chance for competition to succeed in digital markets, tackling the factors that lead to winner-takes-most outcomes and to that position becoming entrenched. By using pro-competition rules and frameworks that open up opportunities for competition, it can deliver a market-led approach.

The benefits which pro-competition frameworks can bring

- 2.16 The Panel is convinced that a pro-competition approach alongside conventional competition policy offers the best solution to securing competition in digital markets. Building in competition upfront can:
- Be pro-entry, helping new and smaller digital businesses to flourish by creating new market niches and reducing the threat that they are squeezed out by anti-competitive practices. This promotes jobs, investment and the retention of skills and intellectual property in the UK.
 - Foster predictability, giving digital businesses large and small upfront certainty about the rules and standards they should apply, which an approach solely based upon antitrust does not provide in markets where cases take many years and turn on complex and finely balanced assessments.

- Spur innovation, with faster development and proliferation of new services. These might include fresher takes on existing services such as social networks and search, or revolutionary new ways to meet consumers' demands in these areas, from companies yet to be started.
- Benefit consumers through driving competition on aspects of quality which many are currently unhappy with. For example, leading companies may compete to convince people to choose them because of their guarantees on privacy and treatment of personal data.
- Lead to lower prices in markets which smaller firms engage in, and which are passed through to their end consumers. For example, reductions in the price of advertising could be passed on to consumers in lower prices for their goods.

The tools for pro-competition policy in digital markets

2.17 What does pro-competition policy mean in practice? How can more competitive market structures be built in from the start? The answer will be different for individual markets and an effective approach will tailor them to each. Three tools stand out as particularly effective. These functions should be available and applied market-by-market to form the basis of digital pro-competition policy:

- **Setting a code of conduct for companies whose position means other markets depend on them:** agreeing across the sector acceptable norms of competitive conduct on how firms with strategic market status should act with respect to smaller firms and consumers. This has a similar aim and motivation to antitrust enforcement. But given the challenges to antitrust in fast-moving yet highly complex markets where cases are always likely to take years to conclude and issues may be specific to a given case, the pro-competition approach is to agree rules upfront, providing clarity to businesses in the market about the rules of the game.
- **Data mobility and open standards between services:** overcoming network effects which cause markets to tip by requiring systems to 'talk' to each other using open, standardised formats. This will mean consumers can port their data between networks, interact with users on other, similar networks, and smaller firms can plug their services into those of bigger ones. New business opportunities will open up that use, manage, and combine data made available. Consumers in turn will have new choices of digital services, with switching made much easier.
- **Secure access to non-personal and anonymised data:** tackling the data barrier to entry for smaller and newer firms, while protecting privacy. The power of bulk data driving economies of scale and scope is a key reason new firms struggle to compete and bring innovative services to consumers. Overcoming this barrier will allow the digital economy to remain dynamic.

Function 1: Promoting fair, pro-competitive conduct by platforms

Limitations to existing competition policy tools for digital markets

- 2.18 The Panel has made a number of recommendations for enhancing the existing competition policy framework, which are set out in Chapter 3. Made together, these changes will go some way to limit the tendency to concentration in digital markets, and to discourage dominant firms from conduct that is clearly anti-competitive. However, there will continue to be some limitations to the effectiveness of antitrust enforcement of competition law in digital markets, due to the associated complexity and scale of activity, and the pace of change.
- 2.19 Remedies to abuse of dominance cases are required, quite reasonably, to be proportionate. This requirement can strengthen the incentive to narrow the focus of a case, and to focus on backward-looking issues where conduct and its impacts can be more robustly evidenced.
- 2.20 Acting on a small number of narrow cases can have wider influence on future behaviour of firms so long as the resulting infringement decisions have a clear deterrent effect. This requires fines that are meaningful, and cases that provide clear precedent for other firms' behaviour. Neither of these conditions are easily achieved in the digital sector.
- 2.21 Fines need to be extremely high to influence the behaviour of the largest platform companies, which would be difficult to impose on a consistent basis, and arguably disproportionate for some cases in isolation. Moreover, the issues involved in digital abuse of dominance cases are often so nuanced and technical that it can be hard to draw clear forward-looking guidance from them for wider behaviour in adjacent markets.
- 2.22 Many of the issues of concern in digital markets relate to platforms giving preferential treatment to their own upstream or downstream products and services, and thereby extending their market position into associated markets, and potentially thereby consolidating their core market position. These cases can be particularly complex, both to assess and to remedy, and contrasting conclusions are sometimes reached in apparently similar cases by different authorities. Variation in outcomes for cases that are substantively similar can send mixed signals to companies in relation to their wider behaviour.
- 2.23 Concentration and dominance has already been achieved in many platform markets, appears to be persistent, and risks being further extended into related markets. Where this is the case, the Panel wants to introduce a system where industry has greater clarity and confidence over what constitutes acceptable practice and the rules that apply. This will secure good consumer outcomes upfront, and help foster an environment where there is greater certainty for investors, where small businesses can be created and grow, and where innovation by all parties is supported and rewarded.
- 2.24 The best way of achieving these outcomes is through introduction of a digital platform code of conduct, that clarifies acceptable conduct between digital platforms and their users, and is developed collaboratively by the proposed new digital markets unit with platforms and other affected parties. This will provide the opportunity to clarify what constitutes unfair or unacceptable conduct in markets where a digital platform has a strategic market status.

Recommended action 1: The digital markets unit should work with industry and stakeholders to establish a digital platform code of conduct, based on a set of core principles. The code would apply to conduct by digital platforms that have been designated as having a strategic market status.

Issues to be tackled by a digital platform code of conduct

- 2.25 Platforms that achieve dominance can hold a high degree of power over how their users access the market, and each other. This dominance can result in harm to consumers directly, with clear evidence of issues relating to quality, such as with the ranking of search results, and data privacy. On the other side of the market, there is a long tail of small, fragmented, independent businesses that rely on the platforms to survive. This is often described as a competitive gateway – a position of control over other parties’ market access.
- 2.26 This powerful negotiating position that certain platforms hold over their users was highlighted by the Australian Competition and Consumer Commission’s preliminary report on digital platforms, published in December 2018.¹ The report identified the ‘bargaining power imbalances that exist between digital platforms and consumers’ while also concluding that ‘advertisers have a limited ability to negotiate with Google and Facebook’. The Panel’s own assessment of the causes and impacts of this control is set out in detail in Chapter 1.
- 2.27 Where a platform has this form of control, the Panel considers it to have achieved strategic market status, and the proposed code of conduct should apply.

EU platform-to-business regulation

- 2.28 The Panel is not alone in identifying the imbalance of power that can occur between large digital platforms and their users. The European Commission is planning to introduce platform-to-business regulations, with the aim of ‘fostering a trusting, lawful and innovation-driven ecosystem around online platforms in the EU.’² These regulations are expected to come into force in 2019, followed by a 12-month implementation phase. The Commission shares some of the same concerns as the Panel regarding the gateway position occupied by online platforms:

‘While the gateway position of online platforms enables them to organise ecosystems of millions of users, it also opens a scope for certain unilateral trading practices that are harmful, and against which no effective redress is available for the businesses using these platforms.

Both direct harms to businesses, as well as the mere scope for such harm, undermine the innovation potential of platforms, which is exacerbated by emerging legal fragmentation.’³

- 2.29 The EU proposals include a range of requirements for online intermediation services to be more transparent about their practices. These include specifying within their terms and conditions the grounds on which they could suspend a

¹ Australian Competition and Consumer Commission, [Digital platforms inquiry – preliminary report, December 2018](#).

² European Commission, [Digital single market – online platforms](#).

³ European Commission, [Digital single market – platform-to-business trading practices](#).

user, stating in terms and conditions, or publicly, a description of any differentiated treatment they may give to themselves or a business they control, and a description of the access that business users will have to data that they or consumers provide when using the service.⁴

- 2.30 Within its proposals, the Commission also encourages the drawing up of voluntary industry codes of conduct by providers of online intermediation services and by organisations and associations representing them. This is intended to contribute to the proper implementation of the above proposals.
- 2.31 The Panel supports these proposals, which should be introduced and retained in the UK regardless of its future relationship with the European Union. These requirements, along with any necessary monitoring and enforcement of them, should be taken forward by the proposed digital markets unit, and reflected within the proposed code of conduct. Greater transparency and certainty for business users is a positive and essential foundation for creating the right conditions for businesses and digital ecosystems to flourish.
- 2.32 The EU regulation constitutes a maximum harmonisation tool, meaning that EU member states are prevented from setting additional rules in the areas explicitly covered by the new EU rules. The Panel is not proposing any specific additional rules relating to transparency between platforms and their business users, nor any additional obligations on platforms regarding redress.
- 2.33 The Panel's proposed approach incorporates and complements the regulation, addressing the additional competition challenges specific to digital companies with strategic market status.

Designing the code of conduct

- 2.34 The code of conduct should be formed around a set of core principles that online platforms identified by the digital markets unit as having a strategic market status should abide by. Principles-led regulation can, in this context, offer the right balance between certainty for all the affected parties, and necessary ongoing flexibility to update the code as markets and practices change. It is vital that some flexibility to agree revisions is retained in such fast-moving markets where innovation is so central to companies' business models.
- 2.35 The Panel intends the principles to be targeted towards specific theories of harm that can arise where platforms have power over their users. The principles should not impact beyond what is necessary to safeguard competition and benefit consumers, and unintended consequences should be considered as part of the design of the code.
- 2.36 If there are issues where inclusion could in principle tackle a potential harm, but any practical application would mean attempting to set rules in an area where they would be impossible to design or enforce, or create perverse incentives or negative consequences that outweigh the benefits, then the digital markets unit should adopt a cautious approach. Below are some

⁴ European Commission, [Q&A on new European rules to improve fairness of online platforms' trading practices](#).

illustrative examples of the forms of behaviour that the Panel considers to be unfair or unreasonable conduct by a platform with a strategic market status:

- an online marketplace, such as those for products or services, excluding or suspending rival sellers from its platform to give its own product or service an advantage
- a platform that contains a search function giving an unfair advantage to its own services over its rivals in downstream markets through the ranking or presentation of results
- an online platform penalising a business user for providing a more attractive offering on another site.

2.37 As part of the proposed participative regulatory model, it would be right for the digital markets unit to work collaboratively with industry parties, consumer bodies, and other affected stakeholders to produce, refine, and consult on the final design of all elements of the initial form of the code, as well as the processes that will be implemented to monitor and enforce it. This process may determine that the scope of the code should reasonably include conduct towards consumers as well as business users of platforms.

2.38 The core principles within a code of conduct enforced by the digital markets unit would ideally be set at a sufficiently high level so that they could apply across each of the platform markets for which the unit has determined a platform to have achieved a strategic market status. The Panel has identified some potential principles that could be usefully applied within this framework (Box 2.A).

Box 2.A: Potential principles for the code of conduct

Based on its own assessment of the issues and the evidence available, the Panel intends for the digital platform code of conduct to be formed around a set of core principles that would be required of digital platform businesses deemed to have a strategic market status.

For the business side of platforms with a strategic market status, the principles should ensure that business users are:

- provided with access to designated platforms on a fair, consistent and transparent basis
- provided with prominence, rankings and reviews on designated platforms on a fair, consistent, and transparent basis
- not unfairly restricted from, or penalised for, utilising alternative platforms or routes to market

2.39 The principles proposed within this report are a first draft only, and the scope of the code may reasonably be drawn more broadly than the above principles allow for. The Panel expects them to evolve and be refined, and added to, through the process of consultation with affected parties.

- 2.40 The principles themselves will not be enough to provide digital platforms and their business users with the certainty and clarity that they need. The code will need to set out more detail under each principle to clarify the forms of conduct that can be considered fair and reasonable, and which other forms of conduct are not. It would not be appropriate to prejudge the details of the code that will be arrived at in collaboration with industry and other stakeholders, but the Panel hopes the assessments and conclusions set out in this report provide a useful place to start.
- 2.41 This process may well reveal the need for variation in detail for different affected markets. It may be necessary to specify certain expectations or requirements that apply only to a smaller subset of platform markets. This should be possible within the code of conduct itself, or with additional granularity potentially provided within supplementary guidance.
- 2.42 The Panel's intention is for a code that governs anti-competitive conduct. Others have proposed codes recently with different aims in a digital space: the Cairncross Review has recommended a new code of conduct to rebalance the relationship between publishers and large online platforms,⁵ and the Digital, Culture, Media and Sport Committee has recommended a code of ethics, overseen by an independent regulator, setting out what constitutes harmful content online.⁶ These can be complementary, and government should ensure that proposals taken forward fit together and create as simple a landscape as possible.

Benefits of the code of conduct, monitored and enforced by the digital markets unit

- 2.43 The code of conduct will, at the highest level, deliver better and more competitive outcomes for consumers. This could be directly through better quality services provided by platforms, or indirectly as they face lower prices and higher quality and choice for the products and services they access via platforms. Most importantly, it is also expected to spur innovation, as business users of platforms will have greater freedom to grow, disrupt, and potentially challenge the platforms they depend on.
- 2.44 These benefits will filter through to consumers because the code of conduct, supported by monitoring and enforcement by the digital markets unit, will deliver in ways that enforcement of competition law naturally cannot.
- 2.45 Firstly, the code can extend beyond the reach of existing competition law, clarifying situations and behaviours as unacceptable that may currently be unclear, or arguably legal. It can give the digital markets unit the power to tackle a broader range of anti-competitive practices, by a set of firms identified as having a level of market power, than it would be reasonable for a competition authority to wield across all markets more generally.
- 2.46 Secondly, moving from a purely *ex post* approach towards *ex ante* monitoring and enforcement of a clearer and more detailed set of rules should help to prevent negative outcomes before they occur, or at least remedy them before

⁵ The Cairncross Review, [A sustainable future for journalism](#), February 2019.

⁶ House of Commons Digital, Culture, Media and Sport Committee, [Disinformation and 'fake news': final report](#), February 2019.

it is too late for the parties involved. An ongoing monitoring function will give the digital markets unit a detailed and up-to-date knowledge of how the markets and platforms within its regulatory scope are functioning. It would have a wealth of data, knowledge, and industry relationships to draw from when a contravention of the code is identified, whether that is through its own monitoring or through complaints brought to its attention.

- 2.47 It should be set up to achieve fast resolutions, in multiples of weeks or months, but not years, ideally through participation and co-operation with affected parties. Its approach would be supported by strong powers to formally request information from designated platforms within tight timeframes set by law when it suspects a breach of the code. It would also need the power to enforce legally binding decisions and penalties for contraventions of the code where a participative approach is not effective. Most importantly, it would be set up to carry out these functions quickly, so that resolutions are achieved before a dependent firm has gone out of business, or before the negative outcome has filtered through to seriously harm consumers. The benefits of a clearer set of rules with ongoing monitoring and a fast-moving enforcement function are illustrated by the case study in Box 2.B, analogous to the Google Shopping case taken by the European Commission, currently under appeal, and outlined in Chapter 1 of this report.

Box 2.B: Code of conduct case study

Case study: A general internet search platform gives premium positioning on its webpages to its own comparison shopping service and demotes rival comparison shopping services in its search results.

Scenario

A general internet search platform is designated by the digital markets unit to have a strategic market status in the online search market.

This platform also provides a comparison shopping service, in competition with existing rival offerings. Comparison shopping services allow consumers to compare products and prices of a variety of online retailers. They are typically funded by the participating retailers on a 'price-per-click' basis, and as such their success depends heavily on the extent to which consumers utilise their services. They also exhibit indirect network effects, in that retailers are more likely to use comparison shopping services that provide access to more consumers, and consumers are more likely to use services that give them more choice of retailers.

The designated search platform is a frequent first point of call for consumers seeking to make a purchase. This platform capitalises on this by designing its webpages and algorithms such that its own comparison shopping service is given prominent placement on its pages, while rival services are demoted in the search results it displays.

The effect of this behaviour is that rival comparison shopping services are less visible to consumers, and thus gain fewer clicks, threatening their viability. The behaviour also limits the competitive constraint facing the designated platform's own comparison shopping service, and allows it to leverage its market position in search into this related market.

Application of the code of conduct

The code of conduct includes a core principle that business users of platforms should be provided with prominence, rankings and reviews on designated platforms on a fair, consistent, and transparent basis.

The code of conduct then sets out in more detail a range of behaviours that are inconsistent with this principle. These include a platform with strategic market status giving undue preferential prominence on its webpages to its own integrated services.

These details in the code of conduct were agreed through a participative approach with the industry, and are well understood by affected parties as a result.

Impact

The code provides clarity to the platform about the boundaries of acceptable competitive conduct. It may well comply and operate in line with these, so that competition between these services will occur on the basis of their attractiveness to consumers and the prices they charge retailers, without distortions from the restrictions previously in place. Over time, such competition will drive up the quality of comparison shopping services and may even stimulate the development of new ways to help consumers with their decision-making. Such competition will also drive down charges to retailers.

Should the designated platform choose to contravene the code, the digital markets unit would go on to achieve a speedy and decisive resolution, doing so far more quickly than would result from a prolonged investigation and remedies under competition law. Faster action creates competitive market conditions at a time when rivals are still active in the market and before any market tipping has occurred. The designated platform gains from the increased legal certainty as to what behaviour is considered acceptable.

Function 2: Personal data mobility and systems with open standards

- 2.48 As part of its remit to build consumer choice and competition into digital services, the digital markets unit should have a second function – to implement personal data mobility and systems with open standards.

Recommended action 2: The digital markets unit should pursue personal data mobility and systems with open standards where these will deliver greater competition and innovation.

- 2.49 Both personal data mobility and systems with open standards are pro-competitive, pro-entry approaches which have the potential to deliver significant value for consumers as well as to bring about a host of new opportunities for businesses to innovate. If championed and developed in the UK, they could provide major opportunities to build on the UK's strength in tech start-ups and to grow more digital businesses to real scale.
- 2.50 However, just as the scale of potential benefits is likely to be significant, so too are the potential costs and complexities associated with delivering these approaches in practice. The digital markets unit would need to evaluate the use of such a solution carefully, on a case by case basis, taking into account a great deal of evidence before deciding the approach was likely to be a necessary, proportionate and effective solution to any lack of competition it observed.

Function 2a: Personal data mobility

- 2.51 Personal data mobility means giving consumers greater control of their personal data, for example their profile, purchase history or content, so they can access and derive greater value from the data businesses hold about them. At a consumer's request, their data can be seamlessly shared by a business with the consumer's chosen third party. This should enable consumers to switch more easily between digital platforms, manage their data held across digital platforms in one place, or to try out innovative services that use their data in a new way.
- 2.52 Personal data mobility goes beyond just data portability. Data portability typically just refers to consumers being able to themselves request access to and move data from one business to another. Currently, moving data from one business to another can be complex and time-consuming, often relying on a consumer to manually request and download their data, convert it into a format required by the business they want to move it to and to upload it again.
- 2.53 In contrast, data mobility encompasses the ability for that data to be moved or shared directly between a business and a third party at the customer's request. Where a consumer wants to move or share their data, data mobility should make this easy for them, enabling their data to be moved or shared with whoever they wish, at the click of a button.
- 2.54 As outlined earlier in the report, data is at the heart of the digital economy and many businesses hold large amounts of data about individual consumers. This data takes several different forms. It can include: input data – data consumers input about themselves; observed data – data businesses observe about consumers (for example what they read or watch online); and inferred data – where businesses combine input and observed data to infer other information about the consumer (for example their age group or gender).

- 2.55 Personal data mobility could involve any such type of data, depending on the particular use case, and this would need careful consideration, particularly where a business had invested in collecting observed or inferred data.

Benefits of personal data mobility

- 2.56 There are many reasons why consumers may wish to share their data with a third party. This might enable them to access more accurate price information, to better compare goods and services or to access more tailored advice or recommendations. It may also help support a more effective market, for example where consumers can make a conscious choice to share their data in exchange for some benefit, for example a monetary payment, price discount or free service. Without better capability for sharing their data, consumers and businesses are missing out on innovative new services which might deliver them value.
- 2.57 Personal data mobility is also likely to drive innovation. Enabling users to better control and share their data will bring about a host of new opportunities for businesses to innovate new market niches where they manage data on users' behalf or combine users' data from different sources to offer them great new products and services.

Personal data mobility in practice

- 2.58 The potential for personal data mobility extends across the economy, from healthcare to financial services. However, there are a number of use cases in relation to digital markets and online platforms that have the potential to deliver significant benefits for users, as well as to address some of the concerns outlined earlier in the review. These are explored further in Boxes 2.C and 2.D.

Box 2.C: Moving history

Consumers currently use many different online businesses and platforms for a variety of uses. These might include to purchase goods and services, book accommodation, listen to music or watch movies and television. These businesses hold data and information about their users. As well as basic profile information they also hold information about the products they have purchased, hotels they have stayed in, their music playlists and the movies and TV they have watched.

Enabling a consumer to easily share this information with other online businesses and platforms is likely to deliver benefits for consumers themselves as well as driving greater competition and innovation within markets. For example, it might enable a consumer to better compare the prices offered by different firms for products and services that they purchase frequently. It could also enable third parties to better tailor the products and services they provide to consumer needs, for example in recommendations of other films, music or products they might like. It might enable a consumer to switch more easily between different platforms, driving competition. Lastly it could enable new propositions to emerge which provide value to consumers, perhaps by combining different datasets shared by

the consumer. For example, an app might be able to do something useful by combining a consumer's purchase history across several different businesses.

Box 2.D: Beyond the social network

A social network currently comprises three distinct features: a profile, network of contacts and a broadcast feed where users can view and share content. In many cases the information that makes up these features is held within a social network. However, there are likely to be significant opportunities for innovation in the interests of users from making this information available to users to share beyond this network.

One example is in profile management. A user, particularly a business user, could use a single site or app to build and manage their profile and then use this profile across multiple social networking sites simultaneously. There are already some examples of sites or apps which enable this in practice. The ability of a user to share this information more widely could enable a marketplace in profile management apps, giving consumers more choice about the volume of information they wish to share about themselves and the opportunity to present this in ways which best suit their needs.

Another example is in managing your network of friends or followers. A user could use a single site or app to manage their network across all social networks, adding, deleting or blocking friends or followers simultaneously in one go across multiple social networking sites. Again, a marketplace could develop in relation to such apps.

In relation to content creation and the broadcast feed or 'newsfeed', a user could post content to their network of friends or followers, regardless of the social networking site used by their friends or followers to view it. In addition, a user could curate their own newsfeed using a single site or app to pull in content from friends or those they 'follow', regardless of the social networking site their friends or those they follow use to post it.

Enabling users to share their posts beyond their social network could enable a marketplace to develop in content creation and newsfeed apps. It could enable users to make a real and active choice on the app they use to share their own posts and content, driving innovation in new ways of creating and sharing content. It could also enable users to make a real and active choice as to the newsfeed they choose to use, without being constrained to using the one within the social network the majority of their friends use. A range of newsfeed apps could develop including those with different levels of privacy, paid-for models which include no advertised content, or sites which enable users to control who they see content from and in what order it is displayed, or to sort or organise it in a way which meets their needs. Some apps might also give users the option of

combining content from different sources, for example from social networks, broadcasters, newspapers and bloggers in a personalised dashboard.

It would also drive greater competition and innovation for users. As explored earlier in the report, a key feature of social networking sites is direct network effects. This means that a user has a strong incentive to use the social network that their friends use, largely irrespective of how well it meets their own needs. Once a social network has a certain number of users, the market is likely to tip in their favour, with other users having little choice but to use the largest social network. This means that the largest social networks no longer need to compete for new users and have little incentive to improve the quality and service of their offering. Competing social networks find it almost impossible to grow and compete. Enabling users to share their posts beyond their social network could drive the emergence of a new marketplace of content creation and newsfeed apps, providing users with greater choice and driving existing social networks to work harder to attract and retain users.

However, achieving this kind of mobility for information held within social networks is not without its challenges. Many of these are common to other data mobility use cases and explored further below. However, this particular use case also raises difficult questions in relation to liability both for content and for data protection. If a friend in my network is using a newsfeed app with poor privacy standards, what happens if they misuse the information in my post? Similarly, if a friend is posting harmful content and that shows up in my newsfeed, whose responsibility is it to police that content – the app my friend posted it from, the newsfeed app I viewed it through or both? Similar challenges already exist in relation to other forms of online communication – for example email. One solution might be to enable data mobility only between those sites or apps which meet particular standards, codes of practice or regulation. These challenges should be explored further when it comes to implementing data mobility in relation to social networks, and solutions developed carefully, market-by-market.

How to achieve personal data mobility

2.59 The General Data Protection Regulation (GDPR) legislation has been an important step in enshrining personal data portability rights.⁷ However, these rights do not go so far as to create the conditions necessary to achieve data mobility and support value generation from personal data:

- Although GDPR requires that personal data must be provided in a ‘structured, commonly used and machine-readable format’ there is no explicit requirement for parties to develop technical standards to facilitate the transmission of personal data across suppliers.
- There is no requirement within GDPR that data portability be made possible on a continuous, rather than discrete, basis. However, many technologies

⁷ See Information Commissioner’s Office, [Right to data portability](#).

and services – such as aggregator apps which provide up to date information on consumers’ activity – require ongoing data sharing.

- The GDPR data portability provisions formally only relate to personal data which the consumer has provided directly. This may be a small subset of the personal data which the supplier holds on that consumer, for example if it has been tracking their online behaviour. A more pro-competitive approach might involve the sharing of additional personal data.
- Competition is not typically a key objective for the designated GDPR supervisors around Europe (including the UK ICO). They are understandably more focussed on data protection and privacy issues. However, without any clear competition objective, it is unlikely that substantial regulatory resource would be dedicated to ensuring that data portability acts to promote competition in the way it is envisaged personal data mobility would.

2.60 There are already examples of businesses in some sectors voluntarily coming together to try and develop the standards necessary to enable data mobility, for example the Data Transfer Project,⁸ and this should be supported and encouraged by government. However, in other areas such action is yet to materialise, could be delivered more quickly or be more ambitious in its aims.

2.61 Therefore, the Panel believes that where the potential benefits for competition and innovation arising from personal data mobility are likely to be significant and this represents a necessary, proportionate and effective intervention, there is a strong case for government acting to ensure that it can be delivered.

2.62 The most notable example of data mobility having been delivered in practice is Open Banking, which is explored further in Box 2.E.

Box 2.E: Open Banking

Open Banking is a secure way for consumers to give providers access to their financial information. Open Banking requires that, at a consumer’s request, firms must share specified account information with a third party in a standardised way. This means that consumers can elect to have information from accounts held across multiple providers, shared with one app. This has paved the way for a number of new propositions to emerge which make use of this information, for example to help consumers better manage their money, budget or to compare different accounts.

The reforms to deliver Open Banking were pursued by the CMA following a market investigation, as a remedy to boost competition and innovation in the retail banking market. The CMA used its order-making powers to require the largest banks to implement Open Banking, working with representatives from the wider industry. They did this by funding an implementation entity that is governed by the CMA. The regulation requires work to implement and the entity does this

⁸ The Data Transfer Project launched in 2017 by Google, Facebook, Microsoft and Twitter, is a collaboration of organizations committed to building a common framework with open-source code that can connect any two online service providers, enabling a seamless, direct, user initiated portability of data between the two platforms.

through vigorous efforts to design standards and practices that make it function effectively.

In addition, under the Revised Payment Services Directive (PSD2), third parties who access consumers' account information must be authorised and regulated by the Financial Conduct Authority. This regulation is considered to be crucial in giving consumers confidence to trust third parties with their account information.

There are already signs that Open Banking is having some success in allowing new, innovative providers of financial services into the market. For example, around 200 organisations are currently going through the process to be regulated to be able to provide bank account information services.⁹

- 2.63 The experience from Open Banking demonstrates that, although complex, the challenges associated with implementing data mobility can be overcome. In taking forward work on data mobility, the digital markets unit should learn from the experience of Open Banking as well as other initiatives in related areas such as the Smart Data Review.¹⁰
- 2.64 One positive example from Open Banking is the effectiveness of requiring at least a subset of firms to implement and deliver the solution. Without such powers, progress is likely to be slow, disjointed and in some cases non-existent. The issue is not just the complexity of agreeing on unified standards but, potentially importantly, misaligned incentives between the largest platforms and consumers. Another lesson is that just requiring common standards is not sufficient and that an active effort to make these work in practice is needed.
- 2.65 Implementation of data mobility could be delivered in a similar way to Open Banking, by compelling only the largest businesses in a market to deliver but requiring they work with a wider group of stakeholders. This may still go beyond the small set of businesses meeting the strategic market status test proposed to define enduring market power in digital markets – so a second tier of business may be appropriate for inclusion.
- 2.66 In addition, implementing personal data mobility is likely to involve considerable costs and complexities that will need to be carefully considered. Some of these challenges were explored in a recent report for government by Ctrl-Shift.¹¹ At a minimum, the digital markets unit should carefully consider the following:
- Technical knowhow and trusted independence will be key for the digital markets unit to be effective in implementing data mobility. The digital

⁹ CMA, [Celebrating the first anniversary of Open Banking](#), January 2019.

¹⁰ [The Smart Data Review](#) is being jointly led by BEIS and DCMS and is looking at the potential for data portability in regulated markets (such as utilities) with the aims of enabling innovative services and improving consumer choice.

¹¹ Ctrl-Shift report for the Department for Digital, Culture, Media and Sport, Data Mobility, [The personal data portability growth opportunity for the UK economy](#), 2018.

markets unit should be given both the powers to require participation and the economic and technical capability to assess where and how it is used.

- The unit should consider the data within scope and the standards for data sharing developed. The benefits of requiring specific data be caught should be weighed against the costs, particularly where businesses have invested in collecting observed or inferred data. In addition, while common data standards are key to enabling innovation, they can also impede it by restricting a business' ability to implement a new idea which goes beyond the standard agreed.
- The digital markets unit should host what is commonly referred to as a 'sandbox', where innovators can build and test propositions which make use of consumer data in a safe environment. In doing so, it should draw on the experience of the Financial Conduct Authority.¹²
- The framework used to implement personal data mobility should recognise the importance of the user experience and ensure those businesses who are required to share data have appropriate incentives to develop and implement the service in a way which meets user needs. Any propositions must be well researched and tested, drawing on behavioural expertise.
- To ensure consumers have sufficient trust and understanding to take advantage of personal data mobility, the digital markets unit should work closely with the ICO as well as with consumer groups. Should there be a need for additional regulatory standards, codes or regulation, for example to provide consumers with confidence that those they share their data with will protect it, the digital markets unit should work closely with government to ensure these can be put in place.

2.67 Alongside these challenges, the Panel recognises that implementing personal data mobility puts requirements on businesses about how they operate. And so, regardless of the degree of technical challenge and complexity, the wider benefits and costs will need to be weighed up, to ensure this tool is only used as a means to deliver more effective competition, in markets where there is strong evidence that it is likely to be a proportionate and effective intervention.

Function 2b: Systems with open standards

2.68 Systems built using open standards are commonly referred to as those that were built using technical specifications that are agreed in common and freely available. Open standards are building blocks that enable interoperability, compatibility and consistency across markets. Open standards are publicly available and developed via processes that are transparent and open to broad participation from industry. Open standards are widely recognised as being the foundation of the internet as we know it. For example, web content is transmitted using an open standard known as the Hypertext Transfer Protocol (HTTP), which is open and free for anyone to use, and makes it possible for anyone to share a webpage or launch Web-based services. Open standards also facilitate email (Simple Mail Transfer Protocol (SMTP) and Internet

¹² FCA, [Regulatory sandbox](#), May 2015.

Message Access Protocol (IMAP)), enabling messages to be transmitted over the internet.

- 2.69 There are many similarities between delivering personal data mobility and systems with open standards, for example both rest on the creation of standards to achieve some level of interoperability. However, the level of interoperability they deliver is different. Personal data mobility just relates to enabling the transfer of specific pieces of personal data – for example a photo or purchase history being shared in a common format such that it can be ‘read’ and ‘interpreted’ by other third-party platforms or apps. When a system is built on open standards, the entire service is compatible with that offered by other third parties.

Benefits of systems with open standards

- 2.70 Requiring that systems are built on the basis of open standards can support an ecosystem where competition and innovation can thrive. Such standards enable innovators to build propositions which are compatible with those already in existence. For example, innovators can build new propositions which compete directly with existing ones, driving competition and providing greater choice for users. In addition, innovators can build ancillary services based on existing systems, bringing about a host of new opportunities for businesses to innovate in new areas.
- 2.71 These standards allow multiple browsers, email clients, and other systems to operate simultaneously – an example of how technical design can facilitate competition. Absent these open standards it could be possible that everyone would need to be on the same email system to communicate with each other. This would have the appearance of a natural monopoly supported by strong network externalities but would in fact be the result of technical choices.

Systems with open standards in practice

- 2.72 There are already a number of use cases in relation to digital markets where the Panel considers there are arguments for considering systems with open standards, and these are explored further in Boxes 2.F and 2.G. It is important to ensure principles of open standards are at the forefront as new innovations emerge.

Box 2.F: Internet communication services

Many internet-based communication services are currently only compatible within a closed system. For example, users can only call their contacts who have accounts with the same internet calling provider, and users can only message their contacts who have accounts with the same internet messaging provider. If these services were built on the basis of systems with open standards, a user could call a contact using one internet calling provider and the receiver could answer using a different internet calling provider, just like standard landline or mobile phone calls don't rely on callers and recipients to be part of the same network. This might drive competition between internet-based communication services and provide consumers with greater choice.

Box 2.G: The Internet of Things

The Internet of things (IoT) refers to the world of interconnected devices with embedded sensors which are capable of providing data, and in some cases, being controlled, across the internet. Common examples include smart thermostats, remotely controllable lighting fixtures, home appliances and security systems.

There are strong arguments for considering whether some IoT technologies should be built on open standards. Although proprietary standards have allowed innovation and investment in this technology, there are likely to be benefits to consumers and competition in IoT devices across different providers being compatible with each other. IoT devices built on open standards could open the sector up to a range of new innovation and applications which could make use of the data these devices collect, on consumers' behalf.

How to achieve systems with open standards

- 2.73 Digital markets have adopted a range of approaches with different degrees of open and closed ecosystems. As set out earlier in this section, open standards, and the interoperability they deliver, are widely recognised as delivering significant benefits. They enable firms to create applications that are able to work seamlessly with other applications based on the same standards. This also ensures that consumers aren't locked in to products from one business.
- 2.74 However, there can also be advantages for businesses and consumers in systems built on standards that are – to a greater or lesser degree – closed. For example, proprietary systems can provide a more secure business proposition for investment in innovative services. They can help ensure technical consistency. They can be part of a proposition that protects user privacy and guarantees the standards and reputation of all services offered. They can protect the intellectual property of new businesses whose innovations would be apparent from an open standard. And proprietary systems are more easily updated and developed where they need to develop rapidly.
- 2.75 All the same, the private incentives for decisions on adopting open or closed systems may not always lead to optimal competitive outcomes. It is for this reason that the government should provide the digital markets unit with powers to require systems be built on open standards, if it determines that approach to be the best, proportionate tool to enable effective competition in that market. The digital markets unit should be given both the powers to require participation and the economic and technical capability to assess where and how it is used
- 2.76 There are already several organisations, such as the Internet Engineering Task Force (IETF), the World Wide Web Consortium (W3C), and the Internet Society pursuing open standards and interoperability in the digital economy and the efforts of these organisations should be strongly supported by government. However, these organisations rely on businesses to voluntarily participate in agreeing and adopting open standards.
- 2.77 There are already legislative moves towards requiring greater interoperability in the digital economy. In particular, the European Electronic Communications

Code, currently being transposed into UK law, enables, in justified circumstances, the national competent authority to be able to impose obligations on relevant providers of number-independent interpersonal communications services which reach a significant level of coverage and user uptake to make their services interoperable.

- 2.78 The Panel expects the digital markets unit could pursue such open standards for systems in the same way as it pursues common standards for data sharing to enable personal data mobility. Although the function could compel certain firms to adapt their systems to meet agreed open standards, the standards themselves would need to be developed in a transparent way with broad participation from industry. Technical knowhow and trusted independence will be key for the regulatory function to be effective in developing and implementing open standards.

Function 3: Data openness

- 2.79 The third function that should be available to the digital markets unit is to pursue data openness as a tool to increase competition. As noted in Chapter 1, companies active in the digital economy generate and hold significant volumes of customers' personal data. This data represents an asset which enables companies to engage in data-driven innovation, helping them improve their understanding of customers' demands, habits and needs.

- 2.80 These innovations can benefit consumers, businesses and society. Yet the economies of scale and scope associated with some data holdings can create a barrier to competition, giving companies with the most comprehensive and recent data a powerful advantage. In turn, this could represent a barrier to innovation and limit the extent to which consumers benefit from new developments.

- 2.81 Enabling personal data mobility may provide a consumer-led tool that will increase use for new digital services, providing companies with an easier way to compete and grow in data-driven markets. However, in some markets, the key to effective competition may be to grant potential competitors access to privately-held data.

- 2.82 Any approach to support this form of data sharing will also have to ensure that robust privacy safeguards are adopted to respect the privacy rights and expectations of users. Protections in GDPR will exclude personal data, unless aggregated or anonymised.

- 2.83 There are several platform-led initiatives to open up data for wider non-commercial uses with social benefit. For instance, Uber has chosen to release anonymised and aggregated data under the 'Uber Movement' scheme to inform and improve infrastructure and planning decisions. Similarly, Facebook recently announced a public interest research access regime, in collaboration with the Social Science Research Council. These are positive steps.

- 2.84 Digital platforms entirely rationally decide what data they will make available to other businesses on the basis of their own private interest. Businesses frequently do have a commercial incentive to share data – it can be sold, or made available on terms that encourage other businesses to participate in the platform. This is frequently integral to platform APIs. However, there will

usually be strong commercial incentives not to share data in a form that could allow a company to threaten the platform's position, and the control they can exercise over this sharing would allow it to be reduced if such a threat became significant.

- 2.85 By contrast, where public data has been released, such as Transport for London's (TfL) provision of free, real-time open data to developers since 2009, a number of new business and products have been created, including some competing directly with TfL's complementary products, such as Citymapper.¹³ Research by Deloitte found that the release of open data by TfL is generating annual economic benefits and savings of up to £130m a year.¹⁴ Companies' incentives to release their own data widely differ – but the wider public and economic benefit of access may sometimes be considerable.
- 2.86 As was submitted by several respondents to the call for evidence, including The Law Society of Scotland and Barclays, increased data sharing would promote competition and in turn improve market outcomes for consumers. Some businesses and commentators have argued for the pro-competitive benefits of making available a range of datasets – examples include instant aggregated information on what is being searched for or bought, and large historical datasets that could be used to train and develop commercial tools requiring big data.

When and how to use data openness

- 2.87 Requiring the opening up of a part of a business's legitimately obtained data holding would be a significant intervention. Platforms would reasonably be concerned about the impact upon their business model, the legitimacy of requiring access to a significant asset, and the impact on incentives for investment in future data collection and management.
- 2.88 These are important factors to consider carefully before any mandatory use of data openness as a competition tool. As a remedy it is likely to be more interventionist than the others proposed, and greater caution needed before it is used. The unit would need to base its use in any digital market on a thorough analytical assessment that weighs these factors against the potential benefits, and considers whether less interventionist solutions would produce the desired competitive outcome.
- 2.89 At the same time the evidence suggests that large data holdings are at the heart of the potential for some platform markets to be dominated by single players and for that dominance to be entrenched in a way that lessens the potential for competition for the market. In these circumstances, if other solutions would not work, data openness, could be the necessary tool to create the potential for new companies to enter the market and challenge an otherwise entrenched business.
- 2.90 As with the other pro-competition functions, engagement with the market would be important in considering any intervention. It could be useful to use a prioritisation process to do this, narrowing down to a shortlist of potential

¹³ Citymapper is a transport app which competes directly with TfL via its 'journey planner' service, as well as through its recently launched 'SmartBus' route.

¹⁴ Deloitte, [Assessing the value of TfL's open data and digital partnerships](#), July 2017.

datasets where the benefits of openness would be greatest, and then focusing analysis and discussion on those areas.

- 2.91 Any data openness remedy should also keep intervention to a minimum to achieve its aim. Opening up raw, underlying data that is an input to the service is more likely to be proportionate than requiring access to processed information where companies have invested further in deriving insights and inferences from the original data.
- 2.92 The Panel's view is that the digital markets unit should have access to it as a tool available, if and when there are markets where the benefits of its use outweigh the costs.

Recommended action 3: The digital markets unit should use data openness as a tool to promote competition, where it determines this is necessary and proportionate to achieve its aims.

- 2.93 If implemented, data openness could take a number of forms and would not require that data be transferred between users, which could carry greater risks regarding the safeguarding of privacy. One model would be to require a dataset to be shared in a controlled environment, with access granted to approved businesses. This would be comparable to the Office of National Statistics' (ONS) Secure Research Service, which provides access to de-identified data, such as business survey data, to approved researchers and government departments. The ONS is able to set constraints and boundaries on the datasets made available to users, who may be able to combine these datasets with their own, enabling data-driven insights and innovation. Under this model, the ability of approved businesses to access or interrogate remains under the control the ONS, ensuring that all privacy safeguards are preserved and that the work carried out is transparent.
- 2.94 Any use would need to ensure privacy of any personal data involved. The ICO would have an important role as a consultant on any such solution.

Data trusts

- 2.95 Government has announced that it is working with the Open Data Institute to pilot new schemes, known as data trusts, with the aim of enabling secure and fair data sharing.¹⁵ Data trusts aim to create secure environments in which diverse stakeholders can collaborate, learn from each other and experiment, for the benefit of a group of organisations or people.¹⁶
- 2.96 Rather than increasing directly rivalry between firms, data trusts are a way in which public institutions are seeking to stimulate innovation by providing a gateway for start-ups or researchers to access data which could facilitate the improvement or generation of services, efficiencies and forming the basis for machine learning. Importantly, they are also aimed at giving people and organisations confidence when sharing data.
- 2.97 The creation of data trusts could also serve the dual purpose of bringing together non-rival organisations, leading to new insights and products, while

¹⁵ Margot James, [Speech at the Government Innovation Conference](#), November 2018.

¹⁶ The ODI, [What is a data trust?](#), July 2018.

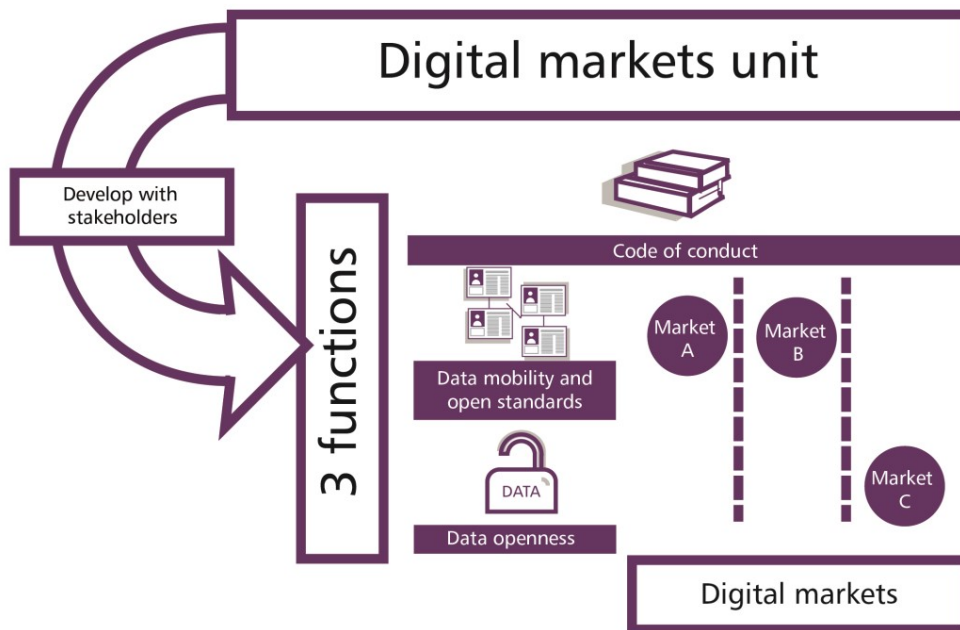
helping to understand how markets are functioning and supporting interventions by regulators. (They may also help address another issue reported to the Panel, namely that researchers are leaving academia in order to gain access to and analyse unrivalled datasets.)

- 2.98 However, the scope for data trusts to stimulate competition within existing markets would currently appear to be limited, particularly as the researchers or developers accessing this data are legally bound to make decisions in the best interests of the organisations sharing this data.¹⁷ Therefore, whilst these schemes can lead to some societal benefits and are likely to face less resistance from platforms, they are unlikely to stimulate competition within existing markets.
- 2.99 Nonetheless, data trusts provide a helpful starting point and template to assist the digital markets unit in developing a mechanism to promote or mandate increased data sharing by platforms in digital markets.

Making it happen: engaged pro-competition regulation

- 2.100 These pro-competition tools offer a better, more targeted, more pro-business and pro-consumer solution to fostering competition in digital markets than one based upon changing antitrust law to drive breakup or structural separation of dominant businesses. Given the concerns around digital platforms that highly concentrated market power gives rise to, and the benefits of fully effective competition, there is good reason for digital platforms to recognise the benefits of this approach.
- 2.101 At the same time, platforms' rational self-interest would at times be to dilute pro-competition policies aimed at making their markets more contestable. Under a purely voluntary approach, their incentives would be to agree standards of minimal use to a potential future competitor, or establish rules that disproportionately burden smaller players.
- 2.102 For this reason, the Panel recommends that these pro-competition policies are implemented by a digital markets unit, with powers to regulate and enforce these functions. The government should decide where this should be located, reaching a view in the round on the institutional arrangements that will create a clear regulatory landscape and can tackle other issues such as harmful online content. There are a number of strong options available, including establishing a new body or extending the powers and using the capabilities of Ofcom or the CMA.

¹⁷ New Stateman, [Can new data trusts unlock the value of data in the UK?](#), September 2018.



The digital markets unit develops and implements a code of pro-competitive conduct across digital markets, and can apply data mobility and data openness remedies in individual markets where these tools are effective and proportionate ways to achieve its aims.

- 2.103 Engagement with stakeholders will be essential to its effective operation so that the codes and standards developed draw upon and balance the perspectives of large and small digital businesses, and the interests of consumers. The Panel favours a model based upon co-operation and voluntary compliance where possible, working with firms and not against them. The capacity to impose and enforce the rules set will be needed, but kept as a fallback where possible.
- 2.104 This approach to competition has many precedents. The UK is experienced in successfully promoting competition through engaging with markets and, where required, regulating them. Ofcom, the CMA, the Financial Conduct Authority, the Payment Systems Regulator and other bodies can provide expertise and practical examples of how to use these approaches to deliver more effective competition and improved consumer outcomes in digital markets.

Recommended action 4: The digital markets unit should co-operate with a wide range of stakeholders in fulfilling its role, but with new powers available to impose solutions and to monitor, investigate and penalise non-compliance.

What can be done under existing powers and institutions?

- 2.105 The most relevant bodies within the existing landscape are:
- The CMA, in addition to its role in merger and antitrust cases, has *ex ante* powers to conduct market studies and follow-on market investigations,

which may result in legally-binding orders. It can also agree undertakings with companies as a condition of a merger or following an antitrust case.

- Ofcom regulates the UK telecommunications sector. Its powers include the ability to impose *ex ante* regulation on telecoms operators with significant market power. It also holds, concurrently with the CMA, antitrust enforcement powers and the ability to conduct market studies over communication matters, including electronic communication, that could include online services.
- The ICO regulates data protection and freedom of information, including oversight of GDPR. One responsibility under GDPR is for the ICO to promote data portability related to consumers' right to transfer their personal data.
- The Centre for Data Ethics and Innovation has been established to analyse, agree best practice, and advise where action is needed to maximise the benefits of data and artificial intelligence for science and the economy.

- 2.106 Under powers already available, these bodies could go some way to pursuing the Panel's aims. Through collaborative working they could convene market participants and stakeholders and develop voluntary approaches. In telecoms markets, regulatory powers would enable firmer action, and the GDPR data portability right could (as discussed earlier in the chapter) achieve a limited degree of consumer-driven switching.
- 2.107 The markets regime has greater potential to initiate *ex ante* regulation across digital markets. This regime has great strengths, including analytical robustness, information-gathering powers and flexibility in remedies. It has underpinned data mobility in Open Banking and an enforceable code of conduct with the Groceries Code Adjudicator. As discussed below, a market study into digital advertising has great potential to determine the dynamics and any threats to competition in a complex and opaque market.
- 2.108 The key limitation of using market investigations as the legal basis for a pro-competition approach is that its remedies are largely static. Binding orders cannot be revised and updated as the nature of solutions needed changes.
- 2.109 Relying on this model alone, under the powers currently available, is not sufficient in digital markets when technologies change but market power is durable. Specific rules imposed as a remedy following a market investigation may quickly go out of date. What is instead needed is an ongoing, dynamic counterparty to market participants, adjusting solutions in response to innovations and market dynamics. The CMA's markets regime has not been designed to provide the powers or capability to perform an ongoing role of this kind.
- 2.110 Although existing powers do not allow the Panel's vision to be fully achieved, significant steps towards establishing its role could be made. A 'virtual' unit could be set up while new powers are taken, potentially through co-operation between the most relevant bodies. Market studies or investigations could be initiated to consider the case for remedies based on codes of conduct or data mobility in key markets. These could allow the concepts and strength of the case for intervention to be tested and developed, with remedies initiated that a full statutory function could then adopt and update.

A digital markets unit backed by new powers

- 2.111 To fully deliver the functions the Panel has concluded are needed to promote competition in digital markets, the unit will need to be established and underpinned with new powers. This could be:
- a wholly independent new unit established in law, giving maximum independence and focus on the issue, but needing sufficient organisational capacity to deliver its role
 - a new function and unit, supported by new primary powers, within either Ofcom or the CMA – both of which have strong organisational advantages and complementarities – drawing on their institutional expertise and already-established credibility
 - a legally independent subsidiary with its own board and CEO, within Ofcom or the CMA, and benefiting from their capacity
- 2.112 This choice should be made by government, and considering in the round the best set of arrangements to implement the Panel’s recommendations alongside policy on online harms, the recommendations of the Cairncross Review, and other relevant elements. Businesses and consumers will benefit from a landscape where institutions have clear remits that complement each other rather than overlap, and where objectives are kept proportionate to the resources available for them.
- 2.113 Whichever institutional format government decides upon, a new body would be given a set of objectives to give clear direction and focus and the resources it needs to carry out these objectives. The Panel considers that a set of objectives along the following lines could be appropriate:
- to promote effective competition in those markets intermediated by digital platforms where strategic market status exists or may develop
 - to ensure that digital intermediary businesses with strategic market status are operated and developed in a way that considers and promotes the interests of the consumers and businesses that use them
 - to promote innovation in digital markets where strategic market status may develop
- 2.114 Defining scope for the unit is a challenge, given that digital markets cover a potentially broad and expanding set of areas. While individual digital markets have been defined in competition cases, an overarching definition of the set of markets to regulate is more difficult.
- 2.115 Scope should be defined with sufficient breadth to future-proof it against changing markets and levels of domination within them, while allaying concerns about sweeping powers and scope creep.¹⁸ Building on the principle outlined above that an approach which adapts to changing technologies and market dynamics will be needed, under this model the Panel suggests a three-stage solution:

¹⁸ Definition of scope would be less important if the unit sat within the CMA, with its economy-wide scope.

- i) The unit should be given a broad underlying scope in primary legislation, based on economic features. This should be along the lines of identifying digital markets where strategic market status may materialise due to characteristics including significant direct or indirect network effects, limited offsetting effects of multi-homing and differentiation, and significant sources of non-contestability.
- ii) Within these markets, the unit would determine which markets have companies able to hold a strategic market status, where a high and enduring market share or other factors lead to market power.
- iii) The unit should every 3 to 5 years conduct a statutory review of both the markets and the companies with strategic market status.

2.116 A key component of this system is to develop a clear legal test for the characteristics of a company's market position above which regulatory powers are appropriate – termed in this review a strategic market status. This needs to be carefully designed to identify where companies operating platforms are in a position to exercise potentially enduring market power, without granting an excessively broad scope and bringing within the bounds of regulation those companies who are effectively constrained by the competitive market. Only a small number of companies should be within the definition of a well-defined test that matches the characteristics of the sector.

Recommended action 5: To account for future technological change and market dynamics, the digital markets unit should be able to impose measures where a company holds a strategic market status – with enduring market power over a strategic bottleneck market.

2.117 The 'significant market power' test in telecoms regulation provides a good starting point. Aspects of market power particularly relevant to platforms and their potential to act as a bottleneck should also be considered for incorporation: economic dependence, relative market power and access to markets. Government should consider carefully and consult before adopting a definition.

Capacity and capability

2.118 The pro-competition functions for the unit will not successfully implement automatically. If the powers proposed were used poorly through badly designed regulation and intervention in markets best left alone, they could create additional uncertainty, impose needless cost and hamper innovation.

2.119 To function successfully, the unit will need significant specialist skills and knowhow in data science, digital systems, and behavioural insights, as well as the core skills in competition, economics and regulation needed to operate in these complex markets. Strong, capable leadership will be important to carve out the role and securely establish this new unit. It will also require appropriate supporting functions and powers, to gather information and monitor markets.

2.120 Companies with strategic market status have a role to play in co-operating with the unit. In financial services, the FCA's Principle 11 requires firms to deal with its regulators in an open and co-operative way, disclosing relevant information to them. A similar approach could help oversight in digital

markets, building open relations and allowing the unit to target resources on action rather than company monitoring. This would build on the specific requirement in Recommended Action 8 that companies with strategic market status should alert the CMA to any acquisitions.

2.121 To accomplish these functions successfully will need appropriate funding, as well as making maximum use of links to specialist skills and capabilities already in existence. An important part of establishing the unit will be to develop the business case and reach an appropriate financial model that sufficiently funds the unit while achieving value for money.

Recommended action 6: Government should ensure the unit has the specialist skills, capabilities and funding needed to deliver its functions successfully.

Co-ordinating with other institutions and initiatives

2.122 While the Panel's remit has focused on competition, a pro-competition approach should not exist in isolation but instead be co-ordinated with other policy aims and institutions. Co-operation amongst regulators is essential to make best use of resources, share scarce specialist data and digital capabilities, and provide a consistent, uncluttered landscape for businesses.

2.123 In particular, there should be a close relationship among:

- the work of the unit to promote competition in digital markets
- actions taken forward from the Smart Data Review to facilitate personal data portability in regulated utility markets
- policy currently being developed by government to tackle online harms, including the code of practice for social media companies published in draft in May 2018
- any implementation by government of the proposal in the Cairncross Review for codes of conduct between online platforms and publishers, overseen by a regulator

2.124 Getting the relations right between these functions will be important. They have the potential to be complementary but could also cut across each other, if taken forward in isolation from each other. In implementing the Panel's recommendations, government should ensure that pro-competition aims and functions are aligned with others, and that the regulatory landscape for digital businesses is kept simple.

2.125 The ICO will also have a vital ongoing role in the digital economy. The Information Commissioner has rightly argued that a robust, respected, trustworthy data protection system is an enabler of innovation and competition, by giving consumers confidence to use new services. The Panel would advocate and welcome any move to build upon the ICO's understanding of this interaction and for it to pursue competition as a secondary aim, without compromising its essential primary focus.

Risks and challenges

2.126 Public policy is always subject to its own challenges in implementation and that will be true for a pro-competition approach as much as any other.

- 2.127 In fast-moving markets where the aim is to encourage innovation, the digital markets unit will need to respond as new technologies and services change market structures. This is easier for a regulatory function with ongoing engagement with the market than it is for an approach solely based on conventional one-off competition enforcement – but it will still require decisions in the face of uncertainty, and a preparedness to learn and develop how its tools are applied.
- 2.128 A unit will also need to be mindful of the risk of industry capture and setting rules that protect incumbents and deter change. As these recommendations propose, an approach that focuses regulation on the largest firms while involving companies of all scales in setting rules would mitigate this risk.
- 2.129 Coherent design of the regulatory landscape and co-operation in practice between the digital markets unit and the other bodies involved will be vital. There is otherwise a risk that the cumulative effect of policy is incoherent and needlessly burdensome. The need for a proportionate and focused approach has informed the design of the digital markets unit, and should continue to do so.
- 2.130 More generally, there is a risk that rule-setting deters innovation. Some will see regulation – even if based on collaboration – as inherently opposed to the spirit of internet-driven innovation.
- 2.131 The biggest risk, however, is not acting at all or relying solely on traditional competition policy tools. Antitrust enforcement can be improved but it cannot alone tackle the tendency to high concentration in these markets. Even where dominance is abused, antitrust enforcement faces challenges in acting rapidly enough or in establishing upfront certainty about the standards to be applied. And the range of evidence that has been considered is clear that many digital markets if left to themselves will lose the competitive tension that drives improvement, innovation and consumer benefit. Engaged, agile and participative pro-competition regulation is the better approach.

Chapter 3

A competition system optimised for a digital world

- 3.1 Chapter 2 discussed the importance of building consumer choice and competition into digital services. Central to this is putting in place a regime that can design and effectively implement the functions that can increase the competitiveness and contestability of digital markets *ex ante*.
- 3.2 Optimising the competition framework for the digital economy is a critical complement to this policy change, in order to make sure that that competition law is effectively enforced *ex post*.
- 3.3 Digital markets pose challenges to competition policy because they can be prone to tipping, as discussed in Chapter 1. In addition, the fact that headline consumer prices can be zero, potential future competition is critical in evolving markets, innovation is a central consideration, and markets are complex and can evolve rapidly all pose challenges for competition policy.
- 3.4 The Panel believes that the traditional approach of basing competition policy on rigorous analysis to advance consumer welfare does not need to be changed. But it does need to be updated and adapted to work more effectively for the digital economy.
- 3.5 The Panel's recommendations are based on updating enforcement to make it more logical and robust, taking into account the characteristics of platforms and being more forward looking. This should lead to better enforcement that advances benefits for consumers. It is the Panel's view that correctly applying consumer welfare would also result in more enforcement, addressing what it perceives to be underenforcement in the past.
- 3.6 The goal of the policy changes is not more or less enforcement but better enforcement. On balance, the Panel believes these recommendations will lead to the UK's Competition and Markets Authority (CMA) doing more to consider, deter and when necessary block mergers in the digital economy where there is the prospect of harm to competition and consumers. They will also allow the CMA to take action more swiftly and have greater confidence its interventions will stick if digital firms breach the established norms of acceptable behaviour in a competitive market.

Introduction

- 3.7 Since the late 19th and early 20th centuries, economies such as the UK have established rules to govern how the competitive process which lies at the heart

of the market economy should operate. This approach is known as competition policy.

- 3.8 Competition policy promotes the economic benefits that competition between different businesses can bring for consumers, businesses and markets. This means ensuring that prices stay low, goods and services are high quality, and consumers have a good range of choices and innovation thrives. Competition also drives productivity, compelling firms to use their resources efficiently, allocating market share and resources to the most productive firms, incentivising firms to invest and innovate over time, and enabling productive new entrants to emerge and grow.¹
- 3.9 Modern competition policy relies on a system of laws grounded in economic theory and evidence, which aim to provide companies with legal certainty over which actions are acceptable and which are proscribed as being anti-competitive.
- 3.10 Competition policy does not act against organic growth by a successful company that takes a larger share of the market because, all else equal, this is positive, reflecting greater efficiencies that benefit consumers. Holding a dominant position is therefore not illegal, but certain actions which create or abuse dominance can be.
- 3.11 The main areas of competition law are:
- merger policy: mergers between firms are generally prohibited if they can substantially lessen competition (for example if they lead to a monopoly)
 - antitrust enforcement:
 - cartel (ie price-fixing or market-sharing) behaviour is illegal
 - companies in a dominant position within markets, for example indicated by a high market share (eg above 40% in many circumstances), have a special duty to act in ways which do not unduly harm competition
 - certain vertical agreements between firms in a supply chain can be anti-competitive and so are illegal
- 3.12 Enforcement of these laws is usually delegated to a designated competition authority. This is typically independent of government ministers, to insulate it from risk or perception of political interference. The UK's competition authority is the CMA.²
- 3.13 Competition policy has to date applied with few exceptions across the economy. This is for good reason as sector carve-outs could create problems

¹ CMA, [Productivity and competition: A summary of the evidence](#), July 2015.

² A number of 'concurrent' regulators have authority for antitrust enforcement in specific sectors of the economy alongside the CMA. Within the EU, DG Competition frequently takes the lead on cases that affect several EU countries. To date, DG Competition has taken on the enforcement role for many of the major competition cases relating to the digital economy. The concurrent regulators are the Civil Aviation Authority, Financial Conduct Authority, Gas and Electricity Markets Authority (Ofgem), NHS Improvement, Office of Communications, Office of Rail and Road, Payment Systems Regulator, Utility Regulator (formerly the Northern Ireland Authority for Utility Regulation) and the Water Services Regulation Authority (Ofwat). For simplicity, we refer to the CMA only as the UK enforcer of competition law during the rest of this report, but this should be taken to include the concurrent regulators, as appropriate.

at definitional boundaries, as firms may not know if they are included in specific rules or not.

- 3.14 The principles of competition policy are generally applicable to the digital economy. However, their implementation will be affected by the challenging economic characteristics of digital markets. This chapter discusses how the competition law framework in the UK should be updated in the context of these challenges. The recommendations in this chapter are motivated by the challenges of the digital economy but are not proposed to apply solely to it. This is not least because the digital sector boundary is likely to be particularly fluid, as technological change spreads into the traditional economy.
- 3.15 Where the recommendations do apply to cases beyond the digital sector, for example in markets with similar economic characteristics, the Panel expects that the recommendations may well have wider benefits. However, as the Panel's remit has been to look specifically at digital markets, it will be important for government to consider and consult on the recommendations more broadly, to ensure there are no unintended side effects in the wider economy.
- 3.16 The recommendations in this chapter relate only to the UK regime. However, many of the same considerations will be relevant globally and so the UK has the opportunity to lead and influence internationally. This is discussed in Chapter 4.
- 3.17 This chapter discusses:
- the consumer welfare standard
 - challenges raised by the digital economy
 - the UK merger regime
 - antitrust enforcement
 - information gathering in the digital economy
 - consumer law enforcement
 - algorithms and competition concerns
 - the digital advertising market

The consumer welfare standard

- 3.18 While UK competition law is largely framed in terms of the competitive process, its application is underpinned conceptually by an approach known as the consumer welfare standard. This dictates that competition decisions should be based on their benefit for consumers. This approach has been formalised and incorporated into competition policy around the world, including in the UK, since the 1980s.
- 3.19 In recent years, and especially in the context of digital markets, a number of commentators and academics have questioned the efficacy of the consumer

welfare standard.³ They have suggested that it is unduly focussed on price, that it is too static and myopic, that it sets too high an evidential threshold for intervention, that its use has led to declining competition, in particular in the United States, and that it misses the political consequences of greater economic concentration.

3.20 These critics frequently advocate a return to an earlier approach to competition economics, which was more likely to consider size to be *prima facie* evidence of a problem and to attempt to gauge not just the economic consequences of reductions in competition but also their political implications. This approach is sometimes known as ‘structural’ or Neo-Brandeisian antitrust, after U.S. Supreme Court Justice Louis Brandeis.

3.21 The Panel has considered the need for such a broader change in paradigm and has concluded that it is unnecessary. This is for a number of reasons:

- The consumer welfare standard is most easily conceptualised in terms of prices and quantities.⁴ However, a number of other factors which impact on consumer welfare can be – and frequently are – considered by competition authorities, including quality, range of products, the service level available to consumers and innovation.⁵
- Consumer welfare standard analysis can be effective even when monetary prices are zero, as they often are in the digital economy, by considering quality aspects such as privacy, how much better ‘free’ services might be with more competition, and the possibility that the price might be negative if customers were paid a competitive price for their data.
- It is not only end consumers that are considered, as businesses are often customers as well and any harm caused to them will also be considered.
- The consumer welfare standard can and should be considered dynamically. Many of the critics’ concerns about protecting potential competition or anti-competitive behaviour can be included by considering cumulative consumer welfare over time.
- There is a strong body of economic theory and evidence underlying modern competition policy. This can allow some use of structural presumptions. More could be done to develop this area, in particular in light of the digital economy, and appropriate enhancements would remain fully consistent with the use of a customer welfare standard.

3.22 A broader change in paradigm would be counterproductive if it created unnecessary uncertainty by departing substantially from current practice. Shifting to a structural approach would risk hindering economic activity that is broadly beneficial to consumers and innovation, and it is anyway not

³ See in particular, Lina M. Khan, [Amazon’s Antitrust Paradox, Yale Law Review](#), January 2017.

⁴ For example, a monopoly will typically raise prices and produce less output compared to firms competing with each other, who lower prices to win customers. The difference between these two scenarios is that consumers collectively have higher welfare under the competitive model. If enough is known about the market the authorities will be able to put a monetary value on this increase in consumer welfare.

⁵ These factors can, for example, all be found in the CMA’s [Merger Assessment Guidelines](#), September 2010.

sufficiently well developed to permit application to many of the questions that competition authorities have to deal with.

- 3.23 The Panel therefore considers that UK competition policy should remain rooted in the consumer welfare standard as properly conceived, giving sufficient focus to non-price elements of competition, and to innovation in particular. Respondents to the call for evidence, in particular academics, generally agreed with this position.⁶

Challenges raised by the digital economy

- 3.24 Rather than changing the conceptual approach of UK competition policy, the accepted principles and concepts need to be applied to achieve their aims where digital markets pose new challenges. This chapter considers how the UK's competition system can be optimised for a digital world.

- 3.25 Digital markets pose new challenges to competition, as outlined in Chapter 1:

- they have a number of features which mean they often tend towards concentration, with limited degrees of in-market competition
- barriers to entry are frequent, in particular due to the accumulation of data by incumbent firms

- 3.26 There are additional challenges for competition policy more directly, as were frequently also reflected in responses to the Panel's call for evidence. In particular:

- digital market dynamics can increase the need for rapid interventions to promote competition, before markets tip to concentration
- markets which have tipped can frequently become sources of strategic or gateway market power for some firms, which opens the possibility for harmful behaviour, whether intentional or otherwise⁷
- the dynamic nature of competition in digital markets requires competition authorities to be more than usually forward-looking and mindful of harm to potential (as opposed to current) competition
- in theory new technologies may afford greater opportunities for anti-competitive or harmful behaviour – through firms' algorithms working together to set anti-competitive prices or using consumer data to set personalised prices that are higher, for at least some consumers, than those they would otherwise receive

⁶ The Panel notes that the UK's current approach which focusses on the competitive process as central to consumer welfare is also in line with a perspective recently propounded by Professor Carl Shapiro. Professor Shapiro considers the consumer welfare standard may be better understood if re-branded as a 'protecting competition standard', defined as an approach where 'a business practice is judged to be anticompetitive if it harms trading parties on the other side of the market as a result of disrupting the competitive process'. See FTC, [Competition and Consumer Protection in the 21st Century Hearing 5 Transcript](#), November 2018.

⁷ Armstrong and Wright, [Two-sided markets, competitive bottlenecks and exclusive contracts](#), August 2007.

- 3.27 A number of practical challenges are posed by digital business models for the analytical tools used by competition authorities such as the CMA. In particular:⁸
- Multi-sided markets have prices which are dependent between sides, meaning they may not closely reflect costs on each side of the market. This could appear to suggest either uncompetitively high margins or below cost predatory pricing when in fact neither is the case.
 - Prices may be zero on one side of the platform, and the true competitive price may even be negative, making typical market definition exercises more complex.
 - Consumers may pay for services implicitly through their personal data or their attention. This means that competition may take place at broader levels than are frequently analysed, for example as attention markets.
 - Extensive data collection, computing power, artificial intelligence and machine learning capabilities may arguably create a multiplicity of small consumer markets.
 - New harms may be created for example regarding loss of privacy due to incentives on treatment of personal data.
- 3.28 The Panel therefore recommends a number of adaptations to the existing competition policy tools of mergers and antitrust enforcement, as well as considering concerns raised by algorithms.⁹
- 3.29 The Panel notes that the CMA is already taking welcome steps to equip itself for digital markets. For example, it has created a Data, Technology and Analytics Team, comprised of data scientists and behavioural economics experts.

The centrality of innovation in delivering continued consumer benefits

- 3.30 Innovation is particularly important in the digital economy, as noted in Chapter 1, and digital markets have been a key source of innovation which has delivered significant benefits to consumers.
- 3.31 The Panel's highest priority is for the UK's competition system to adapt to the competitive dynamics of the digital economy in order to ensure that levels of innovation are as high as they can be. The recommendations discussed in this chapter aim to optimise the UK competition system for a digital world, in particular by promoting continued innovation for consumer benefit.

The UK merger regime

- 3.32 Competition authorities exercise control over mergers to limit the potential for concentration within markets to lead to undesirable consumer outcomes, such as higher prices and lower quality, service and range. At the same time, it aims to avoid blocking mergers which are benign or beneficial. By challenging anti-

⁸ Diane Coyle, [Practical problems for competition policy implications of digital enforcement in digital market platforms](#), March 2018, (forthcoming *Antitrust L.J.* 82-3, 2019).

⁹ The panel has considered a number of other studies which are also making steps in addressing these challenges. See for example OECD, [Rethinking Antitrust Tools for Multi-sided Platforms](#), 2018.

competitive mergers in a consistent manner, firms are deterred from planning such deals in the first place.

- 3.33 Although many mergers are scrutinised and challenged by the CMA on grounds of being anti-competitive, the vast majority go unchallenged on account of being either pro-competitive or having no impact on competition at all.

The UK system

- 3.34 In the UK, the CMA has responsibility for merger control under the Enterprise Act 2002. The CMA is unusual among competition authorities in having a voluntary rather than mandatory notification regime. This means that companies are only required to bring merger cases to the CMA if they consider there is a possible competition concern. The CMA's Mergers Intelligence Committee monitors markets and can 'call in' any case which has not been notified to it and over which it has jurisdiction. It typically does so only where there is a reasonable chance that the test for a reference to a phase 2 investigation will be met.¹⁰
- 3.35 The legal task of CMA merger control is broadly to prevent mergers that would result in a substantial lessening of competition (SLC). The CMA's Merger Assessment Guidelines state that 'A merger gives rise to an SLC when it has a significant effect on rivalry over time, and therefore on the competitive pressure on firms to improve their offer to customers or become more efficient or innovative. A merger that gives rise to an SLC will be expected to lead to an adverse effect for customers.'¹¹
- 3.36 When assessing a merger, the CMA first undertakes an initial 'phase 1' review, which considers whether the merger gives rise to a realistic prospect of a substantial lessening of competition. This results in a merger being cleared – either unconditionally or with remedies such as the sale of certain parts of the business – or referred for a 'phase 2' investigation.
- 3.37 Phase 2 decisions are taken by an inquiry group, drawn from the CMA panel. When making its decisions at Phase 2, the CMA applies a balance of probabilities threshold to its analysis, addressing the question: is it more likely than not that a substantial lessening of competition will result?

Mergers can be beneficial for consumers

- 3.38 The merging of two firms can lead to lower prices and new innovative products or services being made available. New innovations may be brought to market more quickly and effectively by a firm that has the capacity, financial means, and the experience to do so. Many acquisitions may result in products being brought successfully to a mass market that would otherwise have failed or achieved only a niche market position.
- 3.39 In response to the Panel's call for evidence, Airbnb stated that:

'an acquirer may be able to contribute know-how, technology and other resources to a target company or business, allowing the combined firm to

¹⁰ CMA, [Guidance on the CMA's mergers intelligence function](#), September 2017.

¹¹ CMA, [Merger Assessment Guidelines](#), September 2010.

grow and develop in ways that would not have been possible if the acquired company remained independent. Likewise, an acquired company or business may contribute knowhow, skills or other resources. This leads to efficiencies that enable innovation, higher quality and lower prices bringing benefits to consumers.'

- 3.40 A broad range of stakeholders have also strongly emphasised to the Panel the importance of being acquired as a potential exit strategy for technology start-ups. In response to the call for evidence, Uber explained that:

'the potential to be acquired by a larger incumbent is an important driver of the expected returns [for investors]. Any steps taken by competition authorities that alter these expected returns may make it more difficult for start-ups to acquire early-stage investment in the future and may diminish the likelihood that they even get off the ground.'

- 3.41 The Panel has been mindful of this important dynamic throughout its review.

Underenforcement in digital markets

- 3.42 Merger control is subject to two types of errors: false positives, when a merger that should have been allowed to go through is blocked, and false negatives when a merger that should have been blocked is allowed to go through. No enforcement can be perfect, given all of the uncertainties inherent with forward-looking merger assessments, and some balancing of these types of errors is necessary.

- 3.43 To date, there have been no false positives in mergers involving the major digital platforms, for the simple reason that all of them have been permitted. Meanwhile, it is likely that some false negatives will have occurred during this time. This suggests that there has been underenforcement of digital mergers, both in the UK and globally. Remedying this underenforcement is not just a matter of greater focus by the enforcer, as it will also need to be assisted by legislative change.

- 3.44 In the last decade, Amazon, Apple, Facebook, Google, and Microsoft combined have made over 400 acquisitions globally. As discussed in Chapter 1, some of these acquisitions have been exceptionally high value, peaking with Microsoft paying \$26.2 billion for LinkedIn.

- 3.45 This pace is not slowing, with close to 250 acquisitions in the last 5 years. Over this period, none of these mergers were notified voluntarily to the CMA, and none were called in for investigation, either at phase 1, or the more serious phase 2 level. This means that none during this period have been blocked, or even approved subject to conditions set by the CMA.

- 3.46 The last time the CMA investigated a merger by one of these large digital companies was in 2013, when the proposed acquisition of Waze by Google (Motorola Mobility) was cleared following a phase 1 investigation. The CMA monitors all non-notified merger activity with a potential impact in the UK, and in this period its CMA's Mergers Intelligence Committee has considered whether close to 30 of these acquisitions should be called in for review, but determined in each case that they did not warrant closer scrutiny.

- 3.47 These low numbers partly reflect the fact that the CMA defers to the European Commission on cases already being considered at an EU level, owing to the EU's turnover-based mandatory notification requirements. However, only a handful of the largest acquisitions have been examined at an EU level. None of the digital mergers investigated by the European Commission have been blocked either, although Google / Doubleclick and Apple / Shazam both received phase 2 scrutiny, while Microsoft / LinkedIn was cleared at phase 1 subject to commitments.
- 3.48 The Panel recognises that the large majority of the acquisitions by large digital companies in recent years have likely been benign or beneficial for consumers. However, it notes that they have occurred over a period during which the major digital platforms have grown, consolidated their market position and faced few serious independent rivals.
- 3.49 Moreover, it appears that some of these acquisitions have been of platforms and other companies that could have provided much-needed competition in these concentrated markets. Some also appear to have been companies up or downstream, whose products have helped to cement platforms' positions in their core market, increasing their power over their users.
- 3.50 It has not been possible to conduct case-by-case retrospective assessments of each merger within this review. The Panel has not formed a judgment on whether or not any particular merger decision was ill-judged at the time, given information available at the time of merger review and the established approach to merger assessment. Mergers can look very different with the benefit of hindsight.
- 3.51 As outlined in Chapter 1, the Panel has heard concerns that, in some instances, large digital companies have acquired smaller innovative companies in spaces adjacent or overlapping with their main activity, as a so-called killer acquisition strategy, designed to eliminate potential future rivals.
- 3.52 The comments of respected competition economist Carl Shapiro in his 2018 paper 'Antitrust in the Time of Populism' are in line with this view:¹²
- 'One promising way to tighten up on merger enforcement would be to apply tougher standards to mergers that may lessen competition in the future, even if they do not lessen competition right away. In the language of antitrust, these cases involve a loss of potential competition. One common fact pattern that can involve a loss of future competition occurs when a large incumbent firm acquires a highly capable firm operating in an adjacent space. This happens frequently in the technology sector. Prominent examples include Google's acquisition of YouTube in 2006 and DoubleClick in 2007, Facebook's acquisition of Instagram in 2012 and of the virtual reality firm Oculus VR in 2014, and Microsoft's acquisition of LinkedIn in 2016.'
- 3.53 This pattern of digital mergers could also be harmful if the newly acquired position in adjacent markets is exploited to harm existing or downstream rivals. For example, by using their strong gateway position as a platform to

¹² Carl Shapiro, [Antitrust in a time of populism, 2018](#).

harm downstream rivals through high fees or restricted access, thereby also strengthening their own position in that downstream market. The news publishing industry has made strong representations that this has occurred through Google's vertical integration of multiple layers of the digital advertising market. This market is discussed in further detail below.

- 3.54 Being alert to the threat of killer acquisitions does not mean assuming all purchases of small firms by big firms pose a special threat, even in digital markets. The point is that the CMA should develop and use a clearer framework for looking beyond current market conditions to examine how the transaction might affect future innovation and consumer welfare. This requires understanding the kinds of facts that indicate a transaction poses risks. It involves articulating the conditions under which those risks will lead to action against the merger, and putting this into practice in cases.

Strategic recommendation B: Merger assessment in digital markets needs a reset. The CMA should take more frequent and firmer action to challenge mergers that could be detrimental to consumer welfare through reducing future levels of innovation and competition, supported by changes to legislation where necessary.

- 3.55 Many mergers involving digital platforms are effectively global. However, the UK's merger regime has a key role to play in assessing these mergers. Moreover, UK merger law applies to parties based outside the UK, so long as they are carrying on business in the UK.
- 3.56 The Panel has heard clear views from parties involved in past cases that if the CMA had chosen to block their merger, they would have abandoned it. The UK has significant influence globally and the decisions it takes in respect of its own merger regime may well be followed by others. The Panel has concluded that a reset of the UK merger regime has the potential to have substantial impact, including beyond the UK.
- 3.57 A number of other jurisdictions are also already re-considering their own merger rules in the context of the digital economy, and their considerations may be informed by the UK's example.
- 3.58 The Panel has concluded there are three areas where the UK regime can improve:
- the CMA should select more digital markets cases for examination
 - the CMA should update its assessment framework for digital mergers
 - the CMA must have the ability to address lower likelihood but high-impact concerns regarding potential competition
- 3.59 There are actions the CMA can take within its existing powers to select more digital mergers and to update its assessment framework. Ensuring the CMA has the ability to address lower-likelihood but high-impact concerns will most likely require legislation. This will be necessary for a step change in enforcement to be successful. The recommendations the Panel makes in these three areas are set out below.

CMA prioritisation and selection of digital merger cases

- 3.60 As noted above, the CMA has only investigated one acquisition by any of Amazon, Apple, Facebook, Google, and Microsoft since 2013, and this was cleared at phase 1 examination.
- 3.61 The Panel has examined whether this lack of detailed scrutiny is because the CMA is constrained by its reach, which includes meeting either of the following two jurisdictional threshold tests:
- the turnover test
 - the share of supply test
- 3.62 The business model of digital companies often means that they fail to generate any significant revenue for a number of years, focusing initially on user growth. For countries relying solely on turnover thresholds to apply jurisdiction, this is a significant issue that must be addressed.
- 3.63 The Panel did consider carefully whether there might be a gap in the CMA's jurisdiction in relation to non-horizontal mergers. In particular, acquisitions by large digital platforms of technology companies operating in adjacent markets. At the Panel's request, the CMA retrospectively considered potential jurisdiction for a number of historic high-value non-horizontal digital mergers.
- 3.64 In each case, the CMA assured the Panel that it could have asserted jurisdiction through the share of supply test, which is characterised by a considerable degree of flexibility in practice. Instead, it chose not to call in these mergers on the basis that they were not, at that time, considered to raise potential concerns.
- 3.65 On this basis, there is not currently a strong case for any legislative change to the CMA's jurisdiction, but the evidence does suggest the CMA must make digital mergers a higher priority.
- 3.66 Mergers involving large digital companies are rarely notified to the CMA. The onus is therefore on the CMA to place greater emphasis on digital mergers in its case selection going forwards, especially where theories of harm relate to elimination of potential competition and loss of innovation. It will also need to resource their examination.
- 3.67 The Panel understands that the CMA has recently been reviewing its own work on digital mergers and agrees that it has not always given them sufficient priority. The CMA has explained it is in the process of increasing the scrutiny it places on digital mergers, both in terms of calling in non-notified mergers and in terms of giving weight to a wider range of theories of harm. The Panel is supportive of this reported direction of travel, yet more certainly needs to be done.
- 3.68 The Panel considers that it is important that the CMA has the discretion to call in non-horizontal digital mergers, should it determine that they may be anti-competitive. If difficulties arise in applying the share of supply test to such mergers in future, despite its apparent flexibility, the Panel would expect the CMA to alert government of the issue, and government to respond with urgency. Should this be the case, it may be appropriate for government to

introduce a transaction value threshold alongside the existing turnover and share of supply thresholds for jurisdiction.

Recommended action 7: The CMA should further prioritise scrutiny of mergers in digital markets and closely consider harm to innovation and impacts on potential competition in its case selection and in its assessment of such cases.

- 3.69 As noted previously, the largest digital companies have made many acquisitions in recent years. These have rarely been notified to the CMA under the voluntary notification regime. In order to assist the CMA with monitoring and selecting digital cases for investigation, the Panel recommends that digital companies identified as having a strategic market status ought to make the CMA aware of every intended acquisition. Chapter 2 explains what is meant by a strategic market status and how firms will be designated as such. At a high level, a strategic market status will be applied to large platforms that operate a key gateway in one or more digital markets, with many dependent users on either side.
- 3.70 This requirement would guarantee the CMA can make an informed and timely decision on whether to investigate each acquisition by these companies. Unlike with the formal notification system, the CMA would not be obligated to investigate each planned merger that a strategic market status company made it aware of.

Recommended action 8: Digital companies that have been designated with a strategic market status should be required to make the CMA aware of all intended acquisitions.

- 3.71 Assessing mergers always involves making a best attempt to predict the future. This is never easy, but where merging parties are horizontal competitors in stable markets, the authorities can draw on a well-established package of economic tools to facilitate this assessment. Assessment of mergers involving digital companies is made more complex by the multi-sided nature of digital platforms, the role of consumer data and algorithms in these markets, and their fast-moving dynamic nature. As discussed above, digital mergers are also more likely to involve theories of harm which relate to elimination of potential competitors or harming innovation.
- 3.72 These concerns are more difficult for competition authorities to demonstrate using standard merger assessment techniques. However, the economic tools do exist for the CMA to develop and use for more innovation-focused, forward-looking enforcement.

The CMA's assessment framework for digital mergers

- 3.73 There has been substantial evolution and growth in digital markets since the Merger Assessment Guidelines (MAGs) were last updated (2010).¹³ There have also been increasing concerns about underenforcement of digital mergers during this period.
- 3.74 In order to help reset the dial on merger assessment in this sector, the CMA should conduct a full review and update of its MAGs, as soon as time and resources allow. This will be of particular importance as the CMA investigates

¹³ CMA, [Merger Assessment Guidelines](#), September 2010.

an increasing number of such mergers. At a high level, this update should aim to provide greater clarity about how the CMA will deal with the particular issues arising in digital markets, and further emphasise the importance of potential impacts on future competition and innovation. The Panel's proposed updates to the MAGs are set out in Box 3.A.

Box 3.A: Proposed updates to the Merger Assessment Guidelines

During a full review of the MAGs, the following changes should be considered:¹⁴

- Enhanced treatment of multisided platform markets, including the relevance for competition of interoperability between systems and the ability and willingness of users to switch or multi-home.
- Highlighting the relevance of data assets in digital market competition, and the extent to which a merger, by bringing together data from different sources, can restrict competition through increasing incumbency advantages.
- Discussing the nature of competition in platform markets with zero monetary price to consumers, including how consumers may pay for products or services through non-monetary means; and how a zero monetary price may potentially be above the competitive market price.
- Introducing explicit references to loss of future innovation as a potential unilateral anti-competitive effect of a merger.
- Placing greater emphasis on the loss of future potential competition between merging firms not currently operating as direct rivals, with a fuller explanation of how this can be assessed.
- Toning down the existing text that suggests non-horizontal mergers will typically be benign, and broadening the requirement to demonstrate an anti-competitive incentive, acknowledging that digital companies often seek to maximise growth over profits for many years.
- Drawing attention to the evidential relevance of the transaction value relative to the market value and company turnover, and the importance of understanding the rationale for valuations which appear exceptionally high.
- Highlighting that evidence on the behaviour of an acquiring firm following previous mergers may be pertinent to assessing that firm's acquisition strategy, and thus likely merger effects.
- Clarifying that the substantiality of a lessening of competition may depend on the extent of competition pre-merger, reflecting the

¹⁴ This section contains a greater degree of technical terminology in order to allow necessary specificity. These terms are not set out here but are explained in the MAGs in full detail.

greater need to protect competition in circumstances where there is already limited competition.

- Confirming that the UK merger test will address situations in which a merger gives rise to the 'creation or strengthening of a dominant position', so long as this generates an SLC.¹⁵
- Emphasising that empirical evidence should always be considered within the context of an economic framework that takes into account underlying economic theory and principles, which can allow certain inferences to be made. For example, where economic context tells us that a merger is highly likely to be anti-competitive, the empirical evidence required for intervention will be relatively low.¹⁶
- Highlighting that, when considering potential pro-competitive effects of the merger, for example associated with helping to bring small innovative products to a wider market, it may be appropriate to consider whether the same benefits could be delivered through acquisition by purchasers that raise fewer competition concerns.

3.75 These clarifications would not materially change the scope of the CMA's existing powers and should not require any legislative changes. Rather, these changes to the MAGs should bring these issues more to the forefront of CMA analysts' and decision makers' minds. They will also signal to merging companies, and their advisors, that these issues will be factored into the decision.

3.76 The associated consultation process will also foster a rich stakeholder debate as to the appropriate approach to assessing mergers in digital markets. This may lead to refinement and enhancement of the issues highlighted in Box 3.A.

3.77 This process will be resource-intensive, and the CMA already faces a heavy workload, including in relation to EU withdrawal. However, updating the MAGs is sufficiently important in terms of resetting the dial on digital mergers to merit prioritisation.

Recommended action 9: The CMA's Merger Assessment Guidelines should be updated to reflect the features and dynamics of modern digital markets, to improve effectiveness and address underenforcement in the sector.

3.78 The changes discussed so far in this section should mean a greater number of digital mergers being investigated by the CMA going forwards, with these assessments being conducted against a clearer and more refined framework.

3.79 However, although each of these changes are necessary, their impact will be maximised if the CMA has greater ability to address lower likelihood but high-impact concerns, in particular, related to the loss of potential future competition and the innovation it can bring.

¹⁵ Note that the legal test in the EU Merger Regulation makes this more explicit, by bearing upon mergers which would significantly impede effective competition (the SIEC test), in particular by the creation or strengthening of a dominant position.

¹⁶ An example might be an acquisition by a firm with a very high share of a platform market, which exhibits substantial network effects, purchasing a key possible market disruptor. By contrast, if a merger involves the second and third players, in a market where barriers to entry appear low, then the empirical evidence required for intervention will be substantially higher.

The challenge of digital mergers which remove potential future competition

- 3.80 In order to block a merger, the CMA must conclude that there will be, on the balance of probabilities, a substantial lessening of competition. In other words, it must find that a substantial lessening of competition is more likely than not.
- 3.81 In mergers involving digital companies, the harms will often centre around the loss of potential competition, which the target company in an adjacent market may provide in the future, once their services develop. The key concern here is that the removal of an important future competitor could harm innovation – if the acquired company is not developed to its full potential and if the acquiring company is not incentivised to innovate in response.
- 3.82 Although potentially harmful to consumers, these outcomes are likely to be relatively uncertain at the time of the merger. This may make it hard to demonstrate that a substantial lessening of competition is more likely than not, despite the potentially very large scale of lost benefit if the merger prevents competition from emerging in that digital market. Under the current system, there is therefore a risk that digital companies continue to acquire innovative potential future rivals unchallenged.
- 3.83 Referring to a past merger case illustrates this issue. In 2012 Facebook acquired a relatively small photo sharing platform called Instagram for \$1 billion. The CMA's predecessor body, the Office of Fair Trading (OFT), cleared the merger. The OFT could be criticised for not carrying out a sufficiently in-depth review of this deal, given that it was cleared at phase 1. Even at the time, there were reasons to believe that Instagram had some chance of being a future competitor to Facebook, as evidenced by Facebook's willingness to pay such a high price, and descriptions of Facebook's motivation for the transaction in the specialist business press.
- 3.84 Even if the OFT had carried out a more thorough phase 2 investigation, however, it may have been limited in its ability to block the merger by the balance of probabilities standard. The scope for Instagram to grow into a rival to Facebook as a social network was uncertain, and the authority may have struggled to demonstrate that this outcome was more likely than not to occur.
- 3.85 With the benefit of hindsight, we can now observe that Instagram has grown considerably since 2012 and offers a service that many see as an alternative to Facebook. Facebook owns both networks, meaning that consumers switching from its original network to Instagram do not cause it competitive concern, and does not provide an incentive for Facebook to improve its services in response. Analysis of the social media market in Chapter 1 illustrates how this acquisition may have offset some of the decline in Facebook's share of the market.
- 3.86 It is of course unknown how Instagram would have developed without the merger. Facebook may have aided its development, for example through expertise in social networks and financial investment. The Panel is not opining on whether the Instagram merger should have been blocked based on the rules at the time. It is instead arguing that the rules should be updated to ask the economically correct questions about the merits of such mergers.

3.87 While the CMA continues to be required to demonstrate at phase 2 that a substantial lessening of competition is more likely than not to occur, the panel is concerned that it could be unable to challenge mergers of this kind effectively, despite the scale of potential harm being very large. If incumbent digital companies continue to acquire their future rivals before they have been able to grow to maturity, then the digital economy will fail to reach its full potential.

A more economic assessment of digital mergers

3.88 A more economic approach to assessing mergers would be to weigh up both the likelihood and the magnitude of the impact of the merger. This would mean mergers being blocked when they are expected to do more harm than good.¹⁷ The Panel calls this a ‘balance of harms’ approach.

3.89 To continue with the example of Facebook and Instagram, a balance of harms approach would consider the potential harm from losing a powerful rival to Facebook’s social network. This harm would include the forgone benefits from the competition that a rival could bring, for example through increased quality and availability of innovative new services, lower costs of digital advertising being passed through to consumers, and greater privacy protection. Importantly, the scale of these potential impacts would be factored into the decision to a greater extent than is possible under the current test.

3.90 A range of sources have supported an approach along these lines, including The Centre for Competition Policy, which proposed in response to the panel’s call for evidence that:

‘it would be wise to amend the standard “more likely than not” merger test to allow greater harms, which are at least “realistic prospects”, to weigh more heavily in the merger decision.’

3.91 The magnitude and likelihood of potential benefits of the merger would also in principle be taken into account. To the extent that these will be passed through to consumers, and especially to the extent they involve enhancements to valuable innovation, these should be set against any harm from the merger.¹⁸

3.92 Taking benefits more closely into account in CMA decisions was supported by some respondents to the Panel’s call for evidence, such as the Competition Law Committee of the City of London Law Society.

3.93 Leading economists such as Jean Tirole have argued that competition authorities must be willing to be bolder – even to the extent of the occasional

¹⁷ This means ‘expected’ in the mathematical sense, so based on the chance of an outcome and its value. For example, if facing a bet where a person has a one in three chance of losing £150 and a two in three chance of winning £30 they should not take the bet – because although they are most likely to win £30, the bad outcome is a lot worse: the ‘expected’ value is minus £30 ($30/3 + 30/3 - 150/3$).

¹⁸ The balance of harms test would have similarities with the government’s recognised approach for making regulatory decisions, which draws on the principles of cost-benefit analysis. This can combine qualitative and quantitative analysis and judgements, with various techniques for addressing the challenges of uncertainty. This approach is frequently used for significant and complex government decisions, for example for public health proposals, environmental protection, or major infrastructure investment.

rare false positive along the way to promoting competition in the digital economy.¹⁹ In a similar vein, Shapiro (2018) argues that:

‘Sound competition policy would tolerate some false positives – blocking mergers involving targets, only to find that they do not grow to challenge the incumbent – in order to avoid some false negatives – allowing mergers that eliminate targets that would indeed have grown to challenge the dominant incumbent.’²⁰

3.94 A well-implemented change to the current system would provide the most economically-grounded, rational decision-making framework for which mergers to block, providing a clear basis to address the underenforcement in digital markets to date.

Recommended action 10: A change should be made to legislation to allow the CMA to use a ‘balance of harms’ approach which takes into account the scale as well as the likelihood of harm in merger cases involving potential competition and harm to innovation.

Applying a balance of harms approach in the UK competition framework

3.95 There are a range of ways that the balance of harms concept could be incorporated into UK competition law and practice. A practical approach will be one that best accounts for the factors that need to be considered in any merger regime:

- the ability to effectively challenge anti-competitive mergers while avoiding challenging benign or beneficial ones
- the clarity of the test against which mergers will be assessed
- the proportionality of the assessment process, timescales and costs
- the extent to which it fits with and relates to existing practice and precedent

3.96 In developing further how it can best be adopted within UK law, government and the CMA should assess which option strikes the optimal balance between these factors. Implementation need not involve a wholesale change to the current legislative framework, so long as it provides the CMA with a clear option to take into account the magnitude of harms as well as their likelihood in cases where this is a relevant factor. Change should enable the CMA to intervene where it expects, on average, for the harm of the merger to be substantially greater than the benefits.

3.97 Importantly, the emphasis on harm would not reduce focus on the impact of a merger on the competitive process. Competition can work in unpredictable ways that can be difficult to evaluate. If a merger can be demonstrated to substantially lessen competition, as under the current UK merger test, then the merger can be presumed harmful. As such, any mergers which fail the current test would also fall foul of the Panel’s proposed merger test. The new test would only broaden the set of mergers which may be found problematic.

¹⁹ Allison Schrager, *A Nobel-winning economist’s guide to taming tech monopolies*, June 2018.

²⁰ Carl Shapiro, *Antitrust in a time of populism*, 2018.

- 3.98 The current UK merger test also incorporates a substantiality element. By applying only where the lessening of competition is substantial, this test implicitly allows for a certain level of merger efficiencies, without these having to be demonstrated. To the same end, a similar substantiality threshold could be incorporated in a balance of harms approach.
- 3.99 Some stakeholders have suggested to the Panel that a change in the legislation is not required, arguing that the existing UK merger standard is already sufficiently flexible to address issues of the type described above. However, in the absence of intervention against digital mergers to date, or of case law supporting the blocking of a merger where the harm is not the most likely outcome, the panel considers a change in legislation is required. This is preferable to probing the flexibility of the existing test through merger decisions that may well be contested.
- 3.100 The Panel considers that such a balance of harms test, applied in this way, would provide a strong, clear, rational, economically sound approach to appraising mergers. The need to take into account the magnitude and likelihood of outcomes may make decisions more challenging for the CMA. The alternative to taking challenging decisions is to continue with costly underenforcement of digital mergers – the Panel is clear that action must be taken to address this issue.

Alternatives to the balance of harms approach considered by the Panel

- 3.101 The principal alternative considered by the Panel has been the introduction of a legal presumption against acquisitions by large digital companies, with the burden placed on parties involved to provide proof that the merger will not be anti-competitive.
- 3.102 As stated earlier in this chapter, the majority of acquisitions by large digital companies are likely to be either benign or beneficial for consumers, though a minority may not be. Being acquired is also an important exit strategy for technology start-ups, providing significant incentive for investors to provide funding to risky projects and support market entry.
- 3.103 A presumption against all acquisitions by large digital companies is not a proportionate response to the challenges posed by the digital economy, and has therefore been ruled out in favour of the balance of harms approach.
- 3.104 The Panel also considered whether there may be merit in the UK more closely aligning the UK merger test with the EU Merger Regulation. The latter bears upon mergers which would 'significantly impede effective competition (the SIEC test), in particular by the creation or strengthening of a dominant position.' Since the typical concern arising in mergers involving digital platforms could arguably be described as the 'creation or strengthening of a dominant position', this aspect of the EU test appears pertinent.
- 3.105 However, the review concluded that the existing UK test could in practice already capture any creation or strengthening of dominance that gave rise to genuine harm. Thus there would be little to gain from greater alignment. The review also noted that there are concerns about underenforcement of digital mergers at the EU level, reinforcing the Panel's view that adopting the EU merger test would not be a solution.

Impact on exit strategy incentives

- 3.106 The intention of these changes is not to prevent large digital companies acquiring smaller companies, as the large majority of these cases will be either benign or beneficial for consumers. Instead, the CMA should be willing and able to prevent the minority that can be anti-competitive and harmful to consumer welfare and the economy.
- 3.107 This would leave the large majority of the exit options that many respondents identified as a critical incentive for entry and innovation intact. At the same time, it would also do more to protect competition and an environment in which businesses could scale up and alternative forms of capital would be more available.
- 3.108 This change could have a positive impact for consumers and innovation in the long run, but should have a negligible impact on the incentives to invest and innovate associated with the ability to be acquired by a larger company.

Antitrust enforcement

- 3.109 Going forwards, merger policy will only be capable of addressing future acquisitions that reduce competition or potential competition. By definition it is not concerned with the conduct of existing businesses, including ones that are the result of past mergers. This is the domain of antitrust enforcement.
- 3.110 Antitrust enforcement seeks to improve consumer welfare by protecting businesses and consumers against anti-competitive agreements or behaviours. Its investigations aim to deter companies from engaging in these practices, to provide business with clarity over what forms of behaviours are acceptable and to guarantee a fair process for businesses if they are investigated.
- 3.111 Digital markets create several challenges for antitrust enforcers. Their fast-changing nature and high levels of innovation mean that the antitrust framework should place greater emphasis on dynamic considerations and this inevitably entails greater uncertainty. The risk that anti-competitive conduct leads to the market tipping also emphasises the need for quick and effective intervention.
- 3.112 In much of the policy debate around competition and digital platforms, the focus has been on the role antitrust action should play in addressing abuse of dominance in digital markets. As noted above, abuse of dominance occurs when firms take advantage of a strong position, for example derived from a high market share or being an essential route to market for suppliers, to treat weaker firms unfairly or anti-competitively.
- 3.113 Abusive behaviour may be 'exploitative', meaning extracting excessive rents from these third-party suppliers, or 'exclusionary' meaning it prevents other firms from participating in markets. Exclusionary behaviour may in turn be designed to protect or enhance the firm's position in its core market, or to leverage its position into related markets. Leverage of this sort has been a particular concern in many of the recent abuse cases investigated by competition authorities.
- 3.114 This review does not favour a radical change to antitrust enforcement to address digital markets issues. This could lead to unintended and undesirable

side effects. Instead, the review has concluded that antitrust enforcement should not have to tackle all the challenges of digital markets alone: a key conclusion is that *ex ante* pro-competition tools described in the previous chapter offer a faster, more co-operative and more certain basis for creating a successful competitive environment than *ex post* antitrust enforcement.

- 3.115 Acting under antitrust law will remain important, however, to deter businesses from behaving anticompetitively and impose penalties and remedies where they are found to have done so. The Panel has focused its work on antitrust on updating the CMA's enforcement tools for the challenges of the digital economy.

Strategic recommendation C: The CMA's enforcement tools against anti-competitive conduct should be updated and effectively used, to help them play their important role in protecting and promoting competition in the digital economy.

- 3.116 As with merger assessment, the CMA's prioritisation of digital markets is important, and it will need to be prepared to act and bring cases in the digital economy, despite the complexity and challenges involved. To date the CMA has brought only one abuse of dominance case in digital markets.²¹
- 3.117 The CMA would benefit from evaluating past instances in which infringements were suspected or complaints received but no action was taken, in order to assess how markets subsequently evolved and the impact on consumer welfare. Such evaluations clearly need to take care to avoid hindsight bias, but can generate important lessons on challenges such as how to assess dynamic effects in these markets.

Recommended action 11: The CMA should perform a retrospective evaluation of selected cases not brought and decisions not taken, where infringements were suspected or complaints received, to assess how markets have subsequently evolved and what impact this has had on consumer welfare.

Swift and effective enforcement

- 3.118 The fast-moving nature of digital markets and their propensity to tip towards a single market player heightens the importance of ensuring that intervention, where appropriate and necessary, is quick and effective. This was supported by several respondents to the call for evidence, in particular academics, who argued that antitrust investigations in digital markets needed to be fast-tracked or prioritised.
- 3.119 It is widely recognised that antitrust action can be a slow process. For contested cases, the average duration of antitrust cases brought under the Competition Act and completed by the CMA between 2014 and 2017 was 39 months, whilst the average figure for all cases over this period was 25 months.²² Abuse of dominance cases typically have among the longest

²¹ CMA – auction services: anti-competitive practices. The CMA accepted commitments which resulted in the termination of the case.

²² See [CMA Annual Report and Accounts 2016/17](#).

timescales. In a digital market where the evidential issues may often be particularly complex, companies exposed to anti-competitive practice may go out of business before the case is concluded. This risk is well illustrated by abuse of dominance cases brought by the European Commission in digital markets, where major cases have taken as long as 7 years or more to reach a conclusion.

- 3.120 Responses to the call for evidence highlighted this issue. For example, Vodafone called for competition authorities to address the concern that *ex post* enforcement can take too long in highly dynamic industries, through (i) prioritising urgent cases, (ii) enhancing data gathering and processing capabilities, (iii) making use of outside industry experts early on, (iv) using early settlements and commitments where appropriate and (v) ensuring a purposeful, streamlined appeal process.

Facilitating the implementation of interim measures

- 3.121 In fast-moving markets, it is important that the CMA is able to protect competitors at risk from suspected anti-competitive practices, pending the resolution of the full case. Temporary directions known as interim measures serve this purpose in competition law, performing a similar role to injunctions in other areas of litigation.
- 3.122 Interim measures were mentioned in several responses to the Panel's call for evidence. The Digital Policy Alliance suggested that authorities should err on the side of intervening at the optimal time. The Law Society of Scotland recognised that the use of interim measures could strike a balance between the need to intervene quickly and protecting the rights of defence of the affected parties.
- 3.123 In response to the European Commission's Digital Single Market Strategy, the House of Lords Select Committee issued a report on Online Platforms and the Digital Single Market in 2016 which also recommended that the CMA make greater use of interim measures in order to speed up the enforcement of competition law.²³
- 3.124 The CMA already has the power to impose interim measures on businesses suspected of engaging in anti-competitive practices. These powers were expanded in 2014, when the legal threshold was lowered to facilitate their usage.²⁴ Despite this, and despite publicly stating²⁴ that it is committed to doing so, the CMA is yet to make use of these powers.²⁵
- 3.125 The Panel strongly encourages the CMA to use the expanded powers made available to it. The powers are already sufficient in themselves, but the Panel considers further administrative changes would be beneficial in making interim measures more practicable.
- 3.126 Before it can impose an interim measure, the CMA is rightly required to disclose files relating to the proposed direction to the parties affected.²⁶ This is

²³ House of Lords – Online Platforms and the Digital Single Market, [Chapter 5](#), April 2016.

²⁴ The Enterprise and Regulatory Reform Act 2013, [Section 43](#).

²⁵ Competition and Markets Authority, [Written evidence to House of Lords select committee on communications](#), May 2018.

²⁶ The Competition Act 1998, [Competition and Markets Authority's Rules Order 2014](#).

so defendants can see relevant evidence justifying the decision and any potentially exculpatory material. An 'access to file' process is used, with an agreed set of relevant documents shared between the CMA and companies involved in the case.

- 3.127 The CMA has identified the potential to make more use of interim measures through confining file access to documents clearly relevant to the interim measure. This process improvement has the potential to make interim measures more practicable, without compromising companies' legitimate procedural expectations. However, if it proves legally contentious for the CMA to narrow access in this way, it is possible that the CMA's rules will have to change. This would likely require secondary legislation. In addition, as considered in the following section, the standard of appeal against interim measures should be changed in parallel to any change to that for final decisions, to maintain consistency.

Recommended action 12: To facilitate greater and quicker use of interim measures to protect rivals against significant harm, the CMA's processes should be streamlined.

Reforming appeals of antitrust cases

- 3.128 The right to appeal a competition decision is a vital safeguard of affected companies' rights. Competition Act cases come with the possibility of significant fines and follow-on damages actions, therefore it is imperative that competition authorities respect the rights of defence of the firms involved and ensure procedural fairness.
- 3.129 The appeals system ensures that there is a check against incorrect or unreasonable action by the CMA and strengthens the motivation to reach robustly grounded initial decisions. Within competition law, the Competition Appeal Tribunal (CAT) provides specialist expertise that is valuable in reaching appropriate decisions.
- 3.130 Yet appeals processes need to strike a balance. The rights of defendants to protection against over-enforcement or unjustified decisions have to be set against the rights of those who would suffer from the under-enforcement resulting from appeals that impose an undue burden on authorities and limit their ability to act.
- 3.131 The CAT currently applies a full-merits review standard, which allows it to reconsider the legal and economic aspects of the case, when reviewing decisions taken under the Competition Act 1998, and may make any other decision which the CMA could itself have made.²⁷
- 3.132 This full-merits review is a different standard of appeal to that applied to contested CMA merger and market study or market investigation decisions, which are based on a stricter judicial review standard. It is also a different standard of appeal to that faced in practice by the EU's DG Competition, the competition authority which has to date been most active in taking forward large, complex digital cases which affect the UK.

²⁷ The Competition Act 1998, [Schedule 8 Appeals](#).

- 3.133 The government consulted on wider reforms to set more consistent and appropriate appeals standards for competition and regulatory decisions in 2013.²⁸ This proposed to limit the grounds for appeal in Competition Act cases to either a judicial review standard or to a set of grounds for appeal stated directly in legislation, while preserving full appeal rights in relation to the level of penalties imposed, to ensure compliance with the European Convention on Human Rights (ECHR). These proposals were not taken forward at the time. More recently, the CMA last month put forward proposals aiming to improve the effectiveness and efficiency of the current appeals process applied by the CAT when reviewing antitrust decisions.²⁹
- 3.134 Six years later, abuse of dominance proceedings remain infrequently brought by the CMA and no infringement decisions have been reached by the CMA in digital markets. The main onus must be on the CMA to be more pro-active in investigations and bring more cases where it detects anti-competitive behaviour. Appeal systems can, however, contribute to the competition authority's risk aversion. This was noted in the National Audit Office's 2016 review into the UK competition regime, which reported that many stakeholders and legal practitioners felt that there are strong incentives for businesses to appeal decisions made by competition authorities.³⁰
- 3.135 As the CAT has not considered any appeals against CMA antitrust decisions in digital markets, the review's recommendations in this area are not drawn from a backward-looking review of its casework. BEIS is separately reviewing the operation of the competition framework as it stands as part of the government's statutory review of competition law. Nor do they imply any criticism of how the CAT has undertaken its role. The Panel considers the specialist expertise of the CAT to be a strength of the UK competition system, and one well-placed to adjudicate on complex digital cases.
- 3.136 Instead the Panel has taken a forward-looking view of what is needed to optimise the competition framework for the new challenges of digital markets. If it is to achieve this, the competition authority should have an appropriate margin of appreciation to reach decisions on digital cases that are likely to be particularly complex and may require elements of expert judgement. A robust appeals process will be vital but its role should be focused on ensuring decisions are founded on procedural regularity, avoid material errors of fact or law, and are reasonable in their exercise of judgement. A framework that allows wider grounds for appeal risks undue incentives to challenge decisions, in markets where a prolonged case may irreparably damage a smaller company.³¹
- 3.137 Furthermore, the possibility that the CMA may be required to undertake the large digital cases currently taken by DG Competition as UK leaves the European Union means there is a strong rationale to return to the earlier

²⁸ Department for Business, Innovation and Skills, [Consultation on streamlining regulatory and competition appeals](#), June 2013.

²⁹ Competition and Markets Authority, [Letter from Andrew Tyrie to the Secretary of State for Business, Energy and Industrial Strategy](#), February 2019.

³⁰ National Audit Office, [The UK Competition Regime](#), February 2016.

³¹ A relevant comparison is the change made in the Digital Economy Act 2017 to Communications Act appeals which moved from full merits to judicial review.

proposals. This argument is made by the CMA in its recent proposals, and the Panel has reached a similar conclusion.

- 3.138 The 2013 consultation set out the advantages and disadvantages of different options for the appeal standard, and the CMA's proposals also refer to specific options. The Panel considers that government should revisit this choice and consider what basis would best establish clarity regarding the grounds for appeal, consistency with other relevant appeals processes, and parties' rights as protected by the ECHR. A standard comparable with that applied by the General Court of the European Union may be a suitable candidate, or a judicial review standard.
- 3.139 The standard of appeal is also relevant to the use of interim measures. If an interim measure can be appealed on the merits, the CMA will be less likely to use them, particularly if they may delay work on the case itself.
- 3.140 The CAT's rules also allow it to accept new evidence which was withheld by businesses during the investigation phase.³² This can delay proceedings and can compromise the CMA's ability to reach a fully informed determination as to whether an infringement has been committed. The Panel considers that rules should place appropriate limits on the circumstances in which the CAT will permit evidence that has been withheld from the CMA in proceedings, though legislation may not be needed if these can be clarified as a matter of CAT procedure.³³
- 3.141 Finally, the courts and the CAT have a further role, in offering a route for a complainant to bring forward cases under the Competition Act, irrespective of whether the CMA had investigated the conduct. This will continue to be important as a means to address any underenforcement of antitrust law by the CMA.

Recommended action 13: The review applied by the Competition Appeal Tribunal to antitrust cases, including interim measures, should be changed to more limited standards and grounds.

- 3.142 The CMA uses a number of different decision-making bodies. For antitrust cases which the CMA pursues past the interim 'Statement of Objections' phase, a Case Decision Group (CDG) is appointed to be the decision-making body on a case.³⁴ This CDG will generally comprise of members of the CMA's senior staff and, where appropriate, the CMA's independent panel (which is otherwise used for merger and market investigation decisions).³⁵
- 3.143 This structure is intended to introduce independence into the decision-making process by ensuring that the final decision is taken by officials who were not involved in the earlier decision to issue a Statement of Objections, and hence reducing the risk of confirmation bias. While providing independence from the

³² The Enterprise Act 2002, [The Competition Appeal Tribunal Rules 2015](#).

³³ This issue was considered by the government in 2015: [Competition Appeal Tribunal rules of procedure](#). New provisions regarding the admission of new evidence were introduced. The Panel considers that further changes are necessary to ensure an appropriate balance between rights of defence, due process and decision-making expediency.

³⁴ A Statement of Objections sets out the CMA's provisional view that the conduct under investigation amounts to a breach of competition law and is issued to the relevant businesses.

³⁵ Competition and Markets Authority, [CMA's investigation procedures in Competition Act 1998 cases](#).

mindset of first stage of the case, this structure contrasts with other CMA final decision-making structures for mergers and market investigations which are fully comprised of independent panel members.

- 3.144 The Panel considers that significant changes to the appeal standard for antitrust cases would merit a change to the current CMA decision-making process to guarantee sufficient independence, particularly from executive overreach. Decision-making structures at other regulators which separate the investigation and decision-making functions, such as the Regulatory Decisions Committee at the Financial Conduct Authority, the Bank of England Enforcement Decision Making Committee or the Enforcement Decision Panel at Ofgem may make useful reference points in this regard.

Recommended action 14: The government should introduce more independent CMA decision-making structures for antitrust enforcement cases, if appeal standards are changed.

- 3.145 These changes are particularly relevant to digital markets, where the ability to act in an effective and timely way on potentially complex suspected abuse of dominance while guarding against unjustified decisions is especially important. However, the Panel would expect these changes to be applied across all antitrust proceedings, regardless of the market.

Information gathering in the digital economy

- 3.146 As discussed in Chapter 1, the volume and variety of data available to firms in the digital economy has increased enormously. How firms acquire data, store it and make decisions based upon it is also changing.
- 3.147 Use of complex data is common – for example raw data from website use or location data from mobile phones. Cloud storage is common, including on servers in countries outside the UK. And much firm decision-making, especially regarding rapid changes in prices or regarding the personalisation of price and non-price elements such as ranking or listing, is taken by algorithms (explored further below).
- 3.148 This can lead to increasing information asymmetries between digital firms and competition authorities.
- 3.149 The Panel was informed of a number of ways in which the CMA's information gathering powers could be strengthened to better equip it for its work in the digital economy. These included addressing it not having powers to require information prior to opening a formal investigation, there being no requirement on firms to preserve an auditable record of their algorithm development and use, and certain other jurisdictional limitations.
- 3.150 The Panel has not evaluated these proposals in detail, but strongly supports the need for the CMA to have appropriate information gathering powers whilst ensuring these remain proportionate.

Recommended action 15: The government should ensure those authorities responsible for enforcing competition and consumer law have sufficient and

proportionate information gathering powers to enable them to carry out their functions in the digital economy.

Consumer law enforcement

- 3.151 The CMA has been active in applying consumer law to digital markets, and this has had important benefits for competition. Recent examples are ensuring that online secondary ticketing platforms provide consumers with all relevant ticket information³⁶ and that online travel agents do not mislead consumers in relation to additional charges or the level of customer interest in particular hotels.³⁷
- 3.152 This review has been focused on competition law, but the Panel notes that the digital economy raises important issues for consumer law too. For example, online environments provide a variety of new ways in which firms can exploit behavioural biases and mislead consumers. One specific issue relates to whether consumers may be misled by rankings which are based on criteria which are commercially driven and which do not necessarily relate consumer preferences, even if these criteria are theoretically made available for consumer to review.
- 3.153 The Panel welcomes the CMA's consumer law work. Although it has not carried out a detailed review, it would support any changes to consumer law which are required to target it more effectively at the issues arising in the digital economy.

Recommended action 16: The CMA should continue to prioritise consumer enforcement work in digital markets, and alert government to any areas where the law is insufficiently robust.

Algorithms and competition concerns

- 3.154 As discussed in Chapter 1, artificial intelligence and machine learning are increasingly being adopted by businesses both within the digital economy and beyond, with significant benefits for firms, consumers and the economy.
- 3.155 However, there are concerns that the increased application of this technology, in particular in the pricing of goods and services, may lead to anti-competitive practices and consumer harm.

Collusion

- 3.156 In some circumstances, firms in a market economy may be able to work together to set prices or reach other agreements which are beneficial to themselves but harmful to consumers. For example, they may agree to set and maintain a high price rather than compete with each other in providing the lowest price they are able to consumers. This is called collusion and is illegal under competition law.

³⁶ CMA, [Secondary ticketing sites pledge overhaul](#), April 2018.

³⁷ CMA, [Hotel booking sites to make major changes after CMA probe](#), February 2019.

- 3.157 Competition authorities such as the CMA therefore enforce against collusion when they are able to detect it. They are able to impose severe penalties in the form of fines, director disqualifications and criminal sanctions.
- 3.158 Concerns around the potential for pricing algorithms to enable collusion have been most vocally put forward by Ariel Ezrachi and Maurice Stucke.³⁸ The main concerns are twofold:
- That pricing algorithms might help make explicitly collusive agreements more stable, for example by making it easier for businesses to automatically monitor the prices their competitors are offering and detect when they deviate from the collusive agreement.
 - That pricing algorithms could also lead to new forms of tacit collusion – where there is no explicit agreement between businesses to collude, but where pricing algorithms effectively deliver the same result. At the extreme, pricing algorithms drawing on machine learning technology could autonomously learn to collude.
- 3.159 The Panel considers that, broadly, existing competition tools are likely to be sufficient to capture the use of algorithmic pricing to implement explicit collusive agreements. The CMA has already successfully investigated price fixing by two online sellers of posters and frames who used automated re-pricing software to monitor and adjust prices and ensure they did not undercut each other.³⁹
- 3.160 Some responses to the call for evidence also set out that businesses that use pricing algorithms should be responsible for the outcomes they deliver. In the Panel’s view, this is already clearly the case where there is an explicit agreement between businesses, as was demonstrated in the CMA’s online posters case.
- 3.161 In relation to concerns around tacit co-ordination, there is increasing academic evidence of the potential for algorithms to themselves learn to collude.⁴⁰ At the same time, it is hard to predict the impact that use of such algorithms by businesses might have in the future. In their recent economic working paper, the CMA concluded that, in their tentative view, it seems less likely that the increasing use of data and algorithms will be so impactful that it could enable sustained collusion in markets that are currently highly competitive.⁴¹
- 3.162 The degree to which tacit co-ordination such as autonomous collusion is illegal under competition law is uncertain. Some responses to the call for evidence put forward that competition law should remain unchanged in this regard since competition itself relies on firms being able to respond to each other’s prices.
- 3.163 Should further evidence emerge of pricing algorithms tacitly co-ordinating of their own accord, a change in the legal approach may become necessary but

³⁸ Ezrachi and Stucke, *Virtual Competition: The Promise and Perils of the Algorithm-Driven Economy*, November 2016.

³⁹ CMA, [Online posters and frames](#), September 2016.

⁴⁰ Calvano, Calzolari, Denicolo and Pastorello, [Algorithmic Pricing: What Implications for Competition Policy?](#) July 2018.

⁴¹ CMA, [Pricing algorithms](#), October 2018.

the Panel does not believe the evidence is sufficient to justify such a change at the current time.

Increased personalisation

- 3.164 Concerns have been raised that the increasing availability of data and use of algorithms by businesses will enable them to personalise their product and service offerings. At the extreme, personalised pricing could lead to each customer being offered an individual price based on what the business infers they are willing to pay.⁴² In addition, businesses may use the information they hold about consumers to exploit known or inferred vulnerabilities, for example by personalising search rankings or targeting content.
- 3.165 Personalisation can often be fair or efficient, for example charging higher prices to last minute business travellers on airlines. Personalised pricing can also enable a wider group of consumers to access a product than would do so under a uniform pricing model, if they are selectively offered lower prices which they can then afford. However, some personalisation may be harmful to consumers, for example if it exploits consumer vulnerabilities. Personalised pricing may be harmful if it results in all of the surplus being taken away from consumers, especially if it is taken away from those with low incomes or those who are vulnerable.
- 3.166 There has been little evidence that, as yet, personalised pricing is actually happening at substantial scale in practice, especially in forms that have raised concerns.⁴³ Although responses to the call for evidence highlighted this risk, they did not provide evidence of its occurrence. Similarly, the CMA's recent economic working paper found limited evidence of personalised pricing, although it did find algorithms being used to personalise rankings as well as advertising and perhaps discounts.⁴⁴
- 3.167 In a mystery shopping exercise, the European Commission did not find evidence of systematic and consistent personalised pricing across the 8 EU member state and 4 markets considered. The exercise found that price differences between 'personalisation' and 'no personalisation' scenarios were observed in only 6% of situations with identical products and that where observed, price differences were small.⁴⁵
- 3.168 The U.S. Council of Economic Advisers also studied the issue of personalised pricing and concluded that 'examples of personalised pricing remain fairly limited.' The report also found that in the U.S. context, 'many of them can be addressed by enforcing existing antidiscrimination, privacy, and consumer protection laws.'⁴⁶

⁴² Citizens Advice, [A Price of One's Own: An investigation into personalised pricing in essential markets](#), August 2018.

⁴³ CMA, [Pricing algorithms](#), October 2018.

⁴⁴ CMA, [Pricing algorithms](#), October 2018.

⁴⁵ European Commission, [Consumer market study on online market segmentation through personalised pricing/offers in the European Union](#), July 2018.

⁴⁶ US Council of Economic Advisors, [Big Data and Differential Pricing](#), February 2015.

Increased use of algorithms in future

- 3.169 As the scale and use of algorithms by businesses continues to grow, the government, the CMA and Centre for Data Ethics and Innovation (CDEI) should continue to monitor markets closely.
- 3.170 As outlined earlier in this chapter, authorities should have proportionate information gathering powers to enable them to carry out their functions in the digital economy. The CMA would likely need additional information gathering powers to enable it to effectively audit algorithms and government should consider the case for providing these.
- 3.171 The Panel considers as a general principle that businesses who use algorithms should take all reasonable steps to understand, and be prepared to explain, how their algorithms work, how they interact with other firms' algorithms, and how they have mitigated against any potential biases or anti-competitive consequences.
- 3.172 The government has recently established the CDEI⁴⁷ to advise the government on the measures which are needed to ensure safe and ethical innovation in data and artificial intelligence. The CDEI will identify the measures needed to strengthen and improve the way data and artificial intelligence are used and regulated. This includes articulating best practice and advising on how to address potential gaps in regulation. The CMA should work closely with the CDEI in its work in relation to algorithms.

Strategic recommendation D: The government, CMA and the Centre for Data Ethics and Innovation should continue to monitor how use of machine learning algorithms and artificial intelligence evolves to ensure it does not lead to anti-competitive activity or consumer detriment, in particular to vulnerable consumers.

The digital advertising market

- 3.173 Digital advertising has a particularly important role in several key digital markets. It provides the revenue-generating side of platform services frequently offered at zero price to consumers, for example including general and specialised search markets, social networks, and online video. Generating advertising revenue in these markets, and hence the competitive strength of companies operating in them, depends upon being able to obtain and use the most comprehensive and timely data about the consumer that is possible.
- 3.174 For these reasons, the Panel's terms of reference specifically requested consideration of how competition issues in the advertising market could be addressed. Responses to the call for evidence, platforms' and advertisers' engagement with the review, and other studies of this market give a clear picture of its characteristics and of potentially significant competition issues.
- 3.175 The advertising market is important to competition in the digital economy. It also has a strong connection to the news media and the questions around the

⁴⁷ Department for Digital, Culture, Media and Sport, [Centre for Data Ethics and Innovation Consultation](#), November 2018.

sustainability of high-quality journalism that the Cairncross Review⁴⁸ has considered in parallel to the Panel's work.

3.176 While beyond the scope of this review, these issues, raised by several respondents to the call for evidence, are important. Government should take forward solutions with regard both to competitive markets and to the potential social and democratic impacts of changes to advertising. The recent announcement by the Department for Digital, Culture, Media and Sport (DCMS) of a review into how online advertising is regulated is a positive first step.⁴⁹

How the digital advertising market works

3.177 Advertising aims to provide messages to consumers about products or services they provide. The digital channel provides significant opportunities for this due to the amount of time and attention consumers spend online, and its frequent starting point for a purchase decision.

3.178 The UK advertising market has evolved rapidly with digital platforms. The share of digital advertising has grown dramatically over the 10 years to 2017, from 8% to 48%. Press advertising revenue has meanwhile declined rapidly, from 39% to 11%. The UK is an outlier in uptake of digital marketing, spending twice as much on digital advertising as any other EU country.⁵⁰

3.179 There are 4 main categories of digital advertising in the UK:

- search advertising (£5.8 billion) – meaning advertising on search sites such as Google, Bing and others
- social display advertising (£2.4 billion) – advertising on social networks such as Facebook, Instagram, Snapchat, Twitter and LinkedIn
- open display advertising (£1.8 billion) – advertising through banner, video and native display on other sites and apps
- classified advertising (£1.5 billion) – paid classified listings, frequently by individuals and small businesses⁵¹

3.180 The structure of the value chain differs between the 4 main categories of digital advertising, as demonstrated in Figure 3.A.

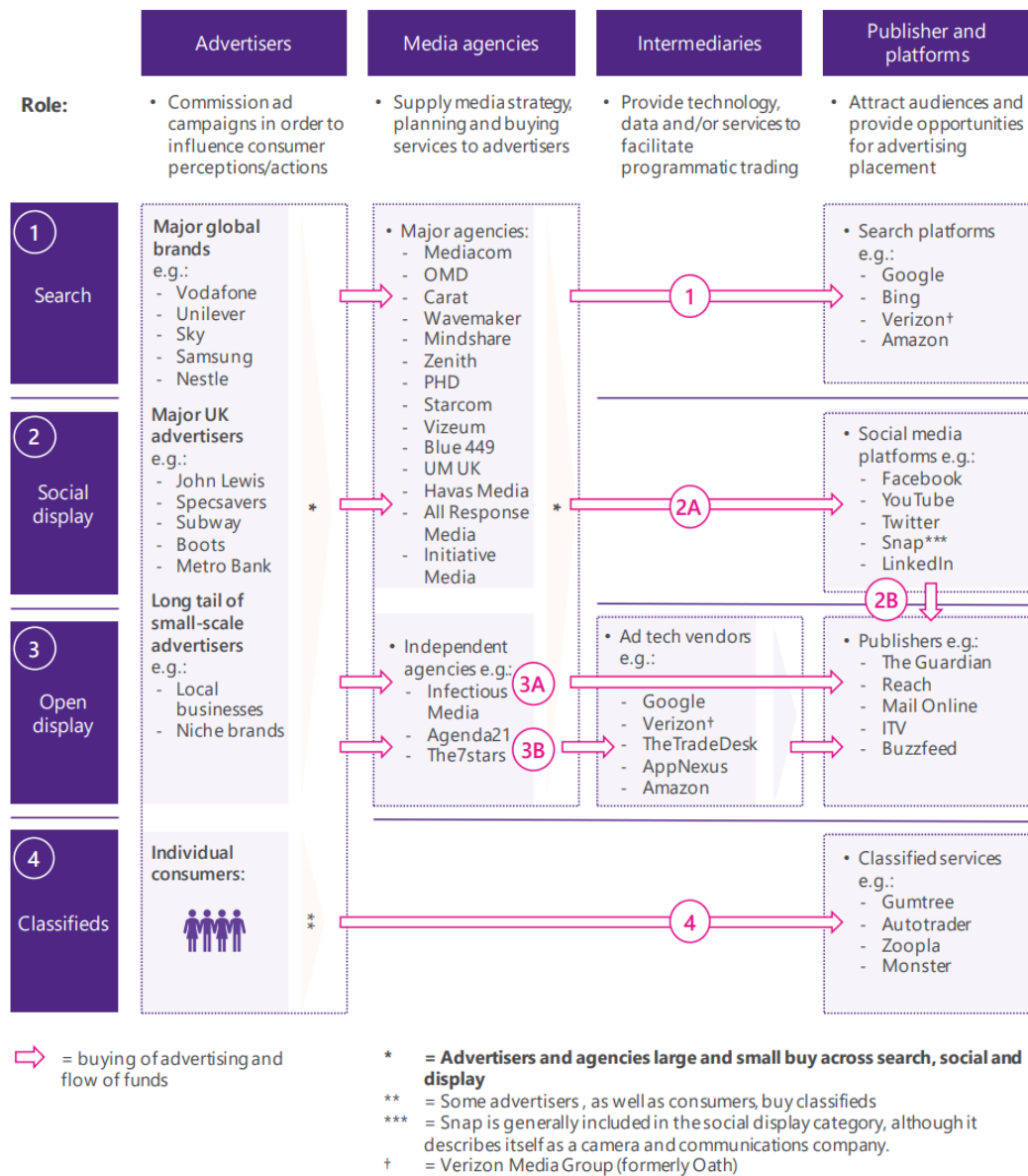
⁴⁸ [The Cairncross Review: A sustainable future for journalism](#), February 2019.

⁴⁹ [Statement by the Secretary of State for Digital, Culture, Media and Sport on the Cairncross Review](#), made in the House of Commons on 12 February 2019.

⁵⁰ House of Lords, [UK advertising in a digital age](#), April 2018.

⁵¹ Plum Consulting report commissioned by DCMS, [Online advertising in the UK](#), January 2019.

Figure 3.A: Overview of the digital advertising value chain



Source: Plum Consulting⁵²

3.181 While with search and social display advertising, advertisers or their agencies buy direct from search or social platforms, open display advertising involves an intermediary layer between advertisers and publishers or platforms. This intermediary layer involves a complex ecosystem that enables programmatic trading.

3.182 Programmatic trading uses automated algorithm-driven buying and selling of advertising to target advertising based on user data. It is commonly referred to as 'ad tech' and has the potential to massively increase the efficiency and effectiveness of advertising as it can direct messages to those most receptive to them. It is therefore unsurprising that in 2017, programmatic trading constituted 80% of online display advertising (including social display and

⁵² Plum Consulting report commissioned by DCMS, *Online advertising in the UK*, January 2019.

open display), as stated in the Internet Advertising Bureau's evidence to the Panel.

- 3.183 In the online display advertising value chain, intermediaries add value by connecting buyers and sellers, facilitating trading, in some cases involving auctions, and leveraging user data and analytics to target advertising. They generally charge commission fees or revenue share and/or technology fees. The value chain also involves providers of supporting technologies and data services.
- 3.184 The question of how much revenue provided by advertisers reaches publishers or content providers, and conversely how much goes to companies in the value chain, has been widely commented upon. Research commissioned by DCMS for the Cairncross Review gave best estimates of publishers receiving about £0.62 of every pound of advertiser investment, with a range of £0.43 to £0.72.⁵³
- 3.185 The digital platforms are involved at multiple levels across the digital advertising market. For example, not only does Google dominate online search advertising, it is also involved throughout the programmatic intermediary market, on the demand side through DV360, on the supply side through its AdX exchange and through the provision of supporting technologies such as AdServer to manage and track advertising, Analytics to analyse web content, and Chrome web browser to display advertising.
- 3.186 In addition to the prominent position occupied by the digital platforms, there are a number of market features that may present barriers to entry and expansion, and thus make this market susceptible to the tendency to concentration discussed in Chapter 1.

Potential issues in the market

- 3.187 The programmatic model's data-driven nature means that those digital platforms with the greatest scale, scope and timeliness of data about the consumer are in a very strong position to derive value from matching that consumer with the advertiser. These digital platforms collect data from large numbers of logged on users and can use this in their own programmatic trading businesses.
- 3.188 As with tendencies to concentration in digital markets more generally, this can be a double-edged sword. Greater aggregation and use of personal data by a platform can drive improved matching of businesses with consumers across the market, benefiting both; but the dynamic effect may close off the realistic potential for others to compete.
- 3.189 The use of data in advertising has been affected by regulatory developments. The implementation of the General Data Protection Regulation has decreased availability of third-party data and led many of the digital platforms to be more protective of their data.

⁵³ This is in display (excluding video) advertising in a programmatic open exchange scenario in an idealised case, excluding any hidden fees, discrepancies and fraud.

- 3.190 Economies of scope in data could also enable digital platforms to rapidly gain strong positions in other markets, and feed that data back to further consolidate their position in the original market. The digital advertising market, particularly programmatic trading, has also been repeatedly characterised in evidence as opaque, with little auditable information for the advertiser about the algorithm used and the quality of the matching process.
- 3.191 There are concerns about the collection and use of consumers' data: whether they are properly informed about how it will be used to direct advertising, whether terms are reasonable, and whether consumers are protected.
- 3.192 Finally, there may be anti-competitive practices and potential for abuse of dominance in parts of the market. These centre on the possibility that businesses present at multiple points in the digital advertising value chain may be tying or granting preferential treatment to traffic channelled through their own ad tech services, to the disadvantage of third-party competitors.
- 3.193 A lack of effective competition in the digital advertising market may lead to harm for consumers and businesses, for example through higher prices for advertisers, higher prices for consumers for goods and services that use digital advertising if these costs are passed through and/or a lower quality advertising experience for example seeing more (or more intrusive) adverts.

Investigating the market

- 3.194 The Panel has not the powers or locus to investigate whether there is substance to any of these concerns or whether, as digital platforms and others have stated, this market functions well in matching advertisers and consumers to mutual benefit.
- 3.195 It is clear that the market is opaque, with limited information disclosed either at an aggregate or an individual level. A thorough investigation of its workings, encompassing the entire value chain, would be helpful in either identifying any valid grounds for concern about effective competition, or dispelling the mistrust that exists. The House of Lords Select Committee on Communications, the Cairncross Review, and others have all called for the CMA to undertake a market study. DCMS recently announced a review of how online advertising is regulated, which can also provide valuable insight and advance policy in this area.⁵⁴
- 3.196 Any such investigation should address the possible issues set out earlier in this section and consider:
- the importance of data in digital advertising including in programmatic trading, including how data may be leveraged across digital platforms operating at different levels of the value chain
 - whether the market is sufficiently transparent, including to advertisers and publishers as well as to consumers in how their data is used

⁵⁴ [Statement by the Secretary of State for Digital, Culture, Media and Sport on the Cairncross Review](#), made in the House of Commons on 12 February 2019.

- the extent to which digital platforms grant preferential treatment to their own businesses across the value chain and/or act in other ways which are likely to disadvantage third-party competitors

3.197 The CMA is well-placed to achieve this through undertaking a market study. Its expertise in market functioning, strong information-gathering powers and experience, data science capability, and independent credibility are powerful assets. As an independent authority the CMA should reach its own decision on the approach to take, but the Panel would encourage and welcome a market study in this area.

Strategic recommendation E: The CMA should conduct a market study into the digital advertising market encompassing the entire value chain, using its investigatory powers to examine whether competition is working effectively and whether consumer harms are arising.

3.198 The CMA should also decide the focus and approach for any study. Using its powers and capability to gather more detailed and robust information on the market characteristics and revenue flows could be particularly valuable.

3.199 The concerns relating to consumers' data, and regarding whether any exclusive or preferential practices have an adverse effect on competition within the ad tech sector, are also both highly relevant to the Panel's aims and CMA findings could significantly advance authorities' understanding of these issues.

Conclusions

3.200 The changes to existing competition policy recommended in this chapter will increase the speed, effectiveness and scope of the policy tools available and will lead to significant benefits for consumers, firms looking to enter or expand in digital markets, and for the UK economy.

3.201 The CMA studying the digital advertising market will also boost its knowledge and understanding of digital markets, enhancing its capability to use its tools in these industries.

Chapter 4

An international agenda for promoting competition in the digital age

- 4.1 The digital economy is global, so an international agenda is needed to harness the full benefits of expanded competition. Doing this will require closer cross-border co-operation between competition authorities and governments in sharing best practice and developing a common approach to issues across international digital markets.
- 4.2 There will be mutual benefits to the extent that authorities in different countries co-operate in this way. Enhancing competition in digital markets in one jurisdiction will make it more likely that new competitors can offer novel and improved services in others, while common standards and interoperability will expand access to network effects and economies of scope and scale.

Introduction

- 4.3 A growing number of countries are now examining one or more aspect of the implications of digital markets for competition policy, with reviews currently taking place in Australia, France, Germany, Israel, Japan and the United States among other countries.
- 4.4 The ongoing U.S. Federal Trade Commission (FTC) hearings have sparked a timely debate on whether ‘broad-based changes in the economy, evolving business practices, new technologies, or international developments’ might require adjustments to existing competition and consumer protection policies.¹ With topics ranging from the measurement of market power and barriers to entry to the intersection between privacy, big data and competition, these hearings provide a useful opportunity for policymakers from around the world to take stock of how the current regulatory environment and competition framework applies to the digital economy.
- 4.5 The Australian Competition and Consumer Commission has recently highlighted concern over the market power held by large technology firms in certain advertising markets as well as through their supply of services to news media businesses.² It is now among the first competition authorities to be considering whether a new regulatory authority should be established to

¹ Federal Trade Commission, *Hearings on Competition and Consumer Protection in the 21st Century*.

² Australian Competition and Consumer Commission, *Digital Platforms Inquiry Preliminary Report*, December 2018.

monitor and investigate potentially discriminatory conduct in these markets by large, vertically integrated platforms.

- 4.6 International institutions have also taken a growing interest in the emerging digital economy, with both the OECD and European Commission undertaking projects on digital transformation and competition.
- 4.7 The OECD's 'Going Digital' project has played an important role in highlighting the implications of digital transformation for different sectors of the economy, underlining a general need for governments to consider how existing frameworks might be updated to reflect modern market practices.³
- 4.8 Meanwhile the appointment of three special advisers to European Commissioner for Competition, Margrethe Vestager, alongside the development of an Observatory on the Online Platform Economy has signalled a desire to proactively address the challenges for competition policy arising from digitisation.⁴
- 4.9 Underlying many of these initiatives is a shared concern over whether the traditional approach to merger control and antitrust is fit for purpose in the digital age – in which large economies of scope and scale, strong network effects, consumer services with no monetary cost, high rates of innovation and the rapid diffusion of new technology are all commonplace.
- 4.10 While the scope and focus of policy solutions will differ in each case, reflecting the individual priorities of different jurisdictions, many of these challenges are transnational in scope. Set against an increasingly international digital market there is a clear benefit to encouraging closer co-operation between platforms, innovators, governments and competition authorities around the world. The recommendations that follow in this chapter are therefore aimed at supporting greater collaboration and co-operation between international authorities.
- 4.11 In many cases, co-ordination across national borders would be the ideal way to address companies that operate at a global scale. However, at the very least, countries can learn from each other and align their approaches to achieve shared objectives. Avoiding a fragmented regulatory landscape, with the risk that digital companies face a proliferation of different rules across jurisdictions, will be central to allowing innovation to flow freely to consumers at a global level.

Strategic recommendation F: Government should engage internationally on the recommendations it chooses to adopt from this review, encouraging closer cross-border co-operation between competition authorities in sharing best practice and developing a common approach to issues across international digital markets.

³ OECD, *Going Digital in a Multilateral World – Interim report to Ministers*, 2018.

⁴ European Commission press release, [Commission appoints Professors Heike Schweitzer, Jacques Crémer and Assistant Professor Yves-Alexandre de Montjoye as Special Advisers to Commissioner Vestager on future challenges of digitisation for competition policy](#), 28 March 2018.

A competition system optimised for the digital world

- 4.12 In markets where services are increasingly provided to consumers at no direct financial cost, and where the primary focus of many businesses is on growing their user base above short-term profitability, authorities will increasingly need to assess non-price effects such as quality and choice when reviewing mergers and takeovers.
- 4.13 Closer collaboration between national competition agencies in the development of shared tools for assessing dynamic competition in digital markets offers one route to building consensus on how these features should be considered.
- 4.14 Jurisdiction – competition authorities’ scope to examine mergers – also matters. In contrast to many other competition authorities, which have not been able to assess low-turnover, high-value acquisitions using their existing turnover or market share thresholds, the Competition and Markets Authority has benefited from having the ability to examine any merger or acquisition resulting in the supply or purchase of at least 25% of any good or service in the UK (see Chapter 3). This share of supply test has given the CMA the flexibility and reach to address mergers which may not trigger traditional turnover thresholds, but may nonetheless have a significant impact on competition and innovation.
- 4.15 The UK’s share of supply approach is not the only possible solution. Some countries, such as Germany and Austria, have responded by introducing a transaction value test where all mergers above a certain value are subjected to review.⁵ While there is no need for authorities to adopt strictly aligned systems for merger jurisdiction, it is sensible given the characteristics of digital markets to ensure that authorities’ rules allow mergers with potential future competitors to be examined.
- 4.16 The standard of proof for establishing whether or not a proposed merger will give rise to anti-competitive effects is another area where competition authorities face a shared challenge. Given the difficulty in predicting future outcomes with complete certainty – and of comparing what would happen if a merger were to proceed against the natural course of events that would otherwise occur – almost all authorities rely on a range of possibilities or probabilities to guide their decisions.
- 4.17 The same arguments and analysis that led the Panel to recommend that a balance of harms approach should be applicable in the UK would apply to other countries too. This would give authorities the option of acting, for example, where there was a 20% chance of serious harm to consumers arising from a proposed merger, set against an 80% chance of relatively small benefits occurring.
- 4.18 It will be important that legal frameworks around the world remain grounded in economic assessment and consumer welfare. A balance of harms approach provides a solution that does so while better reflecting the potential for substantial harm to occur in some digital mergers. In particular, where there is

⁵ Under these thresholds a transaction has to be notified to the relevant authority if the value exceeds €400 million in Germany, or €200 million in Austria.

a significant probability of serious harm arising, for example through the removal of a potential competitor, authorities should consider whether preserving competition may offer the greatest consumer benefit over the longer term.

- 4.19 The CMA's existing power to carry out market studies and investigations will remain another important tool for addressing competition concerns. The ability of the CMA to proactively examine particular markets, and to put forward a range of remedies where markets are found not to be working well, is a widely recognised strength of the UK's competition regime. Recent investigations into both energy and retail banking have led to significant changes in these respective markets, with early signs indicating improved outcomes for consumers.⁶
- 4.20 In allowing the CMA to take a broad view of a particular market, including economic drivers and patterns of consumer and business behaviour, its market studies and investigation powers provide a valuable tool. This approach could enhance the ability of other competition authorities to review why particular markets may not be working well.

Recommended action 17: Government should promote the UK's existing competition policy tools, including its market studies and investigation powers, as flexible tools that other countries may benefit from adopting.

The impact of patent thickets on innovation

- 4.21 Fostering and maintaining adequate competition in digital markets can also be developed through a broader set of policies aimed at facilitating entry and reducing regulatory and other barriers. Well-calibrated intellectual property rights offer one route through which an advanced economy like the UK's can foster a more dynamic, fluid and competitive economy.
- 4.22 The Office for National Statistics has estimated that investment in intangible assets in the UK was £134 billion in 2015.⁷ The Intellectual Property Office in turn estimates that nearly half of this investment was protected by intellectual property rights of some form (copyright, design rights, patents or trademarks).⁸
- 4.23 The proliferation of patent applications is a well-documented global trend. The latest figures from the World Intellectual Property Organisation reveal growth of roughly 200% in the last 25 years, with over 3 million applications in 2017 alone.⁹ The phenomenon of 'patent thickets' – an overlapping web of patents to be navigated by competing firms at great cost, often in high technology sectors – raises particular concerns about barriers to entry for new firms seeking to enter digital markets.
- 4.24 In 2011, Professor Ian Hargreaves published a report for government with recommendations for how to optimise the UK's intellectual property system so

⁶ Open Banking Implementation Entity, [One year of Open Banking](#), January 2019. See also Ofgem, [Open letter: Active choice collective switch trial – early findings](#), 20 August 2018.

⁷ Office for National Statistics, [Experimental estimates of investment in intangible assets in the UK: 2015](#), February 2018.

⁸ This is set against investment of £142 billion in tangible assets over the same period: Intellectual Property Office, [IP and the intangible economy](#), March 2018.

⁹ [World Intellectual Property Office data](#) on total patent applications and growth in applications, March 2018.

the UK could benefit from the growth and opportunity of the digital economy.¹⁰ In particular, the report recommended that government ‘work to ensure patents are not extended into sectors, such as non-technical computer programs and business methods, which they do not currently cover, without clear evidence or benefit.’¹¹ It also called on the UK government to influence its partners at the European level to prevent the proliferation of patenting.

- 4.25 The Panel has not studied the proliferation of patents in the UK in the time since Hargreaves’ report. However, in the interests of ensuring that UK firms can continue to compete effectively in global digital markets, the Panel recommends that the government use its voice internationally to discourage patent extension into unwarranted parts of the digital economy. The U.S. Council of Economic Advisers highlighted similar issues in the U.S. context.¹²

Recommended action 18: The UK should use its voice internationally to prevent patent rights being extended into parts of the digital economy where they are not currently available.

- 4.26 In many cases competition authorities will need to strengthen their ability to understand new and emerging technologies. The increasing use of artificial intelligence and machine learning by digital firms (discussed in Chapter 3) all require that authorities have access to a high level of expertise if they are to ensure that consumers remain protected from potential harms.
- 4.27 The CMA has already shown a welcome readiness to stay up-to-date with the latest developments through the establishment of a new Data, Technology and Analytics Unit. The FTC has also established an Office of Technology Research and Investigation. Both show a willingness to examine how firms are using data, and to understand what actions authorities may need to take in future to promote innovation and protect consumers.
- 4.28 The use of data engineering, machine learning and artificial intelligence techniques by competition authorities provides one model for how other countries might respond to the challenge of keeping pace with innovative business models prompted by new technologies, an issue emphasised in the United States by former FTC Commissioner Terrell McSweeney.¹³

Enhancing cross-border enforcement co-operation

- 4.29 Across the world, antitrust enforcement will continue to play a key role in promoting and protecting the competitive process by preventing exclusionary and exploitative conduct. However, as set out in Chapter 3, the Panel believes that authorities should be prepared to respond more urgently in fast moving markets, placing greater emphasis on the use of interim measures pending the full investigation of a case. In situations where a competitor is at risk of significant harm before a case could be concluded, this approach will ensure the competitive process remains better protected from abuse.

¹⁰ Hargreaves, *Digital Opportunity: A Review of Intellectual Property and Growth*, May 2011.

¹¹ Ibid.

¹² Council of Economic Advisers Issue Brief, *The Patent Litigation Landscape: Recent Research and Developments*, March 2016.

¹³ Terrell McSweeney, ‘*FTC 2.0: Keeping Pace with Online Platforms*’, 32 *Berkeley Tech. L.J.* 1027 (2018).

- 4.30 At the same time, the global scope of modern digital markets and cross-border flow of data and information means competition authorities will increasingly need to work together, across jurisdictions, to protect consumers from the full range of anti-competitive practices.
- 4.31 For many years the CMA has played an active role in the European Competition Network (ECN), which enables competition authorities to support others' enforcement activity at a European level through information sharing and co-ordinating investigations. For example, the CMA recently provided assistance to the Romanian Competition Council in support of an investigation in the aviation insurance sector.¹⁴
- 4.32 The Panel welcomes the government's stated intention to ensure that UK competition authorities can continue to co-operate effectively with the European Commission and competition authorities of EU Member States following the UK's withdrawal from the EU. At the same time, it will be important that steps are taken to maintain and enhance mechanisms for sharing evidence with countries outside the EU, alongside other reciprocal arrangements.
- 4.33 The CMA has rightly highlighted the barriers to obtaining evidence to support cases where servers are located outside the UK, and in establishing which jurisdiction and law should be applied.¹⁵ As cross-border trade in digital services continues to increase, issue of this sort will only become more prominent.
- 4.34 There are clear benefits in maintaining effective and reciprocal mechanisms for information sharing with overseas competition authorities. The Panel therefore recommends that the government should promote close cross-border co-operation between UK competition authorities and their counterparts.
- 4.35 Mergers between digital companies which involve networks which cross national boundaries may raise similar challenges for competition authorities such as the CMA. For example, if one jurisdiction were to require divestment of an arm of a company, but another did not, it could be unclear whether users of the divested national network would be able to interconnect with those in the other jurisdiction. Discussion of such cases with other national competition authorities would bring obvious benefits through developing a coherent response to the challenges posed.

Recommended action 19: Government should support closer co-operation between national competition authorities in the monitoring of potential anti-competitive practices arising from new technologies and in developing remedies to cross-border digital mergers.

A new approach to improving competition in digital markets

- 4.36 One of the Panel's key conclusions is that a pro-competition approach will provide a swifter and more proportionate means of addressing the

¹⁴ Business Review: Romania's Competition Council investigates the aviation insurance market, 29 September 2017.

¹⁵ CMA, [Response to government consultation on 'modernising consumer markets' green paper](#), Annex 3: 'Challenges from digital markets', July 2018. Further points concerning the effect of the UK's withdrawal from the EU on consumer law enforcement can be found in the CMA's [written submission](#) to the House of Lords EU Select Committee (Justice Sub-Committee) inquiry into Brexit and consumer protection rights.

competition challenges posed by the tendency of many digital markets to tip towards one or two large players. The introduction of a principle-based framework, developed in collaboration with the relevant players, is likely to be better suited than *ex post* enforcement to dealing with new and evolving practices in fast-moving digital markets. The presence of a stable and predictable framework would also provide welcome certainty to platforms on the rules of the game for operating in these markets.

- 4.37 The UK can take a lead in promoting this approach, but there is also an opportunity for other countries to collaborate in the development of this policy as part of a globally streamlined response.

Data protection and privacy

- 4.38 The interplay between data protection, competition law and consumer protection has posed a particular challenge for policymakers in the digital era. The increasing use of business models in which consumers experience ‘free’ online services in exchange for their personal data has highlighted the sometimes competing objectives of data protection and consumer privacy, on the one hand, and competition policy on the other hand.

- 4.39 A trustworthy data protection system can, however, become an enabler of innovation and competition by giving consumers the trust and confidence to use new services; in a competitive market where services are offered for ‘free’, privacy standards can themselves become an important marker of quality.

- 4.40 The recent decision by the German Bundeskartellamt to prohibit Facebook from combining user data from different sources has underlined the potential impact of data concentration on consumer outcomes as well as the need for companies to better examine how personal information is used and collected.¹⁶ The recent report of the Digital, Culture, Media and Sport Committee into disinformation and ‘fake news’ has also called for ‘greater transparency in the digital sphere’, advocating that privacy law should be extended beyond personal information ‘to include models used to make inferences about an individual.’¹⁷

- 4.41 The Europe-wide introduction of the General Data Protection Regulation (GDPR) in May 2018 has placed a series of new responsibilities upon businesses particularly where the legal basis for collecting and processing personal data is consent. While this has introduced welcome checks and balances to the processing of personal data, there is some concern that requiring individuals to give their consent for each new website visited may lead to consumers becoming so ‘click-happy’ over time that they ignore important terms or conditions.

- 4.42 A concern expressed to the Panel has been that GDPR is enabling large digital companies to impose unduly strict compliance duties on smaller firms, serving to reinforce their own dominance in the process. Although the regulations are still in the early stages of being embedded across industry, the Panel considers

¹⁶ Bundeskartellamt, [Case Summary](#): Facebook, Exploitative business terms pursuant to Section 19(1) GWB for inadequate data processing, 15 February 2019.

¹⁷ House of Commons Digital, Culture, Media and Sport Committee, [Disinformation and fake news: Final Report](#) (Eighth Report of Session 2017–19), 18 February 2019.

that concerns over the application of the GDPR in digital markets are sufficiently widespread to merit further investigation. A retrospective assessment of the impact of the GDPR would be a valuable exercise regardless to ensure the regulations are operating as intended and are not unduly impacting competition.

Data mobility and open standards

- 4.43 Against the backdrop of new data portability provisions introduced through the GDPR, the Panel believes that data openness can act as a strong pro-competition measure.
- 4.44 The proliferation of internet-connected devices and the emergence of a new Internet of Things is expected to give rise to a host of new applications and services around the world. The speed and scale of their adoption will depend in many cases on how easily information is shared between applications and devices.
- 4.45 Competition can be enabled by giving consumers the ability to share their data easily, and in real time, across services. There may also be opportunities to ensure that technologies and services can work together across countries and continents.
- 4.46 The internet itself stands as a testament to the innovation that can arise where all parties agree to use common, interoperable standards. The creation of email services provides another ready example of how previously non-interoperable networks and systems have converged to become interoperable by design.
- 4.47 The development of common standards for sharing data has huge potential to improve consumer choice and boost competition in markets prone to consumer 'tie-in'. However, policymakers and businesses will need to work together to ensure platforms and other businesses have a simple landscape in which to operate if these benefits are to be realised. A purely government-led approach to setting mandatory standards is likely to be inflexible and ill-equipped to deal with market developments or changes in technology. Industry involvement in the design and implementation of standards will therefore be key to the success of encouraging greater data mobility.
- 4.48 Much of the early promise of the UK's Open Banking scheme has been ascribed to the early engagement of industry and policymakers in the design of an Open Banking Standard.¹⁸ This enabled the UK's largest banks to agree a common set of standards for creating and sharing banking data well ahead of the implementation of the EU's second Payment Services Directive. The result has been for the UK to lead the way in the development of new financial services, with its regulators and banks recognised globally as pioneers in the field. A range of similar schemes are now being pursued by other countries, including Australia, Brazil, Canada and Israel.

Recommended action 20: To ensure platforms and businesses have a simple landscape in which to operate, government should encourage countries to consider using pro-competition tools in digital markets. As part of this work, government

¹⁸ Open Data Institute, [Open banking in the UK and France](#), 2018.

should work with industry to explore options for setting and managing common data standards.

Conclusions

- 4.49 The cross-border nature of many digital platforms and global scope of modern technology means the competition challenges facing the UK are not unique: competition authorities and governments around the world are grappling with similar questions of how to ensure that consumers continue to benefit from new opportunities in digital markets whilst at the same time promoting innovation and protecting consumers' rights.
- 4.50 The increasing prominence of the digital economy in the day-to-day work of competition authorities has reinforced the need to better understand the impacts of new technologies and multi-sided markets on competition. The correct approach to preserving competition in individual digital markets will rightly be for national authorities to decide in each case, but there is an obvious benefit in working together to develop a shared set of internationally applicable methods for appraisal.
- 4.51 As countries look more generally to ensure that their standards and regulations are fit for the digital age, there is an opportunity to align differing regulatory environments to promote a globally streamlined approach in which businesses are clear on the rules of digital markets and consumers can continue to benefit from innovation, better products and greater choice.
- 4.52 As the OECD has noted, 'competition frameworks designed for traditional products may not be suitable for a global digital economy,' adding that 'governments may also need to enhance co-operation across national competition agencies to address competition issues that are increasingly transnational in scope or involve global firms.'¹⁹ Taken together the recommendations outlined in this chapter offer an opportunity to promote just such co-operation.
- 4.53 There is a range of institutions through which common agreement could be forged, ranging from the International Competition Network and the OECD, through to multilateral fora such as the G7 and G20. Each has a role in advancing different elements of international co-operation, but the overarching aim of addressing shared challenges through collective action should remain.

¹⁹ OECD, *Going Digital in a Multilateral World: An Interim Report to Ministers*, 2018.

Chapter 5

Conclusion: the impact of change

- 5.1 How could digital markets and digital services look in the future, if these recommendations are implemented?
- 5.2 It is impossible to predict how digital markets will change. The digital revolution has been driven by innovation that has overturned expectations about the shape of future technology. The intention of this report is to set out ways in which that dynamic, innovative unpredictability can be sustained and strengthened. The Panel's recommendations are based upon designing policy responses that adapt and foster effective competition in uncertain conditions, with a digital markets unit that can work with stakeholders to create greater predictability in changing markets.
- 5.3 In considering the potential impact and value of the Panel's recommendations, it may be helpful to consider how these tools and approaches could look in practice and what their effects would be. On specifics they will be applied differently. When some markets are assessed it will become apparent that changes in current business practices are unnecessary; while others that have not to date caused significant concern will prove more challenging than expected for competition in future. Some will take study and piloting to determine the best solution. But there are common characteristics across digital markets and the recommended policy tools are flexible and transferable. Even where the specifics change, the aggregate outcomes these recommendations will achieve should look similar.

The UK's future digital markets

- 5.4 In many digital markets, the platforms that currently hold large market shares are likely to remain at the head of the field. Their competitive strength and capacity to innovate and improve their services will lead to innovations that will improve consumers' experience and control, keep demand for their services high, and retain their position as world-leading businesses.
- 5.5 In other markets, significant new competitors may emerge and contest platform services that currently appear unassailably dominant or become the leaders in entirely new services that no one today can imagine. Potentially, for example, a video-sharing network based on transparent use and control of personal data will grow, with the digital market unit's requirement for data mobility providing the basis for a business model that allows content creators to switch platforms while retaining their existing networks of viewers. While in the recent past such potential competitors have been acquired by the largest

platforms, a proposed acquisition could in the future be blocked by the CMA if it found that the significant chance of harm from removing a competitor outweighed any benefits.

- 5.6 Across digital markets, implementing the recommendations will enable more new companies to turn innovative ideas into great new services and profitable businesses. Some will continue to be acquired by large platforms, where that is the best route to bring new technology to a large group of users. Others will grow and operate alongside the large platforms. Digital services will be more diverse, more dynamic, with more specialisation and choice available for consumers wanting it. This could drive a flourishing of investment in these UK businesses.
- 5.7 To give some potential examples, social content aggregators might bring together the best material from people's friends across different platforms and sites. Privacy services could give consumers a single simple place to manage the information they share across different platforms. Independent ad tech businesses and changed market dynamics could rebalance the share of advertising revenue back towards publishers.
- 5.8 The main success factor in creating the environment for these new businesses will be successfully establishing the digital markets unit as a body that works with a wide range of industry and other stakeholders to establish clear, stable, trusted rules of the game in platform markets. Alongside the necessary legislation this will mean putting in place capable, respected leadership and a staff with skills across digital technologies, competition practice and behavioural sciences. This unit can then develop technical standards for data mobility and open services, rolled out in digital markets where they will be effective and proportionate, creating space for new entrants to find market niches. The code of competitive conduct may only need to be enforced rarely – discussion upfront should pre-empt most problems, establishing understanding of what constitutes acceptable practice. This trust and confidence that new businesses dependent upon platforms will be safe from exclusionary conduct can be a vital driver of successful UK tech investment.
- 5.9 If this approach proves successful in the UK it could also prove influential internationally. Countries are likely to take a range of approaches. Some may instead pursue tougher antitrust provisions against dominant platforms with some of the delays and uncertainties associated with using litigation as the primary approach. Others may engage in more heavy-handed regulation or try to block most acquisitions by the major platforms. Demonstrating that the UK's predictable, pro-market approach is successful will be important in helping to forestall these more problematic alternatives.
- 5.10 The pro-competition approach may foster greater action by platforms. Silicon Valley, for example, could expand the Data Transfer Project into an industry-led standard-setting programme which, working with the UK and other regulators, is well placed to take a lead on proposing internationally applied technical standards for data mobility.

Benefits for consumers

5.11 Consumers and citizens would benefit in a number of ways from the changes the report's recommendations will bring about:

- Expanded competition in digital markets is the most effective way to ensure that innovation continues to characterise these markets and that digital businesses will compete for customers by improving the services they offer. Consumers can expect new services and features, many (as now) provided at no monetary cost – and in some cases might even be compensated for the value they create for companies.
- Consumers can expect that privacy will be one area where digital platforms in particular look to improve their offer and provide more transparency and control as companies compete for market share by offering higher quality products.
- Consumers will be in control, with greater ability in practice to choose whether to switch services from a digital platform to a new entrant, or to use multiple platforms simultaneously. Many may choose to stay with what is familiar. However, for consumers who want to, there will be a whole new range of platforms, aggregators, dashboards and other services which they can straightforwardly try out.

Benefits for start-ups and scale-ups

5.12 By taking a pro-competition approach, the UK can, by adopting these recommendations, further strengthen the country's status as one of the best places in the world to start and grow a digital business:

- Open standards and access to data will open up a wide range of opportunities to develop and serve new markets adjacent to or interconnected with existing digital platforms.
- The digital markets unit developing and enforcing these will closely engage with market participants, large and small, producing solutions that provide opportunities for new entrants and scale-ups and that respond to their business experience. It should see the strengthening of a broad and thriving competitive digital ecosystem as one of its aims, responsibilities and a measure of its success.
- Trust in the framework and recognition that promising, innovative digital businesses will be protected from foreclosure or exclusion should catalyse investment in UK digital businesses, driving the sector's growth.
- The UK's competition framework should remain widely respected and trusted, taking decisions consistent with widely accepted international principles, and approving many, beneficial, acquisitions of smaller digital firms by platforms. The changes to competition law, however, mean that where a business can grow into a successful competitor, that route to further growth is protected and companies will not in the future see being subsumed into a dominant platform as the only realistic business model.

Benefits for major platforms

- 5.13 This new UK approach can also be beneficial for the large digital platforms in a number of ways:
- Market remedies to promote competition will be developed upfront, in collaboration with digital platforms and other stakeholders. This will provide greater clarity about what constitutes unacceptable anti-competitive conduct, and an opportunity to shape and develop clear, workable measures. Antitrust proceedings should remain available, but with faster and more effective intervention where a dominant position is abused in contravention of the rules established. Platforms should, however, expect to face shorter abuse of dominance cases.
 - An effective, co-operative approach that resolves concerns within the market should reduce pressure to pursue breakup or structural separation of the biggest platforms. More competitive markets can provide sufficient challenge to ensure the benefits of platforms are clear and visible for consumers instead.
 - If this new framework is effective, platforms will generate less public concern. They could be leading players in markets with many participants, rather than seen as holding a degree of power ineffectively constrained by the market. Debate about their position could easily become lower-profile, less polarised and less acrimonious.

The global economy

- 5.14 The digital economy is truly global – with foreign companies creating jobs and serving consumers in the UK while UK companies have technologies that spread all over the world. Countries will continue to learn from each other's experiences in modernising competition policy and setting up clear principles and rules-of-the-road for digital companies. The result will not be a fragmentation of systems but instead increased harmonisation – and in some cases co-ordination – as countries around the world learn from each other's experiences and adopt the best models to build on and advance the tremendous benefits of the digital economy.

Annex A

List of abbreviations

ACCC	Australian Competition and Consumer Commission
BEIS	Department for Business, Energy, and Industrial Strategy
CAT	Competition Appeal Tribunal
CDEI	Centre for Data, Ethics and Innovation
CDG	Case Decision Group
CMA	Competition and Markets Authority
DCMS	Department for Digital, Culture, Media, and Sport
ECHR	European Convention on Human Rights
ECN	European Competition Network
FTC	Federal Trade Commission
GDPR	General Data Protection Regulation
HTTP	Hypertext Transfer Protocol
ICO	Information Commissioner's Office
IETF	Internet Engineering Task Force
IMAP	Internet Message Access Protocol
IoT	Internet of Things
MAGs	Merger Assessment Guidelines
OECD	Organisation for Economic Co-operation and Development
Ofcom	Office of Communications
Ofgem	Office for Gas and Electricity Markets
OFT	Office of Fair Trading
SLC	Substantial Lessening of Competition
SMTP	Simple Mail Transfer Protocol
TfL	Transport for London
W3C	World Wide Web Consortium

Annex B

Terms of reference

Scope

The expert panel's objectives are to consider the potential opportunities and challenges the emerging digital economy may pose for competition and pro-competition policy, and to make recommendations on any changes that may be needed.

The panel will draw on its members' expertise in competition economics and policy and engage widely with experts and stakeholders. It will consider the impact of competition policy on the UK's growth and productivity, on wages and labour markets and on consumer outcomes.

In particular, it will look at:

- the impacts of the emergence of a small number of big players in digital markets such as social media, e-commerce, search, and online advertising
- appropriate approaches to mergers, takeovers and anti-competitive practices in digital markets
- opportunities to enhance competition to increase business innovation and expand consumer choice
- how best to assess consumer impacts in ad-funded products and services that are 'free' to consumers

It will consider what further economic policy tools and frameworks are required to best understand and assess online markets; what if any changes may be required to the powers, functions and resources of the UK's competition authority; and what approaches should be pursued at the international level in order to address the challenges of the digital economy.

The review will not attempt to provide answers to wider social questions such as the possible implications of the digital economy for individuals' privacy, democracy, or independence and accountability of the media. However, it will identify the intersections between competition law, alternative policy tools and other areas of policy. These questions are also further being examined in other fora.

The panel's work will be independent of government. It will make a final report with its recommendations to the Chancellor of the Exchequer and the Secretary of State for Business, Energy and Industrial Strategy in early 2019. Its recommendations will inform the work of HM Treasury, the Department for Digital, Culture, Media and

Sport, and the Department for Business, Energy and Industrial Strategy, particularly the Competition Law Review.

Key questions for the expert panel

- 1 What are the emerging benefits and harms from digital markets such as social media, e-commerce, search, and online advertising tending towards only one or a small number of big firms?
- 2 What are the emerging benefits and harms of the same small number of digital firms becoming present across a broad range of digital markets?
- 3 What effect can the accumulation and concentration of data within a small number of big firms be expected to have on competition?
- 4 How can risks and detriment to consumers in products and services that are 'free' to consumers (or paid for through their data) be assessed? And how could competition effects in other markets such as advertising be addressed?
- 5 How do technologies such as artificial intelligence and machine learning affect competition and what are their implications for competition policy? Does algorithmic pricing raise novel concerns about competition?
- 6 What is the appropriate approach to mergers and takeovers in digital markets – what are the key challenges and how should they be addressed?
- 7 What tools does competition policy need to deal with issues in the digital economy in a sufficiently timely, effective and far-sighted manner? To what extent are these in place in the UK?
- 8 What approaches are being considered and developed by governments and competition authorities in other major economies? What needs to be done internationally and what can be done at the UK level?

Annex C

Stakeholder engagement

The list below sets out the businesses, organisations and academic contributors that have engaged with the Panel, either through submitting a public response to its call for evidence, participating in roundtable discussions or meeting members of the Panel.

In addition to those listed below, the Panel has benefited from discussions with and written evidence from members of the legal and consultancy professions, and others with relevant expertise.

The Panel is grateful to all those who have given their time and expertise to support the review.

A full set of public responses to the Panel's call for evidence can be found on the GOV.UK website alongside this report.

Organisations

Advertising Standards Authority

Airbnb

Amazon

American Chamber of Commerce to the European Union

Apple

Arete Research Services

Australian Competition and Consumer Commission

Baker & McKenzie

Barclays

Bertelsmann SE & Co.

British Broadcasting Corporation

BT Group

Cabinet Office

Centre for Competition Policy (University of East Anglia)

Centre for Data Ethics and Innovation

Citizens Advice

Competition and Markets Authority

Computer & Communications Industry Association

Department for Digital, Culture, Media and Sport

Department for Business, Energy and Industrial Strategy

Department for International Trade

Digital Policy Alliance

Directorate-General for Competition (European Commission)

DMG Media

Doteveryone

eBay

Facebook

Federation of Small Businesses

Financial Conduct Authority

Foundation for Information Policy Research

Google (Alphabet Inc.)

Guardian Media Group

HM Treasury

Incorporated Society of British Advertisers

Incorporated Society of Musicians

Information Commissioner's Office

Institute for Public Policy Research

Institute of Economic Affairs

Institute of Practitioners in Advertising

Kelkoo

medConfidential

Microsoft UK

Mozilla Corporation

News Corporation

News Media Association

Newsquest Media Group

Ofcom

Open Banking Implementation Entity

Open Data Institute

Open Markets Institute

Professional Publishers Association

Public Knowledge

ResPublica

Roosevelt Institute

Social Market Foundation

techUK

The City of London Law Society

The Coalition for a Digital Economy

The Law Society of England and Wales

The Law Society of Scotland

The Internet Advertising Bureau

Twitter

Uber

UK Computing Research Committee

Vodafone

Which?

Academics

Jonathan Baker (American University)

Paul Bernal (University of East Anglia)

Sir Tim Besley (LSE)

Anca Chirita (Durham University)

Jacques Crémer (Toulouse School of Economics)

Ariel Ezrachi (University of Oxford)

Rupert Gatti (University of Cambridge)

Damien Geradin (Tilburg University)

Robert Hahn (University of Oxford)

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Lawrence Summers (Harvard University)

Damian Tambini (LSE)

Flavio Toxvaerd (University of Cambridge)

Catherine Tucker (Massachusetts Institute of Technology)

Sir John Vickers (University of Oxford)

Tim Wu (Columbia University)

Sevil Yesiloglu (Bournemouth University)

Nicolo Zingales (University of Sussex)

Annex D

Summary of recommendations

Strategic recommendation A: To sustain and promote effective competition in digital markets, government should establish and resource a pro-competition digital markets unit, tasked with securing competition, innovation, and beneficial outcomes for consumers and businesses.

Recommended action 1: The digital markets unit should work with industry and stakeholders to establish a digital platform code of conduct, based on a set of core principles. The code would apply to conduct by digital platforms that have been designated as having a strategic market status.

Recommended action 2: The digital markets unit should pursue personal data mobility and systems with open standards where these will deliver greater competition and innovation.

Recommended action 3: The digital markets unit should use data openness as a tool to promote competition, where it determines this is necessary and proportionate to achieve its aims.

Recommended action 4: The digital markets unit should co-operate with a wide range of stakeholders in fulfilling its role, but with new powers available to impose solutions and to monitor, investigate and penalise non-compliance.

Recommended action 5: To account for future technological change and market dynamics, the digital markets unit should be able to impose measures where a company holds a strategic market status – with enduring market power over a strategic bottleneck market.

Recommended action 6: Government should ensure the unit has the specialist skills, capabilities and funding needed to deliver its functions successfully.

Strategic recommendation B: Merger assessment in digital markets needs a reset. The CMA should take more frequent and firmer action to challenge mergers that could be detrimental to consumer welfare through reducing future levels of innovation and competition, supported by changes to legislation where necessary.

Recommended action 7: The CMA should further prioritise scrutiny of mergers in digital markets and closely consider harm to innovation and impacts on potential competition in its case selection and in its assessment of such cases.

Recommended action 8: Digital companies that have been designated with a strategic market status should be required to make the CMA aware of all intended acquisitions.

Recommended action 9: The CMA's Merger Assessment Guidelines should be updated to reflect the features and dynamics of modern digital markets, to improve effectiveness and address underenforcement in the sector.

Recommended action 10: A change should be made to legislation to allow the CMA to use a 'balance of harms' approach which takes into account the scale as well as the likelihood of harm in merger cases involving potential competition and harm to innovation.

Strategic recommendation C: The CMA's enforcement tools against anti-competitive conduct should be updated and effectively used, to help them play their important role in protecting and promoting competition in the digital economy.

Recommended action 11: The CMA should perform a retrospective evaluation of selected cases not brought and decisions not taken, where infringements were suspected or complaints received, to assess how markets have subsequently evolved and what impact this has had on consumer welfare.

Recommended action 12: To facilitate greater and quicker use of interim measures to protect rivals against significant harm, the CMA's processes should be streamlined.

Recommended action 13: The review applied by the Competition Appeal Tribunal to antitrust cases, including interim measures, should be changed to more limited standards and grounds.

Recommended action 14: The government should introduce more independent CMA decision-making structures for antitrust enforcement cases, if appeal standards are changed.

Recommended action 15: The government should ensure those authorities responsible for enforcing competition and consumer law have sufficient and proportionate information gathering powers to enable them to carry out their functions in the digital economy.

Recommended action 16: The CMA should continue to prioritise consumer enforcement work in digital markets, and alert government to any areas where the law is insufficiently robust.

Strategic recommendation D: The government, CMA and the Centre for Data Ethics and Innovation should continue to monitor how use of machine learning algorithms and artificial intelligence evolves to ensure it does not lead to anti-competitive activity or consumer detriment, in particular to vulnerable consumers.

Strategic recommendation E: The CMA should conduct a market study into the digital advertising market encompassing the entire value chain, using its investigatory powers to examine whether competition is working effectively and whether consumer harms are arising.

Strategic recommendation F: Government should engage internationally on the recommendations it chooses to adopt from this review, encouraging closer cross-border co-operation between competition authorities in sharing best practice and developing a common approach to issues across international digital markets.

Recommended action 17: Government should promote the UK's existing competition policy tools, including its market studies and investigation powers, as flexible tools that other countries may benefit from adopting.

Recommended action 18: The UK should use its voice internationally to prevent patent rights being extended into parts of the digital economy where they are not currently available.

Recommended action 19: Government should support closer co-operation between national competition authorities in the monitoring of potential anti-competitive practices arising from new technologies and in developing remedies to cross-border digital mergers.

Recommended action 20: To ensure platforms and businesses have a simple landscape in which to operate, government should encourage countries to consider using pro-competition tools in digital markets. As part of this work, government should work with industry to explore options for setting and managing common data standards.

HM Treasury contacts

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