

C|B|I|



Reimagining regulation

Creating a framework fit for the future

August 2020

Tax and Regulation



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Executive summary

As we enter a new normal following the economic shock of COVID-19 and the UK looks to make its way in the world outside of the EU, there is an opportunity to reflect on whether our economic structures remain fit for purpose. The economy today looks very different to that of a decade ago, and the economy in 2030 will look different again to today.

Economic regulation has been the bedrock of the market structures in our most critical sectors from water and energy to telecommunications, aviation, rail and, increasingly, financial services. In the first quarter of 2020, the utilities and water sectors alone accounted for around 2.8% of the UK's GDP and almost 400,000 jobs. But as essential providers of our national infrastructure, the value of these sectors goes far beyond the pounds and pence they generate by themselves.

Businesses in these industries support economic activity in every sector of our economy, providing the essential services that businesses and households cannot do without. During the lockdown imposed due to COVID-19 many of the workers in these sectors continued to attend their normal workplace as critical workers. That is why it is so important that these industries function in the best interests of consumers and the economy now and over the longer term.





The COVID-19 pandemic has demonstrated the resilience of these sectors in responding to economic shocks. Throughout this period they have had to respond to large shifts in domestic energy demand and ensure stable internet connectivity across the UK. The uncertainty surrounding the nature and frequency of economic shocks underlines the importance of a clear and relevant regulatory framework that keeps the lights on in times of crisis. And at the same time, the pandemic has highlighted the critical need for sustained investment in these sectors to support a green and sustainable economic recovery.

Initially created in the 1980s and 1990s as part of the wave of privatisation, our economic regulators have been the main vehicle for delivering sustained investment and improved outcomes in these sectors. To name a few of the achievements of the last decade: the number of and length of power cuts has almost halved since 2002, and the UK is now a world leader in superfast broadband connectivity, with 95% of premises now covered.

But consumer attitudes are changing, and the sectors overseen by economic regulators are also changing. It is therefore vital that the rules that govern them keep pace. Consumers not only focus on the price of these services but also look to regulators to address issues of environmental and social responsibility. 74% of UK households state that they are very or fairly concerned about climate change.¹ More generally, over 85% of the British public agree that businesses should do their bit to improve the environment in the water, energy and telecommunications sectors.²

To meet the demands of consumers, these regulated industries will need significant and sustained investment. The National Infrastructure Commission (NIC) estimate an additional £9 billion annual investment will be required in the power sector to meet the net zero target by 2050³, while they estimate the telecommunications sector will require £33 billion investment to deliver full fibre across the UK and £8 billion to upgrade existing infrastructure for nationwide 5G coverage.⁴

At the same time, the nature of businesses in regulated sectors is constantly changing, bringing with it new challenges and new opportunities. Increasing digitalisation is disrupting markets, from FinTech companies in the payments sector, to innovative businesses using flexible energy assets to cope with the increase in renewables. The COVID-19 pandemic has accelerated many of these changes, bringing to light the increasing reliance of businesses and households on technology, as well as the urgency of addressing climate change through a green recovery.

For some sectors, entirely new business models will soon come into the scope of economic regulation, such as the potential for Ofcom to begin regulating online harms across a broad range of digital services. Innovation will be critical in delivering an improved customer experience and value across all regulated sectors. Regulators will need to adopt a pro-innovation approach that balances the interests of consumers now and in the future.

In the future the UK will need a system of economic regulation that is smart enough to adapt to these challenges and make the best of the opportunities they present. The evidence of the performance of economic regulators over the last decades shows that the UK needs an evolution, not a revolution, of our regulatory model. Economic regulators have delivered significant investment, but they will need to adapt their ways of working if they are to drive the step change in investment and innovation to support a green recovery and ultimately deliver for consumers and the economy.



“Economic regulators will need to adapt their ways of working if they are to drive the step change in investment and innovation to support a green recovery.”

Summary of recommendations

The CBI has identified 10 key recommendations to support the evolution of the UK's regulatory model:

The regulatory framework must encourage genuine long-term investment:

1. Each regulator must have a clear responsibility to acknowledge how regulatory policy aligns with the government's objectives on infrastructure investment including the National Infrastructure Strategy. This would also require each regulated sector to assist regulatory decisions and reduce fragmentation between departments and regulatory bodies.
2. The government should launch a call for evidence on the broader tools available, other than price control, to achieve long-term investment ambitions. Additionally, the UKRN should report on the tools available to regulators to drive innovation, drawing on international experience and business consultation.
3. A statutory duty should be introduced for Ofgem, Ofcom, Ofwat and the ORR to contribute to reaching the UK's net-zero target by 2050. These regulators must also be required to report on their adherence to these new duties.

Economic regulators must act as enablers of innovation through competitive markets:

4. Regulators should have the power to separate price controls for maintenance of existing networks from strategic enhancements and increase competition in the allocation of investment delivery.
5. Each regulator should have a statutory duty to promote innovation. The government should then require regulators to report on their adherence to this new duty and clarify how this informs upcoming projects such as the pilot 'Innovation Test'.
6. Regulators should diversify the toolkit used to test new business models: The government must be clear on the relationship between the 'Regulators Innovation Network' and the resources available to regulators to enable innovation.
7. Regulators should work together to coordinate digital regulation to avoid overlapping regulation. Current and future regulators should coordinate their remit and policy actions with other sectoral regulators to ensure consistency in approach and avoid duplication of regulation that harms innovation.

The government and regulators must work together to rebuild trust in economic regulation through increased transparency and scrutiny:

8. Regulators should increase the level of consultation with business, including cohesive engagement with multiple regulators on cross-cutting issues and setting out a minimum standard of consultation ahead of any major regulatory change. Regulators should maintain a clear right of appeal, including clear dispute resolution mechanisms, and opportunities for businesses to raise concerns over the regulatory framework.
9. The Government should strengthen the role of the UKRN on regulatory best practise by making it an official body that is adequately funded and resourced. It is important government and regulators clarify the links between the UKRN, the Regulatory Horizon Council, and other government bodies on cross-cutting and mutually aligned work.
10. The government should use its role in providing guidance to economic regulators on how to deliver on their statutory duties more effectively, using specific targets and regular scrutiny. There must be clear scrutiny by the BEIS select committee on the level of compatibility of regulators with the objectives of the government's industrial strategy.



The importance of regulated sectors

Economic regulators have played a vital role in the proper functioning of the markets they cover since the start of widespread privatisation in the 1980s. In the absence of economic regulators these markets could have developed anti-competitive behaviours which would have resulted in worse outcomes for consumers, employees, investors and ultimately the wider economy. Stable independent regulation can also act as a signal to investors to help drive investment into regulated industries resulting in higher levels of innovation and productivity in these sectors over time.

What is an economic regulator?

Economic regulation is defined as the rules, imposed by government or independent regulatory authorities, to correct market failures, achieve economic policy objectives and to deliver outcomes of public interest. Economic regulators can intervene on market prices and market competition.

In the UK economic regulators cover a wide range of sectors from water and energy to the postal services. Traditionally, economic regulators have covered utilities and infrastructure sectors where network effects and/or economies of scale create circumstances such as natural monopolies, that limit the prospects for effective competition. They are instituted as the following five organisations: ⁵

- Office of Gas and Electricity Markets (Ofgem)
- Office of Communications (Ofcom)
- The Water Services Regulation Authority (Ofwat)
- Civil Aviation Authority (CAA); and
- Office of Rail and Road (ORR).

The Financial Conduct Authority (FCA), while not an economic regulator, is increasingly acting as one as it deals with issues such as operational resilience and the integrity of systems alongside enhancing financial integrity.

In 2015, the Payments Systems Regulator (PSR) was created as a subsidiary of the FCA following concerns over the governance of payments systems. It is now an independent economic regulator.

The sectors covered by economic regulators are a critical part of the UK's economy. Together the utilities and water supply sectors directly account for approximately 2.8% of UK GDP and make up 388,000 workforce jobs with most of these roles outside of London and the South East.^{6,7} In addition they support a wide range of other businesses through the backward linkages in their supply chain. The utilities sectors have a higher than average economic multiplier effect, with the electricity and gas sector supporting £2.60 in the wider economy for every £1 output the sector generates for itself.⁸ As critical providers of the UK's national infrastructure they also provide essential goods and services for human welfare and for the operation of every business across the UK. Therefore, good economic regulation is a vital ingredient for the future success of these sectors and ultimately economic growth and prosperity across the country.

However, the landscape for economic regulation is changing. Consumer values and expectations of regulators are shifting. And at the same time, the role economic regulators play in delivering on wider government policy objectives is expanding.



Consumers are not solely concerned with price; there is a growing concern for the environment and issues of social responsibility, with 74% of UK households stating they are very or fairly concerned about climate change.⁹ The same survey found 85% of households support the use of renewable energy, the highest result since the survey began in 2012.¹⁰ Moreover, over 85% of the British public agree that businesses should do their bit to improve the environment in the water, energy and telecommunications sectors.¹¹

As a result, understanding the consumer experience of regulators is becoming more important to economic regulators as a tool to improve outcomes. Building trust and confidence in competitive markets and privately provided services is a vital part of the vision for these sectors.¹² The UK Regulators Network (UKRN), an association of 13 of the UK's regulators, recently developed a set of performance scorecards in collaboration with a subset of the economic regulators. The aim of these scorecards is to identify where the performance of regulated industries needs to improve by measuring consumer experience.¹³

There are also several government policy initiatives that require a greater role for economically regulated industries. Firstly, in the years ahead greater investment will be needed in key sectors to upgrade the UK's infrastructure and meet the government's target of net zero carbon emissions by 2050. Secondly, the pace of innovation and technological change is also accelerating, with greater fragmentation and disruption of traditional markets. With this change to the business environment, economic regulators must evolve if they are to keep pace and continue to protect consumers and support the UK economy.

This paper explores the question of whether the current system of economic regulation in the UK works for consumers and the economy both now and in the future. The subsequent sections cover:

- The evolution of the economic regulator and how we ended up where we are today. This includes an evaluation of the performance of economic regulators today, and how their role and remit has been changing;
- The case for an updated system of economic regulation, looking at how the economy is likely to change over the coming decades and why regulators need to respond to these changes in the best interests of consumers and the economy; and
- A set of recommendations that will help to ensure the model for economic regulation remains responsible and relevant in adapting to a changing economy.

A man wearing a white hard hat, glasses, and a high-visibility safety vest is looking at a tablet computer. He is standing in what appears to be an industrial or office setting. In the foreground, a computer monitor is visible, and another person's hands are seen typing on a keyboard. The entire image has a strong red and orange color overlay.

“Economic regulators must evolve if they are to keep pace and continue to protect consumers and support the UK economy.”

The evolution of the landscape for economic regulation in the UK

Independent economic regulation has been a hallmark of the UK's economic policy framework since the 1980s

The reversal of the UK's post-war programme of nationalisation began in the 1980s in a bid to improve the performance of the nationalised industries such as British Rail and British Telecom. The government at the time believed public ownership was hampering productivity and that by introducing competition through privatisation and appropriate regulation, the efficiency of these industries would increase.¹⁴ The regional water industry, for example, underwent a series of restructures due to problems with planning and forecasting future demand, before being privatised in 1989.¹⁵

By setting rules and penalties, governments can influence business and consumer behaviour where the market fails to deliver the best outcome when left to its own devices. However, the monopolistic nature of these privatised industries – at least initially – required a new type of regulation. As a result, economic regulation, administered through independent economic regulators, was established with the primary objective of promoting competition and protecting consumers. Economic regulators were given the responsibility to correct market failures and facilitate competition through price and non-price related mechanisms.¹⁶

The then Department for Business, Innovation and Skills (BIS) set out six principles for economic regulators as shown in Exhibit 1.¹⁷

Exhibit 1 Principles for Economic regulators

Principle	Definition
1  Accountability	Independent regulation with clear duties set by democratically accountable Parliament and Government.
2  Focus	Economic regulators should: <ul style="list-style-type: none"> • Be concentrated on protecting end users, • Have clearly defined and prioritised duties based on outcomes, and • Have adequate discretion to choose tools.
3  Predictability	The framework must provide a stable and objective environment to anticipate the context for future decisions and allow efficient and necessary investments to receive a reasonable return.
4  Coherence	Regulation must be a logical part of the Government's broader policy context.
5  Adaptability	The framework must have capacity to evolve and respond to circumstance.
6  Efficiency	Interventions must be proportionate and cost-effective, and decisions must be timely and robust.

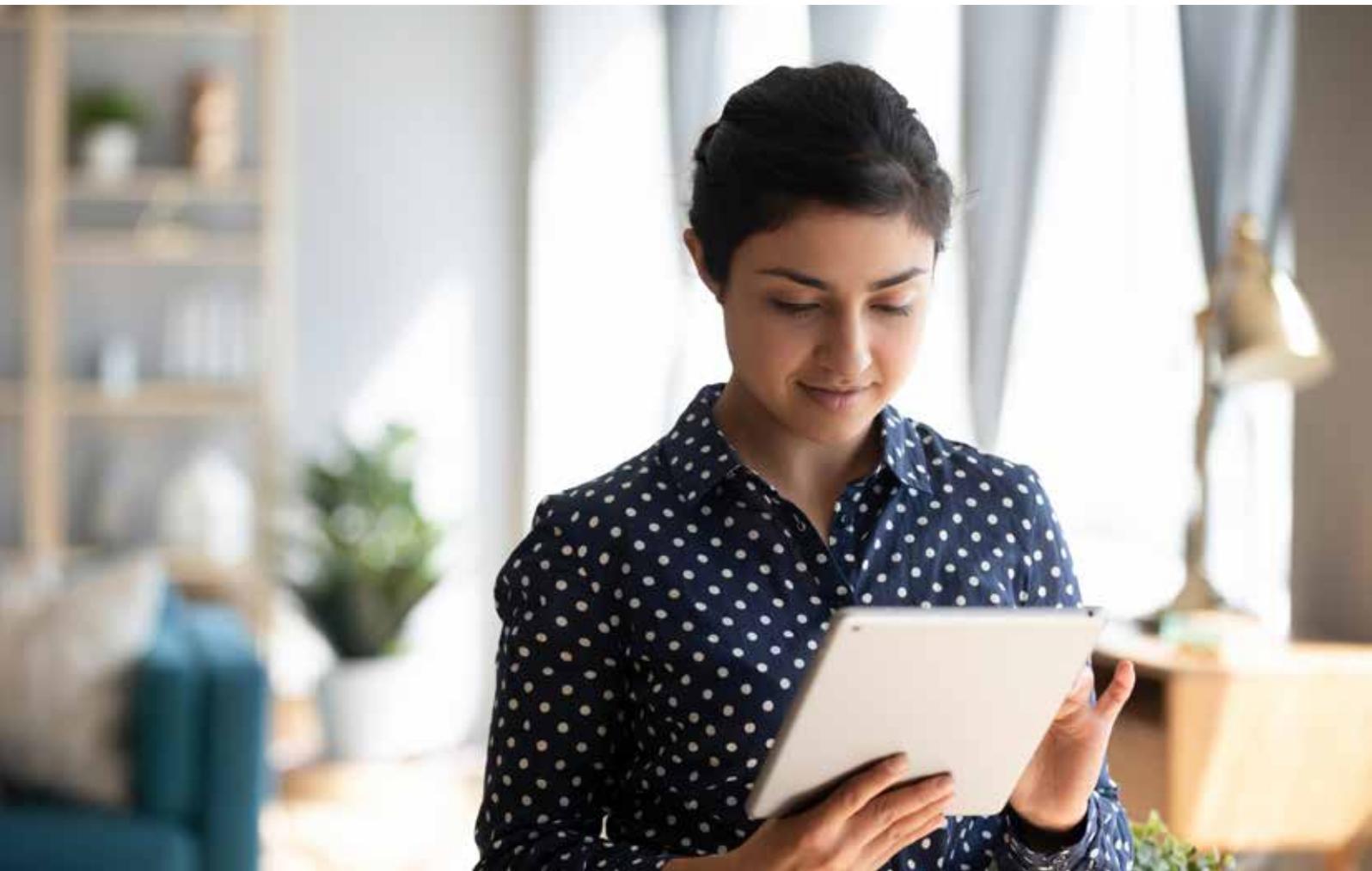
Source: BIS (2011) Principles for Economic Regulation. April 2011



By following these principles, economically regulated industries have seen increased investment from the private sector, improving the quality of services and reducing prices in some cases. Exhibit 2 demonstrates examples of the service improvements that have been observed in each of the five economically regulated sectors since privatisation.

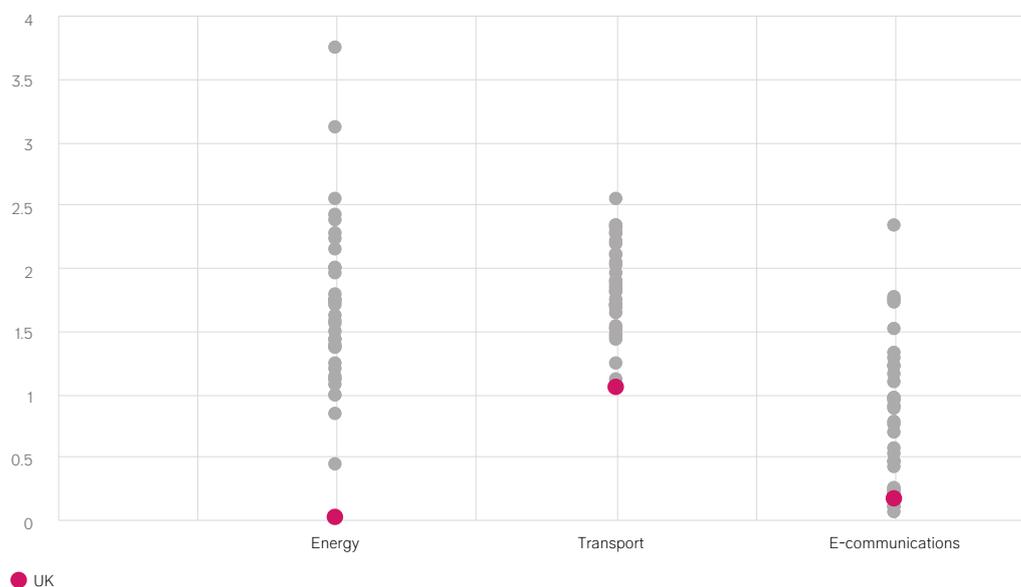
Exhibit 2 Improvements in economically regulated industries since privatisation

Energy	Water	Rail	Aviation	Telecoms
				
The number and length of power cuts in local electricity networks has almost halved since 2002. ¹⁸	Leaks have fallen by a third since the 1990s and customers are 100 times less likely to be affected by low pressure than they were before privatisation. ¹⁹	In 2016 alone the UK spent approximately £7,800 million on railway enhancements – the highest in Europe. ²⁰ There will be 7,000 more train carriages on the tracks by 2021. ²¹	Prices for flights by the lowest priced carrier to major European destinations dropped by 66% by 2002 compared to a decade earlier. ²²	The UK is a world leader in superfast connectivity with more than 95% of premises covered. ²³



The success of the UK's regulatory framework in maintaining standards, incentivising investment, and providing financial savings to consumers means that over the years it has become internationally regarded as a benchmark for best practice. This is demonstrated by the OECD's Product Market Regulation (PMR) indicators, which measure the regulatory barriers to firm entry and competition in the energy, transport and communications sectors.²⁴ In all three sectors measured (energy, transport and communications), the UK outperforms other OECD countries. The PMR is composed of two measures; the first is the distortions induced by state involvement such as price controls or complex regulation and the second is the barriers to domestic and foreign entry, such as administrative burdens to start-ups or barriers to foreign direct investment.

Exhibit 3 Network sector PMR score by OECD country in 2018



Source: OECD sector-PMR indicators 2018, for all 34 OECD member countries. Energy covers electricity and natural gas, transport includes rail, air, road and water, and E-communications covers fixed and mobile communications.

The role and remit of economic regulators is growing

While the primary objective of economic regulators has traditionally been to promote competition and protect consumers, regulators have other statutory duties that vary by industry. For example, the 1993 Railways Act placed a duty on the ORR to contribute to the achievement of sustainable development in the railway network where economically practical.²⁵ More recently Ofcom is expected to assume the role of being an online harms regulator which demonstrates a responsibility to protect vulnerable consumers.²⁶ Exhibit 4 shows a summary of the current statutory duties of each of the economic regulators currently operating in the UK, as well as the FCA.

Exhibit 4 Summary of Economic Regulators' Statutory Duties²⁷

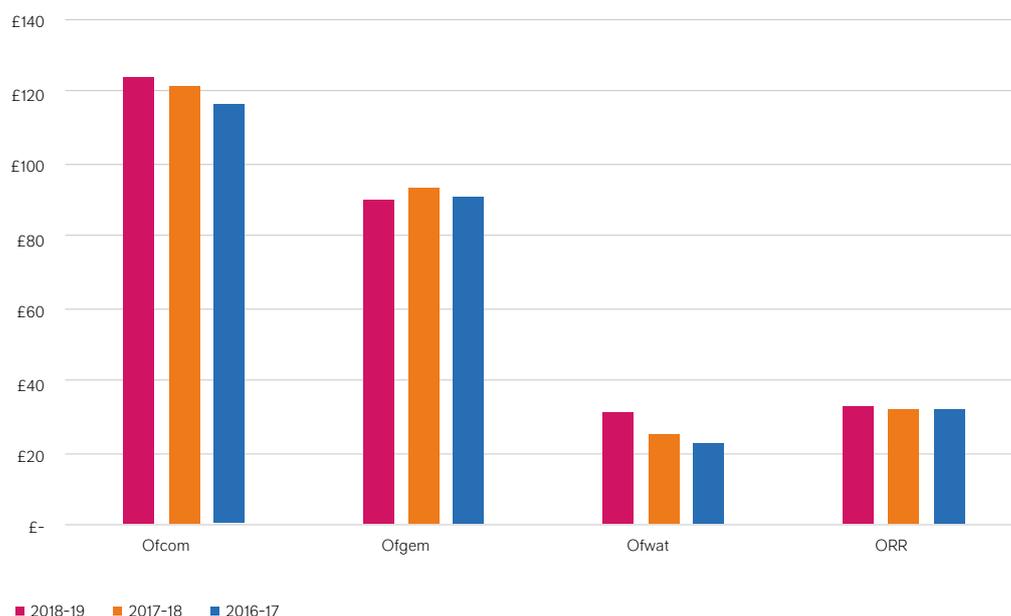
Statutory Duties	Ofgem	Ofcom	Ofwat	CAA	ORR	FCA	PSR
Protect consumers	✓	✓	✓	✓	✓	✓	✓
Promoting competition	✓	✓	✓	✓	✓	✓	✓
Security of supply/ market	✓	✗	✓	✓	✗	✓	✗
Protect vulnerable groups	✓	✗	✗	✗	✓	✗	✗
Sustainable development	✓	✗	✓	✗	✓	✗	✗
Consider environmental impact	✓	✗	✗	✓	✓	✗	✗
Promote innovation	✗	✓	✗	✗	✗	✗	✓

Source: CBI analysis based on respective regulators' official websites and government legislation documents

Despite the government's commitment to reach net-zero by 2050, considering the environmental impact is not a statutory duty for most regulators. Similarly, the PSR and Ofcom are currently the only regulators that have a primary duty to promote innovation despite an increase in the use of innovation and digitalisation across all regulated industries. However, often regulators interpret their duties more broadly. For example, earlier this year Ofgem published a decarbonisation action plan, acknowledging the crucial role the energy regulator plays in supporting the UK's path to net-zero carbon emissions.²⁸

The budgets of economic regulators have grown in line with their responsibilities

Since their inception economic regulators have become larger both in terms of their budgets and operating expenditure. As shown by Exhibit 5, most economic regulators have seen stable or increased operating budgets over the past 3 years. Part of this can be explained by an expanding remit. For example, in 2018/19 Ofcom's budget was increased by £3 million to reflect its increased remit on the broadband Universal Service Obligation (USO) and their work to implement the Network and Information Systems (NIS) regulations.²⁹

Exhibit 5 Nominal regulator annual operating budget, £millions

Source: Annual accounts reports for respective regulators

The increase is also reflected in the number of employees. For example, for Ofgem alone, employment has more than doubled from 300 to 750 permanent staff between 2001 and 2018, pointing to growth in the remit of economic regulators.³⁰

The framework for change within economic regulators is about a gradual and evolving model, not a complete overhaul of the current practices and standards that exist within these bodies. The new decade has already brought with it new challenges for regulators as a result of the COVID-19 pandemic. Looking to the future, changing business models, the need for long-term infrastructure investment, and digitalisation will require smarter regulation developed by well-resourced economic regulators who are able to respond to this evolving environment whilst supporting wider economic resilience. Many economic regulators have already begun to consider the implications of changing markets on their role and wider regulatory landscape. Ofcom, for instance, set out its clear broadcast standards and enforcement duty at the onset of the pandemic, while Ofgem have continued work with business and consumers to maintain a secure supply of energy across the country.^{31, 32}

The case for an updated model of economic regulation

While the UK's economic regulators are often held up as an example of best practice regulation, the future of the markets in which they operate is changing quickly. To remain relevant and effective at protecting consumers and the economy they will need to evolve.

There are four areas where the status quo needs to adapt to ensure the competitiveness of the UK's businesses environment and to deliver for consumers:

1. Scrutiny,
2. Complexity and adaptability,
3. Investment, and
4. Innovation.

The independence of economic regulators can imply limited scrutiny

Economic regulators in the UK are independent, meaning they are legally separate from government with their own statutory duties, responsibilities, and powers. While these duties are set by Parliament, the decisions they make and the tools they use are not subject to government or parliamentary approval. This model was established to promote better regulation by removing short termism and allowing regulators to act on behalf of the industry they regulate independent of the political landscape.

However, being fully independent limits the level of scrutiny and oversight of regulators to Parliament, the public, and the businesses they regulate. Part of the government's role is to provide guidance to economic regulators on how they should deliver their statutory duties, but evidence suggests that often this guidance is provided infrequently.³³ As government priorities change, this reduces the ability of economic regulators to reflect new policy positions in their decision making process.

There has been a long running debate on "who regulates the regulators?" and whether regulators should have increased scrutiny to ensure they carry out their duties effectively and within the public interest. In 2004 the House of Lords Committee investigated the workings of government-appointed regulators and the extent to which their performance is monitored by Parliament. This inquiry called for "a dedicated parliamentary committee to be established to scrutinise the regulatory state" which was subsequently created.³⁴ More recently this issue has become

more prevalent with former deputy Bank of England governor, Sir Paul Tucker, raising concerns about the reach of some regulators such as Ofcom. The issue of the expanding remit of regulators risks creating undesirable outcomes in regulated markets, where intervention is not consistent, proportionate, or clearly defined.³⁵

As regulators increasingly become key institutions in the delivery of government policy, for example reaching net-zero carbon emissions by 2050 and rolling out gigabit-capable broadband across the UK by 2025, the issue of the relationship between independence and scrutiny will only become more important.

The OECD sets out best practice principles for the governance of regulators, which states that “regulation should be independent from political influences but within an accountability framework”.³⁶ This provides integrity which evidence shows delivers better outcomes.³⁷ The OECD’s PMR measures found that most OECD countries have independent regulators combined with an overarching governance structure that provides accountability and oversight. They find a positive and statistically significant correlation between independence and accountability scores for all regulated sectors.³⁸ However, they also find that this can vary significantly by sector. For example, the UK performs strongly for governance structures in the water sector but ranks well below the OECD average on accountability in the rail, transport, and energy sectors.³⁹



Business finds the UK's regulatory landscape difficult to navigate and slow to adapt to changing markets

The system of economic regulators must be looked at as an ecosystem. The complexity of the system and the ease with which businesses can navigate the different and overlapping elements of it matter as much as the design of a specific regulatory instrument. In addition, the pace of regulatory change and its ability to keep pace with changes in the market environment can have a significant impact on businesses' ability to operate, invest, and grow.

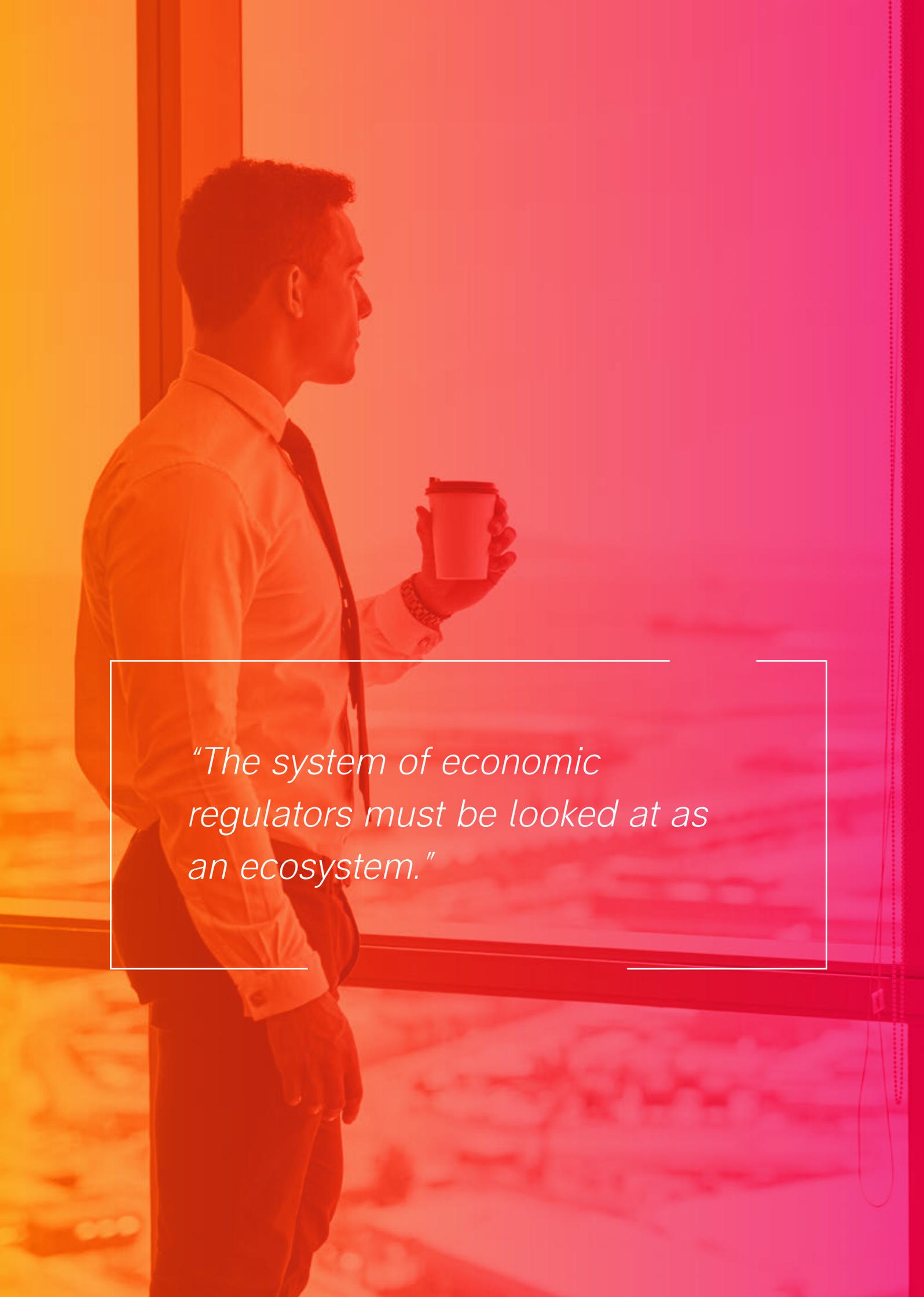
A complex regulatory landscape can deter necessary investment

The OECD's PMR indicators demonstrate that the UK has more complex regulation than the OECD average, ranking worse than Germany, Canada, and Denmark.⁴⁰ While complex regulation is not inherently problematic, and in fact can demonstrate the rigour of UK regulation, the PMR indicators suggest that complexity also inhibits competition in the UK.

To support this, anecdote from business cites two areas that make the regulatory landscape particularly complex:

- **An incoherent, and often fragmented, approach to regulation across government.** Government departments and regulators are not always coordinated in their approach to regulation, which means business often find it difficult to know who to engage with on an issue that directly impacts them. Businesses also note that the interpretation of regulations can differ across departments, causing problems in the long run. Regulation of the digital economy is an example of a complex area that encompasses a broad set of policies, which means by default different departments will be working on different elements. For example, in 2020 alone new regulation on content liability, data protection, digital competition, and a new digital tax will all be delivered by different government departments and regulators.
- **A lack of transparency in the operation and the decision-making process of regulators.** Some businesses find that the motivation behind the decisions of economic regulators is often unclear. For example, businesses have cited ambiguity around the decision process in appeals cases. There is also often insufficient time provided for businesses to respond to consultations, which limits the ability of businesses to provide effective input into policy decisions.

The greater the complexity, the less likely business are to understand the objectives of their regulator and are therefore less able to plan for any future changes in the market in which they operate. This could impact the ability of the regulators to fulfil their purpose of ensuring that regulation promotes competition rather than inhibits it. The challenge is expected to be more acute for smaller businesses who do not have the expertise, resilience, or resource to navigate a complex system.

A man in a white shirt and tie stands in profile by a large window, holding a white coffee cup. The scene is bathed in a warm, orange-red light, suggesting a sunrise or sunset. The background shows a blurred view of a city or landscape. A white rectangular box with a thin border is overlaid on the lower right portion of the image, containing a quote in white italicized text.

"The system of economic regulators must be looked at as an ecosystem."

Markets and business models are evolving and becoming more diverse, presenting new challenges for regulators

As well as an increasingly complex regulatory landscape, the economy itself is also becoming more complicated. Over time regulated industries need to evolve and adapt to external changes, such as changes in consumer preferences or the adoption of new technologies. And as digitalisation and innovation increases, this leads to more complex markets as business models change and new business models are created. While this creates economic opportunities, it brings new challenges for regulators who need to fully understand the industries they regulate in order to deliver optimal outcomes.

Changing markets and business models pose three key challenges for economic regulators:

- **As markets change regulators need to adapt, but if there is a long lag regulation can become outdated and no longer fit for purpose.** The energy market is a prime example of a changing market. With more localised energy suppliers entering the market, the sector is slowly moving away from a model where energy is supplied by a few large power stations to becoming a more decentralised model. This is partly explained by the large increase in the supply of renewables, which in 2019 accounted for 36% of the market.⁴¹ While there are clear advantages of a decentralised model, particularly in supporting decarbonisation and grid flexibility, there is a concern that Ofgem is not adapting to this structural change. The CEO of smart energy company Green Energy Options, Patrick Caiger-Smith cites concern that “the government ambition on electricity generation has not always been matched by consistent action”. For instance, Ofgem is seeking to encourage the emerging residential market for flexibility but is flattening the charges across the day thus reducing the business case for installing load management devices in homes. Similarly, the government has recently increased the VAT rate on battery storage systems installed behind the meter in homes, extending the payback period for anyone installing these assets.
- **With increasing digitalisation in regulated industries there is a risk of an expertise deficit.** It is not just the regulations themselves that need to keep pace with the changing market but also the individuals who run the regulators. As incumbents in regulated industries become more digitalised, and new types of digital firms enter regulated markets, there is a risk that regulators do not have the expertise to regulate these firms. For example, expanding the CMA’s role to include the possible regulation of data and technology models required more expertise. In 2019, the CMA established a new Data, Tech and Analytics Unit (DaTA) comprising of 15 data scientists who have the expertise to understand how these markets work, which would enable them to stay ahead as these areas develop further.⁴²

- **As new unregulated markets are established, regulators may be required to expand their remit thus putting pressure on resources.** There is a growing need politically and socially to bring new types of business models and/or markets under the remit of economic regulators, either by expanding the remit of current regulators or through the creation of a new economic regulator. For example, the creation of the PSR was driven by the desire to regulate a long-established payments system undergoing profound technological change. Ofgem more recently have a growing need to regulate the technological interoperability of Electric Vehicles (EVs), while navigating a nascent and changing market.⁴³ The expanding literature on how to regulate technology markets brings to light the suitability of the current framework for economic regulation in a modern economy.⁴⁴ An example of this is the government's online harms white paper which looked at measures to improve online safety by creating new regulatory powers for an independent regulator, such as Ofcom. While the business community supports clear regulation of the internet, regulating digital technologies requires adequate resource and technical expertise to be able to achieve this.⁴⁵

A poor understanding of how sectors are changing and how business models are evolving, risks continuing to use regulation that is not fit for purpose. A smart regulatory framework is needed to achieve the core objectives of economic regulators to promote competition and protect consumers. This has wider implications to business and the economy, with the risk that markets are unable to adapt to new opportunities, hindering productivity gains from technological change.



Delivering the significant investment needed for the future will require a big step up by regulated industries

Economic regulators and the private sector will have a key role to play in delivering the investment needed for the future. Reaching the government's net zero target by 2050 and rolling out full fibre and other gigabit-capable broadband technologies across the whole of the UK are just two examples where significant investment is required in regulated industries. The National Infrastructure Commission (NIC) estimate an additional £9 billion annual investment will be required in the power sector to meet the net zero target by 2050⁴⁶, while they estimate the telecoms sector will require £33 billion investment to deliver full fibre across the UK by 2025 and £8 billion to upgrade existing infrastructure for nationwide 5G coverage.⁴⁷

The COVID-19 crisis has demonstrated how important well-functioning national infrastructure is to the continued operation of the UK economy in times of crisis. Throughout the lockdown critical workers in the utilities, communication and financial services sectors continued to undertake essential work. At the height of the lockdown 55% of water sector workers were continuing to work at their normal workplace compared to an average of 35% for all industries.⁴⁸

Despite the challenges of continuing to work through COVID-19, the resilience of many regulated industries has shone through. For example Ofcom found that even when faced with a significant increase in demand, the performance of broadband providers remained relatively stable over March, with download speeds falling by only 2% on average between the first and last weeks in March.⁴⁹ Businesses have also shown agility in responding to dramatic shifts in demand, with Openreach building 51 emergency connections for temporary NHS hospitals during the height of the lockdown.⁵⁰

As the UK economy re-opens in the wake of the pandemic there is an opportunity to invest in low-carbon technologies and infrastructure programmes that can offer significant economic benefits while at the same time building clean and resilient economies that help us towards our climate goals.⁵¹ The Prime Minister's speech at the end of June 2020 called for a "New Deal" which puts jobs and infrastructure at the centre of the government's economic growth strategy.⁵² To "build back better" investment from the private sector will be needed over several decades. Committing to policy outcomes over this length of time is rare, with governments and regulators typically required to plan to deliver on policy objectives over a much shorter timeframe of 5-10 years.



Regulators currently use price control as their primary tool to meet short-term objectives such as affordability. Price controls place restrictions on the price charged to a consumer and can be set at any point in the value chain. One form of a price control is a price cap which sets a maximum price to ensure businesses in regulated industries charge a fair price to consumers for using their service, in the absence of sufficient competition.

In the early years of privatisation price controls catalysed the process of removing inefficiencies from water companies and showed tangible benefits to both firms and consumers.⁵³ However, price controls have since come under scrutiny for being too focused on the short term.⁵⁴ Typically, price controls are set every 5 years, which means they are unlikely to reflect the major investment needs of the sector in the long-term.⁵⁵ Setting price caps too low can therefore result in insufficient investment and a lower quality of service.

An example of where a price control has led to undesired outcomes is the energy market price cap, which has put a strain on the costs of energy companies, impacting their financial viability and leading to firms exiting the market. This is in turn creating a barrier to entry for new firms and consequently stifling innovation (see box below for more detail).

The challenges with the energy price cap

At the start of 2019 a price cap on default energy tariffs came into force that aimed to ensure energy suppliers set prices for consumers that reflect the underlying costs of supplying energy.⁵⁶ However, this resulted in low or, in some cases, negative margins, which meant that only three of the “Big 6” energy suppliers were expected to be profitable in 2019. Businesses have also stated that many suppliers have exited the market in the latter part of 2019 as a result.

A poor regulatory environment could also be preventing new innovative firms from entering and investing in new areas. According to one business, the price cap covers two-thirds of the market and is acting as a barrier to innovation because the appetite to take commercial risks in new investments, such as alternative market supply arrangements, is compromised by the uncertainties inherent in price regulation.

Suppliers are also struggling to sufficiently resource their smart meter programme obligations based on the current allowance within the price cap. Smart metering infrastructure is a key enabler of the transition to net zero, and delays to the programme risk impacting the pace at which the target can be delivered.

Similarly, business has cited Ofwat’s recent water price review as a missed opportunity to allow business to use the financial headroom created to increase investment in infrastructure.

The water price review

Ofwat carry out a review of the price limits they set for water and sewerage companies every five years. They have recently concluded the 2019 review which sets prices for the period 2020-2025, but multiple water companies have referred Ofwat's price review to the CMA, citing concerns over the short-term focus of the decision.⁵⁷

According to Wessex Water, price reviews are becoming increasingly more burdensome, with the most recent price review including over forty performance commitments, offsetting efficiency gains that may have already been made. Businesses believe that the overall design of the recent price review focused too heavily on achieving lower bills in the short-term, rather than addressing long-term service resilience. As the water industry in England and Wales currently only replaces c.0.2% of the sewerage network and c.0.6% of the supply network each year. They believe the price review missed an opportunity for both price stability and increased investment in upgrading the infrastructure.

In contrast, Ofcom is an example of a regulator who has been embarking on a regulatory regime that supports long-term investment over mechanisms such as price controls. This has been observed as part of the rollout of gigabit-capable broadband, which has led to proposals by the regulator that incentivise investment in rural areas and a new approach to supporting customers with switching to gigabit-capable broadband packages (see box below for more detail).



Regulatory reform to unlock high-risk, long-term investment in gigabit-capable broadband

Delivering seamless digital connectivity across the UK is of major importance to business. While 95% of UK premises have access to superfast broadband, significant private investment is needed over the next five years to roll out next-generation broadband technology and keep the UK digital economy internationally competitive. This means quickly delivering full fibre and other gigabit-capable broadband technologies across the UK.

The UK's regulatory model was effective in supporting superfast broadband investment, but was far less suited to the larger, riskier infrastructure investment required for nationwide gigabit-capable connectivity, which will need to be rolled out ahead of widespread demand.⁵⁸

With the private sector committed to making the majority of the extensive investment needed, Ofcom recognised that regulatory reform must be prioritised to unlock this investment quickly and to help network providers go further, faster.

As a result, the regulator is embarking on a regulatory reform agenda to support long-term, high-risk private sector investment and incentivise infrastructure competition. For example, Ofcom's Wholesale Fixed Telecoms Market Review proposals include geographically targeted regulation to incentivise investment in rural areas and deregulation where necessary to support customers moving to gigabit-capable broadband packages.⁵⁹

The use of price controls is not the only mechanism available to regulators and in fact, can distort investment decisions over a longer time horizon. Water economic regulation in Scotland has taken a different approach to assessing long-term investment requirements with regulators, companies and consumer bodies working together to agree that a long-term step change in investment is required to secure service levels for future generations coupled with relative price stability.

There is a growing expectation for regulators to facilitate innovation

Innovation can have a significant impact on the approach to regulation and competition policy. Across all regulated sectors, innovation plays a key role in changing how markets work, the level of competition in the market and ultimately the customer experience.

One example is open banking, a regulatory intervention that emerged from the EU's Payment Services Directive (PSD2). This change allows customers to share their financial information with regulated banks and provides an opportunity to facilitate greater competition within the retail banking sector and as a result increase innovation.⁶⁰ Through Application Programming Interface (API) calls, retail banks can securely share customer financial data. Since June 2018, the number of successful API calls made through open banking has increased month-on-month, reaching 215 million calls in November 2019 from just 2 million in June 2018.⁶¹ The Open Banking Implementation Entity (OBIE), the organisation set up by the CMA to deliver the open banking remedies following its retail-banking market investigation, estimates individual UK consumers are set to gain an additional £12 billion in annual value because of the improved levels of service delivered by open banking.⁶²

Data portability, which is the principle underpinning open banking, brings the prospect of greater autonomy to consumers and has received increased attention as a policy tool. The Smart Data Review in 2019 focused on how data portability could be used to improve the customer experience in regulated markets following consumer challenges around switching providers in regulated sectors.⁶³ While giving greater autonomy to the data producer can strengthen competition, sector regulators should take into consideration the burden on firms and be cautious about applying a one size fits all model across industries.

Despite a clear trend towards innovation in regulated industries the PSR and Ofcom are the only regulators with a statutory duty to promote innovation, as demonstrated in Exhibit 2. The approach of the PSR in fulfilling this duty aims to allow technological change without inducing additional complexity and risk.

The government and regulators have already taken steps to facilitate innovation. In 2018 the government announced a £10 million 'Regulator's Pioneers Fund' for fifteen unique projects facilitating innovation in their respective sector.⁶⁴ A second round of funding was announced in the March 2020 Budget.⁶⁵ Examples of projects from 2018 include:

- The FCA's innovation sandbox, a regulator-led initiative to support businesses to test innovative propositions in a controlled environment.
- Ofgem's 'Energy Market Challenge' which aims to produce eight new innovative products and services to improve consumer engagement by August 2020.⁶⁶

Additional initiatives have also been outlined in the government's recent Regulation for the Fourth Industrial Revolution report including a pilot 'Innovation Test' which aims to scrutinise the impact of legislation on innovation during the development of policy and its consequent implementation and evaluation.⁶⁷ The Regulators Innovation Network is another project intended to foster collaboration and best practice amongst regulators by creating a culture of experimentation. More recently, Ofcom, together with the Competition and Markets Authority (CMA) and the Information Commissioner's Office (ICO), have formed the Digital Regulation Cooperation Forum (DRCF) with many objectives including promoting innovation and regulatory coherence.⁶⁸

While these projects are a great first step, there is a risk that regulators are primarily supporting resource-intensive sandbox programmes over more comprehensive innovation policies, market engagement strategies, or financial inclusion programmes. The experience of the Monetary Authority of Singapore (MAS) demonstrates that regulatory questions raised in connection with sandbox tests can be appropriately resolved without a live testing environment. In 2018 the MAS provided guidance to 140 organisations relating to its regulatory sandbox, which resulted in 40 applications, approximately 30 of which were later withdrawn or allowed to proceed without the need for a sandbox.⁷⁰ Sandboxes are often highly resource-intensive for regulators and can have the unintended consequence of being perceived as product endorsements.

The growing potential of innovative products and businesses to improve markets and deliver better services to consumers is significant. Regulators must be able to understand these changes and the wider implications this can have on the regulated industry and in turn, on the role of the regulator. Without examining innovation within their regulated sector, regulatory interventions may in fact have conflicting and inhibiting consequences.



The UK's changing relationship with the EU will affect the future of economic regulators

As the clock quickly runs down to December 2020, the UK's changing relationship with the EU remains a critical question for the future of regulation; both on how aligned the UK is with current rules and what to do in the event of new rules. In any eventuality, the new relationship with the EU will directly affect how businesses in the UK operate.

In the energy sector, EU regulation has enabled ease of trade and transmission in wholesale energy markets across Europe. The UK has also benefited from regulations such as the Regulation on Wholesale Energy Market Integrity and Transparency (REMIT).⁷¹ Divergence could pose serious challenges to fundamental issues such as the safety and supply of energy into the UK.

Broadcasting is another area where EU regulation plays a key role. The UK is the European leader for broadcasting far outstripping any other member state as the location for 1,400 TV channels. Some 35 services, including major players such as Netflix, are available under EU licenses.⁷² The Audio-Visual Media Services Directive (AVMSD) is the set of rules steering Ofcom's broadcast licensing framework. It is based on the 'Country of Origin' principle, which means members only need a license in one country in order to broadcast in other countries. Without clarity on future regulatory convergence in this area, the UK could cause severe complications for service providers and catalyse large restructuring programmes, moving many operations outside the UK.

This changing relationship will coincide with the dramatic changes in investment levels and innovation. It will be an important consideration for government when implementing policies which evolve the UK's system of economic regulation in light of these changes as well as in the areas of accountability and complexity and adaptability.

Ensuring the model remains responsible and relevant

It is clear from the evidence that while the UK is a benchmark for best practice regulation, the scale of change coming from innovation and government policy objectives could be huge. In addition, there is a clear need for better accountability, reduced complexity, and increased adaptability in the current system. The success of the existing model to deliver on its core objectives will need to evolve in light of these changes.

An updated system should deliver the investment needed for the future, foster innovation and rebuild trust in economic regulators to deliver better outcomes for consumers and investors, and ultimately the economy.



The regulatory framework must encourage long-term investment

Delivering on government policy objectives will require transformative investment, particularly in the regulated industries energy, transport, water, and communications. To achieve this, long termism should be ingrained into the regulatory framework, and as a result be reflected in the decision-making process of economic regulators.

The government can take three actions to achieve this:

1. **Set strategic and binding frameworks for investment.** The government should require regulators to have specific regard to deliver the National Infrastructure Strategy. Each regulator must have a clear responsibility to acknowledge how regulatory policy aligns with the government's objectives on infrastructure investment. This would also require each regulated sector to assist regulatory decisions and reduce fragmentation between departments and regulatory bodies.⁷³
2. **Regulators should expand their toolkit beyond price controls.** The use of price controls can lead to underinvestment given their short-term nature. To deliver the transformative investment required, regulators must explore better alternatives in achieving desired long-term infrastructure needs. For example, upfront recognition of the risk investors bear when undertaking long-term investment provides transparency about how the regulator will assess whether future returns are commensurate with that risk. To achieve this, the government should launch a call for evidence on the broader tools available to achieve long-term investment ambitions. Additionally, the UKRN should also report on the tools available to regulators to drive innovation, drawing on international experience and business consultation.
3. **Regulator's duties should cover protection of the environment.** Supporting the delivery of the government's net-zero target should be a priority for regulatory bodies. Government should adopt the NIC's recommendation to implement a statutory duty upon Ofgem, Ofcom, Ofwat and the ORR to contribute to reaching the net-zero target by 2050.⁷⁴ In addition, regulators must also be required to report on their adherence to these new duties.

Economic regulators must be enablers of innovation

Through the development of ideas and new technologies, innovation is a key driver of productivity and, as a result, economic growth. But it also delivers significant social benefits, increasing consumer choice and improving the standard of living. To both deliver on policy objectives and to improve the customer experience in regulated industries, innovation will need to play a key role. It is therefore crucial for government and economic regulators to encourage more innovation to ensure the UK realises its benefits.

The government has already taken steps to facilitate innovation, but there is more action that can be taken to further encourage the use of innovation in regulated industries:

4. **Facilitate a competitive environment to drive innovation:** Increased competition can lead to increased innovation. Regulators must identify barriers to entry in economically regulated markets and remove these disincentives in industries where there is rapid technological change. Sector regulators must maintain their autonomy and utilise their sector expertise to understand how greater competition can improve innovation in economically regulated markets. By adopting the recommendation from the NIC to separate price controls for maintenance of existing networks from strategic enhancements and increasing competition in the allocation of investment delivery regulators can encourage competition in strategic investments to push innovation.⁷⁵
5. **Introduce a statutory duty to promote innovation for all economic regulators:** Innovation is a crucial aspect of addressing the challenges the UK economy will face in the coming decade across all regulated sectors. Including a principle duty for economic regulators to promote innovation will help to deliver the desired outcomes in regulated industries. The government must require regulators to report on their adherence to this new duty and clarify how this informs upcoming projects such as the pilot 'Innovation Test'.
6. **Regulators should diversify the toolkit used to test new business models:** The government must be clear on the relationship between the 'Regulators Innovation Network' and the resource available to regulators to enable innovation. Regulatory sandboxes are one tool for testing new business models and have been particularly useful for the emergence of the FinTech sector. However, sandboxes should be part of a wider toolkit which also includes less resource intensive tools such as market engagement strategies.

7. **Coordinate digital regulation to avoid overlapping regulation.** Current and future regulators should coordinate their remit and policy actions with other sectoral regulators to ensure consistency in approach and avoid duplication of regulation that harms innovation. While improving coordination, sector regulators should also consider any market-specific characteristics that must be considered, to avoid a one-size-fits-all approach. The DRCF is a welcome initiative, but for it to be effective it must have regard to sector-specific characteristics.

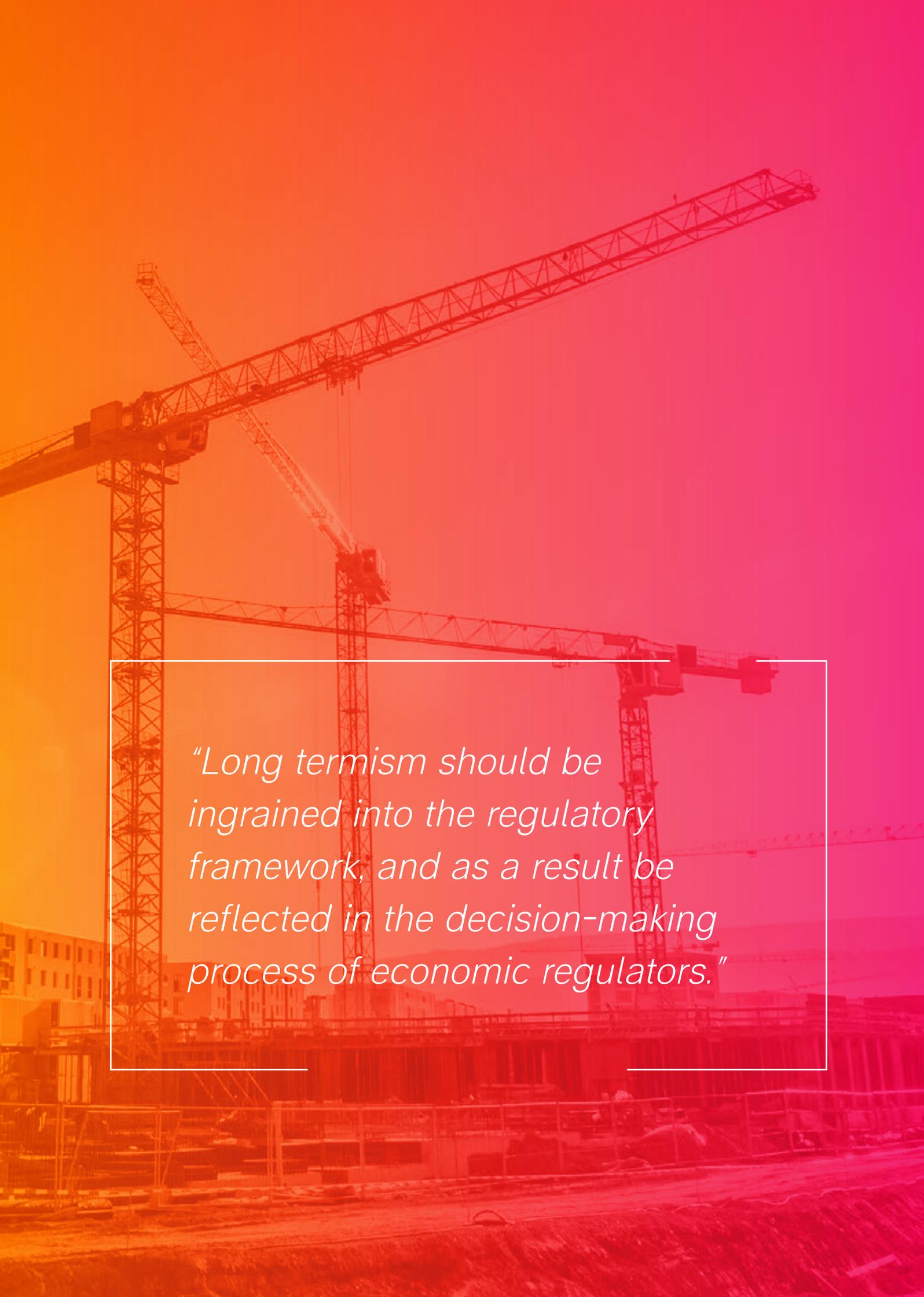
Government should rebuild trust in economic regulators through increased transparency and scrutiny

The dissatisfaction of consumers with regulated industries and the lack of clarity of businesses operating in these industries calls for greater transparency and accountability of economic regulators. Regulation is a complex area and more transparency would help business to understand the motivations driving regulatory decisions and to anticipate future changes. In addition, to ensure regulators can maintain a balance in addressing government policy objectives, while also developing proportionate regulatory policy, more effective oversight will be required.

The following actions will help to ensure the governance framework for economic regulators continues to effectively carry out its purpose:

8. **Increase the level of consultation with business and maintain a clear right of appeal:** Business has raised concern around the lack of consultation on key regulatory changes. Regulators must set out a minimum standard of consultation with business, ahead of any major regulatory change. There should be clear dispute resolution mechanisms, and opportunities for businesses to raise concerns over the regulatory framework. Clear and effective standards of review in economically regulated industries will also assist with the independent scrutiny of regulation. Structured engagement with multiple regulators in a single forum on cross-cutting issues should also become a central element of business engagement. Consulting with business more regularly can help to tease out some of the challenges ahead of implementation, which can lead to more successful outcomes.

9. **Strengthen the role of the UKRN on regulatory best practise:** The UKRN is an important organisation as it allows for cross-sector communication between regulators, which is particularly important when regulators are seeking to adapt to the same policy goals. Strengthening the role of this organisation would help to reduce fragmentation and share good regulatory practice while also maintaining the autonomy of sector regulators. The UKRN is well-positioned to collate growing consumer research and business consultations to better understand the regulatory framework required to reach the best outcomes. To achieve these outcomes, it is vital the UKRN is made an official body and is adequately funded and resourced. It is important government and regulators clarify the links between the UKRN, the Regulators' Network, the Regulatory Horizon Council, and other government bodies on cross-cutting and mutually aligned work.
10. **The government should set economic regulators clear priorities and desired outcomes:** The government should use its role in providing guidance to economic regulators on how to deliver on their statutory duties more effectively, using specific targets and regular scrutiny. Alongside establishing minimum standards of engagement, there must be clear scrutiny by the BEIS select committee on the level of compatibility of regulators with the objectives of the government's industrial strategy. This role should be enhanced particularly in cases where regulators have a responsibility to contribute to the delivery of new policy objectives.



“Long termism should be ingrained into the regulatory framework, and as a result be reflected in the decision-making process of economic regulators.”

References

1. BEIS (2018) Energy and Climate Change Public Attitudes Tracker. Wave 25.
2. National Infrastructure Commission (2019) 'Strategic Investment and Public Confidence'.
3. National Infrastructure Commission (2019) 'Strategic Investment and Public Confidence'.
4. CBI (2018) Ready, Set, Connect: Delivering a roadmap to supercharge the UK's digital infrastructure
5. National Audit Office (2017) A Short Guide to Regulation.
6. ONS (2020) GDP output approach – low level aggregates. June 2020
7. ONS (2020) JOBS02: Workforce jobs by industry. June 2020
8. ONS (2020) 2016 Input-Output Analytical Tables, Multiplier Effects
9. BEIS (2018) Energy and Climate Change Public Attitudes Tracker. Wave 25.
10. Ibid.
11. National Infrastructure Commission (2019) 'Strategic Investment and Public Confidence'.
12. Ofwat (2017) The Future of Independent Economic Regulation. Keynote lecture by Cathryn Ross, London School of Economics. 22nd July 2017.
13. UKRN (2020) Moving forward together: performance scorecards. 9th January 2020
14. Thatcher, M. (1992). Speech in Korea ('The Principles of Thatcherism'). Available at <https://www.margareththatcher.org/document/108302>
15. Byatt, I. (2019) 'A Regulator's Sign-off: Changing the Taps in Britain'. The Monetisation and Privatisation of the Water and Wastewater Industry Short Run Press.
16. A market failure is a situation where the market does not operate effectively to deliver the appropriate outcomes and there is therefore a role for government intervention.
17. BIS (2011) Principles for Economic Regulation. April 2011.
18. HM Government (2018) Encouraging Innovation in Regulated Utilities.
19. Ibid.
20. RMMS (2019) Sixth report on monitoring development of the rail market. European Commission.
21. See: <https://www.raildeliverygroup.com/media-centre/press-releases/2018/469773740-2018-01-29.html>
22. BEIS (2018). 'Modernising Consumer Markets Green Paper'.
23. DCMS (2018) Future Telecoms Infrastructure Review.
24. OECD (2018) PMR database. PMR values range from 0 to 6, from the most to least competition friendly regime therefore a lower score reflects lower regulatory barriers to firm entry and competition.
25. Available at: <http://www.legislation.gov.uk/ukpga/1993/43/contents>
26. <https://www.gov.uk/government/news/government-minded-to-appoint-ofcom-as-online-harms-regulator>
27. This refers to the primary statutory duties of regulators, and therefore does not include secondary considerations which could extend beyond the duties identified in the table.
28. Ofgem (2020) Decarbonisation programme action plan.
29. The Office of Communications Annual Reports and Accounts, 2018/19.
30. Ofgem annual accounts 2001/02 and 2018/19.
31. Ofcom (2020) Broadcast standards during the coronavirus pandemic
32. Ofgem (2020) A new phase for managing the COVID-19 crisis

33. Principles for Economic Regulation, A call for Evidence, Department for Business, Innovation and Skills, January 2011.
34. The Regulatory State: Ensuring its Accountability, Volume 1 Report, House of Lords Select Committee on the Constitution, 6th Report of Session 2003-04.
35. See: <https://www.ft.com/content/71b97124-8b47-11e8-bf9e-8771d5404543> for example.
36. OECD (2014) Best Practice Principles for Regulatory Policy, The Governance of Regulators..
37. Ibid.
38. The 2018 indicators on the governance of sector regulators, Economics Department working papers No. 1564, Lorenzo Casullo, Alexis Durand and Filippo Cavassini, 2 August 2019.
39. OECD (2019) 'The 2018 Indicators on the Governance of Sector Regulators Part of the Product Market Regulation (PMR) Survey. Economics Department Working Papers no. 1564.
40. OECD (2018) Economy-wide Product Market Regulation Indicators., electronic dataset.
41. BEIS (2019) UK Energy Statistics, Q1 2019. Statistical Press Release. 27 June 2019.
42. See: <https://competitionandmarkets.blog.gov.uk/2019/05/28/the-cma-data-unit-were-growing/>
43. Ofgem (2018) Future Insights Series: Implication of the Transition to Electric Vehicles.
44. Van Reenen, J. (2018) 'Increasing Differences Between Firms: Market Power and the Macro-Economy'. Centre for Economic Performance. Discussion paper no.1576
45. The CBI's response to the online harms white paper is available here: <https://www.cbi.org.uk/policy-focus/innovation-and-digital/articles/current-online-proposals-risk-falling-short-of-ambitious-government-targets/>
46. National Infrastructure Commission (2019) Strategic Investment and Public Confidence.
47. CBI (2018) Ready, Set, Connect: Delivering a roadmap to supercharge the UK's digital infrastructure
48. ONS (2020) Business impacts of COVID-19 data, 20 April to 3 May 2020
49. Ofcom (2020) UK Home Broadband Performance.
50. CBI (2020) Openreach: keeping the national connected during the pandemic
51. CBI (2020) Principles for a low-carbon, sustainable and net-zero aligned economic recovery post COVID-19
52. <https://www.gov.uk/government/news/build-build-build-prime-minister-announces-new-deal-for-britain>
53. Byatt, I. (2019) 'A Regulator's Sign-off: Changing the Taps in Britain'. The Monetisation and Privatisation of the Water and Wastewater Industry Short Run Press.
54. National Infrastructure Commission (2019) Strategic Investment and Public Confidence.
55. Ibid.
56. Default energy tariffs are the energy prices paid on a 'standard variable' tariff or a tariff you didn't choose i.e. default is often the energy supplier's basic offer.
57. Plimmer, G (2020) Ofwat faced biggest battle with water companies since privatisation. Financial Times. 14th February.
58. CBI (2018) Ready, Set, Connect: Delivering a roadmap to supercharge the UK's digital infrastructure
59. Ofcom (2020) Promoting competition and investment in fibre networks: Wholesale Fixed Telecoms Market Review 2021-26.
60. KPMG (2019) Open banking opens opportunities for greater customer value: Reshaping the banking experience
61. <https://www.openbanking.org.uk/providers/account-providers/api-performance/>
62. OBIE (2019) Consumer Priorities for Open Banking.
63. Available at: <https://www.gov.uk/government/publications/smart-data-review>
64. See: <https://www.gov.uk/government/news/projects-lay-the-groundwork-for-a-future-of-robotlawyers-and-flying-cars>

65. HMT (2020) Budget 2020: Delivering on our promises to the British people.
66. Ofgem (2018) 'Forward Work Programme: Consultation 2019-2021'.
67. BEIS (2019) Regulation for the Fourth Industrial Revolution.
68. CMA (2020) New regime needed to take on tech giants
69. UNSGSA FinTech Working Group and CCAF. (2019). Early Lessons on Regulatory Innovations to Enable Inclusive FinTech: Innovation Offices, Regulatory Sandboxes, and RegTech. Office of the UNSGSA and CCAF: New York, NY and Cambridge, UK.
70. UNSGSA FinTech Working Group and CCAF. (2019). Early Lessons on Regulatory Innovations to Enable Inclusive FinTech: Innovation Offices, Regulatory Sandboxes, and RegTech. Office of the UNSGSA and CCAF: New York, NY and Cambridge, UK.
71. REMIT is an EU-wide regulatory framework used to identify and penalise market abuse, such as market manipulation and insider trading, in the wholesale energy market.
72. CBI (2018) Smooth Operations: An A-Z of the EU rules that Matter for the Economy.
73. National Infrastructure Commission (2019) 'Strategic Investment and Public Confidence', recommendation 1 pg. 11.
74. National Infrastructure Commission (2019) 'Strategic Investment and Public Confidence', recommendation 3 pg. 13.
75. National Infrastructure Commission (2019) 'Strategic Investment and Public Confidence', recommendation 4 pg. 14.



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