

Global Symposium for Regulators (GSR) 2021 Best Practice Guidelines Topic

Inducing new, effective, and agile financing mechanisms to digital infrastructure, access, and use:

Digital infrastructure and services have become the foundation of the digital economy and society, and a powerful driver for development. What new policy and regulatory tools can be leveraged to trigger a multiplier effect on investment in digital infrastructure and services? Is there a 'silver bullet' for accelerating the rollout of ubiquitous connectivity? How can regulation improve affordability and enhance use? What regulatory incentives can stir the forming of new financing models, such as blended and pooled financing? What is the new role of policy makers and regulators with regards to bridging financing gaps? How can new regulatory patterns help craft new breeds of partnerships among different types of market players, funding agencies, banks and non-traditional players?

Ofcom submission

1. The Covid-19 pandemic has underlined how important reliable broadband is to people and businesses. Broadband has allowed countless millions of people around the world to work, socialise and access health, education, and other government services remotely. However, many still lack access to affordable high-quality broadband. Investment in rolling out and (given rising bandwidth requirements) upgrading telecoms infrastructure is vital, as is ensuring affordable access.
2. The UK has recently adopted policy measures to increase investment in both mobile and fibre broadband services, including in areas which have traditionally been underserved. This includes a shared rural network designed to address poor rural mobile coverage (more information is available on that [here](#)), as well as a regulatory strategy to increase the availability of affordable, competitive fibre networks (which is outlined [here](#)). Investment in fibre is important for operators' transport/core networks, as well as to support rising user demand for fixed broadband access and to provide backhaul for increasingly capacity-hungry mobile broadband networks.
3. Historically, regulators have approached the roll out of, and upgrading to, fibre networks in different ways, according to their national situation. Many developing markets have little legacy fixed infrastructure (i.e. copper) so have considered rolling out substantial greenfield fibre. Other countries have needed to upgrade to fibre to the premises (FTTP) as the topology of their legacy fixed broadband networks left little or no scope to significantly extend the life of copper by adopting interim approaches like fibre to the cabinet (e.g. long distances from homes/offices to the cabinet meant the speeds that could be supported were too slow). Given rapidly rising internet demand and the time it takes to deploy or upgrade to extensive fibre networks, there is little scope to defer this evolution – especially as copper reaches the end of its useful life¹. The key aim is therefore to support affordable fibre availability over as wide an area as possible.
4. Fortunately, growing demand for fibre capabilities has largely meant a greater interest from private investors in deploying fibre. In such cases, the role of regulators is to encourage such investment to try to support a vibrant, competitive market for future-proof broadband services. However, at the

¹ According to Cisco's annual internet report (2020), the average global fixed broadband speed is expected to more than double from 2018-2023 reaching 110.5 Mbps. The region with the fastest rate of growth is the Middle East and Africa which is expected to grow 4.2-fold reaching 41.2 Mbps.

same time regulators might need to adopt alternative approaches to support investment in those areas where there might be less or no commercial interest in deployment, or where competition is less feasible, such as less populated areas.

5. Where the market can sustain it, there are strong arguments for promoting broadband network *infrastructure* competition, rather than relying solely on access-based *service* competition on a single network. Competing network providers have greater scope for product differentiation and their control over the network means they can strive to win customers and generate higher margins by offering a better service than their competitors (e.g. faster speeds and higher reliability). Although this involves the replication of network investments, it can deliver significant benefits to consumers in the longer term from innovation (including innovation to increase efficiency and reduce costs), greater choice, and stronger incentives for price competition.
6. There are a variety of ways regulators can help incentivise private investment and competition in fibre networks.² In March 2021, Ofcom published the conclusions of its [Wholesale Fixed Telecoms Market Review](#) (WFTMR) on the regulation of the fixed telecoms markets that underpin broadband, mobile and business connections, for the period from April 2021 to March 2026. Our approach included:
 - Cutting the costs of rolling out networks: where there is a fixed telecom incumbent with market power, mandating third-party access to their ducts and poles can significantly reduce the upfront cost of building competing networks (in the UK, for instance, by around half).
 - Helping secure investments by new providers: New regional broadband providers can struggle to get a foothold in the market when an existing operator targets their potential customers with geographic discounts. Regulators can reduce this risk by ensuring that those with market power can only offer such discounts on a nationwide basis, thus reducing the risk that discounts are used to target new localised competition.
 - Providing clarity on future fixed broadband regulation: An uncertain regulatory environment can discourage network investment, so setting a clear regulatory framework with a sufficiently long time horizon can help provide regulatory stability and reassurance to all market players and potential investors.
7. Regulators might also consider methods for incentivising operators with market power to deploy fibre where there is none. This is especially important in areas where they provide the only fixed broadband network. Where a regulator considers imposing price controls to promote affordability, these can be selectively modified to allow the operator to charge marginally higher prices for full fibre products than the latest generation of legacy networks (e.g. advanced DSL), thus incentivising investment. Operators with market power are also often required to provide wholesale access to their networks (at regulated prices) to support competition for affordable broadband services. By selectively applying regulated pricing to entry-level superfast broadband services, regulators can encourage both the incumbent and any new providers to invest more in fibre deployments which support the fastest services.
8. There might still be some geographic areas where private investment in fibre networks will struggle to make returns – typically rural and remote locations. In these areas, regulators can adopt cost-based charge controls applicable to operators with market power (who are subject to regulated

² Ofcom focused on gigabit-capable networks, i.e. broadband services able to provide download speeds of 1 Gbit/s typically delivered over full-fibre networks and latest versions of hybrid fibre/coaxial cable networks

pricing) to ensure they are able to cover the costs of their investment. However, in some areas, the business case might not be present to justify fibre investment, and government subsidies might be the only means of supporting deployment in the near-term. It is important that regulators and governments work together to help define such locations in order to minimise the risk of subsidising investment in areas which might have otherwise been covered over time by a private investor.

9. The right mix of regulatory measures, especially those that focus on an incumbent with market power, might well vary in different parts of the country. This means regulators need to take time to assess the broadband market on a local basis to craft the right approach. In the UK, Ofcom defined three different areas in order to tailor its approach:
 - Areas with existing market competition: These areas typically require the least intervention.
 - Areas with the potential for material competition: Care needs to be taken in these areas to enable wholesale access to the incumbent's network to ensure service-based competition without undermining incentives to deploy competing networks (e.g. not regulating prices for the fastest services that can only be supported by fibre).
 - The remaining areas: There are likely to be less densely populated rural areas that require cost-based charge controls and potentially subsidies.