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& CONSUMER COMMISSION

Communications market report

2020-21

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List of acronyms

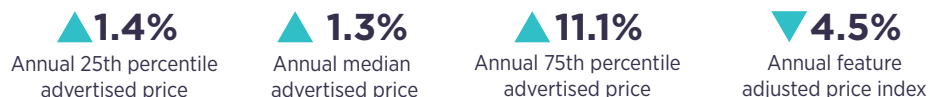
ACCAN	Australian Communications Consumer Action Network
ACCC	Australian Competition and Consumer Commission
ACL	Australian Consumer Law
ACMA	Australian Communications and Media Authority
AVC	access virtual circuit
BBM	building block model
CBD	central business district
CCA	<i>Competition and Consumer Act (2010)</i>
CDR	consumer data right
CIS	Critical Information Summary
CVC	connectivity virtual circuit
DITRDC	Department of Infrastructure, Transport, Regional Development and Communications
DSL	digital subscriber line
DTCS	domestic transmission capacity service
FAD	final access determination
FLSM	fixed-line services model
FTTB	fibre-to-the-basement
FTTC	fibre-to-the-curb
FTTP	fibre-to-the-premises
FTTN	fibre-to-the-node
GB	gigabyte
GHz	gigahertz
HFC	hybrid fibre coaxial
LBAS	local bitstream access service
LTIE	long term interest of end users
LTRCM	long term revenue constraint methodology
MBA	Measuring Broadband Australia
Mbps	megabits per second
MHz	megahertz
MIRA	Macquarie Infrastructure and Real Assets
MNO	mobile network operator
MTAS	mobile terminating access service
MVNO	mobile virtual network operator
NBN	National Broadband Network

OTT	over the top
PDF	product development form
QCN	Queensland Capacity Network
RBS	Regional Broadband Scheme
RHS	right hand side
RKR	Record Keeping Rules
RSP	retail service provider
SAU	Special Access Undertaking
SBAS	superfast broadband access service
SIO	service in operation
SMS	short message service
SSU	Structural Separation Undertaking
SWG	Special Working Group
Tbps	terabits per second
TC-2	traffic class 2
TCP	Telecommunications Consumer Protection Code
TIO	Telecommunications Industry Ombudsman
TPG	TPG Telecom
VOIP	voice over internet protocol
VoLTE	voice over LTE
VoWiFi	voice over WiFi
WADSL	wholesale asymmetrical digital subscriber line
WBA	Wholesale Broadband Agreement
5G	fifth generation

Competition and price changes in telecommunications services in Australia



Fixed broadband



Mobile phone services



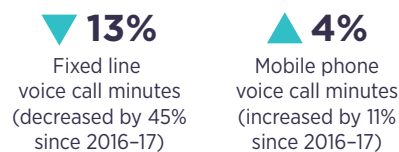
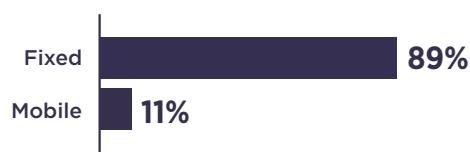
Mobile broadband



Annual growth in data downloads

▲ **20%**

Proportion of total downloads



Annual telecommunications complaints

119,400
Complaints received by the Telecommunications Industry Ombudsman

▼ **6.1%**
Telecommunications Industry Ombudsman complaints received

5,798
Telecommunications complaints received by the ACCC

▼ **5%**
ACCC telecommunications complaints received

Key market developments



NBN declared built and operational in late 2020



Customers selecting faster broadband speeds



Impact of COVID-19



Increased infrastructure competition and investment

Key ACCC projects



Measuring Broadband Australia



Investigations and enforcement



NBN issues: improved consumer protections and service standards introduced



Declarations and access determinations for regulated services



Consumer education

Overview of the report

This report is the ACCC's annual report on communications markets within Australia. It includes an overview of key market developments, observations on competition within the sector, identifies trends and emerging issues and examines the factors impacting on the communications sector in general. It also assesses the changes in the prices paid by consumers for telecommunications services and examines competitive safeguards.

In December 2020, the Australian Government declared the rollout and initial build phase of the national broadband network (NBN) complete. While there is still some migration to occur, the completion of the NBN will enable NBN Co to focus on efficiently operating the network, including efficient investments as required.

It also means that there is an opportunity to examine the long-term regulatory arrangements for the NBN. COVID-19 continued to place unprecedented demand on networks and underscored the essential nature of telecommunications. Ensuring the regulatory arrangements for NBN are appropriate to secure the efficient use of the network, encourage certainty in retail markets and provide appropriate protections for consumers and businesses using the NBN will deliver outcomes that are in the long-term interests of end-users.

Developing new regulatory arrangements for the NBN

In June 2021, the ACCC commenced a multilateral process to review the NBN Special Access Undertaking (SAU). The current SAU has been in place since 2013. Among other things, it establishes a framework of price and revenue controls, but only covers a subset of NBN technologies: fibre-to-the-premise, fixed wireless and satellite.

Retail service providers (RSPs) have raised concerns as to the impacts of the structure and level of NBN Co's prices on the retail market. There were concerns with the ongoing pricing uncertainty arising from NBN Co's use of temporary discounts and promotions. There was also ongoing debate about the effectiveness and efficiency of NBN Co's connectivity virtual circuit (CVC) pricing construct.

NBN Co continued to use discounts, by way of short-term promotions such as Focus on Fast, to encourage take-up of higher speed services. The implication of these discounts is that consumers who take up the offers may be left paying higher prices when discounts are withdrawn, and that if they don't require the higher speeds, they could end up paying for a level of service they do not need. RSPs also face uncertainty about longer-term pricing strategies based on short-term discounts.

The regulatory review is a collaborative process between the ACCC, NBN Co, government, RSPs, industry participants, consumer representatives and other stakeholders to develop a revised long-term regulatory framework for the NBN. This aims to lead to more efficient wholesale pricing. Once finalised, the economic benefits of the significant public investment in the NBN will be realised through a more sustainable and competitive NBN market.

COVID-19 continued to affect the communications sector

COVID-19 placed unprecedented pressure on Australia's communications infrastructure. Almost overnight, schools, households and many Australian companies transitioned to remote working, learning and socialising – all of which require online access and increased use of high data video communications. Demand for broadband services and capacity remained high and can be expected to be ongoing. Initial respite was overtaken by a second wave of lockdowns and restrictions during 2021.

Australians continue to rely heavily on their home internet service for work, education and entertainment. The health orders and re-opening plans underscore the need for consumers to remain connected. For business, online engagement with customers has become increasingly important in a contactless environment.

While the pandemic has undoubtedly changed the way consumers interact with, and use communications services, it is likely that many of these trends will extend beyond the pandemic. For instance, as households transition to more flexible ways of working and data-intensive activities (such as video content) are used more heavily, their communications requirements will also change.

The communications industry responded well to the challenges the pandemic presented. Working together, RSPs, NBN Co and other access providers and content providers continued a raft of measures to ensure the sector functioned efficiently through this period. In particular, the industry collectively supported increased data needs without impacting the costs to consumers.

Consumers shift to, and pay more for, higher speed NBN broadband services

During the year, NBN Co introduced a number of temporary wholesale discount offers to encourage the take-up of high and very-high speed broadband plans. In February 2021, a new wholesale promotion, 'Focus on Fast', offered service providers discounts on wholesale pricing and increased CVC allowances where service providers upgraded customers to higher speed plans. The discounts gave some consumers an effective \$30 per month price reduction for 6 months if they took up a high-speed plan. The higher speed plans proved popular with around 650,000 consumers taking advantage of the discounted plans.

However, as the promotions and discounts were only temporary, many consumers reverted to lower speed plans once the discounts were unwound. In the September 2021 quarter, around 300,000 very high-speed services shifted back to lower-speed plans once the promotional offer ceased. This suggests that many consumers are not prepared to pay more for the higher speed NBN broadband services on offer.

Overall, prices for NBN services as a subset of fixed broadband services rose slightly as consumers took up higher speed, and ultimately higher-priced, plans. Key price changes include:

- in general, consumers did not pay more for entry-level, lower speed NBN plans than last year
- the cost of fixed broadband on middle-of-the-range NBN plans increased by 6.3% or \$5 per month
- consumers on higher-end and very high-speed plans paid around 11% or \$10 per month more (even with promotional discounts) for a much faster service.

Overall, the feature-adjusted price of NBN fixed broadband services fell slightly (-2.6%) when prices are adjusted for features such as speed and the amount of data included with the plan. While the advertised or headline price increased for a large number of consumers on the NBN, they likely received a faster service resulting in a relative fall in price when adjustments are made to account for these features.

NBN speeds reach new highs, for some

NBN speeds reached new highs on the back of favourable prices and conditions in the wholesale market. This included higher maximum speeds (including near gigabit speeds over some technologies), broader availability of very-high speed tiers (particularly over HFC) and boosting CVC allowances to cover increased demand during the busy hour, particularly throughout the COVID lockdown periods.

Busy hour network use slowed in the first half of 2021 as COVID restrictions were relaxed. However, some RSPs took advantage of the discounts offered by NBN Co on its higher speed plans to shift customers up the speed tiers. All RSPs took advantage of these market offers to boost quality, showing the growing importance of speed outcomes to competition in retail markets.

However, not all consumers benefited from these speed improvements. Around 12% of Measuring Broadband Australia (MBA) volunteers on a fibre to the node (FTTN) connection ended the year unable to achieve 75% of their plan speed tier at any time of the day. A subsequent spike in use of the NBN, as lockdowns returned in the middle of 2021, required the reintroduction of wholesale rebates to meet demand from customers.

Not all consumers were enticed to the higher speed tiers. At the end of June 2021, there were still around one million services at the entry-level 12 megabits per second (Mbps) speed tier.

Over the year, there was a rise in the number of complaints related to both the installation of new NBN services and fault rectification. These problems were initially due to disruptions in the supply chain for modems and other network equipment as well as restrictions on technician movements during COVID. This prevented new service orders being taken in some cases, or extended time periods for activating services or fixing faults on the NBN. The loss of RSP call centre capacity over the year also impacted those consumers that needed assistance. As a result, mandatory migration dates were delayed for consumers not yet on the NBN to lessen the risk that those consumers could lose service continuity through no fault of their own.

Problems NBN Co experienced when migrating to a new appointment scheduling platform in 2021 also caused significant declines in operational quality metrics across all RSPs from May 2021.

Mobile consumers likely paying more-for-more, but do they need more?

Throughout 2020-21 the mobiles market continued to consolidate. TPG Telecom (TPG) confirmed its position as the third mobile network operator (MNO) following the merger with Vodafone Hutchison Australia.

On the retail side, the major carriers simplified their service offerings in their flagship brands and introduced new low-price brands and product constructs. MNOs were active in the mobile virtual network operator (MVNO) segment of the market, launching lower-cost sub brands and acquiring formerly independent MVNO operators that compete for more value-conscious consumers.

Geographic coverage and network quality continue to be important factors of non-price competition, particularly as the MNOs' fifth generation (5G) networks are rolled out. All the MNOs significantly advanced the rollout of their 5G networks and services. 5G is becoming an important differentiator as the MNOs' flagship brands focus on non-price factors such as speed, coverage, technology and customer service.

Retail mobile prices increased for many consumers

Consumers are paying significantly more for a range of mobile phone plans from Telstra, Optus and Vodafone. These mobile price increases follow the merger of TPG and Vodafone in 2020. With the 3 major MNOs now accounting for over 91% of the total retail mobile phone market, and almost 95% of the post-paid market, competition remains muted and many consumers are paying more.

The ACCC is concerned that the merger has directly contributed to higher mobile prices by lessening incentives for the 3 MNOs to compete strongly.

With the major carriers continuing to consolidate their retail plans, the MNOs increased prices on a range of post-paid plans and have effectively increased the price of pre-paid plans where expiry periods were reduced, requiring customers to recharge more often. This coincided with mobile operators moving towards a model of 'more-for-more' service offerings.

Many consumers on post-paid plans offered by the MNOs experienced a nominal increase in excess of \$5 per month in the cost of their service, as MNOs increased the price of their 'base' retail mobile plans on their flagship brands. For some consumers on pre-paid plans, effective price increases came through reductions in the recharge expiry period on some 35- and 42-day pre-paid plans to 28 days. Over a year, this effectively equalled a substantial nominal price rise of 25%, and in some cases up to 50%.

Overall, the amount of included data in mobile plans is rising faster than use

While the base line mobile prices rose, the MNOs have also offered higher included data allowances as part of plans. The mobile operators moved towards a model of 'more-for-more' in their service offerings. MNOs now offer 50–100% more data across their plans.

However, the average mobile consumer still uses only 11.8 GB of data per month when on a post-paid contract, compared to a median data allowance of 35 GB. Pre-paid users consume an average of 6.3 GB per month, compared to a median data allowance of 30 GB. As such, the retail cost per GB of data continues to fall rapidly in line with strong growth in data allowances.

Where their existing plan already meets their needs, it is unclear what additional value, if any, consumers derive from more data. With the amount of included data in mobile plans rising faster than average data usage, consumers may not need or want additional data. Accordingly, the ACCC questions whether a higher monthly data allowance provides consumers with a sufficient trade-off for paying a higher monthly price.

This is also the first year in which all post-paid plans surveyed included unlimited SMS to numbers in Australia. In addition, all but one post-paid plan included unlimited calls to Australian numbers. Of the pre-paid plans surveyed, only 3 did not include unlimited calls or SMS, with all plans over \$10 a month offering unlimited calls and SMS.

Key price changes include:

- the price for entry-level, low-cost pre-paid mobile services increased by 16.2% or around \$3.50 per month
- the effective cost of many pre-paid plans increased, some by more than 25%, where the recharge expiry period was reduced
- the price for a typical post-paid mobile phone plan increased by 2.9%
- the feature adjusted price index across all mobile plans, when adjusted for increases in service attributes and quality features such as increased data allowances, fell by 9.9%.

The MVNOs continue to offer good value for money with plans available across a range of price points with competitive pricing and a broad range of included data options and discounts.

Mobile broadband

With the rollout of 5G, network operators are well placed to not only offer improved mobile broadband, but also provide fixed wireless alternatives to homes and small businesses, in competition with traditional fixed-line broadband and NBN technologies. All 3 MNOs now offer some form of 5G home broadband product, which is generally price competitive with comparable NBN plans.

Enforcement action to protect consumers and compliance measures

The ACCC undertook a range of enforcement actions to protect vulnerable consumers and to act against misleading representations about the services consumers acquire.

Telstra paid a \$50m penalty for unconscionable practices when upselling post-paid plans to Indigenous customers. This conduct included manipulating credit assessments and misrepresenting products as free, and exploiting the social, language, literacy, and cultural vulnerabilities of these Indigenous customers. At the time, it was the second highest penalty ever imposed under the Australian Consumer Law and the largest penalty imposed on a telecommunications company.

We continued to ensure that consumers receive the service levels they have paid for by targeting misinformation. We took action against NBN Co for misleading consumers who were serviced by a

superfast broadband network which competes with the NBN. NBN Co had falsely told those consumers that they had to migrate to the NBN.

Vocus Group subsidiaries, Dodo and iPrimus paid a \$2.5m penalty for misleading broadband speed claims.

Measuring Broadband Australia

We also continued to provide consumers with accurate and independent information about broadband speeds through our MBA program. The MBA quarterly reports showed that consumers experienced record high speeds, particularly during busy hour periods. It also showed that the performance gap between RSPs' download speed metrics had narrowed significantly.

During 2021, the Australian Government announced it would support an extension of the program for another 4 years and expand the scope of the program to include NBN fixed wireless and non-NBN networks.

1. Introduction

The Australian Competition and Consumer Commission (ACCC) releases the Communications Market Report annually to report on competitive safeguards in the Australian telecommunications industry and the prices paid by consumers for telecommunications services, as required by the *Competition and Consumer Act 2010* (CCA).

The ACCC has a broad role in the Australian telecommunications sector, including competition and access functions, responsibilities relating to the NBN, monitoring and reporting, and compliance work under the CCA and other telecommunications-specific legislation.

Chapter 2 of this report highlights the key market developments from the 2020–21 financial year that have influenced both the market and the ACCC’s work in communications. In 2020–21, many events have shaped the communications market in Australia, including the ongoing COVID-19 pandemic. The NBN was declared built and fully operational. Wholesale and retail promotions enticed consumers to try high speed plans. In mobiles, the rollout of 5G gained pace but many consumers experienced rising prices.

Chapter 3 gives an overview of pricing and consumer trends for the 2020–21 financial year. While the price of some telecommunications services increased, this likely came with much more included data or other features such as higher speed. This chapter provide insights into price changes for telecommunications service using methodologies that look at price changes in advertised prices and price changes that are adjusted to take into account changes in features and attributes of individual plans.

Finally, Chapter 4 reviews the ACCC’s actions and engagement in the communications sector in 2020–21. It outlines ACCC actions that have been taken to safeguard both competition and consumers noting that telecommunications, as an essential service, is an ACCC compliance and enforcement priority.

2. Key Market Developments

2.1 National Broadband Network

During 2020-21, the initial build phase of the NBN was completed and greater attention turned to NBN Co's ongoing role as network operator and the extent to which wholesale and regulatory settings promote competitive and efficient retail markets.

2.1.1 Completion of the NBN rollout

In December 2020, the Australian Government declared the rollout and initial build phase of the NBN complete.¹ While NBN Co has indicated ongoing investment initiatives for the network, the ACCC expects that NBN Co's future capital and operating expenditure will more closely resemble other steady-state providers.

Customer migration to the NBN is ongoing. At 30 June 2021, 11,966,350 premises were ready-to-connect, with 8,200,403 premises having active NBN connections. At this time, 68.5% of total ready-to-connect premises had an active NBN connection, compared with 62% at the end of last financial year.²

The completion of the NBN will enable NBN Co to focus on investments to further improve service performance. In September 2020, NBN Co announced a planned investment of \$4.5 billion to make the highest speed plans available to more areas across Australia. This program is split into network upgrades, capability enhancements for business connections and the creation of a fund to co-invest in regional and remote broadband services.

2.1.2 NBN Wholesale Broadband Agreement 4

In late 2020, NBN Co offered access seekers a range of improved pricing and service standard commitments in its Wholesale Broadband Agreement 4 (WBA4). NBN Co made these commitments in response to findings that the ACCC had reached in its access inquiries on pricing and wholesale service standards.

These measures, which commenced in December 2020, include:

- further reductions in the wholesale price of NBN Co's entry-level access bundle to \$24.70 from December 2020 to April 2021, and then to \$22.50 for the remaining period
- more product and pricing certainty through additional protections against the withdrawal of bundled access products, and the imposition of price caps and minimum CVC allowances for these product bundles
- higher rebates for missed appointments
- improved commitments and information on service speed performance
- the extension of rebates to business grade (TC-2) services, meaning small-medium business customers are eligible for the benefits of rebates in cases of poor service.

These measures build upon the rebate framework established under Wholesale Broadband Agreement 3 concerning missed appointments, late connections and fault rectification.

WBA4 is due to expire at the end of November 2022. However, NBN Co has proposed an extension until 30 September 2023 to allow industry time to focus on the review of the NBN regulatory framework prior to commencing Wholesale Broadband Agreement 5 negotiations.

1 Available at <https://minister.infrastructure.gov.au/fletcher/media-release/nbn-declared-built-and-fully-operational>.

2 Available at: https://www.nbnco.com.au/content/dam/nbnco2/2019/documents/weekly-progress-report/Public_Progress_data%20-%20141021.pdf.

The improved wholesale arrangements in WBA4 benefit consumers by providing access to an affordable entry-level product, a high degree of certainty around wholesale pricing, and assist in keeping prices for higher speed NBN products at more affordable levels. A stronger rebate framework provides stronger incentives for NBN Co to meet its wholesale service standard commitments.

The ACCC considers the pricing and service standard commitments set out in WBA4 offer meaningful improvements to service outcomes and promote the long-term interests of end users (LTIE).

2.1.3 NBN wholesale market

Since June 2020, the number of NBN residential broadband (i.e. Traffic Class 4) services in operation (SIOs)³ has increased from around 7.4 million to around 8.4 million, with the rate of growth slowing as the network migration nears completion.

During the 2020–21 year, smaller RSPs such as Aussie Broadband, Southern Phone and Superloop have increased their wholesale market access shares, coinciding with a slight decline in the market shares of both Telstra and Vocus Group. Superloop's acquisition of Exetel in mid-2021 has further contributed to its strong SIO growth. This also impacted Optus's market share because it had been supplying Exetel with NBN wholesale aggregation services.

When NBN Co introduced its high-speed promotional offers in late 2020, there was a large increase in services acquired at the 100 Mbps tier, which encompasses the Home Fast product. However, when NBN Co introduced its temporary Focus on Fast promotion in February 2021, there was an even greater migration of services to the tiers above 100 Mbps, including the Home Superfast and Home Ultrafast products. The temporary nature of the promotions, however, meant that many customers who trialled the higher speed services, returned to lower speed tiers in the September 2021 quarter, when the discounted plans ended.

In the September 2021 quarter, around 300,000 very high-speed services shifted back to lower-speed plans once the promotional offer ceased.

The higher speed promotions coincided with COVID-19 lockdowns in 2021 and both these events led to the levels of CVC acquired by wholesale access seekers increasing from around 2.6 Mbps per user in the September quarter 2020 to 2.8 Mbps in the September 2021 quarter.

2.1.4 NBN retail market

Competition in the retail market appears strong with 184 RSPs selling NBN services.⁴

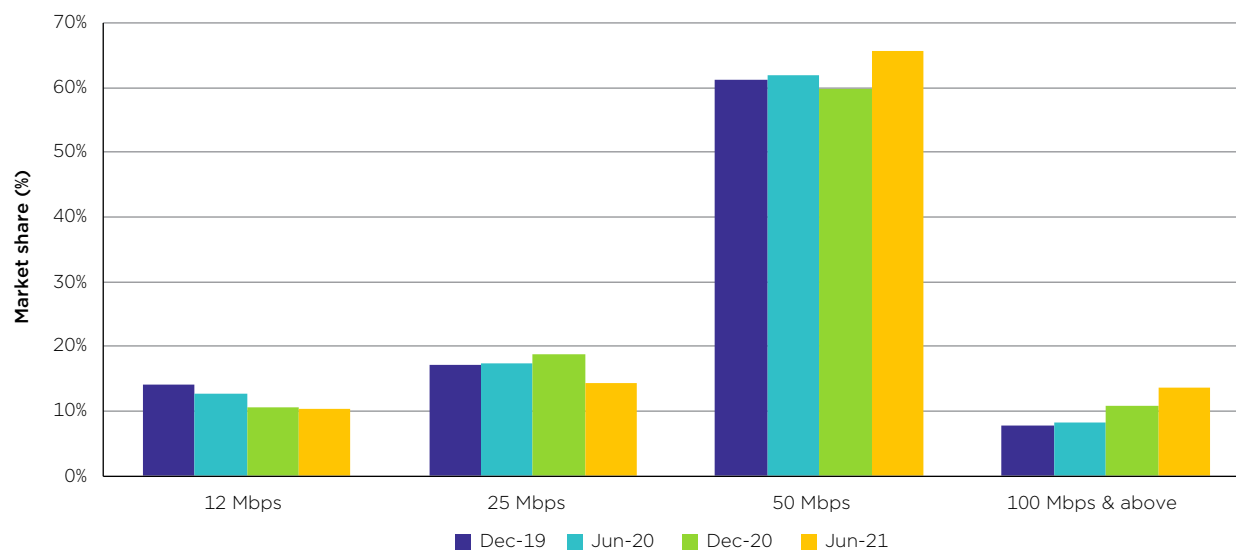
There has been an increase in the take-up of higher speed plans at the retail level in 2021 following the Focus on Fast promotion. In particular, there has been substantial growth in the 100 Mbps or greater speeds with 13% of services at these speeds in June 2021, up from just 8% last year.⁵

3 In general, there are differences between the number of premises activated and SIOs at any point in time, given that NBN Co may supply multiple services to a single premise.

4 <https://www.nbnco.com.au/residential/service-providers>, accessed 29 October 2021.

5 ACCC, [Internet Activity Report for June 2021](#), December 2021.

Figure 2.1: NBN retail broadband internet by speed tier - market share



Source: ACCC Internet Activity Report, June 2021.

Around 24% of services remain on speeds of 25 Mbps or below, down from 30% a year ago.⁶ Despite an expected fall in the number of higher than 100 Mbps services following the end of the Focus on Fast promotion, it is unlikely that consumers will revert to plans at speeds of 25 Mbps or 12 Mbps. Since June 2020, 50 Mbps services have continued to grow and are likely to continue as the dominant speed level.

Monthly data downloaded over the NBN has also continued to increase, up from 322 GB per user in June 2020 to 361 GB per user in June 2021.⁷

In other major market developments:

- Uniti acquired HarbourISP in November 2020
- Vocus's shareholders agreed to Macquarie Infrastructure and Real Assets (MIRA) and Aware Super's acquisition in June 2021
- Superloop completed its acquisition of Exetel in August 2021
- Aussie Broadband, currently the fifth largest provider of broadband services in Australia, made its debut on the ASX in October 2020.

2.1.5 NBN Speeds

NBN speeds improved throughout the period as a result of further network investment and strong retail competition.

NBN Co reported an increase in the number of premises in its fixed line footprint that could move to its 2 higher speed tiers. Almost all premises passed by the HFC network could connect to the 250 Mbps download speed tier and a little over half could connect to the highest speed tier (which in practice can support 600 to 700 Mbps downloads). This is up from 70% and 7% respectively when these speed tiers were launched in May 2020. All premises passed by the fibre to the premise network also had the option of connecting to these speed tiers.⁸

Speeds available on all major NBN speed tiers increased, with average speeds ending the year between 10 and 15% higher than at the start of the year.⁹

⁶ ACCC, [Internet Activity Report for June 2021](#), December 2021.

⁷ ACCC, [Internet Activity Report for June 2021](#), December 2021.

⁸ NBN Co, [NBN Co announces suburbs and towns where 900,000 more homes are eligible for a fibre upgrade by ordering selected plans](#), 4 May 2021.

⁹ ACCC, [Measuring Broadband Australia Report 14](#), August 2021, pp. 7-11.

This was principally due to 2 NBN Co initiatives. In March 2020, NBN Co boosted CVC allowances by 40% without additional charge in response to the COVID-19 crisis.¹⁰ This allowed RSPs to provision their networks to better meet the higher demand over more of the busy hours that occurred each week throughout the 2020 COVID-19 lockdown. NBN Co maintained this arrangement until December 2020, at which point it built some of the allowance into its business-as-usual pricing.

Secondly, in June 2020, NBN introduced a 15% bandwidth overhead allowance, which enabled RSPs to deliver 100% of NBN plan speeds when using connections capable of supporting those speeds.¹¹ Average download speeds observed on NBN services monitored by the MBA program increased by around 7 percentage points by October 2020 during all hours, and this continued as more RSPs took advantage of the change.¹²

In addition, growth in demand for CVC capacity began to trail projections from early 2021. This can be explained by changes in consumer behaviour as lockdown rules were relaxed and/or by some streaming application providers adopting improved data compression techniques to make less intensive use of access networks. As wholesale market pricing is based on projected network use, differences between actual and projected growth will make it either more or less costly to deliver high speeds in busy hours. In this case, RSPs chose to pass on the benefits to consumers in the form of higher busy hour speeds showing the growing importance of this service attribute in retail markets.

High busy hour speeds ceased to be the preserve of those RSPs that directly connect to the NBN. Exetel, which is an RSP that uses a wholesale aggregation service to reach its NBN customers, obtained the highest headline download speed metric during all hours in the MBA report based on testing conducted in May 2021.¹³

From June 2021, COVID lockdowns in the ACT, NSW and Victoria saw a resurgence in demand and for capacity on connectivity virtual circuits. NBN Co responded by providing further rebates in the wholesale market to support RSPs in maintaining high busy hours speeds. This support is expected to remain in market until December 2021.

That said, not all consumers were able to benefit from the significant improvements in NBN speeds. In this regard, although down by 5 percentage points from the start of the year, 12% of MBA volunteers that connect to the FTTN network ended the year rarely able to achieve more than 3 quarters of their selected speed tier at any time of the day.¹⁴

2.1.6 NBN service quality

NBN Co's service activation and fault handling metrics declined over the year, before returning to the levels observed at the start of the period.

The declines were initially due to disruptions in the supply chain for terminating modems and other network equipment which principally affected the HFC and fibre to the curb (FTTC) networks. Restrictions on technician movements during COVID-19, such as crossing state borders or attending certain premises, also contributed to a downtick in performance as these supply issues prevented new service orders being taken in some cases or extended time periods for activating services or fixing faults on the NBN.

The loss of RSP call centre capacity during 2020 also impacted those consumers that needed assistance.

Mandatory migration dates were delayed for consumers not yet on the NBN to mitigate against the risk that those consumers could lose service continuity through no fault of their own. In 2020–21, Telstra advised the ACCC of Force Majeure and Excluded Events under the Migration Plan and requested our forbearance on a number of occasions in order to defer Migration Plan disconnections by 2 to 5 months

10 NBN Co, [nbn waives additional wholesale capacity charges of up to 40 percent for three months](#), 18 March 2020.

11 NBN Co, [NBN launches three new residential wholesale higher speed tiers](#), 29 May 2020.

12 ACCC, [Measuring Broadband Australia Report 11](#), December 2020, p. 4.

13 ACCC, [Measuring Broadband Australia Report 13](#), June 2021, p. 5.

14 ACCC, [Measuring Broadband Australia Report 10](#), September 2020, p. 32 and ACCC, [Measuring Broadband Australia Report 14](#), August 2021, p. 72.

for a number of reasons including the COVID-19 pandemic, premises not being NBN serviceable, holiday period disruptions and NBN Co's inability to install HFC in premises connection units due to semiconductor shortages.

Problems NBN Co experienced when migrating to a new appointment scheduling platform in 2021 also caused significant declines in operational quality metrics across all RSPs from May 2021. Faults fixed in agreed time limits and connect first time metrics were most affected, falling to 70 and 74% respectively from levels that are typically above 90%.¹⁵ Although NBN Co did not accept appointments during the problems with the scheduling platform, and therefore, did not incur a rebate liability, NBN Co agreed to make equivalent payments to RSPs where they missed their agreed time limits.

2.1.7 Development of long-term regulatory arrangements

RSPs continued to raise concerns about the impacts on the retail market of the structure and level of NBN Co's prices, and the lack of certainty under current price control arrangements in the SAU. With WBA4 in place, and the initial rollout of the network complete, the ACCC considered it timely to address the longer-term arrangements in the SAU to enable the NBN to transition to a steady-state environment.

The current SAU has been in place since 2013, when it was accepted by the ACCC as the long-term regulatory framework for NBN Co's wholesale services. The SAU was intended to achieve a range of key objectives benefitting end users and the wholesale market generally.

The SAU was established to provide NBN Co the opportunity (but not the guarantee) of recovering its costs, including an appropriate return on investment. The SAU was also intended to provide a degree of long-term pricing certainty to industry and minimise price shocks for like-for-like services for customers moving to the NBN. Additionally, the SAU sought to provide incentives for NBN Co to innovate and invest in improved services such as enhanced service levels, improved connection technologies and greater capacity.

Since 2013, there have been many key developments resulting in most NBN services operating outside of the SAU regulatory framework, including:

- a change in the design of the NBN network. The current SAU applies only to fibre to the premises (FTTP), fixed wireless and satellite services. The current SAU does not cover the additional technologies incorporated as part of the multi-technology mix
- the practice of NBN Co using discounts as its primary means of establishing its product construct and setting prices. Although these discounts have led to a range of end-user benefits, it has also created a high degree of cost uncertainty for industry and undermines some of the initial intentions of the SAU
- the introduction of bundled offers and discounts which has led to increasingly complex pricing.

On 18 June 2021, the ACCC hosted an industry roundtable to discuss updates to the regulatory arrangements for the NBN that could be established through a revised SAU. This roundtable commenced a collaborative process between the ACCC, NBN Co, industry participants and other stakeholders to develop a revised long-term regulatory framework for the NBN. At this time, 3 working groups comprised of key stakeholders were established. Each working group will consider a specific component of the regulatory framework to be incorporated into a revised SAU that NBN Co is expected to propose in early 2022.

¹⁵ NBN Co, [Monthly progress reports](#), viewed 9 November 2021.

2.2 Retail mobiles

The retail mobiles market in 2020–21 saw flat or rising prices under the ACCC’s advertised price approach but falling feature-adjusted prices calculated using a hedonic index. These diverging results, in contrast to previous years, indicate a trend towards a model of ‘more-for-more’ service offerings, mainly more data for the same or higher prices. This is a key feature at the higher end of the market.

This change has been accompanied by structural changes at the lower end of the market, with the MNOs launching lower-cost sub-brands and acquiring formerly independent mobile network virtual operators (MVNOs) that compete for more value-conscious consumers.

For the MNOs’ flagship brands, the focus of competition is on non-price factors, particularly with regard to 5G access, as a consequence of softer price-based competition. These changes are discussed in turn below.

2.2.1 Retail mobiles prices are rising for many consumers

Mobile providers, and in particular the flagship brands operated by the mobile network operators, Telstra, Optus and Vodafone (TPG) have increased data inclusions across their plans, in return for flat or rising nominal prices.

The ACCC’s analysis of pricing data for 2020–21 indicates that many consumers are likely paying more for their mobile phone services. In return for these higher prices, most of these consumers are likely to have seen very large increases in included value on their mobile plans, almost exclusively in terms of data allowances. For more information on the ACCC’s approach to measuring price and feature changes see section 3.1.

While some existing customers may be happy with strong growth in data allowances, particularly among younger and more digitally-connected demographics, it is unclear exactly how much consumers value the ‘more-for-more’ offers that are being released to market. It is likely that some customers faced with rising mobile prices in exchange for higher data allowances would likely prefer to remain on older, cheaper plans, especially in segments of the market where that inclusion growth outpaces growth in consumer data demand.

The MNOs’ flagship brands collectively make up 91% of the retail mobile phone services market. This concentration is even greater in the post-paid segment of the market, which alone makes up 65% of connected services in 2020–21.

In the post-paid segment, the MNOs’ flagship brands collectively hold 95% of services in operation. This means that pricing changes on the MNOs’ flagship brands have potentially greater impact on the charges paid by consumers than is indicated by more market-wide measures, such as those discussed in chapter 3.

For example, over the course of 2020–21, Telstra increased the prices on its post-paid plans by between 5 and 15 dollars per month.¹⁶ These increases were accompanied by large increases in data allowances, as well as some changes to the way Telstra charges for access to its 5G services. For existing Telstra customers, these price rises are unavoidable, as Telstra moves to migrate all of its customers to current offers on month-to-month terms.

During the same period, Optus also increased prices on 4 of its post-paid plans, by a flat \$6 per month. As with Telstra, these increases were accompanied by large increases in data allowances, in most cases a doubling of available data on post-paid plans.¹⁷

Vodafone also increased the prices of some of its flagship post-paid plans, along with an increase in excess data speeds. Those increases were accompanied by time-limited discounting and large bonus data inclusions.

¹⁶ Telstra, [Why we’re changing our mobile plans, and what you’ll get out of it](#), June 2020.

¹⁷ Canstar, [Optus raises mobile plan prices, but adds more data](#), May 2021.

In the pre-paid segment of the market, Telstra and Vodafone both increased the effective prices on some of their products, by increasing the frequency with which customers must recharge their service. Telstra reduced the expiry on some of its pre-paid plans from 35 or 42 days to a flat 28-day expiry across its product range. This is equivalent to a yearly price increase of 25 and 50%, respectively.

Vodafone also lowered the expiry on some of its pre-paid plans from 35 days to 28 days, resulting in an effective 25% increase in the yearly cost of maintaining a pre-paid service at the same recharge level.

A 28-day recharge cycle, now widespread amongst the pre-paid products of Telstra, Optus and Vodafone, is roughly equivalent to receiving 13 bills in a calendar year.

The ACCC is concerned that the merger has directly contributed to higher mobile prices by lessening incentives for the 3 MNOs to compete strongly.

Notwithstanding these changes, a number of plans are available from providers other than the flagship brands of the MNOs that offer better value over a wide range of price points, particularly at the lower end of the market. These plans offer similar call and data inclusions to those offered by the MNOs at lower prices. More market-wide analysis is undertaken in chapter 3.

2.2.2 The mobile network operators are increasingly active in the ‘MVNO’ segment of the market

In addition to providing retail services via their vertically integrated mobile networks, the MNOs also compete in markets for wholesale communications services. These services are acquired by resellers and mobile virtual network operators in order to provide retail mobile products to consumers.

Retail MVNOs have tended to provide cheaper alternatives to the MNOs’ flagship brands, focusing on the lower end of the market, and being more prevalent in the pre-paid segment of the retail market.

The launch of Optus’ Gomo and TPG’s Felix in late 2020 meant that in addition to Telstra’s Belong (which launched mobile services in 2017), each of the MNOs now operates a wholly-owned sub-brand in the retail mobiles market, competing for younger, more value conscious consumers in the segment traditionally targeted by MVNOs.

In early 2021, Optus completed its acquisition of Amaysim and its 1.2 million customers, absorbing the fourth largest mobile provider into the second largest.¹⁸ This MVNO acquisition follows the merger of TPG and Vodafone Hutchison Australia, which included a consolidation of former MVNO brands such as TPG and iiNet into wholly owned subsidiaries of their host network operator.

Following these developments, the ACCC considers there are now 3 ‘tiers’ of providers of retail mobile services:

- the MNOs’ flagship brands, long established vertically integrated providers serving the vast majority of retail customers, namely Telstra, Optus, and Vodafone
- the MNOs’ sub-brands and subsidiary MVNOs, which target the lower end of the retail market and tend to be focused on providing better value or affordability compared to their flagship brands. Examples include Boost (Telstra), Gomo (Optus), Felix (TPG), Amaysim (Optus) and TPG Mobile (TPG)
- independent resellers and MVNOs, which are not affiliated with the underlying infrastructure providers outside of their wholesale relationship. Examples include Aussie Broadband, Aldi Mobile, Woolworths Mobile and Southern Phone.

Both the MNO sub-brands and subsidiaries and the independent resellers and MVNOs compete in the same downstream retail markets as the flagship brands of the MNOs, typically at the lower end of the market.

MVNOs are dependent on their host networks for the features they are able to offer on their retail services and have historically tended to be price takers due to the relatively strong bargaining position

¹⁸ Optus, [Optus Completes Acquisition of Amaysim Australia's Largest MVNO for \\$250M](#), February 2021.

of the vertically integrated host networks. They have tended historically to target segments of the market underserved by the MNOs' flagship brands.

However, with the launch of MNO sub-brands, the mobile operators have been able to capture segments of the market that have tended to be targeted by the MVNOs. The emergence of this newer 'second tier' of subsidiary retail mobile providers means that in addition to holding the vast majority of market share on their flagship brands, the MNOs are able to further increase their share of the overall market when compared to independent operators.

Many of these sub-brands and subsidiary MVNOs offer good value for consumers, particularly for those consumers who prefer a more 'no-frills' experience and are shopping for large data allowances at low prices.

2.2.3 Operators continue to compete on non-price factors as price competition has softened

Advertised prices for mobile phone services saw a median decline of 12.5% for post-paid services, and 18.7% for pre-paid services over the period 2015–16 to 2019–20. Over the same time period, feature-adjusted prices declined by more than 50% across the retail mobile market.¹⁹

This trend of strong price and inclusion-based competition to the year ending 2019–20 has not continued in 2020–21, reflecting the changes to the pricing of the MNO flagship brands.

However, operators continue to compete strongly on a range of non-price factors, including the bundling of entertainment content, and additional non-mobile rewards and loyalty programs. In addition to these, geographic coverage and network quality continue to be important factors of non-price competition, particularly as the MNOs' 5G networks are extended and more consumers acquire 5G enabled devices.

Some MNOs have focused on having wide coverage on their 5G networks²⁰, while others have noted the peak speed available across their networks.²¹ For example, Telstra's advertising now claims 75% population coverage with its 5G network while Optus has made claims that its 5G network is the 'fastest 5G mobile network' in Australia.

The ACCC expects the MNOs 5G roll outs will continue to drive non-price competition, particularly by the flagship brands of the MNOs.

Mobile operators are also continuing to experiment with different pricing models, similar to those seen in other telecommunications markets, and in mobile markets abroad. For example, Felix, TPG's sub-brand, offers a data service with no data cap for \$35 per month, but is speed limited at all times to 20 Mbps. This model of rationing speed rather than monthly data is more common in fixed broadband markets, and has been implemented in the UK by Vodafone UK, a vertically integrated MNO.²²

Vodafone Australia, TPG's flagship brand, also recently introduced a mobile plan with no cap on data used via consumers' mobile handsets, and no speed cap, for \$85 per month. However, in contrast to the rest of Vodafone's services, and the vast majority of the Australian retail market, this plan caps the amount of data that may be used via a handset's hotspot or tethering functionality at 30 GB at full speed, followed by uncapped usage at 2 Mbps. This model of plans with no limit on the total amount of data that consumers may use, but with restrictions on specific forms of consumer usage (that is, data sharing), is especially prevalent in retail mobile markets in the United States, where restrictions on tethering and video resolution are common.

The ACCC expects that as growth in data allowances continues to outpace consumer demand for data, operators will continue to innovate with pricing models for data services, as happened with the shift away from usage charges to ubiquitous unlimited calls and SMS.

19 ACCC, [Communications Market Report 2019–20](#), December 2020.

20 Telstra, [Telstra announces 75 per cent coverage in major 5G rollout milestone](#), June 2021.

21 Optus, [5G explained](#), accessed 20 September 2021.

22 The parent company of Vodafone UK, Vodafone Group Plc. also maintains an ownership stake in the merged TPG via the Vodafone Hutchison Australia side of the 2020 merger.

2.3 Impact of COVID-19

2.3.1 Broadband demand continues to outpace pre-pandemic levels

COVID-19 has placed unprecedented pressure on Australia's communications infrastructure. Schools, households and many Australian companies swiftly transitioned to remote working, learning and socialising – all of which require online access and increased use of video communications and augmented reality.

This transition almost instantly pushed up broadband usage 32% above pre-pandemic levels.²³ At 30 June 2021, over 12 months since the pandemic began, total broadband usage remained 36% above pre-pandemic levels.²⁴

Demand for streaming services has continued to grow, in part due to other entertainment options being restricted or unavailable. It is estimated that there are now 42 million subscriptions across video, music and gaming streaming, up 14% from 37 million in June 2020.²⁵ At the end of June 2021, 78% of Australian households had at least one entertainment subscription, an increase from 65% 3 years earlier.

While the pandemic has undoubtedly changed the way in which consumers interact with communications services, it is likely that many of these trends will continue, particularly as households transition to more flexible ways of working or as data-intensive activities (such as video/augmented reality, gaming and video streaming of traditional broadcasting content) become more widespread.

2.3.2 Response to increased network demand

The industry has continued to respond well to the challenges presented by the ongoing pandemic, despite key mitigation measures ultimately lapsing in the 2020–21 financial year.

The ACCC's MBA quarterly reports reveal that average download speeds increased over the financial year.²⁶ In October 2020, 53.9% of NBN services monitored recorded a higher average download speed than plan speed.²⁷ This rose to 59.6% by February 2021.²⁸

The key measures initiated in 2020 that assisted industry to cope with the increased demand during the initial nationwide lockdown and Eastern state lockdowns in 2020 were removed:

- NBN Co's Special Working Group formed with the major RSPs to share information to plan for and respond to the challenges posed by the pandemic, met for the final time in November 2020.²⁹ The ACCC's Authorisation for the Special Working Group expired on 31 March 2021.
- Video streaming and conferencing service providers moderated their picture quality as a response to requests from both the Minister in March 2020 and the Special Working Group in August 2020. On 8 September 2020, the Special Working Group agreed that it was no longer necessary for over the top (OTT) video streaming providers to apply bit rate reduction measures.³⁰ Major OTT video streaming services returned to full streaming bitrates in the last 2 weeks of September 2020.
- NBN Co's offer of 40% additional network capacity to RSPs without additional charge was tapered down from December 2020. By February 2021, NBN Co had completely withdrawn the offer.

However, with Eastern states returning to lockdowns in July 2021, NBN Co announced another COVID-19 CVC relief package for RSPs.

23 See: NBN Co, [The Impacts of COVID-19 Response Measures on Australian Broadband Traffic on the NBN Network](#), January 2021, p. 13.

24 ACCC, [Internet Activity Report for June 2021](#), December 2021. The pre-pandemic level was measured using the December 2019 report.

25 Telsyte, [Subscription entertainment lifts in lockdown](#), 20 September 2021.

26 ACCC, [Measuring Broadband Australia Report 14](#), August 2021, pp. 6–7.

27 ACCC, [Measuring Broadband Australia Report 11](#), December 2020, p. 4.

28 ACCC, [Measuring Broadband Australia Report 13](#), June 2021, pp. 6–7.

29 NBN Co, [Report for Special Working Group for week ending 27 November 2020](#), 2 December 2020.

30 NBN Co, [Report for Special Working Group for week commencing 14 September 2021](#), 14 September 2020.

NBN Co's relief for access seekers

RSPs providing services over the NBN pay NBN Co a CVC charge to access network capacity on the NBN. As consumers use their NBN service to access online applications such as streaming services and web browsing, email and interactive communications, they utilise NBN capacity that has been pre-provisioned by their RSPs. If RSPs do not acquire sufficient CVC capacity, they may be unable to meet consumer demand for network capacity.

This has been of particular importance during COVID-19, which has caused an increase in use of bandwidth hungry applications such as video streaming, entertainment and online gaming during the peak busy hours of 7–11pm. As a result, more network capacity is required to avoid network congestion and slower speeds at these times.

At the start of the pandemic, NBN Co offered wholesale access seekers 40% additional CVC capacity without additional charge, using spare capacity on its network. However, in December 2020, NBN Co began phasing down this measure, and fully removed the offer by February 2021.

With the tapered withdrawal of the additional CVC capacity for access seekers, NBN Co also announced that it would bring forward previously scheduled increases in CVC allowances for 100 Mbps plans from May 2021 to December 2020. It also sought to support the growth in bandwidth demand by offering a range of discounts for 50 Mbps (upsell only) and 100 Mbps+ (new connections and upsell) for 6 months as part of its 'Focus on Fast' campaign.

Despite these measures, RSPs sought additional support from NBN Co, as bandwidth demand increased strongly again during the 2021 lockdowns in NSW and Victoria, in particular. Several major access seekers also sought regulatory intervention by the ACCC.

At the end of July 2021, NBN Co announced a COVID-19 CVC relief package to apply for the month of July. This provided a credit amount determined on the basis of industry utilisation.

However, several RSPs were of the view that the relief was not generous enough and was too complex for individual RSPs to calculate with any certainty. In early October, NBN Co increased its COVID-19 relief package for October and subsequent months by changing the baseline period of traffic per customer to May 2021 and basing the relief on the traffic growth of individual RSPs.

2.3.3 Consumer protection and hardship measures

As many Australians relied more heavily on their home internet service for work, education, entertainment, telehealth and other services, the ongoing impact of the pandemic highlighted the need for industry to support consumers staying connected.

In April 2020, the Australian Government and industry organisation Communications Alliance made a joint statement on industry hardship principles as a guide for telecommunication service providers. These principles were scaled back significantly on 30 June 2020 to largely replicate the financial hardship arrangements in the Telecommunications Consumer Protection Code (TCP Code). During 2020–21, the principles were reviewed at 3-monthly intervals and extended without change.

Consumer advocacy groups, including Australian Communications Consumer Action Network (ACCAN), considered additional measures were needed to safeguard consumers, beyond the existing obligations under the TCP Code.³¹

On 14 July 2021, the Australian Communications and Media Authority (ACMA) commenced consultation on a draft Statement of Expectations for the telecommunications industry to improve outcomes for vulnerable consumers, which includes those impacted by the pandemic.

The Consumer Policy Research Centre's *Sector Scorecard* highlighted that telecommunications service providers delivered the least proactive support, such as payment assistance, during the pandemic.³² It

³¹ ACCAN, [COVID-19 telco principles fail to adequately protect telco consumers](#), 29 June 2021.

³² Consumer Policy Research Centre, [COVID-19 and Consumers: Sector Scorecard](#), September 2021, p. 6.

noted that, while telecommunications providers offered hardship relief at the start of the pandemic, this support declined steadily in the months to December 2020.³³

The *Sector Scorecard* also ranked telecommunications providers last for user experience and accessibility, including consumers experiencing difficulty navigating a website/phone system, understanding how to contact a provider, and long wait times.

The Telecommunications Industry Ombudsman (TIO) identified an 88.4% annual increase in complaints about telecommunications providers being uncontactable during 2020–21.³⁴ The TIO indicated that this growth was primarily driven by COVID-19 impacts and changes to consumer contact channels. However, the number of complaints about providers being uncontactable decreased over the financial year, signalling that telecommunications providers improved their customer contact channels.³⁵

2.3.4 Impacts to the connection of NBN services

Following disruptions to the supply of HFC modems, NBN Co announced on 1 February 2021 a cease-sale on HFC orders. This decision delayed legacy network disconnections as NBN Co ceased accepting orders for new HFC connections placed after that time. However, it maintained sufficient stocks of HFC modems to continue to connect medically vulnerable customers and medical support and emergency service organisations. NBN Co recommenced taking new orders for HFC connections on 26 July 2021.

2.4 Infrastructure competition

2.4.1 Network infrastructure developments

New entrants and existing players are building and extending high-capacity fibre to address the ever-increasing proliferation of cloud processing, e-commerce, 5G mobile, edge computing, video streaming, online gaming and video conferencing. There is also a shift from traditional transmission routes to a more diversified and decentralised backhaul network topology, where data is increasingly processed and delivered in a decentralised way, at the edge of networks.

Major fibre projects announced in 2020–21 included:

- HyperOne's planned construction of a \$1.5 billion national 10 Petabits/s 20,000km fibre backbone connecting various subsea landings and capital cities with more than 2,000 'on-ramps' in regional and remote Australia³⁶
- FibreconX's deployment of dark fibre to 32 datacentres in the Greater Sydney area in a diverse ring topology³⁷
- Leading Edge Data Centres' dark fibre builds from each of its regional datacentres directly into NBN's POIs in New South Wales, Victoria and Queensland.³⁸

In addition, some fast-growing RSPs are building their own backhaul links to the NBN POIs, once they have reached sufficient scale, to reduce their dependence on third-party transmission capacity. For example, Aussie Broadband announced the construction of a fibre network for interconnection between 75 NBN POIs and 24 datacentres.³⁹

State government-backed projects are also funding the construction of high-capacity fibre networks to support regional development or support the use of spare capacity in state-owned assets to provide alternative transmissions services in areas where competition is limited.

33 Consumer Policy Research Centre, [COVID-19 and Consumers: Sector Scorecard](#), September 2021, p. 7.

34 Telecommunications Industry Ombudsman, [Annual Report 2020–21](#), p. 46.

35 The 'provider uncontactable' issue was ranked 4th in Quarter 1 of the 2020–21 financial year. By Quarter 4 of the 2020–21 financial year, the issue fell to 13th issue most complained about to the TIO.

36 HyperOne, [HyperOne to unlock the economic potential of regional Australia](#), 25 November 2021.

37 CommsDay, [FibreconX nears completion, launch of massive Sydney fibre ring network](#), 11 February 2021, pp. 1–2.

38 CommsDay, [Leading Edge Datacentres signs WBA with NBN Co](#), 18 January 2021, p. 10.

39 Financial Review, [Aussie Broadband challenges big telcos with fibre build](#), 13 January 2021.

Queensland Capacity Network (QCN), a state-owned backhaul provider, continued to expand its fibre footprint with a 35 terabits per second (Tbps) link from Brisbane to the Japan-Guam-Australia submarine cable landing station in the Sunshine Coast.⁴⁰ QCN provides alternative wholesale transmission services across the state by re-purposing and consolidating spare fibre capacity in existing assets of state-run railways and electricity networks.

The New South Wales Government's [Regional Digital Connectivity Program](#) incorporates a number of infrastructure initiatives, including deployment of fibre to a number regional towns in the state's west with a high-capacity fibre ring that will deliver metro-level internet services to regional communities and businesses.

The Victorian Government, through its [Connecting Victoria program](#), is seeking co-investment opportunities for the delivery of new telecommunications infrastructure to improve and expand connectivity across the state. The first funded project is a partnership with NBN Co to connect 10,000 business in several locations in regional Victoria with NBN Co's Enterprise Ethernet services.⁴¹

Data centre expansion

The scale and scope of Australian data centres continued to increase, as demand for data connectivity and capacity continued to grow. As the demand for latency-critical applications, edge computing and distributed content generation keeps gaining importance, datacentres are becoming larger and more geographically widespread.

Providers such as NextDC and Equinix continue to expand capital city data centre capacity and connectivity, while smaller providers such as DCI Data Centres and Leading Edge Data Centres are building out to new and more regional locations. The growing importance of datacentres is also driving investment in dedicated fibre interconnection to a more diverse range of locations.

Despite the mature state of Australian telecommunications networks, these fibre and data centre investments show that innovation and changing consumer trends continue to create opportunities for further infrastructure builds. Increasing infrastructure-based competition ultimately results in better and cheaper services for consumers.

2.4.2 Non-NBN fixed-line networks

Telecommunications in new developments

The rollout of superfast telecommunications infrastructure by network operators other than NBN Co in both new 'greenfield' developments as well as existing 'brownfield' areas provides an opportunity for network providers to enter or expand their market presence.

It also applies competitive pressure on NBN Co to continue upgrading technology and improving service levels. This vigorous competition for the opportunity to supply new developments benefits both developers and ultimately consumers in greenfields developments.

Carrier separation rules

To encourage investment in infrastructure and promote infrastructure-based competition, amendments to the *Telecommunications Act 1997* (the Telco Act) which came into effect in August 2020 relaxed the requirement for superfast fixed-line broadband network operators serving residential customers to operate on a wholesale-only basis. Network operators may now seek to be exempt from this requirement through a class exemption, or a functional separation undertaking.

In August 2020, the ACCC made a class exemption determination for smaller providers with up to 2,000 fixed-line residential customers. Eligible providers that elect to be bound by the determination must offer wholesale access on an open and non-discriminatory basis and comply with the terms of the determination.

40 QCNFibre, [QCN lights up 35 Tbps of sunshine Coast Backhaul](#), 30 July 2021.

41 Victoria State Government, Department of Jobs, Precincts and Regions, [Connecting Victoria, New funded projects](#), 8 October 2021.

Larger non-NBN network operators may operate both retail and wholesale businesses subject to the ACCC's acceptance of a functional separation undertaking, or by the network operator electing to be bound by the ACCC's deemed functional separation undertaking.

The ACCC accepted a joint functional separation undertaking from Uniti Group Limited (Uniti) in October 2020. In November 2020, Uniti acquired the network operator OptiComm Limited (OptiComm) and in late December 2020, Telstra sold its FTTP network assets including the Velocity Estates and South Brisbane to Uniti. As part of this deal, Uniti will upgrade Telstra's networks to provide higher broadband service levels, bringing them into line with what Uniti offers on its OptiComm network and what is available on the NBN.

Further, Uniti will offer a wholesale Layer 2 bitstream service on an open access and non-discriminatory basis, meaning residential customers in these areas will have a greater choice in their RSP. However, the transfer of end-users to the upgraded networks is not expected to commence until May 2022 and will take around 12 months to complete.

Given the current limited retail offerings available to Velocity and South Brisbane end-users, the ACCC is seeking views through its consultation on the superfast broadband access service (SBAS) final access determination inquiry on what practicable wholesale access measures could be adopted to address any competition and consumer concerns during the interim transition period.

Through its recent acquisitions, Uniti has established itself as the largest residential fixed-line challenger to NBN Co with more than 565,000 premises connected, ready to connect, in construction or contracted, as at 30 June 2021.⁴²

The ACCC is also publicly consulting on a decision to accept a joint functional separation undertaking from TPG. If accepted by the ACCC, TPG's current exemptions from the wholesale-only requirement will no longer apply to its fibre to the basement (FTTB) and TransACT networks. The undertaking will provide TPG with greater flexibility to compete in wholesale and retail markets for the supply of superfast broadband services by allowing it to upgrade and extend its networks while maintaining the ability to provide retail services.

TPG's FTTB network currently connects over 240,000 premises in high-density apartment buildings in Sydney, Melbourne, Brisbane, Adelaide, Perth and other metro areas, offering speeds of up to 100 Mbps.⁴³ However, it is estimated that NBN Co has overbuilt at least 94% of these buildings.⁴⁴ Consolidating TPG's FTTB and TransACT networks into a single wholesale offering via a functional separation undertaking would create a third large residential fixed-line infrastructure competitor.

Growing downstream competition

The increase in infrastructure competition has also promoted competition in downstream markets. The ACCC has observed an increase in the number of retailers on these networks in 2021.

In particular, we have observed growth in the number of RSPs on Uniti's LBNCo and OptiComm networks. This growth has seen Uniti secure larger wholesale customers such as Aussie Broadband, iPrimus and iiNet, with Telstra also committing to become a retailer as part of the Velocity sale.⁴⁵ Uniti has also entered into an agreement to become a wholesale customer of TPG's FTTB network which will make TPG's network available to Uniti's RSPs.⁴⁶

Sale of telecommunications tower assets

During 2021, Telstra and Optus sold most of their portfolio of tower assets as part of a process of corporate restructure. As a result, the majority of telecommunications towers in Australia will be owned and operated by non-carrier entities.⁴⁷

42 Uniti Group Limited, [Annual Report 2021](#), p. 7.

43 TPG Telecom, [TPG Telecom partners with Uniti to maximise growth potential of FTTB network](#), 19 August 2021.

44 [TPG submission to the SBAS & LBAS declaration Draft Decision](#), p. 4.

45 Uniti Group Limited, [Annual Report 2021](#), p. 7.

46 [TPG Telecom partners with Uniti to maximise growth potential of FTTB network](#), 19 August 2021.

47 Telstra and Optus will retain an interest in these new 'TowerCo' companies.

It is expected that these entities will have commercial incentives to maximise tower occupancy and facilitate access on a non-discriminatory basis, increasing competition in the market for tower access and in other markets for the supply of services that rely on access to towers as an essential input.

2.4.3 The enterprise market

Competition in the wholesale enterprise market has continued to intensify following NBN Co's entry into the market, resulting in lower prices and greater flexibility for access seekers providing enterprise services. Telstra, the dominant incumbent, has significantly reduced its ethernet access pricing and cut prices on its retail enterprise products.

In September 2020, the Australian Government announced⁴⁸ its NBN Business Fibre Initiative to increase access to business-grade fibre for small to medium sized businesses. This initiative created 240 business fibre zones across Australia, including a presence in 85 regional centres. Businesses within these zones are able to access NBN Co's Enterprise Ethernet at CBD pricing with no up-front build costs. There is no up-front connection cost charged to RSPs that sign a 3-year deal.

On 9 August 2021, the Minister for Communications announced⁴⁹ an increase of the total number of business fibre zones to 284. NBN Co also announced changes to its Enterprise Ethernet product, which, amongst other things, included discounts to monthly recurring charges, reduced the number of pricing zones from 4 to 2 (now CBD and non-CBD zones) and guaranteed completion of orders within 50 days.

In response to concerns that it had been overbuilding well-served areas, NBN Co conducted a trial to test procuring access to other carriers' fibre infrastructure. In April 2021, it announced⁵⁰ it would not proceed with an industry-wide procurement process as the trial found that it would not be commercially or operationally feasible to lease third-party dark fibre to supply its enterprise services.

However, NBN Co is continuing to explore feasible use cases for third-party dark fibre as they evolve to lower its deployment costs. For example, Telstra launched a new dark fibre product on 23 February 2021 as part of its restructure of business units. Telstra's entry into the dark fibre market is likely to increase competition for dark fibre offerings and options available for NBN Co.

While NBN Co's rapid expansion into the wholesale enterprise market has been positive for competition, particularly in areas where Telstra is the only other fixed-line infrastructure provider, the ACCC will remain vigilant to ensure that NBN Co operates within the constraints established by the regulatory framework.

48 NBN Co, [NBN underpins business growth with premium-grade fibre and reduced pricing, as part of wider enablement package](#), 22 September 2020.

49 The Hon Paul Fletcher MP, Minister for Communications, Urban Infrastructure, Cities and the Arts, [Broadband boost for businesses](#), Australian Government, 9 August 2021.

50 NBN Co, [Update on nbn Industry Consultation Paper: Procurement options for third-party fibre](#), April 2021.

3. Pricing and Consumer Trends

3.1 Approach to pricing methodologies

In the 2019–20 Communications Market Report, the ACCC refined its pricing methodology in response to concerns about affordability and whether consumers value everything they receive in product bundles. The refined pricing methodology consisted of 2 price change measurements:

- The ‘advertised price’ measures changes in nominal prices offered to consumers but does not consider changes in product features (e.g. higher data allowance or faster download speed).
- The ‘feature-adjusted price’ (or hedonic approach) measures pure price changes, that is, price changes for a given level of product features. It is an econometric measure incorporating both changes to advertised price and changes in product features.

The ACCC considered this combination provides a better picture of what consumers are actually paying, as well as whether, in general, they are getting more product features for their money.

The ACCC has continued to use this same pricing methodology in 2020–21.

3.1.1 Advertised price analysis

This report uses an advertised price measure, which allows analysis on how advertised price changes affect different groups of consumers. The 3 price points included in this report are the 25th percentile (i.e. lower price point), median price point and 75th percentile (i.e. higher price point). These price points act as proxies for entry-level, typical and higher end consumers respectively.

It should be noted that in the advertised price changes for NBN and non-NBN fixed services, fixed broadband plans that are bundled with a Voice over Internet Protocol (VoIP) and an entertainment service such as Fetch TV or Foxtel have been excluded from the analysis in this report. These ‘triple play’ product bundles are in some instances very highly priced and only serve a niche market of consumers. Including these plans would tend to inflate the measures of advertised prices and not be representative of the prices that the majority of consumers pay.

3.1.2 Hedonic pricing analysis

The theory underpinning hedonic pricing analysis is that differentiated products can be viewed as a bundle of characteristics. The hedonic approach controls for the features/quality of the plans, and then estimates the effect of time on price. The approach treats each product as a combination of characteristics and features and assigns values to each of the features in the product (for example download speed and data allowance) that are identified as ‘price determining’.

These values are then used to estimate changes in price not explained by the changes in product features. In effect, the hedonic approach splits the overall price change into a feature/quality change component and a pure price change component. Further information on the hedonic approach, including which features of a plan/product are accounted for, can be found in section 5.2.

A negative pure price change estimated using the hedonic approach indicates that prices have decreased, holding product features constant. However, the reality is that a negative price change may not mean that consumers can get a plan with the same features offered in the past at a cheaper price. For example, a negative pure price change could take the form of many plans being offered with increased features and more moderate increases in prices over time. Some consumers may prefer access to low price plans with fewer features over plans with higher prices and even more features.

The hedonic approach does not exclude ‘triple play’ plans⁵¹ as it includes controls for the presence of TV plans and of voice plans when estimating the pure price change of broadband plans.

⁵¹ A triple play plan is a fixed broadband plan that is bundled with a voice over internet protocol (VoIP) service and an entertainment service such as Fetch TV or Foxtel.

3.2 Retail markets

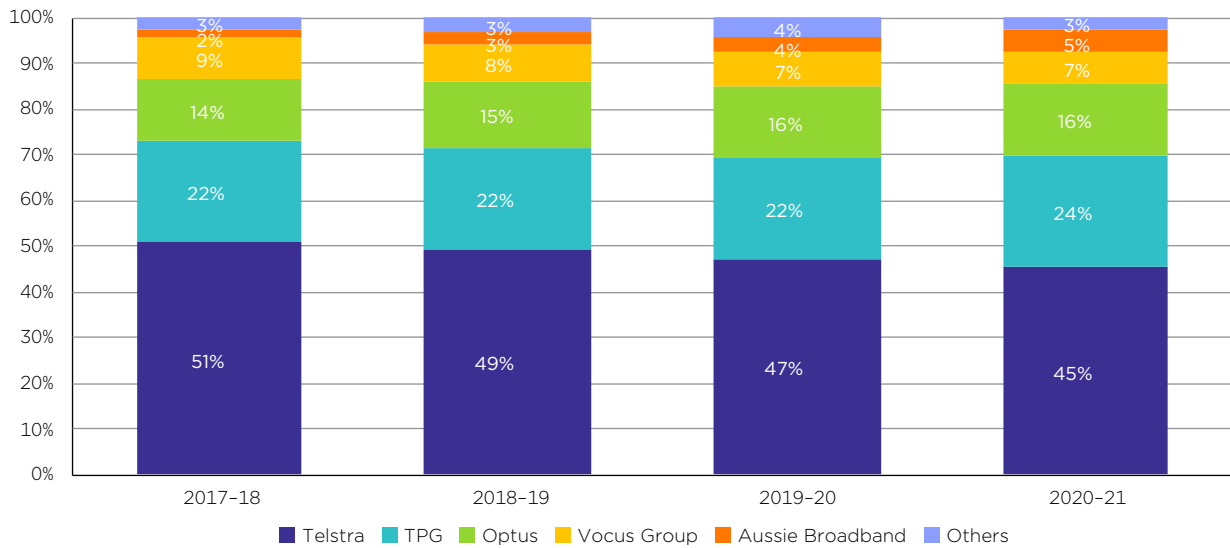
3.2.1 NBN Fixed broadband services

Fixed broadband services are broadband internet services provided over fixed networks such as the NBN and other fibre-based networks. This section focuses on NBN fixed broadband services that are provided over fixed network technologies such as FTTN, FTTC, FTTP, FTTB, HFC and fixed wireless (that is, all services other than satellite).⁵²

Services in operation

Figure 3.1 shows the wholesale market shares for NBN fixed broadband services between 2017-18 and 2020-21.

Figure 3.1: Fixed wholesale NBN market share from 2017-18 to 2020-21



Note: Numbers may not add due to rounding.

Source: ACCC Wholesale Market Indicators Report.

Wholesale market share is an indicative proxy for retail market share and the trends over time for each are similar. However, the retail market shares of larger RSPs will be marginally lower than indicated, while the 'others' category for smaller RSPs will be slightly higher. This is because when larger RSPs acquire services from NBN Co at a wholesale level, they will:

- retain them, and sell a significant proportion of these services under their own retail brand
- on-sell a portion of services to 'other' RSPs that provide retail services to consumers under their own brand.

In 2020-21, Telstra had the largest market share in the wholesale market for NBN fixed broadband services, at 45.3%. This was followed by TPG (24.3%) and Optus (15.8%).

Competing RSPs have made significant inroads in the wholesale market over time. In regional areas, Telstra's market share of residential NBN broadband services has fallen from as high as 67% to 54% by 30 June 2021. With the completion of the NBN rollout, RSP wholesale market shares are stabilising.

Within the top 5, Telstra appears to be slowly losing market share, particularly to Aussie Broadband and TPG. Aussie Broadband has made the largest gains in market share out of the smaller providers, increasing its share from 1.6% to 4.7% between 2017-18 and 2020-21.

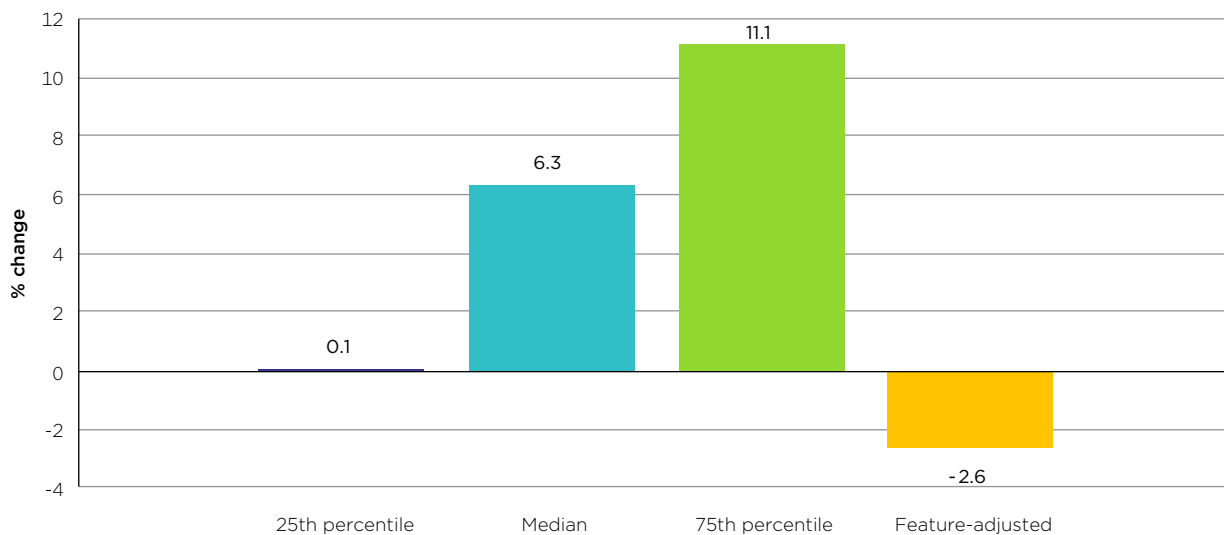
⁵² NBN fixed wireless has been included in the analysis of fixed broadband services due to the functional similarity between fixed wireless and other fixed access technologies.

Pricing

Advertised vs feature-adjusted price

Figure 3.2 shows changes in the average price for NBN fixed broadband services between 2019–20 and 2020–21, as estimated by the advertised price and feature-adjusted (hedonic) approaches.

Figure 3.2: Changes in NBN fixed-line advertised and feature-adjusted price in 2020–21



Source: ACCC estimates based on information from RSP websites.

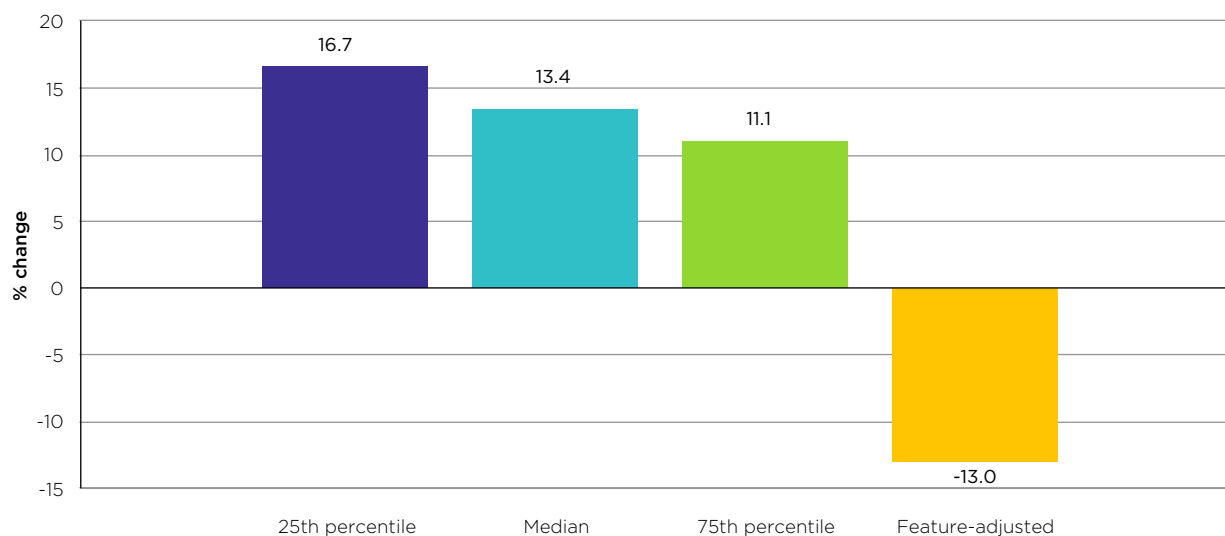
The feature-adjusted approach reveals prices for NBN fixed broadband services fell overall by 2.6% from 2019–20 to 2020–21. This indicates that a consumer is, on average, paying less for a given level of product features and/or receiving more features (e.g. download speed or data allowance) for their money.

However, from an advertised price perspective, prices for consumers:

- on lower price plans (at the 25th percentile) remained stable, rising by only 0.1% to \$69.99
- at the median price point rose by 6.3% to \$85.00
- on higher-priced plans (at the 75th percentile) increased by 11.1% to \$100.

Figure 3.3 shows that between 2016–17 to 2020–21, feature-adjusted prices for NBN fixed broadband services fell by 13% while advertised prices increased.

Figure 3.3: Changes in NBN fixed-line advertised and feature-adjusted price from 2016-17 to 2020-21



Source: ACCC estimates based on information from RSP websites.

In particular, over the 5-year period, prices for consumers in the 25th percentile and median price percentile rose by 16.7% and 13.4% respectively, while consumers in the 75th percentile experienced a price increase of 11.1%. This is consistent with the long-term trend of consumers shifting to higher speed tiers since NBN Co's 'Focus on 50' campaign which commenced in late 2017.

Taken together, figures 3.2 and 3.3 suggest that the higher advertised prices in 2020-21 are likely attributable to the addition of high-speed tier plans through NBN Co's 'Focus on Fast' campaign, along with incentives for RSPs to promote these plans.

The stability of prices in the 25th percentile between 2019-20 and 2020-21 is likely due to budget-conscious consumers who are not sufficiently responsive to NBN Co and RSP incentives, electing not to transition to those higher speed plans. Additionally, the structure of wholesale entry-level prices in WBA4 may have contributed to budget conscious consumers responding favourably to entry-level plans.

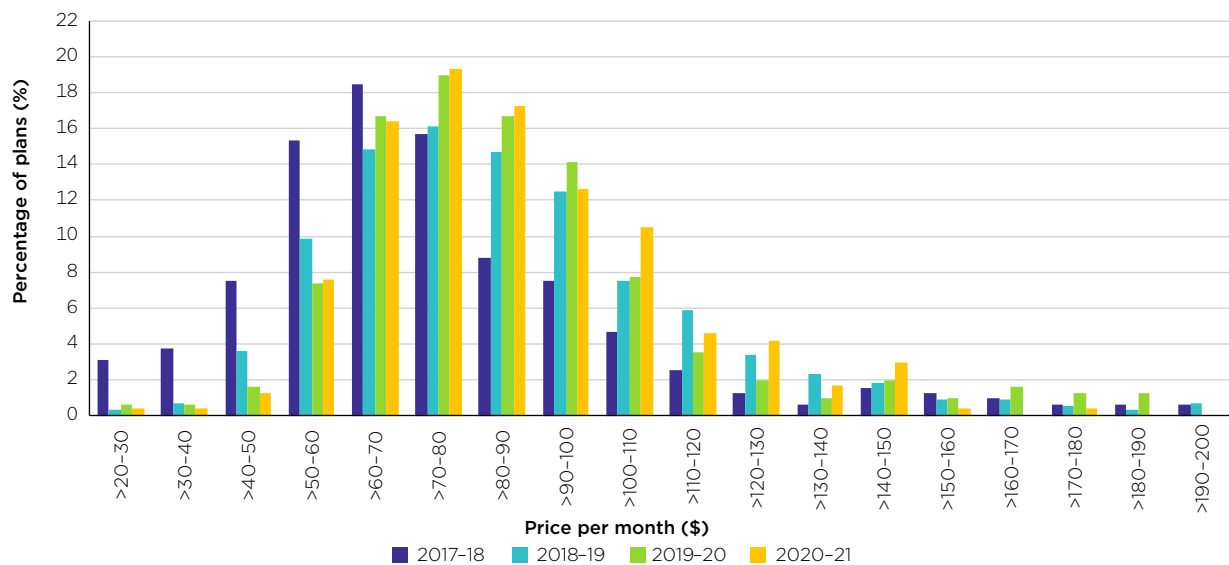
While the feature adjusted price index fell by 13%, this is likely due to a combination of higher speed and unlimited data that are available with higher speed plans. Consumers are paying more but getting additional features as well.

Range of plans available

RSPs offer NBN plans at different price points, each with a variety of plans available and an assortment of service offerings. Figure 3.4 shows the proportion of NBN retail plans at various price points⁵³ over the past 4 years.

⁵³ In figure 3.4 and subsequent figures, each price point is represented by a range. For example, the price point '>50-60' captures retail service plans that are more expensive than \$50 but cheaper than or equal to \$60. However, for simplicity, price points will be referred to as being between the upper and lower bounds of the relevant range.

Figure 3.4: Percentage of NBN fixed broadband plans at various monthly price points from 2017-18 to 2020-21



Source: ACCC estimates based on information from RSP websites.

Since 2017-18, NBN plans in the market have shifted in favour of more expensive offerings.

In 2020-21, consistent with the previous year, the 3 price points with the greatest concentration of plans were between \$60 and \$90. The \$70-\$80 price point remained the most popular, comprising 19.3% of all NBN plans, which was slightly higher than the 19% observed in 2019-20. By comparison, in 2017-18, the greatest percentage of plans offered (18.5%) was at the \$60-\$70 price point.

In 2020-21, the general distribution of NBN plans shifted further towards higher-priced plans. The concentration levels for the 3 price points at the upper end of the \$70-\$100 price range rose. Almost 75% of consumers are now on a plan costing \$70 or more. This is consistent with the shift to higher speed tiers identified in the ACCC’s NBN Wholesale Market Indicators report, where over 75% of consumers are on a 50 Mbps or greater plan. This change was likely driven by NBN Co’s wholesale pricing initiatives, encouraging take-up of higher speed but more expensive plans, through the use of discounts.

The most noteworthy shifts in 2020-21 were the increases in the number of plans at the \$100-\$110 price point (up from 7.7% in 2019-20 to 10.5%) and the \$120-\$130 price point (up from 1.9% to 4.2%).

At the same time, the proportion of lower-priced retail NBN plans (between \$30 and \$60), have decreased over the past 2 years. This is likely due, in part, to RSPs withdrawing their NBN entry-level plans due to insufficient profit margins.

Retail offerings of very high speed NBN products

The introduction of the Focus on Fast promotion by NBN Co in February 2021 led to significant changes in the take-up of higher speed services, including Home Fast (100/20 Mbps), Home Superfast (250/25 Mbps) and Home Ultrafast (500-990/50 Mbps). The 6-month promotion offered rebates on AVC charges and additional CVC capacity where services were upgraded to the higher speed tiers.

A number of retailers considered the wholesale pricing for NBN Co’s Home Fast service to be more competitive than NBN Co’s standard pricing. Retailers marketed the Home Fast, Home Superfast and Home Ultrafast heavily to customers, offering discounted introductory retail pricing for the first 6 months. As a result, large numbers of customers moved to higher speed plans during the reporting period.

There was also a significant increase in the number of retail plans offering speeds greater than 100 Mbps. However, these high download speed products are only accessible to premises that have FTTP or in some case HFC connections.

On 31 August 2021, NBN Co announced that it was on track to achieve its goal of making its highest wholesale speed plans available to up to 75% of households and businesses in the fixed-line network by 2023.⁵⁴ From a total fixed-line network perspective, the proportion of customers now able to access Home Ultra-fast plans is now 40%.⁵⁵ NBN Co also announced plans to commence full fibre upgrades to customers living or working in premises currently served by FTTC.⁵⁶

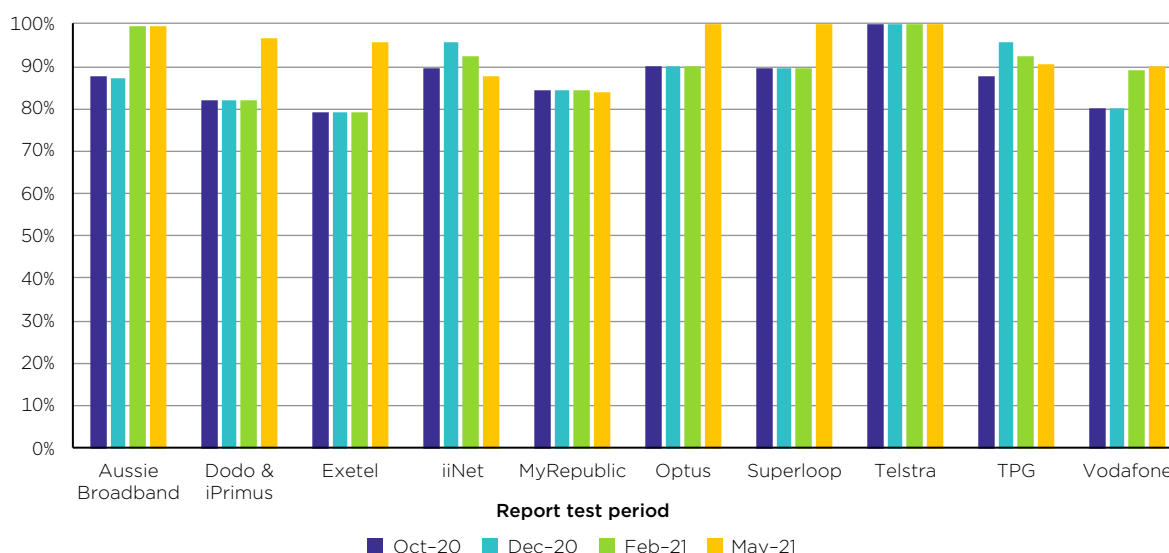
Advertised NBN retail speed claims and performance

In April 2017, the ACCC commenced the MBA performance monitoring program to provide Australians with independent and comparable information about retail fixed-line broadband speeds over the NBN.⁵⁷

The MBA program has played an important role in assessing the reasonableness of RSPs' speed claims and complements the ACCC's Broadband speed claims industry guidance and compliance and enforcement role.

Among other measures, the MBA program reports benchmark RSPs' download speed results against their advertised busy hour speed claims for the relevant period. Figure 3.5 shows the weighted average of the typical busy hour (7 pm–11 pm) speeds advertised by different retailers for their NBN50 and NBN100 products at the end of each reporting month, expressed as a percentage of the maximum download speed (50 Mbps or 100 Mbps) achievable by the product.

Figure 3.5: Advertised download speeds during busy hours (NBN 50 and NBN 100 plans, exclusive of underperforming and impaired services)



Source: ACCC Measuring Broadband Australia program (reports 11, 12, 13 and 14).

The advertised busy hour speed claim is expressed as a percentage of the retailer's NBN speed tier, that is, the maximum speed of the plan (e.g. 50 Mbps and 100 Mbps). Typically, consumers will experience a lower speed during the evening busy hours between 7pm and 11pm as network demand increases. For example, in May 2021, Optus, Superloop and Telstra advertised speeds during busy hours of 100% of their maximum 50 Mbps and 100 Mbps plans, meaning the representations referred to an average busy hour speed of 50 Mbps and 100 Mbps for each product, respectively.

54 NBN Co, [300,000 more homes and businesses to become eligible for NBN fibre upgrade by ordering selected higher speed plans](#), 31 August 2021.

55 NBN Co, [2022 Corporate Plan](#), p. 7.

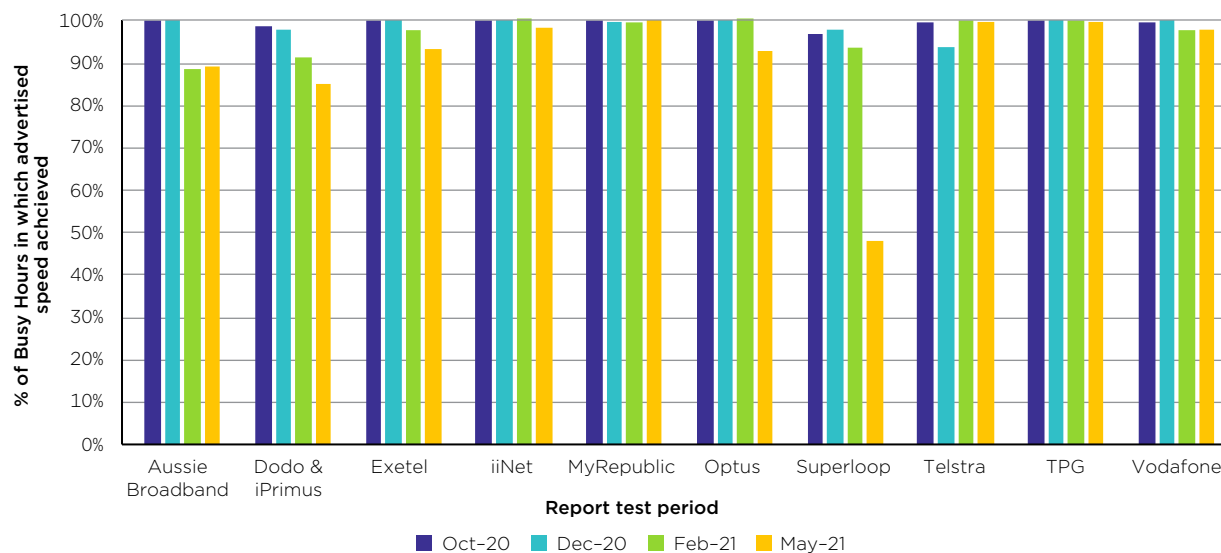
56 NBN Co, [300,000 more homes and businesses to become eligible for NBN fibre upgrade by ordering selected higher speed plans](#), 31 August 2021.

57 ACCC, [ACCC to monitor Australia's broadband performance](#), 7 April 2017.

Between 2020 and 2021, the advertised busy hour download speeds for NBN based products was relatively steady. In May 2021, many RSPs increased their advertised busy hour speed claims, with most making claims of 90% of the NBN speed tier or higher.

Figure 3.6 below shows the proportion of busy hours in which RSPs met or exceeded their advertised busy hour speed claims.

Figure 3.6: Proportion of busy hours where advertised speed was achieved (NBN 50 and NBN 100 plans, exclusive of underperforming services)



Source: ACCC Measuring Broadband Australia program (reports 11, 12, 13 and 14).

In the months analysed, RSPs met or exceeded their advertised busy hour speed claims between 48.1% and 100% of the busy hours. The vast majority of RSPs met or exceeded their advertised busy hour speed claims between 85.1% and 100% of the busy hours.

However, there is variation between RSPs in how often they meet their claims. For example, iiNet and Optus were the most consistent in achieving their advertised speeds in 3 of the 4 months analysed. In May 2021, corresponding with a broad increase in busy hour speed claims, many of the RSPs' performance against their busy hour speed claims, including iiNet and Optus, was worse than in previous months analysed.

3.2.2 Non-NBN fixed-line

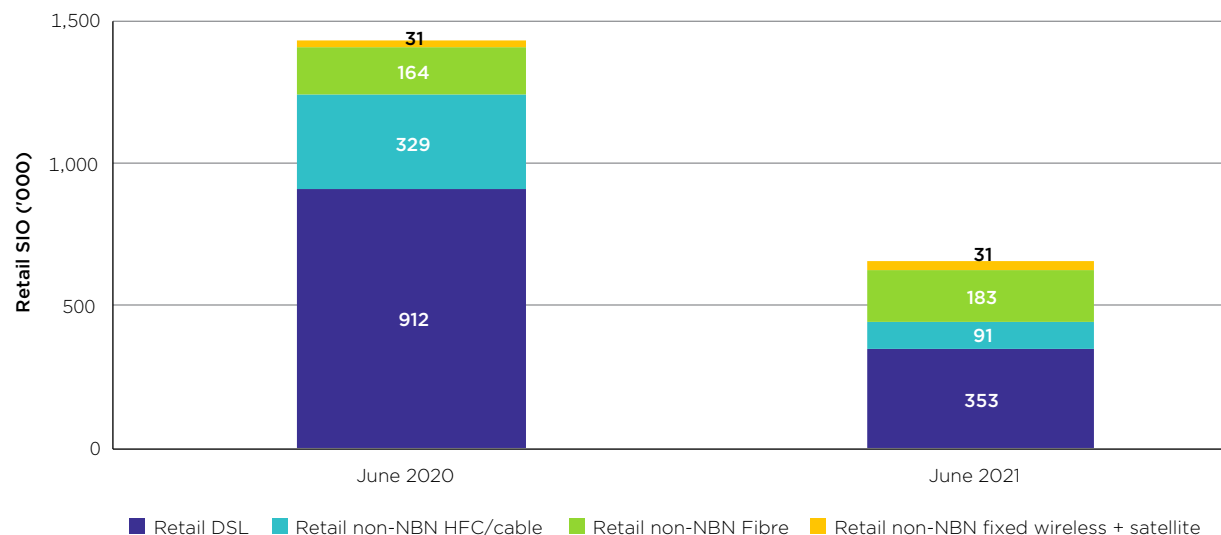
Non-NBN fixed-line broadband services are provided over fixed line networks owned by service providers other than NBN Co. Historically, these services have been largely delivered over Telstra's copper network, Optus' and Telstra's HFC networks, and a number of smaller fibre networks serving regional cities and new housing estates. Some of these networks have been transferred to NBN Co or other carriers in recent years, while Optus' HFC network and Telstra's copper network are being progressively decommissioned within the NBN fixed line footprint.

In areas where non-NBN fibre networks exist, consumers have the choice of staying connected to these networks or migrating to the NBN if it is available. Outside the NBN fixed line footprint, Telstra still offers broadband digital subscriber line (DSL) services over its copper network, and consumers also have the choice of receiving NBN wireless or satellite broadband services in these areas.

Services in Operation

Figure 3.7 illustrated changes in services in operation (SIOs) on non-NBN fixed-line networks between 2019–20 and 2020–21.

Figure 3.7: Retail non-NBN fixed-line SIOs by access technology from 2019–20 to 2020–21

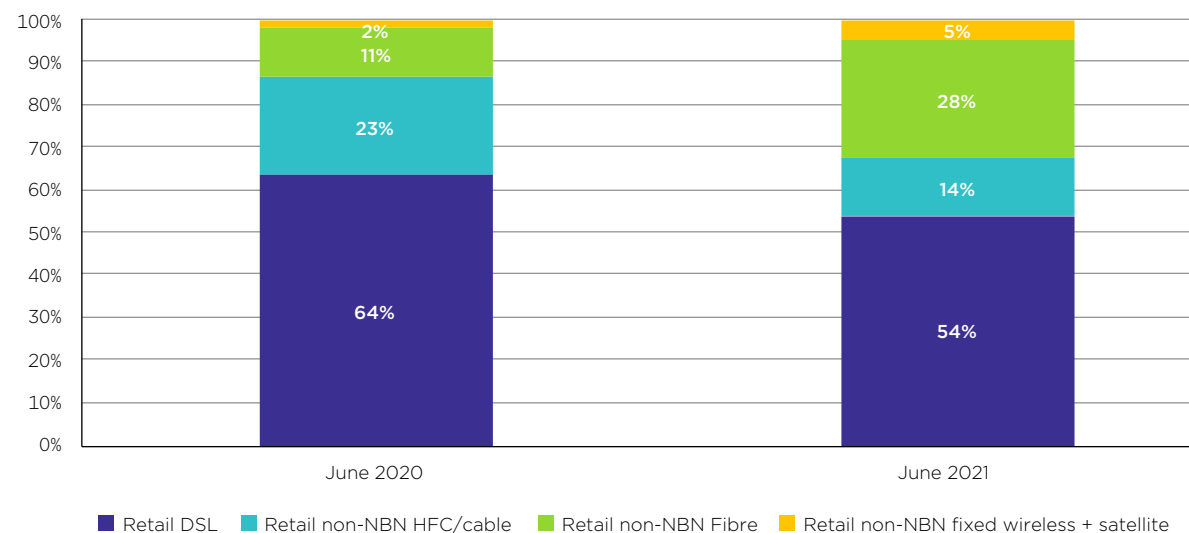


Source: ACCC Internet Activity RKR.

Over this period, retail DSL and retail HFC/cable SIOs fell by 559,000 (61%) and 238,000 (72%) respectively, while retail fibre SIOs increased by 19,000 (12%).

Despite these changes, figure 3.8 shows that, in June 2021, retail DSL SIOs still contributed to the majority (54%) of retail non-NBN fixed-line services.

Figure 3.8: Proportion of retail non-NBN fixed-line SIOs by access technology from 2019–20 to 2020–21



Note: Numbers may not add due to rounding.

Source: ACCC estimates based on information from provider websites.

This downward trend in non-NBN services will continue as consumers migrate off legacy networks onto the NBN. The ACCC estimates that once the NBN migration is complete, around 300,000 SIOs could potentially remain on Telstra's legacy copper services in outer-metro, regional and remote areas.⁵⁸

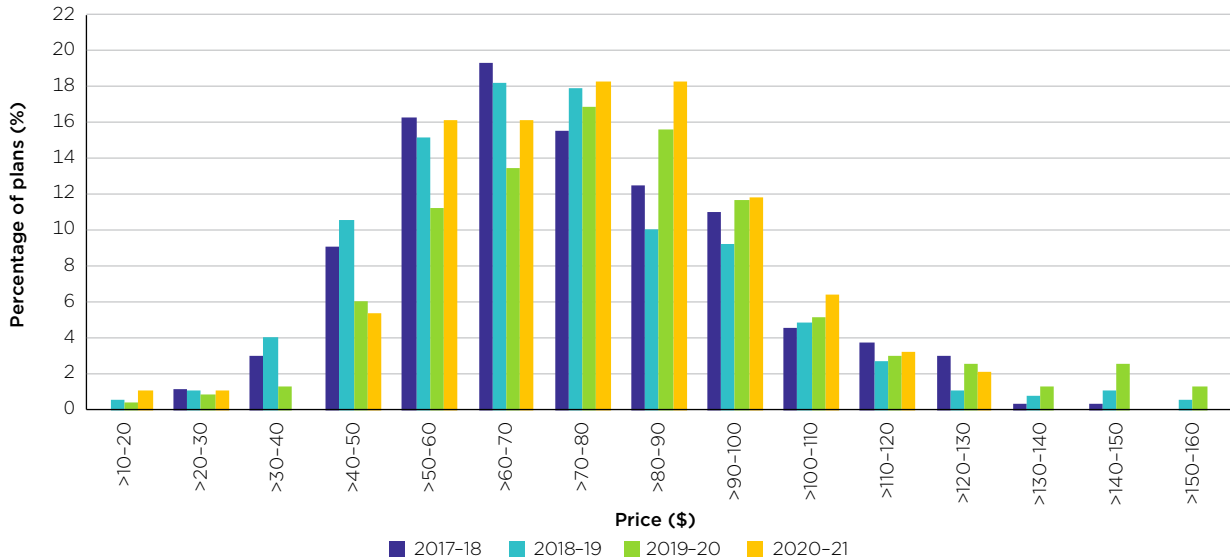
⁵⁸ These are areas outside of the NBN fixed-line footprint which are not required to migrate off of Telstra's legacy DSL network. These services will co-exist with NBN's fixed wireless and satellite services.

Pricing

Range of plans available

Figure 3.9 shows that, during 2020-21, the greatest proportion of non-NBN fixed-line plans were in the \$70-\$90 price range, accounting for more than 36% of all plans on offer.

Figure 3.9: Percentage of non-NBN fixed-line plans at various price points from 2017-18 to 2020-21



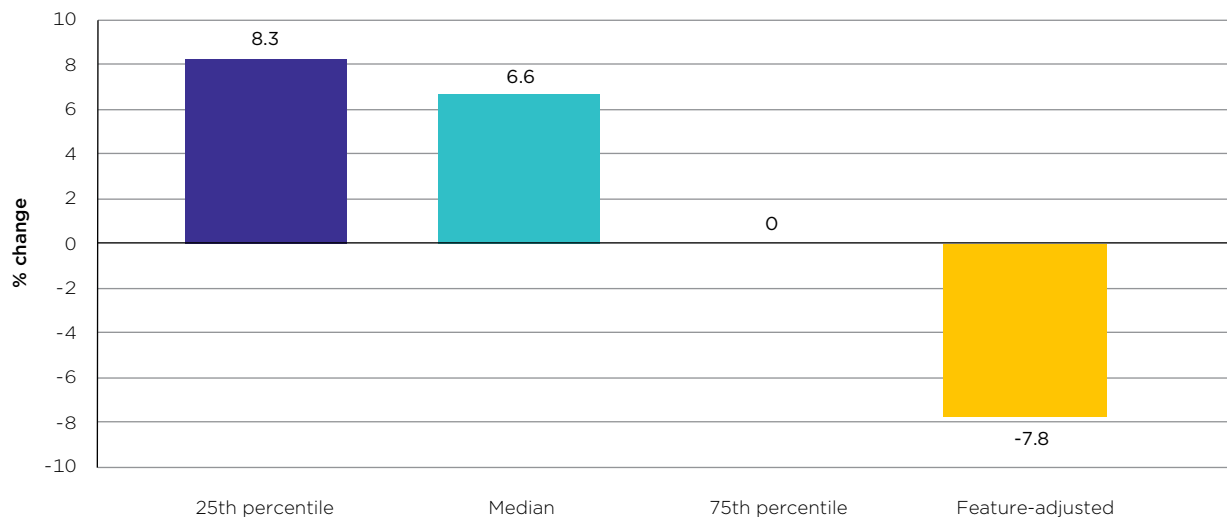
Source: ACCC estimates based on information from RSP websites.

This is in contrast to 2018-19, when the highest percentage of plans was at the \$60-\$70 price point. As discussed above, this is likely due to the compositional shift from DSL/cable plans to non-NBN fibre, which are increasingly priced equivalently to NBN-based services.

Advertised vs feature-adjusted price

Figure 3.10 shows changes in average price for non-NBN fixed broadband services between 2019-20 and 2020-21, as estimated by the advertised price and feature-adjusted (hedonic) approaches.

Figure 3.10: Changes in non-NBN fixed-line advertised and feature-adjusted price in 2020-21



Source: ACCC estimates based on information from RSP websites.

From an advertised price perspective, prices for consumers:

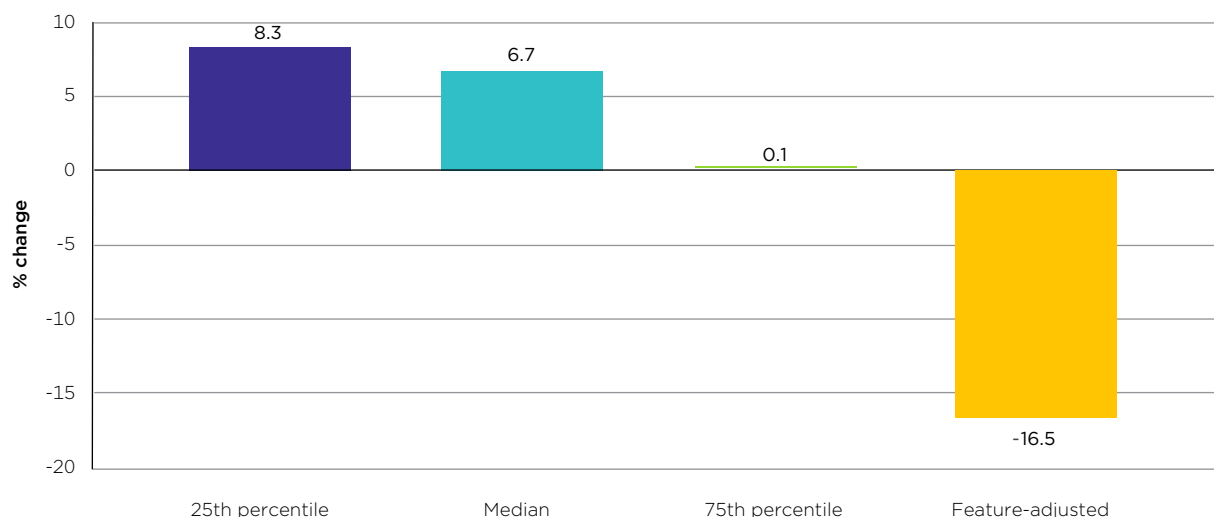
- on lower price plans (at the 25th percentile) rose 8.3% to \$56
- at the median price point increased by 6.6% to \$80
- on higher-priced plans (at the 75th percentile) remained unchanged at \$90.

The price increases at the lower end of the market were likely due to a shift in the composition of plans on offer, rather than a price increase by itself. As DSL and HFC services are decommissioned and these plans are no longer offered to new customers, the number of non-NBN fibre plans has risen. Generally, non-NBN fibre plans are more costly than DSL and HFC plans, with most retailers offering services with similar pricing to those on the NBN.

The 7.8% decrease in the feature-adjusted price suggests that the average consumer is receiving greater features for their money. However, this may have been at the expense of higher prices for some consumers, as suggested by the increase in advertised prices at the 25th and median price percentiles.

Figure 3.11 identifies a similar trend when comparing prices over the 5-year period to 2020–21.

Figure 3.11: Changes in non-NBN fixed-line advertised and feature-adjusted price from 2016–17 to 2020–21



Source: ACCC estimates based on information from RSP websites.

Advertised prices for consumers in the 25th and median price percentile experienced a price increase of 8.3% and 6.7% respectively. However, they likely received significantly more inclusions for their money, as illustrated by the 16.5% fall in feature adjusted prices.

While this analysis compares price and product changes from the shift between DSL/cable and non-NBN fibre, we note that many consumers will have instead migrated to an NBN service. Non-NBN fibre plans are only available to consumers within the footprint of these alternative operators, which have a much smaller footprint than the NBN and generally operate in new residential developments.

3.2.3 Fixed-line voice

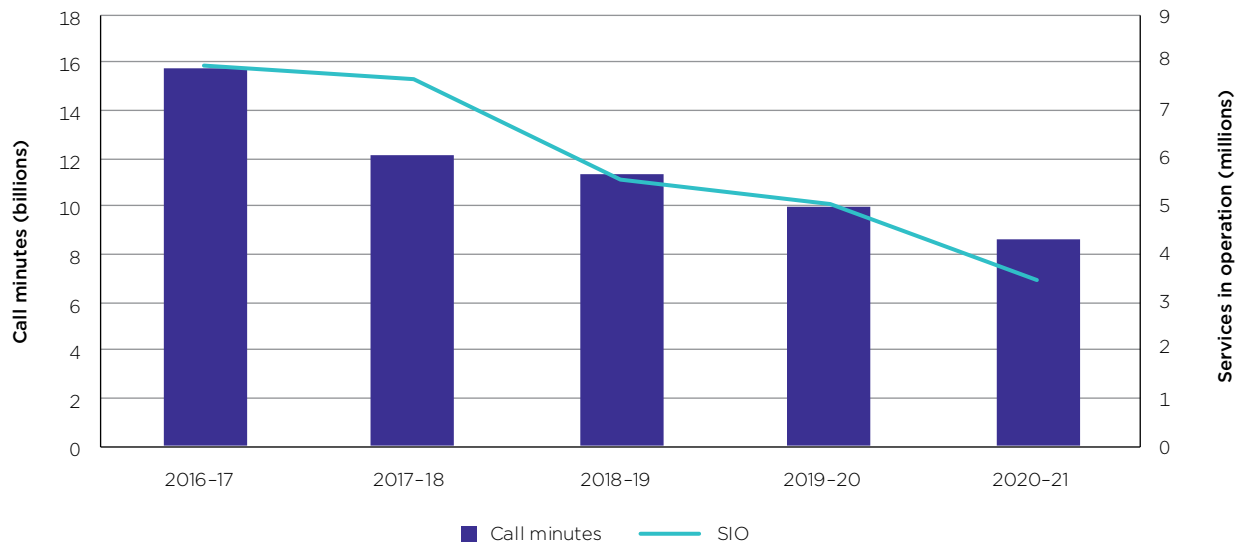
Services in operation and usage

Between 2019–20 and 2020–21, the number of fixed-line voice SIOs (bundled and standalone) fell by 31% to 3.8 million SIOs. At the same time, the number of call minutes declined, by 13% to 8.7 billion call minutes.

These decreases are consistent with trends from previous years and are indicative of diminishing relevance of fixed-line voice services. An increasing number of consumers are choosing to go 'mobile only' for voice, or predominately use over-the-top voice applications (such as Facebook, WhatsApp or Skype).

Figure 3.12 shows that there has been a 45% decline in call minutes since 2016–17.

Figure 3.12: Fixed-line voice SIO and call minutes 2016–17 to 2020–21



Source: ACCC Division 12 Record Keeping Rules.

Pricing

Range of plans available

The ACCC’s market research indicates standalone voice fixed-line voice service providers are moving to primarily offer all-inclusive plans that include unlimited local, national and mobile calls for between \$5 and \$40. Unlimited call inclusions are commonplace as the availability of individual call tariff plans continues to reduce.

Access charges

Despite declining usage, fixed-line voice services remain critical for vulnerable consumers who require access to a reliable and affordable voice service including:

- those who live in regional and remote areas
- those who live in areas at risk of being impacted by natural disasters, such as a bushfire
- those with no or poor mobile coverage
- the elderly and individuals with complex medical needs.

Generally, consumers now access fixed-line voice services as a bundled service (usually as a VoIP service) with their fixed broadband service. However, some consumers may not want or need a fixed broadband service and prefer a stand-alone fixed voice service.

Some larger providers, such as Telstra and Optus, now only offer a single unlimited fixed-line voice product. This presents an issue where consumers have limited options other than to pay a relatively high price for access to a fixed-line voice service. In some instances, these services are priced at a level similar to some bundled fixed-line broadband and voice services.

Casual fixed voice users may face a value-versus-price choice where they prefer a lower price service but with less call inclusions. A mobile phone service with similar call inclusions, but a lower price, is a viable alternative for most consumers, except where reliable mobile coverage is not available.

3.2.4 Mobile

Telstra, Optus and TPG continue to dominate the retail market for mobile services. The 3 MNOs operate large vertically-integrated telecommunications businesses, offering a wide range of retail products covering a range of mobile services. These services include:

- mobile phone plans (a bundle of voice, short message service (SMS) and data services)
- standalone mobile broadband services
- fixed wireless services capable of delivering broadband to fixed addresses at home and small business premises.

In addition to the MNOs' flagship retail brands (Telstra, Optus, and TPG's Vodafone), there are also a wide range of mobile virtual network operators (MVNOs) that acquire wholesale connectivity from the MNOs to provide retail services to consumers. In addition, the MNOs also operate sub-brands that compete at the more price sensitive segment of the retail market. These sub-brands include Belong, Gomo, Felix, Amaysim and TPG.

Mobile services remain the most common form of access to both the internet and voice services in Australia. As at 30 June 2021, there were over 27 million mobile phone services in operation, and around 4.6 million mobile broadband services.⁵⁹ In addition to mobile services being almost ubiquitous among the adult population, an increasing number of Australians are relying on their mobile phones as their only method of voice communication, with 60% of Australian adults using a mobile connection as their only method of voice calls at home as at June 2021.⁶⁰

Mobile phones

The ACCC has analysed the pricing and inclusions of a range of mobile phone plans using an approach that evaluates charges paid by consumers based on advertised pricing, and pure price changes holding plan features constant. This approach includes a wide range of available plans from a number of providers, split into post-paid and pre-paid plans, to give a 'snapshot' of the market as a whole.

In addition to the broad-based pricing analysis, the ACCC also separately discusses recent price changes from the MNOs' flagship brands in chapter 2, which collectively account for 91% of the market share.

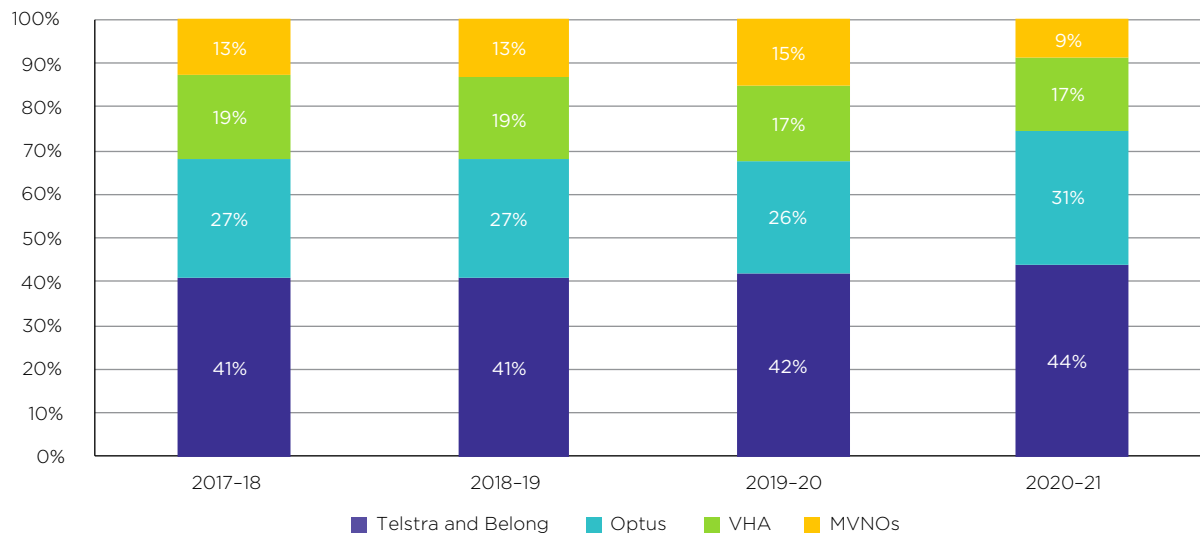
Services in operation and usage

Figure 3.13 shows that retail market shares for mobile phone services remain steady, heavily concentrated in retail brands operated by the MNOs.

59 ACCC, [Internet Activity Report for June 2021](#), December 2021.

60 ACMA, [Mobile-only Australia: living without a fixed-line at home](#), June 2021.

Figure 3.13: Retail market share for mobile phone services



Note: Numbers may not add due to rounding.
 Source: ACCC Division 12 RKR, and ACCC Internet Activity RKR.

Telstra has increased its market share to 44%, with Optus and TPG at 31% and 17% respectively. MVNOs and other resellers make up the remainder of the retail market.

Retail market shares are more concentrated in the post-paid segment of the market, with the 3 MNOs collectively holding 95% of the total SIOs. The pre-paid segment includes a greater share of non-MNO providers, likely due to the combination of the pre-paid segment of the market focusing on lower-cost products, and the MNOs targeting the higher end of the mobiles market with their flagship brands.⁶¹

Pricing

Range of plans available

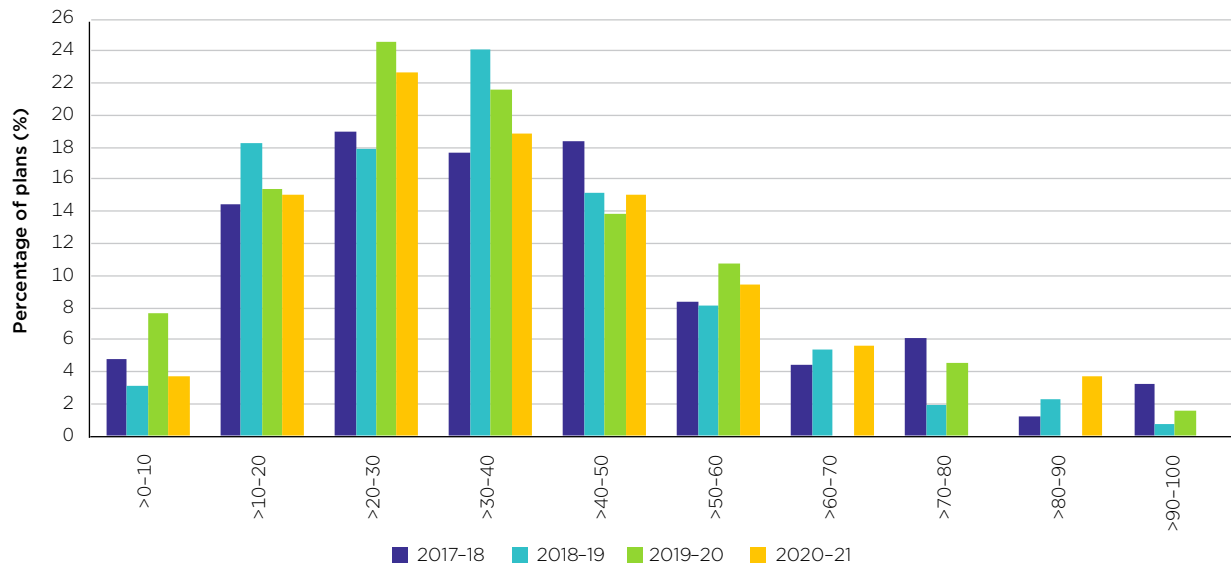
The retail mobiles market continues to see plans available across a wide range of price points. Although there has been a rationalisation in the number of plans available in the market, the overall change in the distribution of plans has been relatively limited.

Post-paid market segment

Figure 3.14 shows that proportion of post-paid plans at a range of price points over time.

⁶¹ It should be noted that the analysis below for pre-paid mobile plans is limited to those with an expiry of 28, 30, 35 or 42 days. This allows analysis to be comparable to that of post-paid services which are generally based on a monthly billing cycle.

Figure 3.14: Percentage of post-paid mobile phone plans at various price points from 2017-18 to 2020-21



Source: ACCC estimates based on information from RSP websites.

In 2020-21, 85% of available plans were priced below \$60 per month, with 23% of plans at the most common price point of \$20-\$30. This was also the case in 2019-20. However, the average data allowance at this price point in 2020-21 was 20 GB, a substantial increase over the 13 GB recorded one year earlier, and greater than 11.8 GB, the average monthly data usage of post-paid mobile services at June 30 2021.⁶²

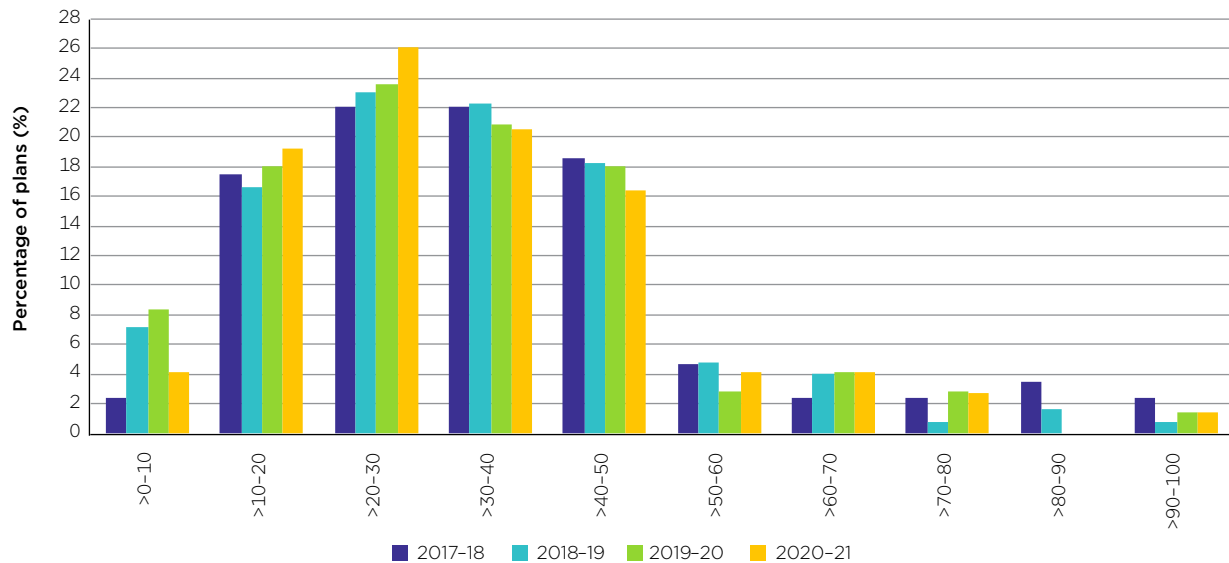
The post-paid segment of the mobile phone market is generally divided between plans offered by the flagship brands of the MNOs, and those offered by smaller re-sellers and MVNOs. Post-paid plans from Telstra, Optus and Vodafone (which collectively represent 95% of all post-paid SIOs) start at \$55, \$45, and \$40 respectively, whereas plans from smaller providers are available across a much wider range of price points. This suggests that a large proportion of the post-paid plans from non-MNO providers are priced below \$40.

Pre-paid market segment

Figure 3.15 shows that proportion of pre-paid plans at a range of price points over time.

62 ACCC, [Internet Activity Report for June 2021](#), December 2021.

Figure 3.15: Percentage of pre-paid mobile phone plans at various price points from 2017-18 to 2020-21



Note: Plans on offer have a range of expiry dates.

Source: ACCC estimates based on information from RSP websites.

Similar to the post-paid market segment, the highest proportion (26%) of plans are at the \$20-\$30 price point. This has been the most popular price point for pre-paid plans since 2017-18.

The majority (86%) of pre-paid plans are available for less than \$50 per month, beyond which the number of plans available drops dramatically. This drop-off may be due to providers choosing to offer better value (in terms of \$/GB) on their post-paid plans above a certain threshold, making higher-priced pre-paid offers less attractive to potential customers.

Advertised vs feature-adjusted price

Advertised prices for mobile services in 2020-21 were generally flat or rising, with significant price changes observed only in some segments of the market. As shown in table 3.1 below, the median cost of a post-paid service rose by 2.9%, with no change recorded at the 25th or 75th percentile of surveyed post-paid services. The 25th percentile, median, and 75th percentile prices for post-paid services in 2020-21 were \$25, \$36, and \$50, respectively.

Table 3.1: Changes (%) in post-paid mobile phone services prices in 2020-21 and 2016-17 to 2020-21

	2020-21	2016-17 to 2020-21
25th percentile	-	-13.8
Median	2.9	-10
75th percentile	-	-16.6

Source: ACCC estimates based on information from RSP websites.

For pre-paid mobile services, recognising the differing expiry of pre-paid services, the ACCC has normalised advertised prices to a uniform 30-day expiry period. Historically, providers have offered plans with expiries ranging from 28 days to 42 days, making comparison challenging. By normalising these plans to a standard 30-day expiry, the actual cost to consumers across plans becomes more comparable.

Table 3.2 shows that in the pre-paid segment of the market, under the advertised price approach, the 25th percentile, median, and 75th percentile prices for 2020-21 were \$24.90, \$32.14, and \$48.21, respectively. While the median price remains unchanged, the 25th percentile price increased by 16.2% based on the advertised price approach, from \$21.43 per month in 2019-20 to \$24.90 per month in 2020-21.

Table 3.2: Changes (%) in pre-paid mobile phone services prices in 2020-21 and 2016-17 to 2020-21

	2020-21	2016-17 to 2020-21
25th percentile	16.2	-19.9
Median	-	-19.6
75th percentile	3.4	-8.2

Source: ACCC estimates based on information from RSP websites.

Despite this seemingly large increase, we consider this change under the advertised approach has largely been driven by a small change in the mix of products available at the lower end of the market, rather than a structural change in pricing. A large range of offers are still available around the \$20-\$30 price bracket.

The combined effect of these changes across the market for mobile phone services (both post-paid and pre-paid) was an increase in the median price of 2.1%, and 1.8% at the 75th percentile when compared to 2019-20.

Increases to advertised prices in 2020-21 mark a shift away from the previously observed trend of annual price falls for consumers. While inclusions continue to grow strongly (discussed below), providers do not appear to be competing as vigorously on price as in previous years.

Table 3.3 sets out the changes in the feature-adjusted prices of mobile phone services over time.

Table 3.3: Changes (%) in mobile phone services feature-adjusted prices in 2020-21 and 2016-17 to 2020-21

	2020-21	2016-17 to 2020-21
Post-paid	-11.5	-52.1
Pre-paid	-8.4	-52.3
Total mobile phone	-9.9	-51.3

Source: ACCC estimates based on information from RSP websites.

From 2019-20 to 2020-21, feature adjusted prices for mobile phone services declined by 11.5% for post-paid services, and 8.4% for pre-paid services. The overall result for the mobile phone market was a 9.9% decline in feature-adjusted prices. When considered with flat or increasing advertised prices, this suggests strong growth in included value, particularly included data.

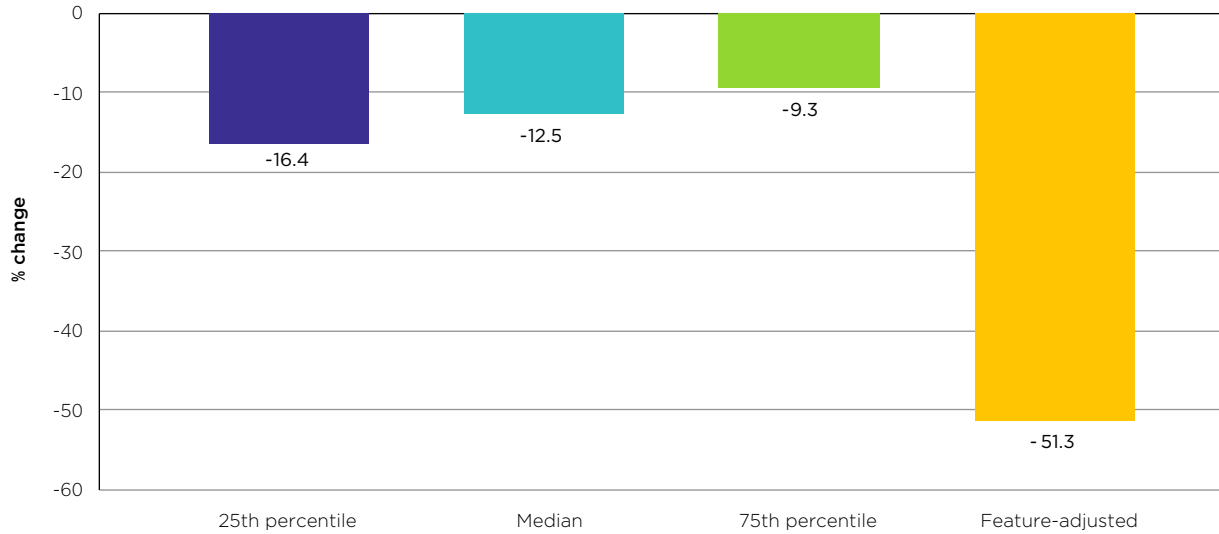
For the period 2016-17 to 2020-21, feature adjusted prices declined for both post-paid and pre-paid services, with the prices for overall mobile services having declined by an average of 15.7% per year. This was likely due to a combination of strong growth in data inclusions, as well as the move towards almost universal provision of unlimited calls and SMS. Notably, during this period there has been a significant fall in pricing, both in terms of advertised price and in feature-adjusted price.

Recently, there has been something of a reversal of the broader market trend observed in the period 2016-17 to 2020-21, with the market moving towards 'more for more' pricing in the mobile services market. Providers, and in particular the flagship brands of the MNOs, are offering plans with greater data inclusions year after year, along with rising advertised prices, or in the case of some pre-paid services, shorter expiry periods.⁶³

As shown in figure 3.16 below, between 2016-17 and 2020-21, the median advertised price has declined by 12.5%, with a greater decrease of 16.4% at the 25th percentile and a smaller but still significant decrease of 9.3% at the 75th percentile point. At that same time, the feature-adjusted price has declined by about 50%, reflecting both lower nominal prices and much greater feature inclusions, primarily in the form of data quotas.

63 ACCC, [Australian consumers now paying more for mobile plans](#), 21 June 2021.

Figure 3.16: Changes in overall mobile phone services prices over the period 2016-17 to 2020-21



Source: ACCC estimates based on information from RSP websites.

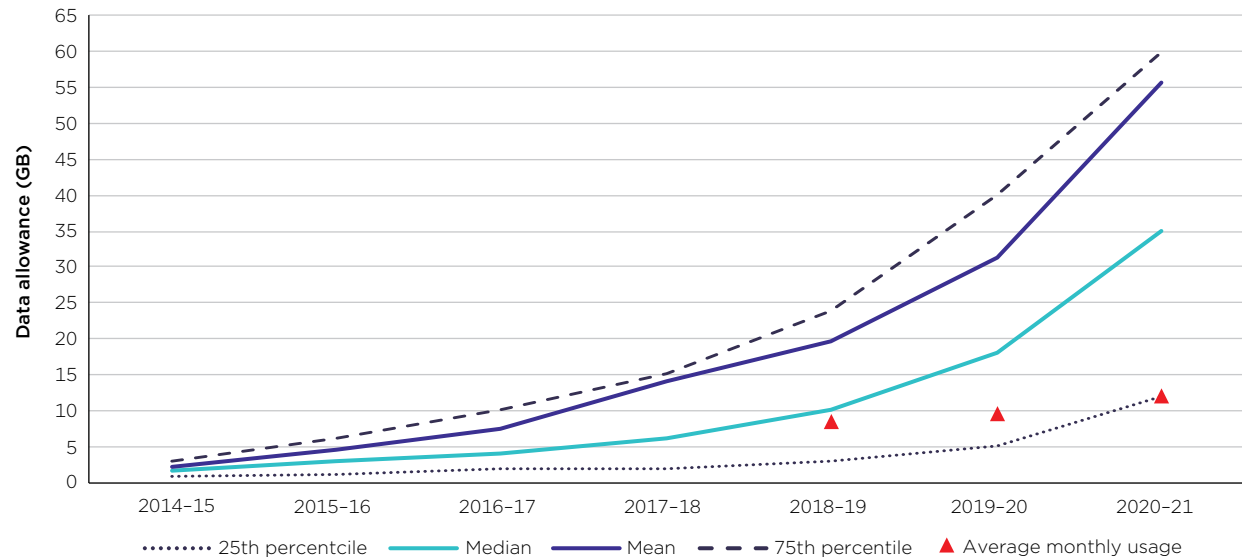
Data allowances

A strong driver of falling feature-adjusted prices, despite flat or rising advertised pricing, is growth in included data across the mobile phone market.

Post-paid market segment

Figure 3.17 shows that in the post-paid segment of the market, inclusions have grown strongly across the period 2014-15 to 2020-21.

Figure 3.17: Average, median, 25th percentile and 75th percentile data allowance for post-paid mobile from 2014-15 to 2020-21



Source: ACCC estimates based on information from RSP websites and ACCC Internet Activity RKR.

In particular, from 2019-20 to 2020-21, the median post-paid data allowance has nearly doubled, from 18 GB to 35 GB.

In contrast to previous years, inclusions between 2019-20 and 2020-21 grew fastest at the lower end of the market, with the 25th percentile inclusion growing from 5 GB to 12 GB (140% year-on-year). Strong growth was also observed at the higher end of the market, from an average of 40 GB in 2019-20 to 60 GB in 2020-21.

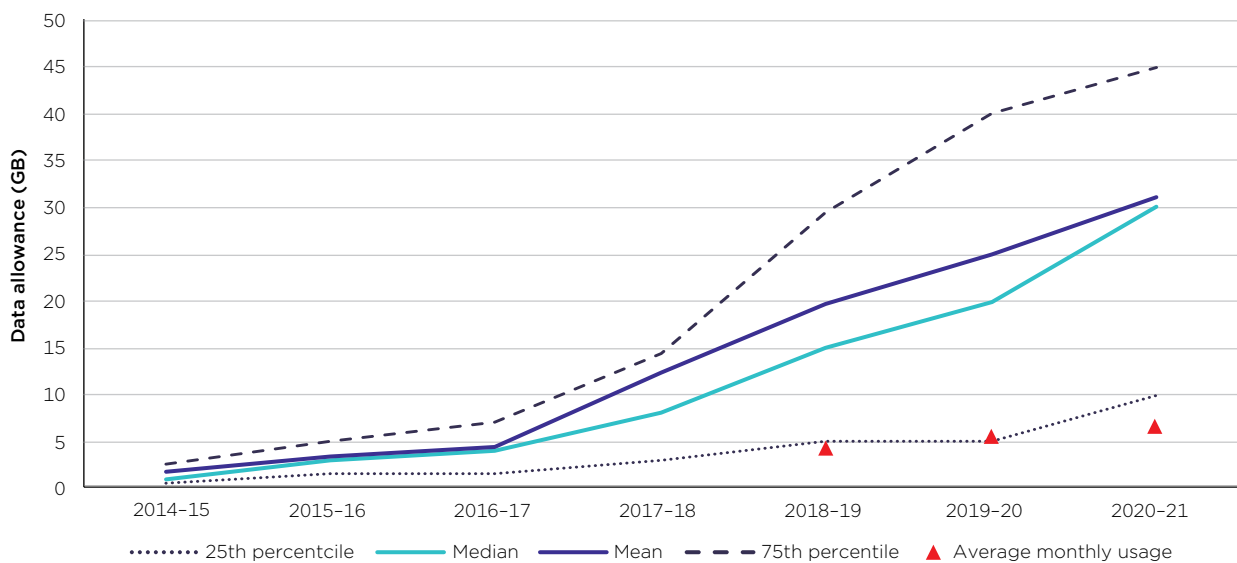
The average allowance is significantly higher than the median (56 GB and 35 GB, respectively), due to the presence of a number of very large allowance plans skewing the dataset. These plans tend to be offered at the higher end of the price range by the flagship brands of the MNOs, and include allowances of up to 240 GB, comparable to some broadband plans offered over fixed-line networks such as the NBN.

Since 2014-15, the average data allowance for post-paid plans has grown from 2 GB to 56 GB, a 28-fold increase.

Pre-paid market segment

Figure 3.18 shows that average data allowances for pre-paid services also grew strongly, if not as substantially as in the post-paid segment of the market. This growth tended to be stronger for more expensive plans, so given the bias towards cheaper plans in the pre-paid segment, data growth will be comparatively slower.

Figure 3.18: Average, median, 25th percentile and 75th percentile data allowance for pre-paid mobile from 2014-15 to 2020-21



Source: ACCC estimates based on information from RSP websites and ACCC Internet Activity RKR's.

The median pre-paid data allowance grew from 20 GB in 2019-20 to 30 GB in 2020-21 (50% year-on-year). While growth was strong at the 25th percentile, doubling from 5 GB to 10 GB, the change in data allowance was much smaller at the 75th percentile, only rising from 40 GB to 45 GB.

Since 2014-15, the average data allowance for pre-paid plans has grown from 2 GB to 31 GB, a more than 15-fold increase.

The median and 25th percentile figures for data inclusions are broadly comparable between post-paid and pre-paid services, indicating no great difference between those segments at the lower end of the market. However, beyond a certain price point, the marginal increase in data allowance for an extra dollar slows in the pre-paid segment, but accelerates in the post-paid segment.

Average usage and data affordability

Figures 3.17 and 3.18 also show that the rate of growth in data inclusions is significantly greater than the rate of change in average monthly usage, for both post-paid and pre-paid services. As at June 30 2021, the average consumer of post-paid mobile phone services uses 11.8 GB per month, while pre-paid users consume 6.3 GB per month on average.⁶⁴

Encouragingly, the retail cost of the average data usage demanded by consumers is falling over time. In other words, data allowances are rising faster than consumer demand for mobile data.

⁶⁴ ACCC, [Internet Activity Report for June 2021](#), December 2021.

The apparent strategy of many providers, and in particular the flagship brands of the MNOs, is to shift their average monthly prices upwards in exchange for increasingly generous data inclusions.

While many consumers, in particular younger consumers and heavier data users, may value the availability of very large download quotas, it is likely that some consumers subject to price increases in exchange for greater data allowances may not prefer the more generous bundle to the previously-available plan at a lower price.

As discussed in chapter 2, the flagship brands of the MNOs have increased the monthly prices of their plans in exchange for greater download quotas over the past 12 to 18 months.

Collectively, the MNOs hold 91% of the mobile phone services market, and 95% of the post-paid segment of the market, which makes up approximately two-thirds of mobile phone SIOs. While our data collected from a broad survey of the market notes flat advertised prices and falling feature-adjusted prices, this is not the case for Telstra, Optus and Vodafone.

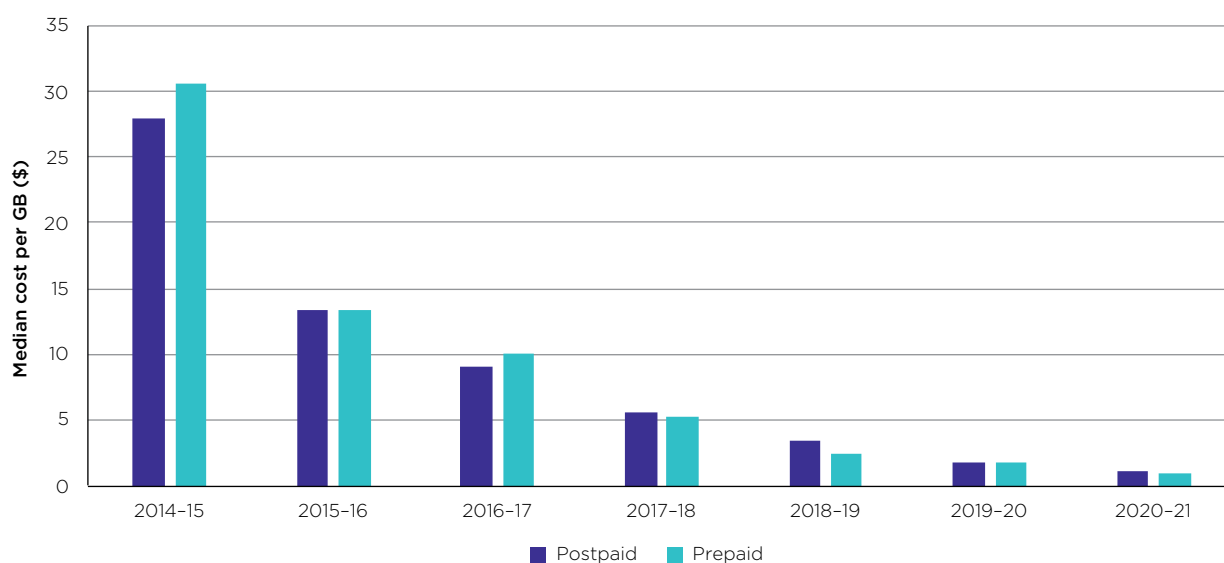
In July 2020, Telstra increased its 4 post-paid mobile plan prices by between \$5 and \$15 per month. In May 2021, Optus raised the price of its 4 post-paid plans by \$6 per month. Both of these changes were accompanied by generous increases in data inclusions, which reduced the cost in terms of price per GB.

In the pre-paid segment of the market, Telstra has also reduced the recharge expiry on 35 and 42-day pre-paid plans to 28 days, which effectively equates to a price increase of between 25% and 50% over a year. Vodafone has also reduced the expiry of its 35-day plans to 28 days, for a 25% increase over a year.

Retail cost per GB of data

Figure 3.19 shows that the median retail cost per GB of data continues to fall in line with strong growth in data allowances.

Figure 3.19: Median retail cost per GB of data for post-paid and pre-paid mobile phone services from 2014-15 to 2020-21



Source: ACCC estimates based on information from RSP websites.

In 2020-21, the median cost per GB fell by 37% in the post-paid segment to \$1.05, and 44% in the pre-paid segment to \$1.00. In the post-paid segment, a plan matching this price per GB can be found for between \$30 and \$35, and \$30 in the pre-paid segment.

These median prices per GB of data have fallen significantly since 2014-15, reflecting rapidly falling costs of providing data services over mobile networks. The retail cost per GB of data has fallen, in line with strong growth in data allowances, from around \$30 per GB in 2015 to around \$1 per GB today. This trend of falling \$/GB, despite flat or rising advertised prices, reflects providers' focus on increasing their data inclusions to compete in the market.

Growth in download quotas also continues to outstrip growth in average consumer demand for data. A wide range of plans are available that comfortably meet the average consumer's download requirements for around \$30 a month, with some available for as little as \$25 a month. While the ACCC expects that download quotas will continue to rise in line with the falling cost of providing mobile data, many consumers may not be aware of their monthly data requirements, and are likely purchasing more generous plans than they need.

Other inclusions and features

While the ACCC's analysis has so far focused on price and data inclusions, these aspects are not the only factors on which providers of mobile services compete. The mobiles market is one for similar but differentiated products, and providers compete on a wide variety of product characteristics, including geographic coverage, the quality of the voice and data services including data rates, 5G availability, customer support, and a number of other factors.

2020–21 marks the first year in which all post-paid plans surveyed included unlimited SMS to numbers in Australia. In addition, all but one post-paid plan included unlimited calls to Australian numbers. Of the pre-paid plans surveyed, only 3 did not include unlimited calls or SMS, with all plans over \$10 a month offering unlimited calls and SMS.

As well as including unlimited calls and SMS, the vast majority of post-paid plans are now available on month-to-month terms, with no lock-in contract. This marks the near completion of a significant structural change in the retail mobiles market, away from 12- or 24 month fixed contracts, and towards a model of flexibility and greater ease of switching.

Where retail competition is robust, consumers can expect to benefit from the lower friction afforded by month-to-month plans to change providers or service levels within their existing provider to best suit their requirements. However, where a provider is able to exercise a degree of market power, month-to-month contracts allow that provider to unilaterally alter the terms of service, with customers given little recourse to remain on their current chosen plan.

In addition to claims around the coverage footprint of their mobile networks, all 3 MNOs are heavily advertising the availability of their 5G networks as a point of competition in recent years. With the availability of 5G-compatible handsets now much greater than at the launch of these 5G networks, the ACCC expects the MNOs to continue to compete on 5G availability as it is further extended across their respective coverage footprints.

Mobile broadband

In addition to mobile phone plans designed for use in handsets, the MNOs and some MVNOs also offer mobile broadband plans that do not offer the ability to make or receive calls or texts. These plans tend to be more generous in terms of the data allowance at a given price point than mobile phone plans, and are designed for use in connected devices such as tablets and some laptops, or for standalone devices like dongles or dedicated wireless hotspots.

This category does not include wireless services designed to provide a permanent, fixed replacement for fixed-line broadband services, and focuses on mobility products. However, these may serve as a substitute for a fixed broadband service for some consumers with lower demand for data.

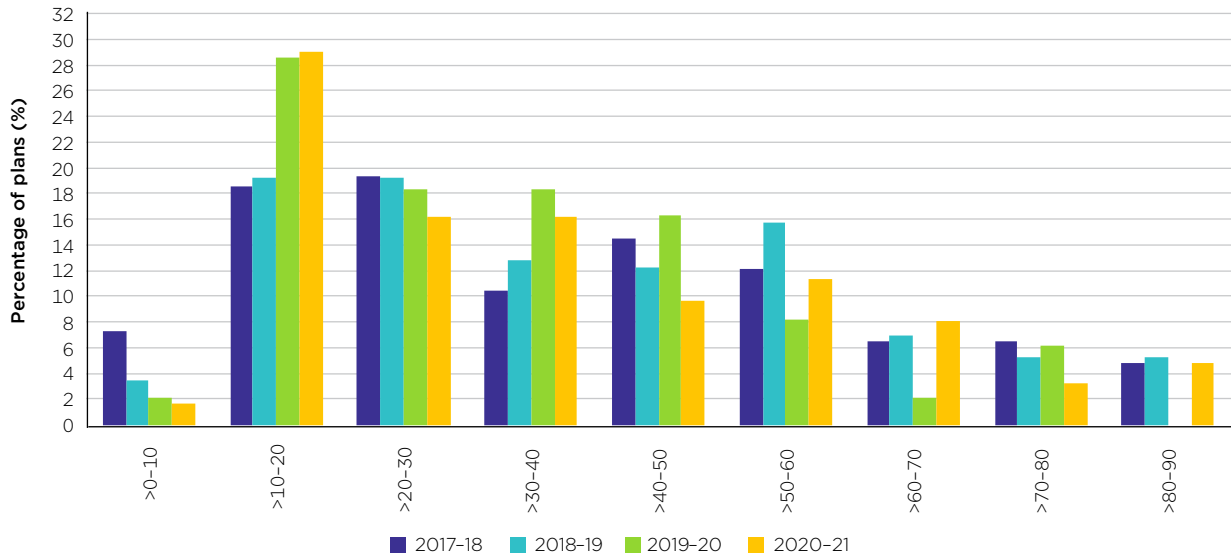
Pricing

Range of plans available

The mobile broadband market has undergone a change over the last 2 years, with a shift towards a greater proportion of plans available in the \$10–\$20 price point, compared to previous years where plans were bunched in the \$10–\$30 range.

Figure 3.20 below shows the pricing category breakdown for the last 4 years.

Figure 3.20: Percentage of mobile broadband plans at various price points from 2017-18 to 2020-21



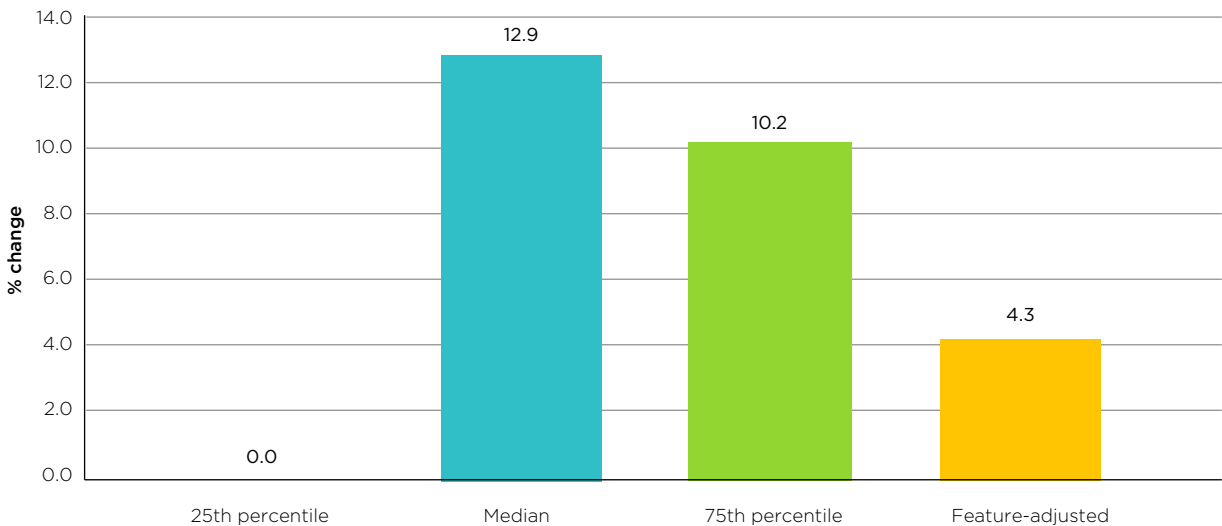
Source: ACCC estimates based on information from RSP websites.

Nearly 30% of all mobile broadband plans surveyed in 2020-21 fell into this \$10-\$20 category, a very similar result to 2019-20 but in contrast to 18-19% in 2018-19. This greater proportion of entry-level plans may suggest demand for these services is softer at the higher-end of the market, as dedicated fixed wireless plans offer better value for those consumers using mobile broadband as a fixed broadband alternative.

Advertised vs feature-adjusted price

Figure 3.21 shows that, in general, advertised and feature-adjusted prices for mobile broadband services rose. This is in contrast to results from previous years.

Figure 3.21: Changes in mobile broadband services advertised and feature-adjusted price in 2020-21



Source: ACCC estimates based on information from RSP websites.

From an advertised price perspective, prices for consumers:

- on lower-price plans (at the 25th percentile) remained unchanged at \$20
- at the median price point increased by 12.9% to \$39.50, indicating a long tail of more expensive plans to go with the large cluster of plans at the \$10-\$20 price point
- on higher-priced plans (at the 75th percentile) rose 10.2%, to \$55.

The mobile broadband market stands in contrast to the post-paid and pre-paid mobile phone segments of the retail mobiles market. Those segments, despite seeing flat or rising advertised prices, still recorded a continued fall in their feature-adjusted price indices, indicating that feature inclusions generally grew faster than nominal prices.

Mobile broadband, by contrast, recorded a 4.3% increase in the feature adjusted price, indicating generally poorer value to consumers in 2020–21 than was available in 2019–20.

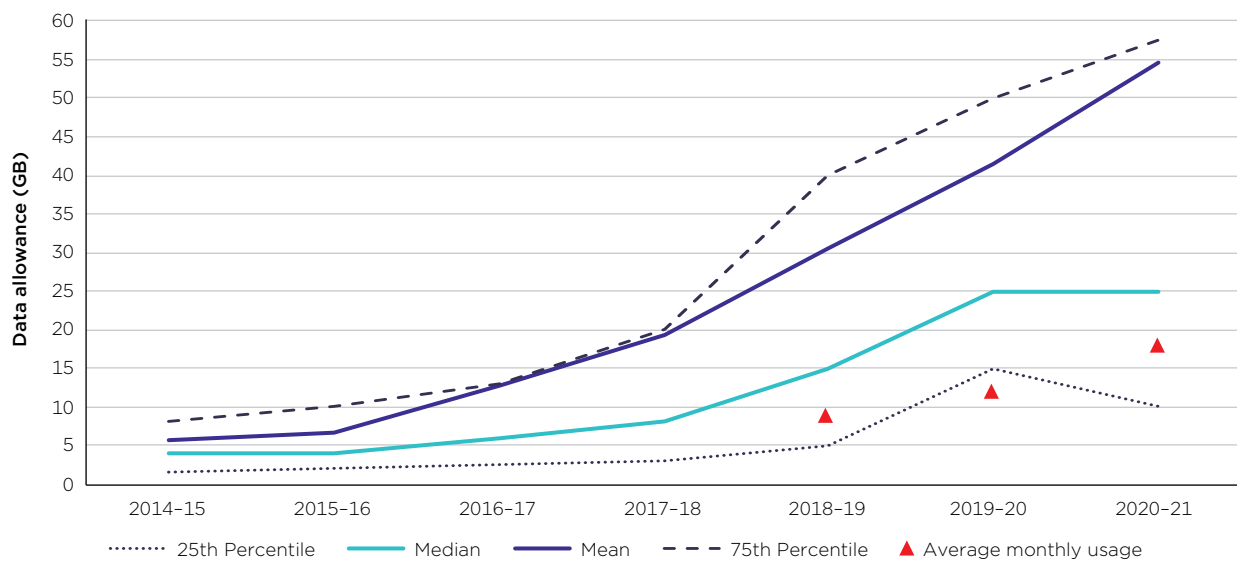
2020–21 saw a sharp fall in the number of plans available on a 12-month contract, with a shift towards post-paid mobile broadband services offered on a month-to-month basis. Historically, providers have tended to offer better value (higher inclusions at the same price) when a customer subscribes to a contract for a set time period, compared to a monthly service. This shrinking availability of contracted services may account for some of this change in the direction of feature-adjusted prices.

The ACCC has also observed a trend for some providers towards offering plans with different expiry dates and varying levels of data allowances. This may indicate that instead of having a set requirement for data per month, some users of a dedicated mobile broadband service have a more casual use pattern, and may prefer plans which are designed to provide a set amount of data for casual use over a specified time period.

Data allowances

Data allowances for mobile broadband plans continued to rise generally, but unevenly. This growth since 2014–15 is shown in figure 3.22 below.

Figure 3.22: Average, median, 25th percentile and 75th percentile data allowance for mobile broadband services from 2014–15 to 2020–21



Source: ACCC estimates based on information from RSP websites and ACCC Internet Activity RKRrs.

At the higher-end, data allowances have grown very strongly, comparable to the exponential growth seen particularly in the post-paid segment of the mobiles market.

However, 2020–21 saw stagnation at the median data allowance of 25 GB.

In addition, at the 25th percentile, the included data fell for the first time in this data series, from 15 GB to 10 GB. Although this result is in sharp contrast to general expectations for this segment, it may reflect the general trend towards providers focusing on lower end plans with lower \$/GB value.

As data allowances rise in the post-paid and pre-paid segments of the retail mobile market, consumers are also likely to spend more time tethering their laptops, tablets and other devices to an existing mobile service, which may change the strategy of providers looking to provide standalone data services to their customers.

5G rollout

During 2020-21, the MNOs continued to roll out their 5G customer access networks rapidly, collectively operating more than 3,800 5G sites active nationwide.⁶⁵ 5G networks promise to bring faster broadband speeds to consumers, as well as enabling a host of applications reliant on ultra-low latency and mass connectivity. At this stage, the impact of 5G networks on retail services has largely been seen in faster download speeds for consumers with 5G-enabled devices.

Access to 5G networks is being monetised by the networks in slightly differing ways. For example, Telstra is making access to their 5G access network contingent on customers taking up a service contract of \$65 or more per month on a post-paid contract, or on recharges of \$60 or more on a pre-paid plan.

Optus, by contrast, is offering 5G access on all of its post-paid plans, available from \$45 per month or more. Similarly, Vodafone is offering access to TPG's 5G network on all of its post-paid plans from \$40 per month. Vodafone is also offering 5G access on its pre-paid slate.

Optus is currently the only MNO to make their 5G access network available to MVNOs on its network, with both Spintel and Aussie Broadband offering a range of 5G-enabled mobile products under their MVNO brands.

With the rollout of 5G, network operators have the opportunity to not only offer improved mobile broadband, but also provide fixed wireless alternatives to homes and small businesses, as an alternative to traditional fixed-line broadband.

However, the extent to which 5G mobile and fixed wireless services could become a substitute for fixed-line broadband services in terms of speed, data allowance and price is unclear. 5G services in some areas are becoming increasingly attractive to consumers as an alternative to fixed-line services. Nevertheless, the technology currently has a limited geographic footprint, and will unlikely be able to service many fixed-line broadband end-users for some time.

All 3 of the MNOs now offer some form of 5G home broadband product, which is generally price competitive with comparable NBN plans.

Telstra, Optus and Vodafone offer 5G home wireless plans for residential use, starting at \$75 per month with higher-priced 'maximum speed' products for around \$85 or \$90, which promise to provide download speeds at the maximum attainable data rate at any given time of day.

At this stage, Optus is the only network operator that has made its 5G access network available for wholesale home broadband products, with Spintel offering a 5G home broadband solution for slightly cheaper than its host MNO Optus.

Access to spectrum

Access to spectrum remains a critical enabling factor for mobile services in Australia. MNOs require a mix of spectrum, across low, mid and high bands, in order to provide coverage and capacity across both major population centres and regional and remote areas.

The ACCC considers that access to spectrum is a critical enabler of competition in the downstream markets, and closely monitors developments in the planning, allocation, and deployment of spectrum by the mobile network operators and other telecommunications entities.

The ACMA conducted an auction of 2,400 megahertz (MHz) of 26 gigahertz (GHz) spectrum in April 2021, with 5 companies securing spectrum in various areas across Australia. This high-band spectrum can be used for the deployment of 5G networks, enabling very high data rates to be attained over relatively short distances. This spectrum is likely to be deployed for use in densely populated areas, and for the provision of fixed wireless broadband services.

65 ACCC, [Mobile Infrastructure Report](#), December 2021.

The MNOs were represented in winning bids by Telstra, Optus, and Mobile JV Ltd. (TPG), as were smaller independent operators, Dense Air and Pentanet.⁶⁶ Telstra has made representations that it will use this spectrum to improve its 5G network and to provide home broadband services, which may enable new infrastructure-based competition in the provision of home and SME broadband.⁶⁷

During 2020–21, the ACCC also provided advice to the Minister for Communications on allocation limits for the upcoming 850/900 MHz auction, scheduled for late 2021. This low-band spectrum can be used to provide wide-area coverage over long distances, and is a critical input to the provision of nationwide mobile network services.

3.2.5 Telecommunications Complaints data

Complaints to the Telecommunications Industry Ombudsman

The TIO provides a dispute resolution service for telecommunications disputes between service operators and residential and small business customers.

Table 3.4 shows that, in 2020–21, the TIO received 119,400 complaints. This represents a 6.1% reduction from 2019–20⁶⁸, and is the third consecutive year where the number of complaints has declined. Residential customers accounted for 83.5% of complaints, with small businesses accounting for 16.5%.⁶⁹

Table 3.4: Complaints to the TIO by service type in 2020–21

Type of service	Number of Claims	Proportion of Claims (%)
Internet	39,857	33.4
Mobile	39,094	32.7
Multiple	26,655	22.3
Landline	13,060	10.9
Property	734	0.6

Source: TIO Annual Report 2020–21.

Whilst complaints relating to internet services decreased by 7.1% in 2020–21, they remained the main type of complaint, accounting for 33.4% of total TIO complaints.

Table 3.5 indicates that, in the reporting period, consumers have made fewer complaints to the TIO about dispute resolutions being unmet, delays in establishing a service and slow data speeds, but made more complaints about services with add on features and uncontactable providers. Difficulties contacting providers in the reporting period is likely to be related to economic and social restrictions arising from COVID-19.

66 ACMA, [Auction summary - 26 GHz band \(2021\)](#), April 2021.

67 Telstra, [We're investing \\$277m in spectrum to make our 5G network stronger and faster](#), April 2021.

68 Figures from the [TIO Annual Report 2020–2021](#).

69 *ibid.*

Table 3.5: Complaints to the TIO by issue type in 2019–20 and 2020–21 (Top 10 issues)

Complaint	Number of complaints		Change (%)
	2019–20	2020–21	
No/delayed action by provider	41,669	46,533	1.7
Service and equipment fees	42,152	39,584	-6.1
No phone or internet service	17,501	15,593	-10.9
Delay establishing a service	17,347	14,170	-18.3
Intermittent service or drop-outs	11,789	10,913	-7.4
Resolution agreed but not net	13,259	10,275	-22.5
Failure to cancel a service	6,753	8,775	29.9
Slow data speed	8,721	7,122	-18.3
Provider uncontactable	4,672	8,800	88.4
Service problem with add-on feature	2,079	4,344	108.9

Source: TIO Annual Report 2020–21.

Complaints to the ACCC

The ACCC is contacted by consumers and small businesses about a wide range of issues. However, it cannot pursue every complaint brought to its attention and does not seek to resolve individuals' complaints. Rather, the ACCC focuses on situations that may impact vulnerable consumers, harm the competitive process or result in widespread consumer or small business detriment. Individuals may be referred to dispute handling organisations that are better placed to assist.

The ACCC also uses information received in complaints to help identify issues for further investigation that may have industry-wide applications.

Table 3.6 illustrates that, during 2020–21, the ACCC received 5,798 complaints relating to telecommunications matters, a 5% decrease from 2019–20.

Table 3.6: ACCC complaints by contact type in 2019–20 and 2020–21

Type of conduct	Number of complaints (2019–20)	Number of complaints (2020–21)
Section 18 – misleading or deceptive conduct	2,276	2,044
Section 54 – guarantee as to acceptable quality	1,845	1,939
Section 36 – wrongly accepting payment	579	566
Section 29(1)(b) – false representations (services) as to standard quality, value or grade	459	402
Section 60 – guarantee as to due care and skill	286	179
General complaints (no breach)	205	201
Section 29(1)(a) – false representations (goods) as to standard, quality, value or grade	151	134
Section 56–57 – guarantee relating to the supply of goods by description, sample or demonstration	108	122
Section 29(1)(m) – false representations as to the exclusion or effect of any condition, warranty, guarantee, right or remedy	104	93
Section 29(1)(i) – false representation as to price	93	118

Source: ACCC data.

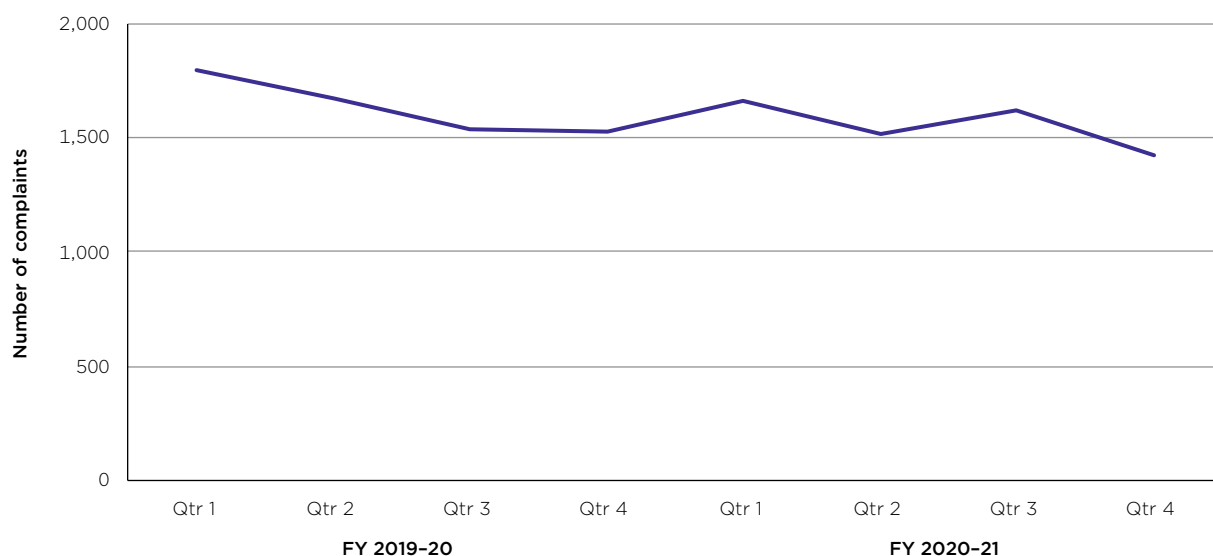
Approximately 81% of these complaints were referred to other agencies, mainly to the TIO and state-based agencies which are tasked with resolving consumer complaints and investigating issues outside of the ACCC's remit.

Whilst there were small changes in the number of complaints across most categories, the largest falls in complaints were for 'misleading or deceptive conduct' and 'general breaches'.

Communications-related complaints to the ACCC are similar to those reported to the TIO, with service quality and connection issues continuing to be significant consumer concerns. Some of these

complaints would have been referred to other entities, primarily to the TIO and state-based agencies, with specific dispute resolutions functions.

Figure 3.23: Communications- related complaints to the ACCC in 2019-20 and 2020-21



Source: ACCC data.

Table 3.7 shows that complaints against most providers generally decreased in 2020-21. However, complaints about Telstra rose by 13.5%.

Table 3.7: Number of complaints by telecommunications provider in 2019-20 and 2020-21

Provider	Number of complaints (2019-20)	Number of complaints (2020-21)
Telstra (including Belong)	1,296	1,466
Optus	893	602
Vodafone Hutchison Australia	275	219
TPG (including iiNet)	546	274
NBN Co	204	152
Dodo	95	56
Boost Mobile	30	40
Aussie Broadband	22	34
Southern Phone	13	32
Internode	30	28

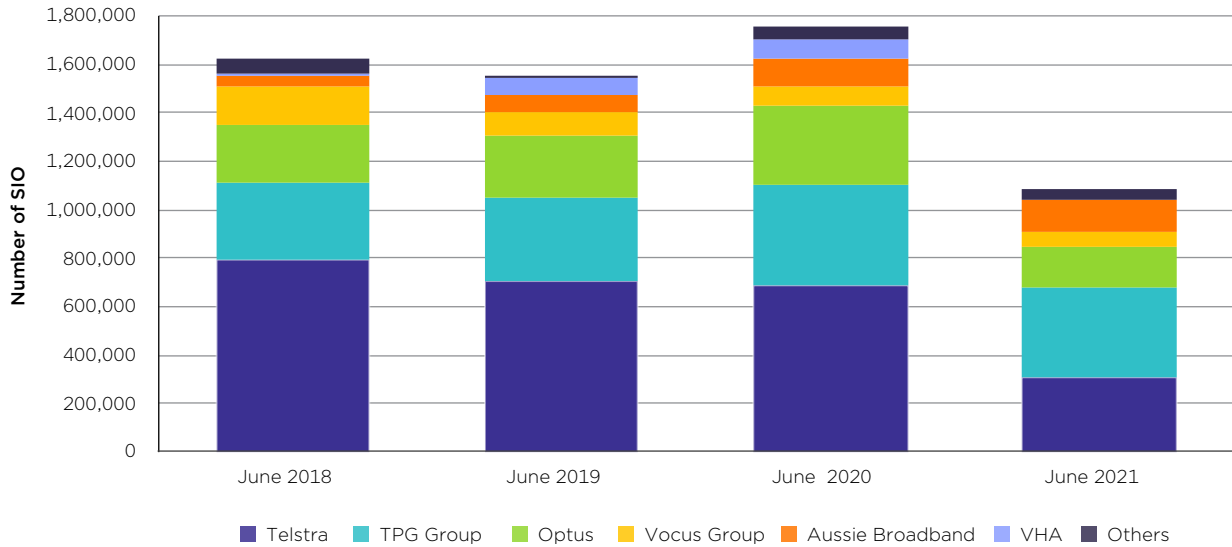
Source: ACCC data.

3.3 Wholesale markets

3.3.1 National Broadband Network

Growth in the NBN wholesale market slowed during 2020-21. Compared to almost 1.8 million new residential services added in 2019-20, figure 3.24 shows that only 938,000 were added in the year to 30 June 2021.

Figure 3.24: NBN wholesale – residential broadband yearly net SIO additions

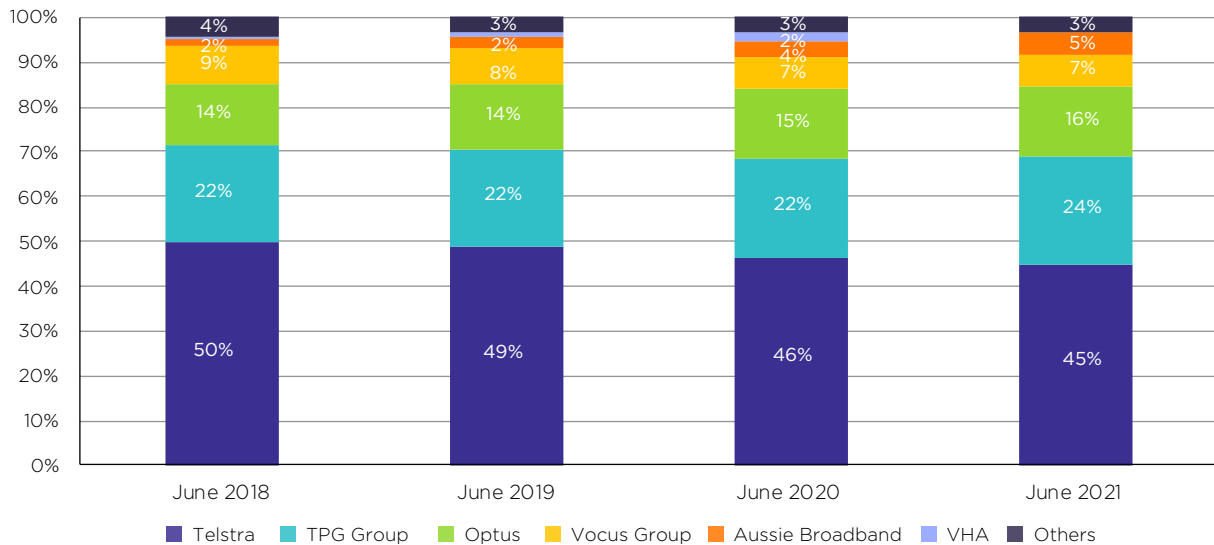


Source: ACCC NBN Wholesale Market Indicators reports.

With the NBN rollout complete, this decline in growth is expected to continue.

Figure 3.25 shows that, wholesale NBN market shares remained relatively stable over 2020-21, with smaller players gaining some market share at the expense of Telstra and Vocus Group.

Figure 3.25: NBN wholesale – residential broadband market shares



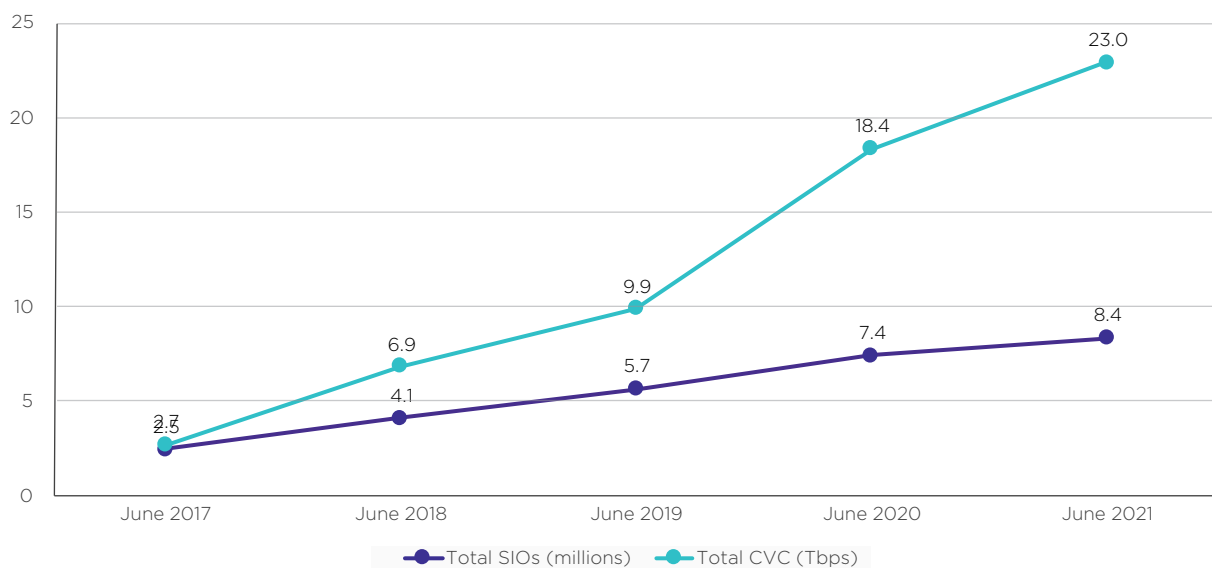
Note: Numbers may not add due to rounding.

Source: ACCC NBN Wholesale Market Indicators reports.

Over the course of 2020-21, the speed tier composition of the NBN wholesale market changed substantially due to the various discounting promotions that NBN Co introduced. By 30 June 2021, almost 3-quarters of all NBN SIOs were on speed tiers of 50 Mbps or above, including over 17% at 100 Mbps or above.

Figure 3.26 shows that the amount of CVC acquired by NBN wholesale access seekers continued to grow over 2020-21, particularly due to CVC bonuses provided by NBN Co in the March and June 2021 quarters as part of its Focus on Fast promotion.

Figure 3.26: NBN wholesale residential broadband – total SIOs and total CVC



Source: ACCC NBN Wholesale Market Indicators reports.

In June 2021, NBN wholesale market access seekers were acquiring around 23 Tbps of residential broadband CVC capacity, compared to about 18.4 Tbps in June 2020, an increase of 25%.

3.3.2 Mobiles

In addition to providing retail services over their networks, the mobile network operators also provide wholesale access to their networks for the purpose of enabling MVNOs to provide retail services in downstream markets. Providing services to MVNOs has traditionally been a method for monetising spare capacity available on the MNOs' networks. Robust competition in the wholesale market can improve competitive conditions in the downstream retail markets through the availability of a wider range of retail products offered by the MVNOs.

As noted in chapter 2, the ACCC considers there now to be 3 'tiers' of retail providers, enabled by the wholesale market for mobile services:

- the MNOs' flagship brands
- the MNOs' sub-brands and subsidiary MVNOs
- independent resellers and MVNOs.

As the MVNOs rely on the MNOs' infrastructure to provide retail services, MNOs are in a strong bargaining position compared to the independent MVNOs on their networks, and are largely able to dictate the terms of service agreements. In particular, the MNOs are generally able to decide whether to provide the MVNOs with access to new and emerging technologies, such as Voice over LTE and Voice over Wi-Fi (VoLTE/VoWiFi), e-SIMs, and 5G access networks.

VoLTE and VoWiFi are technologies that enable the carriage of voice calls over 4G LTE networks, and non-MNO broadband connections (typically via consumer Wi-Fi), respectively. These technologies were initially restricted to the flagship MNO brands, and in particular to their post-paid services, but are now available to some MVNOs. Optus in particular has made VoLTE/VoWiFi available to post-paid MVNO partners⁷⁰, and Telstra has made VoLTE available on Boost pre-paid plans.

An e-SIM is an alternative to a physical plastic SIM card that is embedded in a consumer device, and able to facilitate the switching of mobile networks without physically changing the SIM.⁷¹ This capability reduces the friction involved in switching mobile providers, as consumers are able to move plans entirely

70 Optus, [Optus launches VoLTE and Wi-Fi calling for wholesale partners](#), July 2020.

71 ACCC, [Update: ACCC assessment of competition concerns relating to e-SIMs](#), December 2019.

remotely, without needing to purchase a SIM card at a retail location, or wait for one to be posted to them.

e-SIM technology is currently only offered to customers of the MNOs' flagship brands. Telstra has announced the availability of e-SIM activation on its wholesale network⁷² and the ACCC is aware of one other MNO that is developing e-SIM capability for its wholesale network. However, the ACCC is not aware of any MVNOs currently offering e-SIM activation to its retail customers.

The ACCC considers that e-SIM technology is likely to promote competition and greater choice in the mobile sector. While there is relatively low consumer demand for e-SIM technology as most e-SIM devices (excluding wearables) currently have a physical SIM compartment, we are aware that device manufacturers are looking to expand the use of e-SIMs in devices, which could include e-SIM only phones. The ACCC will continue to monitor MNOs enabling e-SIM availability to wholesale customers.

Access to the MNOs' growing 5G networks is also a highly sought-after feature in wholesale mobile markets, allowing resellers and MVNOs to provide 5G access to their customers in the retail markets. Wholesale access to 5G enables MVNOs to better compete with both other MVNOs, and the vertically-integrated retail arms of the MNOs, due to growing consumer demand for 5G. Optus is currently the only MNO that provides wholesale access to its 5G network, with Optus-hosted MVNOs Spintel and Aussie Broadband offering mobile plans that include 5G network access.

The ACCC considers it likely that technological developments such as VoLTE/VoWiFi, e-SIMs and 5G access will continue to 'trickle down' to MVNOs following deployment across the MNOs' flagship slates, and their sub-brands and subsidiary MVNOs. This was the case for VoLTE/VoWiFi, as well as 4G network access when that technology was first deployed.

72 Telstra, [Wholesale eSIM](#), accessed 29 September 2021.

4. ACCC activities in communications

The ACCC performs specific roles under the CCA (Parts XIB and XIC) in communications markets, as well as other activities related to the communications sector. These activities are reported in detail in periodical publications such as the ACCC Annual Report.⁷³

This chapter briefly describes activities undertaken by the ACCC within the communications sector during 2020–21 in the following areas:

- access to telecommunications
- NBN
- structural separation of Telstra and migration plan
- monitoring and reporting
- enforcement and compliance
- mergers, authorisation and third line forcing
- advice, advocacy and contributions to policy processes.

4.1 Access to telecommunications

Part XIC of the CCA allows the ACCC to declare certain communications services where it is in the LTIE. Once a service is declared, the ACCC can set regulated terms and conditions of access, including price. This is often done via an access determination although it may also be effected through a binding rule of conduct. Further information on declared services can be found on the ACCC's declared services register.⁷⁴

4.1.1 Declarations and access determinations

During 2020–21 the ACCC conducted several inquiries about access to telecommunications services.

Domestic transmission capacity service

The ACCC regulates transmission services in areas where there is a lack of competition between providers, to promote downstream competition in the supply of communications services to consumers, including residential and businesses. The domestic transmission capacity service (DTCS) is the regulated transmission service that enables access seekers to acquire wholesale transmission services under reasonable terms in areas where competition is limited or non-existent.

On 23 October 2020, the ACCC released its [final access determination](#) for the DTCS. Regulated prices in the Final Access Determination (FAD) are significantly lower than those in the 2016 DTCS FAD. FAD prices are based on a benchmarking model developed by the ACCC in 2016. The model uses transmission prices on competitive routes to determine appropriate prices on regulated routes.

The reduction in the regulated prices reflects the overall decline in commercial transmission prices since the last FAD. In particular, prices for low-capacity services were reduced by 35%, mid-range capacity services were reduced by an average of 55% and prices for higher capacity services were reduced by 60%. The decline in commercial transmission prices is driven by technological developments and robust competition.

The 2020 FAD also sets out non-price terms and conditions of access. The FAD applies until 31 March 2025.

73 The ACCC Annual Report is available at: <https://www.accc.gov.au/publications/accc-aer-annual-report>.

74 Further information on this is available at: <https://www.accc.gov.au/public-registers/telecommunications-registers/s152aq-declared-services-register>.

Local bitstream access service (LBAS) and superfast broadband access service (SBAS) declarations inquiry 2020

On 19 June 2021, the ACCC concluded its [inquiry into the SBAS and LBAS](#) and released a [final report](#) on its findings to:

- extend the declaration of the SBAS for a further 5 years until 28 July 2026
- combine the existing declarations under a single SBAS declaration that applies to all non-NBN superfast fixed-line networks
- remove the minimum 25 Mbps download speed requirement. There are now no minimum or maximum speeds nominated in the declaration that would limit the range of access products that an access seeker could request from an access provider.

In July 2021, the ACCC commenced a [public inquiry to make a FAD for the SBAS](#) following its decision to declare the service. The ACCC also issued an interim access determination for the SBAS which applies until a FAD is made and maintains current regulated price and non-price terms.

Mobile terminating access service

On 2 October 2020, the ACCC released a [final report](#) concluding its mobile terminating access service (MTAS) FAD inquiry.

The MTAS is a wholesale service that mobile network operators provide to each other and to fixed-line operators to connect or 'terminate' voice calls on their mobile networks. The ACCC regulates the MTAS to allow consumers on different mobile networks to make calls to each other, and to enable consumers on fixed-line networks to make calls to mobile network subscribers.

The ACCC decided to reduce the regulated price for the MTAS from 1.7 cents per minute to 1.19 cents per minute from 1 January 2021. This was based on the estimated efficient cost of providing the service, and reflects the cost savings to the MNOs from using more efficient technology in delivering mobile services.

Wholesale asymmetrical digital subscriber line service

Under the CCA, the ACCC must hold a public inquiry about whether to extend, revoke, vary, allow to expire or remake the wholesale asymmetrical digital subscriber line (WADSL) service declaration before it expires on 13 February 2022.

In April 2021, the ACCC held preliminary discussions with a number of industry stakeholders to seek their views on whether we should extend declaration of the WADSL service or let it expire. Subsequently, on 30 July 2021, the ACCC commenced a public inquiry, under Part 25 of the Telco Act, into the declared WADSL service.

In September 2021, the ACCC received 5 submissions from ACCAN, the Internet Association of Australia, Telstra, Optus and TPG. The submissions generally indicated support for the ACCC's position to extend the WADSL declaration until 30 June 2024.

In December 2021, the ACCC released its Final Decision to extend the WADSL service declaration until 30 June 2024.

Quarterly reporting of Access Agreements

Carriers or carriage service providers who supply declared services must lodge quarterly reports with the ACCC regarding all new, varied, cancelled and in-force access agreements for declared services.

There were 23 reporting companies in 2020–21.

4.2 National Broadband Network

The ACCC has reviewed the regulatory settings for various elements of telecommunications infrastructure and services to promote the LTIE. It concluded its NBN wholesale service standards and NBN access pricing inquiries, securing a new wholesale broadband agreement between NBN Co and access seekers that contains improved entry-level pricing and enhanced service standards.

The ACCC began engaging with the telecommunications industry to develop a new set of regulatory arrangements for the NBN under NBN Co's SAU. It held an industry roundtable in June 2021, where representatives of NBN Co, broadband retailers, industry groups, consumer representatives and government agencies discussed potential changes to the regulatory arrangements.

The ACCC's objective for this work is to develop a long-term regulatory framework for NBN wholesale services that supports efficient prices and promotes affordable and diverse NBN products.

4.2.1 Conclusion of NBN entry-level pricing and wholesale service standards inquiries

In August 2020, the ACCC recommenced its NBN entry-level pricing and wholesale service standards inquiries. This followed NBN Co's move to finalise its latest commercial agreement with access seekers (known as WBA4) with the aim of it being executed by access seekers before the end of 2020.

NBN Co expressed a desire to work with industry and the ACCC to reflect particular price and service standard terms and conditions in WBA4 that would address concerns raised during the inquiries, rather than to have regulated terms set through an access determination. The key focus of the inquiries therefore became whether the terms and conditions proposed by NBN Co in its WBA4 on the items of interest in the inquiries were reasonable.

On 4 November 2020, the ACCC concluded its public inquiries without making an access determination. NBN Co incorporated the inquiries' key findings into its new WBA4 that commenced on 1 December 2020 and will remain in force until at least November 2022. Following consideration of stakeholder views and its examination of the WBA4 drafting, the ACCC considered that the new version of NBN Co's WBA4 would constitute a reasonable set of wholesale arrangements for the term of the agreement and adequately addressed the key concerns considered during the inquiries.

While the ACCC decided not to issue an access determination, it is continuing to closely monitor implementation and outcomes of WBA4.

4.2.2 Review of NBN regulatory framework

The ACCC is developing a revised long-term regulatory framework which NBN Co would reflect in a variation to its SAU for ACCC approval. This will include extending the scope of the SAU to include all NBN access technologies.

On 18 June 2021, the ACCC hosted an industry roundtable where representatives of NBN Co, broadband retailers, industry groups, consumer representatives and government agencies commenced a process to consider the revised regulatory framework for the NBN.

At a high level, the key issues to emerge from the roundtable were:

- settling the future role (if any) for volumetric capacity charges, including both CVC and network to network product features
- the desirability of maintaining product diversity to serve a range of end users, including special arrangements to support low-income households
- establishing transparent processes by which to assess the efficiency of NBN Co's past and planned expenditures and proposed access prices, including reconsidering the way past accumulated losses are treated
- providing appropriate incentives for efficient new investment in networks.

Working groups have since been established and cover the product and pricing construct, the building block model and the general regulatory framework.

4.2.3 NBN Co SAU variation: extension to non-price terms

On 9 April 2021, the ACCC published its [final decision](#) to accept NBN Co's proposed SAU variation to extend the operation of a number of non-price provisions to 30 June 2023.

In making its final decision, the ACCC extended the decision-making period several times to allow NBN Co to conduct its own review into its Product Development Form (PDF), which was prompted by issues raised by stakeholders during the consultation process. This additional timing allowed the ACCC to give proper consideration to the outcomes of NBN Co's review, which did result in some improvements to the PDF arrangements, and to consider any final feedback from stakeholders.

After assessing the SAU variation against the relevant criteria under Part XIC of the CCA and, having regard to submissions made during the consultation processes, the ACCC considered that the relevant criteria has been satisfied.

4.2.4 Carrier separation rules

Amendments to the Telco Act, which came into effect in August 2020, relaxed the requirement for superfast fixed-line broadband network operators serving residential customers to operate on a wholesale-only basis.

Network operators may now seek an exemption from this requirement through electing to be bound by a class exemption or giving a functional separation undertaking to the ACCC for approval.

The Telco Act empowers the ACCC to make a determination exempting network operators that supply no more than 2,000 residential customers, or a higher number (not exceeding 12,000) if this is specified in the regulations, from the requirement to operate on a wholesale-only basis. The ACCC made a class exemption determination to this effect in August 2020, which will cease to operate 5 years after its commencement, although the determination can be remade.

Non-NBN network operators may now operate on a functionally-separated basis (rather than wholesale-only), subject to the ACCC's acceptance of a functional separation undertaking. The Telco Act specifies 3 forms of undertaking: standard, deemed and joint. The ACCC made a deemed functional separation undertaking determination (effectively a set of model terms) in October 2020.

The ACCC also accepted a joint functional separation undertaking from Uniti Group Limited in October 2020, and consulted on a decision to accept a joint functional separation undertaking from TPG during 2021. If accepted by the ACCC, TPG's undertaking will provide TPG with greater flexibility to compete in wholesale and retail markets for the supply of superfast broadband services.

As part of the new carrier separation rules, the ACCC can also make determinations that permit kinds of information provided by carriers and carriage service providers to a retail business unit to be shared with a wholesale business unit bound by the same functional separation undertaking, which is otherwise prohibited by the Telco Act.

The ACCC made 2 separate determinations of this nature for joint and standard functional separation undertakings in December 2020 and March 2021, respectively.

4.2.5 Non-discrimination under Part XIC of the CCA & Part 8 of the Telecommunications Act

On 18 May 2021 the ACCC released a [consultation paper](#) regarding updated guidelines on the non-discrimination obligations which apply to NBN Co and certain other operators of superfast broadband networks.

The non-discrimination obligations prevent access providers from discriminating between access seekers or in favour of themselves. The non-discrimination provisions in Part XIC of the CCA apply

to NBN Co. Following legislative changes in 2020, the non-discrimination provisions in Part 8 of the Telco Act apply to other superfast network access providers.

The role of the guidelines is to explain how the ACCC will interpret and assess compliance with the non-discrimination obligations. The decision on whether particular conduct contravenes the non-discrimination provisions is ultimately a matter for the Federal Court.

In September 2021, the ACCC issued final guidelines ([2021 Guidelines](#)) which streamlined the tests for assessing complaints of explicit or implicit discrimination, along with a short form summary. The ACCC also communicated the [outcomes of the consultation](#).

4.2.6 NBN Co's Long Term Revenue Constraint Methodology determination 2019-20

On 25 June 2021, the ACCC published its [final determination](#) on NBN Co's Long Term Revenue Constraint Methodology (LTRCM) and price compliance for the 2019-20 financial year.

The ACCC has accepted NBN Co's proposed values (and the inputs to these values) for the Annual Building Block Revenue Requirement, Regulatory Asset Base and Initial Cost Recovery Account in accordance with the SAU. The ACCC has used the regulatory information provided by NBN Co to inform its LTRCM determination for 2019-20.

4.2.7 NBN wholesale market reporting

During 2020-21, the ACCC released 4 quarterly [NBN Wholesale Market Indicators Reports](#). These reports provide stakeholders and market participants with key data on how the NBN wholesale market is developing, including the continued growth in NBN services, shifts in the adoption of different speed tiers and changes in contracted CVC capacity.

4.2.8 Regional Broadband Scheme

On 21 October 2020, the ACCC published [its report on modelling of the Regional Broadband Scheme \(RBS\) Levy](#), as part of the ACCC's new role under the recently-enacted RBS legislation.

The Australian Government introduced the RBS levy to fund the financial losses of NBN Co's fixed wireless and satellite networks deployed in regional Australia. This scheme imposes a legislated levy which is capped at \$7.10 per chargeable premises until the end of 2020-21, the first financial year it will apply, and indexed annually by CPI thereafter.

The report quantifies the estimated losses of NBN Co's fixed wireless and satellite services, and the levy required to offset the losses.

In accordance with the legislative requirements, the ACCC set out estimates of the:

- past, total and future losses
- levy required to cover total losses
- levy required to cover future losses only
- the number of chargeable premises that will be subject to the levy in 2025.

The ACCC estimated the base component of the levy required to cover total losses is \$7.03 (2020 dollars) or \$7.11 (2021 dollars) allowing for indexation.

4.3 Telstra's Structural Separation Undertaking and Migration Plan

4.3.1 Telstra's compliance with structural separation undertaking

The ACCC completed its assessment of Telstra's compliance with the Structural Separation Undertaking (SSU) for 2019–20, and provided its [report](#) to the Minister for Communications, Cyber Safety and the Arts. The ACCC published the report on its website on 11 March 2021, following its tabling in Parliament.

The report identified breaches of the SSU during the 2019–20 financial year and the steps taken by Telstra to remedy those breaches.

The SSU and the Migration Plan together specify Telstra's commitments to progressively migrate its fixed-line voice and broadband customers onto the NBN, and promote equivalence and transparency during the migration period to support competition.

4.3.2 Migration Plan Force Majeure/Excluded events and regulatory forbearance

On 4 September 2020, the ACCC agreed with Telstra that the COVID-19 pandemic constitutes a Force Majeure Event under the Migration Plan causing Telstra to defer certain managed disconnection activities.

The ACCC provided regulatory forbearance on a number of occasions throughout 2020–21 in relation to proposed non-compliance by Telstra with its Migration Plan obligations, in order to promote service continuity and a better migration experience for end users:

- On 15 September 2020 Telstra requested regulatory forbearance from the ACCC to begin implementation of new managed disconnection arrangements for premises that are not currently serviceable by the NBN.
- On 7 December 2020 Telstra sought forbearance in relation to the product exit of private payphone services under the Migration Plan.
- On 10 December 2020 Telstra wrote to the ACCC requesting forbearance regarding the deferral of Migration Plan disconnection arrangements and related activities during the 2020–21 Christmas and New Year holiday period.

The ACCC agreed to Telstra's requests for regulatory forbearance on the condition that Telstra submits a formal variation to the Migration Plan as soon as practical.

On 10 March 2021, Telstra notified the ACCC of an Excluded Event under the Migration Plan arising from NBN Co's decision to pause its HFC network migration. The ACCC advised Telstra on 18 March 2021 that its Migration Plan obligations would not be contravened to the extent that this Excluded Event causes Telstra to delay or fail to perform its obligations under the Plan. Telstra is required to notify the ACCC as soon as reasonably practicable after it becomes aware that the Excluded Event has been remedied or ceases to materially affect its obligations under the Migration Plan.

4.4 Monitoring and reporting

4.4.1 Record Keeping Rules

Section 151BU of the CCA empowers the ACCC to make record keeping and reporting rules (RKR) to require carriers and carriage service providers to provide certain information to the ACCC. The ACCC uses this information to monitor competition and market developments, and to inform regulatory decisions.

Division 12 RKR and Internet Activity RKR

On 8 December 2020, the ACCC published [final versions](#) of the revised Division 12 and Internet Activity RKRs.

The new RKRs will lead to a reduction in regulatory burden and includes, among other changes, the removal of the requirement to disaggregate fixed-line voice call information by call type (i.e., local, national, international and fixed-to-mobile).

The revised Division 12 and Internet Activity RKRs will take effect in the 2021–22 financial year, having regard for the disrupted work environment faced by data providers due to the COVID-19 pandemic.

Extension of NBN SIO RKR

On 25 September 2020, the ACCC extended the operation of the NBN SIO RKR until 30 September 2025 with some amendments to reflect the views of stakeholders raised during a public consultation.

Expiry of the Building Block Model Record Keeping Rule

On 17 May 2021, following a review, the ACCC decided to allow [the Building Block Model Record Keeping Rule \(BBM RKR\)](#) to expire on 30 June 2021.

The BBM RKR required Telstra to provide information on forecast and actual data relating to operating expenditure, capital expenditure, depreciation and demand, regarding legacy fixed-line services, for the Fixed-Line Services Model (FLSM).

In the review, the ACCC recognised that the BBM RKR is no longer required for its regulatory functions. The BBM RKR and the related FLSM were previously used by the ACCC to determine prices for Telstra's declared legacy fixed-line services.

4.4.2 Reporting

Internet Activity Report

During 2020–21, the ACCC published 2 Internet Activity Reports for the reporting periods ending in [June](#) and [December 2020](#). These biannual reports provide information on the number of retail services in operation (SIOs) in terms of access connection and download speed as well as the volume of data downloaded within Australia.

The key statistics from the latest report showed that as of 31 December 2020, NBN services made up 89% of total residential broadband internet SIOs reported and accounted for 90% of the total volume of data downloaded. The total number of NBN services reported increased by 1.56 million (27%) over the last year, coinciding with the conclusion of the NBN rollout.

4.5 Enforcement and compliance activities

4.5.1 Measuring Broadband Australia program

During 2020–21 a number of work programs aimed at supporting the ACCC's objectives have continued through the COVID-19 pandemic, in particular the MBA reports. These reports provide Australian consumers with accurate and independent information about broadband speeds.

Over this period, the ACCC released a number of new reports under the MBA program. The MBA program pivoted to provide stakeholders with information on the performance of the NBN as pandemic related measures placed unprecedented pressure on Australia's communications networks. The program demonstrated how measures put in place by industry continued to support broadband performance as the pandemic continued.

During 2020–21, the ACCC introduced additional transparency into the program in response to stakeholder feedback, the key to which is publishing underlying test data for the MBA Quarterly Reports on the central data depository [data.gov.au](#). Publishing this data assists RSPs to examine the

data further and compare to their own measurements. It also allows other market participants such as consumer comparator services to generate their own reports and analysis for a consumer audience.

MBA quarterly reports

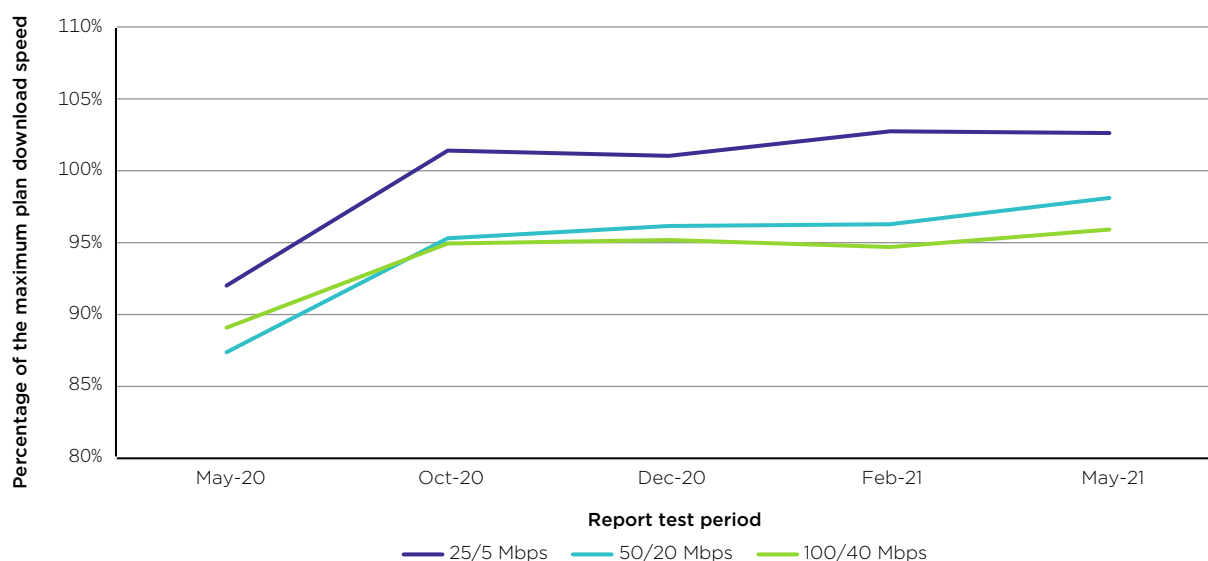
The ACCC released its 11th, 12th, 13th and 14th reports in December 2020, and March, June and August 2021 respectively. The August 2021 report, which relates to the test period May 2021, showed that consumers on fixed-line NBN broadband connections continued to experience record high speeds. Most consumers received their maximum plan speeds more often in the busy evening hours of 7pm to 11pm.

The performance gap between retail services providers' download speed metrics has narrowed significantly in recent quarters, however the ACCC noted that individual consumer experiences by retailers still vary. In particular, the MBA program has highlighted the issue of FTTN connections that are not performing as well as other network connections. The MBA program reports observed a decline in the proportion of FTTN connections that are underperforming, but noted that NBN Co and RSPs need to do more to assist affected consumers.

The August 2021 report also included a time series of network level data looking at performance over the course of the pandemic. The time series showed that between January and July 2021, average download speeds were on average 10 to 15 percentage points higher than the February 2020 baseline. The key increase in broadband speeds came after NBN Co began overprovisioning the downlink component on most of its products in July 2020.⁷⁵

The stronger performance is illustrated in figure 4.1 by the trend of improved fixed-line NBN performance over time (measured in download speed against the maximum plan download speed).

Figure 4.1: Average hourly download speed by speed tier (including underperforming NBN services)



Note: Data is shown for all hours and all services.

Source: ACCC Measuring Broadband Australia program (reports 10, 11, 12, 13 and 14).

Critical services and web performance reports

The testing and data collected under the MBA program provides valuable insights into broader aspects of broadband performance which can be of value to consumers and industry.

The ACCC released [2 critical services reports](#), in July and December 2020. The reports highlighted how NBN consumers had very good access to video streaming and conferencing applications in the May 2020 and October 2020 monitoring periods. This was underpinned by various mitigation measures to alleviate network congestion implemented by NBN Co and service providers during the pandemic.

⁷⁵ NBN Co, [NBN launches three new residential wholesale higher speed tiers](#), 29 May 2020.

In June 2021 the ACCC released a report examining factors that can impact [web browsing performance](#). The report revealed that the NBN access speed and RSP chosen by a consumer does not have a material impact on website browsing performance.

Review and renewal of the MBA program and expansion into other networks

The ACCC undertook a [review of the effectiveness of the MBA program during 2020–21](#). The review was undertaken in conjunction with the Department of Infrastructure, Transport, Regional Development and Communication (DITRDC) and a representative panel of the stakeholders were consulted including via a consumer survey.

The review demonstrated that the program had met its objectives and strongly contributed to improving competition and consumer outcomes in broadband markets. The review found that the MBA program has helped address information asymmetry in the NBN fixed-line broadband market. It has led to greater performance-based competition and contributed to help improve Australia's internet performance. Consumers have benefited from the program as it assists them to compare plans and make more informed decisions about which plan is best suited to meet their needs.

The data obtained through the program is a vital tool in our advocacy efforts in highlighting issues of underperformance and the extent to which consumers may be paying for speeds that are not being achieved.

Consumer advocates expressed support for the expansion of the program to benefit consumers outside of the NBN fixed-line footprint. Submissions also identified a number of improvements and enhancements to the program to ensure it continues to provide reliable, informative and timely data to the market.

In May 2021, the Australian Government [announced](#) that the MBA program will continue for an additional 4 years, until June 2025. The extension allows the program to continue to measure the typical speeds and performance of Australian's home internet connections, and extend it to additional market segments. Following this announcement, the ACCC began engaging with stakeholders to implement improvements and to expand the scope of the program to NBN fixed wireless and non-NBN networks.

The ACCC continues to call on broadband customers on NBN and non-NBN fixed-line and fixed wireless services to volunteer to participate in the program via [measuringbroadbandaustralia.com.au](#).

4.5.2 Consumer education activities

In addition to the information provided by the MBA program, the ACCC considers that arming consumers with information about their services and rights will support the ACCC's objectives for positive NBN outcomes.

On the ACCC's website there is a [plain English guide to using NBN fixed wireless](#) to help consumers impacted by congestion issues on the NBN fixed wireless network. This is supplemented with information to help consumers select an appropriate NBN service based on their usage requirements. This consumer guidance complements the [broadband speed claims industry guidance](#), which helps RSPs to ensure that they give prospective customers clear and accurate information on the typical speeds their services provide.

The ACCC has published [guidance](#) for consumers who are experiencing reduced speeds or poor performance, and the steps they can take to improve their home broadband experience.

The ACCC website also contains advice for consumers on various aspects of mobile, internet and landline communications services including choosing a service, tips on how to manage data usage and in-app purchases and what to do in the case of unauthorised transfers.⁷⁶ This section of the ACCC website also contains consumer-friendly broadband performance data from the quarterly MBA reports.⁷⁷

76 For further information see <https://www.accc.gov.au/consumers>.

77 For further information see <https://www.accc.gov.au/consumers/internet-landline-services/broadband-performance-data>.

Broadband speed claims industry guidance

The ACCC published an [updated version of the Broadband speed claims industry guidance](#) in October 2020. Further enhancements to the guidance followed the introduction of products with higher maximum download and upload wholesale access speeds, as these had gained increased prominence in the communications sector. This revised guidance is designed to further assist RSPs in providing consumers with reliable and clear information.

Consumer vulnerability: a business guide to the Australian Consumer Law in 2021

The ACCC's '[Don't take advantage of disadvantage](#)' brochure from 2011 provides a compliance guide for businesses dealing with disadvantaged or vulnerable consumers and acts as a safeguard to protect these consumers. It outlines the rights and responsibilities of businesses in dealing with disadvantaged or vulnerable consumers.

The ACCC has recently updated this brochure and published its [Consumer vulnerability: a business guide to the Australian Consumer Law in 2021](#).

Collaboration with other agencies

The ACCC has worked closely with the Australian Communications and Media Authority and telecommunications providers on a range of initiatives to address phone scams. In 2020–21, major milestones included the introduction of the *Telecommunications (Mobile Number Pre-Porting Additional Identity Verification) Industry Standard 2020* and the registration of the *Reducing Scam Calls Industry Code* (the Code).

Under the Code, the ACCC shares regular reports of telephone numbers that had been reported to Scamwatch with a number of Communications Alliance members including Telstra, Optus and Vodafone.

On 30 May 2021, the Minister for Communications, Urban Infrastructure, Cities and the Arts announced that telecommunications providers had blocked 55 million calls since the introduction of the Code.⁷⁸

Digital Platforms Services Inquiry 2020–2025

The supply of services such as internet search engines, social media and app marketplace services continued to be scrutinised through 6 monthly reports to the Treasurer under the 5-year Digital Platforms Services Inquiry.

The ACCC's first 6 monthly report⁷⁹, released on 23 October 2020, recognised the growth in online private messaging and its importance as a communications platform. It found that Facebook and Apple have significant competitive advantage in this sector.

The second 6 monthly report⁸⁰, released on 28 April 2021, focussed on competition and consumer issues in mobile app marketplaces. It found that Apple and Google have significant market power in app marketplaces, which is linked to their control of the iOS and Android operating systems. It identified concerns with the ability to self-preference their own services or systems, the potential to misuse commercially sensitive information and inadequate dispute resolution mechanisms.

In this report, the ACCC identified a number of potential measures to address these concerns including the need for greater awareness of the payment options available to consumers through an obligation on marketplaces to allow developers to provide users about alternatives, greater choice for default apps for consumers and measures to address the risk of misuse of commercially sensitive information.

The third 6 monthly report⁸¹, released on 30 September 2021, examined competition and consumer issues in web browsers and general search engine services in Australia and the effectiveness of choice

78 The Hon Paul Fletcher MP, Minister for Communications, Urban Infrastructure, Cities and the Arts, [Millions of scam calls stopped](#), 30 March 2021.

79 ACCC, [Digital platform services inquiry September 2020 interim report](#), 23 October 2021.

80 ACCC, [Digital platform services inquiry March 2021 interim report](#), 28 April 2021.

81 ACCC, [Digital platform services inquiry September 2021 interim report](#), 30 September 2021.

screens in facilitating competition and improving consumer choice. The report found that Google continues to be the dominant search engine in Australia (with a 94% share) and is the default search engine pre-installed on most mobile devices in Australia. In this report, the ACCC recommended that it be given the power to mandate, develop and implement a mandatory choice screen for search engines as well as other potential measures to improve competition and consumer choice in search.

Digital Advertising Services Inquiry 2020–21

On 28 January 2021, the ACCC released an [interim report](#)⁸² for its Digital Platforms Service Inquiry, examining the markets for the supply of digital advertising technology services and digital advertising agency services (ad tech services). The inquiry's [final report](#)⁸³ was published on 28 September 2021.

The inquiry found that substantial regulatory reform is needed to promote more robust competition in ad tech services. In particular, the ACCC found that Google dominated the supply of ad tech services, estimating that in 2020 over 90% of ad impressions traded via the ad tech supply chain passed through at least one Google service.

The final report recommended that the ACCC be given the power to develop sector specific rules to apply to certain providers of ad tech rules. The design of these powers and the scope of potential rules will be considered as part of the fifth interim report of the ACCC's Digital Platform Services Inquiry, due September 2022. This report will consider whether a broader regulatory framework is required to address the common competition and consumer concerns identified in digital platform markets.

4.5.3 Anti-competitive conduct

The ACCC investigates anti-competitive conduct under both the telecommunications specific provisions (Part XIB) and general anti-competitive conduct provisions (Part IV) of the CCA. The ACCC also has a role under the Telco Act in relation to various provisions, including those concerning NBN access to facilities and the numbering plan.

In 2020–21, the ACCC investigated 3 allegations of potential contraventions of the CCA and of the Telco Act specific to telecommunications markets. These included complaints of misuse of market power under the telecommunications-specific anti-competitive conduct provisions in Part XIB of the CCA.

4.5.4 Investigations under Australian Consumer Law

During 2020–21, the ACCC commenced 13 investigations in the communications sector under the Australian Consumer Law (ACL). An additional 9 investigations were underway at the start of the reporting period, and 7 ACL investigations were still ongoing as at 30 June 2021.

4.5.5 Litigation

Dodo and iPrimus ordered to pay \$2.5m for misleading NBN speed claims

On 2 June 2021, the ACCC announced that as a result of it instituting court action against Dodo Services Pty Ltd (Dodo) and Primus Telecommunications Services Pty Ltd (iPrimus), the Federal Court had ordered Dodo to pay \$1.5 million and iPrimus to pay \$1 million in penalties for making misleading claims about their NBN broadband speeds. In considering the appropriate penalty, the Court said it was material that through their parent company Vocus Group, Dodo and iPrimus chose not to adopt the methodology proposed as industry best practice by the ACCC.

Dodo and iPrimus admitted that their 'typical evening speed' claims made between March 2018 and April 2019 were misleading because they were not based on an appropriate testing methodology. The ACCC had concerns that the methodology which the Vocus Group used as the basis for its speed claims cherry-picked only the fastest speeds its network could deliver, and ignored the slower speeds many of its customers experienced.

82 ACCC, [Digital advertising services inquiry – interim report](#), 28 January 2021.

83 ACCC, [Digital advertising services inquiry – final report](#), 28 September 2021.

Despite clear industry guidance from the ACCC, the Vocus Group used a flawed methodology. These misleading speed claims meant consumers could not accurately compare different offerings and make an informed choice about their broadband provider.

The Vocus Group was, at the time, the 4th largest telecommunications operator in Australia, with 5.2% overall market share of consumer NBN services, and 436,000 retail broadband customers.

In the ACCC's MBA Quarterly Report 14, the average download performance of Dodo and iPrimus improved by 5.4 percentage points during all hours and busy hours in May 2021 compared to February 2021. This was the largest improvement of the RSPs in that quarter. These results suggest that the Vocus brands improved their service quality monitoring methods after the ACCC initially instituted proceedings in the Federal Court.⁸⁴

TPG Internet prepayments litigation

On 30 July 2020, the ACCC announced that the Full Federal Court has dismissed the ACCC's appeal against TPG Internet Pty Ltd in relation to the marketing and sale of some pre-paid internet, home telephone and mobile plans.

The ACCC's case was that by representing this was a 'prepayment', consumers were misled by TPG Internet Pty Ltd into thinking they could use all the money they had pre-paid for out-of-plan services, when this was not usually possible.

The Full Federal Court held that TPG Internet Pty Ltd's use of the word 'prepayment' did not convey anything about the way in which TPG would hold and apply the prepayment, particularly at the end of the plan.

On 8 November 2019, the ACCC [commenced an appeal](#) against the Federal Court's [October 2019 decision](#) to dismiss its case against TPG Internet Pty Ltd for alleged false or misleading representations it made about prepayments customers had to make on its pre-paid internet, home telephone and mobile plans

Telstra ordered to pay \$50m penalty for unconscionable sales to Indigenous consumers

On 13 May 2021, the ACCC announced that the Federal Court had ordered that Telstra pay \$50 million in penalties for engaging in unconscionable conduct when it sold mobile contracts to more than 100 Indigenous consumers across 3 states and territories, in proceedings brought by the ACCC. At the time, the \$50 million penalty imposed against Telstra was the second highest penalty ever imposed under the ACL.

Telstra admitted that between January 2016 and August 2018, it breached the ACL and acted unconscionably when sales staff at 5 licensed Telstra-branded stores signed up 108 Indigenous consumers to multiple post-paid mobile contracts which they did not understand and could not afford.

Telstra has since taken steps to waive the debts, refund money paid and put in place measures to reduce the risk of similar conduct in the future. In addition to the remedies ordered by the Federal Court, the ACCC also accepted [a court-enforceable undertaking from Telstra](#) in which Telstra undertook to provide remediation to affected consumers, improve its existing compliance program, review and expand its Indigenous telephone hotline, and enhance its digital literacy program for consumers in certain remote areas.

Superfone to pay \$300,000 for making unsolicited calls and misleading consumers

On 26 March 2021, the ACCC announced that the Federal Court has ordered telecommunications provider Superfone Pty Ltd (Superfone) to pay \$300,000 in penalties for making false and misleading representations and contravening laws designed to protect consumers from unsolicited telemarketing sales, as a result of the proceedings brought by the ACCC.

⁸⁴ ACCC, [NBN download speeds improve and more plans hit maximum speeds](#), 31 August 2021.

In June 2020, the Federal Court declared that Superfone had contravened the ACL between June 2017 and December 2018 when cold-calling consumers and signing them up to unsolicited new contracts with Superfone.

The Court also ordered Superfone to offer remedies to affected customers including the ability to exit their contract with Superfone without charge.

4.5.6 Infringement notices

Amaysim and Lycamobile pay penalties over ads for ‘unlimited’ mobile plans

On 15 October 2020, the ACCC announced that Amaysim Australia Ltd and Lycamobile Pty Ltd paid penalties totalling \$126,000 and \$12,600 respectively after the ACCC issued each of these mobile services providers with an infringement notice for alleged false or misleading representations about their mobile phone plans.

The ACCC alleged that each business separately misrepresented that their mobile phone plans were ‘unlimited’ in advertisements on social media designed to entice new customers, when in fact the plans had a maximum data allowance. The ACCC alleges that the messages in their advertisements breached ACL and were likely to mislead consumers

4.6 Merger, authorisation and exclusive dealing reviews

4.6.1 Mergers

The ACCC reviews proposed mergers and acquisitions to assess whether they would be likely to substantially lessen competition. Merger parties have 2 avenues available to have a proposed acquisition considered and assessed by the ACCC on competition grounds: informal clearance process and merger authorisation. More information about public informal merger reviews and merger authorisations is available on the ACCC’s mergers registers.⁸⁵

In 2020–21 there were no significant mergers in the telecommunications sector requiring a public informal review by the ACCC.

4.6.2 Authorisations

Under the ACCC’s authorisation and notification review function, the ACCC also reviews and makes decisions about applications for authorisation and/or notifications for arrangements or conduct (including proposed mergers) that may otherwise breach competition law. Primarily this is done by evaluating whether the arrangements or conduct are likely to result in a net public benefit. Authorisations may also be granted for certain forms of conduct if the ACCC is satisfied that a substantial lessening of competition is unlikely.

In 2020–21, the ACCC received one communications-related application for authorisation.

NBN Co Ltd

On 10 September 2020, the [ACCC decided to grant conditional authorisation](#) until 31 March 2021 to enable NBN Co and a group of retail communications service providers (the Special Working Group (SWG)) to discuss, agree, and implement capacity optimisation strategies for the NBN, solely for the purpose of responding to the changes in demand on that network resulting from the COVID-19 pandemic. The SWG was comprised of Telstra, Optus, TPG/Vodafone, Vocus and Aussie Broadband. This followed conditional interim authorisations the ACCC had granted to the SWG on 31 March 2020 and 26 July 2020.

The authorisation allowed the SWG to meet and coordinate certain network related activities. The SWG also requested video streaming and video conferencing application providers to take steps, such as

⁸⁵ The ACCC’s Mergers registers are available at <http://registers.accc.gov.au/content/index.phtml/itemId/750991>.

instating bit rate reduction measures, so that consumers used less network capacity when accessing their services.

The authorisation was subject to 2 conditions that sought to ensure there was sufficient transparency over the conduct of the SWG. The ACCC attended all meetings as an observer.

4.6.3 Exclusive dealing notifications

Notification is an alternative to authorisation for certain arrangements such as exclusive dealing. Like authorisation, the notification process provides protection from legal action under the CCA if the conduct is in the public interest.

In 2020–21 the ACCC did not receive any notifications of exclusive dealing involving participants in the communications industry.

4.7 Advice, advocacy and contributions to policy processes

4.7.1 ACCC submissions to policy processes

During 2020–21, the ACCC participated in working committees relevant to the telecommunications industry. These included:

- Utility Regulators Forum
- Infrastructure Consultative Committee
- Quarterly Regulators Roundtable
- Consumer Roundtable
- Australasian Consumer Fraud Taskforce
- engagement with the ACMA's Consumer Consultative Forum.

In addition, the ACCC made submissions and provided input into a number of processes identified below.

Spectrum allocation advice – 850/900 MHz band allocation

On 5 March 2021, the ACCC provided allocation limits [advice](#) to the Minister for Communications, Urban Infrastructure, Cities and the Arts on the 850/900 MHz band allocation.

The ACCC recommended that a limit should be imposed, such that no person or specified group of persons could hold more than 40%, or 80 MHz, of all sub-1 GHz spectrum available for use as a result of the allocation. This is because low-band spectrum is essential for mobile operators and there are currently significant differences in the quantity of low-band spectrum owned or held by each operator.

The ACCC's advice focussed on ensuring that operators would have sufficient spectrum to maintain their existing services, accommodate data growth, roll out 5G technology more broadly and compete effectively in mobile markets, including in regional areas.

On 9 August 2021, the Minister announced his decision on the allocation limits to apply to the 850/900 MHz allocation. The Minister decided to impose a 40% limit across low-band spectrum holdings in metropolitan and more populated areas, but decided on a slightly higher limit of 45% in larger geographic and sparsely populated regional and remote areas in order to encourage investment.⁸⁶

⁸⁶ See the Minister's press release at: <https://www.paulfletcher.com.au/media-releases/bidding-limits-set-for-low-band-spectrum-auction-in-the-year-of-5g>.

Amendments to the Radiocommunications Act 1992

On 17 July 2020, the ACCC made a submission to DITRDC's consultation on the exposure draft of the Radiocommunications Legislation Amendment (Reform and Modernisation) Bill 2020.

The submission noted that a spectrum allocation process that promotes competition in downstream markets will also ensure the efficient use of spectrum in those markets, which delivers the proposed object of the Act. The submission recommended that this be made clear in the relevant provision itself or in the explanatory memorandum accompanying it to guide the interpretation of the object.

The ACCC's recommendation was adopted in the final version of the Bill which was passed on 8 December 2020 and received royal assent on 17 December 2020.

Consumer safeguards review

On 28 September 2020, the ACCC made a submission in response to DITRDC's consultation paper on Part C of the consumer safeguard review. This review focuses on a 'post 2020 environment' once the NBN rollout is complete, and the Part C consultation deals with choice and fairness in the retail relationship between the customer and their provider.

The ACCC's submission noted that the review provides an opportunity to reassess the telecommunications regulatory framework, and implement a scheme that reflects the essential role of telecommunications. In particular, the ACCC proposed a new regulatory framework that imposes minimum standards to market entry for all telecommunications providers, which include a 'suitability' criterion and allow for flexibility to review and modify conditions of entry in response to changing circumstances.

Consumer data right in the telecommunications sector

In May 2021, the Government announced that it would conduct a sectoral assessment to consider whether to extend the consumer data right (CDR) to the telecommunications sector. The CDR is an economy-wide reform designed to give consumers greater access to and control over their data and to help consumers to derive direct benefits from this data.

The ACCC provided input into Treasury's sectoral assessment.

The ACCC's submission supported the designation of telecommunications as a sector to be subject to the CDR. Effective competition relies on informed purchasing decisions and the CDR helps to overcome barriers that prevent consumers from making informed choices. The ACCC considered there to be a number of use cases relating to comparison, choice and switching between products and service providers. The use cases would facilitate consumers using CDR data to compare services and switch between providers based on greater awareness of their own usage history, their needs, the technology available to them and the level of service quality and customer service offered.

5. Appendices

5.1 Other competition indicators

5.1.1 Annual price changes (%) – advertised price

Table 5.1: Advertised price changes (%) for the 25th percentile from 2017-18 to 2020-21

	2017-18	2018-19	2019-20	2020-21	2016-17 to 2020-21
NBN	0.0	9.9	6.1	0.1	16.7
Non-NBN	0.0	0.0	0.0	8.3	8.3
Total fixed-line	0.0	0.0	15.0	1.4	16.6
Post-paid mobile phone	-13.8	-0.4	0.4	0.0	-13.8
Pre-paid mobile phone	-19.5	-0.4	-13.9	16.2	-19.9
Total mobile phone	-16.4	-0.4	-13.9	16.6	-16.4
Mobile broadband	0.0	17.5	-14.9	0.0	0.0

Source: ACCC estimates based on information from RSP websites.

Table 5.2: Advertised price changes (%) for the median from 2017-18 to 2020-21

	2017-18	2018-19	2019-20	2020-21	2016-17 to 2020-21
NBN	-6.6	12.9	1.2	6.3	13.4
Non-NBN	-6.6	0.0	7.2	6.6	6.7
Total fixed-line	-6.6	7.1	5.3	1.3	6.7
Post-paid mobile phone	-0.3	-9.8	-2.8	2.9	-10.0
Pre-paid mobile phone	-12.5	-1.7	-6.5	0.0	-19.6
Total mobile phone	-2.5	-10.3	-2.0	2.1	-12.5
Mobile broadband	7.0	6.8	-12.5	12.9	12.9

Source: ACCC estimates based on information from RSP websites.

Table 5.3: Advertised price changes (%) for the 75th percentile from 2017-18 to 2020-21

	2017-18	2018-19	2019-20	2020-21	2016-17 to 2020-21
NBN	0.0	0.0	0.0	11.1	11.1
Non-NBN	-0.1	-11.0	12.5	0.0	0.1
Total fixed-line	0.0	0.0	0.1	11.1	11.1
Post-paid mobile phone	-8.3	-9.1	0.0	0.0	-16.6
Pre-paid mobile phone	-5.0	0.0	-6.6	3.4	-8.2
Total mobile phone	-9.1	-0.2	-1.8	1.8	-9.3
Mobile broadband	0.1	0.0	-16.8	10.2	-8.3

Source: ACCC estimates based on information from RSP websites.

5.1.2 Annual price changes (%) – feature-adjusted (hedonic approach)

Table 5.4: Feature-adjusted price changes (%) for the hedonic approach from 2017-18 to 2020-21

	2017-18	2018-19	2019-20	2020-21	2016-17 to 2020-21
NBN	-4	-4.6	-2.5	-2.6	-13
Non-NBN	-7.8	0.5	-2.3	-7.8	-16.5
Total fixed line	-6.5	-1.5	-2.4	-4.5	-14.1
Post-paid mobile phone	-17.1	-19.7	-18.8	-11.5	-52.1
Pre-paid mobile phone	-22.6	-22.7	-13.1	-8.4	-52.3
Total mobile phone	-18.1	-20.7	-16.8	-9.9	-51.3
Mobile broadband	-23.5	-14.8	-25.5	4.3	-49.3

Source: ACCC estimates based on information from RSP websites.

5.1.3 Annual price points (\$) – advertised price

Table 5.5: Annual price points (\$) for the 25th percentile from 2017-18 to 2020-21

	2016-17	2017-18	2018-19	2019-20	2020-21
NBN	59.99	59.99	65.9	69.95	69.99
Non-NBN	59.99	59.99	59.99	60	64.95
Total fixed-line	59.99	59.99	60	69	69.95
Post-paid mobile phone	29	25	24.9	24.99	25
Pre-paid mobile phone	31.07	25	24.9	21.43	24.9
Total mobile phone	29.9	25	24.9	21.43	24.99
Mobile broadband	20	20	23.5	20	20

Source: ACCC estimates based on information from RSP websites.

Table 5.6: Annual price points (\$) for the median from 2017-18 to 2020-21

	2016-17	2017-18	2018-19	2019-20	2020-21
NBN	74.95	70	79	79.95	85
Non-NBN	74.95	70	69.99	75	79.95
Total fixed-line	74.95	70	75	79	80
Post-paid mobile phone	40	39.9	36	35	36
Pre-paid mobile phone	40	35	34.39	32.14	32.14
Total mobile phone	40	39	35	34.29	35
Mobile broadband	35	37.45	40	35	39.5

Source: ACCC estimates based on information from RSP websites.

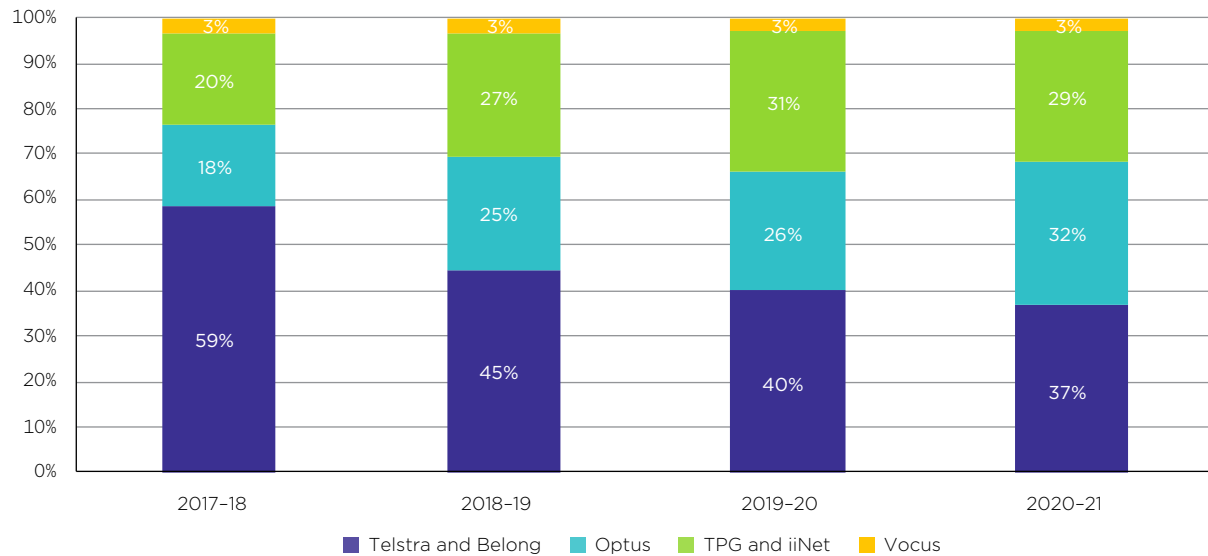
Table 5.7: Annual price points (\$) for the 75th percentile from 2017-18 to 2020-21

	2016-17	2017-18	2018-19	2019-20	2020-21
NBN	89.99	89.99	90	90	100
Non-NBN	89.95	89.9	80	90	90
Total fixed-line	89.99	89.95	89.95	90	99.95
Post-paid mobile phone	59.95	55	50	50	50
Pre-paid mobile phone	52.5	49.9	49.9	46.61	48.21
Total mobile phone	55	50	49.9	49	49.9
Mobile broadband	59.95	60	60	49.9	55

Source: ACCC estimates based on information from RSP websites.

5.1.4 Fixed-line voice SIO market share

Figure 5.1: Fixed-line voice SIO market share from 2017-18 to 2020-21

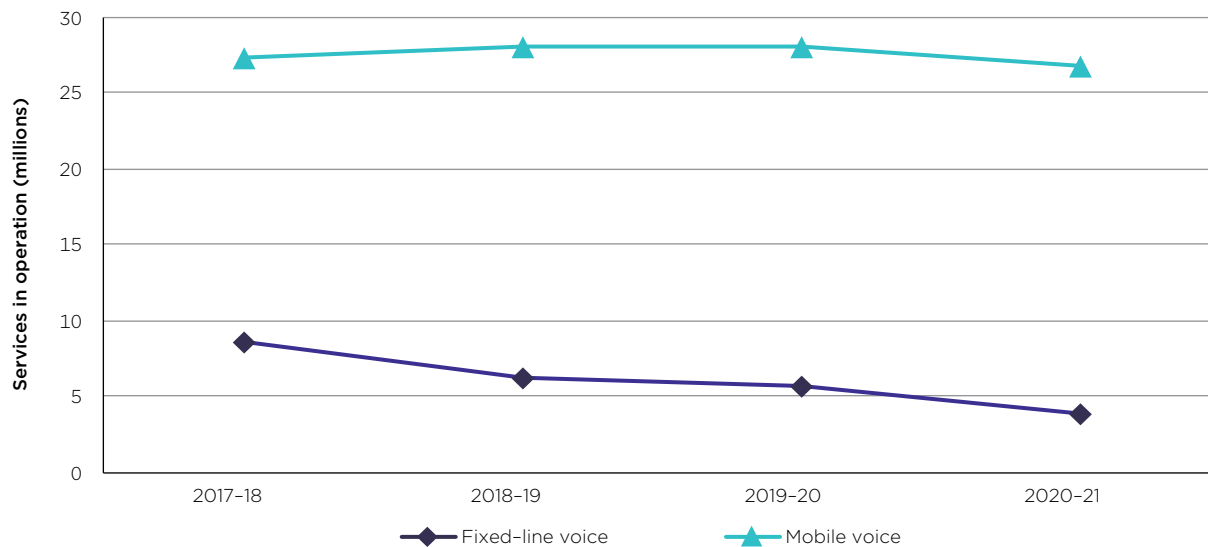


Note: Includes residential, small business and other businesses. Numbers may not add due to rounding.

Source: ACCC Division 12 RKR data for all named carriers except for Vocus Group.

5.1.5 Mobile and fixed-line voice SIO

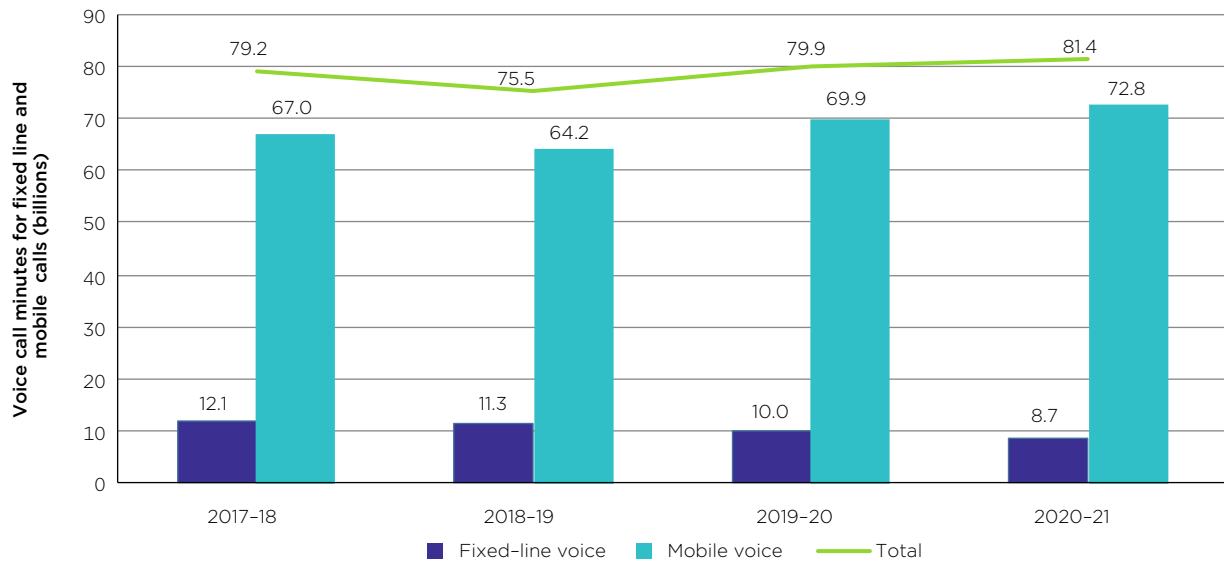
Figure 5.2: Mobile and fixed-line voice SIO from 2017-18 to 2020-21



Source: ACCC Division 12 RKR.

5.1.6 Mobile and fixed-line voice call minutes

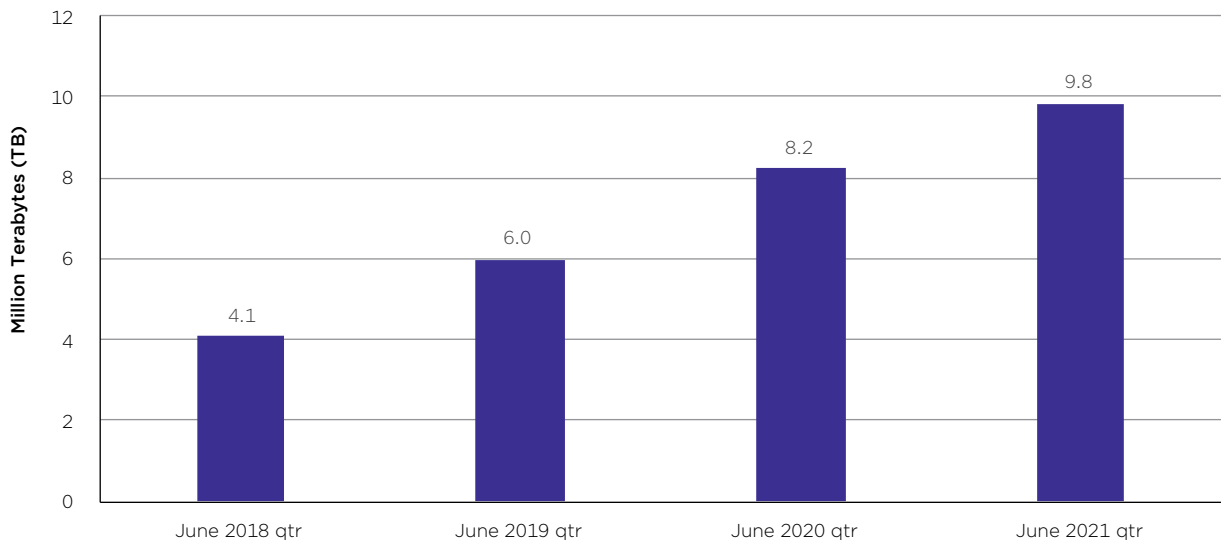
Figure 5.3: Mobile and fixed-line voice minutes from 2017-18 to 2020-21



Source: ACCC Division 12 RKR.

5.1.7 Volume of data downloaded

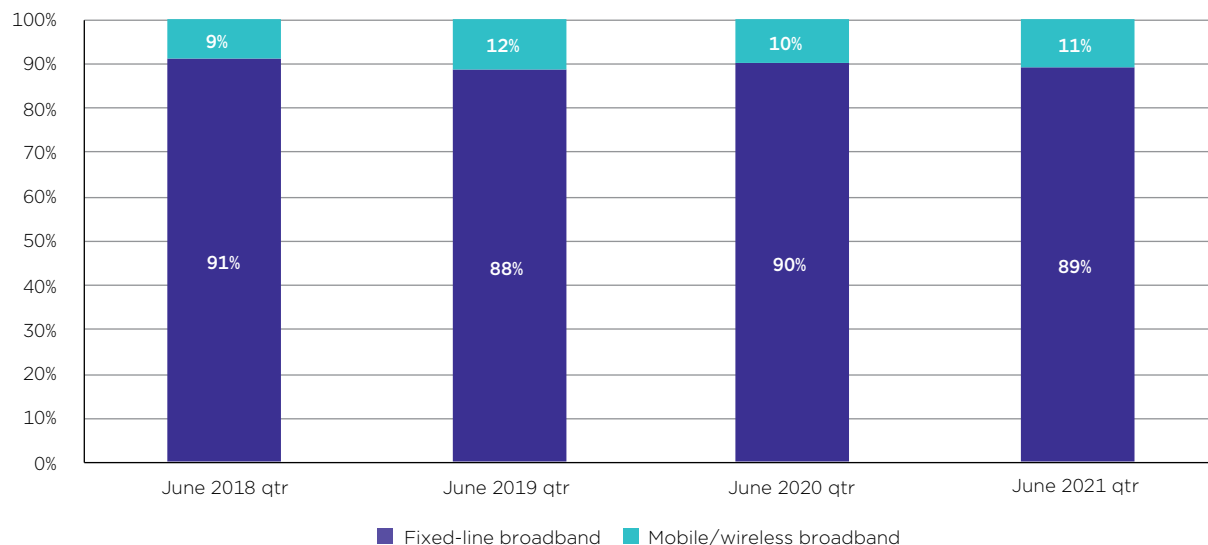
Figure 5.4: Total volume of data downloaded from 2017-18 to 2020-21



Source: Australian Bureau of Statistics (8153.0) and ACCC Internet Activity RKR.

5.1.8 Proportion of volume of data downloaded

Figure 5.5: Proportion of volume of data downloaded by fixed and mobile/wireless access technologies from 2017-18 to 2020-21



Source: Australian Bureau of Statistics (8153.0) and ACCC Internet Activity RKR.

5.2 Advertised price approach

The advertised price approach measures changes in the nominal prices of plans offered to consumers. However, it does not take into account changes in product features, such as higher data allowances or faster download speeds, over time. It is a reflection of what consumers are actually paying.

Data on market offers are drawn annually from Critical Information Summaries⁸⁷ (CIS) which RSPs must publish on their website.

RSP plans are then assembled in ascending order according to price, with 3 price points identified:

- the 25th percentile (the lower price point)
- the median
- the 75th percentile (upper price point).

These price points act as proxies for entry-level, typical and higher end consumers respectively. Accordingly, they provide an indication of how different groups are impacted by changes in advertised prices over time.

It should be noted that in the advertised price changes for NBN and non-NBN fixed services, fixed broadband plans that are bundled with VoIP and an entertainment service such as Fetch TV or Foxtel have been excluded from the analysis in this report. These 'triple play' product bundles are in some instances very highly priced and only serve a niche market of consumers. Including these plans would tend to inflate the measures of advertised prices and not be representative of the prices that the majority of consumers pay.

5.2.1 Limitations

Accounting for new plans into a price index is not a simple process. New plans can differ considerably from older plans in their characteristics. For example, newer plans can offer faster download speeds and greater data allowances than older plans. As a result of these changes, we are no longer comparing

⁸⁷ Prices in the CIS may not reflect prices predominantly advertised on the website of service providers due to time-limited discounting.

prices of like-for-like products and price changes for a product may occur due to changes in quality and/or sticker price. Price statisticians refer to this issue as the need to price to constant quality.

A price index should measure 'pure' price changes and, as a result, adjustments must be made for changes in characteristics (or changes in quality) of individual products. These adjustments are referred to as quality adjustments. As such, a decrease in quality-adjusted prices does not necessarily indicate a drop in advertised price but may instead indicate an increase in quality.

5.3 Hedonic approach to price monitoring

The 'hedonic approach' used in this report was developed in collaboration with Economic Insights, an economic consulting firm. It aims to provide a better indication of overall price changes in a continually changing telecommunications market. The hedonic approach achieves this by estimating how prices change with time, while controlling for the differences in the features and attributes of plans. The percentage price changes provide information about price movements by comparing prices in one year to the prices in another year. However, they do not provide any information about price levels (i.e. the advertised price).

The 'hedonic' approach employs the following method:

- a. Products are defined as bundles of characteristics. A fixed broadband product, for example, is a bundle of characteristics including (among other characteristics) data allowance and download speed.
- b. The estimation of the index involves a regression equation. The regression equation describes how the price of a plan depends upon the characteristics of the plan and the relevant time period.

5.3.1 Hedonic pricing methodologies

For the purposes of this report, 2 approaches were investigated, the pooled data approach and the moving windows method.

The pooled data approach involves combining or 'pooling' of data across all reference years. This is implemented by estimating one regression equation for all the reference years.

The moving windows approach, in contrast, involves estimating a regression equation for each pair of consecutive reference years. For example, if there are 4 years of data there would be 3 regression equations, one for years 1 and 2, another for years 2 and 3 and a final equation for years 3 and 4.

In this report, the pooled data approach was chosen so as to increase the number of available observations. For the pooled data method, 8 financial years' worth of data were used but as noted above, the moving windows approach only uses 2 consecutive years of data for each regression equation.

5.3.2 Variables used

For the regression analysis the following variables were used:

- a. For fixed broadband and mobile broadband plans, the variables were monthly price, data allowance, download speed, voice inclusions (including local, national and mobile calls), TV bundling, access technology, access network and RSP as well as variables for each financial year.
- b. For post-paid and pre-paid mobile plans, the variables were monthly price, unlimited calls, unlimited SMS, handset inclusion, data inclusions, networks and RSP as well as variables for each financial year.

5.3.3 Assumptions

The regression model was specified as follows:

a. Observations were not weighted

In some hedonic pricing models, the observations are weighted to reflect the relative importance of the observations. As the ACCC's estimates of weights are not based on actual frequencies of plans, but rather are approximations, Economic Insights suggested that weighted models are not necessarily preferred. Thus, the ACCC used an unweighted model because of its greater simplicity.

b. Log-log regression

Economic Insights found that a log-log regression provided a substantially better fit than other specifications of the functional form (linear and log-linear) of the regression equation.

c. Random effects model

Economic Insights found that, first, a regression with retailer-specific effects was a better fit than an equation that does not include retailer-specific effects. Second, the hypothesis that random effects are zero was rejected, and the hypothesis that the random effects estimator is efficient and consistent was not rejected.

d. Right Hand Side (RHS) continuous variables are cubic

For the continuous variables on the RHS, the equation included (i) the log of the variable, (ii) the square of the log and (iii) the cube of the log. The square and cube of the log of the variable were included because this gives rise to a more general functional form, and, in many of the regression equations estimated, the square and cube of the log of the variable were found to be statistically significant.



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