



AUSTRALIAN COMPETITION
& CONSUMER COMMISSION

Communications market report

2021-22

December 2022

Australian Competition and Consumer Commission
23 Marcus Clarke Street, Canberra, Australian Capital Territory, 2601
© Commonwealth of Australia 2022

This work is copyright. In addition to any use permitted under the *Copyright Act 1968*, all material contained within this work is provided under a Creative Commons Attribution 3.0 Australia licence, with the exception of:

- the Commonwealth Coat of Arms
- the ACCC and AER logos
- any illustration, diagram, photograph or graphic over which the Australian Competition and Consumer Commission does not hold copyright, but which may be part of or contained within this publication.

The details of the relevant licence conditions are available on the Creative Commons website, as is the full legal code for the CC BY 3.0 AU licence.

Requests and inquiries concerning reproduction and rights should be addressed to the Director, Corporate Communications, ACCC, GPO Box 3131, Canberra ACT 2601.

Important notice

The information in this publication is for general guidance only. It does not constitute legal or other professional advice, and should not be relied on as a statement of the law in any jurisdiction. Because it is intended only as a general guide, it may contain generalisations. You should obtain professional advice if you have any specific concern.

The ACCC has made every reasonable effort to provide current and accurate information, but it does not make any guarantees regarding the accuracy, currency or completeness of that information.

Parties who wish to re-publish or otherwise use the information in this publication must check this information for currency and accuracy prior to publication. This should be done prior to each publication edition, as ACCC guidance and relevant transitional legislation frequently change. Any queries parties have should be addressed to the Director, Corporate Communications, ACCC, GPO Box 3131, Canberra ACT 2601.

ACCC 12/22_22-71

www.accc.gov.au

Contents

List of acronyms	iv
Competition and price changes in telecommunications services in Australia	vi
Executive Summary	viii
1. Introduction	1
2. Key market developments	2
2.1 Retail markets	2
2.2 Infrastructure competition	4
3. Pricing and consumer trends	7
3.1 Approach to pricing methodologies	7
3.2 NBN fixed broadband	8
3.3 Non-NBN fixed-line broadband	10
3.4 Mobile	11
3.5 Fixed-line voice	15
3.6 Satellite	15
3.7 Wholesale markets	16
3.8 Telecommunications consumer complaints	18
4. ACCC activities in communications	22
4.1 Regulated access to telecommunications	22
4.2 NBN regulation	23
4.3 Telstra's Structural Separation Undertaking and Migration Plan	25
4.4 Monitoring and reporting	26
4.5 Enforcement and compliance activities	29
4.6 Industry and consumer education activities	30
4.7 Mergers, authorisations and exclusive dealings	31
4.8 Advice, advocacy and contributions to policy processes	32
5. Appendices	34
5.1 Other competition indicators	34
5.2 Advertised price approach to price monitoring	36
5.3 Hedonic approach to price monitoring	37
5.4 Limitations of price monitoring approaches	38

List of acronyms

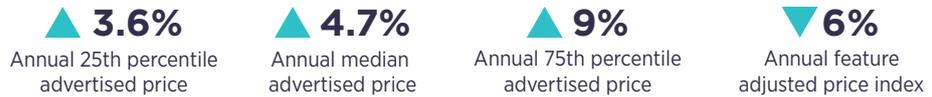
ACCC	Australian Competition and Consumer Commission
ACL	Australian Consumer Law
ACMA	Australian Communications and Media Authority
ADSL	asymmetrical digital subscriber line
AVC	access virtual circuit
CCA	Competition and Consumer Act (2010)
CVC	connectivity virtual circuit
DSL	digital subscriber line
FTTB	fibre-to-the-basement
FTTC	fibre-to-the-curb
FTTP	fibre-to-the-premises
FTTN	fibre-to-the-node
GB	gigabyte
Gbps	gigabits per second
GHz	gigahertz
HFC	hybrid fibre coaxial
LEO	low earth orbit
LTRCM	long term revenue constraint methodology
MBA	Measuring Broadband Australia
Mbps	megabits per second
MHz	megahertz
NBN Co	NBN Co Limited
MNO	mobile network operator
MOCN	multi-operator core network
MVNO	mobile virtual network operator
NBN	National Broadband Network
POI	point of interconnect
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

Tbps	terabits per second
TIO	Telecommunications Industry Ombudsman
TPG	TPG Telecom Limited
TPG Internet	TPG Internet Pty Ltd
TV	television
VoIP	voice over internet protocol
3G	third generation wireless technology
4G	fourth generation wireless technology
5G	fifth generation wireless technology

Competition and price changes in telecommunications services in Australia



Fixed broadband



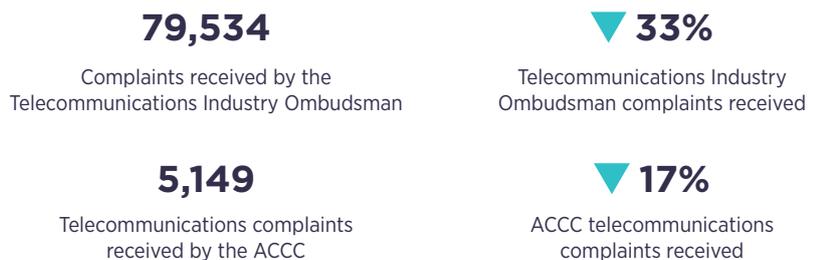
Mobile phone services



Mobile broadband



Annual telecommunications complaints



Key market developments



Networks expanding and improving



Smaller competitors growing



NBN in regulatory transition stage

Key ACCC projects



Measuring Broadband Australia



Investigations and consumer protection



NBN Special Access Undertaking



Consumer education

Executive Summary

This is the ACCC's annual report on Australian communications markets for 2021–22. It includes an overview of key market developments, observations on competition within the sector, and identifies trends and emerging issues. It also assesses the changes in prices paid by consumers for telecommunications services and examines competitive safeguards within the telecommunications industry.

The COVID-19 pandemic continued to affect Australia's telecommunications infrastructure. The first half of 2021–22 witnessed lockdowns and restrictions affecting all parts of Australia. During this period, schools, households and many Australian companies transitioned back to remote working, learning and socialising. This required online access and increased use of high-data video communications.

The second half of 2021–22 saw the removal of COVID-19 restrictions, return to school-based learning and increased opportunities for working in offices. However, the pandemic has changed the way consumers interact with, and use, communications services. It is expected that many of these trends will extend beyond the pandemic. For example, many households have adopted more flexible ways for working, which use data-intensive activities (such as video content) more heavily.

Consumer prices for NBN services increased without a corresponding increase in service standards

Over 2021–22, advertised prices for National Broadband Network (NBN) plans increased. Prices of plans with higher specifications increased at a greater rate compared to entry-level or basic plans. Key price changes were:

- entry-level or basic NBN plans with lower speeds increased by 3.6% or \$2.50 per month
- middle-of-the-range NBN plans increased by 4.7% or \$4 per month
- consumers on higher-end and very high-speed plans paid around 9% or \$9 per month more.

Feature-adjusted NBN prices decreased by around 7% once adjusted for changes in plan speeds and data allowances.¹

NBN service standards remained largely unchanged over the year, with NBN Co reporting broadly consistent performance against the key consumer facing operating metrics from August 2021, with the resolution of problems affecting its appointment scheduling system.²

Measuring Broadband Australia (MBA) results showed a slight upward trend in download speed metrics over 2021–22 for NBN fixed-line services, but with further improvements possible for download speeds during the busy evening hours and upload speeds during all hours. Upload speeds are increasingly important for remote working and learning, as well as online gaming and file sharing.

Consumer demand for NBN services continued to consolidate at the 50 megabits per second (Mbps) speed tier, with these services accounting for 62% of all NBN retail services. The proportion of consumers on 100 Mbps services increased, with reductions in services on both the entry level and very high (greater than 100 Mbps) speed tiers.

Over the period of this report, NBN Co offered temporary wholesale discounts to encourage the take-up of high and very high-speed plans. The 'Focus-on-Fast' and the 'Superfast Plus' rebates were offered until July 2021 and January 2022 respectively. Although these rebates were popular while in market, they did not lead to a significant ongoing shift towards higher speeds.

1 For further information on the feature-adjusted or 'hedonic' pricing approach see section 5.3 of the Appendix.

2 NBN Co, [How we're tracking: September 2022](#), accessed 18 November 2022.

Economic regulation of the NBN remains at a transition point

The future regulation of the NBN was a key area of focus ahead of the module 1 of NBN Co's Special Access Undertaking expiring after 30 June 2023. Both the scope and the fundamental nature of its various commitments are under consideration now that NBN Co has completed its scale build.

ACCC-convened working groups met each week through the second half of 2021 to identify the key competition, efficiency and consumer issues and potential regulatory approaches to them. NBN Co lodged an SAU variation proposal, which the ACCC published in May 2022, but NBN Co subsequently withdrew this proposal based upon stakeholder feedback. On 29 November 2022, NBN Co lodged a new variation proposal with arrangements to apply from July 2023.

5G mobile coverage increased but consumers still likely paying for larger data allowances than they may need

All 3 national Mobile Network Operators (MNOs) continued to make large investments in their 5G rollout resulting in improved coverage. The ACCC's first and second Mobile Infrastructure Reports showed that 5G deployment shifted into regional areas during 2022 after being initially focused on major cities during 2021. At the same time, 5G services increasingly became a focal point of competition among the MNOs. Mobile Virtual Network Operators (MVNOs) also started offering 5G services after previously being prevented by MNOs. This will provide more options for consumers.

Overall, the advertised prices for mobile services in 2021-22 were largely unchanged, with price increases implemented by Telstra and Optus early in the 2022-23 financial year. However, data allowances continued to increase. Compared to 2020-21, median data allowances for entry-level plans increased by 20% to 12 gigabytes (GB), middle-of-the-range plans increased by 7% to 32 GB, and higher-end plans increased 12% to 60 GB. To put these increases in context, consumers downloaded on average 10.2 GB per month.³ While higher-value plans provide consumers with the ability to download more, consumers should continue to ensure their plans offer the right level of value-for-money according to their needs.

The nature of mobile tower infrastructure ownership changed substantially over the year. Historically, MNOs largely owned their passive tower infrastructure. However, during 2021-22, all 3 MNOs divested or sold either all or a large proportion of their mobile towers. MNOs continue to have long-term arrangements with the new mobile tower owners. The ACCC is examining the implications of the change in ownership as part of the Regional Mobile Infrastructure Inquiry.

ACCC enforcement actions and compliance measures are protecting consumers

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

The ACCC instituted separate proceedings against Telstra, TPG Internet and Optus for making false or misleading representations in promoting some 50 Mbps and 100 Mbps NBN broadband plans. The ACCC alleged that, despite representing that they would, all 3 companies failed to properly check and offer remedies for underperforming line speeds for many customers. In November 2022 the Federal Court ordered penalties totalling \$33.5 million after each party admitted making false or misleading representations to consumers when promoting certain NBN internet plans.⁴

³ ACCC, [Internet Activity RKR](#), 2021-2022 reports.

⁴ ACCC, [Telcos to pay a total of \\$33.5 million for misleading statements about NBN maximum speeds](#), 11 November 2022.

The ACCC expects RSPs to be proactively examining their speed claims and the representations made to consumers. To assist with this, the ACCC has published updated industry guidance for broadband speed claims.

The overall level of complaints to the ACCC relating to telecommunications services has declined slightly since 2020–21 and against most providers, with service quality and connection issues continuing to be significant consumer concerns.

1. Introduction

The Australian Competition and Consumer Commission (ACCC) releases the Communications Market Report every year. The report details recent competitive safeguard activities 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.

The structure of this report is as follows:

- Chapter 2 highlights the key developments from the last year that have influenced both the markets and the ACCC's work in communications
- Chapter 3 sets out retail pricing and consumer trends for the 2021-22 financial year. This chapter provides insights into price changes using 2 methodologies: advertised prices and feature-adjusted nominal prices
- Chapter 4 reviews the ACCC's engagement in the communications sector in 2021-22. It outlines ACCC actions that have been taken to safeguard both competition and consumers. Telecommunications, as an essential service, remains an ACCC compliance and enforcement priority.

2. Key market developments

2.1 Retail markets

2.1.1 Demand for NBN consumer services consolidated at the 50 Mbps speed tier, with some growth at the 100 Mbps speed tier

Demand for NBN services remained focused on the 50 Mbps speed tier, with these services accounting for 55% of all NBN wholesale services, as shown in Table 1 below. Amongst the remaining speed tiers, the 100 Mbps tier grew in popularity, while the proportion of consumers on entry level and very high-speed services (greater than 100 Mbps) declined.

Table 1: NBN Wholesale – proportion of residential broadband services

	12 Mbps	25 Mbps	50 Mbps	Wireless Plus	100 Mbps	250 Mbps	500 Mbps	1000 Mbps
June 2021	12%	14%	55%	2%	10%	7%	0%	1%
June 2022	10%	14%	55%	3%	15%	2%	0%	1%

Over 2021–22, NBN Co tested consumer demand for high and very high-speed plans by offering temporary rebates for new or upgraded services at the 100 Mbps and above speed tiers.⁵ Although these rebates were popular while in market, they did not lead to a significant ongoing shift towards higher speeds.

For instance, the proportion of consumer broadband services on the 250 Mbps speed tier increased from 0.1% in December 2020 to reach a peak of 7% in June 2021, but slowly declined as individual service rebates expired after 6 months and had returned to a steady 2% level by the end of March 2022.

2.1.2 Measuring Broadband Australia report findings – download speed metrics improve but further gains possible, upload speeds an issue

The ACCC's MBA reports continued to demonstrate whether consumers receive the network quality in line with their selected plan specifications as they rely heavily on broadband for work, education and entertainment.

Download speeds improved

The MBA reports showed a slight upward trend in the busy-hour download speed metrics for NBN fixed-line services during 2021–22, as shown in Table 2 below.

Table 2: Average download speed as a percentage of plan speed during busy-hours for 50 Mbps plans

Period monitored	% of plan speed
September 2021	97.9%
December 2021	97.4%
February 2022	97.1%
May 2022	98.1%

However, benchmarking on a like-for-like basis against superfast networks in New Zealand showed further gains are possible.⁶

⁵ NBN Co, [NBN Launches new focus on fast campaign](#), 22 October 2020.

⁶ ACCC, [Measuring Broadband Trans-Tasman report](#), 1 June 2022.

The MBA reports also showed NBN Fixed Wireless Plus services download speeds improving steadily during busy hours across 2021–22. The improvement in download speeds is due to a change NBN Co made in July 2021, which allowed a 15% overprovisioning allowance on the download component of NBN fixed wireless plans.

Uploads fall short of maximum plan speeds

On the other hand, NBN upload speed metrics have not improved significantly since early 2020. Upload speed metrics remain substantially below both the observed download speed metrics and the specified wholesale speed tier.⁷ This is due to NBN Co not overprovisioning the upload link as it does for the download link.

With upload speeds increasingly important for a range of applications that support working and learning from home, online gaming and sharing files, increasing the provisioning of the upload link would appear an efficient means by which NBN Co could boost performance.

Urban-regional differences remain

Consumers in both urban and regional Australia with NBN fixed-line services experienced a significant improvement in download speeds since November 2018. ‘All hours’ download speeds increased in urban areas⁸ from 85.7% in August 2018 to 98.2% in February 2022 and in regional areas from 83.7% to 95.2%. However, regional fixed-line services still have some way to go to be on par with urban connections.

2.1.3 Smaller RSPs increased NBN market share

Smaller RSPs continued to increase their residential broadband market share in the NBN wholesale market. The combined market share of the top 4 NBN access seekers (Telstra, Optus, TPG Telecom (TPG) and Vocus) decreased for the third consecutive year, albeit remaining at a still high 87.4% of all services. Smaller RSPs accounted for 12.6% of the market in the June 2022 quarter, up from 8.2% in June 2021. This growth was led by Aussie Broadband, which increased its market share to 6.4% (up 1.7 percentage points).⁹

Smaller RSPs have expanded coverage at NBN points of interconnect (POI), with several achieving a national NBN presence during the 2021–22 period. Many other smaller RSPs expanded their POI coverage, with the improved availability of NBN backhaul a key factor. By June 2022, all the 121 POIs had at least 17 access seekers, with 120 having at least 18 access seekers. In comparison there were only 24 POIs with at least 17 access seekers June 2021. The ACCC expects smaller RSPs will continue to improve their competitiveness by having more direct interconnections with the NBN and undertaking investment in backhaul capacity at POIs.

2.1.4 The level of competition for 5G customers is increasing

Over the year, 5G services became the main focal point of competition between the MNOs. MNOs heavily advertised the capabilities of their 5G networks during 2021–22. 5G performance has become an important marketing factor as the MNOs focus on non-price features such as speed, coverage, technology and customer service.

The 5G home broadband market also matured during 2021–22, with MNOs offering 5G home broadband services to more locations. The price, speed and data allowance of these home 5G plans is generally comparable with NBN fixed broadband plans. As such, 5G services in some areas are becoming increasingly attractive to consumers as an alternative to traditional fixed line services.

Generally, the MNOs maintained their first mover advantage by initially withholding 5G access from their wholesale customers. However, MVNOs have since been provided 5G access, with Optus MVNOs’ SpinTel, Aussie Broadband and Southern Phone offering 5G mobile plans. Telstra provided 5G access

7 In May 2022, during the busy hours of 7–11 pm, NBN fixed-line connections achieved average download speeds of 97.6% and average upload speeds of 85.3%.

8 Urban areas are cities with a population of over 10,000 people.

9 ACCC, [NBN Wholesale Market Indicators Report June 2022 Quarter](#), 18 August 2022.

in July 2022 to Woolworths, Aldi Mobile and Boost Mobile. TPG has started 5G trials for its MVNOs including Kogan, iiNet and Lebara. However, there has been low MVNO take up of 5G wholesale access.¹⁰

2.2 Infrastructure competition

2.2.1 Large changes in mobile tower ownership

Significant changes in mobile tower infrastructure ownership occurred during 2021–22 as MNOs sold some or all of their tower infrastructure.

- In 2021, Telstra and Optus sold most of their mobile tower assets to new tower entities, respectively Amplitel and Indara.^{11,12,13}
- In April 2022, Macquarie Group sold its mobile tower business (known as Axicom) to Indara.¹⁴
- In May 2022, TPG sold most of its mobile towers to WaveConn.¹⁵

The changes mean that a larger proportion of ‘passive’ mobile infrastructure assets (towers, buildings, land) are not owned directly by MNOs. However, MNOs continue to own and operate the ‘active’ components of mobile tower infrastructure (such as antennas and transmitters).

The ACCC is examining the impact and implications of these changes in its [Regional Mobile Infrastructure Inquiry](#) due to report in June 2023.

2.2.2 Investment in transmission and national fibre backhaul is growing

High-capacity transmission networks carry data for most telecommunications services. In 2021–22 a number of new high-capacity fibre links were announced. These investments will boost both the capacity and resilience of the national transmission network, allowing backhaul users to have a wider choice of dedicated fibre connections across Australia.

In the first half of 2022, Aussie Broadband completed the construction of over 270 km of fibre interconnecting several NBN POIs and data centres in Queensland. This continues the carrier’s investment in fibre networks across main central business districts and backhaul to NBN POIs.¹⁶

In June 2022, HyperOne announced the completion of the early design works for a 2,200 km fibre network between Sydney and Melbourne. This is part of HyperOne’s ongoing construction of a 20,000 km national backbone network with over 2,000 connection points. HyperOne claims this will provide an alternative to existing transmission corridors and will be used to carry both internet and data centre traffic.¹⁷

Telstra announced an upgrade to its existing national fibre network that will add a dual-path route of more than 20,000 km. Telstra’s new fibre network will include a direct fibre link between capital cities, and a second link providing connectivity to several regional locations, with multiple access points.¹⁸

These announcements suggest that despite the high level of maturity of Australian core networks, the continued growth in data consumption and the shift to cloud-based services is encouraging large investments in underlying network infrastructure.

10 WhistleOut, [Why small telcos aren’t keen on 5G](#), 17 December 2021, accessed 18 November 2022.

11 Indara was previously known as Australian Tower Network.

12 Telstra, [Telstra finalises \\$2.8 billion InfraCo Towers sale](#), 1 September 2021, accessed 6 October 2022.

13 Optus, [Optus announces sale of towers to AustralianSuper for AU\\$1.9 billion](#), 1 October 2021, accessed 6 October 2022.

14 Macquarie Asset Management, [Macquarie Asset Management announces sale of Axicom to Australia Tower Network](#), 1 April 2022, accessed 6 October 2022.

15 OMERS Infrastructure, [OMERS Infrastructure Announces Agreement to Acquire its First Asia-Pacific Digital Infrastructure Asset](#), 9 May 2022, accessed 6 October 2022.

16 CRN, [Aussie Broadband nears completion of Queensland dark fibre rollout](#), 12 April 2022, accessed 18 November 2022.

17 HyperOne, [HyperOne completes early works packages and continues detailed design on its national Hyperscale network - Media release](#), 30 June 2022, accessed 18 November 2022.

18 Telstra, [Breaking ground on the fibre network of the future](#), 15 March 2022, accessed 18 November 2022.

2.2.3 MNOs continued to extend 5G network breadth and depth

The MNOs continued to make significant investment in their 5G roll-out, as indicated by the various levels of reported coverage:

- Telstra has the widest 5G network with a population coverage of 80%.¹⁹ Telstra intends to deliver 5G coverage to approximately 95% population coverage by 2025.²⁰
- TPG has over 85% population coverage in 10 largest cities and regions.²¹
- Optus 5G population coverage data has not been published, with its roll-out promotion largely focussed on speed.²²

Telstra held a significant first mover advantage with more 5G sites in total than Optus and TPG combined.²³ As at 31 January 2022, Telstra had significantly more 5G sites (4,071) compared to the other MNOs across all areas, with more than twice as many 5G sites as Optus (1,932) and significantly more 5G sites than TPG (1,029).

While the deployment of 5G sites has largely been in major cities, deployment is now moving into regional and remote areas.

2.2.4 Developments continue in new satellite deployments

A new generation of satellite broadband services has recently reached commercial stage or is in near-future development.

In March 2022, Telstra announced a partnership with satellite company Viasat. Telstra will provide terrestrial support for the Asia-Pacific deployment of the Viasat-3 geostationary satellite constellation. Once in operation, ViaSat-3 satellites are expected to deliver data and video streaming at a speed of more than 150 Mbps to 48 countries, including Australia.²⁴

Starlink's low earth orbit (LEO) satellite service²⁵ is available nationally and competes with the NBN Sky Muster service, although there are performance and cost differences.²⁶

The development of LEO satellites that are capable of integrating with terrestrial 5G mobile networks is underway. This will allow satellite-to-mobile connectivity with unmodified 5G handsets in remote locations, aircraft and marine vessels.²⁷

2.2.5 NBN Co has continued to invest in its networks

NBN Co is continuing to invest in its network coverage and capacity. NBN Co is upgrading the speed capabilities of some of its connected premises and investing in rural and regional Australia as part of a \$4.5 billion program.²⁸ In its 2022 corporate plan NBN Co identified that an additional 300,000 premises will benefit from an extension of the fibre network and higher available speeds.²⁹

19 Telstra, [Australia's largest network – covering 80% of Aussies](#), Telstra website, accessed 22 November 2022.

20 Telstra, [Introducing T25: our plan for growth and enhanced customer experiences](#), 16 September 2021, accessed 18 November 2022.

21 TPG, [Our networks](#), accessed 22 November 2022.

22 Optus, [Get super-fast 5G with Optus](#), Optus website, accessed 18 November 2022.

23 ACCC, [Mobile Infrastructure Report 2022](#), Appendix A, 9 September 2022, accessed 18 November 2022.

24 Telstra, [Viasat partners with Telstra for Viasat-3 ground network](#), 31 March 2022, accessed 18 November 2022.

25 A LEO satellite constellation provides much faster speeds and lower latency due to their proximity to earth in comparison with traditional geostationary satellites.

26 WhistleOut, [Starlink Australia Satellite Internet: Everything You Need to Know](#), 7 November 2022, accessed 18 November 2022.

27 Nokia, [5G from space - The role of satellites in 5G](#), accessed 18 November 2022.

28 NBN Co, [NBN Co offers further fibre upgrades as part of \\$4.5 billion plan - media release](#), 22 March 2022, accessed 18 November 2022.

29 NBN Co, [2022 Corporate Plan](#), August 2021, p.7.

On 22 March 2022 NBN Co and the Australian Government announced a \$750 million investment in NBN Co's fixed wireless network to improve rural, regional, and remote speeds in response to the 2021 Regional Telecommunications Review, which recommended enhancements to NBN Co's fixed wireless and satellite services.³⁰

At the end of the 2021-22 financial year the NBN had 12,129,709 premises ready to connect. This was an increase of 163,359 premises since the end of last financial year.³¹ This reflects further investment in the network since the NBN was declared complete on 2020.

2.2.6 Many non-NBN residential broadband networks have been upgraded

Non-NBN broadband providers invested in network upgrades over the year.

- In May 2022, Uniti Group Limited (Uniti) announced that its subsidiary Opticomm had been upgrading and integrating the 'Velocity Network' services it acquired from Telstra. The upgrade involves the deployment of 10 gigabits per second (Gbps) technology to allow Opticomm to provide multi Gbps services to its residential broadband customers.³²
- In August 2021, DGtek, a provider of fibre broadband services, announced the completion of a capital raising round to expand its network. DGtek aims to reach 1 million homes and business by 2024 by way of further acquisitions and organic growth.³³
- In June 2022, TPG announced the launch of its G.Fast technology, offering wholesale 1 Gbps broadband services across its fibre-to-the-basement (FTTB) footprint.³⁴ TPG also announced the launch of its 10 Gbps Fast Fibre broadband service for business and enterprise customers in metropolitan areas of Sydney, Melbourne, Brisbane, Adelaide, Perth and Canberra.³⁵

2.2.7 The Regional Telecommunications Review inquiry concluded

The most recent Regional Telecommunications Review report was published in February 2022 making 16 key findings and 12 recommendations to the Australian Government.³⁶ These recommendations were aimed at creating a more accessible, competitive and reliable regional telecommunications landscape.

The report highlighted how telecommunications, especially mobile networks, play an important role during natural disasters and other emergencies. The Government announced in response to Recommendation 9 ('Mobile services') that the ACCC would be tasked to examine appropriate mobile network quality and coverage reporting requirements.

The report also recommended that preference be given to government funded mobile infrastructure that supports shared network access (Recommendation 10). The Government directed the ACCC to examine mobile tower access fees and how these impact on expanding mobile coverage. The ACCC's Regional Mobile Infrastructure Inquiry is due to report in June 2023.³⁷

30 NBN Co, [\\$750 million investment to 5G-enable nbn® Fixed Wireless to deliver faster speeds to regional Australia - media release](#), 22 March 2022, accessed 18 November 2022.

31 NBN Co, [Weekly progress report](#), accessed 18 November 2022.

32 Opticomm, [Telstra Signs as RSP of Opticomm](#), media release, accessed 18 November 2022.

33 DGtek, [Independent Full Fibre Network, DGtek, Raises Over \\$7m](#), media release, 2 August 2021, accessed 18 November 2022.

34 TPG, [TPG Telecom launches superfast G.Fast broadband services](#), media release, 19 May 2022, accessed 18 November 2022.

35 TPG, [TPG Telecom launches ultrafast 10 Gigabit Fast Fibre for Business, Enterprise and Government](#), media release, 20 June 2022, accessed 18 November 2022.

36 Department of Infrastructure, Transport, Regional Development, Communication and the Arts, [2021 Regional Telecommunications Review - A step change in demand](#), 14 February 2022, accessed 18 November 2022.

37 ACCC, [Regional mobile infrastructure inquiry 2022-23](#).

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 all inclusions they receive in product bundles. The refined pricing methodology consisted of 2 price change measurements:

- The ‘advertised price’ approach measures changes in nominal prices offered to consumers but does not consider changes in product features (for example, 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 estimate incorporating both changes to advertised price and changes in product features.

The ACCC considers these 2 approaches provide different perspectives on the price consumers are paying as well as whether they are in general getting more product features for their money.

3.1.1 Advertised price analysis.

The advertised price analysis examines how advertised price changes affect different groups of consumers. The 3 price points included in this report are the 25th percentile (that is, lower price point), median price point and 75th percentile (that is, higher price point). The difference between the 75th and 25th percentiles is the interquartile range. These price points act as proxies for entry-level, typical and higher-end consumers respectively.³⁸

3.1.2 Hedonic price analysis

The feature-adjusted price, or hedonic approach, controls for the features/quality of the plans, and then estimates the effect of time on price. The theory underpinning hedonic pricing analysis is that differentiated products can be viewed as a bundle of characteristics. The approach treats each product as a combination of characteristics and features and assigns values to each of the ‘price determining’ features of the product (for example, download speed and data allowance).³⁹

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.

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.

38 The advertised price changes for fixed broadband plans (NBN and non-NBN) that are bundled with a voice component and an entertainment service (such as Fetch TV or Foxtel) have been excluded from the advertised price 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 most consumers pay.

39 Unlike for the advertised price approach, ‘triple play’ plans are included in the hedonic approach. The hedonic approach includes controls for the presence of television (TV) services and of voice services when estimating the pure price change of broadband plans. The inclusion of these controls means these triple play plans can be included without distorting the hedonic price results.

3.2 NBN fixed broadband

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 broadband services that are provided over fixed-line and fixed wireless technologies (that is, all services other than satellite).⁴⁰ The source for the data is the ACCC's Internet Activity Record Keeping Rules (RKR) reports.

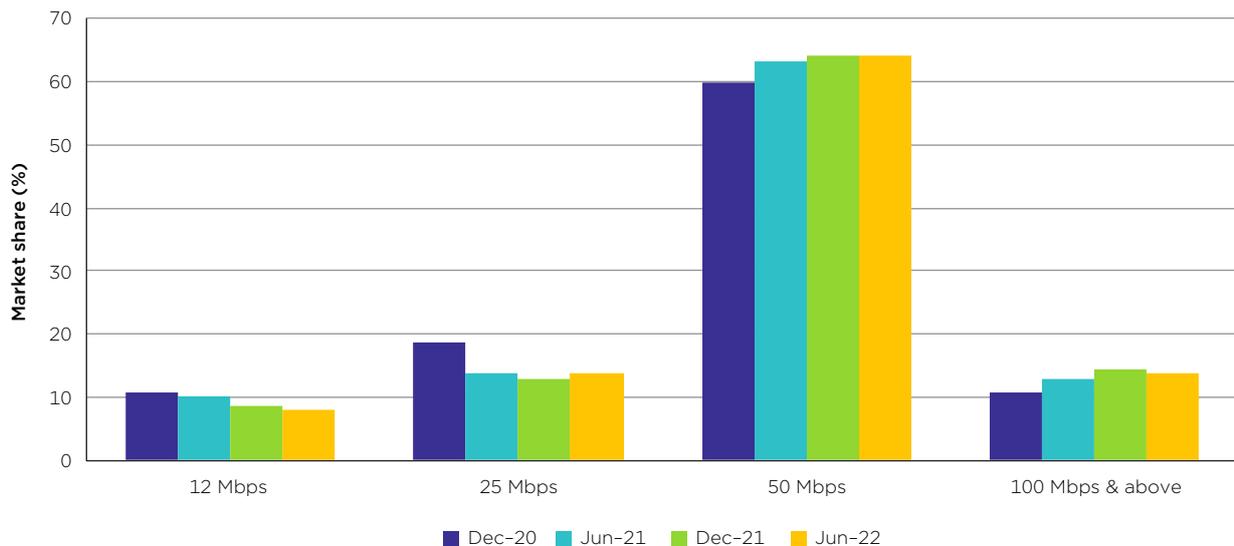
3.2.1 Services in operation

Over 2021–22, NBN Co reported the number of wholesale residential fixed-line and fixed wireless services in operation (SIOs) increased 3.9% to 8.6 million services.⁴¹

However, reporting by major RSPs showed there were 7.5 million retail NBN services.⁴² This indicates that around 1.1 million services were supplied by NBN access seekers to the NBN reseller market. During the first 6 months of 2021–22, the number of retail services reported under the Internet Activity RKR decreased by 0.9% due to methodology updates by several data reporters. This decrease in retail services should be a one-off correction. Under the new methodologies retail services increased by around 85,000 between December 2021 and June 2022.

Figure 1 shows the breakdown of retail NBN subscribers by speed tiers. The 50 Mbps tier remains the most popular NBN service with 62% of the market. Consumers continue to move away from the 12 Mbps service, which has reduced to 8% of the market.

Figure 1: NBN retail broadband internet by speed tier



3.2.2 Prices

Overall, advertised prices for NBN fixed broadband services continued to increase (Figure 2). From 2020–21 to 2021–22, per month retail prices:

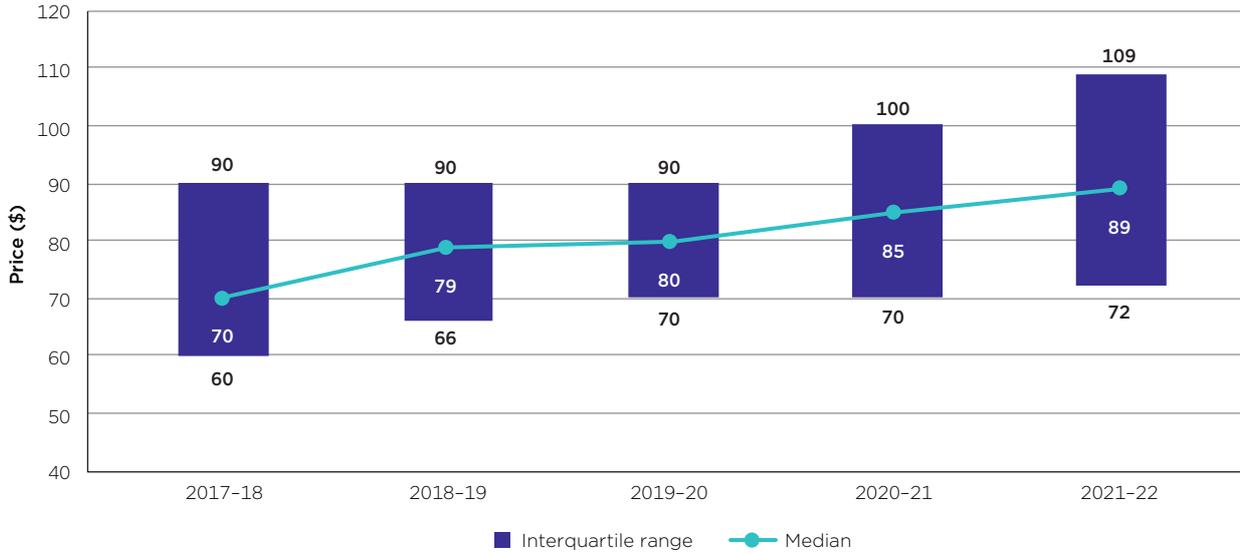
- on lower-priced plans (at the 25th percentile) increased by 3.6% to \$72.50
- at the median price point increased by 4.7% to \$89
- on higher-priced plans (at the 75th percentile) increased by 9% to \$109.

⁴⁰ 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.

⁴¹ ACCC, [NBN Wholesale Market Indicator RKR Reports](#), various reports.

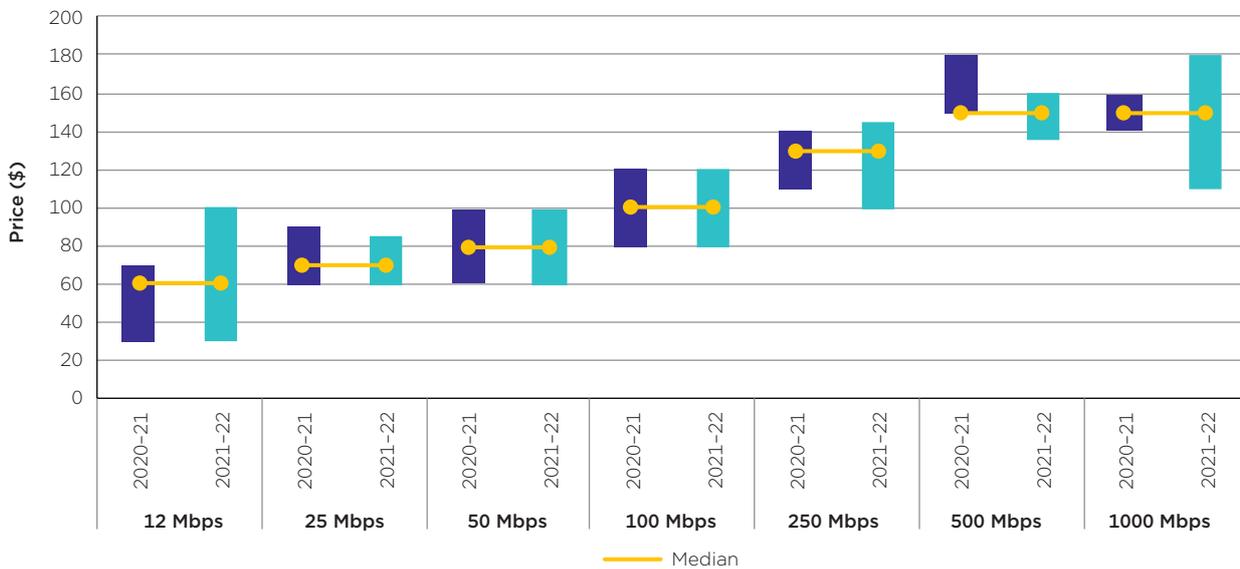
⁴² ACCC, [Internet Activity RKR Reports](#), various reports.

Figure 2: Changes in NBN broadband advertised prices from 2017-18 to 2021-22



These broad increases in advertised prices were likely due several key factors. First, NBN Co ceased its high-speed wholesale rebates, so RSPs passed on the costs with higher advertised prices. Second, there was a shift in composition of plans on offer to consumers. Between 2020-21 and 2021-22, the share of plans on offer with download speeds of 50 Mbps and above increased from 69% to 77%. In 2021-22, the median advertised price for plans with download speeds below 50 Mbps was \$65. This compares to a median advertised price of \$97 for plans with download speeds of 50 Mbps and above (Figure 3).

Figure 3: Median and range of advertised prices by selected download speed tiers, 2020-21 and 2021-22



Over the 5-year period, advertised prices for consumers in the 25th price percentile, median and 75th price percentile increased by 20.8%, 27.1% and 22.1% respectively. Similar to above, the increases in advertised prices have been driven by changes in the composition of plans on offer and NBN Co ending its promotional rebates.

The feature-adjusted pricing analysis indicated that NBN prices fell by 6.8% in 2021-22 and by 15% over the 5-year period primarily due to significant increases in data inclusions and download speeds.

3.3 Non-NBN fixed-line broadband

Non-NBN fixed-line broadband services are provided over networks owned by service providers other than NBN Co. Historically, these services have been largely delivered over Telstra’s copper network, the Optus and Telstra hybrid fibre coaxial (HFC) networks, and smaller fibre networks in 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.

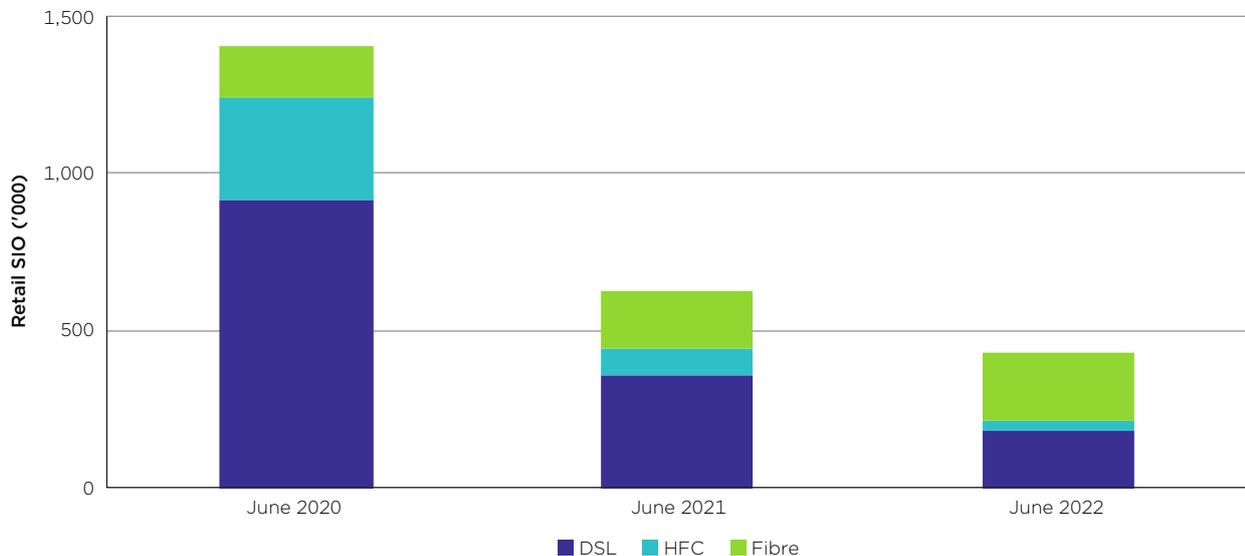
In areas where non-NBN fibre networks exist, consumers have the choice of staying connected to these networks or migrating to the NBN if it is available. Outside the NBN fixed-line footprint, Telstra still offers digital subscriber line (DSL) broadband services over its copper network, and consumers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

3.3.1 Services in operation

Non-NBN fibre services continued to expand and are now the most common non-NBN fixed service. Over 2021–22, these services increased 16% to around 210,000 services (Figure 4).⁴³ Over the past 3 years, the number of non-NBN fibre services increased on average 11% per year. Fibre services had the highest average downloads of all non-NBN services. Averaging 453 GB per service per month, this is higher than NBN services at 436 GB.

The number of consumers using DSL and HFC services on the Optus or Telstra networks continued to decrease. Over 2021–22, DSL services decreased by 48% to around 183,000 services, and HFC services decreased 63% to around 34,000 services. Over the past 3 years, DSL and HFC services decreased on average 54% and 64% per year. With the NBN rollout declared complete in late 2020, many consumers remaining on copper and HFC networks will eventually migrate to NBN services.

Figure 4: Retail non-NBN SIOs by access technology from 2019–20 to 2021–22



3.3.2 Prices

Changes in advertised prices for non-NBN fixed broadband services increased (Figure 5).⁴⁴ From 2020–21 to 2021–22, per month retail prices:

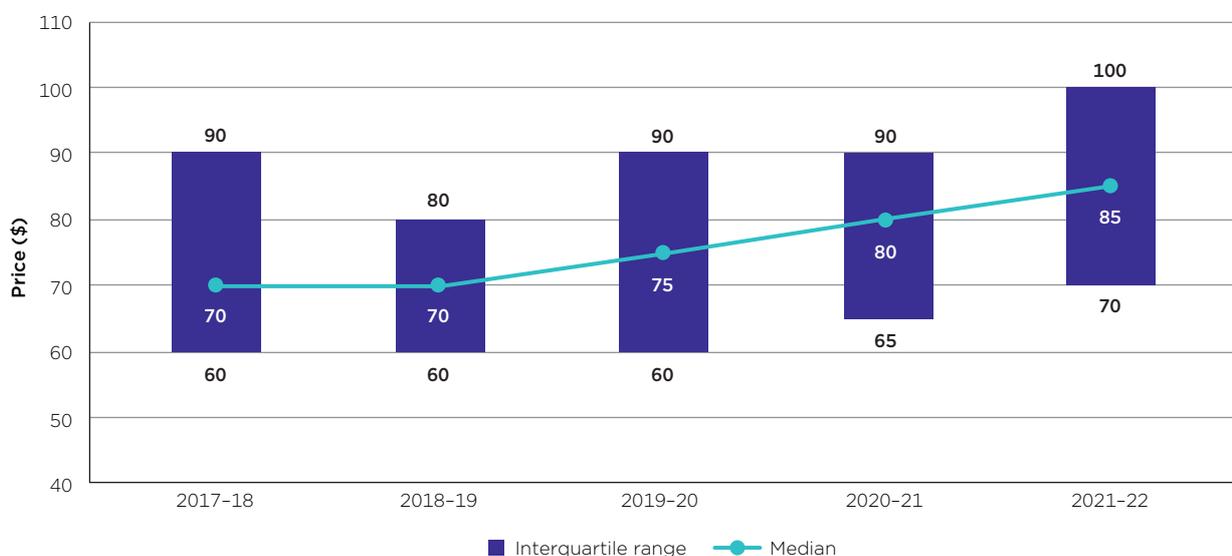
- on lower-priced plans (at the 25th percentile) increased by 7.8% to \$70

⁴³ The non-NBN SIOs data is collected under the [ACCC’s Internet Activity RKR](#) and relates to retail services provided by Aussie Broadband, Australian Private Networks, Dodo, Harbour ISP, iiNet, IPStar, MyRepublic, Primus, Optus, SkyMesh, Telstra and TPG.

⁴⁴ The advertised pricing data covers services provided on the DSL & HFC networks and the FTTx networks including the TPG, Opticomm and Velocity networks.

- at the median price point increased by 6.3% to \$85
- on higher-priced plans (at the 75th percentile) increased by 11.2% to \$100.

Figure 5: Changes in non-NBN fixed broadband advertised prices from 2017-18 to 2021-22



These price increases were likely due to a shift in the composition of plans on offer, rather than a price increase 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 increased. Generally, non-NBN fibre plans are more costly and have higher speed options than DSL and HFC plans. Most retailers offer their fibre services at similar or identical pricing to their NBN prices. In 2021-22, the advertised prices for DSL plans ranged between \$20 and \$100 per month and had a median price of \$79. This compares to non-NBN fibre plans which ranged between \$50 and \$150, with a median price of \$85.

Over the 5-year period, advertised prices for consumers in the 25th percentile and median price percentile increased by 16.7% and 21.4% respectively, with advertised prices in each year increasing or remaining unchanged. Consumers in the 75th percentile experienced a price increase of 11.2%.

The feature-adjusted pricing analysis indicated that non-NBN prices fell by 3.8% in 2021-22 and by 12.6% over the 5-year period

3.4 Mobile

Telstra, Optus and TPG continue to dominate the retail market for mobile services. The 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.

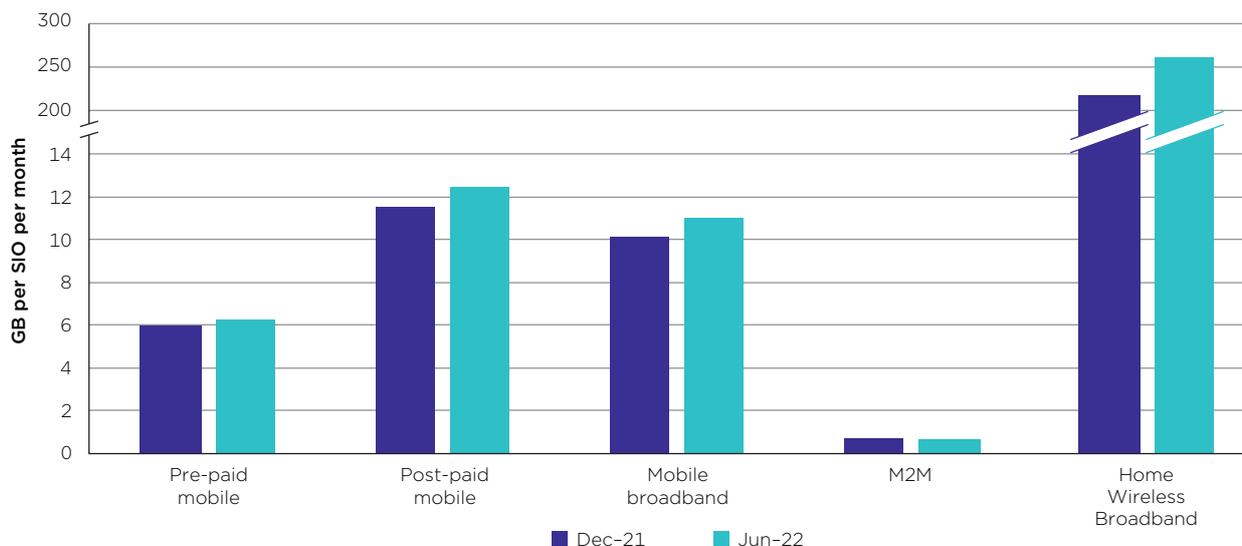
In addition to the MNOs' flagship retail brands (Telstra, Optus, and TPG's Vodafone), there are also a wide range of MVNOs that acquire wholesale connectivity from the MNOs to provide retail services. The MNOs also operate sub-brands that compete for the more price sensitive segment of the retail market.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

3.4.1 Services in operation

Over 2021–22, total mobile phone services increased by 3% or around 926,000 to over 28 million services. There was slight increase in the number of pre-paid services relative to post-paid services as the share of pre-paid services increased by 1 percentage point to 36%. MNO flagship brands continued to account for most (82%) mobile phone services. MNO sub-brands made up 9% of services and MVNO brands also accounted for 9% of services. Finally, average mobile phone downloads increased by 7% to 10.2 GB (Figure 6).

Between December 2021 and June 2022, the number of mobile broadband (data-only) services increased only 1% to over 4.3 million services. However, the average data volume downloaded over mobile broadband services increased by 9% to 11.1 GB.

Figure 6: Mobile network downloads from December 2021 to June 2022



In 2021–22, machine-to-machine⁴⁵ (M2M) and home wireless broadband⁴⁶ services were reported for the first time, and both saw substantial growth in services. Between December 2021 and June 2022, the number of M2M services increased by 11% to over 5.8 million and home wireless broadband increased by 16% to over 345,000 services. Over the same period, average downloads per user on home wireless broadband services increased by 18% to 253 GB per month. Downloads of this amount indicate home wireless broadband could be a fixed-line alternative, particularly for consumers with a lower data demand. For comparison the average NBN download amount was 436 GB per month.

3.4.2 Prices

Mobile phones

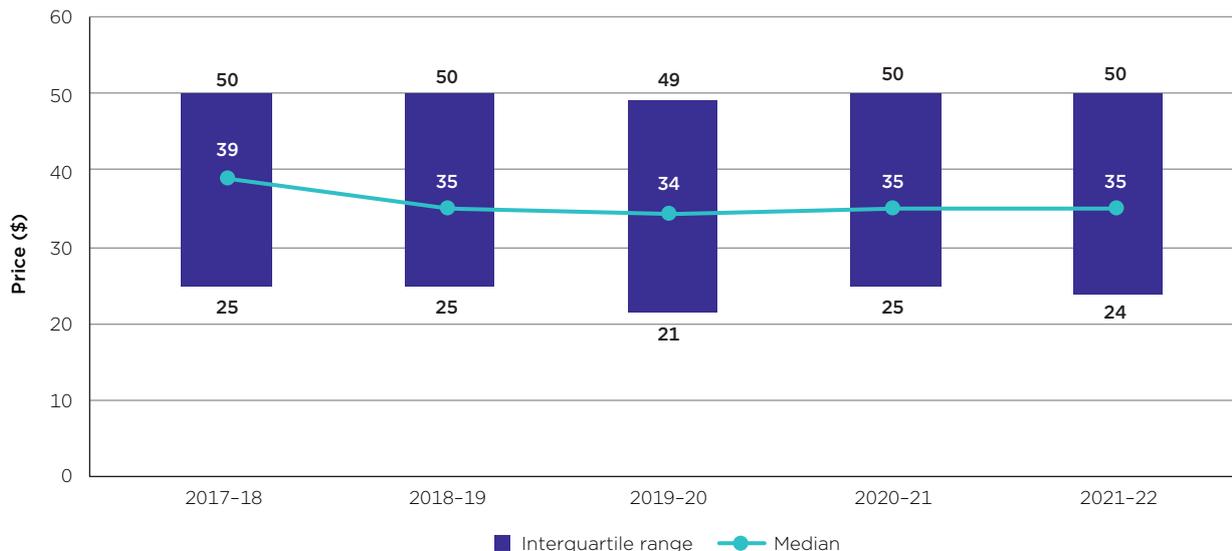
Advertised prices for mobile phone services were mostly unchanged (Figure 7). From 2020–21 to 2021–22, per month retail prices for pre-paid and post-paid services:

- on lower-priced plans (at the 25th percentile) decreased by 4% to \$24
- at the median price point remained unchanged at \$35
- on higher-priced plans (at the 75th percentile) increased by 0.2% to \$50.

45 Machine-to-machine or M2M is a direct communication between devices using any communication channel, including fixed/wired and wireless.

46 Home wireless broadband is an internet connection which provides short broadband range, high data rate connections between a fixed modem and access points connected to a mobile network.

Figure 7: Changes in mobile phone advertised prices 2017-18 to 2021-22



Over this period, there were key differences between post-paid and pre-paid mobile services. For post-paid mobile services, median monthly retail prices increased 11% to \$40, and the median data allowance increased by 14% to 40 GB. This compared to pre-paid mobile services where median monthly retail prices and data allowance were unchanged at \$32 and 30 GB. However, monthly retail prices of lower priced (at the 25th percentile) for post-paid services was unchanged at \$25 but for pre-paid services it decreased by 20% to \$20.

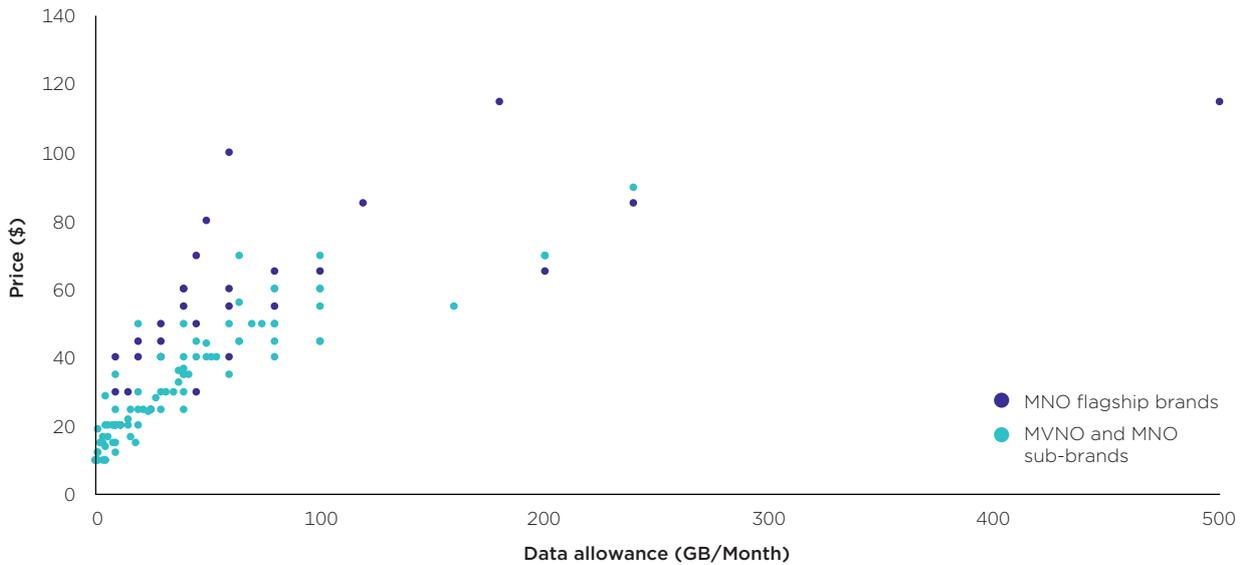
Over the 5-year period, advertised prices for consumers in the 25th percentile was mostly unchanged, aside from the decrease to \$21 in 2019-20. For consumers in the median price percentile, advertised prices decreased by 10.3%. Consumers in the 75th percentile experienced no large changes in advertised prices, remaining between \$49 and \$50.

The feature-adjusted pricing analysis indicated that mobile services overall fell by 11.6%, post-paid mobile services fell by 13.3% and pre-paid mobile fell by 10.6%. Over the 5-year period the prices fell by 47.5%, 50.0% and 45.1% respectively.

MVNO brands and MNO sub-brands continued to play an important and competitive alternative to MNO flagship brands for consumers.⁴⁷ In 2021-22, MVNO brands and MNO sub-brands advertised prices were generally lower compared to those offered by the MNO flagship brands (Figure 8). However, data allowances for MVNO brands and MNO sub-brands were also lower. The median advertised price for MVNO brands and MVNO sub-brand plans was \$30 with a data allowance of 30 GB. This compares to the median price for MNO flagships brands which was \$55 with a data allowance of 42.5 GB.

⁴⁷ MNO flagship brands include Optus, Telstra and Vodafone. MVNO brands and MNO sub-brands include ALDI mobile, amaysim, Belong, Boost, Circle.life, Dodo, Felix, Gomo, Hello Mobile, iPrimus, Kogan Mobile, Lycamobile, Mate, iiNet, TPG, Lebara and Telechoice.

Figure 8: Advertised price and monthly data allowance for MVNO brands and MNO sub-brands compared to MNO flagship brands, 2021-22

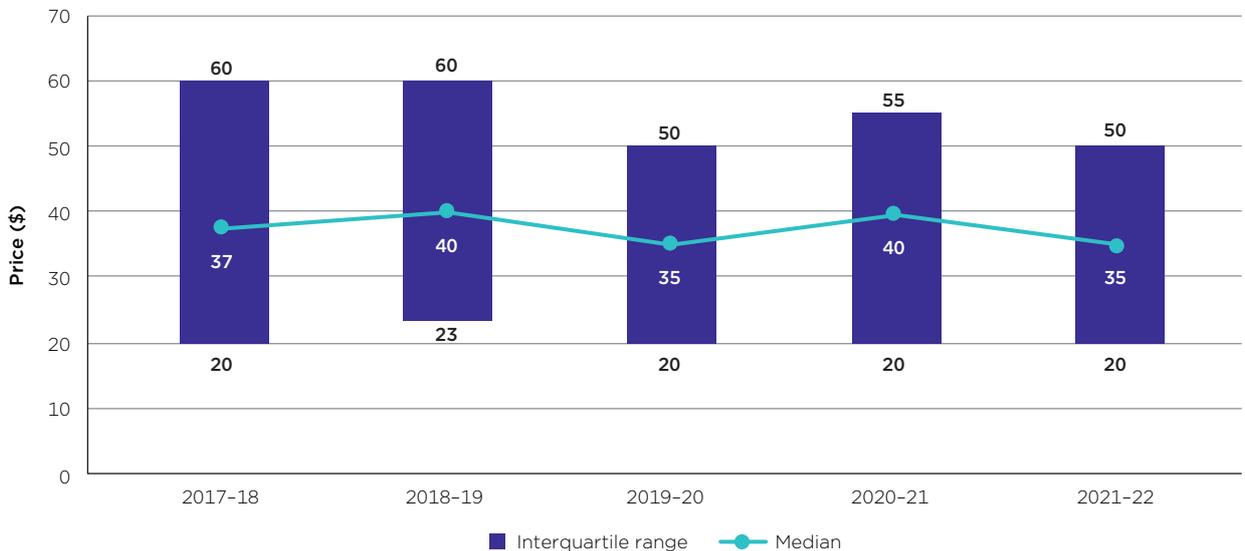


Mobile broadband

Advertised prices for mobile broadband services decreased (Figure 9). From 2020-21 to 2021-22, per month retail prices:

- on lower-priced plans (at the 25th percentile) remained unchanged at \$20
- at the median price point decreased by 11.5% to \$35
- on higher-priced plans (at the 75th percentile) decreased by 9.1% to \$50.

Figure 9: Changes in mobile broadband advertised prices from 2017-18 to 2021-22



Over the 5-year period, advertised prices for consumers in the 25th percentile was unchanged, aside from the temporary increase to \$23 in 2018-19. For consumers in the median price percentile, advertised prices decreased by 6.7%. Consumers in the 75th percentile experienced a price decrease of 14.6%.

The feature-adjusted pricing analysis indicated that mobile broadband prices fell by 15.3% in 2021-22 and by 44.8% over the 5-year period.

3.5 Fixed-line voice

Over 2021–22, the number of fixed-line voice services across Telstra, Optus and TPG decreased by 5% to over 6.4 million services. This continues the long-term trend of decreasing usage of fixed-line voice services.

Despite decreasing 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.

An Australian Communications and Media Authority (ACMA) survey commissioned in 2022 estimated that 34% of Australians had both a mobile and landline phone, while 1.6% had only a landline phone.⁴⁸ While the number of Australians either with both a mobile and landline phone or only a landline has decreased over time, age and location are significant influencing factors. Broadly, younger Australians and those in capital cities use landline phones less.

Generally, consumers now access fixed-line voice services as a bundled service (usually as a voice over internet protocol (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.

The ACCC's retail market research indicates standalone fixed-line voice service providers are moving to primarily offer all-inclusive plans that include unlimited local, national and mobile calls for between \$25 and \$60. It appears plans with unlimited call inclusions are increasingly common and the availability of individual call tariff plans continue to reduce.

Some larger providers, such as Telstra and Optus, only offer a single unlimited fixed-line voice product at around \$55. 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 cost 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.

3.6 Satellite

Satellite services are important to regional and remote Australia for telecommunications services. In some areas, satellite services are becoming a viable alternative to mobile and fixed-line networks. As noted previously, over 2021–22 a new generation of satellite broadband services has recently reached commercial stage or is in near-future development (see subsection 2.2.4).

NBN wholesale satellite services increased 20.2% or around 18,000 to over 107,000 services (which includes over 35,000 Sky Muster Plus services). It is important to note most of this increase is attributed to NBN Co reporting of Sky Muster Plus for the first time from September 2021.

Non-NBN satellite services remained relatively stable over the period, increasing by 3% to around 32,000 services. There has been little change in the number of non-NBN satellite services for the last 3 years, averaging around 31,000 services. However, the ACCC expects this to be a conservative estimate of the number of non-NBN satellite services because several non-NBN satellite providers are not currently captured by the Internet Activity RKR. Between December 2021 and June 2022, average monthly downloads per user of non-NBN satellite services increased 12.4% to 175 GB.

48 ACMA, [How Australians make voice calls at home](#), accessed 18 November 2022.

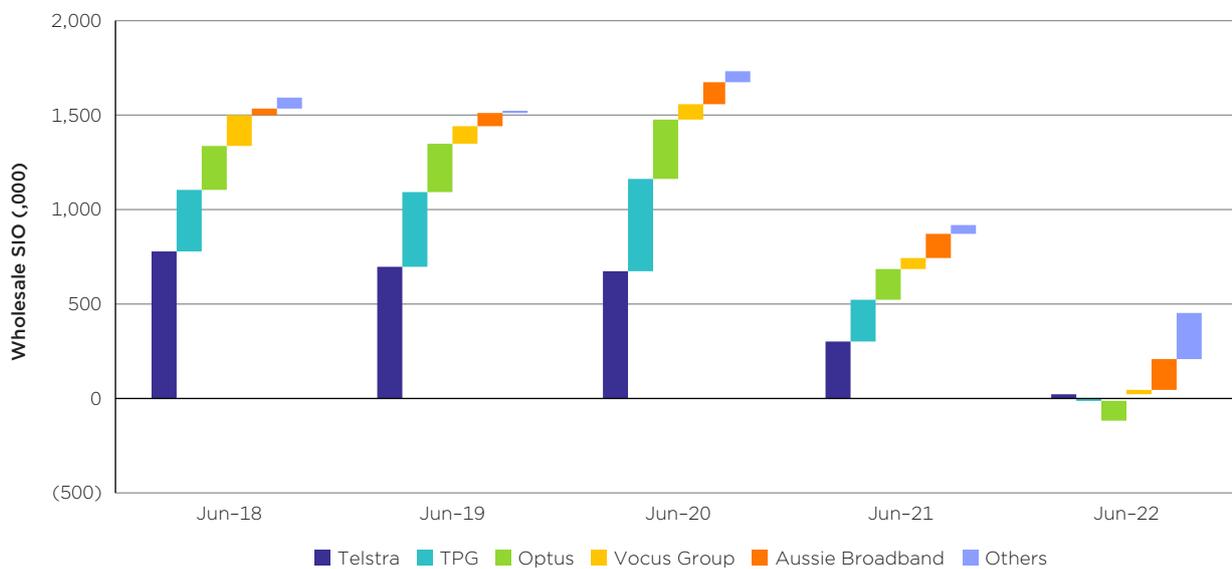
NBN Sky Muster satellite retail plans are offered in 12 and 25 Mbps speeds with a peak/off peak data allowance. Depending on speed and monthly data allowance monthly prices range from \$35 to \$155 with no installation fee. NBN Sky Muster Plus plans include limited peak allowance for video streaming and unlimited for all other usage and monthly prices range from \$50 to \$200 with no installation fee.⁴⁹ In contrast, Starlink’s monthly charge is \$139 with no limits to downloads but it has a standard installation fee of \$924.⁵⁰

3.7 Wholesale markets

3.7.1 National Broadband Network

Growth in the NBN wholesale market slowed during 2021-22. Compared to almost 1 million new residential services added in 2020-21, only around 344,000 were added in the year to 30 June 2022, most of which were added by smaller NBN access seekers (Figure 10).

Figure 10: NBN wholesale – residential broadband net additions, from 2017-18 to 2021-22



With the NBN rollout complete, the decrease in net additions is expected to continue.

Figure 11 shows net additions for the 2021-22 period, with most net additions attributable to Aussie Broadband and other smaller NBN access seekers such as Superloop, Exetel, SkyMesh, Southern Phone, Harbour ISP and Australian Private Networks (trading as ‘Activ8me’). The market share of Optus was impacted during the 2021-22 period by the acquisition of one of its large wholesale customers by a competitor.

49 WhistleOut, [Best Satellite NBN Plans November 2022: Compare & Save](#), 4 November 2022, accessed 18 November 2022.

50 Starlink, [Order Starlink – Australia offer until new year](#), accessed 18 November 2022.

Figure 11: NBN wholesale - residential broadband net additions in 2021-22

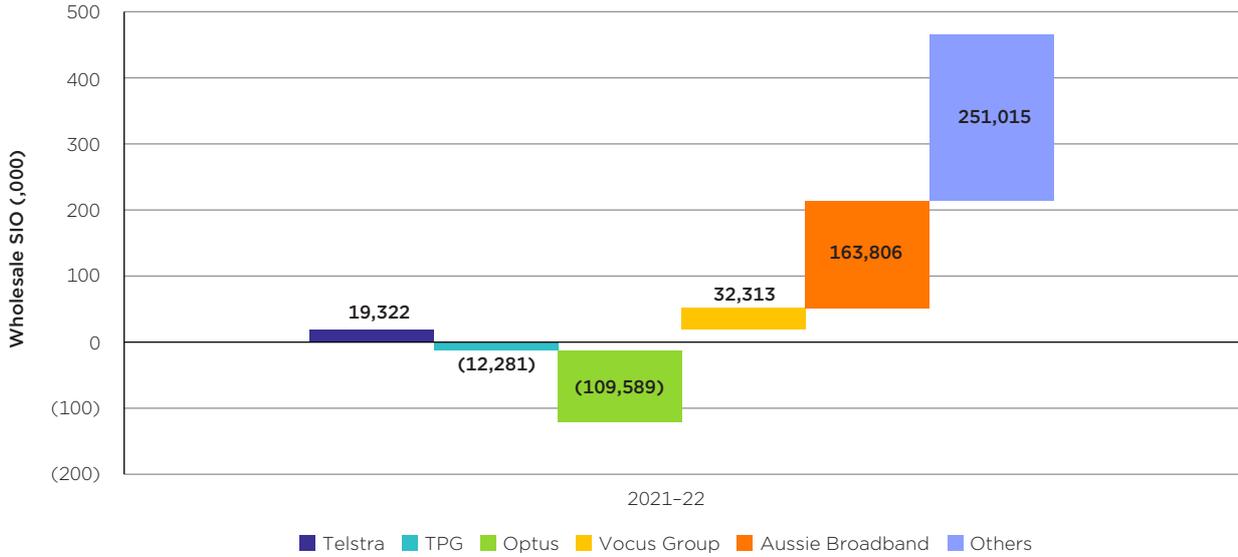
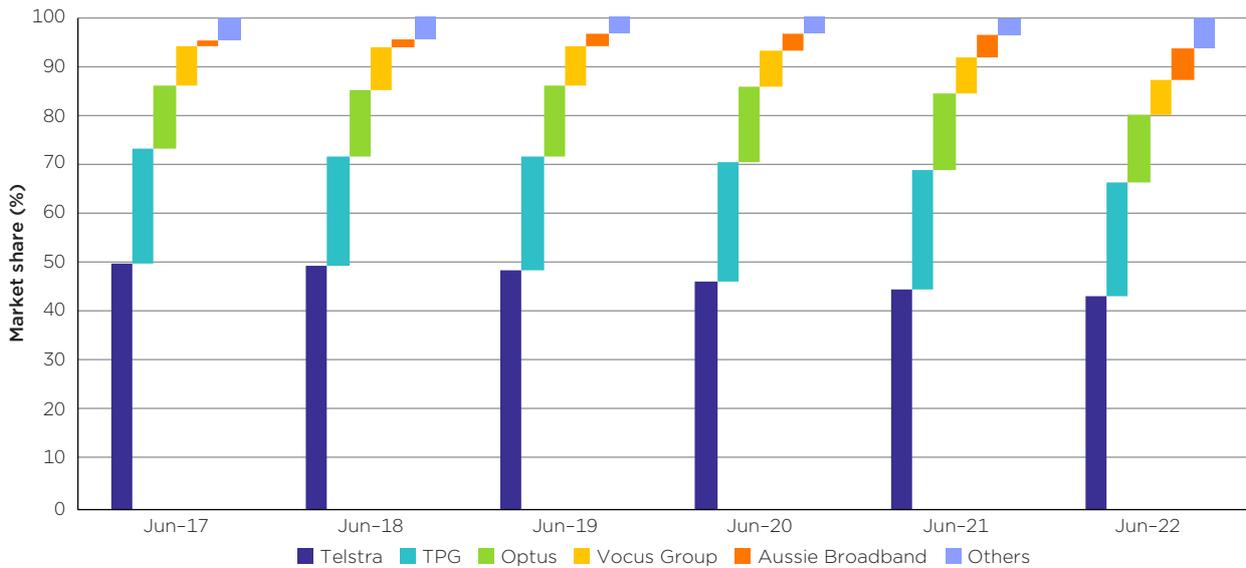


Figure 12 below shows that wholesale NBN market shares declined over 2021-22 for Telstra, Optus and TPG, with smaller players gaining market share to over 12% of the market.

Figure 12: NBN wholesale - residential broadband market shares from 2016-17 to 2021-22



Over the course of 2021-22, the speed tier composition of the NBN wholesale market changed slightly due to the various wholesale discount promotions. By 30 June 2022, over 76% of all NBN wholesale services were on speed tiers of 50 Mbps or above, including almost 18% at 100 Mbps or above.

Figure 13 below shows the adoption of the various speed tiers over time.

Figure 13: NBN wholesale – speed tier composition from 2016-17 to 2021-22

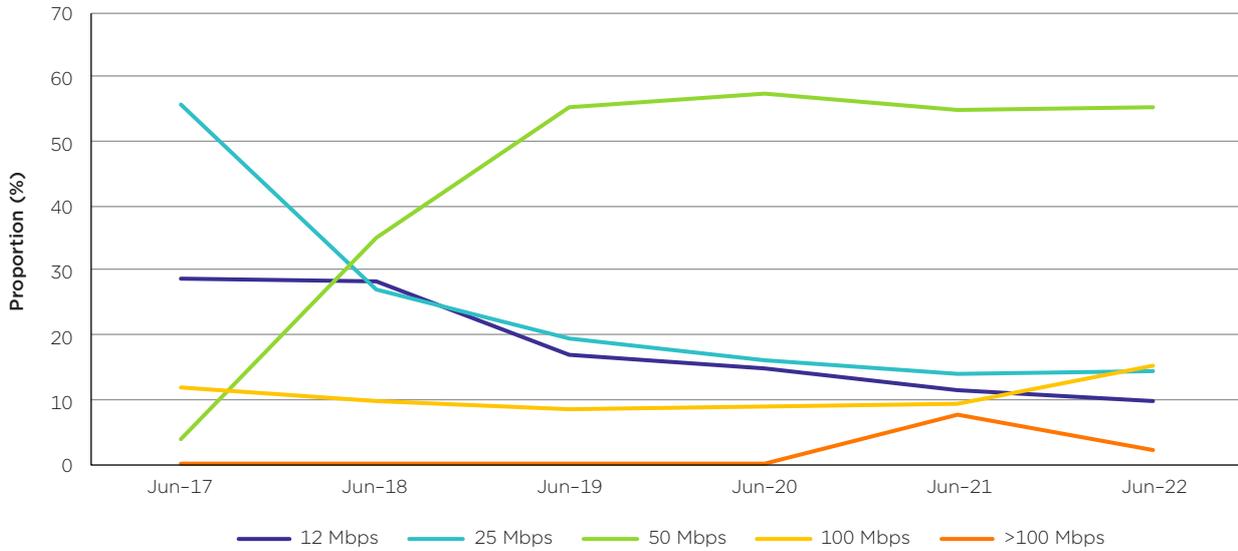


Figure 14 shows that the amount of Connectivity Virtual Circuit (CVC) acquired by NBN wholesale access seekers continued to grow over 2021-22, particularly due to CVC bonuses provided by NBN Co in response to COVID-19 and under the various promotions.

Figure 14: NBN wholesale – residential broadband total AVC and total CVC from 2017-18 to 2021-22



In June 2022, NBN wholesale access seekers were acquiring almost 25 terabits per second (Tbps) of residential broadband CVC capacity, compared to about 23 Tbps in June 2021, an increase of 7%.

3.8 Telecommunications consumer complaints

3.8.1 Complaints reported to the ACMA

The ACMA collects data on customer complaints made directly to medium and larger-sized telecommunications providers (defined as providers with 30,000 or more services). These providers are required to report this information to the ACMA pursuant to the ACMA's *Telecommunications (Consumer Complaints) Record-Keeping Rules 2018*.

In 2021–22, providers reported over 1 million complaints, which represented a decrease of 6.9% compared to the previous year.⁵¹ Of these, 77,765 complaints were escalated to the Telecommunications Industry Ombudsman (TIO), which represented a 33% decrease compared to the previous year.

As shown in Table 3, complaints relating to fixed-line and NBN services all declined in 2021–22 compared to the previous year, and there was a 6% increase in complaints relating to mobile services.

Table 3: Complaints per 10,000 services by service type

Service type	2020–21	2021–22	Change
Fixed-line broadband	156	125	-20%
Fixed-line voice	112	111	-1%
NBN Broadband	84	75	-11%
NBN Voice-only	87	71	-18%
Other	89	53	-40%
Mobile	48	51	6%

As shown in Table 4 below, complaints decreased for most NBN technology types. There was, however, a significant increase in complaints relating to NBN Satellite services, and a small increase in fibre-to-the-Premises (FTTP) complaints.

Table 4: Complaints per 10,000 services by technology type

NBN Technology	2020–21	2021–22	Change
Satellite	27	123	355%
FTTB	147	117	-20%
FTTC	119	88	-26%
HFC	93	83	-11%
FTTN	77	67	-13%
FTTP	64	66	3%
Fixed Wireless	72	61	-15%

3.8.2 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.

In 2021–22, the TIO received 79,534 complaints. This represents a significant 33% reduction from last year and was the lowest volume of referrals received by the TIO in over 3 years and the largest percentage reduction in 10 years.⁵²

As shown in Table 5, complaints relating to internet rose slightly, and there was a 7 percentage point increase in complaints relating to mobile services.

Table 5: TIO complaints by service type

Service type	2019–20	2020–21	2021–22
Internet	33.7%	33.4%	33.9%
Landline	12.6%	10.9%	8.6%
Mobile	31.2%	32.7%	39.7%
Multiple	21.5%	22.3%	17.2%
Property	10.0%	0.6%	0.6%

⁵¹ ACMA, [Telco complaints-handling performance](#), accessed 18 November 2022.

⁵² TIO, [Annual Report 2021–22](#), 21 September 2022, p 70.

As shown in Table 6, whilst complaints for most categories fell significantly, there was a 6.1% rise in complaints relating to poor mobile coverage.

Table 6: Top 10 complaints to the TIO by issue type

Complaint issue	2020-21	2021-22	% of total in 2021-22	Change from 2020-21
No or delayed action by provider	46,533	35,678	44.9%	-23.3%
Service and equipment fees	39,584	23,169	29.1%	-41.5%
No phone or internet service	15,593	10,265	12.9%	-34.2%
Intermittent service or dropouts	10,913	8,839	11.1%	-19%
Resolution agreed but not met	10,275	7,467	9.4%	-27.3%
Delay establishing a service	14,170	7,358	9.3%	-48.1%
Slow data speed	7,122	5,667	7.1%	-20.4%
Poor mobile coverage	4,031	4,275	5.4%	+6.1%
Failure to cancel a service	8,775	4,273	5.4%	-51.3%
Inadequate fault testing	4,253	3,655	4.6%	-14.1%

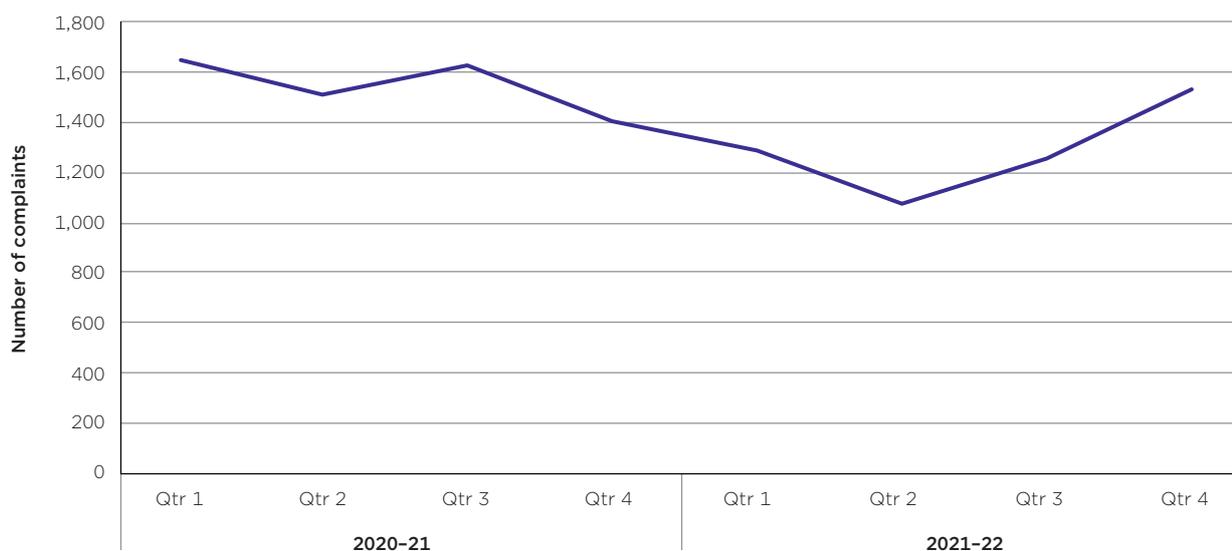
3.8.3 Complaints to the ACCC

Consumers and small businesses contact the ACCC about a wide range of issues. The ACCC is not a complaint-handling body and does not resolve individuals' complaints. 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 such as the TIO 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.

During 2021-22, the ACCC received a total of 5,149 complaints relating to telecommunications matters, which is nearly a 17% decrease from 2020-21. Figure 15 below illustrates this decrease. Communications-related complaints to the ACCC are usually similar to issues reported to the TIO, with service quality and connection issues continuing to be significant consumer concerns.

Figure 15: Communications-related complaints to the ACCC in 2020-21 and 2021-22



Complaints to the ACCC will often cover multiple issues under the CCA and/or ACL. They are recorded and categorised according to the identified issues.

As shown in Table 7 below, complaints in several individual categories rose in 2021-22 compared to the previous year.

Table 7: ACCC complaints by contact type in 2020-21 and 2021-22

Type of conduct	2020-21	2021-22
Section 18 - misleading or deceptive conduct	2,045	2,175
Section 54 - Guarantee as to acceptable quality	1,950	1,552
General telco issues (no CCA breach)	1,284	826
General telco issues (no ACL breach)	203	118
Section 36 - Wrongly accepting payment	568	619
Section 29(1)(b) - False representations (services - standard, quality, value or grade)	402	417
Section 60 - Guarantee as to due care and skill	181	217
Section 29(1)(m) - False representations (exclusion or effect of any condition, warranty, guarantee, right or remedy)	93	291
Section 29(1)(a) - False representations (goods - standard, quality, value, grade, composition, style)	135	164
Section 56-57 - Guarantee relating to the supply of goods by description, sample or demonstration	123	121
Total	6,984	6,500

Approximately 86% 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.

Table 8 shows that complaints against most providers generally decreased in 2021-22, including for Telstra, Optus and TPG. However, there were minor increases in complaints relating to smaller providers such as SpinTel and Tangerine Telecom.

Table 8: Number of complaints by telecommunications provider in 2020-21 and 2021-22

Telecommunications provider	2020-21	2021-22
Telstra (including Belong)	1,466	984
Optus	602	568
TPG Telecom	274	258
Vodafone Australia	219	174
NBN Co	152	119
Dodo Australia	56	47
Aussie Broadband	34	30
Boost Mobile	40	25
SpinTel	11	25
Tangerine Telecom	13	19

4. ACCC activities in communications

The ACCC performs specific roles under Parts XIB and XIC of the CCA 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.

This chapter briefly describes activities undertaken by the ACCC within the communications sector during 2021–22 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 Regulated access to telecommunications

4.1.1 Declared service inquiries

Superfast broadband access service

In July 2021 the ACCC commenced a final access determination inquiry for the declared superfast broadband access service (SBAS). This will determine the prices RSPs pay, in the absence of a commercial agreement, for NBN-like fixed line broadband services on non-NBN networks.

A key objective of this inquiry was to ensure that RSPs and customers supplied via SBAS networks would not be any worse off than if they were supplied by the NBN.

The ACCC released its draft decision in October 2022.⁵³ The draft decision links SBAS prices to NBN wholesale prices for similar residential broadband services. It also proposed to regulate certain non-recurring charges such as connection and transfer fees and require network owners to provide transparency to access seekers on the performance and reliability of services.

The ACCC expects that this will encourage RSPs to use the wholesale services of non-NBN networks, which will promote competition through improved price and service offerings.

The ACCC expects to finalise its inquiry in 2023.

Wholesale asymmetrical digital subscriber line service

On 9 December 2021, the ACCC extended the wholesale asymmetrical digital subscriber line (ADSL) service declaration until 30 June 2024. The wholesale ADSL service allows RSPs to deliver fixed-line broadband services over Telstra's copper network inside and outside NBN fixed-line network areas.

As the migration to the NBN progresses, the use of Telstra's wholesale ADSL service is declining. However, for the period of the declaration (at least) Telstra's network is likely to continue to be used. The ACCC considered that continued regulation would continue to promote competition and provide certainty to RSPs and ADSL consumers.

⁵³ ACCC, [Superfast broadband access service \(SBAS\) final access determination inquiry 2021 – draft decision](#), 27 October 2022.

The wholesale ADSL service is one of 7 declared fixed-line services. The ACCC has declared the other 6 services until 30 June 2024, so this extension to the wholesale ADSL declaration has brought the expiry of all 7 services into line.

4.1.2 Carrier separation rules

The carrier separation rules in Part 8 of the *Telecommunications Act 1997* (Telecommunications Act) require controllers of local access lines serving residential customers to supply eligible services on a wholesale-only basis. This means that a company that controls a superfast broadband network cannot itself supply retail services over it unless an exemption applies.

Network operators may seek to be exempt from the wholesale-only requirement via either a class exemption (for network operators with no more than 12,000 residential customers) or a functional separation undertaking. This is intended to provide greater commercial flexibility for superfast network operators and promote infrastructure-based competition.

Following consultation with industry, the ACCC published industry guidance in October 2022 setting out how the carrier separation rules apply and how network operators can elect to be bound by the class exemption or give the ACCC a functional separation undertaking.⁵⁴

4.1.3 TPG joint functional separation undertaking

On 7 April 2022, following public consultation, the ACCC accepted a joint functional separation undertaking submitted by TPG on behalf of its wholesale and retail subsidiaries.

The undertaking came into force on 7 October 2022 and applies to all local access lines that TPG controls that supply residential superfast carriage services. This includes its existing FTTB networks in apartment buildings and HFC and fibre-to-the-node (FTTN) networks in the Australian Capital Territory and regional Victoria, as well any new superfast local access lines that it deploys.

4.1.4 Quarterly reporting of Access Agreements

Carriers or carriage service providers that supply declared services are required under 152BEB of the CCA to lodge quarterly reports with the ACCC regarding all new, varied, cancelled and in-force access agreements for declared services.⁵⁵

There has been no change to which services are declared since the previous Communications Market Report. There were 23 reporting companies in 2021–22.

4.2 NBN regulation

4.2.1 ACCC roundtable and workshops

On 18 June 2021 the ACCC convened an industry roundtable to assist NBN Co with its development of a proposal to vary the SAU. This commenced a period of ongoing consultation between the ACCC, NBN Co, industry participants and other stakeholders to discuss a possible revised long-term regulatory framework for the NBN. Discussions covered a wide range of issues.⁵⁶

Following the roundtable, between August and December 2021 the ACCC hosted 17 working group meetings.⁵⁷ ACCC Commissioners chaired the working group meetings, attended by representatives of NBN Co, access seekers, and industry, consumer and government bodies. Stakeholders were encouraged to engage on specific issues regarding NBN Co's current SAU and discuss potential changes.

54 ACCC, [Industry guidance on the carrier separation rules](#), 14 October 2022.

55 ACCC, [Access agreement reporting](#).

56 ACCC, [Communications market report 2020-21](#), published 10 December 2021, p.47.

57 ACCC, [Review of NBN regulatory framework](#), 22 December 2021.

Generally, the working groups covered 3 key areas:

- NBN products and pricing
- the building block model and NBN Co's accumulated losses
- the regulatory reset process and other functions and powers that could be conferred under a varied SAU.

The working groups proposed 5 key outcomes to guide NBN Co's development of its proposed variation:

- NBN Co has the opportunity to earn the minimum revenues it needs to meet its legitimate financing objectives, including to transition to a stand-alone investment grade credit rating
- NBN end-users are protected from price shocks and from prices that are higher than necessary in later years
- the regulatory framework provides incentives for NBN Co to operate efficiently and promote use of the NBN
- retailers have greater certainty over the costs that they will face when using the NBN
- there is a clear and robust quality of service framework so retailers and end-users know what to expect from NBN services, including a review mechanism so that service standards remain fit for purpose.

4.2.2 SAU variation consultation

The SAU has significant implications for competition and the efficiency of communications markets over the long term, dictating the price and quality of retail voice and broadband offers that will be available to households and businesses. Accordingly, the ACCC has worked with NBN Co, industry and other stakeholders to assist NBN Co with its development of a proposed variation to the SAU.

On 29 March 2022, NBN Co lodged a variation to its SAU with the ACCC.⁵⁸ NBN Co's proposal included expanding the scope of the SAU to include all the access network technologies, the replacement of bundle discounts with new price offers and revisions to the methodology and approach of various aspects of the SAU.⁵⁹

As part of the SAU variation assessment process, in May 2022 the ACCC released a public consultation paper and received written submissions on NBN Co's proposal.

Many stakeholder submissions on the proposed SAU variation related to:

- the incorporation of service quality commitments into the SAU framework
- changes to NBN Co's pricing
- changes to the way historical losses are treated under the SAU.

The Minister for Communications wrote to the ACCC on 22 July 2022 advising that she supported NBN Co withdrawing its proposed SAU variation and submitting a revised variation proposal; and that she and the Minister for Finance had written to NBN Co to outline their views. NBN Co subsequently withdrew its March SAU variation proposal on 27 July 2022.⁶⁰

Since then, NBN Co has been working on a revised SAU variation proposal, which commenced with the publication by NBN Co of a discussion paper in August 2022 on a potential revised SAU variation proposal.

58 ACCC, [NBN Co SAU variation 2022](#), accessed 6 October 2022.

59 ACCC, [Proposed variation to the NBN Co Special Access Undertaking: Consultation paper](#), 23 May 2022, pp.16-18.

60 ACCC, [Minister letter and withdrawal of SAU variation](#), 28 July 2022.

On 18 and 19 August 2022 the ACCC convened an industry forum to discuss the regulatory framework that could apply under a varied SAU, which included discussing the topics mentioned above and reporting requirements, expenditure review criteria, and ACCC functions powers. The industry forum also discussed interim commercial arrangements that might be necessary in the lead up to such a framework coming into effect.

On 29 November 2022, NBN Co lodged a new variation proposal with arrangements to apply from July 2023.⁶¹

4.2.3 2020-21 LTRCM determination

The Long Term Revenue Constraint Methodology (LTRCM) is part of the existing SAU framework to regulate the NBN. The LTRCM allows NBN Co the opportunity to recover prudently incurred costs and sets several variables for the building block regulation covering NBN Co. The ACCC assesses NBN Co's proposed values of costs incurred according to the prudence and efficiency definition outlined in the SAU.

The ACCC released its final determination in relation to the 2020-21 financial year in June 2022 and accepted without modification NBN Co's proposed values for all elements of the LTRCM.⁶²

Potential changes to the LTRCM process were raised as part of the ACCC's consultation on the March 2022 SAU variation. Stakeholders expressed concerns about the various cost recovery methodologies under the current SAU. We expect the rules relating to the prudence and efficiency of NBN Co's expenditure will be a key focus for stakeholders in the SAU variation process.

4.3 Telstra's Structural Separation Undertaking and Migration Plan

4.3.1 Telstra's compliance with structural separation undertaking

On 14 July 2022, the ACCC published its annual report on Telstra's compliance with its structural separation undertaking (SSU) for 2020-21.

The report found Telstra's compliance with its SSU obligations to be good overall, continuing the trend in recent years. While there were instances of non-compliance, the ACCC considered regard should be given to the scale of the migration process, the logistic and other challenges created by the COVID-19 pandemic and several natural disasters over the 2020 and 2021 period.

When viewed in this context, the ACCC did not consider that any of the instances of non-compliance required enforcement or compliance action.⁶³

4.3.2 Approved variations to the Migration Plan

On 20 April 2021, Telstra advised the ACCC of a proposal to amend Required Measures relating to the disconnection and migration of Telstra's remaining legacy business services in 2022 under the Migration Plan.

The amendments provide that in 2022 Telstra will disconnect the remaining business service customers connected to its legacy network (i.e., in May 2022 or in August 2022 depending on the service type). The ACCC considered the amended Required Measures were consistent with the Migration Plan Principles and did not object to the amendments.

Telstra also proposed variations to the Migration Plan with the effect of:

- amending the managed disconnection arrangements for services to multi-dwelling unit common areas and fire and lift telephones

61 ACCC, [NBN Co SAU variation](#), November 2022.

62 ACCC, [LTRCM final determination](#), 22 June 2022.

63 ACCC, [Telstra's structural separation undertaking 2020-21](#), 14 July 2022, p.2.

- extending the timeframe for managed disconnection of premises that are not NBN-serviceable
- allowing for public and private payphone services to be differentiated
- expanding the current authority within Telstra for the reconnection of some services in accordance with the standard conditions within the Migration Plan.

The ACCC approved the variations on 23 February 2022.⁶⁴

4.3.3 Force Majeure Events

If any delay or failure to perform Telstra's obligations is caused by a 'Force Majeure Event' or an 'Excluded Event' then Telstra is not taken to have contravened the Migration Plan or be liable to pay.

The ACCC and Telstra agreed that the COVID-19 pandemic constituted a Force Majeure Event, enabling Telstra to defer certain managed disconnection activities. On 21 September 2021, Telstra notified the ACCC of an extension to the Force Majeure Event due to the ongoing impacts of the COVID-19 pandemic in NSW and Victoria.⁶⁵

On 1 December 2021, Telstra notified the ACCC of its proposal to defer the scheduled Migration Plan activities during the 2021-22 Christmas and New Year holiday period. The ACCC agreed to Telstra's request on 2 December 2021.⁶⁶

On 28 March 2022, Telstra notified the ACCC of a Force Majeure Event due to floods in Queensland and New South Wales. On 30 March 2022 the ACCC advised Telstra that it agreed the floods constituted a Force Majeure event.⁶⁷

On 11 August 2022, Telstra advised the ACCC that the conditions giving rise to the 2 Force Majeure Events (COVID-19 and floods) had come to an end.

4.4 Monitoring and reporting

4.4.1 Mobile Infrastructure Report

The ACCC made a commitment following the Domestic Mobile Roaming Inquiry 2016 to improve publicly available information on mobile infrastructure assets and mobile coverage. The ACCC committed to using data it collects under the Audit of Telecommunications Infrastructure Assets - Record Keeping Rules (Infrastructure RKR) for this purpose.⁶⁸ The first annual Mobile Infrastructure Report was published in December 2021 and the second report was published in September 2022.⁶⁹

The Mobile Infrastructure Report provides analysis on the change in MNOs' mobile infrastructure and coverage from 2018 onwards. The analysis is based on information collected from the 3 national MNOs - Optus, Telstra and TPG under the Infrastructure RKR.

The 2022 report showed that growth in 3G and 4G network deployment in regional and remote areas had generally slowed since 2019. This appears to be due to a change in focus by the MNOs to 5G roll outs predominately in Major Cities. This trend is in line with the findings of the 2021 report. In addition, the number of 5G sites in regional and remote areas increased. Telstra held a significant first mover advantage in all these areas with more 5G sites in total than Optus and TPG combined.

The annual publication of this data is important as a crucial input to the ongoing consideration of Australia's telecommunications networks, such as the ACCC's Regional Mobile Infrastructure Inquiry.

64 ACCC, [Telstra's Migration Plan Variation approved](#), 23 February 2022.

65 ACCC, [Extended COVID-19 Force Majeure Event and deferral of disconnections](#), 29 September 2021.

66 ACCC, [Deferral of disconnections in the holiday period](#), 13 December 2021.

67 ACCC, [Force Majeure Event - QLD and NSW floods](#), 28 March 2022.

68 ACCC, [Measures to address regional mobile issues](#), October 2017, p 26.

69 ACCC, [Mobile Infrastructure Report](#).

4.4.2 Measuring Broadband Australia program reports

The ACCC's MBA reports provide Australian consumers with accurate and independent information about broadband speeds to assist their purchasing decisions. The reports increase transparency and encourage greater performance-based competition and better internet performance throughout the country.

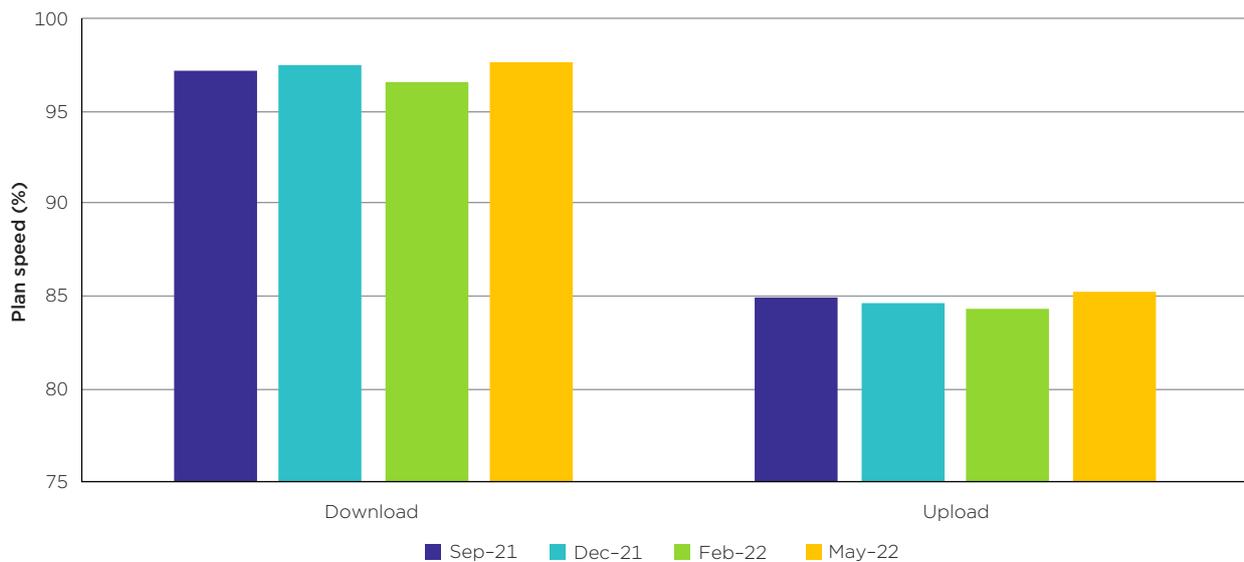
Quarterly reports

The ACCC released 4 new MBA reports that focussed on performance in September and December 2021 and February and May 2022.⁷⁰

Key observations included the following:

- Download speeds on NBN fixed-line services showed slight improvement and sustained strong performance, as shown in Figure 16 below
- NBN Fixed Wireless services also showed improvements in download performance over 2021-22
- NBN uploads fell short of maximum plan speeds due to the lack of overprovisioning by NBN Co on the uplink
- Urban NBN fixed-line services performed better than regional services
- FTTN connections continued to under-perform compared to other network connections.

Figure 16: Measuring Broadband Australia – fixed-line download and upload comparison September 2021 to May 2022



Special comparative report released

In 2021-22 the ACCC and the New Zealand Commerce Commission jointly issued a special report comparing trans-Tasman broadband performance.⁷¹ This report found that Australia and New Zealand had broadly similar fibre to the premises and fixed wireless performance.

Fibre to the premises connections received similar download speeds in both countries, but New Zealanders experienced more consistent performance during the evening hours. For fixed wireless, Australian consumers received faster download speeds and more stable connections than New Zealanders.

⁷⁰ ACCC, [Measuring Broadband Australia program – Performance reports](#).

⁷¹ ACCC, [Measuring Broadband Australia program – Performance reports](#).

The faster upload speeds on New Zealand's networks can be attributed to differences in configuration. New Zealand overprovisions plan speeds for both downloads and uploads, whereas in Australia NBN Co only overprovisions the downlink.

MBA program enhancements

In 2020–21 the Federal Government decided to extend the MBA program until June 2025. The ACCC expanded the program in 2021–22 to cover a new RSP, additional networks, and an additional reporting metric. These changes benefit wider groups of broadband consumers and enable the ACCC to identify potential areas for improvement on NBN and other superfast networks.

New RSP – Launtel

The March 2022 report included Launtel. In December 2021 Launtel achieved 98.4% of download plan speed during the busy evening hours, compared to an average of 97.4% for other providers. An above-average result from an emerging retailer is a positive development for consumers and for competition in the residential broadband market.

Non-NBN superfast access networks

Australians connect to the internet through a variety of non-NBN superfast networks. The June and August 2022 reports included results from Uniti Group, which operates the Opticomm and LBNC Co superfast networks. In May 2022 the average download speeds on Uniti's fibre to the premises connections were 99% of plan speed during the busy evening hours.

Addition of 'busiest hour' metric

The December 2021 report highlighted a new metric reporting RSP performance during the 'busiest hour'. This metric is a proxy for when networks are under extreme levels of usage.

RSPs' busiest hour speeds varied between 88.4% and 99% of plan speed in September 2021. This is a wider range than the corresponding 'all hours' and 'busy hours' (7–11 pm) metrics. This indicates that peaks of high demand affected some retailers more than others.

Measuring Broadband Australia testing provider reappointed

The ACCC completed an open tender procurement process during 2022 and selected SamKnows to as the testing provider for the MBA program until June 2025.

Continued call for volunteers for MBA program

The ACCC continues to call on broadband customers on NBN and non-NBN networks to participate in the program via measuringbroadbandaustralia.com.au.

4.4.3 Changes to various RKR

Division 12 and Internet Activity record keeping rule review (December 2020)

The Division 12 and Internet Activity RKR review was completed in December 2020, but the changes to the RKR took effect in the 2021–22. This review resulted in substantive changes to both RKR.⁷²

The Division 12 RKR has been simplified and updated to reflect modern technologies and market structures. Data reported relating to internet services now requires revenue totals broken into 5 categories, NBN, non-NBN fixed, mobile broadband, M2M and home wireless broadband services. Previous requirements for the number of customers and detailed revenue breakdowns have been removed. Vocus is required to report under the Division 12 RKR for the first time.

The Internet Activity RKR now requires more detailed data about which NBN speed tiers consumers are on, and data about M2M and home wireless broadband services is reported for the first time. The inclusion of M2M and home wireless broadband services in both RKR reflects the evolving market and allows the ACCC to monitor these emerging technologies.

⁷² ACCC, [Record Keeping Rules \(RKR\) update: Division 12 RKR and Internet Activity RKR](#), Consultation Paper, 7 May 2020.

Measuring Broadband Australia program RKR (December 2021)

In December 2021 the ACCC finalised changes to the MBA RKR to collect more detailed data for the program.⁷³ The new amendments require NBN Co to provide additional location ID data and information for NBN services regardless of underlying technology.

TPG group RKR consolidation (May 2022)

In May 2022 amendments were made to the Infrastructure RKR, Division 12 RKR and Internet Activity RKR following a brief public consultation process.⁷⁴ The changes allow TPG to submit a single consolidated return under each RKR to reflect that various related companies, including, iiNet, and Vodafone, are owned by TPG. The amendments were made at the request of TPG and are not likely to affect the quality or use of the data reported.

Infrastructure RKR update (August 2022)

In August 2022, the ACCC finalised changes to the Infrastructure RKR following a consultation process began in October 2021.⁷⁵ The changes:

- updated the list of required record keepers and adding 4 new providers to the RKR
- require coverage maps to reflect an MNO's overall national footprint for each technology
- require coverage maps for both 'outdoor coverage' and 'external-antenna coverage'
- require coverage maps at the state and territory or national level and a detailed legend
- require that the ACCC is informed of any changes to reporting methodology.

These changes will apply for the 2023 reporting period onwards.

After consultation with industry, the ACCC decided that reporting regarding end-user CAN equipment and satellite providers would not be introduced. Neither would a standardised set of assumptions for coverage maps be mandated.

NBN SIO RKR update

In October 2021 the ACCC began consultation on updates to the NBN SIO RKR. This process is ongoing and an updated RKR has not been released yet.

4.5 Enforcement and compliance activities

4.5.1 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 Telecommunications Act in relation to various provisions, including those concerning NBN, access to facilities and the numbering plan.

In 2021-22, the ACCC commenced 3 investigations into potential contraventions of the CCA and/or the Telecommunications Act specific to telecommunications markets.

4.5.2 Investigations under the Australian Consumer Law

In addition, the ACCC commenced 10 investigations under the ACL relating to the telecommunications sector. Of these, 4 investigations remained ongoing as at 30 June 2022.

73 ACCC, [Measuring Broadband Australia program record keeping and reporting rules](#).

74 ACCC, [Record Keeping Rules \(RKR\) update: Infrastructure RKR, Division 12 RKR and Internet Activity RKR](#), Consultation Paper, March 2022.

75 ACCC, [Infrastructure RKR August 2022 amendments](#), 19 August 2022.

4.5.3 Litigation

Institution of proceedings against Telstra, TPG Internet and Optus for alleged misleading representations in relation to NBN speeds

On 9 August 2021, the ACCC instituted separate proceedings against each of Telstra Corporation Ltd, TPG Internet Pty Ltd and Optus Internet Pty Ltd for making alleged false or misleading representations in their promotions of some 50 Mbps and 100 Mbps NBN plans, in breach of the ACL.⁷⁶

The ACCC alleged that the companies made representations to some consumers on FTTN connections that they would test the maximum speed of their connections, notify the impacted consumer of their maximum speed if their line was underperforming, and offer them remedies if the maximum speed was below their plan's stated speed, but failed to do so for many customers.

This investigation was prompted by Telstra self-reporting elements of this conduct to the ACCC and by information in the MBA Reports indicating consumers were not receiving the speeds they were paying for. In November 2022 the Federal Court ordered penalties totalling \$33.5 million after each party admitted making false or misleading representations to consumers when promoting certain NBN internet plans.⁷⁷

4.5.4 Telstra/Optus spectrum matter

The ACCC was concerned about Telstra's registration of radiocommunications sites in low band spectrum that might interfere with Optus' plans to roll out its 5G network nationally.

Following an intensive investigation, the ACCC accepted a court-enforceable undertaking from Telstra to address the concerns.⁷⁸

The undertaking requires Telstra to deregister all remaining radiocommunications sites it registered with the ACMA in the 900 megahertz (MHz) spectrum band in January 2022 that would have prevented Optus from early access to the spectrum.

4.6 Industry and consumer education activities

4.6.1 Telecommunications non-discrimination obligations guidelines

On 29 September 2021, the ACCC released guidelines relating to the non-discrimination obligations (NDO) under Part XIC of the CCA and Part 8 of the Telecommunications Act.⁷⁹ The guidance is an industry-focused plain language guide to the non-discrimination provisions and how the ACCC will consider NBN Co and other access providers non-discrimination obligations compliance.

The guidance covers an overview of the regulatory framework; discrimination in how Access Providers supply services, and in favour of themselves; enforcement of the non-discrimination provisions; and worked examples of potential discrimination issues.

4.6.2 Broadband Speed Claims Industry Guidance

In 2022, the ACCC undertook a review of its Broadband Speed Claims Industry Guidance. The guidance provides RSPs with assistance regarding the best practice for advertising the speeds of broadband services they provide.

Public consultation began in January 2022 with a focus on upload speed information and factors affecting speeds on emerging fixed wireless networks. Further targeted consultations with stakeholders also occurred.

⁷⁶ ACCC, [Telstra, Optus and TPG allegedly misled consumers over NBN maximum speeds](#), media release, 9 August 2021.

⁷⁷ ACCC, [Telcos to pay a total of \\$33.5 million for misleading statements about NBN maximum speeds](#), media release, 11 November 2022.

⁷⁸ ACCC, [Telstra undertakes to address 5G competition concerns](#), media release, 3 August 2022.

⁷⁹ ACCC, [Telecommunications non-discrimination guidelines](#), 29 September 2021.

The ACCC published revised guidance in October 2022 promoting transparent information about upload speeds and about issues that may affect services supplied over new and emerging fixed wireless networks.⁸⁰

4.7 Mergers, authorisations and exclusive dealings

4.7.1 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.

4.7.2 TPG and Telstra merger authorisation

In May 2022, the ACCC received an application for merger authorisation from Telstra Corporation Limited and TPG in relation to an authorisation to use spectrum, which is deemed by section 68A of the *Radiocommunications Act 1992* (Cth) to be an acquisition for the purposes of the merger provisions of the CCA.

Telstra and TPG have entered into 3 interrelated agreements in respect of a Multi-Operator Core Network (MOCN) commercial arrangement: a MOCN Service Agreement, a Spectrum Authorisation Agreement, and a Mobile Site Transition Agreement.

The ACCC is currently reviewing the proposal.⁸¹

4.7.3 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 ACCC is satisfied that 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 2021-22, the ACCC received one communications-related application for authorisation from Telstra and NBN Co relating to the Definitive Agreements.⁸²

4.7.4 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 unless the ACCC is satisfied that the conduct has the purpose, or is likely to have the effect, of substantially lessen competition and is not likely to result in a net public benefit.

In 2021-22 the ACCC did not receive any notifications of exclusive dealing involving participants in the communications industry.

80 ACCC, [Broadband speed claims industry guidance](#), 31 October 2022.

81 ACCC, [Telstra Corporation Limited and TPG Telecom Limited proposed spectrum sharing](#), 23 May 2022.

82 ACCC, [Telstra Corporation Limited, NBN Co and Ors](#), 31 March 2022.

4.8 Advice, advocacy and contributions to policy processes

4.8.1 Corporate control percentage review under s581ZH

In December 2021, the Telecommunications Act was amended to establish a mandatory telecommunications tower access regime that includes licenced and non-licenced telecommunications infrastructure operators.

The change meant that carriers that move tower assets to non-carrier entities cannot avoid legislated access obligations. In June 2022 the ACCC provided a review to the Minister on the corporate control percentage to apply under the new access regime. This review recommended that the default 15% corporate control threshold should apply.⁸³

4.8.2 Regional mobile infrastructure inquiry 2022-23

On 31 March 2022, the Government announced it had directed the ACCC to examine the economics of mobile networks, tower access and mobile infrastructure in regional areas. The inquiry is also examining the feasibility of providing mobile roaming during natural disasters or other emergencies.

On 1 July 2022, the ACCC released an initial consultation paper and invited submissions. The ACCC received 39 submissions covering the following key themes:

- the incentives to build new tower infrastructure are low in regional, rural and remote areas, and further regional expansion is reliant on government co-funding
- concerns that it will not necessarily be easier for mobile operators to secure tower space and increased costs for co-location on tower assets which have been sold recently
- service quality and coverage issues, including lack of coverage in areas that may be indicated as having coverage in mobile operator coverage maps
- the importance of telecommunications services being accessible during and after emergencies and natural disasters
- the importance of implementing emergency redundancy systems, such as backup power infrastructure, to complement any future temporary mobile roaming arrangements.⁸⁴

The ACCC is seeking further public input via a survey or submissions at the ACCC's Consultation Hub.⁸⁵ The ACCC intends to publish a draft report for stakeholder comment by April 2023. A final report is due by 30 June 2023.

4.8.3 ACMA spectrum advice

Request for advice – 3.4-4.0 GHz remote allocation

On 6 August 2021, the ACMA requested advice from the ACCC regarding allocation limits for the issue of apparatus licences in the 3.4-4.0 gigahertz (GHz) band in remote areas. On 12 November 2021, the ACCC advised the ACMA that based on the information available that there was a risk of spectrum monopolisation.⁸⁶

There was a concern regarding the impact this may have on the ability of various spectrum users to deploy services in downstream markets. However, the evidence suggested that there was uncertain demand for the spectrum, and the geographical boundaries of the relevant markets was unclear. Competing demand was also likely to come from users that do not compete in the same market.

83 ACCC, [s581ZH review of the corporate control percentage - ACCC report to the Minister for Communications](#), 1 September 2022, accessed 6 October 2022.

84 ACCC, [Regional mobile infrastructure inquiry 2022-23](#), 1 July 2022.

85 ACCC, [Regional Mobile Infrastructure Inquiry - Consumer Survey](#).

86 ACCC, [Allocation limits advice for the 3.4-4.0 GHz Remote spectrum allocation](#), 12 November 2021.

For these reasons, the ACCC did not consider it had sufficient basis to recommend allocation limits to ACMA.

Request for advice - 3.4 GHz and 3.7 GHz spectrum allocation

On 14 December 2021, the ACMA requested advice from the ACCC on allocation limits for spectrum licences in the 3.4 GHz and 3.7 GHz bands. On 1 August 2022, the ACCC advised that it considered allocation limits were required to promote competition in the downstream mobile and fixed broadband markets post-auction. The ACCC recommended a limit of 140 MHz of spectrum between 3.4 and 3.8 GHz in both metropolitan and regional areas.⁸⁷

4.8.4 ACCC submission to the Regional Telecommunications Independent Review Committee

In September 2021, the ACCC made a submission to the RTIRC that highlighted the importance of reliable telecommunications services in regional and remote areas.⁸⁸ The ACCC noted that improving connectivity in regional Australia required significant ongoing investment in infrastructure. However, the ACCC suggested that the commercial incentives become increasingly marginal without government subsidisation. The ACCC supported Government co-contribution programs focusing on neutral host solutions and innovative funding models to promote competition and maximise choice of providers.

The ACCC also noted that mobile roaming in limited and well-defined circumstances, such as a natural disaster, would provide an important safety measure without impacting competition.

RTIRC recommended that preference be given to government funded mobile infrastructure that provides shared network access. This included a focus on:

- the design of the Mobile Black Spot Program towards neutral host solutions and innovative funding models to encourage participation
- that the Australian Government undertake a feasibility study to consider the capability for mobile roaming to be deployed in emergency circumstances

Both recommendations relate to suggestions made by the ACCC in its submission to the RTIRC review, including concerns about network resilience during emergencies and how co-contribution programs could be designed to promote increased mobile coverage and promote efficient use of infrastructure.

87 ACCC, [Allocation limits advice for the 3.4 GHz and 3.7 GHz spectrum allocation](#), 4 August 2022.

88 ACCC, [Regional Telecommunication Review 2021 – ACCC Submission](#), September 2021.

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 2018–19 to 2021–22

	2018–19	2019–20	2020–21	2021–22	2017–18 to 2021–22
NBN	9.9	6.1	0.1	3.5	20.8
Non-NBN	0	0.0	8.3	7.8	16.7
Total fixed-line	0	15.0	1.4	0.1	16.7
Post-paid mobile phone	-0.4	0.4	0	0	0
Pre-paid mobile phone	-0.4	-13.9	16.2	-19.7	-20
Total mobile phone	-0.4	-13.9	16.6	-4.0	-4
Mobile broadband	17.5	-14.9	0	0	0

Source: ACCC estimates based on information from RSP websites.

Table 5.2: Advertised price changes (%) for the median from 2018–19 to 2021–22

	2018–19	2019–20	2020–21	2021–22	2017–18 to 2021–22
NBN	12.9	1.2	6.3	4.7	27
Non-NBN	0	7.2	6.6	6.3	21.4
Total fixed-line	7.1	5.3	1.3	6.2	21.4
Post-paid mobile phone	-9.8	-2.8	2.9	11.1	0.2
Pre-paid mobile phone	-1.7	-6.5	0	0	-8.2
Total mobile phone	-10.3	-2.0	2.1	0	-10.2
Mobile broadband	6.8	-12.5	12.9	-11.5	-6.7

Source: ACCC estimates based on information from RSP websites.

Table 5.3: Advertised price changes (%) for the 75th percentile from 2018–19 to 2021–22

	2018–19	2019–20	2020–21	2021–22	2017–18 to 2021–22
NBN	0	0	11.1	9	21.1
Non-NBN	-11.0	12.5	0	11.1	11.2
Total fixed-line	0	0.1	11.1	5.1	16.7
Post-paid mobile phone	-9.1	0	0	11	0.9
Pre-paid mobile phone	0	-6.6	3.4	-11.1	-14.1
Total mobile phone	-0.2	-1.8	1.8	0.2	0
Mobile broadband	0	-16.8	10.2	-9.1	-16.7

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 2021-22

	2018-19	2019-20	2020-21	2021-22	2017-18 to 2021-22
NBN	-5.1%	-2.8%	-1.2%	-6.8%	-15.1%
Non-NBN	0.9%	-2.2%	-8.0%	-3.8%	-12.6%
Total fixed-line	-1.4%	-2.4%	-3.8%	-6%	-13%
Post-paid mobile phone	-19.7%	-18.7%	-11.7%	-13.3%	-50%
Pre-paid mobile phone	-22.6%	-13.5%	-8.2%	-10.6%	-45.1%
Total mobile phone	-20.8%	-16.9%	-9.7%	-11.6%	-47.5%
Mobile broadband	-14.7%	-25.7%	2.9%	-15.3%	-44.8%

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 2021-22

	2017-18	2018-19	2019-20	2020-21	2021-22
NBN	59.99	65.90	69.95	69.99	72.50
Non-NBN	59.99	59.99	60.00	64.95	70.00
Total fixed-line	59.99	60.00	69.00	69.95	70.00
Post-paid mobile phone	25.00	24.90	24.99	25.00	25.00
Pre-paid mobile phone	25.00	24.90	21.43	24.90	20.00
Total mobile phone	25.00	24.90	21.43	24.99	24.00
Mobile broadband	20.00	23.50	20.00	20.00	20.00

Source: ACCC estimates based on information from RSP websites.

Table 5.6: Annual price points (\$) for the median from 2017-18 to 2021-22

	2017-18	2018-19	2019-20	2020-21	2021-22
NBN	70.00	79.00	79.95	85.00	89.00
Non-NBN	70.00	69.99	75.00	79.95	85.00
Total fixed-line	70.00	75.00	79.00	80.00	85.00
Post-paid mobile phone	39.9	36.00	35.00	36.00	40.00
Pre-paid mobile phone	35.00	34.39	32.14	32.14	32.14
Total mobile phone	39.00	35.00	34.29	35.00	35.00
Mobile broadband	37.45	40.00	35.00	39.50	35.00

Source: ACCC estimates based on information from RSP websites.

Table 5.7: Annual price points (\$) for the 75th percentile from 2017-18 to 2021-22

	2017-18	2018-19	2019-20	2020-21	2021-22
NBN	89.99	90.00	90.00	100.00	109.00
Non-NBN	89.90	80.00	90.00	90.00	100.00
Total fixed-line	89.95	89.95	90.00	99.95	105.00
Post-paid mobile phone	55.00	50.00	50.00	50.00	55.50
Pre-paid mobile phone	49.90	49.90	46.61	48.21	48.86
Total mobile phone	50.00	49.90	49.00	49.90	50.00
Mobile broadband	60.00	60.00	49.90	55.00	50.00

5.1.4 Mobile sites data – Number of 5G sites by MNO and ABS remoteness index

ABS Remoteness Area	2020	2021	2022
Major Cities of Australia			
Optus	424	975	1,790
Telstra	631	2,252	3,140
TPG	-	161	991
Inner Regional Australia			
Optus	2	35	122
Telstra	139	346	684
TPG	-	2	38
Outer Regional Australia			
Optus	-	-	14
Telstra	27	92	222
Remote Australia			
Optus	-	-	6
Telstra	-	5	23
Very Remote Australia			
Telstra	-	-	2
Total			
Optus	426	1,010	1,932
Telstra	797	2,695	4,071
TPG	-	163	1,029

5.2 Advertised price approach to price monitoring

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 Summaries⁸⁹, 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.

⁸⁹ Prices in the Critical Information Summaries may not reflect prices predominantly advertised on the website of service providers due to time-limited discounting.

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 from one year to the next. However, they do not provide any information about actual price levels (that is, 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 using 9 financial years' worth of data. Had the moving windows approach been adopted, 2 consecutive years of data would be used 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, 5G technology, 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. The ACCC's estimates here used an unweighted model primarily because of its greater simplicity and issues of availability of data to estimate weights.

- 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 continuous variables are cubic

Each continuous variable on the right-hand side of 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.

5.4 Limitations of price monitoring approaches

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 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.



AUSTRALIAN COMPETITION
& CONSUMER COMMISSION

