



NBN Co

Australian Government Competitive Neutrality Complaints Office

Investigation no. 18

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The Commission's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

The Australian Government Competitive Neutrality Complaints Office, a separate unit within the Commission, operates as the Australian Government's competitive neutrality complaints mechanism. It provides independent advice to the Government following complaints about unfair competition from the public sector.

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15 November 2022

The Hon Dr. Jim Chalmers MP
Treasurer
Parliament House
CANBERRA ACT 2600

Dear Treasurer

In accordance with section 21 of the *Productivity Commission Act 1998* and the Commonwealth Competitive Neutrality Policy Statement, I have pleasure in submitting the results of the Australian Government Competitive Neutrality Complaints Office's investigation of NBN Co.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'S King', written over a light blue horizontal line.

Dr Stephen King
Commissioner
Australian Government Competitive Neutrality Complaints Office

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The Commissioner would like to thank the staff who worked on the investigation, primarily Stewart Plain and Ralph Lattimore, with assistance from Catherine McCombe and Jasna Rogic.

Competitive neutrality policy

Competitive neutrality is a policy which aims to promote efficient competition between public and private businesses. The Australian Government's approach is set out in its *Competitive Neutrality Policy Statement* (Australian Government 1996):

Competitive neutrality requires that government business activities should not enjoy net competitive advantages over their private sector competitors simply by virtue of public sector ownership (p. 4).

In particular, competitive neutrality policy:

... requires that governments should not use their legislative or fiscal powers to advantage their own businesses over the private sector (p. 5).

While the policy recognises that there are a number of advantages and disadvantages of government ownership, its primary focus covers those competitive advantages enjoyed by government businesses that are widespread and relatively easy to observe and correct (Australian Government 1996, p. 6), including:

- exemptions from various taxes (taxation neutrality)
- access to borrowings at concessional interest rates (debt neutrality)
- exemptions from complying with regulatory arrangements imposed on private sector competitors (regulatory neutrality)
- other benefits associated with not having to achieve a commercial rate of return on assets (commercial rate of return requirements).

The policy is applied to significant government businesses where the benefits from doing so outweigh the costs. For the purpose of competitive neutrality policy, a business activity is defined as one where:

- there is user charging
- there is an actual or potential competitor (that is, users are not restricted by law or policy from choosing alternative sources of supply)
- managers of the activity have a degree of independence in relation to the production or supply of the good or service and the price at which it is provided.

Competitive neutrality policy deems the following organisations as significant as they have been specifically structured to operate along commercial lines:

- all government business enterprises (listed under the *Commonwealth Authorities and Companies Act 1997*) and their subsidiaries
- other share limited trading companies
- all designated business units.

Other activities that operate in accordance with the definition of a business and generate in excess of \$10 million in revenue from commercial activities are also deemed to be significant.

Overview

In late 2020, the Australian Government Competitive Neutrality Complaints Office (AGCNCO) received a formal complaint against NBN Co from OptiComm Limited (a wholesale operator that build, operate, and maintain their own fibre telecommunications network, typically in new or recently developed housing estates). The complaint alleged NBN Co is not complying with its obligations under competitive neutrality (CN) policy and is benefiting from competitive advantages simply as a result of its Government ownership.

The complaint specified two areas of concern: that NBN Co is not earning a commercial rate of return and is operating in a regulatory environment that favours it over its competitors. To understand whether (and to what extent) NBN Co is complying with its rate of return requirement, the AGCNCO needed to examine a wide range of underlying factors — specifically whether NBN Co is meeting its CN obligations for debt, tax and regulatory neutrality and for full cost attribution; and is facing other advantages or disadvantages arising from government ownership.

Debt neutrality

NBN Co's debt — from Government and financial market sources — does not accord with the requirements of CN policy, albeit for different reasons.

NBN Co's Government-provided debt is via a \$19.5 billion loan facility, provided in December 2016 at a fixed rate of 3.96 per cent when the benchmark cost of that debt was over twice that rate. Given this, NBN Co has benefited from accumulated interest savings in excess of \$2 billion as of 30 June 2022 (a sum that is still growing), and would normally have been required under CN policy to make corresponding CN-adjustment payments to consolidated revenue. However, that loan was exempted from the application of CN policy by way of a Government decision. Thus, while the loan was not provided in a manner consistent with the principles of CN, the favourable treatment of this loan does not represent a breach of CN policy by NBN Co.

NBN Co's market-sourced debt (expected to total at least \$27.5 billion by June 2024) is being raised under a program of long-term borrowing. As of 31 October 2021, that program had secured just over \$19 billion of debt through a mix of bank facilities, bond/note issues of various terms, and private placements on Australian and US markets. Of that \$19 billion, NBN Co had drawn down some \$16.7 billion at that date. This debt, though, enjoys no exemption from the debt neutrality requirements of CN policy.

For debt drawn from these private sources, NBN Co will enjoy annual cost-of-debt savings for the 2021-22 year of more than \$300 million simply by virtue of its government ownership — a total that will grow as it raises more debt. However, despite the existence of these savings across NBN Co's portfolio of private debt, NBN Co has made no corresponding debt neutrality payments into consolidated revenue. This absence of any payments is a breach of NBN Co's debt neutrality requirement under CN policy. To comply with the debt neutrality requirements of CN policy, NBN Co should make debt neutrality payments to consolidated revenue equal in value to those savings (after allowing for the value of offsetting disadvantages of government ownership associated with its Statutory Infrastructure Provider status, as identified in chapter 5).

While the responsibility for identifying the need for and the value of CN adjustment payments could be devolved to the government business involved, in this instance, the AGCNCO considers that the estimates be undertaken (or verified) at arms' length from NBN Co. This reflects collectively the scope for a conflict of interest if NBN Co is both the arbiter for and payee of any debt neutrality payments; the scale of those payments; their sensitivity to differences in the spread between the actual and benchmark cost of debt and to the reference date for calculating that spread. A preferred option is for an independent agency to determine any interest rate advantage NBN Co enjoys on its cost of debt as a result of its government ownership or to verify that NBN Co has accurately identified that interest rate advantage. The ACCC or the NCC would be suitable candidates for this role.

Debt neutrality payments to the Australian Government will enable private sector competitors to compete on an even playing field. Those payments will increase NBN Co's costs and, in the absence of mitigating circumstances, put upward pressure on wholesale prices. The Australian Government could reduce that pressure if it acknowledged that NBN Co's provision of loss-making fixed-wireless and satellite services qualifies as a community service obligation and it funded those losses directly from the Budget (instead of mandating NBN Co fund those losses through an internal cross-subsidy supported by the Regional Broadband Scheme (RBS) levy arrangements). Such alternative funding arrangements for those loss-making services would be competitively neutral.

Tax neutrality

NBN Co is subject to all Commonwealth, State or Territory and local government taxes and charges that its competitors face — with one exception. That exception is certain exemptions from stamp duty, which are specified in the *National Broadband Network Companies Act 2011* (Cwlth). However, as those exemptions are primarily to give effect to the Government's policy objectives of improving competition and availability of affordable broadband services across Australia, any tax benefit would not be an advantage arising simply by virtue of government ownership. On that basis, together with evidence of NBN Co being subject to the same other taxes and charges that its competitors are subject to, the investigation has concluded that NBN Co is fully complying with its tax neutrality obligations under CN policy.

Regulatory neutrality

The complainant identified four areas where it believed NBN Co enjoyed a regulatory advantage due to government ownership. In addition, some companies consulted during the investigation identified the allocation of spectrum to NBN Co (on what they claimed to be preferential terms and conditions) as a regulatory neutrality issue of concern.

Part 8 of the *Telecommunications Act 1997*

The complainant stated that the 'wholesale only' obligations in Part 8 of the Telecommunications Act 1997 prevent NBN Co's competitors from operating in a fully vertically integrated manner. This, it held, assists NBN Co to win market share and disadvantages competitors. NBN Co responded by stating that the wholesale-only obligation is unrelated to government ownership of NBN Co. It stated that it is, instead, a manifestation of a particular Government policy position designed to address longstanding concerns about the potential for vertically integrated networks to undermine competition.

The AGCNCO's review of draft and final Regulatory Impact Statements dealing with changes to the Telecommunications Act indicated that the wholesale-only regulations in Part 8 derive from Government

policy directed at avoiding anti-competitive conduct, and not from an intent to advantage NBN Co as a government-owned business. Accordingly, the AGCNCO has found that those regulations do not constitute a breach of regulatory neutrality under CN policy.

The Regional Broadband Scheme levy

OptiComm alleged that the RBS levy was designed to damage NBN Co's fixed-line competitors and gave a regulatory advantage to NBN Co. The AGCNCO found little evidence for this view. In developing the levy, the (then) Bureau of Communications Research (BCR) gave particular consideration to competitive neutrality. Moreover, its final report on NBN non-commercial services funding options clearly indicates that the levy is designed to remove a distortion between NBN Co and its fixed-line competitors by making sure those competitors bear a share of the cost of subsidising the losses from NBN Co's non-commercial fixed-wireless and satellite services. It is also evident from the levy options considered in the BCR report, and the levy design ultimately chosen (discussed further below), that advantaging NBN Co over its competitors was not the focus of the RBS levy. Accordingly, the AGCNCO has found that the levy does not represent a breach of regulatory neutrality under CN policy.

However, the passage of time between the design of the levy (2016) and its implementation (2021) and unanticipated changes in technologies and the competitive landscape over that period has resulted in the scheme's coverage of competitors to fixed-line NBN services falling short of the comprehensive coverage originally intended. Those changes threaten the scheme's ability to provide sufficient funding to cover NBN Co's losses from providing non-commercial services and advantage some technologies delivering NBN services relative to others. These threats suggest that if the scheme is retained its design should be reviewed sooner rather than later in order to ensure it remains fit for purpose.

The Telecommunications in New Developments (TIND) policy

OptiComm's complaint on this matter focussed on the removal of NBN Co's obligation to charge a developer fee for the capital costs of new networks and on giving NBN Co greater scope to overbuild its competitors' existing fibre networks. OptiComm stated that these changes advantaged NBN Co relative to its competitors.

It is true that those amendments remove past restrictions on what NBN Co could charge developers and on its ability to overbuild existing networks. To that extent, the amendments are clearly to NBN Co's advantage. But the policy changes at the heart of OptiComm's complaint removed restrictions that limited NBN Co's ability to compete with its private sector counterparts. Their removal is thus a levelling of the regulatory playing field rather than giving NBN Co any undue regulatory advantage. Accordingly, the AGCNCO finds that the changes to the TIND policy identified by OptiComm do not constitute a breach of regulatory neutrality under CN policy.

The Telecommunications (Low-impact Facility) Determination 2018

On the amendments contained in the *Telecommunications (Low-impact Facilities) Determination 2018*, OptiComm's complaint was that, in practice, they exclude all carriers except for NBN Co from accessing the significant advantages available when installing low-impact facilities under Schedule 3 of the Telecommunications Act 1997. At the heart of the complaint is that a range of facilities can only be classified as low-impact facilities if they are part of a network that meets the following two-part test:

... that is, or is to be, part of **a national network** used, or for use, for the high speed carriage of communications, **on a wholesale-only and non-discriminatory basis** [emphasis added]

In practice, the two tests in the amended legislation mean that only NBN Co is authorised by Schedule 3 to install the facilities added by the amendments, as only NBN Co's network meets both tests. As a result, the complainant argued that the amendments provide a material regulatory advantage to NBN Co that is not available to its competitors, and have done so over the past 10 years since their introduction.

However, this regulatory advantage is the result of legislation intended to give effect to Government policy by facilitating the rapid rollout, at minimal cost, of the national broadband network (NBN), regardless of ownership. Thus, while the 2011 amendments do provide NBN Co with a material advantage over its competitors, that outcome was not the intent of those regulatory changes, nor did it arise simply by virtue of government ownership. Accordingly, this advantage does not constitute a breach of regulatory neutrality by NBN Co.

Nonetheless, although this regulatory advantage does not constitute a breach of regulatory neutrality by NBN Co, it is at odds with CN policy more generally. As the Determination, in practice, provides regulatory advantages to NBN Co but not to its competitors, there are grounds under CN policy for reassessing the need for the two-part test, with a view to extending that regulatory regime (and associated cost advantages) to NBN Co's competitors. Accordingly, the AGCNCO recommends the review of the qualifying conditions for determining which network providers are authorised to install certain low-impact facilities. Revisiting this regulation would also be consistent with the legislation review element of the National Competition Policy reforms, which was designed to identify and remove legislation inimical to competition.

Spectrum allocation

During the AGCNCO's investigation, several telecommunications companies expressed concerns to the AGCNCO about the allocation of spectrum in the 3.5 GHz band to NBN Co. Those concerns were that NBN Co had benefited significantly from the exclusive allocation of spectrum at below market cost and on favourable terms not available to other companies, and that this occurred only because it was a government-owned business. Two allocations were at issue — 2015 apparatus licences and 2021 spectrum licences.

In April 2015, NBN Co was given exclusive access to 75 MHz of apparatus licences in the 3.5 GHz band. Apparatus licences in this band were subsequently issued to NBN Co in 2016 and 2018.

NBN Co benefitted from this exclusive access to apparatus licences in the 3.5 GHz band and nominated areas to be used for the NBN. This access, though, was intended to give effect to Government policy by facilitating the rollout of the NBN. By that measure, the benefits that NBN Co received arose due to government policy rather than simply by virtue of government ownership. The AGCNCO also found there was a lack of consultation on proposed taxes for these apparatus licences. Notwithstanding this absence, NBN Co was subject to taxes as listed in the apparatus licence fee schedule — as would be the case for any other business — which were equal to prices paid by private market participants in 2012. Accordingly, the AGCNCO considers that any benefits NBN Co received through exclusive access to 75 MHz of apparatus licences in the 3.5 GHz band and its later allocation to NBN Co do not constitute a breach of CN policy.

In 2021, following a review of spectrum allocation arrangements in the 3.5 GHz band, the apparatus licences held by NBN Co were converted to spectrum licences. The terms offered to NBN Co to convert those licences appear to be more favourable than those offered to other companies (payments over a longer period and no interest element to the payments). However, the AGCNCO found that the value to NBN Co of those favourable terms are trivial (in the order of \$0.6–\$2.2 million per year). Moreover, while NBN Co has enjoyed (trivial) lower than otherwise costs for spectrum allocated to it, these lower costs have been the result of actions by Government to facilitate government policy, in particular the rollout of the NBN at minimum cost. Accordingly, the AGCNCO has found that they are not advantages arising simply by virtue of government ownership and any cost advantages would not constitute a breach of regulatory neutrality.

Competitive disadvantages

NBN Co noted that it faced various competitive disadvantages and that the cost of those should be used to offset the value of any competitive advantages of government ownership (like cost-of-debt advantages) or to justify a lower rate of return target. It claimed that those disadvantages arose from:

- annual losses from providing fixed-wireless and satellite network services
- its obligation to connect all premises within its fixed-line network
- line-of-business restrictions
- having to increase the NBN's number of Points of Interconnect (POI), as determined by the ACCC
- a requirement to prioritise regional areas in the NBN rollout
- a requirement to adopt national uniform wholesale pricing and being subject to uniform national price caps
- its former status as Infrastructure Provider of Last Resort and current status as Statutory Infrastructure Provider.

The shareholder departments also referred to most of these regulatory disadvantages, claiming they imposed significant costs (and competitive disadvantages) on the company.

Whether a purported disadvantage of a government direction or policy is one that can legitimately offset an advantage depends on whether it imposes genuine costs on the business and whether, by virtue of its ownership, only NBN Co would accept these costs. NBN Co is a business that cannot say no to its Government owner's directives, whereas the influence of Government over private businesses is limited to directions that still leave them enough returns to be a profitable entity. The conclusion is that where a government institutes a policy that has some commercial disadvantages, but that these would feasibly apply regardless of ownership, then these are not disadvantages that exist simply by virtue of government ownership. As such, it is not appropriate for the cost of those disadvantages to be taken into account in determining a business's net competitive advantages of government ownership.

The AGCNCO's assessment of those claims determined that of all these areas, only NBN Co's status as Statutory Infrastructure Provider has any currency as a contemporary competitive disadvantage of government ownership.

Fixed-wireless and satellite network services

Estimates of the scale of these various disadvantages are only available for the annual losses associated with NBN Co's provision of fixed-wireless and satellite services. These estimates indicate those annual losses are significant — running into the hundreds of millions of dollars. This is broadly consistent with estimates by the (then) BCR, which indicated average annual negative operating cash flows over FY2011–FY2021 of up to \$480 million (in 2014 prices).

However, while there is little dispute that the losses in this sub-market are substantial, they do not comprise a competitive disadvantage. From its inception, NBN Co has been allowed (and expected) to charge higher prices in its commercial markets to obtain the revenue needed to cross-subsidise those losses. The capacity to charge higher prices for commercial services without losing market share to competitors has recently been ensured with the introduction of the RBS levy arrangements. This feature of regulation governing the NBN market effectively means NBN Co is being fully 'reimbursed' for the losses it incurs as a result of its obligation to provide fixed-wireless and satellite services. Accordingly, the AGCNCO has found that those losses do not represent a 'cost' or a competitive disadvantage to NBN Co.

Obligation to connect all premises within a fixed-line network

Regarding NBN Co's obligation to connect all premises within NBN Co's fixed-line network, the AGCNCO notes that this issue has previously been considered by the (then) BCR in its investigation and report on NBN non-commercial services funding options.

In a submission to that investigation, NBN Co argued that the provision of fixed-line services to some geographic locations is likely to be loss-making over the longer term, and to that extent should be deemed non-commercial. In responding to that view, the BCR accepted that, at a disaggregated network level, there will be different costs for providing services within the fixed-line footprint, and fixed-line services to some premises within a network may be non-commercial. But, it also noted that the relevant benchmark for defining the commerciality of a network is the extent to which its operator is able to recover its costs over time (including an appropriate cost of capital) through revenues. In this regard, it noted:

... while some areas of the NBN fixed-line networks may also be loss-making, at an aggregate level the networks are projected to be commercial. (BCR 2016, p. 9)

Thus, although an assessment of the non-commerciality of fixed-line services was not the focus of the BCR's report, the AGCNCO has nonetheless been guided by its position on what defines non-commercial services. Accordingly, the AGCNCO considers NBN Co's obligation to connect all premises within a fixed-line network, which is in aggregate projected to be profitable, does not constitute a non-commercial undertaking and does not represent a competitive disadvantage arising simply by virtue of government ownership.

Line-of-business restrictions

The line-of-business restrictions that NBN Co is subject to are the result of the Government's policy that the NBN provider be a wholesale-only entity in order to facilitate a competitive and well-functioning telecommunications sector. Accordingly, the AGCNCO finds that any costs imposed on NBN Co as a result of these restrictions are a consequence of this system design feature of the NBN — a feature that would equally have applied to NBN Co if it were privately owned. Those costs, therefore, are not costs that arise simply by virtue of government ownership and do not constitute a competitive disadvantage of government ownership from a CN perspective.

ACCC-determined number and location of Points of Interconnect

The Government's adoption of a significantly greater number of POI above those specified in NBN Co's original network design (that is, from 14 to 121) increased the NBN's build and operational costs and delayed the migration of customers (and revenue) to the NBN.

However, although those higher costs and lower revenues disadvantaged NBN Co, they do not represent disadvantages that are simply due to government ownership. Rather, those disadvantages are the result of system design considerations necessary to realise the objectives of Government policies on structuring the NBN in the long-term interest of end-users and the telecommunications industry and on not preventing effective retail competition. In view of this, the AGCNCO considers the ultimate number and location of POI are unrelated to government ownership of the NBN provider and the costs associated with those additional POI do not constitute a competitive disadvantage of government ownership.

Requirement to prioritise regional areas

The requirement to prioritise regional areas in the rollout of the NBN resulted from the Government's 'Commitment to Regional Australia' agreement reached with Independent Members of Parliament in 2010.

That requirement was enshrined in the Government's 2010 Statement of Expectations for NBN Co, and the AGCNCO accepts NBN Co's claim that it incurred significant costs in complying with what was effectively a direction by its owner. The AGCNCO also accepts NBN Co's view that prioritising regional areas would have been totally at odds with the commercial focus expected of a private profit-maximising firm rolling out the NBN. The requirement to prioritise regional areas undoubtedly imposed significant costs on NBN Co and, at that time, represented a competitive disadvantage arising simply by virtue of government ownership.

However, that imperative to prioritise regional areas was not mentioned in the 2013 Interim Statement of Expectations, and was effectively removed in the 2014 Statement of Expectations when it was replaced by directions that NBN Co only do so to the extent it was commercially and operationally feasible to do so. This change was reinforced in the 2016 Statement of Expectations, which contained no specific directive on prioritising regional areas and highlighted the need for NBN Co to behave commercially. The most recent (2021) Statement of Expectations also makes no mention of the need to prioritise regional areas in the rollout of the NBN — which, in any case, is no longer needed now that the NBN is effectively built and fully operational.

Moreover, past losses incurred by NBN Co in prioritising regional areas need to be viewed in the context of (at that time) uniform national pricing, which provided the revenue needed to cross-subsidise systemic losses in particular areas of its operations (such as providing services to regional areas) and, more recently, the RBS, which operates to provide added revenues for NBN Co with which it can cross-subsidise loss-making operations in regional areas.

In view of the above, prioritising regional Australia is no longer a binding direction on NBN Co's operations and, accordingly, does not constitute a contemporary source of competitive disadvantage arising from government ownership.

Requirement for national uniform wholesale pricing and uniform national price caps

The requirement on NBN Co to institute national uniform wholesale pricing fundamentally constrained its ability to vary prices in different markets to best meet its commercial interests. That obligation meant that NBN Co's prices in metropolitan areas had to be set higher than would otherwise be the case to garner the revenue needed to cross-subsidise capex and opex costs in other (mostly rural and regional) areas. This situation encouraged competitors to enter metropolitan markets and, given the high price elasticity of demand for high speed broadband, discouraged consumers from migrating to the NBN. Both scenarios imposed significant costs on NBN Co over the life of this requirement.

However, this requirement was the consequence of giving effect to one of the core elements of the (then) Government's policy objectives for the NBN (the 'pricing objective'). In this regard, uniform wholesale pricing was a design feature of the NBN — a feature that would have applied regardless of whether the NBN was provided by NBN Co or a privately-owned equivalent business. In view of this, this restriction (and its associated costs to NBN Co) does not represent a competitive disadvantage arising simply by virtue of government ownership.

Following the Vertigan report in 2014, the Government replaced NBN Co's national uniform wholesale pricing obligation with uniform national wholesale price caps. Those price caps, which are set out in NBN Co's Special Access Undertaking (SAU), are similarly a design feature of the NBN intended to give effect to the policy objectives the Government was trying to achieve through its creation of the NBN — a point NBN Co acknowledged in its submissions to this investigation.

In view of the above, the AGCNCO considers that costs NBN Co might incur as a result of being subject to uniform national price caps do not constitute a competitive disadvantage arising simply by virtue of government ownership.

Status as Infrastructure Provider of Last Resort and as Statutory Infrastructure Provider

The claim by NBN Co that its status as Infrastructure Provider of Last Resort (IPOLR) for new developments was a source of competitive disadvantage arising from government ownership is credible. The combination of NBN Co's IPOLR status and being subject to price caps under its SAU and the Government's TIND policy meant that it faced limits on its ability to charge prices sufficient to cover its costs when meeting its IPOLR obligations. Moreover, NBN Co stated it was not compensated for the losses it incurred as a result of its IPOLR status and such restrictions on pricing did not apply to private businesses with IPOLR status.

However, as the IPOLR arrangements were superseded by the Statutory Infrastructure Provider (SIP) regime in 2020, those IPOLR costs are not relevant to any assessment of NBN Co's current CN position.

In 2020, the Government introduced a SIP regime covering all of Australia. That regime effectively established NBN Co as the default SIP across Australia, in addition to establishing its SIP status with respect to new developments. NBN Co's SIP role was further outlined in the Government's 2020 TIND policy — which, in effect, provided for a continuation of its IPOLR status in those areas as set out in earlier TIND policies.

As SIP for Australia generally, NBN Co can potentially be forced to incur losses in meeting its SIP obligations if the price caps set out in the current SAU constrain its ability to price to fully cover its costs when doing so or if those obligations can only be met by using non-commercial fixed wireless or satellite services. Private SIPs are not subject to such constraints and, thus, are not compelled to incur losses as a result of their SIP status. Similarly, as SIP for new developments, NBN Co can potentially be forced to incur losses in meeting its SIP obligations if the price caps in the current SAU or listed in Annex A of the 2020 TIND policy constrain its ability to price to fully cover its costs when doing so. Again, private SIPs are not subject to such constraints and, thus, are not compelled to incur losses as a result of their SIP status for new developments.

Accordingly, the AGCNCO considers that losses NBN Co might incur from meeting its SIP obligations (where those losses are not compensated by Government) constitute a competitive disadvantage of government ownership. As such, when determining the level of net advantages of government ownership enjoyed by NBN Co, the value of those losses should be used to offset any advantages of government ownership arising elsewhere in NBN Co's operations.

Earning a commercial rate of return on assets

Competitive neutrality policy requires NBN Co to earn a minimum benchmark commercial rate of return on assets (the 'commerciality' test). OptiComm's complaint was that NBN Co's targeted rate of return was well below the minimum rate required of it. The complaint related to all of NBN Co's activities and not just to new developments, which is the market in which the complainant was competing with NBN Co.

To assess the merit of this complaint, the AGCNCO determined the appropriate benchmark rate of return on assets for NBN Co and how NBN Co's actual rate of return compares to that benchmark. In the absence of a government-specified rate of return or of comparable businesses to provide a like-with-like proxy, the AGCNCO considered various measures of NBN Co's weighted average cost of capital (WACC). The WACC is a weighted combination of the return rates that a company must pay to private debt and equity holders for them to be willing to provide finance given the risks of the business. The AGCNCO's estimates take into

account the market value of debt for a business of NBN Co's risk (rather than the lower cost of debt that arises by virtue of government ownership).

Any business making commercial returns must have an internal rate of return (IRR) on its investments that is at least equivalent to the WACC. If the IRR is less than the WACC, then the net present value of its cash stream at its cost of capital is negative. NBN Co has provided estimates of the IRR at the commencement of its rollout, and subsequent revisions to it as the cashflows varied from expected values. The projected IRRs of NBN Co are below all measures of its WACC, indicative of a failure, at inception and ex post, to make a commercial rate of return.

Overall, NBN Co's accumulated losses, as calculated in the Special Access Undertaking were about \$36 billion by the end of 2021, with indicative estimates suggesting that the accumulated losses will still be around \$25 billion by 2039-40 in 2019-20 prices. NBN Co experienced delays and cost blowouts before it had a fully operational network, which affected its potential to make enough timely net revenue. NBN Co's cumulative operating costs (only one part of total costs) from 2010-11 to 2020-21 were about 90 per cent above its revenue, whereas at the commencement of its investments, the projection was that they would be 2 per cent below revenue.

There are poor prospects that future revenue could realistically offset these sufficiently to earn a commercial rate of return on NBN Co's reported asset values over the life of the project. In 2021-22, the fair value of NBN Co — the market value of NBN Co after acquitting its debt — was an estimated \$19.7 billion, well below the Australian Government's (then) \$29.5 billion of contributed equity. (From an economic perspective, the equity 'gap' is considerably larger than this because accounting measures of contributed equity are cumulative indicators of past contributions in nominal prices that ignore the timing of the injections and therefore fail to fully consider the opportunity costs of investment funds between the time at which they were made and end June 2022 — an issue discussed in greater detail in appendix A.)

There are several factors driving these financial outcomes:

- costs will partly reflect unanticipated costs associated with the degraded copper wire and hybrid fibre coaxial networks that NBN Co was directed to use for its multi-technology mix rollout
- *while no longer a requirement*, the Australian Government required NBN Co to prioritise the network rollout to regional Australia, where prices were well below those that could recover their costs and which came at the opportunity cost of revenue foregone from delaying the serving of revenue rich metropolitan areas until much later than a genuine commercially orientated business would have done.

Had these factors not been in play, it is possible that at its commencement, NBN Co might have reasonably forecast rates of return closer to that of commercially-focused business. All businesses, regardless of ownership, can make ex post poor returns through 'bad luck' or regulatory fiat. Accordingly, weak observed returns need not be consistent with the deficient pricing, cost management or investment that competitive neutrality policy seeks to address.

From a CN policy perspective, the remedies for any non-neutrality are forward looking.

NBN Co is unlikely to earn a commercial rate of return in the future if the asset values currently used to measure rates are those reported in either its annual reports or the Special Access Undertaking with the ACCC. However, it appears likely that those asset values exceed their market value — that is, what a commercially-oriented private business would pay for them. There is little evidence to suggest that in the future NBN Co will set prices or make investments in breach of the requirement to make a commercial rate of return on its *properly measured* asset value so long as debt neutrality is achieved and recognising that this value is less than the asset value currently reported for NBN Co. (In that vein, there are grounds to make the

real value of NBN Co's assets more transparent. This need not require an accounting or regulatory write-down though.)

There are also grounds for governments to clarify the nature of the commerciality test in CN policy so that it takes account of the fact that government policy constraints and unanticipated shocks to costs or demand may make it impossible for even a fully commercially oriented business to ever make an ex post commercial rate of return on its assets. A possible revision to competitive neutrality policy is to require a government business to manage its costs, set prices and undertake investments that are likely to maximise its profits *in the environment it faces*. Operationalising a revised commerciality test would require ex ante divulgence of a government business to its shareholders of its pricing approach, followed by timely monitoring of its cost-management, pricing and investment conduct to ensure compatibility with standard commercial practice, and where that was not occurring, early intervention.

Other competitive neutrality issues

This investigation encountered a number of issues that did not fit neatly into tax, debt or regulatory neutrality pigeonholes and/or have relevance to the broader implementation and enforcement of CN.

One of these — full cost attribution — is important in determining the value of any net competitive advantages of government ownership, but is rarely an issue in practice. Other issues pointed to the need for additional guidance on how government businesses should address CN concerns, or highlighted the need for improved transparency and accountability.

Full cost attribution

Under the RBS levy arrangements, NBN Co receives external funding from other carriers. That funding covers a small proportion of the losses it incurs from providing fixed-wireless and satellite network services. Those contributions, though, raise concerns about whether some of that funding is cross-subsidising NBN Co's commercial operations. At the heart of those concerns is the issue of cost allocation: are the costs underpinning the levy contributions exclusive to NBN Co's non-commercial operations, or are some of the costs of its commercial operations being allocated to its non-commercial fixed-wireless and satellite network operations?

The AGCNCO's investigation found that while NBN Co calculates the losses associated with its non-commercial operations using a fully distributed cost methodology, those costs do not form the basis for the RBS levy. Instead, the costs underpinning the levy collected from other carriers have been calculated (by the BCR and the ACCC) using an avoidable cost approach to cost allocation. Accordingly, while the RBS levy provides some external funding to help cover NBN Co's losses from its fixed-wireless and satellite services, concerns that this funding might cross-subsidise its commercial operations and breach CN are entirely unfounded.

Additional guidelines would assist future competitive neutrality implementation and enforcement

The AGCNCO's complaint investigation of NBN Co exposed a number of areas where guidance on how to deal with CN concerns was lacking or absent. Additional guidance in these areas would assist government businesses, their shareholder agencies, potential complainants and the AGCNCO to implement, monitor and assess measures intended to ensure CN. These areas are:

- how to calculate the cost savings associated with an implied guarantee of lease agreements
- how to calculate the difference between the actual and benchmark cost of debt where no direct market data are available

- how to avoid excessive administrative and compliance costs in setting and collecting debt neutrality charges for line-of-credit type debt
- how to calculate the cost savings associated with unpriced loan extensions and the premature payout of fixed term loans
- how businesses should select a value for the 10-year bond rate and the appropriate risk premium level to assign to low-, medium- or high-risk categories under the risk broad-banding approach for setting a benchmark commercial rate of return on assets
- the tax deductibility of competitive neutrality payments.

As the department responsible for the Australian Government's CN policy, the Treasury would be the appropriate department to prepare and publish this guidance. This guidance should be included in the Australian Government Competitive Neutrality Guidelines for Managers when it is next revised.

Improving transparency and accountability

The Australian Government's 1996 CN policy statement sets out the reporting obligations of government businesses subject to CN, which are intended to enhance transparency and accountability.

However, NBN Co's reporting against these obligations has been seriously deficient. NBN Co's annual reports from 2009 to 2019, for example, do not mention that it is subject to CN (despite being subject to a CN complaint investigation in 2011) nor that it was exempt from certain stamp duties and debt neutrality obligations and why that is so, while its 2020 and 2021 annual reports provide only a cursory reference to it being subject to CN (and do not report an ongoing CN complaint investigation).

To meet its CN reporting requirements, NBN Co should include information in its future annual reports that indicates:

- it is subject to CN policy, the requirements that policy obliges it to comply with, and its actions to achieve compliance
- where exemptions from taxation and borrowing levy arrangements have been provided by the Government, and the reasons for those exemptions
- whether any changes to its CN arrangements have been made in the previous 12 months
- the status and/or outcome of any public inquiries under the complaints mechanism.

The government agencies that have shareholder responsibility for NBN Co (the Departments of Finance and of Infrastructure, Transport, Regional Development, Communications and the Arts) can also contribute to improving transparency and accountability. Currently, their annual reports make no reference to NBN Co being subject to CN nor provide any comment on the extent to which that business complies with the Australian Government's CN policy. However, those departments could complement NBN Co's reporting by:

- undertaking an annual audit of NBN Co's compliance with its CN policy obligations
- providing information in their own annual reports on the extent of CN compliance by NBN Co and the existence and outcome of any CN complaint investigations into that business
- ensuring the results of that annual assessment are incorporated in an accurate reporting of Australian Government businesses' performance against CN expectations in the *Heads of Treasuries Competitive Neutrality Matrix* report.

Improving the monitoring of competitive neutrality compliance

The Heads of Treasuries Competitive Neutrality Matrix report contains each jurisdiction's assessment of how well their significant government businesses comply with CN policy and, in doing so, helps to improve awareness of CN policy and ensure ongoing transparency and accountability around the implementation of CN.

However, in the most recent publication reporting on the 2018 year, the Australian Government's entry for NBN Co omitted critical aspects of its compliance with CN (in particular the company's exemption from debt neutrality charges on its \$19.5 billion Government loan), notwithstanding an obligation to report this information. These omissions erode the worth of the Matrix, which is the only publication that provides an overview of the extent to which the operations of Australian Government business enterprises are consistent with CN. Finance — responsible for producing the Australian Government's input into that report — could improve the usefulness of the Matrix by instituting processes to ensure the accuracy of that input.

Recommendations and findings

Debt neutrality



Finding 2.1

NBN Co is not in breach of debt neutrality for its \$19.5 billion Government-provided loan

The Australian Government's \$19.5 billion loan to NBN Co was not provided and is not being provided on a basis that accords with the debt neutrality requirement of competitive neutrality policy.

However, as this Government-provided debt is exempted from the application of competitive neutrality policy by way of a Government decision, this means that NBN Co is not in breach of the debt neutrality requirements of competitive neutrality policy for debt incurred under this loan.



Finding 2.2

NBN Co's private debt financing does not comply with the debt neutrality requirements of competitive neutrality policy

NBN Co is not complying with debt neutrality requirements for debt raised through its \$9.85 billion bank facilities, its \$2.775 billion domestic medium-term note issues, and its almost \$6.5 billion global medium-term note issues (as at 31 October 2021).

For the \$7.4 billion of bank debt drawn as of 31 October 2021, the advantage of government ownership is likely to be worth at least \$150 million a year.

The advantage of government ownership is likely to be in excess of \$60 million a year for NBN Co's domestic note issues and \$110 million a year for NBN Co's US note issues.

**Recommendation 2.1**

NBN Co should make debt neutrality payments to address the cost-of-debt savings it enjoys as a result of government ownership

To comply with the debt neutrality requirements of competitive neutrality policy, NBN Co should make debt neutrality payments to the Official Public Account of an amount that reflects the actual cost-of-debt advantage it enjoys over the benchmark cost of debt that it would otherwise incur if it was not government-owned.

The Australian Government should request that an entity independent of NBN Co and with the financial expertise needed to calculate the difference between NBN Co's actual and benchmark cost of debt should:

- determine the interest rate advantage NBN Co enjoys on its cost of debt as a result of its government ownership, OR
- verify that NBN Co has accurately identified that interest rate advantage.

The interest rate advantage should be used to calculate NBN Co's debt neutrality payments required to account for the cost-of-debt advantage resulting from government ownership.

The Australian Competition and Consumer Commission or the National Competition Council would be options to fulfill this role.

Tax neutrality

**Finding 3.1**

NBN Co is complying with its tax neutrality obligations

NBN Co is complying with its tax neutrality obligations under competitive neutrality policy.

Regulatory neutrality

**Finding 4.1**

Part 8 of the Telecommunications Act is not a breach of regulatory neutrality

The wholesale-only requirements in Part 8 of the *Telecommunications Act 1997* are the result of implementing Government policy and are not simply the result of government ownership of NBN Co. As such, the wholesale-only requirement in that Act does not constitute a breach of regulatory neutrality under competitive neutrality policy.



Finding 4.2

The Regional Broadband Scheme levy is not a breach of regulatory neutrality

The Regional Broadband Scheme levy was not developed with a view to advantage the government-owned NBN Co relative to its competitors. Moreover, as the levy provides the funds needed for NBN Co to recoup the losses it incurs on its fixed-wireless and satellite network services (losses it incurs as a result of its government ownership) it does not represent a breach of regulatory neutrality. Rather, the levy should be viewed as a vehicle for reducing a disadvantage of government ownership rather than one providing a regulatory advantage to NBN Co.



Finding 4.3

Changes to the 2020 Telecommunications in New Developments policy do not breach regulatory neutrality

The amendments to the Telecommunications in New Developments policy announced in September 2020 removed previous restrictions on NBN Co's ability to compete in the servicing of new developments. Those changes represent a levelling of the regulatory playing field rather than tilting it to give NBN Co a regulatory advantage. Accordingly, the changes to the policy identified by OptiComm do not constitute a breach of regulatory neutrality under competitive neutrality policy.



Finding 4.4

The 2018 Low-impact Facilities Determination advantages NBN Co, but this is not a breach of regulatory neutrality by NBN Co

The *Telecommunications (Low-impact Facilities) Determination 2018* has the effect of providing NBN Co with a regulatory advantage not available to its competitors. However, that advantage is an outcome of regulation intended to facilitate the implementation of government policy, in particular the rapid rollout of the national broadband network at minimal cost. That advantage did not arise as a result of government ownership and does not constitute a breach of regulatory neutrality by NBN Co.



Finding 4.5

The 2018 Low-impact Facilities Determination advantages NBN Co, and is contrary to the *objective* of competitive neutrality policy

The *Telecommunications (Low-impact Facilities) Determination 2018* is intended to facilitate the implementation of government policy, in particular the rapid rollout of the national broadband network at minimal cost. That Determination provides a regulatory advantage to NBN Co and, in doing so, establishes a regulatory regime that is not competitively neutral in its application.

**Recommendation 4.1****Qualifying conditions for low-impact facilities should be reviewed**

The qualifying conditions for determining which network providers are authorised to install certain low-impact facilities under the *Telecommunications (Low-impact Facilities) Determination 2018* should be reviewed, with a view to making the regulatory regime under that Determination neutral in its application to NBN Co and its competitors.

**Finding 4.6****Spectrum allocation and pricing for NBN Co did not breach regulatory neutrality**

The decision in 2015 to reserve spectrum only for the National Broadband Network and the spectrum pricing decisions taken in 2020 have provided NBN Co with a regulatory advantage not available to its competitors. However, that advantage is the result of implementing government policy, in particular the rollout of the National Broadband Network at minimum cost. The advantage did not arise simply by virtue of government ownership and does not constitute a breach of regulatory neutrality.

Competitive disadvantages

**Finding 5.1****Losses incurred by NBN Co on its fixed-wireless and satellite network services are the consequence of its government ownership**

NBN Co's provision and operation of a fixed-wireless and satellite network to serve regional and remote Australia has resulted in it incurring annual losses in this market of hundreds of millions of dollars. These losses are a direct consequence of the Government requiring the business it owns to meet the Government's policy objectives for the National Broadband Network. Thus, NBN Co's losses in this area are a consequence of its government ownership.

**Finding 5.2****The Regional Broadband Scheme levy is intended to fund the cost to NBN Co of losses associated with its provision of fixed-wireless and satellite network services**

The costs of past and future losses associated with NBN Co's obligation to provide fixed-wireless and satellite network services to regional and remote Australia are met through the Regional Broadband Scheme levy, which is collected from fixed-line broadband providers, with the amount dependent on their customer base. The revenue raised through the levy is intended to be sufficient to fully compensate NBN Co's losses on those services and effectively eliminates any competitive disadvantages associated with the provision of those non-commercial services. As such, those losses do not qualify as a cost disadvantage of government ownership that can be appropriately offset against any competitive advantages of government ownership.

**Finding 5.3****NBN Co's obligation to connect all premises within a fixed-line network is not a competitive disadvantage of government ownership**

NBN Co's obligation to connect all premises within a fixed-line network, which is in aggregate projected to be profitable, does not constitute a non-commercial undertaking and is not a competitive disadvantage of government ownership.

**Finding 5.4****Line-of-business restrictions are not a competitive disadvantage of government ownership**

The competitive disadvantage resulting from line-of-business restrictions on NBN Co are the result of Government policy that the National Broadband Network provider be a wholesale-only entity. That disadvantage stems from the Government's policy objective to facilitate a competitive and well-functioning telecommunications sector, and does not exist simply by virtue of government ownership.

**Finding 5.5****Costs associated with the ACCC-determined Points of Interconnect are not a competitive disadvantage of government ownership**

The additional costs and foregone revenue experienced by NBN Co from having to adopt the ACCC's network design of 121 Points of Interconnect are not disadvantages simply due to government ownership. Those disadvantages are the result of system design considerations necessary to realise the objectives of Government policies on structuring the National Broadband Network in the long-term interest of end-users and the telecommunications industry and on not preventing effective retail competition. They do not exist simply by virtue of government ownership.

**Finding 5.6****Losses associated with past directives to prioritise regional areas do not qualify as a current competitive disadvantage of government ownership**

The losses and foregone revenue experienced by NBN Co as a result of prioritising regional areas in rolling out the National Broadband Network were a direct result of government ownership. But, since 2014, that imperative has been replaced by directions that NBN Co only do so to the extent that it is commercially and operationally feasible. This, together with the National Broadband Network now being built and fully operational and NBN Co being compensated under the Regional Broadband Scheme levy arrangements for losses from its fixed-wireless and satellite services, means that past directives to prioritise regional areas do not represent a source of current competitive disadvantage of government ownership.

**Finding 5.7**

Costs associated with uniform national wholesale pricing and price caps are not a competitive disadvantage of government ownership

The application of past uniform national wholesale pricing and current national price caps to NBN Co's operations are the result of Government policies guiding the provision of the National Broadband Network, which would apply to any provider, regardless of its ownership. Thus, the costs of these restrictions do not qualify as a competitive disadvantage arising simply by virtue of government ownership.

**Finding 5.8**

NBN Co's losses arising from being the Infrastructure Provider of Last Resort for new developments were a competitive disadvantage of government ownership

NBN Co's losses arising from its status as Infrastructure Provider of Last Resort for new developments were a competitive disadvantage of government ownership.

**Finding 5.9**

Uncompensated losses incurred by NBN Co as a result of its Statutory Infrastructure Provider status are a competitive disadvantage of government ownership

NBN Co's status as Statutory Infrastructure Provider (across Australia generally and for new developments specifically) results in it incurring costs that are not borne by private businesses with similar status. Those costs constitute a competitive disadvantage of government ownership.

**Recommendation 5.1**

NBN Co should quantify the value of any losses it is compelled to incur as a result of its Statutory Infrastructure Provider status

NBN Co should calculate the value of any losses it is compelled to incur as a result of its Statutory Infrastructure Provider status. Those losses should be used as offsets in determining the value of any net competitive advantages of government ownership enjoyed by NBN Co and the corresponding level of competitive neutrality adjustments payments it should make to the Official Public Account.

This quantification should be subject to independent verification by the ACCC or NCC.

Earning a commercial rate of return



Finding 6.1

NBN Co has not met the commercial rate of return requirement to date and is unlikely to make a commercial rate of return in the future on its currently valued asset base

NBN Co has not achieved a commercial rate of return on assets from its inception and has not had target rates of return commensurate with the cost of capital for a business of its nature.

However, factors outside of the control of NBN Co have contributed to this outcome:

- in its early years, NBN Co had to bear disadvantages associated with prioritising the network rollout in regional and remote Australia (finding 5.1)
- NBN Co faced higher than anticipated costs associated with the Government's decision to pursue a multi-technology mix of the roll out of the national broadband network.

The relevant test for *remedying* a non-commercial rate of return is forward-looking.

NBN Co is unlikely to earn a commercial rate of return in the future if the asset values used to measure rates are those reported in either its annual report or the Special Access Undertaking with the ACCC.

However, it appears likely that the reported asset values exceed their market value — what a commercially-oriented private business would pay for them.

There is little evidence to suggest that in the future NBN Co will set prices or make investments in breach of the requirement to make a commercial rate of return on its *properly measured* asset value so long as debt neutrality is achieved and recognising that this value is less than the asset value currently reported for NBN Co.



Finding 6.2

There is merit in re-specifying the commerciality test in competitive neutrality policy

The existing requirement in competitive neutrality policy that a government business should earn a commercial rate of return over a reasonable period does not take account of the fact that government policy constraints and unanticipated shocks to costs or demand may make it impossible for even a fully commercially-oriented business to ever make an ex post commercial rate of return on its assets.

A possible revision to competitive neutrality policy is to require a government business to manage its costs, set prices and undertake investments that are likely to maximise its profits in the environment it faces.

Other competitive neutrality issues



Finding 7.1

External funding of NBN Co's fixed-wireless and satellite service losses does not cross-subsidise its commercial operations

The Regional Broadband Scheme levy is underpinned by estimates of the losses of NBN Co's fixed-wireless and satellite services that were derived using a cost allocation approach consistent with competitive neutrality. Any concerns that external funding provided to NBN Co by the levy might cross-subsidise its commercial operations are unfounded.



Finding 7.2

Guidelines for setting a commercial rate of return are not robust

The broad-banding approach for setting a benchmark commercial rate of return on assets (set out in the *Australian Government Competitive Neutrality Guidelines for Managers*) allows discretion in selecting a value for the 10-year bond rate and uses risk premiums that may not reflect contemporary market conditions. These features can result in a benchmark rate that is inappropriate for the relevant business and for achieving competitive neutrality.



Recommendation 7.1

Treasury should develop guidance material

Treasury should develop guidance material on:

- how to calculate the cost savings associated with an implied guarantee of lease agreements
- how to calculate the difference between the actual and benchmark cost of debt where no direct market data are available
- how to avoid excessive compliance and administrative costs in setting and collecting debt neutrality adjustment payments for line-of-credit type debt
- how to calculate the cost savings associated with unpriced loan extensions and the premature payout of fixed-term loans
- how businesses should select a value for the 10-year bond rate under the risk broad-banding approach for setting a benchmark commercial rate of return on assets, as specified in the *Australian Government Competitive Neutrality Guidelines for Managers*
- the appropriate risk premium level to assign to a low-, medium- or high-risk assessment under that broad-banding approach.

Treasury should make the material publicly available and include it in the *Australian Government Competitive Neutrality Guidelines for Managers* when it is next revised.



Finding 7.3

NBN Co is not meeting its reporting requirements

NBN Co is not meeting the minimum reporting requirements it is subject to under competitive neutrality policy.



Recommendation 7.2

NBN Co should improve its competitive neutrality reporting

NBN Co should include information in its annual report that indicates:

- it is subject to competitive neutrality policy, the requirements that policy obliges it to comply with, and the actions it has taken and/or is taking to comply with those requirements
- where exemptions from taxation and borrowing levy arrangements have been provided by the Australian Government, and the reasons for those exemptions
- whether any changes to its competitive neutrality arrangements have been made in the previous 12 months
- whether it was subject to any competitive neutrality complaints, and the status and/or outcome of any investigations under the complaints mechanism.



Recommendation 7.3

Shareholder agencies should improve their reporting of competitive neutrality compliance

The Department of Finance and the Department of Infrastructure, Transport, Regional Development, Communications and the Arts should annually check NBN Co's compliance with its competitive neutrality policy obligations, publishing the extent of that compliance and the results of any formal competitive neutrality complaint investigation in their annual reports. Finance should draw on those annual assessments to accurately record NBN Co's performance in the Australian Government's entry in the *Heads of Treasuries Competitive Neutrality Matrix* report.



Finding 7.4

NBN Co's compliance is not accurately reported in the Competitive Neutrality Matrix report

The Australian Government's contribution to the most recent (2019) *Heads of Treasuries Competitive Neutrality Matrix* report has not accurately recorded the extent to which NBN Co's operations are consistent with the requirements of competitive neutrality policy.



Recommendation 7.4

Finance should accurately record compliance in Competitive Neutrality Matrix reports

Finance should improve its processes for verifying the accuracy of the information on which it bases the Australian Government's entry in the *Heads of Treasuries Competitive Neutrality Matrix* report.



Finding 7.5

Tax deductability of adjustment payments is normal, but not certain

The tax deductibility status of competitive neutrality adjustment payments needs to be considered in setting the level of any such payments. Not doing so might inadvertently put Australian Government businesses making such payments at a competitive disadvantage.

Full tax deductibility of those payments is likely to be the norm, but this should not be taken for granted.



Recommendation 7.5

Treasury should advise businesses of the tax status issue

Treasury should inform Australian Government businesses currently subject to competitive neutrality of the tax deductibility issues associated with competitive neutrality adjustment payments. When the *Australian Government Competitive Neutrality Guidelines for Managers* is next revised, that document should also flag this issue.

1. About the complaint

In late 2020, OptiComm Limited (OptiComm) lodged a complaint with the Australian Government Competitive Neutrality Complaints Office (AGCNCO). That complaint alleged that NBN Co Limited (NBN Co) was not complying with the Australian Government's competitive neutrality (CN) policy.

This chapter outlines the nature of that complaint, provides background on NBN Co, establishes the jurisdiction of the AGCNCO, and describes the scope and conduct of the complaint investigation.

1.1 Nature of the complaint

On 30 October 2020, the AGCNCO received a formal complaint from OptiComm (since acquired by Uniti Group Ltd).¹ OptiComm is a wholesale operator that build, operate, and maintain their own fibre telecommunications network, typically in new or recently developed housing estates.

That complaint alleged that NBN Co is not complying with its obligations under CN policy and is, as a consequence, obtaining a competitive advantage simply by virtue of its government ownership.

The complaint from OptiComm identified two areas of concern:

- NBN Co's forecast 3.2 per cent rate of return on equity — as reported in its Corporate Plan 2020–23 — does not constitute a commercial rate of return (NBN Co 2019)
- the regulatory environment favours NBN Co at the expense of its competitors, in particular:
 - elements of Part 8 of the *Telecommunications Act 1997* and aspects of the *Telecommunications (Regional Broadband Scheme) Charge Act 2020*
 - recent amendments to the Telecommunications in New Developments policy.

An addendum to the complaint, received on 10 February 2021, included a further concern about regulatory neutrality arising from the *Telecommunications (Low-impact Facilities) Determination 2018*.

During the course of the AGCNCO's investigations, other telecommunication businesses raised regulatory neutrality concerns about the allocation of spectrum to NBN Co at a price and on terms that are favourable compared with the price and terms that are otherwise available to private businesses. The AGCNCO has also investigated these concerns.

1.2 About NBN Co

NBN Co was established and incorporated on 9 April 2009 under the *Corporations Act 2001* and was prescribed as a Government Business Enterprise on 9 August 2009 under the *Commonwealth Authorities and Companies Act 1997*.

¹ Uniti advised the AGCNCO that had it owned Opticomm in October 2020 Uniti would not have made this complaint.

The company is wholly owned by the Commonwealth of Australia — with the Australian Government's shareholding represented jointly by the Minister for Finance and the Minister for Infrastructure, Transport, Regional Development, Communications and the Arts.

NBN Co was established to design, build and operate Australia's wholesale local access broadband network (NBN Co 2020a). It is operated in accordance with the *Public Governance, Performance and Accountability Act 2013* and a Statement of Expectations from the Government to the company, supplemented from time to time by policy directives and correspondence. The company's current objectives are set out in the 26 August 2021 Statement of Expectations (Birmingham and Fletcher 2021).

From its establishment to the present, the Government's intent has always been for NBN Co to operate as a commercial entity. For example:

The Government's vision for NBN Co is that it [operates] as a commercial entity. (Wong and Conroy 2010, p. 2)

nbn should ... operate its business on a commercial basis. (Cormann and Fifield 2016b, p. 1)

The Government's objective is ... for NBN Co to operate as a sustainable, commercial business. ... Taxpayers have made a substantial investment in NBN Co and the Company will operate its business commercially. (Birmingham and Fletcher 2021)

1.3 Jurisdiction of the AGCNCO

In accordance with the Australian Government's *Competitive Neutrality Policy Statement* of June 1996, NBN Co is a government business to which CN arrangements are intended to apply. This has been acknowledged in the Commonwealth Government entries in each of the annual *Heads of Treasuries Competitive Neutrality Matrix Report* since 2010 (for example, Australian Government 2019a).

Section 21(1)(a) of the *Productivity Commission Act 1998* empowers the AGCNCO to investigate complaints that an Australian Government business or business activity (which is subject to CN policy) is not being conducted in accordance with CN requirements. Moreover, NBN Co has been the subject of a previous AGCNCO CN complaint investigation (AGCNCO 2011).

In deciding to investigate a complaint, the office must have regard to the *Productivity Commission Act 1998* (part 4, division 2) and the Australian Government's *Competitive Neutrality Policy Statement* (Australian Government 1996) and ensure that the complaint:

- is not better handled by another body
- does not relate to CN policies that are being finalised or are currently the subject of review by government
- is not vexatious
- raises issues of substance and with non-trivial resource allocation effects.

With regard to the first of these considerations, some aspects of the complaint deal with issues that are more appropriately within the realm of competition law (for example, the low end-user contributions to property developers, which do not reflect NBN Co's costs to build a connection to premises). The AGCNCO has not considered those issues as they are outside the remit of the office, although it has brought those issues to the attention of the Australian Competition and Consumer Commission (ACCC). The bulk of the remaining issues, however, fall within the AGCNCO's area of responsibility.

With regard to the second, the AGCNCO considered if a Treasury review of CN policy (Treasury 2017) — the results of which are yet to be reported — might give cause to not investigate the complaint. The

AGCNCO discussed this prospect with the secretariat responsible for that review, and is confident that the review provides no grounds that would warrant not investigating the complaint against NBN Co.

Finally, the AGCNCO determined that the complaint is not vexatious and deals with substantial issues with significant resource allocation effects.

Accordingly, the AGCNCO decided that an investigation of the CN complaint against NBN Co was justified.

1.4 Why competitive neutrality matters

The economic implications of non-neutrality are significant, and especially so given the size of NBN Co, and its importance to a digitally-advanced Australia.

A business given a commercial advantage by virtue of ownership can still survive even if it is inefficient across multiple domains. Such domains include failing to manage operational costs (which reduces net income), making unnecessary investments (which increases recorded assets without commensurate returns), and pricing too low (which reduces revenue).

All of these adversely affect resource allocation generally, but also affect the state of competition. So, the survival of a technically inefficient firm crowds out efficient competitors that must earn a risk-adjusted commercial rate of return sufficient to attract debt and equity. Prices that are below the long-run incremental costs of supply (including the cost of capital) cannot be matched by a commercial business that must set cost-reflective prices, providing an advantage to the government business.

Warning signs of failing to meet competitive neutrality requirements would be prices below that of similarly or more efficient competitors in like markets, evidence of over-investment, or sustained poor cost containment. However, a government-owned business could still breach competitive neutrality policy if it was failing to make a commercial rate of return and was pricing *above* competitors. This is because even at higher prices, a business can still retain many customers (through market power and consumer inertia) and so limit the entry and expansion of more efficient competitors. Were such a business exposed to the full commercial costs of doing business, its exit would be more rapid.

1.5 Scope and conduct of the investigation

Scope of the investigation

OptiComm's complaint dealt only with allegations that NBN Co breached the CN policy requirements for earning a commercial rate of return and regulatory neutrality.

However, because NBN Co's rate of return is affected by the extent to which it complies with its CN obligations regarding debt, tax and regulatory neutrality, and the requirement for full cost attribution, the complaint investigation needs to examine all those areas. For the same reason, the investigation needs to examine whether there are any other areas of material advantage arising from government ownership and, if so, how NBN Co has addressed these.

In practice, this means the scope of this CN complaint investigation will cover NBN Co's compliance regarding:

- debt, tax and regulatory neutrality
- cost allocation/full cost attribution
- other competitive advantages arising from Government ownership

- earning a commercial rate of return.

Moreover, the investigation also needs to assess whether NBN Co faces any competitive disadvantages due to government ownership and, if so, their cost to NBN Co. This is because, should this be the case, the cost of any such disadvantages may be used to offset any competitive advantages. Ascertaining this net position is necessary to establish whether NBN Co's rate of return (after adjusting its reported revenue for advantages and disadvantages of government ownership) complies with the commercial rate of return obligation under CN policy.

The investigation also encountered several issues that do not fit neatly into tax, debt or regulatory neutrality pigeonholes but were nonetheless relevant for this investigation and/or have relevance to the broader implementation and enforcement of CN policy.

Conduct of the investigation

Consistent with the Productivity Commission Act, the AGCNCO gave interested parties the opportunity to comment on the matters raised by the complaint.

During its investigation, the office held discussions with and/or sought information from: the complainant; NBN Co; the Department of Finance and the (then) Department of Infrastructure, Transport, Regional Development and Communications (whose Ministers are NBN Co's two shareholder Ministers); some of NBN Co's larger national competitors and smaller niche competitors in the new development market; the Bureau of Communications, Arts and Regional Research; the ACCC; the Australian Communications and Media Authority; the Australian Taxation Office; the Australian Office of Financial Management; state departments of Treasury and Finance; state government CN complaint offices; credit rating agencies; the Reserve Bank of Australia; and telecommunications industry experts and media commentators.

The AGCNCO received a formal submission from NBN Co on 23 June 2021 and a supplementary submission on 29 July 2021. It received a formal joint response from the two shareholder departments to questions submitted to them by the AGCNCO on 24 August 2021.

Prior to finalising its investigations, the AGCNCO provided NBN Co, the shareholder departments and the complainant with a draft of its final report for them to review and provide feedback. In the light of that feedback the AGCNCO amended the report as appropriate.

Over the course of the investigation, the AGCNCO also received a steady flow of information (primarily from NBN Co and the ACCC) in response to the AGCNCO's many requests for additional information on issues it was assessing. The AGCNCO would particularly like to express its appreciation of the cooperation and assistance provided by those two bodies.

2. Debt neutrality

The Australian Government's competitive neutrality (CN) policy statement notes that:

Markets confer borrowing cost advantages on government owned entities as a result of explicit government guarantees and perceptions of implicit government support. Debt neutrality will be achieved by subjecting identified organisations to similar borrowing costs to those faced by private sector businesses. ...

Where organisations borrow from the Budget for the purpose of a significant business activity they will be required to pay a rate of interest to the Budget equivalent to what would be paid if the borrowing was occurring in the financial markets (without a Commonwealth guarantee).
(Australian Government 1996, p. 17)

The *Australian Government Competitive Neutrality Guidelines for Managers* (2004) elaborates on what this means for businesses subject to CN and what they must do to comply with that policy:

Managers must adjust their cost base, and therefore prices, where they borrow money at a rate that reflects the credit risk of the Australian Government as a whole rather than a rate reflecting the credit risk of that type of business activity. (p. 21)

In circumstances where you are able to borrow funds at a lower rate than your competitors (as a result of your government ownership), you will need to make adjustments to the cost of your debt. This is known as debt neutrality. The objective of a debt neutrality adjustment is to place your borrowing costs on par with the borrowing costs that would apply if you were not a government business. In practice, this is done by comparing the cost of your debt against a benchmark cost of debt and identifying the difference. (p. 22)

Significant business activities that receive a cost advantage in borrowing as a result of government ownership need to make a debt neutrality payment to the [Official Public Account]. ... Debt neutrality charges should reflect the difference in your actual cost of borrowing (cost of debt) and the cost you would incur if you were borrowing as a non-government entity (benchmark cost of debt). (p. 23)

Against this backdrop, the rest of this chapter describes NBN Co's debt portfolio and assesses the debt within it against the CN policy requirement for debt neutrality. That assessment primarily revolves around:

- identifying NBN Co's actual and benchmark cost of debt, and the debt neutrality charge warranted by any difference between these
- whether NBN Co has made debt neutrality payments to address any advantage on the cost of their borrowings and, in the light of that information
- where debt neutrality payments are required but have not been made, what level of payments is required.

Over the course of this investigation, NBN Co was regularly adding to its debt holding. Rather than continually updating its analysis for each new form of debt, the AGCNCO took the approach of examining examples of debt up to a point in time (as at 31 October 2021) and providing for each the associated analysis of whether and to what extent debt neutrality might apply to that debt. The office considers this approach provides the framework for assessing any/all further debt assumed by NBN Co after that date.

2.1 A summary of NBN Co's debt portfolio

Prior to 2016, NBN Co was debt-free (Robinson 2016a, p. 30; 2016b, p. 65). That position changed in December 2016, when the Australian Government provided a loan to NBN Co of up to \$19.5 billion for the period 1 July 2017 to 30 June 2021. NBN Co's debt position changed again in 2020, when it secured \$6.1 billion in debt finance on external markets, marking the start of a program of long-term borrowing from private debt markets:

In order to finance the repayment of the Commonwealth loan and to execute the additional investments outlined in this [Corporate] plan, NBN Co is expected to raise a total of \$27.5 billion of external debt by June 2024 plus additional working capital facilities. (NBN Co 2020c, p. 52)

While the avenues for sourcing that external debt are wide-ranging (box 2.1), to date NBN Co has primarily sourced the majority of its debt from Australian and US markets.

Box 2.1 – Potential sources of external debt for NBN Co

On 18 May 2021, NBN Co established a Financing Committee that was charged with responsibility for considering and approving matters relating to funding arrangements and Debt Capital Markets. That committee was to establish an Australian Medium-Term Note Program; and any additional Debt Capital Market Programs.

The authority conferred on the board shows the breadth of market NBN Co could potentially source debt from:

The Committee has the delegated authority of the Board to:

- a. establish any debt financing arrangement or programme, including without limitation:
 - i. private debt capital including corporate bank facilities, private placement facilities or wholesale debt
 - ii. Australian Medium-Term Note Programme;
 - iii. a Euro Medium-Term Note Programme;
 - iv. a U.S. Debt Programme ... providing for issuances under Rule 144A and/or section 4(a)(2) of the U.S. Securities Act of 1933 (Securities Act);
 - v. a Global Debt Programme; and/or
 - vi. any other Debt Capital Market Programme

Source: NBN Co (2021c).

As of 31 October 2021, the program of long-term borrowing had secured just over \$19 billion of external long-term debt through a mix of bank facilities, bond/note issues of various terms, and private placements on Australian and US markets (table 2.1). In line with the stated intent of the external borrowing program, some of that debt has been applied to pay down NBN Co's \$19.5 billion loan, the balance of which at 31 October 2021 stood at just under \$8 billion.

Table 2.1 – NBN Co's debt portfolio: as of 31 October 2021 (AUD millions)

	Facility limit	Used	Undrawn
Australian Government loan	7 875	7 875	
Bank debt facilities	9 850	7 400	2 450
Australian Medium-Term Notes	2 775	2 775	
Global Medium-Term Notes — US 144A	5 350	5 350	
Global Medium-Term Notes — Private placements	1 148	1 148	
Total committed debt	26 999	24 549	2 450

Source: NBN Co (2021b).

For each of these forms of debt, the AGCNCO assessed whether their actual cost represents a competitive advantage stemming from government ownership, whether a debt neutrality charge is warranted and, if so, whether NBN Co has accounted for these savings in its cost base or made a debt neutrality payment into the OPA to meet the debt neutrality requirements of CN policy.

2.2 The Australian Government \$19.5 billion loan

Although NBN Co's *Corporate Plan 2017* assumed it would source private debt funding for the \$19.5 billion it needed to complete the national broadband network rollout, the Australian Government decided it would provide this funding instead (Cormann and Fifield 2016a).

Accordingly, in December 2016, the Government provided a loan to NBN Co of up to \$19.5 billion for the period 1 July 2017 to 30 June 2021. The loan had a fixed interest rate of 3.96 per cent per annum, with interest on outstanding debt calculated daily and payable monthly over the life of the facility. One of the conditions of the loan was that it be re-financed by NBN Co on external markets in 2020-21. In August 2018, however, the Australian Government agreed to extend the term of this loan by three years and to apply the same rate of interest (COA 2019, pp. 8–43).

That loan was fully drawn in July 2020 (COA 2021, p. 301), and NBN Co has since begun to repay it — for example, repaying \$3 billion in December 2020, using the full \$1.6 billion from its medium-term note issues in that month and \$1.4 billion drawn from its bank debt facilities (NBN Co 2021g). On 31 October 2021, the balance of that loan was around \$7.9 billion (table 2.1).

That \$19.5 billion loan, though, was provided to NBN Co on a basis that did not and does not meet the debt neutrality requirements of CN policy (box 2.2).

Nevertheless, NBN Co is not operating in breach of CN policy with regard to this loan because that loan was exempted from the application of CN policy by way of a Government decision — a decision that, in practice, exempted NBN Co from any debt neutrality charges that might otherwise be associated with that loan.

Box 2.2 – The \$19.5 billion loan to NBN Co fails the debt neutrality test

A breach of debt neutrality occurs when the interest rate on a government business's debt is lower than the rate at which that same business, were it not government-owned, could borrow from the private market, and where that cost-of-debt advantage is not addressed through competitive neutrality adjustment payments.

At the time the \$19.5 billion loan to NBN Co was being priced (15 December 2016), that price was set on the back of an assigned AA credit rating for NBN Co, which reflected its government-owned status.

However, at that time, the rollout of the NBN by NBN Co faced major uncertainties around, for example, construction costs, consumers' uptake of services, average revenue per premises, technological change and future competition.

By 2021, the Minister for Communications had just announced that the NBN should be treated as built and fully operational, and those major uncertainties around construction costs etc were either absent or better understood. Nonetheless, despite this massive lessening of risks overshadowing the rollout of the NBN by NBN Co, in 2021 Fitch and Moody's were only able to assign a standalone credit rating for NBN Co of 'bb'.

It is, therefore, unreasonable to argue that when the \$19.5 billion loan was being priced and all those uncertainties were real and their significance unknown, that a standalone rating of below 'bb' would not have been assigned to NBN Co. Accordingly, the AGCNCO considers that in December 2016 a credit rating of B is an appropriate and defensible likely rating for NBN Co at that time.

Using data from US financial markets (in the absence of a market in Australian dollars for comparably rated debt), the AGCNCO has estimated that for this loan the spread between the actual cost of debt (based on the AA credit rating assigned to NBN Co at that time) and the benchmark cost of debt (based on a likely B credit rating at that time) would have been well in excess of 400 basis points.

However, over the course of this loan, NBN Co has only paid interest at the rate of 3.96 per cent, representing aggregate payments to 30 June 2022 of some \$2 billion. If the benchmark cost of debt (some 4+ percentage points higher than that AA-based actual cost of debt of 3.96 per cent) had been applied, the interest payments on that loan (including a debt neutrality adjustment payment) would have been at least double that amount — some \$4+ billion. No such additional debt neutrality payments have been made to the Official Public Account.

On the basis of the information above, the \$19.5 billion loan to NBN Co was not provided, and is not being provided, on a basis consistent with the debt neutrality requirement of CN policy.

Source: Australian Office of Financial Management advice and analysis of Refinitiv data; Department of Infrastructure, Transport, Regional Development and Communications Annual Reports (various years); NBN Co Annual Reports (various years).

**Finding 2.1****NBN Co is not in breach of debt neutrality for its \$19.5 billion Government-provided loan**

The Australian Government's \$19.5 billion loan to NBN Co was not provided and is not being provided on a basis that accords with the debt neutrality requirement of competitive neutrality policy.

However, as this Government-provided debt is exempted from the application of competitive neutrality policy by way of a Government decision, this means that NBN Co is not in breach of the debt neutrality requirements of competitive neutrality policy for debt incurred under this loan.

Notwithstanding this finding, the AGCNCO notes that this exemption is at odds with the Government's Statement of Expectations for NBN Co issued in August 2016, which explicitly states that 'nbn should ... operate its business on a commercial basis' (Cormann and Fifield 2016b, p. 1).

The exemption also conflicts with the Government's commitment in December 2016 to the *Intergovernmental Agreement on Competition and Productivity-Enhancing Reforms*, which included a recommitment to CN.

Government business activities that compete with private providers, whether for-profit or not-for-profit, should comply with competitive neutrality principles to ensure they do not enjoy a net competitive advantage simply as a result of government ownership. (COAG 2016, p. 3)

It is also contrary to statements by NBN Co and the Australian Government since the exemption was granted about the commercial status of NBN Co. For example:

- NBN Co's 2020 Annual Report refers to the Commonwealth Government's vision for it to operate as a commercial entity (NBN Co 2020b, p. 193)
- the media release by one of NBN Co's shareholder Ministers in announcing the new Telecommunications in New and Developments (TIND) policy, which stated:

As a Government Business Enterprise, NBN Co must operate commercially and remains subject to strong competition laws and competitive neutrality rules. (Fletcher 2020d)

- a 10 February 2021 speech on NBN Co's first half FY2021 financial results by the company's CFO, which referred to NBN Co as a 'commercial entity' (Rue and Knox 2021, p. 16)
- the 2021 Statement of Expectations for NBN Co, which declared:

The Government's objective is ... for NBN Co to operate as a sustainable, commercial business. (Birmingham and Fletcher 2021, p. 1)

The AGCNCO considers that exempting NBN Co's \$19.5 billion government-provided debt from the discipline of CN is incompatible with describing NBN Co's business as a commercial business or as operating on a commercial (i.e. competitively neutral) basis.

2.3 Private debt

Bank debt facilities for \$9.85 billion

As of 31 October 2021, NBN Co had total bank debt facilities to the value of \$9.85 billion, of which \$7.4 billion had been utilised (table 2.1). This total comprises \$6.1 billion in debt facilities secured in

May 2020 (later extended to \$7.05 billion), \$2.4 billion secured in late December 2020 (later reduced to \$2.35 billion), and a \$450 million increase in existing bank facilities secured over the second half of 2021.

NBN Co secured the first of these debt facilities (for \$6.1 billion) at a floating interest rate from a syndicate of Australian and international banks. These facilities each have a 5-year term although, as the Minister for Finance noted at the time, 'There is no requirement for NBN Co to draw down on these additional facilities immediately' (Cormann and Fletcher 2020).²

For this debt, NBN Co did not seek a credit rating prior to approaching the market. Instead, the banks competing for the business provided a spread of interest rates based on their own credit and risk assessments (pers. comm., NBN Co, 14 September 2020). As a result, credit rating assessments for this debt, the actual rate of interest applicable and a benchmark credit rating and corresponding interest rate are not publicly available.

Nonetheless, there are strong grounds to believe those banks would have priced that debt on the basis that NBN Co would attract an AA credit rating.

The first of these is that in October 2020 Fitch Ratings and Moody's Investor Services released inaugural public rating advisories for NBN Co that provided an issuer credit rating³ for NBN Co of AA and A1, respectively — equivalent to an AA and A+ rating, respectively (Fitch 2020a; Moody's 2020).

The second is that NBN Co's Chief Financial Officer, when commenting on this funding agreement, is on record as stating:

... the pricing of the new facilities is in line with debt pricing for high investment grade Australian corporate borrowers. (NBN Co 2020e)

His comment suggests that the actual pricing for these debt facilities was based on a credit rating at the upper end of the AAA and BBB range — as a high investment grade borrower implies a rating in the top half of investment grade credit rating bands, which include AAA, AA, A and BBB. This is consistent with the AA credit rating assigned by Fitch and Moody's some five months later.

Of particular significance from a CN perspective is that the Fitch and Moody's rating advice also included a standalone/benchmark credit rating, which treats the company as if it were not a government-owned entity. The Fitch advice assigned NBN Co a Standalone Credit Profile of 'bb' (Fitch 2020a), while the Moody's advice assigned NBN Co a Baseline Credit Assessment of 'ba1' (Moody's 2020). These ratings are the equivalent of a BB credit rating and a BB+ credit rating, respectively. The AGCNCO is confident that this BB credit rating would mirror the benchmark rate applicable to NBN Co in May 2020.

From the above, the AGCNCO considers it is reasonable to conclude that NBN Co's actual cost of debt for funds drawn from its \$6.1 billion facilities would have been based on an imputed AA credit rating whereas its benchmark cost of debt would have been based on a BB rating. From this it follows that any drawdown from these facilities should attract a debt neutrality charge equal to the value of the interest rate spread between that AA and BB rating for the amount of debt drawn down (although that spread is not always easy to calculate: box 2.3).

² The terms of these facilities were modified during the period to 30 June 2021, increasing the overall facility limit by \$900 million and extending the tenor of certain facility agreements (NBN Co 2021c, p. 140).

³ These ratings were the basis on which the market would have priced NBN Co's \$1.2 billion and \$400 million bond issues in late November and early December 2020.

Box 2.3 – Bank facilities and associated debt neutrality charges

Calculating the debt neutrality charge applicable to any debt is simple in concept as it is the stock of debt times the difference between the benchmark and actual cost of debt. However, in practice, determining the benchmark and actual cost of debt is not straightforward:

- Unless there is a liquid market for debt at the benchmark credit rating, identifying a benchmark cost of debt may not be possible. In these cases, a proxy is needed. For this investigation the AGCNCO sought and has benefited from advice from the Australian Office of Financial Management, based on data from US financial markets — which do have a deep and liquid market for sub-investment grade debt — to present an indicative interest rate spread between AA and BB rated debt. (While the gradient of the credit curve will not be identical in each country and the value of a basis point in US dollars is typically slightly more than the value of a basis point in Australian dollars, this approach provides a reasonably conservative estimate of the value of the differential in Australian dollars.)
- For some forms of debt (like bank debt facilities), the debt on issue is something of a moving target. Unlike bond issues, where the cost and quantum of debt is set at the time of issue (and the actual and benchmark cost-of-debt spread is thus fixed for the duration of that debt), bank debt facilities have debt drawn down over time while the margins may either be set for the life of the facility or periodically reset through the life of the facility. Where margins are periodically reset, each drawdown may require a bespoke calculation of the actual/benchmark spreads applicable at the time of that drawdown and that apply to that particular quantum of drawn-down debt.

While the spread between actual and benchmark costs of debt from bank facilities will vary day-to-day, it is possible to provide an insight into the size of this advantage of government ownership for a given debt drawdown (and, thus, the corresponding size of any debt neutrality adjustment needed to account for this advantage). To this end, the AGCNCO has drawn on Australian and US financial market data to derive the likely difference between the cost of borrowing for AA rated debt and an equivalent tenor BB rated debt (box 2.4).

The spread examples in box 2.4 show that the actual cost for debt drawn from NBN Co's \$6.1 billion bank facilities would have been materially below the benchmark cost applicable if NBN Co was not government-owned. However, as each tranche of debt drawn from these facilities has a bespoke spread that determines the debt neutrality charge applicable to that debt, and the date and value of drawdowns are not publicly available, the AGCNCO is unable to calculate what the level of any corresponding debt neutrality payments should be.

NBN Co's secured the second of its bank debt facilities (for \$2.4 billion) in late December 2020 (Rue and Knox 2021, p. 16). This was comprised of 5-year facilities to the value of \$2.35 billion and a 7-year facility for \$50 million, at a floating rate of interest (NBN Co 2021c, p. 140).

As with the initial \$6.1 billion bank debt facilities, public information on the banks' credit ratings of NBN Co and corresponding interest rates is not available. Nonetheless, it is reasonable to assume that the actual and benchmark costs of debt from these facilities should be based on AA and BB ratings, respectively, in accord with the Fitch and Moody's October 2020 public advisories and a Fitch advisory on 25 November 2020 (Fitch 2020b). By extension, NBN Co would have benefited from a material interest rate advantage arising simply by virtue of its government-ownership (the scale of which may be inferred from the examples in box 2.4, and that could easily run to \$20 to \$40 million per annum for every \$1 billion of debt drawn from those facilities).

There is no public information on the \$450 million of NBN Co's bank debt facilities secured over the latter half of 2021 (the sum of which the AGCNCO has inferred from the total \$9.85 billion of bank debt facilities listed on NBN Co's Debt Investor Information web page less the known \$6.1 billion, \$950 million and \$2.35 billion debt from the facilities described above).

Nonetheless, as with the earlier bank debt facilities, contemporary public credit rating advisories from Fitch and Moody's in October and November 2020 and in April 2021 indicate a cost-of-debt advantage corresponding to an AA–BB credit rating spread.

Box 2.4 – Deriving the spread between the actual and benchmark cost of debt

While there is an Australian market for AA and BBB rated debt, there is no market to speak of for debt assessed as bb or ba1 — effectively a BB+ rating — or below. There is, however, a large and liquid market for such non-investment grade speculative bonds (also known as junk bonds) in the US.

To provide an indication of the interest rate advantage of government ownership, the AGCNCO has drawn on advice from the Australian Office of Financial Management and analysis of Australian market data for the spread between the cost of debt with an uplifted issuer credit rating of AA and debt with a BBB rating. This has been augmented by analysis of market data on the spread on US markets between BBB and BB rated debt.

Using this approach for a theoretical tranche of debt drawn on 12 May 2020 (the day the \$6.1 billion facilities were secured) the interest rate spread on Australian markets between AA and BBB rated 5-year bonds was around 100 basis points. At the same time, US market data for BBB and BB rated 5-year bonds indicated a prevailing margin (and thus the likely additional interest rate advantage of government ownership) of around 320 basis points. These results suggest that NBN Co's actual cost of debt in this case would be some 420 basis points below the likely benchmark cost of debt. (A further margin could arguably be applied to account for the level of cross currency basis swaps at the time, in order to better translate the value of a US basis point to an Australian basis point.)

Those spreads suggests that the BB benchmark rating likely to apply to NBN Co on that date would attract an interest rate some 4 percentage points higher than the rate associated with an (uplifted) AA rating. In this example, that would mean that, for a \$1 billion tranche of debt drawn down at that date, NBN Co would be liable for an annual debt neutrality charge of around \$40 million.

Using the same approach for theoretical debt drawn from those facilities a year later (12 May 2021) the AA–BB spread is of the order of 2 percentage points. In this example, for a \$1 billion tranche of debt drawn down at that date, NBN Co would be liable for an annual debt neutrality charge of \$20 million.

While these examples are for illustrative purposes only, they indicate that NBN Co is receiving a material interest rate advantage on debt drawn from these bank facilities, and that advantage is one arising simply by virtue its government ownership.

Source: AGCNCO estimates based on Reserve Bank of Australia data and advice from the Australian Office of Financial Management and analysis of Refinitiv market data.

Accordingly, it is clear that NBN Co has a significantly lower cost of debt simply as a result of its government ownership. Since establishing these facilities, NBN Co has drawn on them to the value of \$7.4 billion (as of 31 October 2021). Drawing on the indicative spreads described in box 2.4, the AGCNCO estimates that the

lower interest rate NBN Co enjoys as a result of its government ownership relative to its benchmark cost of debt is, conservatively, likely to be worth at least \$150 million annually for this \$7.4 billion of drawn debt.

Australian Medium-Term Note issues

NBN Co's program of medium-term note issues on the Australian capital market commenced in late November 2020, when it issued \$1.2 billion in 5-year bonds at an unprecedented low coupon rate of 1 per cent. Since then (to 31 October 2021), NBN Co has raised a further \$1.575 billion in four separate issues (table 2.2).

The pricing for these domestic bonds would have been specifically informed by the public rating advisory released by Fitch in November 2020, which was targeted at NBN Co's Australian medium-term note issue (Fitch 2020b). That advisory assigned a rating of AA to NBN Co's note issue program, but made no reference to a benchmark rating that would apply if NBN Co was not government owned.

Nonetheless, that benchmark rating may reasonably be presumed to be BB, in view of Fitch and Moody's assigning this rating in their October 2020 advisories and Fitch assigning a benchmark rating of BB in its April 2021 advisory for NBN Co's global US\$50 billion medium-term note program (Fitch 2021).

Using the same approach described in box 2.4, the AGCNCO has used Reserve Bank of Australia data, advice from the Australian Office of Financial Management (AOFM) and analysis of data on US markets to estimate the likely cost-of-debt savings that NBN Co has enjoyed simply by virtue of its government ownership. Those estimates are presented in table 2.2.⁴ NBN Co's actual cost of debt for its medium-term notes is significantly below that it would have incurred had those notes been priced on a benchmark rating of BB, indicating that NBN Co is receiving a significant competitive advantage associated with its ownership status.

Table 2.2 – Australian bond issues and indicative cost-of-debt advantage

Issuance	Indicative AA–BB spread ^a	Indicative annual cost-of-debt savings ^b
\$1.2 billion 5-year bond	280 basis points	\$33.5 million
\$400 million 10-year bond	210 basis points	\$8.5 million
\$350 million 7-year bond	210 basis points	\$7.5 million
\$425 million 3-year bond	165 basis points	\$7.0 million
\$400 million 3-year bond	165 basis points	\$6.5 million
\$2.775 billion		\$63.0 million

a. Applicable on the day the bond was priced or on the next working day for which data were available. b. To be addressed through an annual debt neutrality charge of equal value.

Source: AGCNCO estimates; AOFM advice and analysis of Refinitiv data; NBN Co (2021b).

Global Medium-Term Notes

NBN Co's Global Medium-Term Note Program has to date concentrated on the US market — where it has embarked on a program of 144A note issues and Private Placements (box 2.1).

Immediately prior to NBN Co's inaugural issue on US markets, Fitch Ratings released a public advisory stating that it '... has assigned NBN Co Limited's (AA/Negative) USD50 billion medium-term note (MTN)

⁴ These estimates are indicative only. It is indisputable that the cost of debt for an AA and BB rated company will differ significantly. But estimating with accuracy the likely savings to NBN Co in the absence of direct market data is fraught. This issue points to the need to develop a robust methodology for doing so. This issue is discussed in chapter 7.

programme a rating of 'AA'.' (Fitch 2021). That advisory, as with its earlier public rating advisories, explicitly noted that this credit rating was on the back of NBN Co's status as a government-owned entity.⁵

From this targeted rating and earlier Fitch and Moody's credit ratings, it is clear that NBN Co's actual cost of debt charged by the market for funds raised under the Global Medium-Term Note program is likely to be based on an AA credit rating while its benchmark cost of debt would correspond to a BB credit rating.

For debt raised on the US market, quantifying the scale and value of the cost advantage is more tractable than doing so for debt raised on the Australian market. In the Australian market, there is no directly comparable data to precisely determine the spread difference between AA and BB rated debt, but this is not the case in the US, which has an observable market for BB rated debt. As such, that market has directly comparable data on AA-BB spreads, which has allowed the AGCNCO to estimate the difference in actual and benchmark costs of debt for each tranche of debt NBN Co has raised on that market.

US 144A note issues and Private Placements of notes

For each of the US 144A and Private Placement notes issued on the US market (to 31 October 2021), the AGCNCO has identified the AA–BB spread on the day those notes were priced. This spread is indicative of the likely interest rate advantage that NBN Co received simply by virtue of its government ownership (tables 2.3 and 2.4).

Table 2.3 – US 144A notes and indicative cost-of-debt advantage

Issuance	Indicative AA–BB spread ^a	Indicative annual cost of debt savings ^b
US\$750 million 5-year note	200 basis points	US\$15.0 million
US\$1.25 billion 10-year note	200 basis points	US\$25.0 million
US\$600 million 3-year note	130 basis points	US\$8.0 million
US\$700 million 5-year note	150 basis points	US\$10.5 million
US\$700 million 10-year note	150 basis points	US\$10.5 million
US\$4.0 billion/A\$5.35 billion^c		US\$69 million/A\$90 million

a. Applicable on day the bond was priced or the next working day. **b.** To be addressed through an annual debt neutrality charge of equal value. **c.** Total adopted from NBN Co (2021b).

Source: AGCNCO estimates; AOFM advice and analysis of Refinitiv data; NBN Co (2021c).

⁵ Although the Pricing Supplement to these notes states 'The Notes are not obligations of any government or governmental agency and in particular are not guaranteed by the Commonwealth of Australia', the Fitch rating of AA — which is explicitly based on the value of government ownership — would be instrumental in driving the pricing for these notes.

Table 2.4 – US Private Placement notes and indicative cost-of-debt advantage

Issuance	Indicative AA–BB spread ^a	Indicative annual cost of debt savings ^b
A\$200 million 6-year note	200 basis points	A\$4.0 million
A\$200 million 5-year note	180 basis points	A\$3.6 million
NOK1.25 billion ^c 12-year note (approx. A\$200 million)	170 basis points	A\$3.4 million
A\$50 million 12-year note	160 basis points	A\$0.8 million
A\$50 million 7-year note	180 basis points	A\$0.9 million
NOK1.5 billion ^c 10-year note (approx. A\$240 million)	150 basis points	A\$3.6 million
A\$200 million 7-year note	160 basis points	A\$3.2 million
A\$1.148 billion^d		A\$19.5 million

a. Applicable on day the bond was priced or the next working day. **b.** To be addressed through an annual debt neutrality charge of equal value. **c.** Norwegian Kroner: converted at the rate applicable on the respective trade date. **d.** Total adopted from NBN Co (2021b).

Source: AGCNCO estimates; AOFM advice and analysis of Refinitiv data; NBN Co (2021c).

NBN Co's actual cost of debt for its 144A and Private Placement notes is materially below the cost it would have incurred had those notes been priced on a benchmark rating of BB (tables 2.3 and 2.4). The AGCNCO estimates that the savings on this \$6.5 billion of debt raised on the US market would be about \$110 million annually.

The private debt arrangements do not comply with debt neutrality

The AGCNCO concludes that NBN Co is not complying with the CN obligation for debt neutrality for each of the private avenues for debt financing discussed above, reflecting that:

- NBN Co has borrowed billions of dollars on Australian and US financial markets
- the actual cost of debt drawn for each of the financing avenues is demonstrably and materially lower than the corresponding benchmark cost of debt that would apply if NBN Co was a private rather than a government-owned business
- the value of NBN Co's disadvantages of government ownership that could offset the value of this competitive advantage of government ownership are trivial in comparison (chapter 5)
- NBN Co has not addressed these savings through debt neutrality payments to the OPA.



Finding 2.2

NBN Co's private debt financing does not comply with the debt neutrality requirements of competitive neutrality policy

NBN Co is not complying with debt neutrality requirements for debt raised through its \$9.85 billion bank facilities, its \$2.775 billion domestic medium-term note issues, and its almost \$6.5 billion global medium-term note issues (as at 31 October 2021).

For the \$7.4 billion of bank debt drawn as of 31 October 2021, the advantage of government ownership is likely to be worth at least \$150 million a year.

The advantage of government ownership is likely to be in excess of \$60 million a year for NBN Co's domestic note issues and \$110 million a year for NBN Co's US note issues.

NBN Co rejected the approach taken by the AGCNCO to estimate the cost-of-debt savings NBN Co enjoys simply by virtue of government ownership. It argued that its actual borrowing costs were commensurate with a BBB rating rather than the AA equivalent credit rating assigned by Fitch and Moody's, and that the AGCNCO's estimates of any cost-of-debt saving are therefore invalid (NBN Co 2022b, p. 6).

The AGCNCO considers that claim has no merit and is at odds with compelling evidence to the contrary. For example, as noted earlier, NBN Co's own Chief Financial Officer (Phillip Knox), when commenting on its \$6.1 billion debt facility secured in May 2020, is on the public record as stating:

... the pricing of the new facilities is in line with debt pricing for high investment grade Australian corporate borrowers. (NBN Co 2020e)

His comments belie the claim that the actual pricing for these debt facilities was commensurate with a BBB rating, as that rating sits at the low end of the range for investment grade debt.

A further example is NBN Co's \$1.2 billion 5-year bond issue, priced on 26 November 2020, which attracted an unprecedented low coupon rate of 1 per cent, which equated to 0.7 per cent above the 5-year swap rate (KangaNews 2020).

Financial market data for that date show the likely cost of debt for an AA credit-rated business issuing a 5-year bond would be around 0.8 per cent per annum, or 0.5 per cent over the swap rate, and the likely cost of debt for a BBB credit-rated business issuing a similar bond of around 1.45 per cent per annum or 1.15 per cent over the swap rate. The proximity of the 1 per cent actual cost of debt to the AA price (0.8 per cent) rather than the BBB price (1.45 per cent) supports the approach taken by the AGCNCO. At any rate, even if NBN Co consistently accessed the market at rates commensurate with a BBB rating, there would still remain the pricing benefit that would exist versus its standalone credit rating of BB — a benefit estimated to be an additional 2.2 per cent per annum at the time, based on US financial market data.

One explanation for the extent to which NBN Co notes have been issued slightly wider than suggested by AA benchmarks, is that this may be a function of NBN Co's status as a new issuer or, potentially, congestion issues with regards to the Australian corporate debt market's capacity to absorb the relatively large supply of these bonds. Moreover, the rate of issuance of NBN Co debt while interest rates were low between late 2020 and early 2022 may have exacerbated any such congestion issues.

Accordingly, the AGCNCO is confident that its approach to determining cost-of-debt savings arising from government ownership is sound and that the results from that approach are credible.

2.4 Addressing current and future debt neutrality

At 31 October 2021, NBN Co's outstanding debt was some \$24.5 billion (table 2.1). Nonetheless, NBN Co expects this to increase to \$27.5 billion by June 2024, and for this debt to be raised on the back of an investment grade (i.e. AA) credit rating (NBN Co 2020c, p. 52; 2021b, p. 37).

Of this \$24.5 billion debt, NBN Co's outstanding balance of \$7.875 billion on its Australian Government loan has a CN-adjusted cost of debt of around 8 per cent (box 2.2), which is about 4 percentage points above the actual cost of debt. But, as noted, a Government decision in 2016 exempted NBN Co from the requirement to make a debt neutrality charge in respect of that loan. Accordingly, although the terms of this loan are inconsistent with CN, no action to address this inconsistency is warranted.

However, the exemption from making a debt neutrality charge to comply with CN does not apply to the balance of NBN Co's debt, which has been raised on private markets. At 31 October 2021 NBN Co had about \$16.7 billion of utilised debt that it has raised on those markets. Overall, the cost-of-debt savings on

that debt, which accrues to NBN Co simply by virtue of its government ownership, amounts to about \$320 million a year — a total that will grow as it raises further private sector debt.⁶

In the face of those significant cost-of-debt savings the AGCNCO recommends that, to comply with the debt neutrality requirements of CN policy, NBN Co should make debt neutrality payments to the OPA equal in value to those savings (net of the costs it incurs as a result of its Statutory Infrastructure Provider status).

While normal practice with CN adjustment payments is to devolve responsibility for identifying the need for and the value of those payments to the government business involved, in this instance, the AGCNCO considers that the estimates should be undertaken at arms' length from NBN Co. This reflects collectively the scope for a conflict of interest if NBN Co is both the arbiter for and payee of any debt neutrality payments, the scale of those payments; and their sensitivity to differences in the spread between the actual and benchmark cost of debt and to the reference date for calculating that spread.

Such an arms' length estimate of the value of any debt neutrality payments could be achieved by having either:

- an independent body with appropriate expertise in this area charged with identifying the interest rate spread between the actual and benchmark cost of debt, or
- NBN Co itself calculating the interest rate spread between the actual and benchmark cost of debt, but with a body independent of NBN Co charged with verifying those calculations.

An obvious candidate for the relevant body is the ACCC given its expertise and regulatory remit in telecommunications generally and its familiarity with NBN Co specifically. Another option is the National Competition Council with the assistance of the ACCC.

The AGCNCO's experience in estimating any cost-of-debt advantage arising simply by virtue of government ownership has highlighted the absence of guidance on the most appropriate methodology for doing so. This issue is discussed in chapter 7 (Other competitive neutrality issues).

Looking to the future and given the interest rate differential between investment-grade debt (AA rated) and debt at NBN Co's underlying benchmark creditworthiness (rated BB), it is inevitable that its foreshadowed \$27.5 billion of external debt will require major debt neutrality adjustments if NBN Co is to comply with CN policy. For example, the anticipated debt of over \$27.5 billion, together with the current interest rate advantage from government ownership of at least 2.0 per cent would, when fully utilised, require debt neutrality payments of \$550 million a year or more to ensure NBN Co complies with CN.

The issues covered in this chapter also highlight deficiencies in the transparency and accountability about NBN Co's compliance with CN — which are heightened by the scale of the CN adjustments at issue. This issue is also taken up further in chapter 7.

⁶ These estimates are indicative only, as they have been derived from estimated rather than observed AA–BB spreads for the dates the various lines of debt were contracted.



Recommendation 2.1

NBN Co should make debt neutrality payments to address cost-of-debt savings it enjoys as a result of government ownership, with payments calculated by an independent agency

To comply with the debt neutrality requirements of competitive neutrality policy, NBN Co should make debt neutrality payments to the Official Public Account of an amount that reflects the actual cost-of-debt advantage it enjoys over the benchmark cost of debt that it would otherwise incur if it was not government-owned.

The Australian Government should request that an entity independent of NBN Co and with the financial expertise needed to calculate the difference between NBN Co's actual and benchmark cost of debt should:

- determine the interest rate advantage NBN Co enjoys on its cost of debt as a result of its government ownership, OR
- verify that NBN Co has accurately identified that interest rate advantage.

The interest rate advantage should be used to calculate NBN Co's debt neutrality payments required to account for the cost-of-debt advantage resulting from government ownership.

The Australian Competition and Consumer Commission or the National Competition Council would be options to fulfill this role.

Complying with its debt neutrality obligations under CN policy will result in significant additional costs for NBN Co.

In the new developments market (the market most relevant to the complainant, OptiComm), the incremental cost of investing in new capital would rise for NBN Co. This would tend to place upward pressures on NBN Co's prices in this market segment. *The implication of this is that NBN Co's investments in new developments or any other activity where there are rival investors would no longer be distorted, which is the objective of CN policy.*

The higher financing cost of debt arising from CN payments would not just affect NBN Co's costs of supplying services in the competitive part of the market, raising the question of whether prices would also rise in the regulated market where NBN Co faces little direct competition as a universal supplier of wholesale fixed broadband services. In the case of services covered by the Special Access Undertaking (SAU), prices are primarily set by the market, not regulation, as the revenue cap under the SAU does not bind (box 6.1 in chapter 6). NBN Co sets prices to maximise revenue, subject to market disciplines. It is not certain which services in the 'regulated' part of the market would be most affected by pricing pressures associated with a higher cost of capital. There is no single price for NBN Co services, with different prices for different services and, as the ACCC has noted, 'NBN Co has a high degree of flexibility in its pricing' (ACCC 2020a, p. 25), so that cost increases can be recovered in the most efficient way, and most likely from the higher speed broadband part of the market. There are claims, including by the ACCC, that wholesale prices are already so high for basic speed services that further increases would lead to exits by retailers, which limits any capacity for NBN Co to increase prices in this vulnerable market segment (box 6.2 in chapter 6). So, while higher borrowing costs will create price pressures, it is likely that NBN Co has flexibility to impose these in varying forms across those services where the impact on demand will be least. Moreover, there also appears to be scope for NBN Co to increase the efficiency of its wholesale pricing through changes in combinations of access and usage charges (Frontier Economics 2022a, pp. 15, 52), which further reduces the effects of meeting additional financing costs.

Nevertheless, NBN Co and its shareholder departments expressed concerns that those payments would make it difficult for NBN Co to deliver against the Government's objective of providing NBN services at

affordable prices. In view of this, those agencies sought the AGCNCO's view on how these concerns might be addressed.

While it is not the role of the AGCNCO to second-guess how the Government might respond to its report and to propose 'what if' solutions to address various scenarios, it has in this case responded to those agencies' request.

In this regard, the AGCNCO notes that there is an option available to the Government to address price pressures and that would accord with the Government's own priorities and expressed desire to have NBN services available at 'affordable prices' (Rowland 2022).

That option is for the Government to:

- explicitly acknowledge the reality that NBN Co's provision of non-commercial fixed-wireless and satellite services to regional Australia, done at the Government's behest (with its associated annual losses in the many hundreds of millions of dollars), qualifies as a community service obligation (CSO)
- identify the cost of that CSO and fully fund NBN Co directly from the Budget for providing those services, consistent with best practice (SCNPMGTR 1994, p. 39; NSW Treasury 2019).

This CSO funding would replace the current funding arrangements via the Regional Broadband Scheme (RBS) levy.

The AGCNCO notes that this option has previously been suggested by the ACCC:

... there could be a need for Government intervention to provide for direct budget funding arrangements for non-commercial services ... to enable NBN Co to charge lower prices for its services. (2017, p. 133)

If this option was implemented, it is likely that the net effect on NBN Co (of adding debt neutrality costs and removing the fixed-wireless and satellite service losses it incurs) would be a material reduction in its costs and a commensurately improved scope to lower prices. This option would incidentally also avoid the worst of the inequitable effects of the RBS levy, which imposes a uniform value levy on eligible premises and whose incidence is thus proportionately highest on those users least able to afford it.

The AGCNCO notes, though, that this option raises practical issues around operationalising the costing and funding of any such CSO and that the current RBS levy arrangements might lend themselves to addressing this issue. Box 2.5 provides one example of how this might work.

Box 2.5 – Using levy arrangements to inform Community Service Obligation funding

The Regional Broadband Scheme (RBS) levy arrangements could provide a ready-to-use approach to determine the annual level of Budget funding needed to recompense NBN Co for delivering a community service obligation in the form of loss-making fixed-wireless and satellite network services.

That scheme aims to make transparent the cost of NBN Co's internal cross-subsidy of its fixed-wireless and satellite network losses and ensure sustainable funding for the provision of those services.

Harnessing that scheme's approach would have carriers continue to identify the number of relevant premises to which a monthly levy applies. That levy (presently \$7.45 (indexed)) would continue to be based on estimates derived from modelling by the (then) Bureau of Communications Research and the Australian Competition and Consumer Commission, which has already been accepted by Government as reflecting the cost of providing those loss-making services. And the annual product of the number of

Box 2.5 – Using levy arrangements to inform Community Service Obligation funding

premises and the monthly levy would then provide the aggregate level of Budget funding needed to meet the cost of this community service obligation.

Under this CSO option, carriers would no longer pay an RBS levy, and an equivalent amount to the aggregate levy monies otherwise collected would be paid to NBN Co directly from the Budget.

Based on the RBS levy forecast from the Department of Infrastructure, Transport, Regional Development and Communication's *Portfolio Budget Statements for 2020-21*, this approach suggests that Budget funding for such a CSO would be in the order of \$750 million a year.

Source: DITRDC (2020c, p. 70).

3. Tax neutrality

Where Australian Government businesses are exempt from certain taxes and charges they will face lower costs than their private sector competitors. The Australian Government's competitive neutrality (CN) policy addresses this source of artificial cost advantage through its requirement for tax neutrality. That policy states:

Taxation neutrality will be achieved by removing taxation exemptions from identified organisations where this can be achieved in a cost effective and administratively simple manner. Alternatively, taxation neutrality may be achieved by retaining taxation exemptions and establishing taxation equivalent regimes (TERs), providing it is cost effective to do so. (Australian Government 1996, p. 16)

The *Australian Government Competitive Neutrality Guidelines for Managers* (2004) elaborates on what this means for businesses subject to CN and what they must do to comply with that policy:

As a government business, you may benefit from taxation exemptions or concessions that are not available to your private sector competitors. ... Taxation exemptions can be addressed by amending the legislation to remove these advantages or by putting in place a comparable tax equivalent regime ... (pp. 16–17)

The guidelines go on to describe how a tax equivalent regime might work in practice.

It is against this background that the AGCNCO has examined NBN Co's compliance with the CN policy requirement for tax neutrality.

3.1 NBN Co's exposure to taxes and charges

In its submission to the AGCNCO's investigation, NBN Co stated that it is not subject to any Commonwealth, State or Territory taxation exemptions or concessions other than certain exemptions to stamp duty contained in the *National Broadband Network Companies Act 2011* (NBN Co 2021d, p. 26).

Indeed, as a Commonwealth company (as defined in s. 89(1) of the *Public Governance, Performance and Accountability Act 2013*) and a Commonwealth Government Business Enterprise subject to the *Corporations Act 2001*, the AGCNCO notes that NBN Co is generally required to pay all Commonwealth taxes — just as any private sector taxpayer. Similarly, as a government business operated through a separate legal entity and governed by the *Public Governance, Performance and Accountability Act 2013*,⁷ it is subject to state, territory and local government taxes and charges (TDoFA 2004, p. 17). The only exception to these is where an exemption from taxes is specifically provided for in the business's enabling (or other) legislation.

The AGCNCO notes that NBN Co is committed to transparent tax disclosure, as recommended by the Board of Taxation's Voluntary Tax Transparency Code — a code endorsed by the Australian Government in May 2016.

That commitment has expression in NBN Co's decision to publish an annual *Tax Transparency Report*. The latest of these transparency reports, for the year ended 30 June 2021, states that NBN Co is subject to

⁷ Which replaced the *Commonwealth Authorities and Companies Act 1997* on 1 July 2014.

corporate income tax, GST, payroll tax and fringe benefit tax, and reports the amount paid (where relevant) for the 2021 and 2020 financial years (table 3.1).

Table 3.1 – NBN Co taxes paid

	2021 (AUD millions)	2020 (AUD millions)
GST	643	957
Payroll tax	44	49
Fringe benefits tax ^a	0	1

a. 0 means the balance is between \$0 and \$500 000.

Source: NBN Co (2021a, p. 3).

No corporate income tax is payable by NBN Co and nor is this likely for the foreseeable future. This is because NBN Co has yet to earn a profit on which income tax would be levied and, with accumulated losses at 30 June 2021 of some \$31.2 billion, this situation is expected to continue for some years (NBN Co 2021c, p. 115).

NBN Co's compliance in paying GST, payroll tax and fringe benefit tax has been subject to an independent review by the ATO through their Pre-Lodgement Compliance Review of the 2017 and 2018 income years. The outcome of that review resulted in the ATO reporting a provisional high assurance that the right Australian tax outcomes were reported in NBN Co's income tax returns in respect of the years reviewed (NBN Co 2020f, p. 2). Accordingly, the AGCNCO is confident that, with regard to corporate income tax, GST, payroll tax and fringe benefit tax, NBN Co is fully compliant with its tax neutrality obligations under CN policy.

NBN Co's *Tax Transparency Report* does not report whether it is subject to state and territory government land tax and local government rates or on any amounts it has paid. Further, as such taxes are not recorded as specific line items, the exact amounts paid are not available for public reporting (pers. comm., NBN Co, 15 July 2021).

In response to a request for evidence that NBN Co is subject to state- and territory-level taxes, NBN Co provided the AGCNCO with evidence that confirmed it is subject to state and territory government taxes and charges. The AGCNCO also contacted two local governments, in whose jurisdiction NBN Co owned properties, to verify that NBN Co was subject to local government rates. Those councils confirmed that properties owned by NBN Co in their jurisdiction were indeed subject to council rates.

Those local governments also advised the AGCNCO that as of end September 2021, in one council area, NBN Co had not paid any rates in the preceding two years and in the other council area had not paid any rates in the preceding five years. Since then the rates outstanding for two years have been paid (those for 2020-21 in October 2021 and those for 2021-22 in November 2021) as have those outstanding from 2016 (which were paid in January 2022).

However, while the late payment of such taxes and charges in any year or years may well confer a competitive advantage on NBN Co (the small sample size notwithstanding), it does not represent a cost advantage arising simply by virtue of government ownership as this situation is not uncommon among privately-owned businesses. Accordingly, any such late payment of taxes and charges that NBN Co is subject to does not constitute non-compliance with the tax neutrality requirement under CN policy.

As noted, the *National Broadband Network Companies Act 2011* provides NBN Co with certain exemptions from stamp duty. NBN Co's submission notes that these exemptions are in relation to particular circumstances articulated in sub-sections 34(1), 56, 98A, and apply to:

- the transfer of assets from one NBN Co corporation to another;
- the transfer by the Commonwealth of its shares in NBN Co; and

- Subscriber (PSAA) Payments, Migration Payments (Optus) and Infrastructure payments made under the Revised Definitive Agreements. (NBN Co 2021d, p. 26)

However, while stamp duty exemptions in a government business's enabling legislation allow for it to not pay those specific taxes to the tax levying agency, this does not mean that business is free from the CN policy requirement to ensure tax neutrality (TDoFA 2004, p. 17).

As the *Australian Government Competitive Neutrality Guidelines for Managers* states, any exemptions from Commonwealth, state, territory and local government taxes can provide a government-owned business with significant advantages not available to its competitors (TDoFA 2004, p. 17). Accordingly, the AGCNCO sought information from NBN Co and from the Departments of Communication and of Finance on the beneficial value of these exemptions.

In its response, NBN Co claimed this was a non-issue, as it doubted whether any stamp duty would have been levied if the NBN Companies Act exemptions did not exist. It noted that the possible application of stamp duty on Subscriber Payments, Migration Payments or Infrastructure Access Payments would only have arisen in Victoria, Western Australia, and South Australia, as they are the only states that have not abolished duty on transactions involving business assets (NBN Co 2021d, p. 26). Moreover, it argued, in those states the application of any duties would not have been automatic in any case but, rather, would be contingent on the terms of their relevant legislation and negotiations between those states and NBN Co. And it considered those negotiations would have resulted in no stamp duties being applied (pers. comm., NBN Co, 3 August 2021). On this basis, NBN Co held, the beneficial advantage of duty exemptions in the Act would be zero and there is no CN issue to answer.

The joint response from the shareholder departments noted that stamp duty legislation in most, if not all, states and territories either contain exemptions for similar types of transactions referred to in the NBN Companies Act or have provisions enabling exemptions to be granted upon application to the respective Duties Commissioner (DITRDC and DOF 2021, p. 2).

In the face of such exemptions and the discretionary nature of the application of stamp duty, it is therefore unlikely that any such duties would have been applied even if the NBN Companies Act exemptions did not exist.

To test this view the AGCNCO sought advice from a state government department responsible for levying and collecting stamp duty about whether this line of argument was valid. That department advised that while NBN Co would be liable for duty on a limited range of dutiable property or transactions in the absence of the NBN Companies Act exemptions, an application to the relevant Duties Commissioner could well obviate the application of any such duties.

In view of that advice, the AGCNCO considers the likelihood of NBN Co materially benefitting from the stamp duty exemptions in the NBN Companies Act to be low.

NBN Co also noted that, even if the exemptions have some value, they are transitional only, and ended when the Minister for Communications made a declaration under section 48 of the *National Broadband Network Companies Act 2011* that the NBN should be treated as built and fully operational. That declaration was made by the Minister, the Hon. Paul Fletcher MP, on 11 December 2020 (Fletcher 2020b).

While it is true that some exemptions ceased to exist from the time of the Minister's declaration, this is not the case for all exemptions. As the joint response from the shareholder departments noted, the exemptions applying to Category B Designated Matters (mainly transfers of conduits, wires and cables) ceased on 10 December 2020. However, it also noted that all other items covered by the exemption — that is, Category A Designated Matters (mainly migration of customer services) — will only cease 24 months after 10 December 2020 (DITRDC and DOF 2021, p. 1; Conroy 2010a, pp. 9–10).

It is, therefore, still a remote possibility that the stamp duty exemptions in the Act dealing with Category A Designated Matters might provide tax savings to NBN Co over the period to 10 December 2022.

However, NBN Co's shareholder departments also argued that even if this remote possibility gave rise to a tax benefit, this would not be a CN issue, as the tax exemption in the Act was created to achieve the Government's policy objectives of improving competition and availability of affordable broadband services across Australia. Thus, any tax advantage would not be an advantage arising simply by virtue of government ownership.

The AGCNCO notes that this position is supported by the Supplementary Explanatory Memorandum to the National Broadband Network Companies Bill 2010:

It is not appropriate for the Definitive Agreements to be subject to stamp duty or other State or Territory tax, because they are the mechanisms that give effect to the Australian Government's preferred policy outcome: structural reform of the telecommunications industry. As a fundamental component of the government's reforms, the Definitive Agreements are not part of normal business operations, and so it is appropriate for the transactions and conduct involved in the Definitive Agreements to be exempt from State and Territory stamp duty and taxes. (Conroy 2010a, p. 6)

Accordingly, the AGCNCO accepts that the stamp duty exemptions in the NBN Companies Act arise as a consequence of Government policy and not simply by virtue of government ownership.

On the basis of that conclusion, together with evidence of NBN Co being subject to the same other taxes and charges as its competitors, the AGCNCO is confident that NBN Co is fully complying with its tax neutrality obligations under CN policy.



Finding 3.1

NBN Co is complying with its tax neutrality obligations

NBN Co is fully complying with its tax neutrality obligations under competitive neutrality policy.

4. Regulatory neutrality

Competitive neutrality (CN) policy requires that government business activities do not have regulatory advantages as a consequence of their government ownership and, as far as practicable, should operate in the same regulatory environment as their competitors (Australian Government 1996, p. 18; TDoFA 2004, p. 28).

The *Australian Government Competitive Neutrality Guidelines for Managers* provides examples of the form that such regulatory advantages might take:

- exemptions from local planning, building and environmental laws;
- exemptions from prudential requirements;
- preferred treatment by other agencies; or
- amended reporting and/or licensing requirements. (TDoFA 2004, p. 27)

Against this background, OptiComm's complaint alleged that NBN Co — as a result of its government ownership — enjoyed regulatory advantages at the expense of its competitors in the telecommunications markets. It identified a number of areas where it believed this was the case:

- Part 8 of the *Telecommunications Act 1997*, which prevents NBN Co's competitors from operating in a fully vertically integrated manner
- the Regional Broadband Scheme levy arrangements, established under the *Telecommunications (Regional Broadband Scheme) Charge Act 2020*
- the Telecommunications in New Developments (TIND) policy, which was amended in 2020 to remove NBN Co's minimum developer charge and gave NBN Co flexibility to overbuild existing fibre networks
- the *Telecommunications (Low-impact Facility) Determination 2018*, which in practice authorises only NBN Co to install certain 'low-impact facilities', even where a land or building owner does not consent, and exempts these facilities from most planning and environmental laws.

In addition, some companies contacted during the AGCNCO's investigations identified the allocation of spectrum to NBN Co (on what they considered to be preferential terms and conditions) as an area where regulatory neutrality was a concern.

Each of these areas are discussed in the following sections.

4.1 Part 8 of the Telecommunications Act

OptiComm's complaint regarding Part 8 of the *Telecommunications Act 1997* centred around concerns that the 'wholesale only' obligations introduced into Part 8 have acted to assist NBN Co to win market share and disadvantage its competitors.

Unstated, but inherently underpinning this complaint being considered through the lens of CN, is the view that these advantages for NBN Co arise purely as a result of government ownership of NBN Co.

The *Telecommunications Act 1997* sets out broad regulations for carriers and 'carriage service providers' in Australia. In 2011, wholesale-only requirements were introduced into Part 8 of the Act (Department of

Communications and the Arts and DoCA 2017). Those requirements stipulate that non-national broadband network fixed-line services are only to be provided by their owners on a wholesale basis — that is, they cannot be provided directly to end-user consumers. Further amendments to the Act in 2020 relaxed the wholesale-only rules to allow carriers to run separate wholesale and retail businesses on a ‘functionally separated’ basis. There is also an exemption for very small carriers serving up to 2000 premises.

OptiComm’s complaint alleges that the wholesale-only obligation in Part 8 of the Act ‘was designed to ensure and protect NBN Co’s share of the market for the supply of wholesale broadband’. It noted that this requirement has hindered competition from other carriers as they are prohibited from operating vertically-integrated businesses (where the same company sells both as a wholesaler and as a retailer).

In addition, while acknowledging that recent amendments allow functionally separated carriers to operate vertically integrated networks, OptiComm argued that operating in a functionally-separate manner requires carriers to incur considerable costs through operating separate divisions and separate premises for those divisions. These significant expenses make it very difficult for smaller carriers to achieve the mandatory level of separation and remain financially viable.

In response to OptiComm’s allegation, NBN Co argued that the wholesale-only obligation is unrelated to government ownership of NBN Co. Rather, it is a manifestation of a particular Government policy position (one with bipartisan support) to address longstanding concerns about the potential for vertically integrated networks to undermine competition.

Those concerns — which have been enunciated in various Regulatory Impact Statements (DOCA 2014, p. 5) — are that vertically integrated services provide the owner of a monopoly network with strong incentives to undermine retail-level competition and the ability to do so. For example:

Where [a] vertically integrated network forms an access bottleneck history has shown that competition may not be effective, and therefore may have delivered less consumer welfare than might have been expected. ... Vertical separation rules have been used in other industries such as electricity and gas to address concerns about anti-competitive conduct between constituent parts of vertically integrated operations ... Imposing separation obligations on a provider would address these competition issues ... (DOCA 2014)

Having reviewed draft and final Regulatory Impact Statements dealing with changes to the *Telecommunications Act 1997*, the AGCNCO is satisfied that the wholesale-only regulations in Part 8 derive from Government policy considerations aimed at avoiding anti-competitive conduct and not from an intent to advantage NBN Co as a government-owned business. Accordingly, those regulations do not breach the regulatory neutrality requirement of CN policy.



Finding 4.1

Part 8 of the *Telecommunications Act* is not a breach of regulatory neutrality

The wholesale-only requirements in Part 8 of the *Telecommunications Act 1997* are the result of implementing Government policy and are not simply the result of government ownership of NBN Co. As such, the wholesale-only requirement in that Act does not constitute a breach of regulatory neutrality under competitive neutrality policy.

4.2 The Regional Broadband Scheme levy

OptiComm alleged that the Regional Broadband Scheme (RBS) levy provided a regulatory advantage to NBN Co. It argued that the levy appears designed to damage NBN Co's fixed-line competitors and it was critical of the levy's design — particularly the exemption of mobile operators from the levy, despite those carriers earning a significant share of telecommunications revenue.

In response, NBN Co maintained that the introduction of the RBS levy does not amount to a regulatory advantage. It noted that its government owners have mandated that NBN Co provide non-commercial fixed-wireless and satellite networks, the losses from which it must cross-subsidise from its commercial operations. The RBS levy was introduced to make transparent the extent of those losses and the corresponding internal cross-subsidy needed to fund them. Moreover, NBN Co noted, the structure of the levy is such that while other carriers pay some 5 per cent of the levy, the lion's share — the remaining 95 per cent — is borne by NBN Co itself. Accordingly, NBN Co concluded, the RBS levy does not amount to a regulatory advantage and cannot amount to a breach of CN.

The AGCNCO notes that in the development of the RBS levy arrangements, the (then) Bureau of Communications Research (BCR) gave particular attention to competitive neutrality considerations (BCR 2016, p. 47).

The BCR's final report on *NBN non-commercial services funding options* indicates that the RBS levy arrangements are designed to remove a distortion between NBN Co and its fixed-line competitors by making sure that they, too, bear a share of the cost of subsidising those non-commercial service losses. Viewed in this light, the AGCNCO considers that, as NBN Co argues, the RBS levy should be seen as reducing a disadvantage of government ownership rather than providing a regulatory advantage to NBN Co.

While OptiComm was critical of the levy scheme's design, which exempts mobile operators from the levy (box 4.1), this is not a CN issue and is outside the remit of the AGCNCO. Nonetheless, the AGCNCO notes that when the ACCC or the department responsible for communications review the scheme as part of the scheme's foreshadowed review process, this aspect of the levy arrangements will be an issue for consideration. (This issue is also discussed in chapter 5.)

Box 4.1 – Funding options for the Regional Broadband Scheme levy

The Bureau of Communications Research considered two options — an NBN-equivalent funding arrangement and a broader industry funding arrangement.

Under the first option, NBN Co goes from funding 100 per cent of fixed wireless and satellite service losses — through its internal cross-subsidisation — to funding about 96 per cent of those losses by FY2022, with competitors paying the balance, based on their market share. This arrangement confers no competitive advantage (or disadvantage) on NBN Co. (The impact of the levy arrangements on competition is discussed further in chapter 5.)

Under the second option, the cost of funding fixed-wireless and satellite service losses is spread across a much broader base. Under this option, NBN Co would only bear about 13 per cent of the funding needed to meet fixed-wireless and satellite losses by FY2022, with the broader telecommunications industry bearing the balance. This option, too, confers no competitive advantage (or disadvantage) on NBN Co.

Source: BCR (2016, pp. 90, 92).

**Finding 4.2****The Regional Broadband Scheme levy is not a breach of regulatory neutrality**

The Regional Broadband Scheme levy was not developed with a view to advantage the government-owned NBN Co relative to its competitors. Moreover, as the levy provides the funds needed for NBN Co to recoup the losses it incurs on its fixed-wireless and satellite network services (losses it incurs as a result of its government ownership) it does not represent a breach of regulatory neutrality. Rather, the levy should be viewed as a vehicle for reducing a disadvantage of government ownership rather than one providing a regulatory advantage to NBN Co.

4.3 The Telecommunications in New Developments policy

OptiComm's complaint regarding amendments to the TIND policy focussed on two areas: the removal of NBN Co's obligation to charge a developer fee towards the capital costs of new networks and giving NBN Co greater scope to overbuild existing fibre networks of its competitors (box 4.2).

Box 4.2 – Changes to the Telecommunications in New Developments policy

The previous Telecommunications in New Developments (TIND) policy set the amount that NBN Co could charge for connecting new developments. This feature has been removed from the 2020 policy. The 2020 policy continues to set maximum amounts that NBN Co can charge to the developer and the ultimate retail customer, but NBN Co is now free to charge less than that prescribed maximum.

The original TIND policy also limited NBN Co's ability to 'overbuild' other fibre networks to circumstances where developments were not being adequately serviced, as there would be 'no policy basis and little commercial reason' for them to do so otherwise. However, the 2020 TIND policy amendments removed the rules on any given Statutory Infrastructure Provider overbuilding another's network:

In an open and competitive market like Australia's, where developers are free to choose which carrier they wish to use and carriers are generally free to make commercial decisions, such rules have no merit going forward. To the extent market circumstances dictate an area is most efficiently serviced by one fixed-line network, this should be the outcome of normal commercial forces and does not need to be mandated by Government policy. Conversely, where an area may be profitably served by multiple competing networks, this should not be ruled out (and indeed cannot be ruled out under Australian law).

Source: Australian Government (2020a).

Those amendments, OptiComm argued, allow NBN Co to use Government funds and cross-subsidies from its fixed line brownfield network, and will allow it to outcompete other carriers in the market for building networks in new estates. These changes, OptiComm alleged, confer an advantage on NBN Co and, to that extent, constitute a breach of regulatory neutrality under CN policy.

These concerns, though, reflect a misunderstanding about government-owned businesses and about what CN policy requires of those businesses.

On the first of these, the fact is that NBN Co — although government-owned — is a business in its own right. Thus, the funds it might use to cross-subsidise particular areas of its operations are not ‘Government funds’. Rather they are NBN Co’s funds, derived from revenue earned from its normal business operations or monies available from its own borrowings. Using those funds to subsidise loss-making areas is not, therefore, a misuse of Government monies and is not an advantage conferred on NBN Co simply as a result of its government ownership.

Similarly, the criticism that NBN Co might be cross-subsidising loss-making operations in new developments with revenue from its other operations, and the inference that this is at odds with CN policy, is not correct. CN policy does not require that a government business activity make a commercial rate of return on each market niche it operates in or in each area of its operations. Instead, CN policy only requires that a government business earn a commercial rate of return for the company as a whole (Australian Government 1996, p. 17; TDoFA 2004, pp. 29–30). It is a discipline applied at the aggregate level of the business, not at a disaggregated level.

In summary, OptiComm’s claim that the September 2020 amendments to the TIND policy represent a breach of regulatory neutrality is unfounded.

It is true that the amendments in question do remove past restrictions on what NBN Co could charge developers and on its ability to overbuild existing networks. To that extent, the amendments are to NBN Co’s advantage.

However, the policy changes at the heart of OptiComm’s complaint are changes to remove measures designed to restrict NBN Co’s ability to compete with its private sector counterparts. As NBN Co noted in their submission:

The change to the TIND Policy in this regard was a step in providing a more symmetric regulatory environment between NBN Co and its private sector competitors. (NBN Co 2021d, p. 19)

The removal of these restrictions is thus a levelling of the regulatory playing field rather than giving NBN Co any undue regulatory advantage. Accordingly, the AGCNCO considers the changes to the TIND policy identified by OptiComm do not constitute a breach of regulatory neutrality under CN policy.



Finding 4.3

Changes to the 2020 Telecommunications in New Developments policy do not breach regulatory neutrality

The amendments to the Telecommunications in New Developments policy announced in September 2020 removed previous restrictions on NBN Co’s ability to compete in the servicing of new developments. Those changes represent a levelling of the regulatory playing field rather than tilting it to give NBN Co a regulatory advantage. Accordingly, the changes to the policy identified by OptiComm do not constitute a breach of regulatory neutrality under competitive neutrality policy.

4.4 The Telecommunications (Low-impact Facilities) Determination 2018

The installation of physical infrastructure is an essential part of providing telecommunications services.

All carriers are granted rights to install and maintain telecommunications facilities by a federal legislative scheme consisting of Schedule 3 to the *Telecommunications Act 1997*, the *Telecommunications Code of Practice 2018* and the *Telecommunications (Low-impact Facilities) Determination 2018*. The purpose of each can be broadly characterised as:

- Schedule 3 provides carriers rights to install low-impact facilities
- the Code sets out a carrier's obligations when exercising its Schedule 3 rights
- the Determination sets out an exhaustive list of telecommunications facilities that are defined as 'low-impact' and, as such, are permitted to be installed by carriers in exercising their Schedule 3 rights.⁸

This legislative scheme authorises carriers to install certain low-impact facilities on land or buildings even where the owners do not consent, and exempts these facilities from most planning and environmental laws. Where facilities do not qualify under these provisions, carriers must negotiate with land and building owners and comply with relevant planning and environmental laws. Being able to install facilities under Schedule 3 is a distinct advantage for a carrier — as OptiComm noted in its supplementary complaint:

... the legislative scheme is vital as it facilitates the rapid rollout of economically important telecommunications networks at minimal cost.

Until 2011, the full list of low-impact facilities in the Determination applied to all licensed carriers. However, amendments to the Determination in 2011 — coinciding with the start of construction of the NBN — introduced a range of facilities that can only be classified as low-impact facilities if they are part of a network that meets the following two-part test:

... that is, or is to be, part of **a national network** used, or for use, for the high speed carriage of communications, **on a wholesale-only and non-discriminatory basis** [emphasis added]
(Australian Government 2020b)

OptiComm's complaint about these amendments was that, in practice, they have the effect of excluding all carriers bar NBN Co from accessing the significant advantages available when installing certain facilities deemed as low-impact facilities under Schedule 3.

OptiComm noted that networks owned by it and other Uniti subsidiaries do not qualify as 'national networks' because they do not have a geographic reach into every state or mainland territory. As a result, the 2011 amendments mean that those networks cannot obtain the advantages associated with installing designated low-impact facilities. However, it noted that networks owned by NBN Co, Telstra, TPG, Vocus and Optus — which have that geographic reach — do qualify as 'national networks'.⁹

In its response to this view, NBN Co noted that the explanatory statement to the amending Determination in 2011 indicated that the intent of the amendments was to assist the national rollout of the NBN network. Thus, it argued, it stands to reason that OptiComm (not a national network provider) would not benefit from legislation designed to assist in the rollout of a national network.

⁸ These facilities include, for example, external and internal building connection and network equipment, underground network equipment, and certain above ground facilities including cables and power supplies.

⁹ 'National networks' are defined in section 1.5 of the Determination as networks that have a geographic reach in every state or mainland territory, a significant number of end users, and importance to the national economy.

NBN Co also noted that there is nothing in the Determination that prevents any other carriers from choosing to service geographical areas of activity so that they too could qualify as a 'national network'. While true in theory, the AGCNCO views this line of argument as akin to claiming that a local milk bar should not complain about special regulatory advantages that competitors like Coles or Woolworths enjoy as a result of their national scale and reach because that local business too could choose to expand and operate at that level. The AGCNCO considers that regulatory advantages tied to a national network test cannot be justified as neutral when a number of NBN Co's competitors (such as OptiComm) only operate in discrete, rather than national, markets — for example in localised new developments.

With regard to the second part of the test, OptiComm noted that only one network is required to operate on a wholesale-only and non-discriminatory basis — NBN Co. Other network providers, as noted above, are permitted to be functionally-separated and, because of the significant financial advantages of that approach, all choose to operate on that basis rather than on a wholesale-only basis. In doing so, they fail the second part of the test and are thereby denied the right to install the range of low-impact facilities that NBN Co enjoys under the amended Determination.

In response to this view, NBN Co stated that when the amendments were introduced, the 'wholesale-only and non-discriminatory' test was consistent with the Government's policy settings and expectations at that time — that all networks built, expanded or upgraded after 1 January 2011 would be operated on a wholesale-only and non-discriminatory basis. Thus, the amendments reflected the Government's policy intent to facilitate the rollout of the NBN and to put all providers on an equal footing — the amendments were not an instrument to provide a regulatory advantage to NBN Co over its competitors.

In practice, the two tests in the amended legislation mean that only NBN Co is authorised by Schedule 3 to install the facilities added by the amendments, as only NBN Co's network meets both tests. As a result, the amendments provide a material regulatory advantage to NBN Co that is not available to its competitors, and have done so over the past 10 years since their introduction.

From the information before the AGCNCO, the two-part test does, in practice, provide NBN Co with a competitive advantage over its competitors (whether national or sub-national in scale). It is also apparent that this regulatory advantage is the result of legislation intended to give effect to Government policy by facilitating the rapid rollout, at minimal cost, of the national broadband network (Australian Government 2011).

Thus, while the AGCNCO accepts that the 2011 amendments provide NBN Co with a material advantage over its competitors, that outcome was not the intent of the regulatory changes nor did it arise simply by virtue of government ownership. Accordingly, the AGCNCO considers that this advantage does not constitute a breach of regulatory neutrality by NBN Co.



Finding 4.4

The 2018 Low-impact Facilities Determination advantages NBN Co, but this is not a breach of regulatory neutrality by NBN Co

The *Telecommunications (Low-impact Facilities) Determination 2018* has the effect of providing NBN Co with a regulatory advantage not available to its competitors. However, that advantage is an outcome of regulation intended to facilitate the implementation of government policy, in particular the rapid rollout of the national broadband network at minimal cost. That advantage did not arise as a result of government ownership and does not constitute a breach of regulatory neutrality by NBN Co.

While this regulatory advantage does not constitute a breach of regulatory neutrality by NBN Co, it is at odds with CN policy more generally.

CN policy does not just require that government business activities do not have regulatory advantages as a consequence of their government ownership. It also states that, as far as practicable, they should operate in the same regulatory environment as their competitors (Australian Government 1996, pp. 18–19; TDoFA 2004, p. 28).

As the Determination, in practice, provides regulatory advantages to NBN Co but not to its competitors, there are grounds under CN policy for reassessing the need for the two-part test, with a view to extending that regulatory regime (and associated cost advantages) to NBN Co's competitors.

Revisiting this regulation would also be consistent with the review element of the National Competition Policy reforms,¹⁰ which was designed to identify and remove legislation that harmed competition.



Finding 4.5

The 2018 Low-impact Facilities Determination advantages NBN Co, and is contrary to the objective of competitive neutrality policy

The *Telecommunications (Low-impact Facilities) Determination 2018* is intended to facilitate the implementation of government policy, in particular the rapid rollout of the national broadband network at minimal cost. That Determination provides a regulatory advantage to NBN Co and, in doing so, establishes a regulatory regime that is not competitively neutral in its application.



Recommendation 4.1

Qualifying conditions for low-impact facilities should be reviewed

The qualifying conditions for determining which network providers are authorised to install certain low-impact facilities under the *Telecommunications (Low-impact Facilities) Determination 2018* should be reviewed, with a view to making the regulatory regime under that Determination neutral in its application to NBN Co and its competitors.

4.5 Allocation of spectrum

In its discussions with telecommunications companies about possible advantages NBN Co might have as a result of government ownership, the AGCNCO heard concerns about the allocation of spectrum in the 3.5 GHz band to NBN Co.¹¹ Those concerns were that NBN Co had benefited from the exclusive allocation of spectrum at below market cost and on favourable terms not available to other companies, and that this occurred only because it was a government-owned business. If this were the case, it could mean that NBN Co was accorded

¹⁰ CN policy was also one of the National Competition Policy reforms (PC 2005, p. XV).

¹¹ The complaint referenced the 3.4 GHz band. Prior to late 2020, the 3.4 GHz band was separated into two parts: the 3.4 GHz band which referred to the frequencies 3425–3492.5 MHz and 3542.5–3575 MHz; and the 3.5 GHz band which included the frequencies 3400–3425 MHz and 3492.5–3542.5 MHz. In late 2020, these two bands were combined into the 3.4 GHz band (3400–3575 MHz). The spectrum subject to discussion in this complaint was in the 3.5 GHz band. For clarity, this report refers to the spectrum subject to the complaint as the 3.5 GHz band.

a regulatory advantage through ‘preferred treatment by other agencies’ (i.e. the Australian Communications and Media Authority — ACMA), which may constitute a breach of CN policy (TDoFA 2004, p. 27).

Spectrum in the 3.5 GHz band provided to NBN Co has been subject to two government processes: first, through allocation of apparatus licences in 2015 and, subsequently, through the conversion of those apparatus licences to spectrum licences in 2021. The AGCNCO has investigated the process by which the spectrum was allocated, and the price paid by NBN Co for the spectrum in each case and the terms of those payments.

2015 apparatus licences

In April 2015, NBN Co was accorded exclusive access to 75 MHz of apparatus licences in the 3.5 GHz band. Apparatus licences in the band were subsequently issued to NBN Co in 2016 and 2018.

The process of providing NBN Co access to these licences was initiated through the *Australian Communications and Media Authority (3.5 GHz frequency band) Direction 2014*. This Ministerial Direction required ACMA to undertake ‘all steps necessary to enable apparatus licences of a type which would be appropriate for use for the NBN ... to be issued in respect of the relevant spectrum’ (Turnbull 2014).¹²

The process of issuing these licences appears to be consistent with the relevant sections of the *Radiocommunications Act (1992)* in force at the time.¹³

Radiocommunications assignment and licensing instructions, specifically RALI MS39, were developed to establish the rules to licence and coordinate frequency between services in the 3.5 GHz band. The rules established that licences could only be issued in the 3.5 GHz band and nominated areas if they are to be used for the NBN. As NBN Co was the sole provider of the NBN at that stage, that rule effectively provided NBN Co with exclusive access to apparatus licences in the band. This exclusive access provided NBN Co with a valuable advantage, allowing them to rely on the unpriced option to use the licences in that band when required. It also may have imposed a cost on competitors as they were excluded from accessing spectrum in that band.

ACMA has told the AGCNCO that ‘RALI MS39 was developed to give effect to the 2014 Ministerial Direction to enable apparatus licences of a type that would be appropriate for use for the NBN and to support the communications policy objectives of the Commonwealth Government with regard to the NBN’ (ACMA, pers. comm., 6 September 2021).

RALI MS39 intended to give effect to Government policy by facilitating the rollout of the NBN. The advantage to NBN Co from RALI MS39 and the exclusive access to apparatus licences in the 3.5 GHz band were, therefore, a result of facilitating government policy rather than a result of NBN Co’s government ownership status. Accordingly, the AGCNCO is satisfied that the allocation of apparatus licences to NBN Co in 2015 did not arise simply by virtue of government ownership and, as such, did not constitute a breach of the regulatory neutrality requirements of CN policy.

The 2014 Ministerial Direction also required ACMA to determine ‘an amount of tax that reflects a market price in respect of a transmitter licence for the relevant spectrum’. Once determined, the fees and taxes paid for apparatus licences were set in the *Radiocommunications (Transmitter Licence Tax) Determination 2015* (ACMA 2016).

¹² Relevant spectrum defined as: ‘from 3400 MHz up to and including 3425 MHz; and from 3492.5 MHz up to and including 3542.5 MHz’ — the frequency band referred to as the 3.5 GHz band in this report (Turnbull 2014).

¹³ There have been several revisions to the *Radiocommunications Act (1992)* between 2014 and this report being prepared. The AGCNCO has referred to the version of the Act that applied when the decisions were made. The relevant version for this section can be found at www.legislation.gov.au/Details/C2015C00143.

The tax set for PMTS Class B licences (those issued to NBN Co) was equivalent to the price used for similar spectrum assessed in 2012.¹⁴ ACMA determined there had been no market transactions that would change the 2012 assessment of the value of the spectrum. In a submission to the draft 2014 Ministerial Direction, Optus stated that the tax for the apparatus licences should not be any lower than the 2012 price (Smith 2014). Other submissions did not address the value of taxes to be set.

However, the actual proposed taxes for the apparatus licences were not subject to wide consultation, with NBN Co the only party consulted on the proposed taxes for PMTS Class B licences. Other changes to the apparatus licence fee schedule were subject to public consultation.

Despite the lack on consultation on proposed taxes for the apparatus licences, NBN Co was subject to taxes as listed in the apparatus licence fee schedule — as would be the case for any other business — which were equal to prices paid by private market participants in 2012. Accordingly, the AGCNCO considers that the approach to pricing NBN Co's apparatus licence taxes does not constitute a breach of CN policy.

2021 spectrum licences

In 2021, following a review of spectrum allocation arrangements in the 3.5 GHz band, the apparatus licences held by NBN Co were converted to spectrum licences. The conversion of licences was part of a broader spectrum management process with two objectives: first, to improve the efficiency of spectrum allocation in the band by enabling defragmentation of holdings; and second, to allow NBN Co to surrender spectrum holdings in inner-metropolitan areas that were not required to deliver fixed-wireless services in outer-metropolitan areas (the original purpose of the apparatus licence allocation). The inner- and outer-metropolitan areas were grouped together in the apparatus licences held and paid for by NBN Co under the initial arrangements stemming from 2015. Subsequent to the conversion to spectrum licences, the inner-metropolitan spectrum licences were surrendered by NBN Co.

The AGCNCO has considered the process by which the apparatus licences were converted to spectrum licences, the price set for the spectrum licences and the payment terms provided to NBN Co for those licences.

The *Radiocommunications Act (1992)*¹⁵ set out requirements for converting apparatus licences to spectrum licences. Under the Act, ACMA must offer the apparatus licensee a replacement spectrum licence and issue the spectrum licence if the offer is accepted. This process was followed in respect of NBN Co's apparatus licences in the 3.5 GHz band. The spectrum licences issued to NBN Co were given an expiry date of 13 December 2030 to align with the expiry of other licences in the band.¹⁶ As this conversion was in accordance with general practice applicable to all spectrum holders, the AGCNCO does not believe there was any breach of CN policy in the conversion of the apparatus licences to spectrum licences.

Radiocommunications (Spectrum Access Charges — 3.4 GHz Band) Direction 2020 sets the spectrum access charges (SAC) payable by NBN Co for spectrum licences in the outer-metropolitan areas at a total of \$57 146 840, payable either upfront or in 10 equal annual instalments that sum to the total.

The explanatory statement to the Direction (Fletcher 2020a) provided the following justification for the charges:

Regarding outer-metropolitan areas, the Minister has directed ACMA to set a SAC of \$57,146,840, assuming a licence period of nine years and six months. In giving the Direction, the

¹⁴ Explanatory statement to the *Radiocommunications (Transmitter Licence Tax) Determination 2015*, found at www.legislation.gov.au/Details/F2015L00322/Explanatory%20Statement/Text.

¹⁵ The relevant version of the Act can be found at www.legislation.gov.au/Details/C2021C00046.

¹⁶ See *Radiocommunications (3.4 GHz Band) Spectrum Conversion Plan 2021* available at www.legislation.gov.au/Details/F2021L00337.

Minister recognises that NBN Co's fixed-wireless network delivered using this spectrum provides substantial public benefits. In conjunction with the Notice, this Direction accords with the overall object of the Act. The conversion of NBN Co's apparatus licences to spectrum licences in order to facilitate defragmentation will maximise, by ensuring the efficient allocation and use of the spectrum, the overall public benefit derived from using the radiofrequency spectrum. Providing NBN Co ongoing access to this spectrum for its fixed-wireless network, at a price which takes into account the public benefit of that use of the spectrum, also supports the Government's communications policy objective in relation to the provision of affordable, high-speed broadband access to Australians across the NBN multi-technology mix.

The (then) Department of Infrastructure, Transport, Regional Development and Communications consulted ACMA and NBN Co on the Direction.

Converting the total SAC to a per unit value allows for comparison with similar spectrum. The unit price of the outer-metropolitan spectrum is \$0.0879/MHz/pop. This is less than a third of the equivalent price for the inner-metropolitan spectrum (\$0.271/MHz/pop) and of the price for similar spectrum set through auction in 2018 (\$0.296/MHz/pop, set at auction for 125 MHz in the 3575 to 3700 MHz band).

If the outer-metropolitan spectrum licences were set using the same unit price as the inner-metropolitan spectrum licences, the cost would have been in the order of \$176 million (\$119 million greater than the price set). With the spectrum licences valid for nine years and six months, the apparent cost advantage to NBN Co arising from favourable spectrum pricing represents an ongoing benefit of some \$12.5 million a year until 13 December 2030.

The concerns of various telecommunications companies also extended to possible favourable payment terms provided to NBN Co.

The *Radiocommunications Act 1992* provides ACMA with the ability to determine the terms of payment for any spectrum charges by written instrument. ACMA advised the AGCNCO that they consider payment terms as part of the consultation process associated with spectrum allocation. ACMA noted that there have been other examples of payment by instalment offered for spectrum charges. For example, the 2021 spectrum auction for the 26 GHz band allowed successful bidders to pay spectrum charges in five equal instalments over four years (Fletcher 2020c).

Nonetheless, the AGCNCO notes that the terms offered to NBN Co appear to be more favourable than those offered to other companies — by allowing payments over a longer period and not including an interest element to the payments. However, the AGCNCO found that the value to NBN Co of those favourable terms are minimal (box 4.3).

Box 4.3 – Determining the value of favourable spectrum payment terms

The AGCNCO has estimated the value of the advantage provided NBN Co through favourable payment terms. That estimate is sensitive to the assumed discount rate.

The Commonwealth Office of Best Practice requires the calculation of net present values at an annual real discount rate of 7 per cent. However, the implied discount rate in the payment terms offered under the 26 GHz band spectrum was just 0.8 per cent. To overcome this discrepancy, AGCNCO has estimated the annual cost advantage using both the 0.8 per cent and 7 per cent rates.

- Assuming a discount rate of 0.8 per cent, the cost advantage is estimated at \$0.57 million per year.
- Assuming a discount rate of 7 per cent, the advantage is \$2.23 million per year.

Source: AGCNCO estimates; OBPR (2016).

While NBN Co has enjoyed lower than otherwise costs for spectrum allocated to it, the AGCNCO considers these relatively small cost advantages have been the result of actions by Government to facilitate government policy and are not advantages arising simply by virtue of government ownership. Accordingly, it considers the lower cost of spectrum enjoyed by NBN Co does not constitute a breach of regulatory neutrality under CN policy.

**Finding 4.6****Spectrum allocation and pricing for NBN Co did not breach regulatory neutrality**

The decision in 2015 to reserve spectrum only for the National Broadband Network and the spectrum pricing decisions taken in 2020 have provided NBN Co with a regulatory advantage not available to its competitors. However, that advantage is the result of implementing government policy, in particular the rollout of the National Broadband Network at minimum cost. The advantage did not arise simply by virtue of government ownership and does not constitute a breach of regulatory neutrality.

5. Competitive disadvantages

Competitive neutrality (CN) policy is based on the premise that government business activities should not enjoy net competitive advantages over their competitors simply by virtue of public sector ownership (emphasis added) (Australian Government 1996, p. 4).

The policy recognises that there can be both advantages and disadvantages of government ownership and that the role of the complaints mechanism (among other things) is to determine whether Government businesses have net competitive advantages arising simply by virtue of public sector ownership (Australian Government 1996, pp. 4, 6, 21).

Earlier chapters have considered whether NBN Co enjoys any competitive advantages of government ownership and, if so, what the value of those advantages might be.

However, to answer the question of whether NBN Co has any net competitive advantages resulting simply by virtue of its public ownership, the AGCNCO also needs to determine whether NBN Co suffers from any competitive disadvantages of government ownership and, if so, what the likely value of those disadvantages might be.

NBN Co argued that it faced several competitive disadvantages. The most significant of these was the cost of the annual losses it incurred as a consequence of its construction and operation of non-commercial fixed-wireless and satellite network services — services that its government owner has mandated it provide. In addition, NBN Co stated that it faced other material disadvantages arising from:

- its obligation to connect all premises within its fixed-line network
- line-of-business restrictions
- ACCC-determined Points of Interconnect
- a requirement to prioritise regional areas in the national broadband network (NBN) rollout
- a requirement to adopt uniform national wholesale pricing and being subject to uniform national price caps
- its status as Infrastructure Provider of Last Resort (IPOLR) and Statutory Infrastructure Provider (SIP).

NBN Co's shareholder departments also identified most of these areas (excepting the obligation to connect and its IPOLR and SIP status) as sources of competitive disadvantages for NBN Co.

The following sections assess whether these areas qualify as competitive disadvantages of government ownership and, in some cases, explore the costs they impose on NBN Co.

That assessment finds that, of all these areas, only NBN Co's status as Statutory Infrastructure Provider constitutes a contemporary source of competitive disadvantage arising simply by virtue of government ownership. The other areas either do not give rise to current competitive disadvantages or, where they do impose costs on NBN Co, those competitive disadvantages do not exist simply by virtue of government ownership.

5.1 Fixed-wireless and satellite network services

From its inception, NBN Co's government owner has required it to provide fixed-wireless and satellite network services to regional and remote Australia at prices that fell well short of recovering the costs of those services (Conroy 2010a, pp. 6, 48; Wong and Conroy 2010, p. 1), and to fund the losses associated with providing those services via an internal cross-subsidy.

Securing the affordability of high-speed broadband services in high-cost areas has been an important element in the NBN policy framework. ... this objective is secured through NBN Co's commitment to uniform national wholesale pricing, supported by internal cross-subsidies from low-cost areas to high-cost areas, particularly to the fixed wireless and satellite networks in regional and remote Australia. (Vertigan et al. 2014a, p. 169)

The requirement to provide these services in this way was also to ensure that other Government policy objectives for the NBN ('speed and quality', 'coverage' and 'equity') were delivered to regional and remote Australia (Conroy 2010a, p. 47).

As NBN Co has argued in this and a previous CN complaint investigation, these losses have major implications for its ability to earn a commercial rate of return (AGCNCO 2011, p. 33). Putting a figure on the extent of these losses, though, has proven difficult.

While the previous (2011) complaint investigation was unable to quantify those losses, events since then provide an insight into their scale and significance. Those events are the Government's response to the Vertigan report, which led to a request for the then Bureau of Communications Research (BCR) to identify the net costs of providing non-commercial fixed-wireless and satellite services and to develop a sustainable model for funding those loss-making services. That work, augmented and updated by the ACCC in 2020, in turn crystallised into the Regional Broadband Scheme (RBS) levy (box 5.1) — a levy intended to make transparent the value of NBN Co's opaque internal cross-subsidy of its fixed-wireless and satellite network losses and to ensure sustainable funding for the provision of those services (Fifield 2017, p. 5).

Box 5.1 – The Regional Broadband Scheme levy

The Government established the Regional Broadband Scheme levy to ensure the transparent and sustainable funding for essential broadband services to regional, rural and remote Australians.

The scheme came into effect on 1 January 2021.

The scheme applies to all NBN-comparable networks. Under the scheme, carriers are initially required to pay \$7.10 per month for each premises on their network with an active high-speed superfast broadband service provided over a local access line. It is intended that carriers pay a levy for all premises serviced by fibre-to-the-premises, fibre-to-the-node, fibre-to-the-curb, fibre-to-the-basement and Hybrid Fibre-Coaxial networks. Other delivery modes are exempt from the levy.

The levy (which is indexed annually by the Consumer Price Index) is set at a level to fund the net present value of the total expected losses of NBN Co's fixed-wireless and satellite services (i.e. those losses between 1 July 2009 and 30 June 2040). The ACCC's *Report on modelling of the Regional Broadband Scheme levy initial base component* estimated these total losses (using an avoidable cost methodology for allocating costs) at \$12.949 billion.

Box 5.1 – The Regional Broadband Scheme levy

The ACCC's estimated value of these total losses is comprised of two amounts: past losses (between 1 July 2009 and 30 June 2020) of \$7.526 billion and forward-facing losses (between 1 July 2020 and 30 June 2040) of \$5.424 billion.

On the basis of these estimates, 42 per cent of the levy is aimed at funding the cost of current and future NBN Co losses from delivering non-commercial fixed-wireless and satellite network services.

Source: ACCC (2020b), DITRDC (2020).

Accordingly, the AGCNCO has drawn on the RBS levy forecast from the Department of Infrastructure, Transport, Regional Development and Communication's *Portfolio Budget Statements for 2020-21* to give an insight into the scale of NBN Co's annual cross-subsidy of its fixed-wireless and satellite services.

Those statements indicate a total levy for the 2021-22 financial year of around \$750 million (DITRDC 2020c, p. 70): comprised of a component for past losses (58 per cent) and expected future losses (42 per cent) (ACCC 2020b, p. 2). These proportions assign a value of some \$315 million for NBN Co's forward-facing losses for its 2021-22 financial year.

However, this estimate is fraught on a number of counts (box 5.2).

Box 5.2 – Translating levy components into annual losses is fraught

The ACCC's 2020 estimates of the Regional Broadband Scheme (RBS) levy base component were not estimates of NBN Co's annual losses associated with fixed wireless and satellite services. Rather, the report provided the estimated net present value (NPV) of past losses over 2009–2020 and the NPV of future losses over 2020–2040.

Using a ratio of the NPVs of past and future losses (calculated from a stream of losses over the 2009–20 and 2020–40 periods) as a proxy for calculating losses (and a corresponding cross-subsidy) in any single year is open to criticism.

In addition, the ACCC's RBS levy calculation is based on cash flow modelling rather than economic cost modelling. Because the levy is calculated as the NPV of historical and forecast losses, the dollar magnitude of RBS levy 'cross-subsidy' revenue in a given year does not correspond to a matching 'loss' in that year. The cross-subsidy in a given year may only be considered as a contribution to the recovery of a pool of intertemporal losses.

NBN Co provided estimates of the scale of its annual cross-subsidy of its loss-making fixed-wireless and satellite services that indicated those losses were in the order of hundreds of millions of dollars a year. Other estimates, from the (then) Bureau of Communications Research, show cumulative negative operating cash flow of up to ~\$5.3 billion between FY2011 and FY2021 (BCR 2015, p. 10). Those estimates indicate annual average losses over that period of around \$480 million (in 2014 prices).

By any measure, it is apparent that NBN Co's obligation to provide fixed-wireless and satellite network services — as directed by its government owner — has forced it to incur significant annual losses on these services in the order of hundreds of millions of dollars annually. Moreover, as it is inconceivable that private owners of a business providing the NBN would direct that business to enter a non-commercial market and

incur losses in the hundreds of millions of dollar annually, or to direct it to prioritise entry into that market, the AGCNCO considers the losses NBN Co incurs in providing these services are losses that arise simply by virtue of its government ownership.



Finding 5.1

Losses incurred by NBN Co on its fixed-wireless and satellite network services are the consequence of its government ownership

NBN Co's provision and operation of a fixed-wireless and satellite network to serve regional and remote Australia has resulted in it incurring annual losses in this market of hundreds of millions of dollars. These losses are a direct consequence of the Government requiring the business it owns to meet the Government's policy objectives for the National Broadband Network. Thus, NBN Co's losses in this area are a consequence of its government ownership.

NBN Co argued its losses in this market are a significant competitive disadvantage for the company and the value of the losses should qualify as an offset against any competitive advantages of government ownership.

But, while it is true that NBN Co's fixed-wireless and satellite services incur substantial annual losses, this alone does not justify characterising those losses as a 'cost' and a significant competitive disadvantage.

Contrary to NBN Co's claim, these losses do not simply equate to a competitive disadvantage of equal value. From its inception, the expectation of Government was that the losses on NBN Co's non-commercial fixed-wireless and satellite services would be fully-funded via higher prices in its commercial markets (that is, through cross-subsidisation). Under those circumstances, NBN Co's losses from fixed-wireless and satellite services would be fully reimbursed to the extent that the higher prices in commercial markets did not erode NBN Co's market share.

However, as the Vertigan report made clear, changing circumstances rendered that original funding model unsustainable. Technological change and growing competition put at risk NBN Co's capacity to cross-subsidise its loss-making fixed-wireless and satellite services via charging higher prices in other markets. Those circumstances threatened to turn those losses into genuine costs and to disadvantage NBN Co compared with its competitors.

The introduction of the RBS levy addresses this concern by ensuring all carriers, including NBN Co, that provide an active high speed superfast broadband service over a local access line must contribute an amount (initially \$7.10 per premises per month) sufficient to offset NBN Co's losses on its fixed-wireless and satellite services. It is irrelevant that NBN Co makes much bigger contributions than other carriers; this reflects their market size.¹⁷ In effect, the levy eliminates the scope for NBN Co's competitors to undercut the higher prices NBN Co needs to charge to cover its fixed-wireless and satellite service losses. In doing so, the levy establishes competitive neutrality between the pricing of NBN Co and its competitors.

As the intent of the RBS levy is to provide the level of funds needed to compensate NBN Co for past and future losses incurred by its fixed-wireless and satellite services, these losses do not represent a cost and a

¹⁷ At present and for the foreseeable future, NBN Co is expected to be responsible for around 95 per cent of the levy, with the remaining 5 per cent paid by competing NBN-comparable wholesale networks (DITRDC 2021b). In the 2021-22 financial year, the levy is expected to amount to \$750 million — less some trivial administration expenses. This means that for 2021-22 around 5 per cent of that levy (about \$37.5 million) will be collected from other carriers and paid to NBN Co.

disadvantage of government ownership. Moreover, as such, the value of these losses does not qualify as an offset against any competitive advantages of government ownership.



Finding 5.2

The Regional Broadband Scheme levy is intended to fund the cost to NBN Co of losses associated with its provision of fixed-wireless and satellite network services

The costs of past and future losses associated with NBN Co's obligation to provide fixed-wireless and satellite network services to regional and remote Australia are met through the Regional Broadband Scheme levy, which is collected from fixed-line broadband providers, with the amount dependent on their customer base. The revenue raised through the levy is intended to be sufficient to fully compensate NBN Co's losses on those services and effectively eliminates any competitive disadvantages associated with the provision of those non-commercial services. As such, those losses do not qualify as a cost disadvantage of government ownership that can be appropriately offset against any competitive advantages of government ownership.

The shareholder departments, though, noted that it is not possible to be definitive about whether the levy will completely cover these losses over the longer-term, given the cap on charges included in the RBS legislation. The AGCNCO acknowledges this possibility, but notes that changing circumstances, particularly through technological change, could equally result in the levy being in excess of that needed to cover future losses.

NBN Co also drew attention to what it argued were design flaws in the RBS that had the potential to erode the aggregate level of levy proceeds. It gave the example of the scheme's exemption for carriers serving new developments of less than 2000 premises, which allows those carriers to cherry-pick market share from NBN Co in lucrative sub-markets. Similarly, it noted that technological change poses an ever-present threat to aggregate levy proceeds and that the current scheme does not adequately address such threats. As an example of this, NBN Co referred to 4G/5G fixed-wireless services provided to premises that are exempt from the levy, despite those services being marketed as direct substitutes for an NBN fixed-line service.

Uniti, too, raised concerns that the RBS levy is no longer fit for purpose. It noted that, as a result of unanticipated technological change over the period between the design of the levy (2016) and its implementation (2021), the scheme does not capture all of the services that are competitors to fixed-line broadband services. This, it argued, means the current scheme is no longer comprehensive and is at risk of delivering insufficient levy proceeds to cover NBN Co's losses from providing non-commercial fixed-wireless and satellite network services. In this regard, it echoed the concerns raised by NBN Co. Uniti also expressed concern that shortcomings in the scheme's design are distorting competition. It noted that a consequence of exempting certain non-fixed-line broadband network providers from paying the RBS levy (despite them providing services that compete with fixed-line broadband services) is that the levy has, in effect, become a tax on a specific technology (fixed-line broadband), to the competitive detriment of those businesses using this technology.

Thus, while the levy is intended to compensate NBN Co for the cost of losses associated with its fixed-wireless and satellite services, the AGCNCO acknowledges that changing circumstances could pose a threat to realising that goal. If the levy is at risk of being insufficient to cover such losses, then the scheme's design will need to be revisited — with a view to determining what changes to the levy or the scheme's design might be warranted to address that shortfall. Similarly, if the scheme's design is weakening competition this too adds weight to the need to review the scheme with a view to returning it to a fit-for-purpose instrument.

On this point, the AGCNCO notes that, in considering the introduction of the RBS levy, the Government of the day was cognisant of this risk:

The Government has committed to reviewing the Scheme on a regular basis. In the event that mobile broadband services become substitutable for fixed-line services, the Government would consider changing the funding base. ...

The legislation includes a requirement for a statutory policy review of the Scheme by the Department of Communications and the Arts within the first four years of the Scheme or as soon as practicable. If mobile broadband become increasingly substitutable for fixed-line high-speed broadband then the Department could initiate a review of the legislative arrangements. (Fletcher 2019, pp. 28–29)

and that the legislation under which the scheme was created provides for the scheme to be reviewed (Australian Government 2019b, p. 20). In addition, the AGCNCO notes that any reviews would have implications for the option discussed in chapter 2 — of replacing the levy with a Budget-funded community service obligation.

5.2 Obligation to connect all premises within its fixed-line network

As an indicator of some of the costs imposed on it, NBN Co drew attention to the costs associated with its obligation to connect all premises within its fixed-line network — costs for which it was not compensated and, it argued, partly explained why its whole-of-company rate of return was below what would otherwise be an appropriate rate of return.

NBN Co noted that there were a number of premises within its fixed-line networks that it is obligated to connect to the NBN, but that do not deliver revenue greater than the capex and opex incurred in doing so (NBN Co 2021d, p. 18). It argued that the loss from having to serve these non-commercial premises should be treated as a competitive disadvantage and be taken into account in considering whether NBN Co's overall rate of return is appropriate.

The underlying issue here (what constitutes a 'non-commercial' activity) has previously been considered by the BCR in its investigation and report on *NBN non-commercial services funding options* (2016). In a submission to that investigation, NBN Co noted that the provision of fixed-line services to some geographic locations is likely to be loss-making over the longer term, and to that extent should be deemed non-commercial (NBN Co 2015b, p. 7). In responding to that view, the BCR accepted that, at a disaggregated network level, there will be different costs for providing services within the fixed-line footprint, and fixed-line services to some premises within a network may be non-commercial. But, it also noted that the relevant benchmark for defining the commerciality of a network is the extent to which its operator is able to recover its costs over time (including an appropriate cost of capital) through revenues. In this regard, it noted:

... while some areas of the NBN fixed-line networks may also be loss-making, at an aggregate level the networks are projected to be commercial. (BCR 2016, p. 9)

Thus, although an assessment of the non-commerciality of fixed-line services was not the focus of the BCR's report, the AGCNCO is guided by its position on what defines non-commercial services.

Accordingly, the AGCNCO considers that NBN Co's obligation to serve some non-commercial premises within a fixed-line network that is in aggregate projected to be profitable does not constitute a cost imposed on it or a competitive disadvantage.

**Finding 5.3**
NBN Co's obligation to connect all premises within a fixed-line network is not a competitive disadvantage of government ownership

NBN Co's obligation to connect all premises within a fixed-line network, which is in aggregate projected to be profitable, does not constitute a non-commercial undertaking and is not a competitive disadvantage of government ownership.

5.3 Line-of-business restrictions

The NBN Companies Act limits NBN Co to the supply of goods or services associated with its prime function as a supplier of wholesale telecommunications services. Those provisions in the Act restrict it from providing non-communications services and content services.

NBN Co stated that these restrictions mean it is unable to exploit economies of scope and synergies that would maximise profit and in some cases match competitor's product and service offerings (NBN Co 2021d, p. 22). A recent report by Frontier Economics provided a real world example of this:

NBN Co faces competition from Uniti Group, which is functionally separated and does not have any lines of business restrictions. The lines of business restrictions applying to NBN Co mean that Uniti can offer value added services to developers such as content (including free-to-air TV services) and non-communications services (such as in-building services) that NBN Co is prohibited from supplying. (Frontier Economics 2022b, p. 12)

Such restrictions have imposed, and will continue to impose, a significant competitive disadvantage on NBN Co. However, the issue for this investigation is not just whether such disadvantage exists, but whether it exists and whether it arises simply by virtue of government ownership. For line-of-business restrictions it would appear that this is not the case.

The Explanatory Memorandum to the NBN Companies Bill notes that such restrictions are, in effect, an inevitable extension of the Government's policy for the NBN to be a wholesale-only access network:

Consistent with NBN Co's wholesale-only mandate, the Companies Bill includes provisions to limit and focus NBN Co's business activities to the supply of goods or services, or investments, that are associated with its primary function as a supplier of wholesale telecommunications services. (Conroy 2010b, pp. 3–4).

Similarly, the Government's initial Statement of Expectations for NBN Co makes clear that these restrictions are the direct and inevitable consequence of the Government's policy to establish NBN Co as a wholesale-only entity in order to facilitate a competitive and well-functioning telecommunications sector (Wong and Conroy 2010, p. 2).

Thus, these restrictions would apply to any provider of the NBN, regardless of ownership, and are not simply the result of government ownership. Moreover, and as NBN Co itself recognised in its submission:

... matters that are 'the result of broader policy decisions of the Australian Government' are 'outside the realm of competitive neutrality policy and, thus, outside the remit of the AGCNCO to consider'. (2021d, p. 3)

Accordingly, it is not appropriate for the cost of these restrictions to be used to offset the value of any competitive advantages of government ownership when determining the net advantages arising as a result of that government ownership.



Finding 5.4

Line-of-business restrictions are not a competitive disadvantage of government ownership

The competitive disadvantage resulting from line-of-business restrictions on NBN Co are the result of Government policy that the National Broadband Network provider be a wholesale-only entity. That disadvantage stems from the Government's policy objective to facilitate a competitive and well-functioning telecommunications sector, and does not exist simply by virtue of government ownership.

5.4 ACCC-determined Points of Interconnect

NBN Co noted that its original, efficient network design was to have 14 Points of Interconnect (POI). However, following a request by the Government for the ACCC to review the number and location of initial POI that will best meet the long-term interests of end users, this design was amended by the ACCC to require NBN Co to offer services from 121 interconnect locations (ACCC 2010).

NBN Co argued that the amended POI design increased the network's build and operational costs and delayed the migration of customers to the NBN, with corresponding additional costs to NBN Co from foregone revenue streams:

This is a regulatory disadvantage that has been placed upon NBN Co solely as the national network operator. (NBN Co 2021d, p. 23)

NBN Co's shareholder departments also drew attention to the potential disadvantages the amended design imposed on the company:

NBN Co is bound by the Points of Interconnect restriction that empowered the ACCC to specify that NBN Co must offer services from 121 interconnect locations. This has had significant implications for how NBN Co has had to roll out the NBN and offer services on the network. (DITRDC and DOF 2021, p. 4)

However, neither NBN Co nor its shareholder departments provided a measure of the cost of this direction from Government.

The imposition of significant but unquantified costs on NBN Co arising from the Government's acceptance of the ACCC's amended design for the number and location of POIs is not, however, the core issue here. As with the line-of-business restrictions discussed above, the core issue is whether the disadvantages faced by NBN Co as a result of that amended design is a CN issue. In other words, do those disadvantages exist simply by virtue of government ownership?

The ACCC's recommended design was the outcome of a process instituted in response to a request from the Australian Government to determine the most appropriate number and locations of initial POI for the NBN to best meet the long-term interests of end-users (box 5.3) (ACCC 2010, p. 4). That request and the eventual adoption of the ACCC's recommendation for a network design with 121 POI reflected the Government's policy position on structuring the NBN in the long-term interest of end-users and the telecommunications industry, and not preventing effective retail competition (Wong and Conroy 2010, p. 7).

In this regard, the appropriate number and location of POI was a feature driven by system design considerations and unrelated to the ownership of the NBN provider.

Against this backdrop, the AGCNCO considers the additional costs imposed on NBN Co from the Government's adoption of the ACCC's alternative POI design do not represent disadvantages arising simply by virtue of government ownership. As such, it is not appropriate for the cost of these restrictions to be used to offset competitive advantages of government ownership when determining the net advantages arising simply by virtue of government ownership.

Box 5.3 – Long-term interests of end-users

The ACCC has spelled out what the Government's policy position on ensuring the long-term interest of end-users means in practice. In determining whether something promotes the long-term interests of end-users, subsection 152AB(2) of the Competition and Consumer Act requires the ACCC to only have regard to the extent to which the thing is likely to achieve the following objectives:

- promoting competition in markets for listed services
- achieving any-to-any connectivity in relation to carriage services that involve communication between end-users
- encouraging the economically efficient use of, and investment in, infrastructure by which services are supplied, and any other infrastructure by which listed services are, or are likely to become capable of being supplied.

Source: ACCC (2013).



Finding 5.5

Costs associated with the ACCC-determined Points of Interconnect are not a competitive disadvantage of government ownership

The additional costs and foregone revenue experienced by NBN Co from having to adopt the ACCC's network design of 121 Points of Interconnect are not disadvantages simply due to government ownership. Those disadvantages are the result of system design considerations necessary to realise the objectives of Government policies on structuring the National Broadband Network in the long-term interest of end-users and the telecommunications industry and on not preventing effective retail competition. They do not exist simply by virtue of government ownership.

5.5 Requirement to prioritise regional areas

From its inception, NBN Co has been subjected to its government-owner's expectations about how the company should go about implementing the NBN rollout. These expectations have been explicitly specified and communicated to NBN Co by its shareholder Ministers in a formal Statement of Expectations (with each Statement replacing the previous).

NBN Co noted that the initial (2010) Statement of Expectations drew attention to the Government's commitment to prioritise the NBN rollout in regional areas and to its implications for NBN Co's build:

In progressing the rollout, the Government expects that NBN Co will take into account the Government's commitment that fibre will be built in regional areas as a priority. (Wong and Conroy 2010, p. 3)

NBN Co argued that complying with this quasi direction from Government has imposed significant costs and contributed to lowering NBN Co's overall long-run rate of return:

This is because regional areas generally exhibit lower population densities and hence less tele-density meaning that they are higher cost to serve and drive less revenue relative to urban and metropolitan areas. This means that NBN Co has brought forward the expenditure of capex and delayed the generation of revenues which is the antithesis of normal commercial practice. Furthermore, these commercial losses are compounded by the fact that NBN Co must finance these additional losses over the longer term. (NBN Co 2021d, p. 23)

While the imperative to prioritise regional areas lessened in later Statements (box 5.4), and is in any case no longer needed now that the NBN is effectively built and fully operational (Fletcher 2020b), the AGCNCO accepts that NBN Co incurred substantial additional costs in responding to the expectations of its government owner in this regard.

Box 5.4 – Changing expectations for prioritising regional areas

The 2010 Statement of Expectations specified that, in progressing the NBN rollout, the Government expects that NBN Co will take into account the Government's commitment that fibre will be built in regional areas as a priority. The statement noted that this explicit direction and emphasis on prioritising regional areas reflected the Government's 'Commitment to Regional Australia' agreement reached with the Independent Members Mr Tony Windsor MP, and Mr Rob Oakeshott MP.

The 2013 Interim Statement of Expectations (issued by the then newly elected Liberal/National Party Government) made no mention of prioritising regional areas.

The 2014 Statement of Expectations partly resurrected the prioritisation of regional areas with a directive that NBN Co prioritise areas identified as poorly served by the Department of Communications' 2013 report on *Broadband Availability and Quality*, albeit with the caveat 'to the extent commercially and operationally feasible'. That 2013 report noted:

... the analysis found that there are areas of inadequate access to infrastructure across the country
... The premises in this category are typically located in regional or remote areas of Australia ... (p. 3)

The 2016 Statement of Expectations contained no specific directive on prioritising regional areas. Instead, it presented a more oblique direction and removed the imperative to prioritise a regional rollout by highlighting the need for NBN Co to behave commercially:

This statement provides nbn with flexibility and discretion in operational, technology and network design decisions (p. 1)

The Government is committed to completing the network and ensuring that all Australians have access to very fast broadband as soon as possible ... (p. 1)

[NBN Co] ... should pursue these objectives and operate its business on a commercial basis. In doing so nbn should be mindful of the following principles:

Box 5.4 – Changing expectations for prioritising regional areas

- **Rolling out the network:** When planning the rollout, nbn should prioritise locations that are poorly served, to the extent commercially and operationally feasible. (p. 1) [underline emphasis added]

In particular, the company should be engaging proactively with those in regional and remote Australia who have historically been at an access disadvantage. (p. 2)

This absence of any explicit direction and of emphasis on prioritising regional areas is replicated in the most recent (2021) Statement of Expectations, which notes with regard to regional and remote areas:

NBN Co will improve its wholesale services and assist in addressing access challenges in regional and remote areas. The Government recognises that, in meeting its obligations, NBN Co cannot generate a commercial return on all of its activities in parts of regional and remote Australia. It is expected the Company will support these activities through returns in other parts of its business, and contributions from the Regional Broadband Scheme. ... The Company will proactively engage with stakeholders and seek specific opportunities to improve outcomes in regional and remote areas. (p. 2)

Source: Birmingham and Fletcher (2021); Cormann and Fifield (2016); DoC (2013); Turnbull and Cormann (2013, 2014b); Wong and Conroy (2010).

However, as with the line-of-business restrictions and POI discussed earlier, the key issues here are whether disadvantages associated with prioritising regional areas exist simply by virtue of government ownership and whether those disadvantages qualify as costs that can be offset against the value of any competitive advantages of government ownership.

In this regard, the AGCNCO accepts NBN Co's position that prioritising those areas is the antithesis of normal commercial practice. Accordingly, the AGCNCO accepts NBN Co's claim that the prioritisation of regional areas is not something private owners would direct their business to pursue and that NBN Co's doing so is a direct result of its government ownership.

However, the AGCNCO does not accept that that prioritisation is currently generating competitive disadvantages of government ownership.

As noted earlier, the Government's direction to NBN Co that it prioritise bringing the NBN to regional Australia required it to provide fixed-wireless and satellite network services to those areas, albeit at prices that fell well short of recovering the costs of providing those services. That earlier discussion also notes that while this direction resulted in substantial losses in serving these areas, NBN Co was 'compensated' for those losses through being able to charge higher prices in some markets so as to provide the revenue needed to cross-subsidise those loss-making activities, and is now being compensated for those losses via the RBS levy arrangements.

Also, as noted in box 5.4, since 2014 that imperative has effectively been removed, and replaced by directions that NBN Co only prioritise areas to the extent that it is commercially and operationally feasible. Moreover, now that the NBN is effectively built and fully operational (Fletcher 2020b), the cost to NBN Co of foregone revenue as a result of prioritising regional areas at the expense of serving metropolitan areas is no longer an issue.

Accordingly, it is the AGCNCO's view that those losses do not qualify as a cost disadvantage of government ownership that can be offset against any current competitive advantages of government ownership.

**Finding 5.6**
Losses associated with past directives to prioritise regional areas do not qualify as a current competitive disadvantage of government ownership

The losses and foregone revenue experienced by NBN Co as a result of prioritising regional areas in rolling out the National Broadband Network were a direct result of government ownership. But, since 2014, that imperative has been replaced by directions that NBN Co only do so to the extent that it is commercially and operationally feasible. This, together with the National Broadband Network now being built and fully operational and NBN Co being compensated under the Regional Broadband Scheme levy arrangements for losses from its fixed-wireless and satellite services, means that past directives to prioritise regional areas do not represent a source of current competitive disadvantage of government ownership.

5.6 Requirements for uniform national wholesale pricing and uniform national price caps

NBN Co stated that it had been required to adopt uniform national wholesale pricing and is currently subject to uniform national price caps (box 5.5). These two constraints, it argued, are just some of the many aspects of the regulatory framework it operates under that impose costs on it (NBN Co 2021d, p. 6). Its shareholder departments expressed similar views, noting that regulatory requirements such as being restricted to a wholesale-only entity considerably limit NBN Co's commercial activities and place significantly more costs on NBN Co in its operations than any advantages it receives as a result of government ownership (DITRDC and DOF 2021, p. 4).

However, despite the claim that these restrictions imposed significant costs on NBN Co, neither NBN Co nor its shareholder departments provided any quantification of the costs they imposed (or currently impose) on NBN Co.

Box 5.5 – National uniform wholesale pricing and national price caps

A core element of the Labor Government's initial policy objectives for the national broadband network (NBN) was that there be national uniform wholesale pricing for such services — a feature of the NBN regardless of whether its services were provided by NBN Co or other (privately-owned) broadband networks.

This meant that wholesale prices would be uniform for a given service within a technology footprint (for example, all 25 megabit per second services within a fixed-wireless area would have the same wholesale price).

Under this approach, NBN Co set a uniform wholesale price that contained an embedded cross-subsidy, whereby fixed-line users in high-value (mainly metropolitan) areas would pay more than it cost to service them and that, in turn, would fund the capex and opex of the NBN in 'non-commercial' areas. (The cross-subsidy to NBN Co's fixed-wireless and satellite services being the most obvious example of this.)

However, on 11 December 2014, the Coalition Government — in response to the final Vertigan report — announced that NBN Co's national uniform wholesale pricing obligation would be replaced with uniform national wholesale price caps.

Box 5.5 – National uniform wholesale pricing and national price caps

This change, the Government stated, would provide NBN Co with the flexibility to adjust prices on a non-uniform basis but would also ‘... ensure the price of the NBN cannot rise in either urban or regional areas’. The Government’s subsequent policy paper setting out its framework for regulatory reform in the telecommunications sector (the *Telecommunications Regulatory and Structural Reform paper*) confirmed that ‘... price caps will not increase NBN wholesale prices in either urban or regional areas above the current levels approved by the ACCC in the [Special Access Undertaking]’.

This change has led to the current situation where NBN Co’s pricing is set with the view to, among other objectives:

Maintain a national wholesale access pricing structure across similar technology types. [Although] ... that pricing will vary depending on the access technology type (**nbn**TM Fixed Line, Fixed Wireless or Sky MusterTM satellite).

Source: Australian Government (2014b); Conroy (2010b, p. 47); NBN Co (2021c); Turnbull and Cormann (2014a); Vertigan et al. (2014).

Notwithstanding these claims, the AGCNCO has determined that these restrictions do not represent competitive disadvantages that arise simply by virtue of government ownership.

With regard to uniform national wholesale pricing, it is clear that being subject to this imperative fundamentally constrained NBN Co’s ability to vary prices in different markets in order to best meet its commercial interests. It meant that prices in metropolitan areas had to be set above costs and higher than would otherwise be the case. As the Vertigan report has noted, this situation encouraged competition in metropolitan areas and, given the high price elasticity of demand for high speed broadband, discouraged consumers from migrating to the NBN (2014a, p. 20). Both scenarios imposed additional costs on NBN Co, although this restriction ceased in December 2014.

However, it was always the Government’s intent that uniform pricing for the NBN would apply, which would necessarily involve cross-subsidies from more lucrative markets in order to fund the provision of NBN services in non-commercial markets. For example, the *Explanatory Memorandum to the Amendment of the NBN Companies Bill 2010* and the Government’s initial Statement of Expectations for NBN Co state, respectively:

In broad terms the Government’s policy objectives for the provision of superfast broadband in Australia can be summarised as ensuring: ...

- there is national uniform wholesale pricing for such services (the ‘pricing objective’). (Conroy 2010b, p. 47)

In support of the Government’s objective of enabling uniform national wholesale prices, NBN Co will be required to charge access seekers uniformly for services across its network for all technologies and for the basic service offering. (Wong and Conroy 2010, p. 7)

Thus, this feature of the NBN was a means to realise the (then) Government’s policy objectives for the NBN — a feature that would have applied regardless of whether the NBN was provided by NBN Co or a privately-owned business. On that basis, any costs imposed by the uniform national wholesale pricing requirement are not costs resulting simply by virtue of government ownership.

With regard to uniform national price caps (set out in NBN Co's Special Access Undertaking (SAU) (NBN Co 2021h)), this constraint — announced (among others) in response to the Vertigan report — is also a means of meeting the Government's vision for the NBN:

NBN Co's current uniform national wholesale prices will be replaced with price caps ... (Turnbull and Cormann 2014a)

NBN Co itself has acknowledged this point, noting that these uniform national pricing and price caps are features of the regulatory environment it operates under, which is there to give effect to Government policy (NBN Co 2021d, pp. 5–6). Similarly, the shareholder departments have acknowledged that these are regulatory requirements intended to realise the policy objectives the Government was trying to achieve through its creation of the NBN (DITRDC and DOF 2021, p. 4).

Viewed in this light (as with national uniform wholesale pricing), these pricing constraints in the SAU do not exist simply by virtue of government ownership.

Moreover, the extent to which these caps impose any costs on NBN Co is moot for a number of reasons.

One is that the current SAU only applies to around 25 per cent of NBN Co's services (FTTP, fixed wireless and satellite), as it does not include the multi-technology mix technologies (FTTN, HFC, FTTC). Thus, for services delivered over those latter technologies, NBN Co faces no price caps and can potentially charge whatever it likes.

The second is that, in practice, NBN Co's prices tend to be set by the price a particular market can bear. The ACCC, for example, has noted that since the adoption of the SAU, NBN Co has typically chosen to develop product and pricing offers by way of discounts that sit outside the price control mechanism set out in the SAU. As a result, the maximum regulated prices in the SAU and the effective prices charged by NBN Co have diverged substantially (ACCC 2019, p. 23). Others, too, have noted this reality:

NBN's large (and growing) allowed regulatory value (the [Regulatory Asset Base] including [the Initial Cost Recovery Account]) means there is little regulatory constraint on NBN's current pricing. In fact, it is market constraints that are the primary concern in pricing. (Davis and Key 2019)

The special access undertaking (SAU) lodged by NBN Co with the ACCC ... sets out ... maximum prices for NBN access (AVC) and capacity (CVC). ... Increasingly, however, NBN Co has turned to discount notices that sit outside the SAU to vary its prices and develop new product constructs. (Pearce 2019)

Evidence that this is likely to continue to be the case is found in the Department of Infrastructure, Transport, Regional Development and Communications' *2020-21 Annual Report*, which noted:

In 2020-21, NBN Co maintained pricing well below regulatory pricing caps. (2021a, p. 105)

Thus, while the requirement to adopt uniform national wholesale pricing has in the past imposed significant costs on NBN Co, the present pricing restriction in the SAU from uniform national price caps is generally more theoretical than real. In practice, competition and consumers' willingness to pay means these caps rarely impose any constraints on NBN Co's pricing flexibility. The exception to this is when NBN Co, in discharging its Statutory Infrastructure Provider (SIP) responsibilities, is obliged to provide services that are subject to the price caps set out in the SAU where, by definition, there is no competition to provide those services. (This exception is discussed in the following section.)

Accordingly, the AGCNCO has determined that uniform national pricing and uniform national price caps are not competitive disadvantages arising simply by virtue of government ownership. As such, any costs

resulting from these restrictions do not constitute a competitive disadvantage of government ownership, and do not qualify as offsets in determining NBN Co's net competitive advantages of government ownership.



Finding 5.7

Costs associated with uniform national wholesale pricing and price caps are not a competitive disadvantage of government ownership

The application of past uniform national wholesale pricing and current national price caps to NBN Co's operations are the result of Government policies guiding the provision of the National Broadband Network, which would apply to any provider, regardless of its ownership. Thus, the costs of these restrictions do not qualify as a competitive disadvantage arising simply by virtue of government ownership.

5.7 Status as Infrastructure Provider of Last Resort and Statutory Infrastructure Provider

Prior to 1 July 2020, the Government's Telecommunications Infrastructure in New Developments (TIND) policy made NBN Co the Infrastructure Provider of Last Resort (IPOLR) in those developments covered by that policy. After that date — when the SIP legislation came into effect — NBN Co became the default SIP for all areas of Australia, as well as for those areas covered by the TIND policy.

A result of these obligations, NBN Co argued, is that it must build, connect and supply an eligible service upon reasonable request, even in areas where it is non-commercial to do so. In addition, NBN Co noted that it 'is not compensated by Government for performing these significant social policy obligations' and that 'No private sector organisation is required to meet those types of obligations' (2021d, p. 12).

Industry Provider of Last Resort

The IPOLR obligation was imposed on NBN Co in 2010:

On 20 June 2010, the Government indicated that in new real estate developments NBN Co will be the infrastructure provider of last resort. (Conroy 2010b, p. 53)

This obligation was a vehicle to achieve the Government's policy objectives for the NBN — in particular that consumers have access to high-quality superfast broadband services (the 'speed and quality objective') and that superfast broadband services are available nationally (the 'coverage objective') (Conroy 2010b, p. 47).

NBN Co's IPOLR status was included in the Government's 2010 Statement of Expectations for NBN Co, and reaffirmed in its various policies for telecommunications in new developments¹⁸ and 2016 Statement of Expectations (Australian Government 2015; Turnbull and Cormann 2016, p. 1; Wong and Conroy 2010, p. 3).

That status, though, was not solely assigned to NBN Co:

NBN Co remains the infrastructure provider of last resort (IPOLR) in developments with 100 lots or more within its fixed line footprint. Telstra remains the IPOLR in developments with fewer than 100 lots and in developments outside the NBN fixed line footprint. (Australian Government 2015, p. 5)

¹⁸ Includes the original 2011 Fibre in new developments policy and the later Telecommunications in new developments policies (2014, 2015, 2020).

A non-NBN or non-Telstra network operator servicing a development will take on the role of primary IPOLR and be responsible for all premises within the footprint it has been contracted by the developer to service. This will be a condition of the proposed carrier licence conditions to be put in place for carriers servicing new developments. (Australian Government 2015, p. 20)

(As the NBN Co fixed line rollout expanded, Telstra's IPOLR responsibilities reduced to only cover developments in the NBN Co wireless and satellite areas (Telstra 2015, p. 4).)

That IPOLR status did, though, mean that only NBN Co was required to provide infrastructure on what could be a non-commercial basis, and incur losses or sub-normal profits in the process (for which it was not compensated for by Government). This situation arose as a result of general price caps within its SAU and specific provisions within the TIND policy, both of which constrained NBN Co's ability to set prices to recover costs. The TIND policy, for example, specified that:

In its role as IPOLR, NBN Co will levy the charges set out in the table on page 4 when it services new developments. These charges are not binding on any other provider. (Australian Government 2014a, p. 16)

In its role as IPOLR, NBN Co will levy the charges set out in the table on pages 10 and 11 when it services new developments. These charges are not binding on any other provider. (Australian Government 2015, p. 22)

The most notable of the TIND policy constraints on pricing were a limit of up to 50 per cent on backhaul costs up to \$1000 per premise and setting a cap on wireless/satellite contributions per premise of \$1300 for a single-dwelling unit and \$1100 for a multi-dwelling unit.

However, as NBN Co and the shareholder departments have not quantified the scale of its losses resulting from its status as provider of last resort, it is difficult to assess the materiality of those costs.

Nonetheless, as information from NBN Co indicates that the losses associated with its IPOLR obligation were heavily concentrated in developments of less than 10 premises, the AGCNCO has tried to put the materiality of these costs into context (box 5.6). Drawing on public information on the number and size of new developments served by NBN Co it is likely that NBN Co's IPOLR status in the last year of its operation (to 30 June 2020) would have resulted in it serving a total of some 2500 premises in developments of less than 10 premises. The AGCNCO considers that the cost to NBN Co arising from its IPOLR status across all developments in that year would have been relatively modest, with an upper bound unlikely to be in excess of \$10 million.

Whatever those costs might be, though, it is clear that they were the result of Government policy for the rollout of the NBN, particularly with regard to new developments, which constrained NBN Co from pricing at levels necessary to fully cover their costs. It is also clear that, while IPOLR status has not been confined solely to NBN Co as a government-owned business, private businesses with IPOLR status were not constrained from pricing to cover their costs and thus, not forced to incur losses in meeting their IPOLR obligations.

Accordingly, in the absence of any Government compensation for some or all of those losses, the AGCNCO has determined that the costs NBN Co incurred as a result of its IPOLR status in new developments were a competitive disadvantage arising simply by virtue of its government ownership. However, as the IPOLR regime was superseded by the SIP regime in 2020, those IPOLR costs are not relevant to any assessment of NBN Co's current net competitive advantages resulting from its government ownership.

Box 5.6 – Estimating the potential cost to NBN Co of its IPOLR status

Public information on both the number and size of new developments that NBN Co has serviced is only available for the 4-year period to June 2015 (DITRDC 2016). That information shows that of the 6003 new developments that NBN Co serviced over that period, 639 (10.6 per cent) of these were for less than 10 premises. Compared with the total number of premises served in those 6003 new developments (251 996), the premises served in these small and likely commercially unattractive developments constituted less than 1.5 per cent of the total premises served.

Public data on the rollout of the NBN show that in the year to 30 June 2020 (the last year of IPOLR responsibilities), NBN Co made 177 184 premises in new developments ready to connect to the NBN (NBN Co 2022d, p. 3), at an overall average cost per premise of around \$2100 (NBN Co 2020c, p. 55). Assuming the proportion of premises in developments of less than 10 premises to total premises was roughly the same as that indicated by the data to June 2015 (i.e. less than 1.5 per cent), these data suggest that those small developments in the year to 30 June 2020 contained some 2500 premises.

On this basis, assuming a worst case scenario that all premises in developments of less than 10 were served under IPOLR obligations and at an average loss of \$2000 as a result of the then Telecommunications and New and Developments policy caps on pricing per premise, the AGCNCO considers the annual losses incurred by NBN Co as IPOLR are likely to have been relatively modest and would have been unlikely to have exceeded \$10 million across all developments in the final year of its IPOLR status.

Source: DITRDC (2016); NBN Co (2020c, 2022d).



Finding 5.8

NBN Co's losses arising from being the Infrastructure Provider of Last Resort for new developments were a competitive disadvantage of government ownership

Losses arising from NBN Co's status as Infrastructure Provider of Last Resort for new developments were a competitive disadvantage of government ownership.

Statutory Infrastructure Provider

The *Telecommunications Legislation Amendment (Competition and Consumer) Act 2020* introduced a SIP regime covering all of Australia. The obligations for SIPs under that regime are set out in Part 19 of the *Telecommunications Act 1997* (summarised in box 5.7). The SIP regime commenced on 1 July 2020, with a register of all SIPs maintained on the ACMA website (ACMA 2022).

That regime is part of a new Universal Service Guarantee covering broadband as well as voice. The regime imposes a legislative requirement on NBN Co and other wholesale network carriers to connect premises to their network(s) and supply wholesale broadband services on reasonable request to end users via their Retail Service Provider. In doing so, the regime is intended to realise the Government's policy objectives for the NBN, particularly the 'speed and quality objective' and the 'coverage objective' (Conroy 2010, p. 47; Fifield 2017, p. 7).

The new regime established NBN Co as the SIP for areas it has declared ready for service and, from December 2020 (when the NBN was declared built and fully operational), the default SIP for those areas

where no other network carrier has been declared as the SIP. These responsibilities were in addition to establishing its SIP status with respect to new developments (as outlined in the 2020 TIND policy — which was effectively a continuation of its IPOLR status in those areas as set out in earlier TIND policies).

Box 5.7 – Key Statutory Infrastructure Provider obligations

A Statutory Infrastructure Provider (SIP) must connect all premises in its network footprint following a reasonable request from a retail service provider. It must also supply wholesale services that allow that retail service provider to deliver a high speed broadband service to consumers. SIPs will be expected to connect premises to a high speed fixed-line network.

However, where this is not reasonable, a SIP will be able to connect premises to a high speed fixed wireless or satellite broadband network. The wholesale services SIPs supply must meet reference standards.

Source: DITRDC (2020b).

As noted, NBN Co has claimed that these SIP obligations mean that NBN Co must build, connect and supply an eligible service upon reasonable request even in areas where it is non-commercial to do so, but it is not compensated by Government when it incurs a loss in meeting these obligations. NBN Co, however, did not provide the AGCNCO with any estimates of the scale of the losses it is forced to incur as a result of these SIP obligations.

In assessing this claim the AGCNCO notes that the losses NBN Co is referring to arise from its SIP status in two different areas and under two different regimes. These are its SIP obligations across Australia generally (where it faces price caps under its SAU) and its SIP obligations in new developments (where it faces maximum charges and caps under the 2020 TIND policy, as well as the price caps under its SAU). Each of these is considered below.

NBN Co's SIP obligations across Australia generally

As the SIP for areas it has declared ready for service and the default SIP for all other areas of Australia, NBN Co can potentially be forced to incur losses in meeting its SIP obligations. This can occur if the price caps set out in the current SAU constrain its ability to price to fully cover its costs when doing so, or if those obligations can only be met by using non-commercial fixed wireless or satellite services.¹⁹ This potential exists because the legislation specifying circumstances under which a SIP can refuse to connect premises or supply eligible services has no provision for an exemption on the grounds that it is not commercial to do so (Australian Government 2021).

However, private SIPs are not subject to pricing constraints in meeting their SIP obligations and, thus, are not compelled to incur losses in doing so (and nor would they accede to do so). In view of this, the AGCNCO considers that the losses that NBN Co incur from meeting their general SIP obligations are a result of its government ownership. Accordingly, the value of those losses (where they are not compensated by Government) constitutes a competitive disadvantage of government ownership. As such, the value of those

¹⁹ Those price caps and any associated losses will only apply to services provided via FTTP, fixed wireless or satellite — as only these technologies are covered by the SAU.

losses should be used to offset any advantages of government ownership enjoyed by NBN Co when determining its level of net competitive advantages of government ownership.

NBN Co's SIP obligations in new developments

NBN Co has also been designated as SIP for new developments — a function that essentially replicates its previous role as IPOLR in new developments (a role specified in pre-2020 TIND policies).

Other carriers, too, have been designated as SIPs for new developments where they have a contract to install telecommunications infrastructure, and complete construction after 1 July 2020. In addition, the Minister can 'designate' some SIPs and SIP areas (for example, where a superfast network was already in place prior to the legislation commencing) (DITRDC 2021b).

However, those private SIPs are not constrained in their ability to price to cover their costs, as is NBN Co to the extent that generally applicable price caps in the SAU apply to its operations in new developments and as a result of specific price caps set out in Annex A in the 2020 TIND policy:

... NBN Co is entitled to charge and is expected to do so, even when acting as the default SIP. The charges NBN Co may charge are set out in Annex A. ... NBN Co may charge below the amounts in Annex A if warranted by competitive and commercial forces, but it is not able to charge above them; that is, the charges operate as caps. (Australian Government 2020a, p. 9)

Moreover, the cost to NBN Co of being constrained in its ability to price to fully cover its costs is compounded by additional technical obligations that it is subject to under the 2020 TIND policy (box 5.8).

Box 5.8 – Additional technical obligations on NBN Co as Statutory Infrastructure Provider in new developments

While private SIPs are required to provide a technology platform that enables the carrier to supply wholesale services to retail providers that will then allow those providers to supply broadband services to end-users with peak download speeds of at least 25 Mbps and peak upload speeds of at least 5 Mbps, this is not the case for NBN Co.

NBN Co is subject to an additional statutory target that its fixed-line networks be capable of being used by retail providers to supply broadband fixed-line carriage services with peak speeds of at least 50/10 Mbps to 90 per cent of premises serviced by the networks.

Source: Australian Government (2020a).

These constraints (from SAU price caps and Annex A of the 2020 TIND policy) mean NBN Co may be forced to incur losses in meeting its SIP obligations in new developments.

Thus, although the genesis for the SIP regime was to support the Government's coverage and pricing policy objectives for the NBN, and both government and private businesses are designated SIPs, only NBN Co is subject to constraints on pricing to cover its costs. Accordingly, the AGCNCO considers that NBN Co's losses associated with meeting their SIP obligations in new developments do arise simply by virtue of government ownership. As a result, the AGCNCO accepts that the value of those losses (where they are not compensated by Government) constitutes a competitive disadvantage of government ownership. It is appropriate, therefore, that the annual value of those losses should be applied to offset any advantages of

government ownership enjoyed by NBN Co when determining the level of net advantages of government ownership it might have.



Finding 5.9

Uncompensated losses incurred by NBN Co as a result of its Statutory Infrastructure Provider status are a competitive disadvantage of government ownership

NBN Co's status as Statutory Infrastructure Provider (across Australia generally and for new developments specifically) results in it incurring costs that are not borne by private businesses with similar status. Those costs constitute a competitive disadvantage of government ownership.

However, public information is not available on the number and commerciality of connections and eligible services that NBN Co has delivered or is expected to deliver to meet its SIP obligations across Australia generally and in new developments specifically. This lack of information means the AGCNCO has been unable to quantify this disadvantage and determine the extent of its materiality.

Nonetheless, as a disadvantage of government ownership, NBN Co should quantify the scale of annual losses associated with the intersection of its SIP responsibilities and SAU and TIND policy constraints on its ability to charge prices sufficient to cover costs incurred in meeting those responsibilities. This will allow NBN Co to determine its level of net competitive advantages of government ownership and the corresponding level of CN adjustments payments it should make to the Official Public Account.

In doing so, NBN Co will need to be mindful of the extent to which losses arise from its use of fixed wireless and satellite technologies to meet its SIP obligations, and the extent to which these losses have already been accounted for under the RBS levy arrangements. If, for example, those particular SIP-related losses have already been factored into the ACCC's estimated forward facing losses that underpin the level of the RBS levy, then NBN Co is, in effect, already being compensated for those losses. Should this be the case, any SIP-related losses arising from the use of fixed wireless and satellite services would need to be excised from the total level of losses arising from NBN Co fulfilling its general SIP obligations.

However, if those SIP-related losses associated with using fixed wireless and satellite technologies have not been included in the ACCC's estimate of total expected forward facing losses then the value of those losses is a legitimate offset to competitive advantages elsewhere in NBN Co's operations. (When the ACCC or the relevant department responsible for communications policy undertake their first review of the scheme, as foreshadowed in the RBS legislation, they will need to take this issue into account in order to ensure that this disadvantage of government ownership is not being 'double counted'.)

To provide confidence in the quantification of this competitive disadvantage of government ownership and any corresponding adjustments to NBN Co's CN adjustment payments, the AGCNCO considers that NBN Co's quantification of these costs should be subject to independent verification. As indicated in this report's chapter on debt neutrality, the AGCNCO considers that either the ACCC or NCC would be suitable agencies to undertake this verification.

(While any losses incurred by NBN Co in fulfilling its default SIP obligations could be included in the Initial Cost Recovery Account and, thus, be potentially available for recovery through higher prices in the future, the AGCNCO considers the prospect of any such recovery is highly unlikely and this potential recovery would not qualify as 'compensation' in this instance.)

**Recommendation 5.1**

NBN Co should quantify the value of any losses it is compelled to incur as a result of its Statutory Infrastructure Provider status

NBN Co should calculate the value of any losses it is compelled to incur as a result of its Statutory Infrastructure Provider status. Those losses should be used as offsets in determining the value of any net competitive advantages of government ownership enjoyed by NBN Co and the corresponding level of competitive neutrality adjustments payments it should make to the Official Public Account.

This quantification should be subject to independent verification by the ACCC or NCC.

6. Earning a commercial rate of return

Competitive neutrality (CN) policy requires government businesses to earn a commercial rate of return on assets over a reasonable period:

[Government Business Enterprises] are specifically required to achieve, over time, as a minimum benchmark, economic rates of return on assets for their commercial operations equivalent to the long-term bond rate plus an appropriate margin for risk. (Australian Government 1996, p. 18)

The Government's *Competitive Neutrality Guidelines for Managers* expands on this:

Over time, government businesses should earn a RoR [rate of return] equal to the Commonwealth long-term bond rate, plus a margin for risk. In this way, the target RoR should be equivalent to the average RoR of the business's competitors.

Although the profit (or loss) earned may vary from transaction to transaction, a government business should earn a commercial RoR over a reasonable period and Budget-funded activities should not cross-subsidise other activities. (TDoFA 2004, p. 30)

It is against this background that OptiComm alleged that NBN Co's forecast rate of return of 3.2 per cent in its *Corporate Plan 2020–23* is — in the light of the risks NBN Co faces — one that falls well below the minimum economic return required by CN policy.

Stakeholders raised several possible rejoinders to OptiComm's claims.

First, NBN Co and others argued that NBN Co's overall commercial rate of return was not the relevant activity because OptiComm operates in a specific market — new developments — and in this sub-market, NBN Co earned a commercial rate of return. If (a) the costs of providing new developments market were sufficiently separable from NBN Co's other activities *and* (b) OptiComm's complaint related to that market, *and* (c) NBN Co did not provide any cross-subsidies to markets in which it faced competition *and* (d) NBN Co's obtained a commercial rate of return in this market, then NBN Co's activities in this market would meet the 'commerciality' test (though not the debt neutrality test as discussed in chapter 2). However, in its annual report, NBN Co noted that its business's cashflows cannot readily be meaningfully compartmentalised, which appears inconsistent with condition (a) above.

For assets that do not generate largely independent cash inflows, the recoverable amount is determined for the cash generating unit (CGU) to which that asset belongs. The Group's CGU is determined according to the lowest level of aggregation for which the cash inflows are independent of cash inflows from other assets. The Group has determined that assets which form part of the nbn™ access network, work together to achieve the delivery of products and services in order to generate cash inflows. As a result, the Group has determined that the ubiquitous broadband network is a single CGU (the NBN Co CGU). (NBN Co 2021c, p. 134)

Moreover, OptiComm's complaint related to the *entirety* of NBN's business, contrary to condition (b) above. Thus, regardless of whether or not a separate market can meaningfully be identified for new developments, the AGCNCO is obliged to address the actual complaint made to it, irrespective of the effect of any conduct by a government-owned business on the market in which the complainant's business is operating. This investigation is therefore a holistic test of commercial returns for NBN Co as an aggregate entity.

A second rejoinder was that if the disparity between NBN's rate of return on assets and a commercial return emanated from the disadvantages it faces, then adjusted for these disadvantages, NBN Co would be deemed to be making an adequate rate of return. Assessing this is complex, but has some merit in explaining the rates of return expected and earned by NBN Co, as discussed further below.

The following sections and appendix A:

- discuss the appropriate commercial rate of return for NBN Co (the 'commerciality test')
- compare NBN Co's forecast rate of return against this benchmark and consider other evidence about whether NBN Co has made a commercial rate of return from an *ex post* perspective
- re-assess the commerciality test from an *ex ante* perspective — in our view, the conceptually appropriate one — and its implications for CN.

To avoid any confusion, it is important to note that the threshold return test applied by the Australian Government to its equity investments in budget reporting (DoF 2022) is not the relevant benchmark for assessment of the required return under both CN policy and Commonwealth guidelines for governance and oversight of government business enterprises (DoF 2018). That threshold test relates to financial reporting by the Australian Government and only requires that, *ex ante*, the return is expected to be at least the rate of inflation (such that if this test is not met, the equity would be treated as a grant expense in the budget).

6.1 What is an appropriate commercial rate of return?

The Government (through its shareholder Ministers) have not specified any rate of return for NBN Co. Instead, during all stages in its construction and operation, successive Australian Governments have indicated that NBN Co should operate as a commercial entity (Birmingham and Fletcher 2021; Turnbull and Cormann 2014b; Wong and Conroy 2010, p. 2). In particular, the 2016 Statement highlighted the inherently commercial features of NBN Co:

nbn should ... operate its business on a commercial basis. In doing so nbn should be mindful of the following principles: ... nbn is a commercial entity operating in a market environment and can compete and innovate like other companies in this environment in accordance with legal and policy parameters.²⁰ (Turnbull and Cormann 2016, pp. 1, 2)

The latest Statement of Expectations reiterates this view:

The Government's objective is ... for NBN Co to operate as a sustainable, commercial business. (Birmingham and Fletcher 2021, p. 1)

While it did not specify an expected rate of return, the Australian Government did set a floor. Its objective at commencement was that '... the expected rate of return should, at a minimum, be in excess of current public debt rates' (NBN Co 2010, p. 12). As this includes no appropriate margin of risk, this floor rate of return would not be viable for a commercial entity and would not be sufficient to comply with CN policy.

²⁰ Policy parameters that include CN policy, as acknowledged by NBN Co in its *Annual Report 2020* (NBN Co 2020b, p. 103).

As set out in the CN Guidelines (TDoFA 2004) and an earlier methodology paper on measuring capital returns (CCNCO 1998b), there are several methods that can be used to assess the rate of return on assets.

Some approaches for assessing rates of return, such as the year-by-year rate of return on assets, are not meaningful for businesses that make large upfront investments ahead of any revenues. The problem in that case is that even a business returning a long-run commercial rate of return will make large losses on its assets in the (potentially prolonged) construction phase and then large positive returns on assets once construction is completed. Accordingly, snapshots of returns on assets — even over a few years — can be misleading and are not a useful measure of whether a business is earning a commercial rate of return.

In this investigation, the AGCNCO considers the most appropriate test for whether the business is earning a commercial rate of return is the extent to which the long-run cashflows of the business are sufficient to recover the cost of capital — measured as the weighted average of cost of capital (WACC). The WACC is a weighted combination of the return rates that a company must pay to private debt and equity holders for them to be willing to provide finance given the risks of the business (appendix A). The need to provide returns that meet the WACC has been explicitly acknowledged by NBN Co in its early business case:

The WACC is the true, but unobservable ex ante, cost to the firm of obtaining capital. It is the return that has to be generated, in expectation, to attract capital investment from equity and debt investors. (NBN Co 2010, p. 143)

There are multiple versions of the WACC (for example, in the degree to which they take account of the tax shield on debt and dividend imputation). The capital asset pricing model (CAPM) is the prime conceptual construct underpinning the functional form of the WACC.

An important insight of the CAPM for this investigation is that the cost of debt is influenced by all the risks faced by the business through a debt premium on the risk-free rate. That includes the idiosyncratic risks borne by the business, which for NBN Co includes the risks associated with delays in infrastructure builds, cost blowouts, overestimated demand, and competition from rival technologies (like 5G), and more general economy-wide risks (such as economic downturns). The absence of an appropriate debt margin to reflect these risks is the prime factor underpinning the failure of NBN Co to achieve debt neutrality (chapter 2).

Risks are also important for the willingness of equity holders to provide finance, but under the CAPM, the relevant risks are only those that cannot be diversified by holding a broad portfolio of assets across the economy. The AGCNCO has considered these various risks in its estimates of the WACC for NBN Co, as have other parties.

There are three broad ways in which we have assessed the appropriate WACC for NBN Co:

A bottoms-up approach to the WACC

This approach derives the WACC from estimates of the key parameters from the CAPM. This has the advantage that it can consider specific aspects of NBN Co that contribute to its overall cost of capital, such as its debt premium. Appendix A provides the evidence underpinning the AGCNCO's estimates using this approach.

Deriving the WACC from risk broad-banding

Broad-banding is a rule of thumb measure that can be useful when there is insufficient knowledge about some key WACC parameters, but where the analyst has a reasonably informed view about the overall riskiness of the business. The CN Guidelines and other advice on required rates of return (CCNCO 1998b, pp. 10–11; TDoFA 2004, p. 30) specify three broad risk strata — low risk (the risk-free rate plus 3 percentage points), medium risk (the risk-free rate plus 5 percentage points) and high risk (the risk-free rate plus

7 percentage points), where the risk-free rate is proxied by the long-term (10-year) Australian Government bond rate, and the risk premium takes account of the debt premium and any non-diversifiable risks (as described above). The TDoFA guidance suggested that the margin of error in estimated WACCs for government businesses are greater than for private listed entities, which, partly justifies broad-banding as a rule-of-thumb method. In practice, the ACCC has adopted a broad-banding approach in its determination of the WACC to apply to NBN Co's regulatory asset base (see below) under the Special Access Undertaking (SAU) (ACCC 2013c, p. 98). Similarly, the Vertigan report's cost-benefit analysis of NBN Co's investments recommended three options for the WACC in discounting cash flows (Vertigan et al. 2014b, p. 64).

Using insights from the rate of return on equity

The rate of return on equity provides insights into the WACC and is a valuable measure in its own right.

As the cost of equity is one component of the WACC, independent estimates of its value combined with estimates of the cost of debt and leverage provides another insight into the magnitude of the WACC. The AGCNCO's assessment of the cost of equity from a bottom's up approach was between 11 per cent (2010-11) and 5.6 per cent (2020-21) (appendix A). The Department of Infrastructure, Transport, Regional Development and Communications has independently estimated long-term rates of return on equity of 10.49 per cent in 2019-20, 10 per cent in 2020-21 and 9.3 per cent in 2021-22 (based on information provided by NBN Co and audited by the Australian National Audit Office) (DITRDC 2020a, pp. 189–190, 2022, p. 204). Combined with the AGCNCO's estimates of the debt premium and leverage, DITRDC's cost of equity implies that the WACC in 2021-22 would be about 7.2 per cent.

In its own right, the rate of return on equity is an (if not the most) important indicator of whether a business is making a commercial rate of return on its assets. The rate of return on equity is the required rate of return to shareholders and is the relevant measure of the financial performance of the business from the perspective of its sole shareholder, the Australian Government. It is critical because it is the discount rate used to estimate the fair value of the business to equity holders were it sold in an orderly market between market participants and after meeting its debt obligations. As noted in appendix A, if a business achieves a lower than commercial rate of return on equity it cannot be making a commercial return on the overall assets of the business. This reflects that the return required by those issuing debt is contractually binding and cannot offset a higher required rate of return on equity. Consequently, the return on equity is still a decisive factor in CN policy.

Summary of WACCs

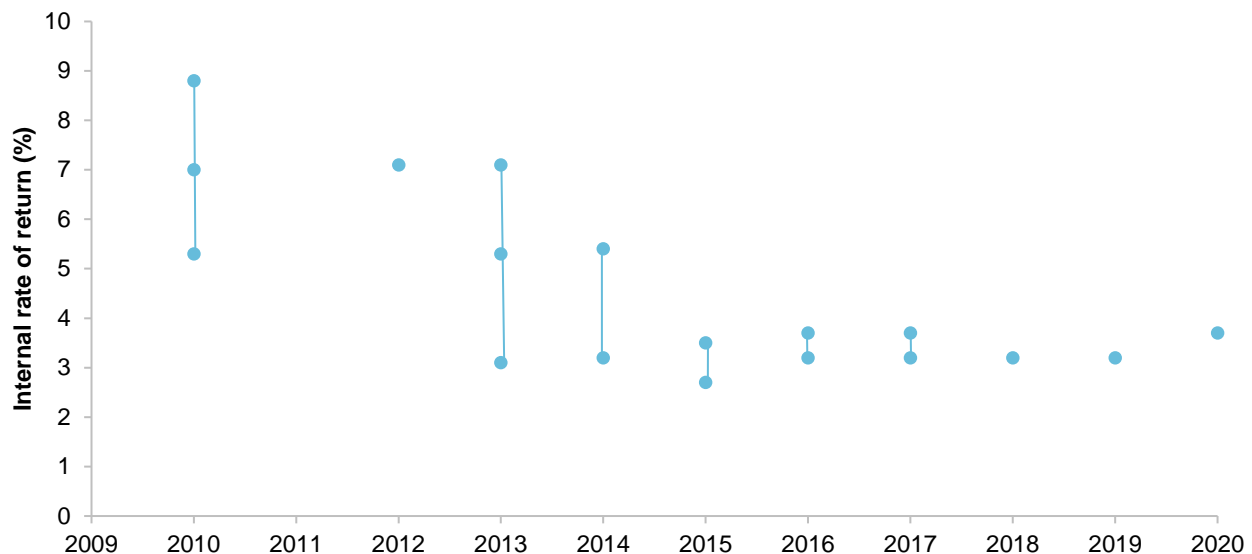
Estimates of the (nominal) WACC vary considerably depending on the method for its derivation and timing. No estimate falls below 4.4 per cent, and from a *long-run perspective*, a rate between 7–11 per cent seems a reasonable estimate (table 6.1).

6.2 Has NBN Co earned a commercial rate of return on assets? — an ex post assessment

Any business making commercial returns must have an internal rate of return (IRR) on its investments that is at least equivalent to the WACC. If the IRR is less than the WACC, then the net present value of its cash stream at its cost of capital is negative. Consequently, assessing whether NBN Co's realised IRR is less than its WACC is the principal way to identify whether it is achieving commercial returns.

NBN Co has provided estimates of the IRR at the commencement of its rollout, and subsequent revisions to it as the cashflows varied from expected values (figure 6.1). The IRRs have declined over time. This outcome reflects poorer than anticipated cashflows. NBN Co initially projected that, from 2010-11 to 2020-21, cumulative operating costs (only one part of total costs) would be about 2 per cent below revenue, whereas the outcome was that they were about 90 per cent above revenue (appendix A).

Figure 6.1 – NBN Co's evolving estimates of its internal rate of return 2010–2040^a



a. At times, NBN Co has provided a range of possible IRRs to reflect its uncertainty about cashflows, though it has ceased to do this in recent estimates. While at times, NBN Co makes clear it is the unlevered IRR from 2010–2040, in other instances it does not specify the period or form of the IRR, though consistency requires they should share the same basis. Otherwise, comparisons would be misleading. No IRR is reported in the latest corporate plan.

Source: Based on various Corporate plans and the Strategic Review (NBN Co 2010, p. 133; 2012, p. 9; 2013, p. 17; 2014, p. 49; 2015a, p. 70; 2016, p. 54; 2017, p. 17; 2018, p. 66; 2019, p. 55; 2020d, p. 54).

In all instances, NBN Co's expected IRR has been below *any* of the estimated WACCs from table 6.1, and well below the more likely values of the WACC as specified above. There is, accordingly, no evidence that, on an all-of-company basis, NBN Co has earned a commercial rate of return on its assets. Former Prime Minister, Malcolm Turnbull also observed that:

At the moment, it [NBN Co] is estimated to deliver a return of around 3 per cent, ... it is enough to keep it on the government's balance sheet, as a government asset, but it certainly is not a commercial return that the stock market would expect. (Massola 2017)

NBN Co has noted the prospect of a 'modest' return going forward (NBN Co 2021b, p. 37), which it reiterated in its 2022 annual report (NBN Co 2022a, p. 57). However, a modest return is too vague to substantiate whether its investments have been (or will be) commercially satisfactory and/or comply with CN.

Table 6.1 – Estimates of NBN Co's Weighted Average Cost of Capital

Source and period	WACC (%)
AGCNCO estimate 2010-11	10.0
AGCNCO estimate 2020-21	5.5
Special Access Undertaking (NBN Co and ACCC) 2010-11	8.9
Special Access Undertaking (NBN Co and ACCC) 2020-21	4.4
Special Access Undertaking (NBN Co and ACCC) Building Block Model 2022 for 2019-20	6.8
NBN Co (Proof of concept stage) ^a	25
NBN Co (Construction stage) ^a	12–13
NBN Co (Transition/market development stage) ^a	9.5–10.5
NBN Co (Established network) ^a	8–9
NBN Co (All of project) ^a	10–11
Officer and Bishop (2016)	7.0
Frontier Economics (2022) for FY 2024 midpoint estimate	7.2
AGCNCO estimate 2021-22 using DITRDC (2022) cost of equity	7.2
Risk broad-banding (at project inception)	8–12

a. NBN Co (2010, p. 143). Appendix A has further analysis and information on the sources of data for this table.

NBN Co's commercial prospects have recently been improving, reflecting significant projected reductions in operating costs and the higher revenue from increasing uptake of lucrative high-speed broadband services (appendix A). However, the large upfront capital expenditure and lower than anticipated revenues for the initial years of the project mean that the prospects of ultimately achieving a commercial rate of return on the rollout of NBN is unlikely because the future discounted revenue streams would have to be very substantial to achieve that outcome. Notably, taking into account compounding, by 2020-21 the accumulated losses of NBN Co stood at \$36 billion, as measured by the Initial Cost Recovery Account in NBN Co's SAU (appendix A).²¹ Under some scenarios, NBN Co is projected to have more than \$40 billion of accumulated losses by the end of the financial year 2039-40 (though in real terms, it is predicted to drop to about \$25 billion in 2020-21 prices).²²

The difference between the Australian Government's contributed equity in NBN Co and the estimated fair value of the business's equity provides an additional insight into the rate of return of a business. While there are significant uncertainties about NBN Co's future cashflows (appendix A), it appears unlikely that at the required rate of return to equity, the fair value will be sufficient to provide a genuine commercial rate of return.

²¹ Its accumulated (conventional) accounting losses as recorded in NBN Co's annual report were about \$33 billion by end June 2021-22.

²² NBN Co has produced indicative estimates of the revenues, operating costs and cost of capital until 2039-40. It warns that these are subject to considerable uncertainty, and that only the forecasts to the end of the financial year 2024-25 have been approved by the shareholder departments and the NBN Co's board. NBN Co notes that 'Any values relating to the period from FY2026 onwards are indicative estimates prepared for accounting valuation purposes only and do not reflect an operational forecast — they have not been approved by nbn's Board or Shareholders and do not include the full potential capex requirements (or specific operational timing) to meet future customer demand and network lifecycle requirements over time' (NBN Co 2022c WACC tab).

However, as emphasised in chapter 5, it is important to consider any disadvantages of public ownership when applying the commerciality test. At NBN Co's inception, the Australian Government directed it to prioritise the rollout of the network in regional areas at prices that it could not feasibly recover (and which came at the opportunity cost of foregone revenue from its delayed entry to profitable metropolitan markets). A private business would not accept a direction to undertake activities that reduced its return below that required by its shareholders, so this disadvantage arose by dint of government ownership. While exact apportioning of this disadvantage is not feasible, it will have contributed to the low rate of return experienced by NBN Co.

6.3 An ex ante assessment of the commerciality test and its relevance to policy solutions

It is important to understand the reasoning behind the commerciality test under CN policy, since that affects the solutions that follow from it, while also putting into perspective the evidence relevant to the test.

The costs of a business include its capital costs — comprising the required rate of return on its asset base (including construction in progress) and depreciation — and its operating costs. The required rate of return reflects the commercial risks of the business, and therefore the determination of the borrowing rate for debt held by the business and the returns that a commercially-oriented equity holder would require to be willing to invest in the business. If government ownership leads to either the required cost of debt or return to equity being lower than the private sector equivalent, then the costs of the business are lower than their true economic costs. This gives the business the *capacity* to:

- set prices lower than efficient cost-reflective prices, which disadvantages any competitors, is generally inefficient, and is the prime concern of CN policy
- poorly manage its operating costs
- over-invest and/or to invest earlier than would have otherwise occurred.

The commerciality test can be assessed either from an ex ante or ex post perspective (as above). An ex ante test is the relevant one for *remedying* deviations from CN policy, as CN policy is intended to change investment and other commercial decisions in the future.

An ex post test is valuable for accountability purposes. A breach provides lessons for shareholder departments and government businesses about their obligations to know about and comply with CN policy. The costs to the community of not doing this can be significant.

However, once a breach has occurred, the grounds for any remedial policy is weak if the breach is no longer ongoing. Any historical over-investment cannot be reversed — the assets are sunk. For instance, if NBN Co had obtained concessional finance in the past but no longer had access to it (for example because it had rolled over all debt to *genuinely* commercially-obtained finance), then it is likely to have led to distortions in its past investment decisions and be a breach of competitive neutrality at the time, but not be relevant for future commercial decisions. CN policy is not incentive-based regulation that seeks ex post 'punishments' of the business to encourage ex ante competitively neutral commercial decisions.

A further problem with ex post analysis is that, regardless of ownership, any business can obtain a commercial return lower (or indeed higher) than the required one due to any external shocks (to input prices, demand and supply shocks, and technological change), management capability, or a deliberate strategy of temporary loss leading in order to grow market share. In NBN Co's case, there have been several unanticipated cost pressures, such as those associated with the variable quality of copper wire and hybrid fibre coaxial networks

that underpinned the multi-technology approach to the network. That problem was not due to ownership. So the realised ex post returns of NBN Co will reflect a combination of factors: a favourable treatment of debt financing (an advantage), a direction to prioritise a high-cost regional rollout (a disadvantage) and unanticipated adverse shocks to costs. It is hard to disentangle how much of the poor past commercial outcomes reflect the latter uncontrollable factors, but the effects will be large.

As for the future, there are three broad considerations.

1. Conceptually, the asset values relevant to the future commercial rate of return is the market (economic) value of NBN Co's assets today plus the assets created by the future augmentation of the network through subsequent investment, not to the (inflated) accounting value of its assets. The market value of these assets is the price an efficient commercially-oriented business would be willing to pay for them, which would be equivalent to the net present value of the profit maximising cashflows from using those assets. If NBN Co was to manage costs and prices poorly, then its returns on the market value would be below the efficient level. However, it is not clear why, given NBN Co's corporate governance and Australian Government expectations that the business operate on a standalone commercial basis (NBN Co 2022e, p. 4), NBN Co would have any other objective than to maximise its future commercial rate of return, subject to the regulatory regime it faces. An assessment of NBN Co's future pricing strategy under a revised SAU suggests that this is just what is happening: '... there is evidence to suggest that NBN Co's prices effectively target different customer types to maximise access and usage to its networks, subject to recovering as much of its efficient costs as is commercially feasible' (Frontier Economics 2022a, p. 38).
2. NBN Co has obtained, and is seeking to obtain more, private debt to replace government-issued debt and to finance new investments (chapter 2). In doing so, NBN Co has benefitted from a significantly lower cost of debt simply as a result of its government ownership, as a result of interest rates that do not fully capture the real risks of the business. Once such 'concessional' debt finances new investments it has a distortionary effect — the target of CN policy.
3. The borrowing terms and the value of the assets held by NBN Co if it was sold in an orderly market to a private buyer subject to the same regulatory constraints provide a reasonable benchmark for the borrowing terms and regulatory value of the assets held by NBN Co as a publicly-owned business.

These considerations suggest that the prime solution²³ to the concerns about commercial rates of return and breaches of debt neutrality would be to require NBN Co to make debt neutrality payments to the Australian Government for all debt sourced from private financial markets (Recommendation 2.1). The CN payments for existing private and future borrowings would be the mechanism to bring NBN Co's financing costs into line with the cost of debt that a private business could obtain. It would affect prices and reduce incentives for some marginal investments, but this is the intent of CN policy. The price effects for lower-speed services — the area of pricing of most concern to the ACCC and regulators — would be moderated by the high elasticity of demand by retailers and their customers in this market segment (chapter 2 and box 6.1).

As regards (1), the existing high valuation of its assets in NBN Co's accounts conceals the likelihood that it could be making a commercial rate of return if its assets were valued at their real commercial, rather than historical, worth. In that vein, there are grounds to improve transparency by publishing the real value of NBN Co's assets.

²³ Another option would be for the Australian Government to sell NBN Co, which would eliminate any further need for the application of CN policy, and would leave the private business, subject to the ACCC's regulation, to determine its prices. Currently, the Australian Government has indicated that it will retain ownership of NBN Co for the foreseeable future (Rowland 2022).

Such estimates could exist alongside the accounting measure of assets in NBN Co's annual report and the regulatory asset base in the SAU.

An accounting write-down may be desirable, subject to AASB13 rules and decisions by NBN Co (AASB 2015). Some have recommended this:

[A write-down] has to come from the NBN Co board recognising that the expected value is less than the value booked given the cashflow generated from an established price path and expected service take up. A board decision rather than a regulator driven process is the right approach in a market economy. (New Street Research 2022, p. 7)

The AGCNCO has not investigated the merit of an accounting write-down. Whether or not NBN Co management think it is appropriate to make changes to the accounting representation of the value of NBN Co's assets is a separate matter and not one on which the AGCNCO makes any comments.

However, the AGCNCO has considered whether a regulatory asset write-down could be appropriate (combined with a re-assessment of the value of the Initial Cost Recovery Account in the SAU) since this could fulfill the purpose of transparency, while also allowing the SAU to serve its purpose of constraining prices over the longer term as the revenue cap would begin to bind. This has been recommended by several parties (Commpete 2020, p. 4; Davis and Key 2019, p. 2 and box 6.1).



Finding 6.1

NBN Co has not met the commercial rate of return requirement to date and is unlikely to make a commercial rate of return in the future on its currently valued asset base

NBN Co has not achieved a commercial rate of return on assets from its inception and has not had target rates of return commensurate with the cost of capital for a business of its nature.

However, factors outside of the control of NBN Co have contributed to this outcome:

- in its early years, NBN Co had to bear disadvantages associated with prioritising the network rollout in regional and remote Australia (finding 5.1)
- NBN Co faced higher than anticipated costs associated with the Government's decision to pursue a multi-technology mix of the roll out of the national broadband network.

The relevant test for *remedying* a non-commercial rate of return is forward-looking.

NBN Co is unlikely to earn a commercial rate of return in the future if the asset values used to measure rates are those reported in either its annual report or the Special Access Undertaking with the ACCC.

However, it appears likely that the reported asset values exceed their market value — what a commercially-oriented private business would pay for them.

There is little evidence to suggest that in the future NBN Co will set prices or make investments in breach of the requirement to make a commercial rate of return on its *properly measured* asset value so long as debt neutrality is achieved and recognising that this value is less than the asset value currently reported for NBN Co.

The AGCNCO understands that it is doubtful that, under the terms and conditions of the SAU, the ACCC could unilaterally *impose* adjustments to the regulatory asset base or the Initial Cost Recovery Account. However, NBN Co could agree to make adjustments, a matter raised by the Ministers for Finance and Communications:

We understand that any variation to the SAU will need to have some regard to the past. However, we encourage NBN Co to develop a proposal that reflects a reset in the process and looks forward to the necessary and appropriate returns to support the business. This could mean that historical concepts such as the Initial Cost Recovery Account (ICRA) could be changed or reconsidered to facilitate a focus on a forward looking regulatory model for the business (Rowland and Gallagher 2022)

From an economic perspective, another factor relevant to an imposed regulatory write-down is whether it distorts business investment incentives (box 6.2). While there would be a level of write-down that could damage investment decisions, this does not mean that write-downs should never occur, but it is a balancing act for regulators and government.

Box 6.1 – Regulatory constraints on NBN Co's pricing have limited effect

The Special Access Undertaking (SAU) provides for revenue controls under the long-term revenue constraint mechanism. All of NBN Co's prudently incurred expenditure and revenues are recorded each year and any losses incurred (associated with all of NBN Co's expenditure undertaken so far) are capitalised and accumulated in the Initial Cost Recovery Account (ICRA). This account allows unrecovered costs in early years to be recorded for recovery in later years. Moreover, because the ICRA balance attracts a rate of return, it may continue to grow for a prolonged period even after NBN Co's annual revenue is sufficient to cover its building block model costs. The ICRA balance was about \$36 billion (nominal) in 2020-21 and is continuing to grow. It is higher than the regulatory asset base, which was about \$28 billion. Under current arrangements, the ACCC does not expect the ICRA balance to be extinguished within the SAU period. There are, therefore, no direct links between NBN Co's annual building block revenue and its prices. NBN Co's pricing in 2020-21 was well below the regulatory pricing caps to which it was subject (DITRDC 2020a, p. 105).

Retail service providers (RSPs) have long argued that NBN Co's prices are already too high — indicating that the option of even higher prices to increase its net revenue is not viable. Paul Budde, a well-known telecommunications industry expert, commenting on just this issue, has noted:

... [NBN Co's maiden profit] has been at the costs of the margins of the retail service providers. NBN Co's high wholesale prices have squeezed margins for some of them to close to 10%. (2019)

The Chair of the ACCC has made similar observations:

... following a fundamental revision by NBN Co to its wholesale pricing, we have seen fewer service providers willing to supply basic speed services over the NBN. Those still offering this service are under very significant margin pressure. (Sims 2019)

More recently, Telstra, in a submission to a Joint Standing Committee Inquiry into the business case for the NBN and the experiences of small businesses, argued that RSPs cannot make a return on their investments due to NBN Co's high prices (Telstra 2020, p. 4).

But it is not just RSPs that are apparently reaching the limit of their ability to absorb higher prices. Final consumers too are hitting this wall. TPG, for example, in its submission to the ACCC NBN SAU industry roundtable framing paper in July 2021, observed that NBN Co's current level of pricing is pushing the limits of consumers' willingness to pay (TPG 2021, p. 1). In addition, there are concerns that higher prices will disenfranchise low-income Australians who will not be able to afford NBN services and are likely to be priced out of the market (Samios 2021; TPG 2021, p. 1).

Box 6.1 – Regulatory constraints on NBN Co's pricing have limited effect

As it moves to develop the next version of the SAU, the ACCC is considering the extent to which it will record historical losses in the ICRA. Adjustments to the ICRA and the regulatory asset base — as envisaged in this report — would align with the goal of more affordable broadband services (2021).

Source: ACCC (2021); Budde (2019); DITRDC (2020a); Samios (2021); Sims (2019); Telstra (2020); TPG (2021).

Box 6.2 – Making headroom for price cuts through asset revaluation

Several stakeholders have suggested that asset revaluation could pave the way for lower prices. The key logic is that 'bygones are bygones' and that asset values need to reflect their real value, not their historic or intended value. In its draft Communications Sector Market Report, the ACCC expressed concern over high prices and explored how NBN Co might get some flexibility in lowering prices. In that report, the ACCC flagged the prospect of an asset write down:

... there could be a need for Government intervention to provide for direct budget funding arrangements for non-commercial services, debt relief measures or an asset revaluation, to enable NBN Co to charge lower prices for its services. We note that private sector firms that fail to meet rate of return targets regularly write-down the carrying value of their assets. (2017, p. 133)

Its final report reiterated this latter point:

We had raised asset revaluation as a possible means by which NBN Co could provide itself with additional pricing flexibility ... noting that this is a standard practice of capital intensive private enterprise firms where financial targets are not being realised. (ACCC 2018, p. 103)

In 2019, Frontier Economics revisited this issue noting the subtle difference between accounting and regulatory write-downs.

While NBN Co CEO ... considers the term 'write down' to have a very special meaning, it can have two meanings: an accounting write-down reflecting a reduction in future cashflows, or a regulatory write-down, which may be proposed for various reasons. ... write-downs are no red herring. If one accepts that the current regulatory arrangements provide insufficient pricing certainty, and are not reflective of commercial reality which jeopardises the long-term take up of its fixed broadband services, then a regulatory write-down could:

- relieve short term financial pressure and support lower prices to RSPs and greater take up by their customers — and help stave off competition from mobiles;
- eliminate or greatly reduce the impact of subsidies for non-commercial infrastructure (particularly satellite services) which NBN Co is trying to recover in commercial pricing; and
- allow NBN Co to earn a commercial return making it a better understood and more attractive future asset. (Davis and Key 2019)

From an economic perspective, another factor relevant to an imposed regulatory write down is the tension between the ex ante and ex post incentives of the regulator. Ex ante, pricing /revenue regulations should allow a natural monopoly to recover its prudent investment costs as well as the business's marginal costs as this is a precondition for investment to occur. Once the assets are sunk, the regulator is tempted to reduce the regulatory asset base so that prices are set closer to marginal costs, which

Box 6.2 – Making headroom for price cuts through asset revaluation

would therefore lower costs to consumers, while reducing profits to the business. Any such response by a regulator affects the incentives of a business to make the investments in the first place or would lead to a higher weighted average cost of capital for subsequent investments, with unintended impacts. However, currently the regulatory asset base appears to have no impact on NBN Co's pricing and profits, which are determined by the market rather than regulation. In that context, the economic problem is not whether there should be a write-down, but determining the level of write-down that is compatible with efficient pricing for consumers and avoidance of adverse incentives on future investments.

6.4 Reformulating the commerciality test in competitive neutrality policy

The assessment of NBN Co's compliance with the CN requirement to make a commercial rate of return has revealed weaknesses in the application of that test.

The existing commerciality test takes account of the potential for short-term deviations from commercial rates of return, but requires the business to eventually make such returns. However, for some businesses, unanticipated shocks to demand or supply outside the control of management may make it impossible for the business ever to make a fully commercial rate of return. This will particularly apply when a capital-intensive business finds its assets are stranded by technological change or faces firm-specific cost pressures (such as costly repairs to assets). This suggests that a commerciality test should attempt to distinguish between low returns driven by managers' decisions and those from factors outside their control. In some instances, that assessment will be hard to credibly operationalise.

CN policy is intended to avoid distortions in markets, not to merely deplore the outcomes after the fact. Accordingly, a commerciality test should be clear about the conduct that would be incompatible with standard profit-maximising commercial practices and be forward-looking.

This suggests that there could be some value in reformulating the commerciality test to focus on the factors that would, ex ante, lead to rates of return below that of a business run on purely commercial grounds. For instance, the kinds of conduct that would lead to low commercial returns would be:

- setting prices below that of competitors that operate in similar markets and with similar costs
- having operating cost structures that are higher than competitors producing like goods in like markets
- proposing investments that no purely commercial business would make (for example, premature investments, excessive investments, investments in the wrong assets).

The advice given to government businesses would be that to comply with CN policy they must make pricing, cost and investment decisions that a commercially focused private business would make in a similar market environment — in essence, to maximise their profits.

Such a framing is helpful for remedying breaches of the commerciality test. For instance, it is practical to require a government business to increase its prices so that they fully recover efficient costs.

Operationalising a revised commerciality test would require ex ante divulgence of a government business to its shareholders of its pricing approach, followed by timely monitoring of its cost-management, pricing and

investment conduct to ensure compatibility with standard commercial practice, and where that was not occurring, early intervention.

**Finding 6.2****There is merit in re-specifying the commerciality test in competitive neutrality policy**

The existing requirement in competitive neutrality policy that a government business should earn a commercial rate of return over a reasonable period does not take account of the fact that government policy constraints and unanticipated shocks to costs or demand may make it impossible for even a fully commercially-oriented business to ever make an ex post commercial rate of return on its assets.

A possible revision to competitive neutrality policy is to require a government business to manage its costs, set prices and undertake investments that are likely to maximise its profits in the environment it faces.

7. Other competitive neutrality issues

This complaint investigation encountered several issues that do not fit neatly into tax, debt, or regulatory neutrality pigeonholes but nonetheless have relevance for this investigation or for the broader implementation and enforcement of competitive neutrality (CN).

Some of these — like full cost attribution — are important in determining the value of any net competitive advantages of government ownership, but are rarely an issue in practice.

Others are novel sources of potential competitive advantages — like the Government's guarantee of NBN Co's financial obligations under lease agreements with Telstra — but for which the methodology for costing any such advantage is unspecified.

Others are issues associated with core areas like debt neutrality that, although they may give rise to competitive advantages, are not treated in detail in the Government's CN policy or its Guidelines for Managers. They raise practical concerns around how to calculate debt neutrality charges when there is no observable market for benchmark debt, how to calculate the value of an un-costed extension of a loan term or the absence of loan break fees, and how to avoid excessive compliance and administrative costs in setting and collecting debt neutrality charges for line-of-credit type debt. Similarly, the investigation has identified practical issues in calculating just what is a commercial rate of return under CN policy.

In addition, this investigation has found deficiencies in reporting and monitoring of the implementation of CN. These deficiencies erode transparency and accountability around the extent to which business operations meet the requirements of CN policy and, ultimately, reduce the pressure on government businesses to meet their CN obligations. This report presents some easily implemented improvements in reporting and monitoring of the implementation of CN.

Finally, the tax deductibility of CN adjustment payments can affect the achievement of neutrality, but the issue gets no mention in CN policy nor is it addressed in the Government's Guidelines for Managers.

The following sections discuss these issues in detail.

7.1 Full cost attribution

The Australian Government's Competitive Neutrality Policy Statement notes that significant government businesses should ensure that prices charged reflect full cost attribution for their business activities (1996, p. 19). The Competitive Neutrality Guidelines for Managers notes how cost allocation can compromise CN:

There needs to be organisational separation (either accounting or legal) of commercial and non-commercial activities. It is necessary to separate business activities from other government activities to ensure that Budget-funded activities do not effectively cross-subsidise commercial

operations. Cross-subsidisation of these activities is undesirable, as it is not a transparent use of government funds and places private sector competitors at a disadvantage. (TDoFA 2004, p. 37)

The principle here is that a government business's operations should only incorporate costs exclusive to those operations — that is, only those costs that could be avoided if the commercial operations ceased.

Prior to the introduction of the Regional Broadband Scheme levy, no external funding was provided to NBN Co to help cover the losses from its non-commercial fixed-wireless and satellite services. The issue of cost attribution was thus irrelevant for NBN Co.

However, while NBN Co still receives no Government funding to cover losses from its provision of non-commercial fixed-wireless and satellite services, the introduction of that levy means a small proportion of those losses (around 10 per cent) will now be funded by other carriers. Within this context the AGCNCO has considered whether NBN Co's approach to cost attribution opens the door for some of that funding to cross-subsidise its commercial operations. Such an outcome would be contrary to CN.

As noted in chapter 5, NBN Co calculates the losses associated with those services using a fully distributed cost methodology. Those costs, though, do not form the basis for the levy. Instead, the costs underpinning the levy that is collected from other carriers and provided to NBN Co have been calculated using an avoidable cost approach to cost allocation.²⁴ Thus, any external funding of those losses is based on a cost allocation approach that is consistent with CN and will not cross-subsidise NBN Co's commercial operations.



Finding 7.1

External funding of NBN Co's fixed-wireless and satellite service losses does not cross-subsidise its commercial operations

The Regional Broadband Scheme levy is underpinned by estimates of the losses of NBN Co's fixed-wireless and satellite services that were derived using a cost allocation approach consistent with competitive neutrality. Any concerns that external funding provided to NBN Co by the levy might cross-subsidise its commercial operations are unfounded.

7.2 Additional guidelines would assist the future implementation of competitive neutrality policy

In the course of its investigations, the AGCNCO identified a number of areas where greater guidance would assist government businesses in meeting their CN obligations and/or assist any future assessments of whether businesses were complying with those obligations. This new guidance material could readily be included in a revised version of the *Australian Government Competitive Neutrality Guidelines for Managers*.

²⁴ The avoidable cost approach is also the AGCNCO's preferred methodology, as outlined in our publication on *Cost Allocation and Pricing* (CCNCO 1998a).

Government guarantee of NBN Co's lease agreements

The Australian Government provides a guarantee of some of NBN Co's lease obligations (obligations valued at \$10.8 billion as of 30 June 2020 — box 7.1). Public credit advisories on NBN Co by Fitch Ratings ascribe a 'Key Rating Driver' status to this guarantee (Fitch 2020a, 2021) that, together with the scale of those lease obligations, suggest it might provide a significant competitive advantage by virtue of government ownership.

Box 7.1 – Government guarantee of NBN Co's lease obligations

Telstra Financial Guarantee

The Australian Government has provided to Telstra Corporation Limited (Telstra) a guarantee in respect of NBN Co's financial obligations under the Definitive Agreements. The Agreements were amended on 14 December 2014. The Guarantee was not amended at that time and it continues in force in accordance with its terms in respect of the amended Definitive Agreements. The liabilities under the Definitive Agreements between Telstra and NBN Co arise progressively during the roll-out of the National Broadband Network as Telstra's infrastructure is accessed and Telstra's customers are disconnected from its copper and Hybrid Fibre Coaxial cable networks. The Australian Government is only liable in the event NBN Co does not pay an amount when due under the Definitive Agreements. As of 30 June 2022, NBN Co had generated liabilities covered by the Guarantee estimated at \$10.2 billion. The Guarantee will terminate when NBN Co achieves specified credit ratings for a period of two continuous years and either:

- the company is capitalised by the Commonwealth to the agreed amount, or
- the Communications Minister declares, under the *National Broadband Network Companies Act 2011*, that, in his or her opinion, the National Broadband Network should be treated as built and fully operational.²⁵

As the specified credit ratings have not yet been achieved, the guarantee remains in force, and will do so for at least a further two years.

Source: DITRDC (2022a).

However, while that 'Key Rating Driver' status and the scale of lease obligations initially suggested this guarantee could be a significant competitive advantage of government ownership, further investigation ruled this out. The AGCNCO accepts the shareholder departments' position that the guarantee stems from various Government policy objectives for the rollout of the NBN (for example, ensuring the affordability of high-speed broadband services across Australia) — objectives that were subsequently enshrined in the Government's Statement of Expectations for NBN Co. It follows that any cost savings that NBN Co might enjoy that are associated with this guarantee are not advantages arising simply by virtue of government ownership.

Nonetheless, while not relevant in this case, this government guarantee points to the potential for such support to provide other government businesses with a material competitive advantage arising simply by virtue of government ownership. The AGCNCO's investigation of this issue, however, highlighted a lack of guidance material on how government businesses might best determine the value of such a guarantee in the

²⁵ This latter condition occurred on 23 December 2020 (Fletcher 2020b).

context of their complying with CN policy and/or how the AGCNCO might best assess such compliance in the context of a complaint investigation.

While the AGCNCO is aware of various approaches to quantify the value of such a guarantee (box 7.2), it is beyond the scope of this investigation to identify the most appropriate ones.

Box 7.2 – Valuing government guarantees (lease agreements or other)

Quantifying the scope of a government guarantee and the value of such protection is complex — benefits may be hard to identify and quantify, the characteristics of government businesses differ significantly, and there is a lack of literature addressing the value of such guarantees to government businesses that can help guide valuing such agreements.

Nevertheless, practices in commercial markets can provide insights into valuing a government guarantee. For example, a bank or insurance provider would assess a range of variables before determining the price of one of their products. These might include the:

- organisation's credit history and rating
- potential risk of loss
- financial characteristics of the organisation, such as the scale of the operation and the source of business revenues and other business obligations held by the organisation.
- nature of the market in which the guarantee is sought.

The approach to valuing the guarantee would also depend on the nature of the obligation. For example, does the organisation have an obligation to make a payment or to provide a service? Alternatively, is the obligation more akin to a debt?

In a commercial market, the answer to these questions will affect the type of product being sought by a business. This would also likely be the case in valuing a government guarantee. Products available commercially that could act as a proxy for valuing a government guarantee (and thus providing an insight into the scale of competitive advantage arising from this product of government ownership) include:

- A bank guarantee, which would provide an assurance from a lending institution that the liabilities of a debtor will be met by a bank/lending institution in the situation that the debtor defaults on its obligations.
- A surety bond, which is the insurance equivalent of a bank guarantee, and provides a guarantee that a contract or other business deal will be completed in accordance with the agreed terms. The value of a surety bond is a function of the bond rate and the bond amount.
- A credit derivative, which would allow a creditor to transfer some or all of the risk of a debtor defaulting to a third party. This third party accepts the risk in return for payment, known as the premium. Credit derivatives can take various forms, such as credit default swaps, collateralised debt obligations, total return swaps and credit spread options.

Each approach taken is likely to result in a different value for a government guarantee and, therefore, a different cost for the government business. In some cases, the different approaches could result in significant differences in payments.

Further guidance on the methodology is required to ensure that any CN adjustment payments associated with government guarantees reflect the true value of that advantage.

However, to assist businesses in implementing CN and the AGCNCO in advising Government on changes needed to ensure its businesses comply with their CN obligations, the AGCNCO considers guidance on how to calculate savings associated with an implied or explicit government guarantee should be developed to fill the current void in this area. Those guidelines should be made publicly available and included in the *Australian Government Competitive Neutrality Guidelines for Managers* when it is next revised. This material could be developed by Treasury as part of its Competitive Neutrality Review, which has yet to finalise its deliberations and release a report on its findings.

Estimating a benchmark cost of debt where no market data exist

Chapter 2 notes the difficulty of estimating the difference between actual and benchmark costs of debt where directly comparable market data for a benchmark cost of debt do not exist.

This situation arose because NBN Co's issuer credit rating is AA (on the back of its government ownership), but its benchmark credit rating (the rating applicable if it were not government-owned) is BB.²⁶ And while Australia does have a market for AA rated debt, it has no market to speak of for debt rated below BBB. This meant that for debt raised on the Australian market by NBN Co, the AGCNCO has had to infer a benchmark cost of debt and the corresponding spread between that and the cost of AA rated debt.

One approach to achieve this is to draw on financial market data from the US (which has a liquid market for BB rated debt) to estimate the spread between AA and BB rated debt. In this investigation the AGCNCO adopted this approach to derive an inferred AA–BB spread for NBN Co's debt raised in Australia, and provide an indicative cost-of-debt advantage applicable to that debt (see box 2.2 in chapter 2). This approach is subject to various caveats, such as the need to convert US market yields to Australian market equivalents.²⁷

The AGCNCO also explored whether it is viable to extrapolate Australian financial market data to infer an AA–BB spread. Several State Governments use 'straight line projections' from Reserve Bank of Australia (RBA) data to identify a benchmark cost of debt and, hence, appropriate debt neutrality payments for their entities. The New South Wales Government, for example, uses straight line projections to impute rates for certain credit ratings not covered by RBA data (NSW Treasury 2014, p. 3). Such projections or interpolations can be useful to 'fill in the gaps' in thin markets, where there are insufficient debt financing transactions to provide benchmark debt data for specific credit ratings, tenors and dates of issuance within the AAA–BBB range. However, some strong assumptions are required to extrapolate from rates within that range to rates for BB rated debt outside that range, and the reliability of such inferred rates is uncertain.

Accordingly, the AGCNCO did not use straight line extrapolation to impute a benchmark cost for BB rated debt, although it recognises this approach can have a role in imputing rates within the AAA–BBB range.

Given the scope for different outcomes from different approaches and, thus, for quite different debt neutrality adjustment fees, the AGCNCO considers formal guidance on this matter is warranted. That guidance would be useful in assisting government and its businesses to implement the debt neutrality requirements of CN policy.

Accordingly, the AGCNCO considers that guidance material on how to calculate the difference between the actual and benchmark cost of debt should be developed. That material could be developed by Treasury as part of its Competitive Neutrality Review. That guidance should be made publicly available and be included in the *Australian Government Competitive Neutrality Guidelines for Managers* when it is next revised.

²⁶ This standalone or benchmark credit rating was assigned to NBN Co by Fitch Rating and Moody's Investor Services in a number of public credit rating advisories in 2020 and 2021 (Fitch 2020a, 2020b), 2021; Moody's 2020).

²⁷ These caveats and a methodology to convert US bond yields to an Australian equivalent may be found in Appendix C and D of *A cost of debt estimation methodology for businesses regulated by the Queensland Competition Authority* (PwC 2013).

Administration and compliance costs of applying debt neutrality to bank facilities

The AGCNCO's examination of debt neutrality for NBN Co also highlighted a potential weakness in the way cost-of-debt advantages are typically addressed.

Determining any competitive advantage of government ownership with respect to the cost of debt is simple in theory. It requires a government business to identify both its actual and benchmark cost of debt for that borrowing and to calculate the corresponding interest rate benefit to the government business. This interest rate difference is then applied to the quantum of debt borrowed at that time to determine the dollar value of the savings from borrowing that amount of money at that time and at that advantageously lower actual interest rate.

For a bond issue, this calculation is a simple exercise. At the time the bond is priced, the spread between the actual cost of debt (achieved on the back of a government-owner based credit rating) and the benchmark cost of debt (were that business not government owned) is applied to the full amount of the bond issue, which continues over the life of the bond. This is a simple set and forget exercise, and the associated compliance and administration costs for the parties estimating a debt neutrality payment is minimal in these circumstances.

However, for bank facilities or 'line-of-credit' type debt this process is potentially a more complex affair. NBN Co advised the AGCNCO that debt from bank facilities is drawn down intermittently over the life of those facilities, while working capital lines of debt involve frequent withdrawals and repayments. In those circumstances, each drawdown and repayment requires calculating bespoke debt neutrality adjustments at that time. Each withdrawal or repayment also imposes an administration burden on any government agency responsible for monitoring the accuracy of corresponding debt neutrality charges paid to government. NBN Co expressed concern that in these circumstances, the task of applying debt neutrality adjustments to debt drawn from bank facilities or the like could result in excessive compliance and administration cost burdens.

The AGCNCO discussed this issue with Defence Housing Australia (DHA), another Australian Government business subject to CN, whose lines of debt with the Department of Finance are broadly akin to the bank facilities of NBN Co. However, in DHA's case, debt withdrawals are infrequent and substantial, with compliance costs that are small in absolute and relative terms. Consequently, its experience may not translate to all contexts where a business makes frequent drawdowns of varying amounts.

The Australian Government's CN policy and CN Guidelines for Managers are silent on how businesses might avoid this potentially costly and burdensome process. This issue, though, has been recognised (and addressed) at the state and territory level. New South Wales, for example, provides guidance to its government businesses about how debt neutrality fees for such short-term debt should be calculated in its *Government Guarantee Fee Policy for Government Businesses* (NSW Treasury 2014). Other jurisdictions, like Queensland, exempt working capital debt from CN policy, although it applies strict definitions to what qualifies as such CN-exempt debt.

Guidance on how to calculate debt neutrality charges for debt drawn from bank facilities or line-of-credit type debt (or even on whether some defined working capital lines of debt could be exempt from debt neutrality) would assist the Australian Government, its businesses and the AGCNCO in applying and monitoring this aspect of CN. For that reason, the AGCNCO considers guidance material should be developed to fill the current void in this area. That material should be made publicly available and included the *Australian Government Competitive Neutrality Guidelines for Managers* when it is next revised. This material could be developed by Treasury as part of its Competitive Neutrality Review.

Un-costed term extension and loan break fees

During the course of the AGCNCO's investigations, interested parties raised concerns that while NBN Co had extended the tenor of its \$19.5 billion loan from 2021 to 2024 and had embarked on an early payout of that loan (using new debt borrowed at historically low rates), it had not been charged for doing so. They noted that if a private business were to do the same thing it would face significant costs for doing so.

Uncosted extension of loan term

In December 2016, the Government provided a loan to NBN Co of up to \$19.5 billion for the period 1 July 2017 to 30 June 2021 at a fixed interest rate of 3.96 per cent per annum. In August 2018, the Government agreed to extend the term of this loan by three years — to 30 June 2024 — and to apply the same rate of interest (Commonwealth of Australia 2019, p. 8-43).

On the day the 4-year loan was priced (15 December 2016), the spread between AA credit rated 5-year and 10-year bonds was some 20 basis points. For the whole month of December, the average spread between those bonds was around 30 basis points. These spreads suggest that in getting an initial 4-year term for its loan and then extending it in August 2018 for three years at the same rate of interest, NBN Co effectively obtained a free option on a longer-term loan. The cost-of-debt advantage of that free option — embedded in its initial (lower) loan pricing — was potentially in excess of 10 basis points.

The Department of Finance has confirmed that no fee was charged to accommodate NBN Co's requests for the three-year extension. Although the absence of any such charge would normally raise concerns that this could constitute a competitive advantage of government ownership, the Government's decision in 2016 to exempt NBN Co from debt neutrality charges for this loan means the un-priced extension of the loan term (and any advantage that might confer on NBN Co) is not an issue for this investigation.

However, while not an issue for this investigation, pricing the value of loan extensions remains a potentially relevant CN issue for other government businesses and for future assessments of their compliance with CN. On this matter, though, the Government's CN policy and Guidelines for Managers are silent on how the value of that saving might best be calculated. Accordingly, the AGCNCO considers that guidance material on how to calculate the competitive advantage derived from loan term extensions should be developed by the Department of Treasury, and be included in a revised version of the Government's Guidelines for Managers.

Absence of break fees

As noted in chapter 2, NBN Co has already repaid significant amounts of its \$19.5 billion loan — using the proceeds of new debt, which has mostly been borrowed at rates significantly below the 3.96 per cent attached to that loan. Moreover, NBN Co has said it will continue to do so (NBN Co 2021c, pp. 50–51).

Some participants raised concerns about the scale of these early repayments (\$11.65 billion at 31 October 2021), arguing that a private sector businesses in a similar position would likely be subject to significant break fees. (The AGCNCO notes that some other government businesses, such as Defence Housing Australia (DHA 2021, p. 135), incur break fees and interest on the early repayment of their borrowings.) The apparent absence of any such fees in NBN Co's case would appear to confer a material cost advantage and, if no corresponding debt neutrality adjustments were made, would normally constitute a breach of CN.

However, there is no breach as the Australian Government exempted the loan from CN charges (chapter 2).

In any case, NBN Co may be subject to break fees. Information provided to the AGCNCO from the shareholder agencies indicates that while the terms of the loan allow NBN Co to make progressive drawdowns, it was not able to begin repayments until the facility was fully drawn. That occurred around August 2020 (NBN Co 2021c,

p. 139). Moreover, the terms of the loan include a repayment profile agreed between the Government and NBN Co — although the details of that are not publicly available. In theory, under the terms of that agreement, should NBN Co repay the loan in advance of this profile it would be subject to break fees.

However, despite that agreement, during the year to 30 June 2021 NBN Co varied the terms of that loan agreement with the Government to allow it to use proceeds from external borrowing to make loan prepayments in advance of the maturity date (NBN Co 2021c, p. 139). The absence of public information on that repayment profile and on the amended terms has meant the AGCNCO is unable to determine whether any break fees were imposed.

Notwithstanding that forgone break fees are not relevant in this investigation in light of NBN Co's exemption from CN charges, they may be relevant for other government businesses.

However, neither the Government's CN policy statement nor its Guidelines for Managers offer any insight into how the value of such break fees might best be costed. Accordingly, Australian Government guidance on their estimated value would be useful. This guidance could draw on information already developed by some state governments, for example the *NSW Government Guarantee Fee Policy for Government Businesses* (NSW Treasury 2014).

Methodology for identifying a benchmark rate of return

CN policy requires that government-owned businesses generate a commercial rate of return on assets at least sufficient to justify the long-term retention of those assets in the business and to pay commercial dividends to the Budget from those returns.

However, NBN Co has no Australian Government-specified rate of return and has no comparable competitors from which the AGCNCO can infer a robust proxy benchmark rate of return. As a result, the AGCNCO explored using a target commercial rate of return on assets that is at least equal to the Commonwealth long-term (10-year) bond rate plus a margin for risk — as noted in the Government's CN policy and an option suggested in the *Competitive Neutrality Guidelines for Managers* for determining an appropriate rate of return (TDoFA 2004, pp. 30–31).

However, while this formulaic approach is simple in theory, two issues confound applying it in practice, and suggest more guidance is needed to effectively operationalise this approach.

Handling movements in 10-year bond rates

The first of these issues is how to operationalise 'the Commonwealth long-term (10-year) bond rate'. That rate moves around from day to day, and those movements can be significant. For example, during the course of the AGCNCO's investigation, the 10-year bond rate ranged from a low of 0.74 per cent on 5 November 2020 to a high of 3.57 per cent on the 9th and 10th of May 2022 (RBA 2022). In the absence of any direction on what basis the 10-year bond rate should be determined, this part of the formula is open to inaccuracy at best and gaming at worst — neither of which is likely to advance the intent of CN policy.

For this investigation, the AGCNCO was able to identify a suitable approach for determining a long-term bond rate applicable to NBN Co's circumstances. That approach was that set out in NBN Co's Special Access Undertaking for determining an appropriate value for the 10-year bond rate, namely:

... the mean yield on 10-year Commonwealth Government Securities, averaged over the final 20 business days of the preceding financial year and using the indicative mid rates published by the Reserve Bank of Australia. (ACCC 2013a, p. 150)

But, while the AGCNCO is confident this approach would be an acceptable approach for this investigation, it is mindful that other government-owned businesses could warrant a different approach to identify a ‘best fit’ rate for their circumstances. However, neither the Government’s CN policy nor the Guidelines for Managers offer guidance on how that rate might be identified.

Time-varying risk premia for equity and debt

The second confounding issue is the appropriate margin for risk in determining the target rate of return on assets (chapter 6 and appendix A). The Guidelines for Managers sets out varying approaches to calculating the weighted average cost of capital (WACC)-, including standard approaches that rely on using the Capital Asset Pricing Model (CAPM) for given types of investments. However, the Guidelines also indicate that government businesses may sometimes apply ‘risk broad-banding’ when it is not feasible to undertake conventional calculations of the weighted costs of capital. The current Guidelines set out explicit risk premiums of 3, 5 and 7 per cent to the risk-free rate (the 10-year government bond rate) for low-, medium- and high-risk investments respectively.

However, estimated risk premiums for debt and equity vary over time, which calls into question static risk broad-banding values. As an example, for the risk premium associated with debt alone, over the period December 2016 to December 2020, the 10-year bond mid-rates for that month fell from 2.79 per cent to 0.98 per cent. In that same period, the spread between AA and BBB rated 10-year bonds (an indication of the premium for risk) fell from around 110 basis points on 1 December 2016 to around 50 basis points on 1 December 2020 (FRBSL 2021). At the firm level, idiosyncratic risks will also affect the debt premium, and requires information about the business environment and project risk of the business. In addition, businesses that are making large investments with upfront construction risk and uncertain long-term revenues are different from established government businesses with stable cashflows and investment that replenishes their capital stock rather than expanding it. Some government businesses operate in highly regulated environments — as does NBN Co — which can also affect their risk levels.

The WACC for a given business is also influenced by non-diversifiable risk, which is a function of the degree to which returns are correlated with the overall market. For non-listed businesses, such as NBN Co, there is no observable value of their market values (as measured by share valuation) which makes judgments about non-diversifiable risk more difficult.

Overall, using models — such as the CAPM — that seek to include all of the factors that contribute to the cost of capital faced by a given government-owned business are conceptually superior to risk broad-banding. The latter, though, still has a place as a rule of thumb as long as it is anchored to contemporary states of business risks, and as a sense check on bottoms-up measures of the required commercial rate of return.

While the AGCNCO has made assumptions about the risk premium appropriate for this investigation, there would be benefits from a more detailed and contemporary assessment of appropriate risk premia for the rate of return on assets.

**Finding 7.2****Guidelines for setting a commercial rate of return are not robust**

The broad-banding approach for setting a benchmark commercial rate of return on assets (set out in the *Australian Government Competitive Neutrality Guidelines for Managers*) allows discretion in selecting a value for the 10-year bond rate and uses risk premiums that may not reflect contemporary market conditions. These features can result in a benchmark rate that is inappropriate for the relevant business and for achieving competitive neutrality.

**Recommendation 7.1****Treasury should develop guidance material**

Treasury should develop guidance material on:

- how to calculate the cost savings associated with an implied guarantee of lease agreements
- how to calculate the difference between the actual and benchmark cost of debt where no direct market data are available
- how to avoid excessive compliance and administrative costs in setting and collecting debt neutrality adjustment payments for line-of-credit type debt
- how to calculate the cost savings associated with unpriced loan extensions and the premature payout of fixed-term loans
- how businesses should select a value for the 10-year bond rate under the risk broad-banding approach for setting a benchmark commercial rate of return on assets, as specified in the *Australian Government Competitive Neutrality Guidelines for Managers*
- the appropriate risk premium level to assign to a low-, medium- or high-risk assessment under that broad-banding approach.

Treasury should make the material publicly available and include it in the *Australian Government Competitive Neutrality Guidelines for Managers* when it is next revised.

In acting on recommendation 7.1, the Treasury could undertake the development of guidance material as part of its Competitive Neutrality Review, which is yet to be finalised.

7.3 Lack of transparency about and accountability for competitive neutrality

The Australian Government's 1996 CN policy statement indicated the importance of public reporting by relevant government businesses about their CN obligations:

Competitive neutrality is an important additional element in the financial management and accountability arrangements of government business activities. Each organisation subject to competitive neutrality arrangements is required to note that it is subject to the policy in its annual report to Parliament. This statement will indicate where exemptions from taxation and borrowing levy arrangements have been provided by the Government and the reasons for any exemptions. This statement will also indicate whether any changes to an organisation's competitive neutrality

arrangements have been made in the previous 12 months and the outcome of any public inquiries under the complaints mechanism. (1996, p. 22)

The goals of transparency and accountability are still relevant. The Harper report, for example, drew attention to a lack of community awareness of CN and the limited public disclosure of businesses' compliance with the policy (Harper et al. 2015, pp. 261–262). That report identified a need for improved transparency and accountability, and recommended:

... all Australian governments should require government businesses to include a statement on compliance with competitive neutrality principles in their annual reports. (2015, p. 268)

Notwithstanding the statement of obligations in the 1996 policy statement and the Harper report's recommendations, NBN Co's annual reports from 2009 to 2019 do not mention that it is subject to CN policy. These omissions are despite: it having enabling legislation specifying certain taxation exemptions, it being subject to a CN complaint investigation in 2011 and a public report on that investigation being released in November 2011, and the Government giving it an exemption from CN debt adjustment payments on its \$19.5 billion loan during this period (that would have otherwise amounted to \$2 billion as at 30 June 2022, and growing). In contrast, the annual reports of other Government businesses like Defence Housing Australia, Export Finance Australia and Hearing Australia acknowledge that they are subject to CN and what they do to comply with that policy.

In its 2020, 2021 and 2022 Annual Reports, NBN Co has included a reference to CN:

NBN Co's governance framework is regularly reviewed to ensure it aligns to Government, regulatory and legislative requirements, and market practice. NBN Co's governance practices continue to evolve, having regard to the:

... Commonwealth Competitive Neutrality Policy Statement ... (2020, p. 103; 2021, p. 90; 2022a, p. 104)

However, these references fall short of CN policy requirements. NBN Co's 2021 and 2022 Annual Report, for example, do not note that it is exempt from certain taxation and borrowing levy arrangements and the reasons for those exemptions. In this respect, NBN Co is not meeting the minimum reporting required of it under CN policy.

To meet those reporting requirements and the goal of transparency and accountability, the AGCNCO considers that NBN Co should include information in its future annual reports that indicates:

- it is subject to CN policy, the requirements that policy obliges it to comply with, and what it does to comply with those requirements
- where exemptions from taxation and borrowing levy arrangements have been provided by the Government, and the reasons for those exemptions
- whether any changes to its CN arrangements have been made in the previous 12 months
- whether it is subject to any CN complaints, and the status and/or outcome of any investigations under the complaints mechanism.



Finding 7.3

NBN Co is not meeting its reporting requirements

NBN Co is not meeting the minimum reporting requirements it is subject to under competitive neutrality policy.



Recommendation 7.2

NBN Co should improve its competitive neutrality reporting

NBN Co should include information in its annual report that indicates:

- it is subject to competitive neutrality policy, the requirements that policy obliges it to comply with, and the actions it has taken and/or is taking to comply with those requirements
- where exemptions from taxation and borrowing levy arrangements have been provided by the Australian Government, and the reasons for those exemptions
- whether any changes to its competitive neutrality arrangements have been made in the previous 12 months
- whether it was subject to any competitive neutrality complaints, and the status and/or outcome of any investigations under the complaints mechanism.

NBN Co's non-compliance with its reporting obligations over an extended period (nor with its debt neutrality obligations since 2020) is also a symptom of flaws in the oversight and awareness by shareholder agencies of NBN's obligation to comply with CN policy.

As shareholders, these agencies can perform a valuable role in ensuring that the businesses they 'own' comply with CN. Three actions could increase the rigour and impact of CN oversight by these shareholder agencies:

- undertaking an annual audit of compliance with CN policy obligations by NBN Co
- providing information in their own annual reports on the extent of CN compliance by NBN Co and the existence and outcome of any CN complaint investigations into that business
- ensuring the results of that annual assessment are incorporated in an accurate reporting of Australian Government businesses' performance against CN expectations in the *Heads of Treasuries Competitive Neutrality Matrix* report.

This approach involves deliberate duplication reflecting the benefits of greater surety that reporting is adequate, and that knowledge of CN obligations are more widely diffused across responsible portfolios and, thence, to a wider audience of potentially interested parties. This is against a background of persistent inadequacies in reporting by NBN Co over the past 13 years and the absence of any Heads of Treasuries CN Matrix publication since 2018.



Recommendation 7.3

Shareholder agencies should improve their reporting of competitive neutrality compliance

The Department of Finance and the Department of Infrastructure, Transport, Regional Development, Communications and the Arts should annually check NBN Co's compliance with its competitive neutrality policy obligations, publishing the extent of that compliance and the results of any formal competitive neutrality complaint investigation in their annual reports. Finance should draw on those annual assessments to accurately record NBN Co's performance in the Australian Government's entry in the *Heads of Treasuries Competitive Neutrality Matrix* report.

7.4 Inadequate monitoring of competitive neutrality compliance

The *Heads of Treasuries Competitive Neutrality Matrix* report is meant to contain each jurisdiction's assessment of how well their government business enterprises comply with CN policy requirements (Australian Government 2019a, p. 1). It is the only report that provides an overview of the extent to which Australian, state and territory government business operations are consistent with CN and, therefore, plays a significant role in facilitating transparency and accountability.

However, the Matrix has inadequately described NBN Co's compliance with CN policy. The most recent (2019) Matrix report indicated that NBN Co met the tax neutrality provision of CN, despite the fact that the National Broadband Companies Act provides for certain taxation exemptions for selected stamp duties (Australian Government 2019a, p. 6). The Matrix also indicated that the Australian Government had met its requirement to 'impose debt guarantee fees directed towards offsetting the competitive advantages provided by government guarantees'. As noted in chapter 2, though, in 2016 the Australian Government decided to exempt its \$19.5 billion loan to NBN Co from CN adjustment payments, and this significant fact was not reported in the Matrix.

Given the need for the Matrix to accurately reflect compliance with CN policy, Finance (responsible for producing the Australian Government's input into that report) should improve its processes for verifying the accuracy of the information on which the Australian Government's entry in the Matrix report is based.



Finding 7.4

NBN Co's compliance is not accurately reported in the Competitive Neutrality Matrix report

The Australian Government's contribution to the most recent (2019) *Heads of Treasuries Competitive Neutrality Matrix* report has not accurately recorded the extent to which NBN Co's operations are consistent with the requirements of competitive neutrality policy.



Recommendation 7.4

Finance should accurately record compliance in Competitive Neutrality Matrix reports

Finance should improve its processes for verifying the accuracy of the information on which it bases the Australian Government's entry in the *Heads of Treasuries Competitive Neutrality Matrix* report.

7.5 Tax deductibility of competitive neutrality payments

In considering the consequences of any CN payments to consolidated revenue made by NBN Co in order to comply with CN, the AGCNCO investigated whether such payments would be tax deductible, as this could affect the achievement of the goal of CN and the managerial decisions of government businesses directed to achieve that end.

To illustrate the issue, were a government business to borrow \$100 million at an interest rate 2 percentage points lower than the benchmark rate, it would be subject to a CN adjustment payment equal to the advantage it obtained simply by virtue of government ownership. In this example, that cost advantage over an equivalent

private sector business would be \$2 million per year. But, for a private business, their \$2 million of higher interest payments would normally be an allowable income tax deduction. Taking into account the company tax rate of 25 per cent, the after-tax cost to that business of \$2 million would be \$1.5 million. Thus, if a simple first-round cost advantage of \$2 million resulted in a CN debt neutrality adjustment payment of that amount — but which was not an eligible tax deduction — that CN payment would disadvantage the government business rather than just put it on an equal cost footing with its private sector competitors.

For this reason, the tax treatment of CN adjustment payments should be an important consideration when government businesses set, or the AGCNCO in its complaint investigations recommend, any such payments. This issue, though, receives no mention in the *Australian Government Competitive Neutrality Guidelines for Managers*.

To clarify the tax deductibility status of CN adjustment payments, the AGCNCO sought advice from the ATO. That non-binding general advice indicates CN adjustment payments would generally be expected to be tax deductible (ATO, pers. comm., 3 May 2021). However, that advice stressed that deductibility would be determined on a case-by-case basis and should not be taken for granted.

The Government's CN policy statement and Guidelines for Managers make no mention of this issue. That omission suggests that government businesses currently subject to CN should be advised of this issue and encouraged to review any CN adjustment payments they make to ensure those payments are not inadvertently disadvantaging them relative to their competitors. Treasury, as steward of CN policy and the portfolio responsible for monitoring the implementation of CN, could inform all government businesses making CN adjustment payments of the issue so they can, if necessary, clarify their eligibility for deductions with the ATO.

In addition, while the Guidelines for Managers cannot provide definitive guidance for government businesses — given the ATO's case-by-case determination of deductibility — that document could nonetheless be amended to alert businesses to the issue.



Finding 7.5

Tax deductibility of adjustment payments is normal, but not certain

The tax deductibility status of competitive neutrality adjustment payments needs to be considered in setting the level of any such payments. Not doing so might inadvertently put Australian Government businesses making such payments at a competitive disadvantage.

Full tax deductibility of those payments is likely to be the norm, but this should not be taken for granted.

On this issue, NBN Co advised the AGCNCO that it has processes in place as part of their annual tax filing that, in consultation with their tax advisors where appropriate, would be sufficient to ensure that the tax status of any CN adjustment payments would be made clear. These processes, NBN Co maintain, would be sufficient to avoid it being disadvantaged by excessive CN adjustment payments.

**Recommendation 7.5****Treasury should inform businesses of the tax status issue**

Treasury should inform Australian Government businesses currently subject to competitive neutrality of the tax deductibility issues associated with competitive neutrality adjustment payments. When the *Australian Government Competitive Neutrality Guidelines for Managers* is next revised, that document should also flag this issue.

A. The cost of capital

A.1 Introduction

As noted in chapter 6, the key test of whether NBN Co is making a commercial rate of return on its assets is that it makes an internal rate of return that is at least as high as its cost of capital. This appendix provides various estimates of the cost of capital for NBN Co as a benchmark for that test. It also provides more detailed evidence about NBN Co's realised cashflows and internal rates of return, and other evidence that points to non-commercial rates of return.

A.2 Building up NBN Co's WACC from its components

At various times, NBN Co has reported the internal rate of return (IRR) of NBN Co from its inception in 2010 to 2040 (with an assumed terminal value at that end point). However, while an IRR is often used to consider returns to investments and to choose between them, by itself it is not a directly interpretable measure for competitive neutrality assessments. An investment is only profitable if its IRR equals or exceeds the weighted average cost of capital (WACC), which is a weighted combination of the return rates that a company must pay to debt and equity holders for them to be willing to provide finance given the risks of the business (as recognised by NBN Co 2010, p. 143). The net present value of a business's cash flow is negative if the IRR is less than its WACC.

A benefit of looking at rate of return issues through the lens of the WACC is that it is one of the inputs of the building block approach used by the ACCC to determine NBN Co's long-term revenue constraint and has therefore been regularly considered as the network has been rolled out. It should be noted that the WACC used in regulatory determinations provides an allowable rate of return on the regulated asset base that the ACCC considers matches that of a normal commercial entity in a workably competitive market. If a regulated business has revenues that are routinely below the allowable amount and it appears unlikely that these will be recovered over the longer-term, then the business is not earning a commercial rate of return.

In the Capital Asset Pricing Model (the still dominant, though contested, framework for the cost of capital), determination of the nominal WACC involves estimates of the:

- current cost of debt for financing an investment (r_d)
- the cost of equity (r_e) — the required return for shareholders to provide capital, which incorporates the risk-free rate (r_f), the market risk premium (r_m) and the degree to which the value of the business's assets vary with the value of the market overall (the equity beta — β). Businesses with revenue streams that do not change much with variations of the overall market (covering all firms and industries in the economy) have β s closer to 0, while those whose proportional changes are about the same as those of the overall market, tend to 1. (In principle, β can be negative or greater than 1, but this seems unlikely for the assets in NBN Co.) In effect, $\beta(r_m - r_f)$ or the equity risk premium, is the undiversifiable risks for the particular investments of the business. Note that the unique risks of the business — such as the effects of disruptive technologies that affect the activities of the business but not the market generally — are not included in

the equity risk premium because the assumption is that across a wide range of investments these risks can be diversified (CCNCO 1999, p. 7; Partington 2015, p. 77).

Formally, the nominal ‘vanilla’ WACC is a weighted average of the pre-tax cost of debt and the post-tax cost of equity:

$$WACC = \frac{D}{V} \times r_d + \left(1 - \frac{D}{V}\right) \times r_e = \frac{D}{V} \times r_d + \left(1 - \frac{D}{V}\right) \times (r_f + \beta(r_m - r_f))$$

where D/V is the share of debt financing in overall market value of the firm. In a regulated setting, the vanilla WACC is applied to the post-tax cashflow of the business to determine its allowable revenue. For instance, this is the AER’s approach (AER 2020, p. 9). Other regulators use different approaches, but they can be reconciled if they are applied to the appropriate cashflows. If the cashflow before tax was used, then allowance has to be made for the impact of taxes and a different WACC must generally be used. In the case of NBN Co, a complicating factor is that the entity has never paid tax as it has never earned taxable income. As such, it has carried forward its tax losses, whose present value will be significantly reduced as the ATO does not pay interest on tax losses. In effect, the tax shield provided by debt is much less than for a business that is making taxable returns.

In regulatory determinations made by the Australian Energy Regulator, the Independent Pricing and Regulatory Tribunal, Independent Competition and Regulatory Commission, the Western Australian Economic Regulation Authority and other Australian economic regulators, the risk-free rate and the market risk premium tends to vary over time (as can betas), which needs to be considered in estimates of the WACC.²⁸

Establishing the market risk premium ($r_m - r_f$)

As in other elements of the WACC, the value of the market risk premium is contested. In part this is because of its relevance to regulators’ determination of the allowed rate of return on assets for natural monopolies, and therefore to constraints on the regulated businesses’ prices, revenue and profits. Regulated entities tend to argue for higher market risk premiums than regulators because this gives them greater latitude to raise prices. The size of the premium is also questioned because it implies a reward for risk that appears too great given people’s underlying risk aversion (‘the equity premium puzzle’). Conceptually, the market risk premium should relate to the future economy and could be time varying. In practice, it is mainly estimated using historical data with an assumption that it is time invariant.²⁹ Most estimates of the market risk premium lie in the range 5 to 8 per cent looking, but with 6 to 6.5 per cent being a commonly chosen value in regulatory decisions (AER 2016, 2021; Anderson et al. 2020; Bianchi, Drew and Walk 2016; Bishop, Carlton and Pan 2018; CAANZ 2021; ERAWA 2021; ICRC 2021; KPMG 2019; Leadenhall 2022; Queensland Government 2020). IPART used a market risk premium as high as 8.9 per cent (for June 2021) for its calculations of the WACC for regulated businesses.³⁰ The panel assessing the costs and benefits of the NBN recommended a market risk premium of 6 per cent (Vertigan et al. 2014b, p. 41), which is consistent with the above estimates. The most recent report on the WACC appropriate to NBN Co used a market risk premium of 6.5 per cent (Frontier Economics 2022b, p. 7).

²⁸ Leveraging may also change, but as a business borrows to a greater extent, the cost of equity rises due to increased financial risks (Partington and Satchell 2021). In that context, it is sensible either to use an unlevered WACC or adopt a fixed debt to asset ratio over time.

²⁹ The views about trends in the market risk premium vary. For example, one corporate advisory firm considered that the equity market risk premium had increased from 6.5 per cent at June 2021 to 6.75 per cent six months later. The Reserve Bank of Australia found that some firms perceive risk as having increased, notwithstanding reductions in interest rates (Edwards and Lane 2021). In contrast, a review of market risk premiums by KPMG found a negligible increase between 2012 and 2020 (KPMG 2020).

³⁰ Based on its February 2022 Spreadsheet Model of the WACC available at <https://www.ipart.nsw.gov.au/Home/Industries/Special-Reviews/Regulatory-policy/Market-Update>.

Establishing the equity risk premium $\beta(r_m - r_f)$ for ‘similar’ regulated businesses

While the market risk premium is unrelated to any specific business’s risk, the equity risk premium represents the risk to shareholders of the given business to which they are providing capital, which depends on the equity beta. The cost-benefit analysis of NBN Co used $\beta=1$ (Vertigan et al. 2014b, p. 41), while an earlier consideration of NBN Co recommended $\beta=0.7$, consistent with that used for Telstra (Officer and Bishop 2011). The most recent assessment of the appropriate β for NBN Co was also 0.7 (Frontier Economics 2022b, p. 36). It is unlikely that the beta for NBN Co will exceed 1, noting that NBN Co appears to share some of the features of large natural monopolies. Regulated natural monopolies tend to have more stable cash flows compared with other businesses, which leads to lower non-diversifiable risk (Fallon, Cunningham and da Silva Rosa 2021). This reflecting their ‘essential’ nature, their low price elasticity of demand (Williams and Zhao 2020), their universal uptake, the fact that prices often have a fixed and variable component (which provides a minimum revenue stream even if use is low), and the impact of regulation on allowable revenue/prices.³¹

The equity betas for regulated utilities and capital-intensive networks reflects these features. The equity beta for telecommunications services have been estimated to lie between 0.57 and 0.99 (Fallon, Cunningham and da Silva Rosa 2021, p. 74). Other regulated utilities tend to have betas between 0.4 and 1, with for example, 0.6 for Western Australia’s public transport authority (ERAWA 2021, p. 4), , 0.7 to 1.0 for the various public transport networks in NSW (IPART 2016), 0.7 for water in the ACT (ICRC 2021), 0.7 for water in South Australia (ESCSA 2015), 0.65 for water in Tasmania (Tasmanian Economic Regulator 2022, p. 62), about 0.8 to 0.9 for water in Queensland (Frontier Economics 2021), 0.35 to 0.55 for various electricity and gas networks across Australia (IPART 2002, p. 12), 0.5 to 0.7 for airports (Fallon, Cunningham and da Silva Rosa 2021, p. 72), 0.8 for Australia Post (Value Adviser Associates 2015, p. 12), and 0.4 to 0.7 for utilities as a group (AER 2018). A large sample of regulatorily-determined betas for electricity network and gas utilities for the period from 1998 to 2010 varied between 0.8 and 1.33, with a modal value of 1 (Officer and Bishop 2011, p. 17). There are a few instances where regulated businesses have high estimated betas, such as $\beta=1.6$ for rail freight in Western Australia, which may reflect the volatility in the resources sector relative to the economy as a whole (ERAWA 2021, p. 4).

One obstacle to selecting a beta based on findings for other utilities is that NBN Co is unique among the other regulated monopolies in that it is only just starting to realise significant customer income, reflecting that it has taken a decade to build the network, whereas other utilities have had observable revenues over many decades. The data that would allow any estimation of the correlation between cashflows of NBN Co and the market are not yet available, and so some doubt applies to simply assuming that the correlation of NBN Co’s future cashflow movements with market cashflows will be like other utilities.

NBN Co may not have the same stability in cashflows as some existing utilities. Households are likely to be reluctant to upgrade to high-speed services (which are more lucrative for suppliers) following income shocks, which suggests that economic downturns could have adverse effects on trends in cashflows from this market segment. There is also some (relatively low quality) evidence that demand for internet services *generally* is income elastic, with similar risks for cash flows during downturns (Goel et al. 2006). Moreover, while NBN Co is subject to a Special Access Undertaking (SAU) that could, in principle, significantly affect its pricing, it does not appear to act as a significant constraint (yet). As such, NBN Co is arguably not as insulated from

³¹ Its near Australia-wide adoption rate further diversifies demand risk for NBN Co relative to state based utilities since any idiosyncratic state-based demand and supply shocks are smoothed for activities at a national level.

non-diversifiable risk as typical low β utilities.³² Overall, while only a judgment, using a beta close to 1, as in Vertigan et al. (2014, p. 41), seems more plausible than either higher or lower betas.

A further issue is that NBN Co faces significant risks of technological disruption posed by competing technologies like 5G and low-orbit satellite services, which means that its natural monopoly status is being undermined, even if it retains some market power in the meantime. NBN Co itself has put this position (principally in seeking to amend its SAU):

The SAU was also developed in a context where the market dynamics facing nbn were assumed to reflect nbn operating as a monopoly provider of broadband services. In reality, there are substantial market segments where this is not the case. nbn faces significant competition in the enterprise, business, and new developments markets from existing infrastructure providers, and also faces increasing competition from 4G, 5G and fixed wireless services in the residential market. (NBN Co 2021j, p. 6)

Technological developments (box A.1) may separately affect the cost of capital via other means than the stability of its cash flows. Technological risks could well influence NBN Co's future *debt* premiums, which themselves may be further accentuated as NBN Co increases its leverage and thereby erodes the capacity of an equity buffer to protect the interest of creditors. Given the technological threats to NBN Co are likely to increase, they are unlikely to be fully reflected in the current costs of debt.

Determining the impact of technological risks on the required return to equity is more subtle. In principle, investors confronted with two competing technologies that could cannibalise the others' cashflows can spread the risk by making equity investments in both. If 5G displaces NBN, then the investor could thereby offset the losses on holding assets in a fixed broadband network. To the extent that this is true, then technological risk does not necessarily affect NBN Co's beta and associated cost of equity capital.³³ However, it would still be important to adjust cashflows to their expected levels (not certainty equivalents) as the impacts of increasingly capable wireless technologies become apparent. This would not alter the WACC, but it would affect the commercial returns on NBN Co's investments.

In summary, while technological risks may not affect beta, they could affect the debt premium and require downgraded expected cash flows, both of which reduces the net present value of the returns from NBN Cos investments.

³² A third observation is that businesses with long-lived assets like NBN Co are sensitive to changes in future discount rates, and that this adds to β (Boyle and Murray 2021).

³³ We have followed the convention used by regulators of ignoring ownership in estimating the appropriate WACC for government-owned natural monopolies. In doing so, we have skirted some broader contested issues about public finance. There are several competing views on the degree to which ownership may matter for assessing project risk. On the one hand, as NBN Co's equity investor, the Australian Government does not diversify equity risk through buying a wide variety of stocks and other assets, and so does not manage idiosyncratic risk via this mechanism. That might suggest that the WACC should be higher for a government-owned business. However, while not undertaken through equity markets, governments invest in many activities with social and economic benefits with gains and losses of their risky activities spread over all of its citizens, diversifying risk this way (BTRE 2005; SCNPMGTE 1996, p. 21). There are also arguments that the equity premium in private share markets reflects failures in these markets that are not replicated in government financing — which would suggest a lower cost of finance for government projects (Quiggin 1997).

Box A.1 – New technologies may threaten NBN Co's cashflow and risks

At the commencement of NBN Co, there was little consideration of the technological threats posed by wireless technologies. Mobile technologies were largely seen as complementary to fixed broadband and the rollout plan envisaged no wireless-only businesses (NBN Co 2010, pp. 36, 49).

OptiComm observed that while 4G has traditionally been considered a poor substitute for NBN Co's fixed-line services — because of its low data caps — this no longer holds. As evidence of this, it gave the example of Tangerine Telecom's introduction in early September 2020 of a 1000Gb 4G wireless home broadband service on the Optus network, which is priced at below \$100/month.

It also pointed to the 5G mobile and fixed-wireless networks currently being rolled out across Australia, which are direct substitutes for NBN Co's fixed-line broadband service. This, it argued, will put considerable pressure on NBN Co's ability to win and retain market share and to generate profit. OptiComm also noted that some companies, such as TPG, are rolling out a large fibre network in capital cities and taking a significant share of NBN Co's business, particularly in the financially attractive CBD and metropolitan apartment buildings market. Media reports of highly competitive download speeds using 5G technology suggests the capacity of this technology to compete with broadband networks in some markets (Adhikari and Samios 2020; Clark 2021; Harrison 2021; Pearce 2021). Other technologies, such as low Earth orbit satellite ground stations will, with their lower latency, provide competitive pressures outside urban areas (Dux 2021), though the recent announcement by the Australian Government to provide large subsidies to regional fixed-wireless and satellite services will reduce competitive pressures by innovative private sector parties on NBN Co.

These claims echo NBN Co's own concerns about the risk of wireless competition, noted in past Corporate Plans and in its recent SAU variation discussion paper (NBN Co 2010, p. 148; 2016, p. 35; 2021b, p. 6), and the view in the *Australian Telecommunications Market Report 2020–2025* that competition from 5G introduces a significant but unknown degree of risk to NBN Co's business model (Fevre 2021). More generally, NBN Co has identified the difficulties of forecasting its future financial performance:

In the current market, Management and the Board face inherent uncertainty in accurately forecasting long-term financial prospects. NBN Co has a limited factual and operational base for financial projections due to the uncertainty in the long-term market structure and competitive landscape, network usage, regulatory policy, innovation and the impacts of COVID-19 and other potentially disruptive events. (NBN Co 2020c, p. 54)

What is the risk-free rate?

Typically, the risk-free rate is measured as the return on the 10 year Australian Government bond rate (given its high rating by rating agencies, which reflects its very low default risk). The cost of risk-free debt capital apparent over the current life of NBN Co has been highly variable (see figure A.1 later in this appendix). There have been considerable changes even over the period since the AGCNCO received the formal CN complaint against NBN Co: for example, the 10-year bond rate ranged from a low of 0.74 per cent on 5 November 2020 to a high of 3.57 per cent on the 9th and 10 May 2022 (RBA 2022).

Assuming the potential for periodic re-financing and new debt issues, the risk-free rate used in the WACC will vary over time. In determining the allowed rate of return for NBN Co, the ACCC has used the risk-free rate for each

year. (While this approach recognises that there can be new debt issues and refinancing, it implies that old debt contracts can be broken without costs, which would not be typical for private debt raisings.)

The debt risk premium ($r_d - r_f$)

As noted in chapter 2, NBN Co obtained access to debt capital on favourable terms because of their government ownership status, with independent rating agencies classifying the benchmark cost of debt (i.e. that applicable if NBN Co was not government owned) as significantly higher — varying something between 2 and 4 percentage points higher.³⁴ As discussed above, the IRRs for NBN Co involve a model of financial returns to 2040, which involves years well outside the terms of the existing new loans obtained by NBN Co. As also noted above, the technological disruption risks facing NBN Co may lead to a premium for debt issues in 2030 or more that are greater than historically-observed premiums. (Notably, inflation risk in 2022 and subsequent years are higher than historical norms.)

Assembling the components of the WACC

Table A.1 provides *indicative* measures of the average WACC over a 10 year investment horizon at the commencement of any significant investment (2010-11) and for investments being financed now (2020-21). Actual WACCs will vary from this, given tranches of debt were obtained at separate times and entail different interest rates. Furthermore, future debt financing will be required and the interest rates will likely be higher given growing inflationary pressures and the reduced need to stimulate the economy as the COVID pandemic recedes. (Current bond rates are at unprecedented low levels.) Consequently, the long-term WACC will likely be higher than its current low value. The results assume fixed values over time for other aspects of the WACC, such as the market risk premium, equity beta, the debt premium and leverage, which may also change.

A.3 Alternative views about NBN Co's WACC³⁵

NBN Co's early view

At the time of initial investments, NBN Co assessed the cost of capital over four stages of the project, estimating a WACC of 25 per cent in the 'proof of concept' period, 12--13 per cent during the construction stage (2014–2021), 9.5-10.5 per cent during the transition/market development stage (2021–2022), and 8-9 per cent during the period from 2023 when the network was established. The inference is that a high WACC is required in the early period since there are significant (non-diversifiable) risks associated with a change in the nature of the project or its abandonment that would limit the future cashflows that shareholders require. If nothing else, one special consideration for NBN Co is that for much of its early years, its prime

³⁴ To provide a comparison, the estimated long-term debt margin used by IPART in its February 2022 Spreadsheet WACC model for a (stable) regulated natural monopoly with a beta of 1 was between 3.09 and 2.63 per cent annualised for the first four tranches of debt per cent for the period from January 2014 to January 2020.

³⁵ Apart from those below, another avenue for assessing the WACC for NBN Co would be the typical rate of return of the government business's competitors. However, the nature of NBN Co's business makes it difficult to identify satisfactory like-with-like competitors. NBN Co's prime business is as an open access wholesaler of broadband services, principally achieved through various types of fibre technologies (supplemented by satellite and fixed wireless oriented to regional subscribers). In contrast, the three other major Australian telecommunications businesses — Telstra, Optus and Vodafone — are more diversified and act as retailers, wholesalers and major asset holders, particularly of wireless networks, and also have interests overseas.

activity was as an infrastructure construction company, with all the special risks that this entails compared with a stable business with largely built infrastructure. Overall, NBN Co indicated that the long-run WACC that took account of these variations over life stages of the project was estimated as 10–11 per cent (NBN Co 2010, p. 143). At the time of these estimates, the risk-free rate was more than 5 per cent.

Table A.1 – Indicative measure of long-run nominal WACC for NBN Co^a

Factor		2010-11+	2020-21+
Market risk premium	$(r_m - r_f)$	6.25	6.25
Equity beta	β	0.9	0.9
Equity risk premium	$\beta(r_m - r_f)$	5.6	5.6
Risk-free rate of interest	r_f	5.4	0.9
Cost of equity	$(r_f + \beta(r_m - r_f))$	11.0	6.6
Debt premium (under neutrality)	$r_d - r_f$	3.0	3.0
Cost of debt	r_d	8.4	3.9
Leverage	$\frac{D}{V}$	40	40
Weighted average nominal cost of capital for discounting pre-tax cashflows over medium run horizons		10.0	5.5

a. A leverage of 40 per cent has been assumed as the long-run leverage for a comparable private sector entity. NBN Co had initially low leverage given the relatively large difference between the Australian Government's equity injection of \$29.5 billion and its loan. Its ultimate leverage will be higher.

The 'rough and ready' rate from the Special Access Undertaking

In the SAU, the ACCC specifies that the allowable rate of return on the regulatory asset base for NBN Co is the risk-free rate plus a uniform 3.5 per cent.³⁶ This can be reconciled with the standard approach to estimating the WACC if it is assumed that the only reason for variations in the WACC over time is due to the risk-free rate and not to other components expressed in the Capital Asset Pricing Model (CAPM) model. At the time the ACCC accepted the SAU, it noted the difficulty of setting an accurate rate:

Generally, the ACCC would determine the rate of return through a bottom-up WACC methodology, where the weighted average of costs of equity and debt are determined through an in-depth analysis of estimation methods and input parameters. However, NBN Co is a new company that is proposed to operate under a unique regulatory regime and that finds itself facing a somewhat exceptional set of circumstances, making it difficult to undertake a traditional WACC analysis. (ACCC 2013a, p. 152)

Notwithstanding that it is a uniform rate, its derivation was not arbitrary, but informed by an assessment by the ACCC's consultants of the WACC for other regulated natural monopolies and 'like' businesses NBN Co (Officer and Bishop 2011). The cost of debt to the firm can be broken down into the risk-free rate on debt and

³⁶ This was also the rule-of-thumb approach recommended in the original CN guidelines from the Australian Government Treasury (1998) for estimating the WACC for *smaller* government-owned businesses, though subsequently CN advice increased the recommended margin to 5 per cent (TDoFA 2004, p. 32).

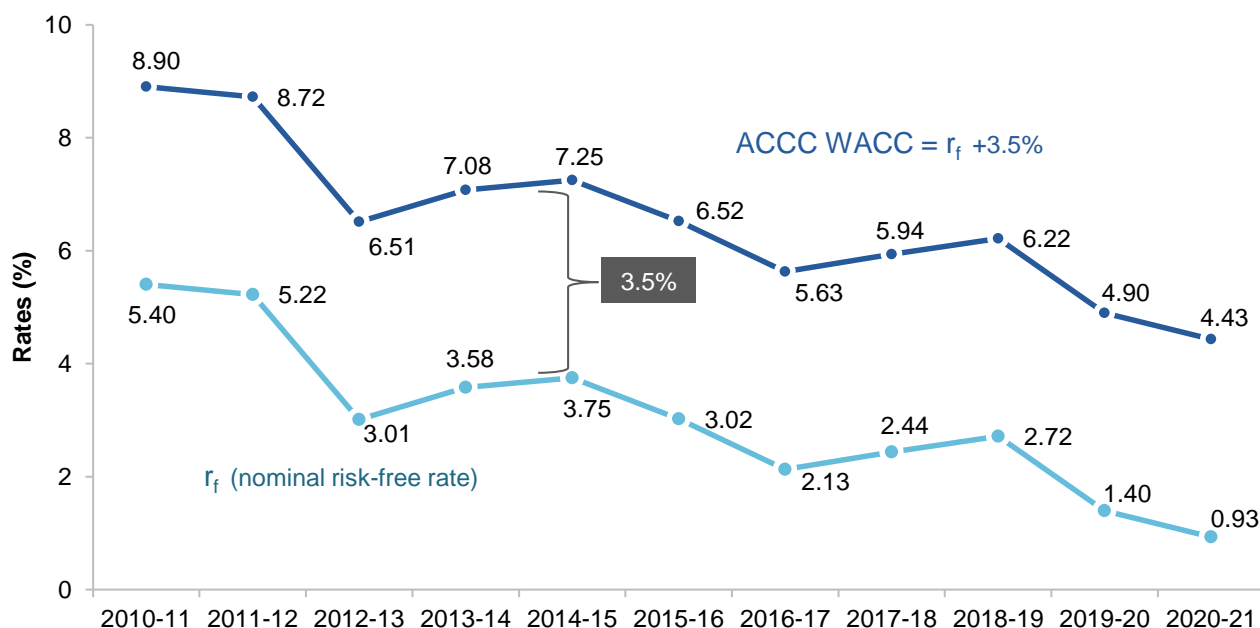
a debt risk premium, which means that an alternative representation of the WACC is the risk-free rate of debt plus a weighted average of the debt risk premium and the equity risk premium:

$$WACC = r_f + \frac{D}{V} \times (r_d - r_f) + \left(1 - \frac{D}{V}\right) \times \beta(r_m - r_f)$$

The implicit assumption of the ACCC and their consultants is that weighted average of the debt risk premium and the equity risk premium is fixed at 3.5 per cent, as shown in figure A.1. There are many possible combinations of the debt and equity premiums and the leverage rate that could lead to a constant 3.5 per cent, and there is evidence for this as a reasonable starting approximation (Officer and Bishop 2011).

In the latest indicative WACCs for a revised SAU, the NBN Co calculates future WACCs with higher values than shown in figure 1.1, which are the relevant values for considering future investments. The 'current' estimate is 6.8 per cent and the long-term rate 7.7 per cent (reflecting an assumption of a higher risk-free rate of debt and a lower market risk premium).³⁷

Figure A.1 – The risk-free rate of interest and the ACCC's WACC for NBN Co^a



a. The risk-free rate is based on the 10-year Australian Government bond rate. The *Competitive Neutrality Guidelines for Managers* (TDoFA 2004) and the CCNCO's discussion of rate of return issues (CCNCO 1998b) are silent on the question of the exact period that should be used for deriving the risk-free rate issue in any given year. In the case of NBN Co, the SAU specifies that the risk-free rate for a financial year should be calculated on a moving average basis from the mean annualised yield on Commonwealth Government securities with a maturity of 10 years, averaged over the final 20 Business Days of the preceding Financial Year and using the indicative mid rates published by the Reserve Bank of Australia (NBN Co 2021h, p. 123), which is what is depicted here.

Source: Based on NBN Co (2022c).

There has been a reassessment of the appropriate WACC since the original estimates. The SAU applies only to fibre-to-the-premises, fixed-wireless and satellite networks. It does not cover the later addition of other technologies employed under the multi-technology mix model, raising the question of whether the original WACC remained relevant (ACCC 2021, pp. 1–2). However, a subsequent investigation of the (ex-ante) risks associated with the multi-technology mix model was that the original WACC was still an appropriate indicator of

³⁷ Based on the WACC tab in NBN Co (2022c).

NBN Co's whole-of-company risk (Officer and Bishop 2016, p. 5). The fact that there were significant unanticipated ex-post costs associated with the multi-technology mix does not mean that the ex ante WACC was the wrong estimate to apply. The WACC relates to the willingness of parties to provide finance to a business given an ex-ante view about its risks, and inevitably, the fact that there is no prior certainty means that cashflows and costs will vary from their expected mean values. Nonetheless, a reassessment of the original WACC based on economic developments, further consideration of NBN Co's characteristics as a business and other regulatory decisions suggests the estimate may be too low, though it would still fall within the wide confidence interval for WACC estimates. The judgment was that the appropriate expected markup on the risk-free rate from a bottom-up approach would be 4 percentage points (Officer and Bishop 2016, p. 5).

Risk broad-banding

Another option for selecting a value of the WACC — as discussed in the Guidelines for implementing CN policy — is risk broad-banding approach (TDoFA 2004, p. 32). This allocates a cost of capital to a business based on a judgement about its market risk — low risk (bond rate + 3 per centage points); medium risk (bond rate plus 5 per centage points) and high risk (bond rate plus 7 per centage points). At its inception, NBN Co projected the long-term bond rate as stable at 5 per cent over its long-term projection horizon (NBN Co 2010, p. 143). The risk broad banding approach therefore suggests a cost of capital between 8 and 12 per cent.

The implications of estimates of the fair value of NBN Co for the WACC

The fair value of an investment is the estimated price that would be received if it were sold in an orderly transaction between market participants (AASB 2015) — an issue explored in greater detail in section A.5.³⁸ The fair value estimate relevant to the Australian Government is the amount the business is worth to *equity holders* (the true equity value of the business). This value differs from the economic value of the collective assets held by business itself (the enterprise value), which is based on the estimated cashflow available to the equity holder *and* creditors (to recoup their provision of debt). The cashflow relevant for the equity holder is one that removes any obligations to creditors and should be discounted using the required rate of return to equity, not the WACC.

In estimating NBN Co's fair value in 2021-22, the Department of Infrastructure, Transport, Regional Development and Communications used a required rate of return to equity of 9.3 per cent as the rate for discounting cashflows to equity holders (DITRDC 2022, p. 204), down from 10 and 10.49 per cent in 2020-21 and 2019-20 respectively (DITRDC 2020a, pp. 189–190). Adjusting the AGCNCO's WACC based on a bottoms-up approach to reflect DITRDC's cost of equity results in a WACC in 2021-22 of about 7.2 per cent.

A.4 The relationship between the IRR and the WACC suggests a non-commercial rate of return

NBN Co has, at various times, provided estimates of the IRR from its cashflows, which provide the benchmark against which to assess whether the returns cover the WACC (figure 6.1 in chapter 6).

In its early stages, NBN Co projected a long-run unlevered internal rate of return of 7.04 per cent over a 30 year project lifetime (NBN Co 2010, p. 23), but acknowledged that under a range of uncertain contingencies, the

³⁸ It does not include any transactions costs associated with such a sale.

rates could be between 5.3 and 8.8 per cent (p. 25).³⁹ NBN Co noted that its average estimate of the IRR was above the 5-year bond rate, which was 5.38 per cent (p. 134), a difference of 1.66 per cent, which is well below the premium that is suggested by any of the above estimates of NBN Co's WACC, including its own.

NBN Co's 2013 Strategic Review estimated the IRR over the period from 2010–2040 under various technology options. The estimated IRR of retention of the original technology plan was 2.5 per cent, but was still just 5.3 per cent for the then anticipated 'optimal' technology mix and with the highest revenue trajectory (NBN Co 2013, p. 17). NBN Co characterised the highest IRR as 'relatively low' (ibid p. 19). Under the alternative revenue strategy, the best outcome was an IRR of 3.1 per cent.

The negative margin between NBN Co's own estimates of the long-run IRR and the cost of obtaining debt and equity capital has persisted, which implies that NBN Co has not been able to generate a commercial rate of return. The recent estimates of the rate of return have just been above the rate of inflation (below which NBN Co would no longer figure as an asset on the government's balance sheet).

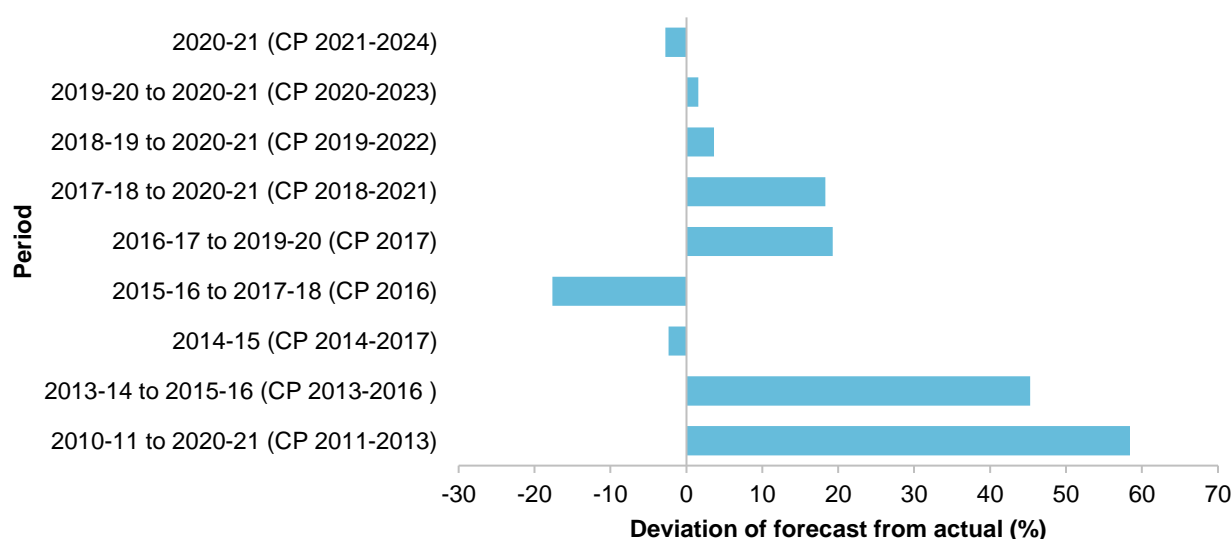
Two aspects concerning the IRRs should be noted.

At inception, the gap between the IRR and all reasonable long-run estimates of the WACC provides evidence that ex ante, a truly commercial rate of return was not anticipated at the time investments were planned. At the time that should have precipitated concerns about a breach of CN policy.

Subsequently, the slower than expected rollout, the associated lower revenue streams and an insufficient reduction in costs meant that the cashflow was much below the anticipated level (figures A.2 and A.3). At commencement, NBN Co projected that over the period from 2010-11 to 2020-21, operating costs (only a component of full costs) would be about 2 per cent less than revenue, whereas the actual outcome was that operating cost were 91 per cent higher than revenue. At end June 2021, the cumulative gap between NBN Co's revenue and the sum of its operating costs and the regulatory required rate of return on, and depreciation of, its asset base stood at more than \$36 billion (figure A.4).⁴⁰

³⁹ The 2011-13 Corporate Plan did not specify the IRR as unlevered, but this is made clear in the subsequent 2012-15 plan (NBN Co 2012, p. 10). The unlevered IRR is based on the free cash flows to the business and does not subtract interest paid or other effects of debt on the cashflow. It is therefore unaffected by the financing structure of the business. In contrast, the levered IRR takes account of the effect of debt on the cash flow and provides a measure of the return to equity holders. An equity investor comparing different investment options should choose the one with the highest levered IRR subject to the provision that its unlevered IRR is greater than the WACC (noting that if the latter condition is not met, the project as a whole has a negative net present value).

⁴⁰ While measured on a different basis than the Initial Cost Recovery Account in the SAU, by the end of June 2022, the accumulated recorded accounting losses of NBN Co were \$33 billion (NBN Co 2022a, p. 131).

Figure A.2 – Deviation between forecast and actual revenue for different corporate plans^a

a. In its various corporate plans (identified in parentheses), NBN Co has produced forecasts of future revenue. Some of the differences will reflect the rounding of estimates from the 2016 Corporate Plan, but the overall pattern is indicative. To understand the chart, the corporate plan for 2011–2013 gave an estimate of revenues for the period from 2010-11 to 2020-21 of \$23.7 billion, but actual revenues over this period were \$14.9 billion, or a 58 per cent difference between the forecast and the actual. Actual revenue in 2020-21 was \$4.629 billion, while the corporate plan for 2021–2024 forecast a revenue of \$4.5 billion, or about 2.8 per cent less so that the business performed slightly better than forecast in that year.

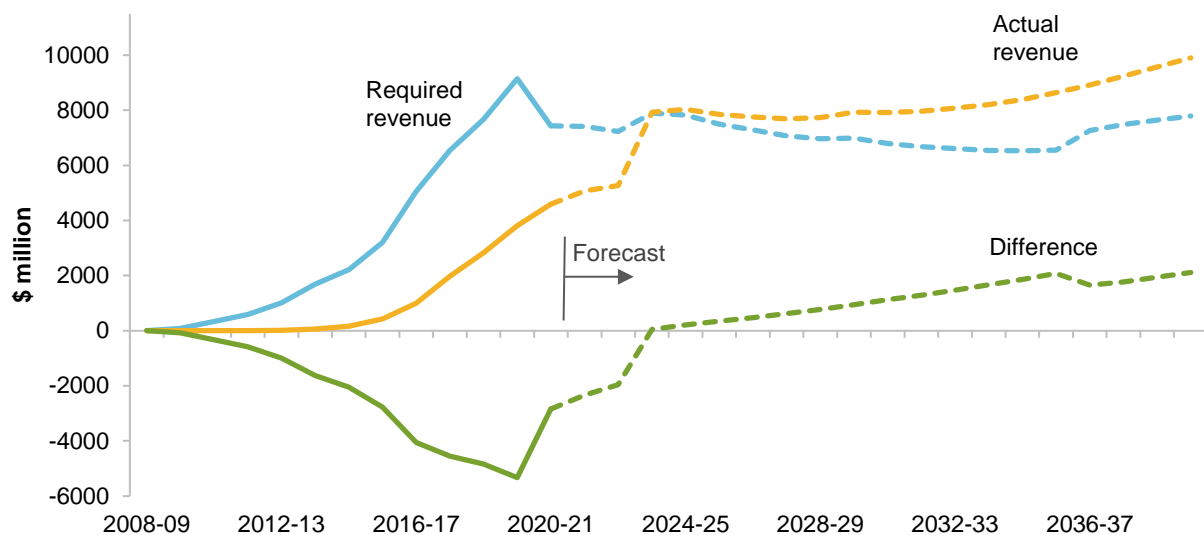
Source: Actual revenue is from NBN Co's *Special Access Undertaking 2020-21 Regulatory Information – LTRCM Spreadsheet*, while forecasts are from the sources specified in the previous chart.

A.5 The implications of the fair value of NBN Co

When compared with the properly interpreted value of contributed equity, the fair value of the assets of a business gives an indication of its financial position. Under standard accounting rules, fair value is an estimate of 'the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions (i.e. an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability)' (AASB 2015).

In line with required reporting functions for government-owned businesses, DITRDC and its various predecessors overseeing NBN Co annually report its value *to its shareholder* — the Australian Government. Given the complexity of these estimates, they are regarded as a key audit matter by the ANAO (as the auditor for the Department's financial accounts) and subject to close scrutiny to check their reliability. Estimates of fair value from 2013-14 to 2018-19 used a modified net asset approach (total assets less total liabilities plus a variety of adjustments) and showed a widening gap between contributed equity provided by taxpayers and fair value — a reflection of the revenue shortfalls discussed above. While this appears to suggest of a failure to achieve a commercial rate of return, the net asset approach can underestimate the true value to equity holders of an infrastructure business during its construction phase when large losses are accumulated before positive cashflows (PBO 2020, p. 14).

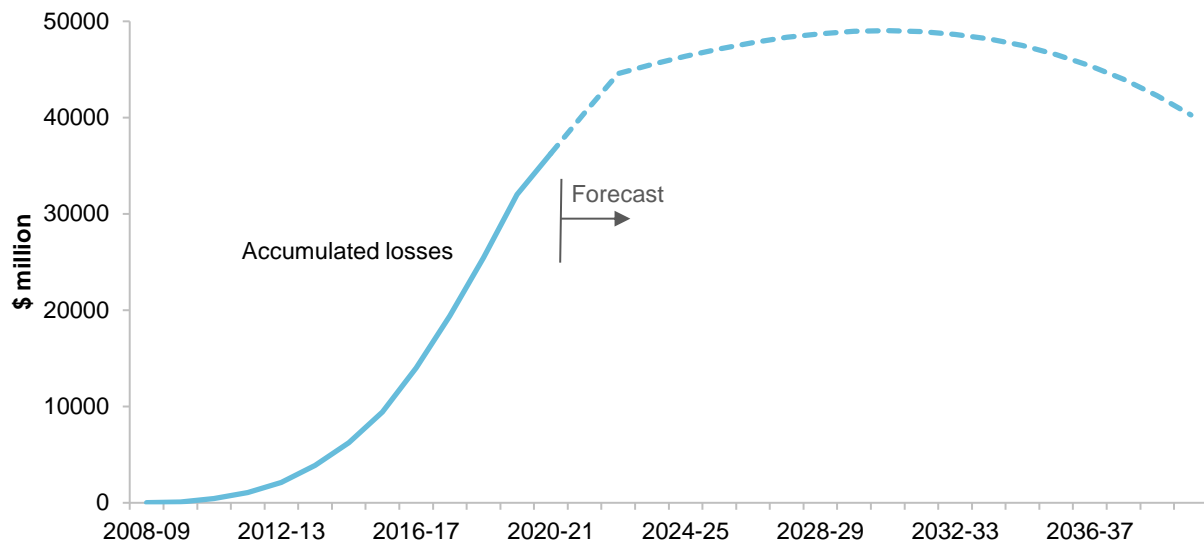
Figure A.3 – NBN Co revenue and losses since inception^a
2008-09 to 2039-40



a. The revenue required is the Annual Building Block Revenue Requirement (ABBRR) as specified in the SAU. It covers the return on the regulated asset base needed for debt and equity holders, nominal regulatory depreciation, nominal operating expenses and the annual construction in progress allowance (which relates to a return on work in progress). The values from 2021-22 are a combination of forecasts and indicative estimates from NBN Co.

Source: NBN Co (2022c).

Figure A.4 – Accumulated losses^a
2008-09 to 2039-40



a. Accumulated losses (the Initial Cost Recovery Account in the Special Access Undertaking between NBN Co and the ACCC) is the stock of losses (in nominal terms), compounded by the WACC to take account of their opportunity cost, which is why it more than the accumulated losses shown in NBN Co's accounts. The values from 2021-22 are forecasts and indicative estimates from NBN Co.

Source: NBN Co (2022c).

Now that the business has transitioned from the construction phase to a predominantly operational phase (DITRDC 2020a, p. 130), it is feasible to estimate the fair value based on the net present value of its

expected long-run cashflows, which is conceptually superior to the net asset approach. The fair value takes into account NBN Co management's best estimates of the future commercial prospects of the business. These forecasts include the rising revenue associated with the existing network and upgrades associated with connection of additional premises to fibre-to-the-node technology, and reductions in operating costs (DITRDC 2022, p. 162, box A.2).

Box A.2 – Forecasts suggest that NBN Co's commercial prospects are improving

There are some positive signs for NBN Co's cashflows, with it forecasting a taxable profit by 2023-24.

Subscriber payments from NBN Co to Telstra and Optus — which have been a major source of operating costs — are scheduled to fall to zero from the end of 2022-23.^a In 2024-25, NBN Co's operating costs are forecast to be 50 per cent of their peak value in 2019-20.

Demand for NBN Co services is also rising. Some of the revenue upturn in recent times can be ascribed to the impact of COVID-19 on demand for broadband services (NBN Co 2021k). While working from home will probably be less than its peak, it will be permanently more prevalent than prior to the pandemic, and will stimulate uptake of quality broadband services (PC 2021a, 2021b). On top of this, demand for more lucrative faster broadband services is expected to rise significantly. NBN Co forecasts that the sum of active services using Home Fast, Home Superfast and Home Ultrafast will increase by more than 230 per cent from 2020-21 to 2024-25 (with the share of these in Traffic Class 4 services increasing from about 7 per cent to about 20 per cent over the same period).^b

Overall, while there have been some (and will be further) improvements in NBN Co's cashflows, its accumulated losses as forecast in the Special Access Undertaking are still expected to amount to about \$25 billion by 2039-40 in 2019-20 prices (though down from \$36 billion in 2019-20).

There are also a range of risks. The regulatory situation is evolving. The ACCC has noted that the pricing of low-speed NBN plans should not exceed the prices that consumers would have paid with the technology that existed prior to NBN Co's network (Sims 2020). Mounting pressures for price reductions in lower-speed NBN plans may therefore erode expected revenues. Growth in the use of 5G and other competing technologies may add to these pressures (box A.1).

NBN Co's management will already have considered these various factors in their revenue forecasts, and so, in principle, they are also reflected in the fair value estimates of equity to the extent that those forecasts are reliable.

a. Subscriber costs primarily reflect contractual payments to Telstra for the disconnection of services and to Optus regarding the migration of subscribers (NBN Co 2022a, p. 181). **b.** Traffic Class 4 services are the dominant class of services designed primarily for general internet and standard data services.

Source: The source is the spreadsheet available on NBN Co's webpage: *NBN Co Forecast financial information in support of Replacement Module Application_0*.

While the declared status of the business as 'built and fully operational' reduces uncertainty about its future commercial prospects, there remains significant risks of material errors in estimating the future demand for NBN Co services, its cost pressures, and the other factors that determine its value to shareholders. The Australian National Audit Office (ANAO) rates the risks of the risks of inaccuracy of the Department's assessment of fair value of NBN Co in its financial statements as 'higher' (Auditor-General 2021, pp. 207–208). It emphasised that there is 'a risk of misstatement in the estimated fair value', noting that:

The discounted cash flow model used by the Entity to determine the fair value of the company requires a higher level of judgement and estimation because the primary inputs applied in the model are not based on observable market data (given limitations on the availability of such comparable data. (DITRDC 2021a, p. 145)

Against that background, the DITRDC's annual report prudently shows a range of estimates. The base estimate of the fair value of NBN Co in 2021-22 was \$19.7 billion (up from \$18 billion in 2020-21 and \$13.8 billion in 2019-20). However, taking account of potential deviations from the base case, in 2021-22, the valuation was as small as \$14.5 billion if annual operating expenditure growth was increased by 10 per cent in each year and as high as \$24.2 billion under lower operating cost growth assumptions (table A.2). All other scenarios — such as varying the cost of debt and terminal growth rate assumptions leads to values that lie between the above range.

Higher or lower values would arise if more than one of the base case assumptions proved wrong. For example, were forecast operating costs to be at the high end of the range in table A.2, and revenues at the bottom end, the fair value would be considerably less than \$14.5 billion. On the other hand, the value would be appreciably higher than \$24.2 billion if the forecast operating costs and revenue were respectively at the lower and higher end of their respective ranges.

The current fair value estimates rely on the best estimates of NBN Co's management. Future fair value estimates are inherently uncertain and will depend on the assumed discount rate, financial structure, the value of tax losses and NBN Co's management changing views about future prospects. These uncertainties also affect the gap between the fair value and the Australian Government's current \$29.5 billion of contributed equity (increasing to \$31.9 billion over the next four years⁴¹). For example, the increase in the department's fair value estimate of \$18 billion in 2020-21 from \$13.8 billion in the previous year reflected a reduction in the discount rate from 10.49 per cent to 10 per cent, the change in the period modelled (which excludes 2019-20, when losses were larger) and different assumptions about gearing and financing structure (Auditor-General 2021, p. 207). The increase in fair value between 2021-22 and 2020-21 also reflects a lower discount rate, the exclusion of the loss-making results of 2020-21, and the different treatment of tax losses. In its 2021-22 valuation, DITRDC assumed that any sale of NBN Co would be compliant with the Australian Tax Office's continuity of ownership test and, as such, NBN Co's large accumulated tax losses have some value. In contrast, the department assigned no value to tax losses in previous years.

Over time, the gap between the fair value of NBN Co and the Australian Government's contributed equity, as *reported* in NBN Co's financial accounts, will narrow, and could become positive. The treatment of the timing of financial flows is a major contributor to this pattern. The Australian Government's initial target equity contributions of \$29.5 billion was reached in 2017-18 and was still at that value in 2021-22 as no further equity had been provided in the meantime. A comparison of the fair value in 2021-22 with contributed equity of \$29.5 billion four years earlier misses the impact of timing on discounted cashflows, or equivalently, the opportunity costs of the contributed equity in the intervening period. From an economic (compared with accounting) perspective, the fair value that should be compared with the equity contribution is the stream of discounted benefits from 2017-18 not from 2022-23. Undertaking this calculation means the bigger losses from trading between 2017-18 and 2021-22 would be included and all subsequent cashflows would be more heavily discounted because they are further away from 2017-18. So, at a discount rate of 9.3 per cent, the net present value in 2017-18 of the stream of cashflows from 2022-23 is about \$13.8 billion. If the discounted losses from 2017-18 to 2021-22 were included, the fair value estimate for 2017-18 would be less than this, and far short of the equity contributions. Overall, even accounting for uncertainty and future possible changes in fair value estimates, it appears unlikely that, when a

⁴¹ The October 2022-23 Budget indicated the Government will provide a further equity injection of \$2.4 billion to NBN Co over four years, beginning from 2022-23 (Chalmers and Gallagher 2022, p. 162).

common base year is used, the gap between contributed equity and fair value is consistent with NBN Co realising an ex post commercial rate of return.⁴²

This conclusion is strengthened if the treatment of interest payments in fair value estimates is considered. As shown in table A.2, higher interest payments reduce the value of NBN Co to the Australian Government. The interest rate used for calculating the interest payments are those that would be faced by a hypothetical market owner obtaining debt in the private market. The relevant interest rate is not cited in the fair value estimates reported by DITRDC, but would appear to be the ‘commercial’ cost of debt as secured by NBN Co in private debt markets. As the department notes:

The valuation model assumes NBN Co does not have access to government debt, and that the company is required to raise debt financing on a standalone basis without the government support. This means that the model assumes the government debt is replaced with private debt (at arm’s length terms) on day 1, and that future debt capital is raised at terms that a hypothetical market participant acquirer could be expected to assume. (DITRDC 2021a, p. 189)

If there were no breach of debt neutrality, the cost of private debt obtained by NBN Co on commercial terms and a private sector equivalent would be the same. However, as found in chapter 2, if NBN Co was not government owned it would not have the implicit shelter of the Australian Government and would have to pay an additional risk premium when obtaining finance. This would raise interest payments and reduce the estimates of the fair value above (and by a larger margin than shown in the sensitivity analysis in table A.2).

Table A.2 – Fair value of NBN investments under varying assumptions, 2021-22^a

Assumptions	Base assumption	Shock to base	Low value (\$b)	High value (\$b)
Discount rate (equity)	9.3%	+/- 0.5%	17.8	21.9
Forecast total revenue	Per valuation model	+/- 5% in each year	15.7	23.8
Forecast operating expenses	Per valuation model	+/- 10% in each year	14.5	24.2
Forecast capex	Per valuation model	+/- 2.5% in each year	18.0	21.4
Interest rate on debt	Per valuation model	+/- 50 bps	18.4	21.0
Terminal growth rate	2.5%	+/-0.5%	19.1	20.4

a. A valuation model (unpublished) underpins the forecasts of total revenue, expenses and capital expenditure. The estimated fair value under the base assumption is \$19.7 billion. The estimates relate to the value that a hypothetical acquirer would consider in an acquisition of the equity in NBN Co as at 30 June 2022 in an arm’s length transaction. It relates to revenue flows from 2023 to 2024 with an assumption about the terminal value of the business at the end of the forecast period.

Source: DITRDC (2022, p. 204).

⁴² There are diverging views based on applying the ratio of other infrastructure businesses’ enterprise values to measures of their cashflows (typically earnings before interest, tax, depreciation and amortisation or EBITDA) times the equivalent cashflow measure for NBN Co. Using several such measures, one commentator argues that NBN Co’s enterprise value would be about \$99 billion in 2025, and after deduction of debt, its equity value of about \$70 billion for that year (Chanticleer 2020). However, these results are dependent on the value of the EV/EBITDA used and are based on a single year’s EBITDA, which will tend to vary from year to year. Other measures of the EV/EBITDA ratios for energy, power and utilities suggests ratios between 6 to 10 (Couper 2022), which would give an upper value of equity value of \$17.5 billion. The AGCNCO has instead given greatest weight to the audited valuations provided by DITRDC, which reflect NBN Co’s management estimates of long-run future cashflows.

A.6 A failure to pay debt neutrality payments affects commercial returns

By virtue of its government ownership, rather than any inherently lower risk profile, the cost of debt capital for NBN Co is less than that which would apply were it not owned by Government. In effect, the WACC facing NBN Co was lower than the WACC it would have faced in a competitively neutral environment. A business maximises its overall returns by exhausting all of the investment options available at the WACC it faces, so that the 'optimal' ex ante IRR across all the business's investments should be roughly equated with the WACC. (If the ex ante IRR is above the WACC, then it suggests there are some marginal investments that an investor would willing to finance, but that the business cannot find, which is unlikely given the breadth, scaling and timing of investment options available to NBN Co). The inference is therefore that a commercially-oriented business should undertake more investment (or earlier or riskier investment) if it can obtain debt at lower costs, but that the marginal investments made under these circumstances would not be making a commercial rate of return were the cost of debt higher. The gravamen of the case is that if a business receives concessional debt, it can only be making the commercial rate of return that would be expected of a comparable business facing the true market rate of debt by forgoing investments that would have been profitable at the concessional rates of debt. Consequently, if NBN Co continues to obtain debt on non-neutral terms, then its future marginal investments would tend be below a commercial rate of return and, by implication, be a breach of the requirement for an ex ante commercial rate of return.

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