



Review of Covec’s “Economic Analysis of 700MHz Spectrum Allocation”

Telecom

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1. Introduction and conclusions

Covec has prepared a report for 2degrees titled “Economic Analysis of 700MHz Spectrum Allocation”, dated 26 November 2013. The Covec report relates to applications by Telecom and Vodafone for Commission clearance to acquire 2x20MHz of the 700MHz spectrum band recently auctioned by the government. The government auctioned 2x45MHz of paired spectrum, with the initial auction round resulting in Vodafone and Telecom each purchasing 2x15MHz and 2degrees purchasing 2x10MHz. The Covec report focusses on the competitive effects of allocating the remaining 2x5MHz of spectrum (“**the ninth lot**”) to Telecom or Vodafone. Following the release of the Covec report, a further auction round resulted in Telecom purchasing the ninth lot for \$83m.

The award of the ninth lot to Telecom would result in a 700MHz spectrum allocation of 20MHz:15MHz:10MHz (Telecom:Vodafone:2degrees). If the result of the supplementary auction was denied, the outcome would be 15MHz:15MHz:10MHz, with one 2x5MHz lot going unsold. The Covec report presents an alternative counterfactual in which the ninth lot is allocated to 2degrees, i.e. a 700MHz spectrum allocation of 15MHz:15MHz:15MHz.

Telecom has asked us to review the public version of the Covec report (we have not seen the confidential version). Overall, we disagree with the Covec report’s conclusions. The Covec report fails to provide any substantive evidence that allocating the ninth lot to Telecom would lessen competition. Indeed, we think it more likely that the auction outcome, which was determined by market forces, and included an uncontested option for 2degrees to purchase the ninth lot, will enhance overall surplus for society.

The Covec report misstates the dynamics of the New Zealand mobile market by positing an over-simplified structure in which spectrum is a fixed cost and other costs (such as cell sites) that may be incurred in an attempt to replicate or compete against the benefits of extra spectrum are characterised as variable. The reality is more complex: mobile operators continually invest in a variety of different ways, including in spectrum, cell sites, marketing, etc, each of which has different cost profiles. There are numerous ways in which mobile firms can achieve a competitive advantage, and the Covec report’s framework does not capture this dynamic.

For the following reasons, we do not consider there would be a substantial lessening of competition under the factual of the ninth lot going to Telecom (i.e., a 700MHz spectrum allocation of 20:15:10), as opposed to a counterfactual of the ninth lot going to 2degrees (i.e., a 700MHz spectrum allocation of 15:15:15):

- As noted, there are numerous investments that mobile operators can make in an attempt to enhance their customer proposition – investment in spectrum is just one of these. This is illustrated by international evidence that competitive mobile outcomes occur with asymmetric spectrum allocation, and that other regulators worldwide have been quite relaxed about auction outcomes that increase asymmetry, provided each operator has access to a critical mass of spectrum. In New Zealand, all three operators have substantial spectrum holdings, with each having a critical mass of spectrum in the two key LTE bands: at least 2x10MHz at 700MHz and 2x25MHz at 1800MHz;
- If ownership of the ninth lot was critical for 2degrees to compete for 4G services, 2degrees would have either:

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- Exercised the option it had to buy the ninth lot at the reserve price of \$22m; or
- Not bought any 700MHz spectrum.

The Covec report's counterfactual of the ninth lot going to 2degrees is not, in our view, a valid one for the purposes of competition analysis. The Covec report does not acknowledge the fact that a symmetric allocation was enabled by the government auction, but was not the outcome because 2degrees declined to purchase a third lot at the reserve price. A key benefit of the government's chosen auction design is that it revealed information about the relative valuations that each of Telecom, Vodafone, 2degrees and the government placed on incremental lots (of 2x5MHz). Specifically, the auction revealed that both Telecom and Vodafone were willing to pay more than the \$22m reserve for a fourth lot, whereas 2degrees was not willing to pay this amount for a third lot.

Accordingly, the presumption should be that Telecom, as the winner of the supplementary auction, is able to add the most value from using this spectrum – it would be allocatively and dynamically efficient to allocate the ninth lot to Telecom. Moreover, the revealed behaviour from the auction implies that 2degrees valued the ninth lot at less than \$22m.

The Covec report makes the argument that this market-based allocation should be rejected. The implication of the Covec report is that society would be better off if the government kept the ninth lot for an indefinite period, before eventually reallocating it to 2degrees. This conclusion would only make sense if it could be demonstrated that overriding the auction allocation could somehow result in higher overall surplus for society, taking into account both the impact on mobile consumers and the fiscal impact on the government. But this seems unlikely:

- Overriding the auction allocation could delay the use of the ninth lot and therefore any incremental welfare benefits to subscribers from the use of extra spectrum. In particular, this would likely mean Telecom providing a lower speed service in some rural areas and in-buildings than would otherwise have been the case.¹ Accordingly, any decision preventing Telecom buying the ninth lot would deprive society of the benefit of using the spectrum and therefore have a negative impact on consumer surplus;
- Any future value to be added by 2degrees is distant and uncertain – there is no reason to assume the valuation of 2degrees at that future point would be higher than the government's valuation at that future point (let alone higher than the value added by Telecom at that future point), given that it is not today. Any future value would also need to be discounted to present value; and
- The Covec report's argument might rely on the \$83m including an expectation of market power rents by Telecom. However, this is not demonstrated. We have reviewed Telecom's internal slide pack valuation summaries, and the value appears to be determined by the enhanced services and customer proposition enabled by having the ninth lot. Indeed, it is difficult to see how Telecom could expect to earn market power rents when: (i) even without the ninth lot, Vodafone and 2degrees would still have

¹ [Telecom CI:]

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sufficient capacity to operate in the market and provide competitive constraint; and (ii) the mobile market is considered by the Commission to be competitive.

2. Covec report misstates dynamics of New Zealand mobile market and is not internally consistent

A core argument underlying the Covec report is that a firm with less spectrum than its rivals would have to compensate by incurring higher on-going capital expenditure (for example, on cell sites). The Covec report characterises this on-going capital expenditure as “variable” or “marginal” costs (see p.14), and concludes that the higher marginal costs would make the firm with less spectrum a weaker competitor.

However, evidence from around the world is that competitive outcomes occur with asymmetric spectrum allocation – we set out this evidence in section 3 of our report. But we start in this section by noting that the Covec report analysis is too simplistic (as well as being inconsistent with the evidence), for three reasons:

1. The Covec report conflates variable and fixed costs, by treating expenditure on spectrum as a fixed cost but expenditure on cell sites as a variable cost. As the Covec report acknowledges, however, expenditure on cell sites is “lumpy”. Adding one more unit of mobile traffic does not lead to changes in these costs (unless that unit of traffic results in a capacity constraint). These costs better fit the definition of fixed costs, rather than variable costs.
2. The Covec report’s framework is that a firm makes an initial capital investment, and then competes on its marginal costs. The reality is that firms in many types of markets constantly make investments in an attempt to gain a competitive advantage, and this includes mobile operators. Mobile operators continually invest in a variety of different ways, including in spectrum, cell sites, switches, network upgrades, customer acquisition, marketing, etc. There are numerous ways in which mobile firms can achieve a competitive advantage, and the Covec report’s framework does not capture this dynamic. Rather, the report describes competition as exclusively relying on spectrum.

Indeed, the real options framework raised by the Covec report (which we return to below) could be applied to a mobile operator’s investment decisions. Given the uncertainty in demand for 4G mobile services and mobile services in general, and to the degree that investment in spectrum and other network assets is irreversible, it might well be the case that investing less upfront in spectrum and more on an on-going basis in cell sites is a lower risk strategy for a mobile operator. In these circumstances, it would preserve a valuable real option by allowing irreversible investment to be delayed until demand becomes more certain.

3. Even if the Covec report’s characterisation of variable and fixed costs (and the stylistic diagram on page 14 of the Covec report that follows from this) was correct, the Covec report does not present any evidence regarding where the New Zealand mobile market lies on this diagram. It is possible that mobile traffic is at a point to the left of the cross-over between the two cost curves. This would imply that, contrary to the Covec report argument, the marginal cost of having more spectrum exceeds that of having less spectrum.

The Covec report also contains a number of examples of internal inconsistency.

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The first example arises from the strategic entry deterrence argument floated on pages 14-15. This argument posits that Telecom or Vodafone would purchase the ninth lot as a signal to 2degrees that they would compete aggressively if 2degrees expanded. The argument is that Telecom or Vodafone would not actually use the spectrum: “*the excess capacity simply acts as a barrier to entry or expansion, with little benefit for consumers*” (page 15). This is inconsistent with the Covec report’s core argument that if Telecom or Vodafone acquired the rights to the ninth lot, they would have an incentive to compete hard in order to attract customers.

Moreover, strategic entry deterrence by Telecom or Vodafone would appear to be quite an expensive strategy. It would require the upfront investment in the ninth lot capacity (which Telecom paid \$83m for), and we understand there are also build out requirements – Telecom’s clearance application notes the requirements on successful bidders to build a small number of new cell sites and upgrade 75% of their existing 2G/3G rural cell sites.² It would seem costly to incur this expenditure yet only retain the ninth lot as excess capacity in an effort to deter entry or expansion. [Telecom CI:]

A second example of an inconsistency relates to the Covec report’s coordinated effects arguments. The Covec report argues that under the counterfactual of 2degrees having the ninth lot, 2degrees would in effect be an “*aggressive and destabilising competitor*”, disrupting the coordinated effects that might otherwise occur between Telecom and Vodafone in the factual. However, on the Covec report’s own argument, Telecom or Vodafone acquiring the ninth lot would create an incentive to compete hard, and so this incentive (and disruptive effect) would also exist under the factual.

3. Asymmetric spectrum allocation

The Covec report overstates the nature of the spectrum asymmetry among Telecom, Vodafone and 2degrees, in particular in relation to provision of 4G services. The key bands right now for provision of 4G services worldwide are the 700MHz band (or 800MHz in Europe) and the 1800MHz band (with 2600MHz as an inferior substitute or as additional capacity in urban areas). Each of New Zealand’s three operators has access to what is widely recognised to be a critical mass of spectrum in each of these bands: at least 2x10MHz of sub-1GHz spectrum and at least 2x20MHz at 1800MHz.

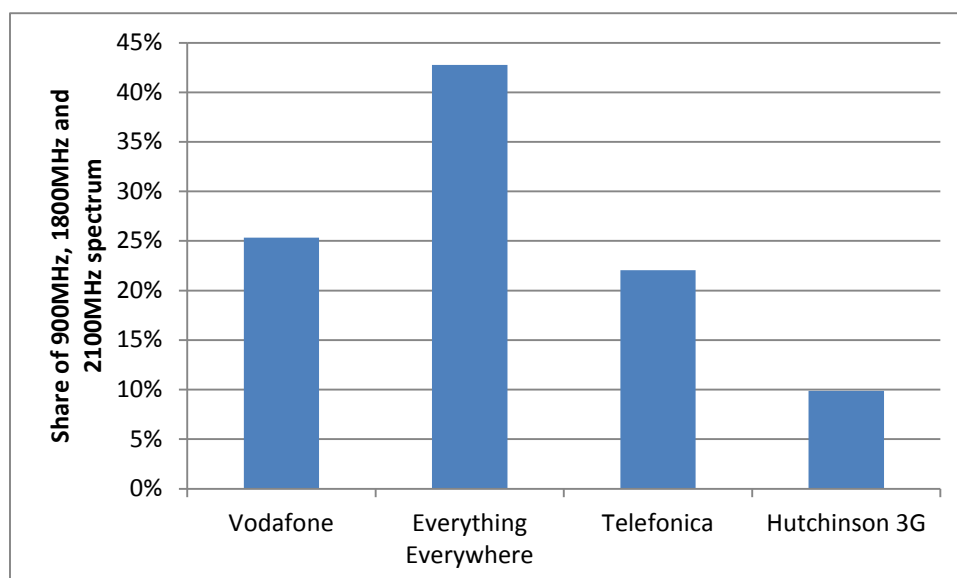
As Figure 7 in the Covec report shows, all three players have equal amounts (2x25MHz) of 1800MHz spectrum. Our understanding is that each operator will be able to use this 1800MHz spectrum to provide a core high-speed 4G offering in the immediate area surrounding any cell site that they may operate. Further, using 2x10MHz or more of 700MHz spectrum, each operator will be able to reach further into rural areas and into buildings in the larger centres. The incremental benefits of an extra 2x5MHz or 2x10MHz at 700MHz is thus largely limited to being able to extend the very highest speeds over a larger catchment area as an alternative to building more cell sites. Of course, extra spectrum also provides more capacity, but this is quite modest as a proportion of total LTE spectrum

² Paragraphs 4.3 (a) and (b) of Telecom’s clearance application, dated 4 October 2013 (public version).

holdings, and will only become less so as LTE technology is extended to cover other bands such as 850/900 MHz and 2100 MHz.

In any case, the evidence from both New Zealand and other markets is that a symmetric spectrum allocation is not necessary for competitive market outcomes. Prior to the 700MHz spectrum auction, Vodafone held 41% of paired (mobile) spectrum, Telecom held 36% and 2degrees held 24%,³ yet the mobile market is still considered by the Commerce Commission to be competitive.⁴ Similarly, many mobile markets worldwide are competitive, despite an uneven distribution of spectrum. One example is the UK, which Ofcom has described as being competitive, with each of the four national mobile operators exerting “*a strong competitive force on the others*”, driving successful outcomes for UK consumers.⁵ At the time this statement was made, the share of spectrum was asymmetric, as shown in Figure 1. Furthermore, this asymmetry has increased following the recent multi-band auction in the UK, as a result of Everything Everywhere and Vodafone each buying more spectrum than Telefonica and H3G,⁶ an outcome that was allowed within the rules after Ofcom had carefully evaluated the competitive impact of potential spectrum allocations from the auction.

Figure 1
UK share of spectrum



Source: Ofcom (2012) and NERA analysis

³ Based on the paired spectrum allocations in the 850MHz, 900MHz, 2100MHz, and 2600MHz bands, reported in Figure 7 of the Covec report. We understand from Telecom that there is no proposed use of Telecom’s and Vodafone’s spectrum holdings in the LTE3500MHz band.

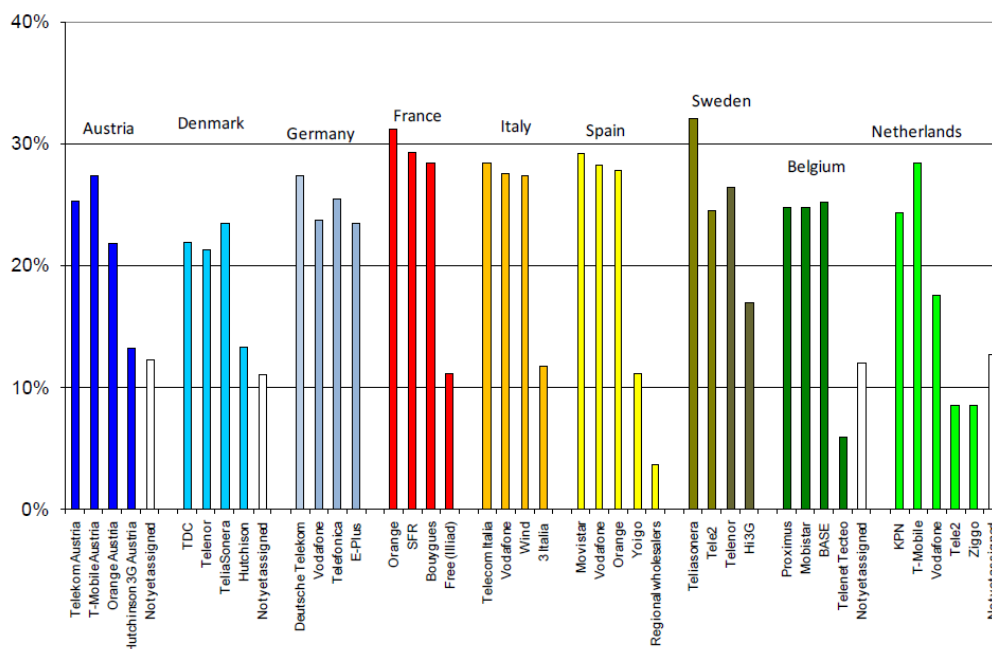
⁴ In the 2010/11 financial review of the Commerce Commission, then Telecommunications Commissioner Ross Patterson stated that the mobile market “is now characterised by intense competition between the big operators”.

⁵ Ofcom (2012), “Assessment of future mobile competition and award of 800MHz and 2.6GHz”, Statement, 24 July, paragraph 4.14 (our emphasis).

⁶ The auction results are available here: <http://stakeholders.ofcom.org.uk/binaries/spectrum/spectrum-awards/awards-in-progress/notices/4g-final-results.pdf>

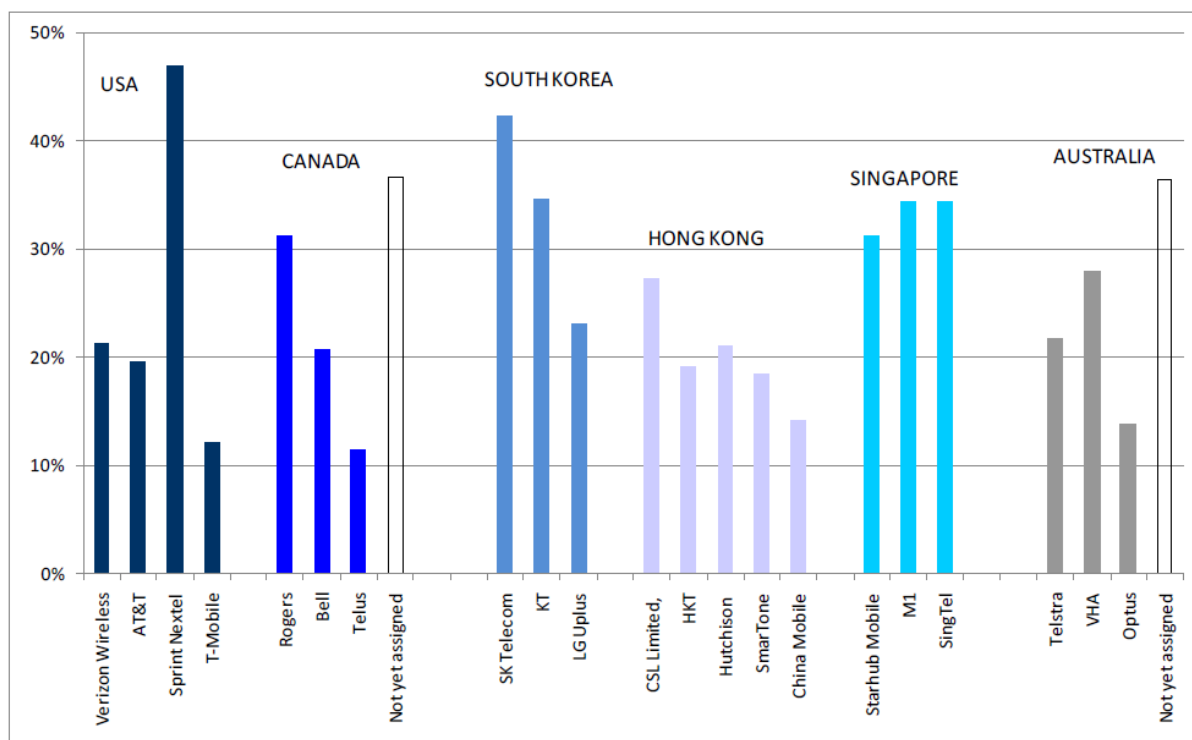
An asymmetric spectrum allocation appears to be the norm in overseas mobile markets, as shown in Figure 2 for selected European countries and Figure 3 for selected non-European countries.

**Figure 2
Shares of paired mobile spectrum in selected European countries**



Source: Figure 3.6 of Ofcom (2012), “Second consultation on assessment of future mobile competition and proposals for the award of 800 MHz and 2.6 GHz spectrum and related issues”, Consultation, 12 January, Annex 6.

Figure 3
Share of paired mobile spectrum in selected non-European countries



Source: Figure 3.6 of Ofcom (2012), "Second consultation on assessment of future mobile competition and proposals for the award of 800 MHz and 2.6 GHz spectrum and related issues", Consultation, 12 January, Annex 6.

In fact, Ofcom specifically considered whether an unequal share of spectrum is detrimental to competition among mobile telecommunications firms.⁷ Ofcom found that equal shares of spectrum are not necessary for mobile firms to act as competitive constraints on each other, with its reasons including that:

- Spectrum is not the only way of adding capacity, and mobile firms with smaller amounts of spectrum can still compete by using other approaches (such as adding more cell sites); and
- A mobile firm with less capacity than its rivals, but still a sufficient amount of capacity, can still act as an effective constraint across a large portion of the market, and might also be able to choose commercial strategies that avoid providing services to heavy data users.

The Ofcom report does note that if a mobile operator has a very small share of spectrum capacity, then competition can be weakened. Ofcom concludes that this might be the case if an operator's share of total paired spectrum was less than 10-15%, across a wide range of spectrum bands (the 800MHz, 900MHz, 1800MHz, 2.1GHz and 2.6GHz spectrum bands – 700MHz spectrum was not available for mobile use at the time of the Ofcom report). Based on the spectrum allocations presented in figures 3 and 7 of the Covec report, and the allocation of the ninth lot to Telecom, we estimate that 2degrees would have a total spectrum

⁷ Ofcom (2012), "Assessment of future mobile competition and award of 800MHz and 2.6GHz", Statement, 24 July.

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share of 23%,⁸ which based on the Ofcom figures would not present a competition concern. Moreover, we note that 2degrees' holdings of LTE spectrum at 700MHz and 1800MHz exceed the equivalent holdings of many third operators elsewhere, for example T-Mobile in the Netherlands, E-Plus in Germany, Orange in Switzerland, and Meteor Mobile in Ireland.

Indeed, we might add that some degree of asymmetry in business models and inputs can assist competitive tension, and that consumers can benefit from a diversity of business strategies. Having heterogeneous inputs could force more innovation as firms attempt to compensate for what they might be missing. To the extent that an extra 2x5MHz of spectrum gives Telecom a competitive edge, it creates an incentive for Vodafone or 2degrees to either attempt to replicate this level of service by building more cell sites, or establish other points of difference.

Furthermore, it could be that one firm can make better use of an input than the others, and that forcing symmetry of inputs could constrain the value added by one firm, in an attempt to assist another. We return to this point in section 4 of our report.

More generally, we also note that most regulators worldwide appear quite relaxed about there being asymmetric outcomes to spectrum auctions. While spectrum caps are commonly used, these appear designed to ensure no party can monopolise spectrum holdings and that a sufficient number of operators (typically three, but sometimes two in smaller markets and four in larger ones) can secure a critical mass of spectrum. Beyond this, it is relatively rare for regulators to impose symmetry. For example, 4G auctions in Australia, Austria, Canada, Denmark, Ireland, Italy, Netherlands, Spain, Sweden, Switzerland, the UK and USA all featured structures that permitted asymmetric outcomes of 700/800 MHz allocated across the top three bidders. Further, in a number of these cases, the auction did indeed produce an asymmetric outcome, for example, Australia, Austria, Denmark and the UK.

In conclusion, the fact that Telecom has paid \$83m for the ninth lot implies that Telecom anticipates commercial benefits from deploying that ninth lot. But this does not necessarily mean that competition would be materially stronger if instead the lot was in the hands of 2degrees. There are other investments that 2degrees (and Vodafone) can make in order to develop their own competitive advantages, and indeed they may be more motivated to make these investments if they have less spectrum than Telecom.

4. Any benefits from the additional spectrum were contestable

The Covec report argument implies that a symmetric allocation of spectrum is the best allocation for competition. As noted above, the evidence does not support this argument, and at a conceptual level we think this argument is overstated, particularly when considered in a more dynamic framework. But even if the Covec report argument was correct, the Covec report does not acknowledge the fact that a symmetric allocation was enabled by the government auction, but was not the outcome. 2degrees had the option to ensure a symmetric

⁸ We have excluded the LTE3500 MHz band because, as noted above, we understand there is no proposed use of the spectrum allocated in this band. Nonetheless, if this band were included in our calculations then 2degrees' spectrum share would be 21%.

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allocation of 700MHz spectrum by paying the reserve price of \$22m for the ninth lot, but did not exercise that option. The Covec report argument is essentially that 2degrees should again be granted this option, for an undetermined period of time.

We think this point is critical – the counterfactual the Covec report argues for has not occurred under a market test, in which 2degrees had the un-contestable right to the ninth lot that would have led to symmetry in the 700MHz band.⁹ However, 2degrees chose not to exercise that option. In fact, if the government followed the Covec report's recommendation, there would have been no need for an auction. The government could simply have assigned the 700MHz equally at a fixed price. Clearly the government did not think this was the right solution. So, why would it be now?

Following 2degrees' decision to only buy 2x10MHz, the ninth lot then went to a secondary phase where Telecom and Vodafone competed and Telecom ended up winning it for \$83m. This implies that Telecom values the rights higher than 2degrees, and suggests that Telecom is the more efficient owner of the rights.

This is also relevant to the counterfactual claimed by the Covec report, i.e., that "*the spectrum is not allocated in the short term, and is later acquired by 2degrees*" (page 1, our emphasis). If 2degrees does not value the ninth lot enough to bid for it today whereas Telecom and Vodafone do, it is speculative to assume that 2degrees would be allocated the ninth lot at some undefined point in the future.

For similar reasons, the real options analysis in the Covec report (pages 24-26) should not have any weight placed on it. The argument is effectively that the Commission should preserve the possibility of a more competitive counterfactual in the future, that counterfactual being acquisition by 2degrees at some point. But given 2degrees did not exercise its option to buy the ninth lot in the recent auction, this is speculative.

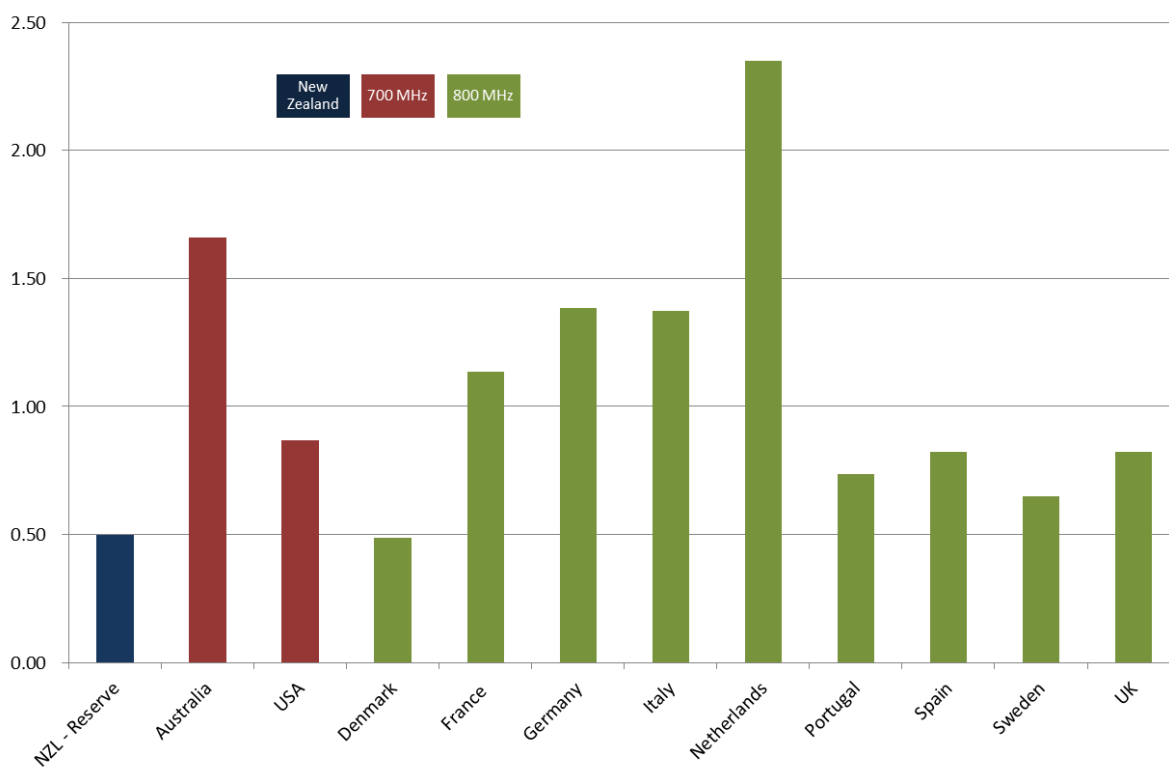
A hurdle the Covec report real options argument faces is that, on the face of it, the recent auction has allocated the ninth lot to the party that can add the most value from using the spectrum. The Crown's valuation of the ninth lot was \$22m, as indicated by the reservation price it set. The value 2degrees placed on the ninth lot was less than that \$22m, as indicated by 2degrees not exercising its option over that spectrum for \$22m. Vodafone placed a value on the ninth lot of less than \$83m (the point at which it dropped out of the bidding), and Telecom's value equalled or exceeded that.

We acknowledge the possibility that bidder behaviour in the auction could be affected by financing constraints and/or imperfect capital markets. However, we are sceptical that, in this case, such constraints could have prevented 2degrees from acquiring a third lot if it had a solid business case for acquiring that lot, as:

⁹ The auction is for nine lots of 5MHz paired spectrum, or 2x45MHz. As part of the auction rules, each bidder could acquire up to three lots (2 x 15MHz) of spectrum in the first round. Vodafone and Telecom both acquired the limit of 2x15MHz, and 2degrees acquired 2x10MHz of spectrum. 2degrees could therefore have acquired a final lot of 2x5MHz spectrum, and done so at the reserve price of \$22m, since both Vodafone and Telecom had already reached the limit they could acquire.

- The reserve price per 2x5MHz lot in New Zealand appears reasonable by international standards – notably on a price per MHz per population basis, it was lower than final prices in almost all comparable countries, as illustrated in Figure 4; and
- The government has allowed quite favourable payment terms, with payments spread over five years, whereas many other countries (e.g., the UK) have required upfront payment.

Figure 4
New Zealand 700MHz reserve price compared to final prices in other countries
Price/MHz/Pop - 700 MHz & 800 MHz Auctions (\$NZL)



Source: NERA analysis

Furthermore, if such constraints did exist, they may still apply under the Covec report's counterfactual, i.e., the scenario under which the government holds on to the ninth lot and attempts to sell it to 2degrees at some undetermined time in the future.

Accordingly, the presumption should be that Telecom is able to add the most value from using this incremental spectrum – it would be allocatively and dynamically efficient to allocate the ninth lot to Telecom. Moreover, the revealed behaviour from the auction also implies that 2degrees did not consider the competitive downside to it of Telecom or Vodafone winning the ninth lot (or to put it another way, the upside to 2degrees of winning) to be sufficient to justify purchasing the ninth lot for \$22m to avoid this downside.

The Covec report's argument is that this market-based allocation should be rejected, and that society would be better off if the government kept the ninth lot (despite the government

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receiving surplus of \$83m less \$22m from the sale), and then reallocating the ninth lot to 2degrees at some undetermined time in the future.

To be clear, this course of action would, on revealed behaviour, make the government worse off in a fiscal sense, unless the future price paid by 2degrees is equal to or exceeds the future value of the \$83m paid by Telecom today (which seems rather unlikely, given that 2degrees was not willing to pay \$22m now and might face little competition for the lot if Telecom and Vodafone were precluded from bidding).

Furthermore, from a broader welfare perspective it is clear from the government's actions that it considers:

- The nine lots of 700MHz spectrum to be best used for mobile services;¹⁰ and
- If 2degrees declined to exercise its option to take the ninth lot, that ninth lot should be auctioned to the highest bidder.

The only way the Covec report proposal could make sense is if overriding the auction allocation could somehow result in higher overall surplus for mobile consumers. This seems unlikely:

- Overriding the auction allocation could delay the use of the ninth lot and therefore any incremental welfare benefits to subscribers from the use of extra spectrum. In particular, this would likely mean Telecom providing a lower speed service in some rural areas and in-buildings than would otherwise have been the case.¹¹ Accordingly, any decision preventing Telecom buying the ninth lot would deprive society of the benefit of using the spectrum and therefore have a negative impact on consumer surplus;¹²
- Any future value to be added by 2degrees is distant and uncertain – there is no reason to assume the valuation of 2degrees at that future point would be higher than the government's valuation at that future point (let alone higher than the value added by Telecom at that future point), given that it is not today; and
- The Covec report's argument might rely on the \$83m including an expectation of market power rents by Telecom. However, this is not demonstrated. We have reviewed Telecom's internal slide pack valuation summaries, and the value appears to be determined by the enhanced services and customer proposition enabled by having the ninth lot. Indeed, it is difficult to see how Telecom could expect to earn market power rents when: (i) even without the ninth lot, Vodafone and 2degrees would still have

¹⁰ This is evident by the requirement for successful bidders for the 700MHz spectrum to build a small number of new cell sites each year for five years, in areas in which they do not currently provide mobile coverage, and to upgrade 75% of either existing 850/900MHz cell sites in rural areas to 4G. In addition, successful bidders who do not currently operate a mobile network are required to deploy 4G services to at least 50% of New Zealanders within five years. See paragraph 4.3 of Telecom's clearance application, dated 4 October 2013 (public version).

¹¹ [Telecom CI:]

¹² While we are not claiming (by any stretch) a similar quantitative effect here, we do note that Hausman (1997) estimates regulation that led to an approximate 10-year delay in the introduction of voice messaging services in the US cost consumers in the order of (US) billions of dollars in lost consumer welfare, and regulatory delay in the introduction of cellular telephone services cost closer to US\$100 billion. Jerry Hausman (1997), "Valuing the Effect of Regulation on New Services in Telecommunications", *Brookings Papers on Economic Activity: Microeconomics*, 1-38.

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sufficient capacity to operate in the market and provide competitive constraint;¹³ and (ii) the mobile market is considered by the Commission to be competitive.¹⁴

In conclusion, we consider that any decision to block or defer the allocation of the ninth lot to Telecom would likely be value destructive. This is on the basis that Telecom is likely to use the spectrum to provide enhanced services to customers that will generate consumer surplus gains, and that 2degrees' failure to buy the spectrum when it had the chance implies it does not believe it could generate similar benefits.

5. Spectrum sharing

The Covec report argues that the “*incentives for pro-competitive spectrum sharing will also be reduced if the spectrum at issue is allocated to either of the applicants*” (page iii, our emphasis). The argument appears to be that spectrum sharing is less likely when spectrum holdings are asymmetric.

Once again, we think this argument is too simplistic – the incentive to provide access to spectrum is a function of more than just spectrum holdings. The Covec report appears to envisage 2degrees using future or potential access to the ninth block of spectrum as a bargaining tool in spectrum sharing and/or roaming negotiations. However, if 2degrees saw such a block as critical to such negotiations, why did it not buy the lot? It is also unclear why 2degrees would not have the same leverage when it owns 2 lots, especially with respect to Vodafone, given it failed to acquire a fourth lot but has revealed a valuation of accessing one of \$82m. More generally, in relation to access, the Covec argument ignores the incentive an asset owner will have to increase volumes across its asset. A vertically integrated asset owner may be prepared to provide access to its network to rivals to gain wholesale margins, although of course it will be wary of downstream cannibalisation.

Furthermore, an asymmetric allocation may increase the incentives on Vodafone and 2degrees to share spectrum, as a way in which to increase their respective competitive advantage against Telecom and each other.

¹³ This is implied by the fact that both Vodafone and 2degrees purchased their 15MHz and 10MHz respectively without purchasing the ninth lot. [Telecom CI:]. We note also that many operators overseas have purchased only 2x10MHz of spectrum auctioned for 4G mobile services.

¹⁴ The Commission has noted that market concentration in the retail mobile market has been falling in recent years – see Commerce Commission (2013), “Annual Telecommunications Monitoring Report 2012”, April. In the 2010/11 financial review of the Commerce Commission, then Telecommunications Commissioner Ross Patterson stated that the mobile market “is now characterised by intense competition between the big operators”.

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