



Sky/Vodafone – response to LOUI

Bell Gully and Buddle Findlay

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Contents

1.	Introduction	1
2.	Consumer heterogeneity and dynamic competition	1
3.	Undermining of rivals' competitiveness	4

Confidential information in this report is identified by grey shading.

1. Introduction

1. We have been asked by Bell Gully and Buddle Findlay, counsel to Vodafone and Sky respectively, to review the Commerce Commission's letter of unresolved issues ("the LOUI") in respect of the proposed Sky/Vodafone merger, dated 31 October 2016.
2. Our review focuses particularly on:
 - a) The nature of broadband competition and consumer preferences, and the impact on the merged firm's ability to win customers (section 2); and
 - b) The impact of the merger on rival broadband providers' ability to compete (section 3).

2. Consumer heterogeneity and dynamic competition

3. Certain statements in the LOUI imply quite a static view of competition, and relatedly a homogenous view of consumers. For example (with paragraph numbers in square brackets):

[24] The merged entity could potentially capture the proportion of broadband customers that currently subscribe to a Sky package that includes sport (around [REDACTED]% of broadband customers).

[38] Rivals may find it difficult to grow again if they are unable to match the merged entity's bundled offerings.

[42] In the event that more TSPs resell Sky without the merger, there may be greater like-for-like bundle competition between the TSPs, driving the price of bundles containing Sky content down.

[43] If the merged entity did not offer Sky on terms that would allow TSPs to compete effectively with the bundle offered by the merged entity, the price for bundles containing Sky content may not be as low. This may be the case even if rival TSPs can offer bundles with other types of content (such as music), since there would be less like-for-like competition for bundles containing Sky content.

4. However, the existing evidence suggests that broadband competition is differentiated and dynamic, and that consumers are heterogeneous. This has important implications for the tentative views expressed by the Commission in the LOUI. As we will show, the evidence from the current broadband market in New Zealand shows that the bundling strategy considered in the Commission's theory of harm is unlikely to be successful.
5. Vodafone has offered discounts on, and promotions of, Sky since 2009, and yet:

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- a) The vast majority (approximately [REDACTED]%)¹ of Sky Sport subscribers still buy standalone (and the vast majority of those still buy their broadband from another RSP²); and
 - b) Vodafone's broadband market share has been trending downwards since approximately the beginning of 2013, as shown in Figure 1 below.
6. This evidence reveals that:
- a) Even within the segment of customers who value Sky Sport highly enough to buy it, there is heterogeneity – the fact that most Sky Sport subscribers do not take up the discounted Vodafone offer (i.e., the fact they are “leaving money on the table”) implies they (highly) value aspects of other RSPs' offerings (e.g., a lower broadband price, free Lightbox and Spotify, bundled electricity and gas, etc). ; and
 - b) Other RSPs can compete (successfully) without offering Sky. Indeed, it is the “smaller broadband suppliers” the Commission appears to be concerned about³ that are gaining market share at the expense of Vodafone and Spark, without having Sky to offer (see Figure 3 from the Vodafone clearance application as well as Figure 1 below). Spark is losing share, but was also doing so across the period it resold Sky (up to 2014).
7. In other words, the field of competition is wider than just Sky/broadband – there are numerous other product offerings that consumers are attracted to.
8. Indeed, when consumer preferences are heterogeneous, then having a single, undifferentiated, product offering is likely to leave some consumers worse off. There is a large economics literature that models the optimal product differentiation when consumers have heterogeneous preferences.⁴ Since these consumers will value variety in their consumption,⁵ an increase in product variety will therefore increase consumer welfare. At the same time, however, there is a trade off if there are economies of scale from producing fewer varieties. While the optimal variety depends on the intensity of preferences and the degree of scale economies, it would only be optimal to produce a single, undifferentiated, product if there are no consumer gains from variety.⁶ The revealed behaviour in the New Zealand broadband market implies this is not the case.

¹ See footnote 7 below.

² We note that a number of Vodafone's broadband subscribers purchase Sky standalone rather than bundling, which Vodafone appears to estimate could be up to [REDACTED] customers. See Project Double Rainbow revenue synergies document, 19 April 2015.

³ See [38] of the LOUI. We understand the Commission is particularly referring to Vocus, Trustpower and 2degrees.

⁴ For a summary see Kelvin Lancaster (1990), “The Economics of Product Variety: A Survey”, *Marketing Science*, 9(3), 189-206; and Dennis W. Carlton and Jeffrey M. Perloff (2005), *Modern Industrial Organization*, Fourth edition, Pearson-Addison Wesley, pp. 214-220.

⁵ See, e.g., Pindyck and Rubinfeld (2013, p.455) who state that “[m]ost consumers value the ability to choose among a wide variety of competing products and brands that differ in various ways” (Robert S. Pindyck and Daniel L. Rubinfeld (2013), *Microeconomics*, Eighth edition, Prentice Hall, and more generally Lancaster (1990), *op cit*.

⁶ Lancaster (1990), *op cit.*, at p.192.

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9. Accordingly, the additional variety in consumer bundles beyond just Sky/broadband is likely to be beneficial to consumers, and suppliers are likely to be viable without having to “match” the merged entity’s offering. It would be inappropriate to assume that “greater like-for-like bundle competition” ([42] of the LOUI) would result in superior consumer outcomes to differentiated competition (whether the differentiation be on bundles or broadband price and quality).
10. Furthermore, there is no evidence to suggest that all or even a majority of Sky Sport subscribers would shift to the merged entity if it increased its discount, even in the absence of rival RSP reactions. The quote above from [24] of the LOUI is speculative.
11. Indeed, the theory proposed at [24] would result in an unprecedented (and implausible) change in market shares. To visually illustrate this, see Figure 1 below. The solid lines show ISP market shares by number of fixed broadband connections in New Zealand from 2010 to 2015. On the theory set out at [24] of the LOUI, Vodafone would increase its market share to [REDACTED]%.⁷ The Commission does not specify a timeframe for this to occur, but for the sake of illustration we assume 3 years. If this share is won from the other firms in proportion to their 2015 market shares, then the dashed lines depict the market shares over time.

⁷ Calculated by taking the total number of Sky Sport subscribers at March 2016 ([REDACTED], data provided to NERA by Sky, 11 November 2016) added to the total Vodafone broadband subscribers for Q4 2015 ([REDACTED], IDC data provided to NERA by Vodafone, 10 November 2016), minus Vodafone’s total bundled broadband/Sky Sport subscribers at March 2016 ([REDACTED]) and the estimated number of Vodafone broadband subscribers buying Sky Sport standalone (which we have calculated by multiplying the estimated [REDACTED] Vodafone broadband/Sky standalone subscribers by [REDACTED]%, which is the proportion of Sky/Vodafone bundlers who subscribe to Sky Sport at March 2016, , divided by total broadband connections at Q4 2015 ([REDACTED], IDC data provided to NERA by Vodafone, 10 November 2016).

Figure 1
[REDACTED]

12. It can be seen that the Commission's theory would result in an unprecedented step-change in market shares, the type of change not suggested by any existing evidence as to consumer preferences or competitive dynamics, including evidence as to trends. Even if the change were spread out over a longer period (say, five years), it would still represent a materially (and implausibly) greater change in share than has been seen over the previous five year period.
13. Due to pure share, it is also likely that most Sky Sport subscribers currently purchase their broadband from Spark. Therefore on the Commission's theory, it is Spark that would be particularly affected by the merged entity, not the "smaller broadband suppliers" that the Commission appears most concerned about. Indeed, as illustrated by Figure 1, it seems unlikely that the scale of these suppliers would be changed much at all, even if all Sky Sport subscribers shifted to Vodafone.
14. Finally, we would expect rival RSPs to react if the merged entity increased its Sky discount – for example, by offering further discounts themselves or further differentiating themselves through their bundle offerings. This likely response makes the gains displayed in Figure 1 completely improbable.

3. Undermining of rivals' competitiveness

15. As we set out in our 11 September 2016 report, for any bundling to result in a competition problem, the merged entity would need to first undermine the competitiveness of its rivals (for example, by reducing their market share to the point they are sub-scale or their marginal costs rise),⁸ and then exercise market power (for example, by raising price).⁹
16. Regarding the sub-scale issue, the literature actually says that the rivals would need to be pushed out of the market. For example, Carlton, Greenlee, and Waldman (2008, 618-619) state:¹⁰

⁸ See Carlton, Greenlee and Waldman (2008) who state (at p.611) that "For a pricing strategy to have an anticompetitive effect on rival firms, the strategy must alter the ability of rival firms to compete. This can be accomplished by denying a rival firm sales which otherwise would insure its survival or reduce its marginal costs" (Dennis W. Carlton, Patrick Greenlee and Michael Waldman (2008), "Assessing the anticompetitive effects of multiproduct pricing", *Antitrust Bulletin*, 53(3), 587-622). Similarly, Murphy, Snyder and Topel (2015, p.102) state that bundling practices that "do not impair the rival's ability to compete – that is, do not drive the rival from the market or raise its marginal costs – do not impinge the rival's ability to discipline market prices" (Kevin M. Murphy, Edward A. Snyder, and Robert H. Topel (2015), "Competitive Discounts and Antitrust Policy", in Roger D. Blair and D. Daniel Sokol (eds.), *The Oxford Handbook of International Antitrust Economics*, Vol 2, Oxford University Press).

⁹ For example, Carlton and Waldman (2008) state (at p.1237) that "the key issue is whether the price of [the competitive good in the bundle] can ultimately be elevated above the competitive level as a result of the competitive impairment of the rival" (Dennis W. Carlton and Michael Waldman (2008), "Safe Harbors for Quantity Discounts and Bundling", *George Mason Law Review*, 15(5), 1231-1239). Carlton, Greenlee and Waldman (2008), *op cit.*, make a similar point at p.613.

¹⁰ Carlton, Greenlee and Waldman (2008), *op cit.* See also the passage from Murphy, Snyder and Topel (2005), *op cit.*, quoted above regarding the requirement to "drive the rival from the market".

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It is not enough to show that the rival firm was “foreclosed” from some customers, or that it was foreclosed from a substantial share of them. The key to establishing competitive harm is showing that the foreclosed business left insufficient scale for the firm to remain in business...

17. Regarding the marginal cost issue, the major variable cost for a fixed broadband operator is that paid to Chorus, which is the same for all RSPs, regardless of the scale. Accordingly it seems unlikely any foreclosure by the merged entity could materially raise the marginal costs of other RSPs. We assume the Commission agrees with this analysis, as the marginal cost issue is not raised in the LOUI.

18. Rather, the Commission’s concern as expressed in the LOUI appears to be about fixed costs and lack of scale. The crux of the concern appears to be expressed in the following sentences [38]:

Those suppliers may then leave the market or become forced to retrench. Rivals may find it difficult to grow again if they are unable to match the merged entity’s bundled offerings.

19. At [37] and [39], the Commission lists the relevant fixed costs. However, most of the examples of fixed costs provided by the Commission are sunk costs (active network assets,¹¹ backhaul networks and mobile assets¹²). Sunk costs are not relevant to an exit (retrenchment) decision. The irrelevance of sunk costs to a shut-down decision is explained by Pindyck and Rubinfeld (2013, 234):¹³

Why distinguish between fixed and sunk costs? Because fixed costs affect the firm’s decisions looking forward, whereas sunk costs do not. Fixed costs that are high relative to revenue and cannot be reduced might lead a firm to shut down — eliminating those fixed costs and earning zero profit might be better than incurring ongoing losses. Incurring a high sunk cost might later turn out to be a bad decision (for example, the unsuccessful development of a new product), but the expenditure is gone and cannot be recovered by shutting down.

20. The Commission also mentions “marketing costs and support staff” [37]. While these types of costs may not be sunk in a material way, a significant proportion of them are likely to be common across several products, e.g., generic brand advertising, sales and support staff across electricity for Trustpower and mobile for 2degrees. Furthermore, marketing costs are

¹¹ The Commission has stated (in its UCLL FPP decision) that the transitional arrangements (following the vertical separation of Telecom) around wholesale copper pricing have “protected existing unbundlers significantly” and “provided the opportunity to recover unbundling investments” (Commerce Commission, “Final pricing review determination for Chorus’ unbundled copper local loop service”, [2015] NZCC 37, 15 December, at paragraph [703]). The Commission has noted in its 2015 *Annual Telecommunications Monitoring Report* that “[t]he number of unbundled lines where Spark’s competitors provide their own broadband and voice service has peaked with there being little incentive to unbundle further exchanges” (Commerce Commission, “Annual Telecommunications Monitoring Report”, 2015, at p.21).

¹² See, for example, Haucap (2003), who states: “For mobile telephone networks it is characteristic that the cost structure has high fixed and common costs and relatively low variable or incremental/marginal costs. The main part of a mobile telephone operator’s costs therefore does not vary with the number of participants, calls or connection minutes, but it is fixed and, furthermore, to a large extent also sunk.” Justus Haucap (2003) “The Economics of Mobile Telephone Regulation”, University of the Federal Armed Forces Hamburg, Department of Economics Discussion Paper No. 4.

¹³ Robert S. Pindyck and Daniel L. Rubinfeld (2013) *Microeconomics*, Prentice Hall, Eighth edition.

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relatively small – we are advised by Vodafone that across its business, advertising and promotion costs account for approximately [REDACTED]% of total costs.

21. We understand that the main concern about rival RSP competitiveness is actually in the context of possible fibre unbundling post-2020. We understand the Commission's theory of harm to be as follows:
- a) Under the factual, Sky/Vodafone would go into the post-2020 world with a lot more broadband customers than Trustpower, Vocus and 2degrees;
 - b) In the post-2020 world, RSPs that unbundle fibre would provide a better product than those who simply buy a layer 2 product from Chorus or another LFC (in other words, there is a competitive advantage in unbundling);
 - c) Much of that fibre unbundling investment would be sunk (although forward-looking from today's perspective);
 - d) All RSPs would be starting from scratch when it comes to unbundling fibre. However, larger players would have a competitive advantage, due to scale; and
 - e) Vodafone could raise the broadband price (exercise market power) at that point.
22. However, the key components of this theory can be rebutted:
- a) There is no evidence to suggest that all or even a majority of Sky Sport subscribers would shift to the merged entity if it increased its discount (as discussed in section 2 of this report);
 - b) If there is fibre unbundling, there would be competition between Chorus and RSPs, meaning those who buy from Chorus would have a competitive product.¹⁴ In other words, there is no reason to expect RSPs who do not unbundle to have an inferior product to those who do, as Chorus would be incentivised to innovate (this is the basic rationale for mandating unbundling in the first place);¹⁵ and
 - c) The layer 2 investor with the biggest scale advantage would likely be Chorus, meaning those who buy from it would not be at a cost disadvantage to RSPs who invest in layer 2 (unbundle).
23. Accordingly, fibre unbundling would not provide Sky/Vodafone with the ability to exercise market power – rival RSPs would be well placed to re-expand, whether they unbundle or buy

¹⁴ Despite Chorus not offering retail broadband products, there would be *indirect* competition between Chorus and any RSPs who self-supply layer 2 services through unbundling. This is because if a self-supplying RSP has a superior layer 2 (and therefore retail) product, it will increase its retail market share, which will reduce Chorus' layer 2 sales. Furthermore, a self-supplying RSP could also wholesale its layer 2 product, which would result in *direct* competition between Chorus and the RSP.

¹⁵ See, e.g., 4.1.3 of MBIE, *Regulating communications for the future: Review of the Telecommunications Act 2001*, September 2015.

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layer 2 services from Chorus.¹⁶ This would be the case even if the merged entity did manage to pick up the majority of Sky Sport subscribers as broadband customers (an outcome for which there is no evidence).

24. Furthermore, if the Commission's theory of harm was correct, there would be a competition problem in the counterfactual as well. That is because under the counterfactual (and probably the factual) Spark would be the dominant RSP going into the 2020 world, and so it could do exactly what the theory is concerned about Sky/Vodafone doing. So if the theory was correct (which we dispute), in fact the merger could be pro-competitive, as it would provide Spark with a stronger competitor.
25. Accordingly, the theory of harm is not merger-specific. Indeed, if the smaller RSPs expected the Commission's theory to be correct, they would have a further incentive to compete hard (and invest) in the short-term for market share.
26. Finally, the only way the theory of harm could work would be if the regulatory regime somehow constrained Chorus' ability to invest in layer 2 itself, but permitted RSPs to – this seems unlikely, as it would be a step back towards the vertically integrated industry that the structural separation of Telecom was designed to address.

¹⁶ For the same reason, the merged entity would not be able to recoup any losses incurred by a foreclosure strategy – any attempted price increase would be undermined by rivals' expansion.

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