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Moana/Sanford: Upstream theories of harm in the Statement of Issues

Sanford Limited

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1. Introduction

1. On 27 July 2023, the New Zealand Commerce Commission's ("**NZCC"**) released a Statement of Issues (**"SOI"**) regarding Moana's clearance application to acquire Annual Catch Entitlements ("**ACE"**) to harvest certain inshore fish species from Sanford.[1] We have been engaged by Sanford Limited ("**Sanford**") to assess the theories of harm set out in the SOI, including in light of Sanford's 14 August 2023 submission in response to the SOI. In the SOI the NZCC identifies two potential theories of harm:

    a. **ToH 1 – vertical effects – Moana could increase the price of surplus ACE needed to cover by-catch (or withhold supply)**: That is, Moana could increase the ACE price of certain species (in particular, Snapper) to foreclose competitors from fishing *other* species that require this ACE given practical bycatch concerns; and

    b. **ToH 2 – buyer power – Moana could exercise buyer power by reducing payments for harvesting services:** The NZCC's concern appears to be that this would decrease the harvest volume available for downstream supply and/or that fishers would get paid less even if volumes do not change.

2. An important dynamic in the fishing industry is the fixed and generally binding nature of the quota. A binding quota means there is a capacity constraint in the market. As a generalisation, capacity constrained markets may have competition that is (irrespective of the number of competitors) limited by that capacity constraint, as parties will have a constrained incentive/ability to grow their business at the expense of rivals. As a result, where the capacity constraint is an upstream input required by downstream firms, we would expect the upstream firms to price in such a way that any scarcity rents[2] sit with the upstream firms (in this case, quota holders).[3]

3. Regarding **ToH 1 – vertical effects** – this is only a concern if post transaction Moana would have both the ***ability*** and ***incentive*** to leverage its position with Snapper ACE to foreclose rivals:

    a. Regarding the ***ability*** to increase the Snapper ACE price and foreclose rivals:

        i. Sanford currently transacts limited Snapper ACE to other parties (except in SNA8) and Moana is likely to use the majority of its ACE for its fish processing and wholesaling/retailing requirements (Snapper volumes and by-catch). There is also a material volume of ACE held by parties other than Sanford or Moana (the one area with lower volumes held by other parties being SNA8). Thus to the extent concerns arise, they are likely to be narrowly related to SNA8, which is significantly smaller than SNA1.

        ii. To the extent that fishers need ACE for balancing purposes at the end of the year, the price charged for these trades will be capped by the deemed value penalty for catching fish without ACE. We also understand that these transactions already sometimes occur at a premium to the market price, suggesting there may be limited scope for the price to rise further, given the binding nature of Snapper quota. Additionally, conservative calculations suggest that prices would need to rise above the deemed value penalty in order to foreclose other fishers.

    b. Regarding the ***incentive*** to foreclose:

[1] NZCC, *Statement of Issues: Moana/Sanford*, July 2023.

[2] Technically, only the *marginal* rents would be captured if price discrimination is not possible and firms that are more efficient than the *marginal* firm would continue to earn infra marginal rents.

[3] Quota was originally given by the crown to fishers at the time, so that rents sit with the quota owners.

i. Snapper ACE is scarce and valuable and therefore Moana would forego significant ACE profit if it implemented a foreclosure strategy. Which is to say the costs of this strategy could be large, and thus the benefit would need to be large.

ii. The benefit of this strategy would be being able to raise prices in downstream markets as a result of foreclosing certain geographic upstream markets. But Moana would be unable to increase downstream price if the downstream market is national, includes other fish, and/or export diversion is possible. Analysis of the availability of fish ACE in unaffected areas suggests there would be limited impact on downstream markets, particularly if only SNA8 is foreclosed.

4. Regarding **ToH 2 – buyer power –** the concern appears to be that this would be bad for fishers, in the sense that harvesting fees would reduce and that this would also result in a quantity reduction.

   a. This ToH is premised on there being competition between Moana and Sanford to acquire harvesting services in the counterfactual. However, our understanding is that there is limited evidence of competition between Moana and Sanford to acquire harvesting services today, which suggests that negotiated outcomes would not differ materially post transaction:

      i. Fishers and commercial fishing businesses generally have long term relationships, despite not having long term contracts.

      ii. Contracts with fishers [ ] focus on costs and realizable downstream prices rather than harvest prices available from Moana or other quota holders. [ ].

      iii. There are limited/no examples of fishers switching between Moana and Sanford that Sanford is aware of.

   b. This lack of competition between Moana and Sanford today is consistent with the fixed and binding nature of the quota meaning that:

      i. There is a mutual dependency between fishers and commercial fishing businesses (quota is valuable so holders want their ACE caught, fishers need access to ACE to fish. Commercial fishing businesses also face reputational risks and loss of realised value from fish if their fishers cut corners on quality);

      ii. Commercial fishing businesses have some bargaining power in negotiations and may be able to push prices close to willingness to accept (WTA),[4] though the extent to which they do is tempered by the mutual dependency already mentioned; and

      iii. Quota holders have limited incentive to "steal" fishers from rivals if they do not also simultaneously acquire more ACE.

   c. We interpret the NZCC's mention of a reduction in volumes available for downstream supply to mean that the theory of harm is the standard theory of buyer power whereby price is pushed below the competitive level such that reduced profits from lower volumes are offset by:

      i. An increase in prices in downstream markets; and/or

      ii. A transfer from the remaining, more efficient, fishers who were earning rents prior to the reduction in harvest prices.

   d. However, the evidence is not consistent with Moana having an ability/incentive to exercise buyer power post transaction:

      i. As already discussed, it seems unlikely that reducing the quantity fished in certain North Island QMAs would impact downstream prices; and

[4] WTA is the parallel concept to willingness to pay from the perspective of a seller of a good/service.

ii. We understand that costs do not vary greatly between fishers [ ] suggesting limited additional surplus to be extracted by exercising buyer power.

2. Economics of fishing quota

2.1. Necessary background

5. By way of necessary background, paragraphs 23-28 of the NZCC's SoI provide an instructive overview of the relevant features such as markets for quota and ACE, deemed valued rates, how fishers obtain ACE, as well as other relevant considerations such as by-catch.[5] A brief summary is as follows:

    a. Focusing on fishery management, so initially abstracting from quota and ACE:

        i. MPI defines species-region fisheries called **quota Management Areas** (QMA). An example is the Snapper 1 fishery (SNA1) of the east coast of the North Island;

        ii. Each year, MPI sets a **Total Allowable Commercial Catch** (TACC) per QMA, which limits the yearly harvest for that species in that area. For example, in 2023 the TACC was 4.5mil kg of Snapper in the SNA 1 QMA.

    b. Now adding details of quota, ACE, and deemed value:

        i. **Quota** defines the perpetual right to catch a % share of the yearly TACC. For example, owning 10% of the SNA1 quota allows the holder to catch 10% of the SNA1 TACC each year.

        ii. In practice, each year quota generates **ACE**. Extending the example above, owning 10% of the SNA1 quota would generate ACE worth 10% of that year's TACC. These are credits that must be surrendered when landing fish i.e., to land 1kg of Snapper in the SNA1 QMA requires declaring 1kg of SNA1 ACE.

        iii. If a fisher cannot declare ACE, then the fisher pays a **deemed value** payment set by MPI. The deemed value is meant to act as a deterrent, so is set to mean the fisher would face a financial penalty for catching a species without ACE. It is a sliding scale meaning the deemed value rate increases if the fisher harvests an increasing amount above its ACE. This penalty nature is intended to make it not profitable for fishers to harvest more than their ACE.

        iv. Both quota and ACE can be freely traded. For instance, it is possible for a firm to own quota and sell yearly ACE (i.e., not fish). It is also possible for a fisher to harvest their own quota or alternatively not own any quota and instead buy ACE.

    c. Last, setting out details on fishing practices:

        i. For fishers, there is effectively **free entry**, as beyond acquiring a boat and fishing gear, the fisher only needs to secure ACE (whether by contract or purchase of ACE) and some other minor licensing requirements before harvesting fish.

        ii. While a fisher may "target" specific species, it is typical for there to be **bycatch**, which is when the fisher catches other species that are not the target. For example, a trawling operation has limited control over what fish it catches in its net, though the mix itself is somewhat predictable.

        iii. A common arrangement is for a fisher to contract with a quota owner through a **Catch plan**, in which the quota owner sets out the intended harvest for various fish stocks, and then supplies corresponding amounts of ACE required to land the fish.

[5] NZCC, *Statement of Issues Moana/Sanford*, July 2023, para 28-28 on p. 4-5.

2.2. Economics of fishing quota

6. This section covers some important details on the key economic principles that guide our assessment of the NZCC's theories of harm. To start, we contrast the difference in perspective of a fisher and a quota owner:

    a. **Fisher**: the ACE price is the price paid by a fisher that is purchasing ACE on the open market to cover their harvest. In practice, most fishers are contracted so do not purchase ACE directly. Instead, they receive a harvest price per kg from a commercial fishing business that supplies the ACE (which implicitly nets off a price for the ACE used to catch the fish).[6] For instance, the NZCC refers to "…the amount paid to the harvesters of fresh fish for harvesting services…". The point being that, when making fishing decisions, fishers primarily consider the harvest payments and to some extent the price of ACE traded on the open market; and

    b. **Quota owner**: considers the rents or profits earned from quota. This is either the ACE price if transacted on the open market or the *implied* ACE price if the quota owner contracts with a fisher. In other words, the implied ACE price is the profit earned from selling the fish at wholesale downstream minus the harvest cost paid to the fisher. The important point is that quota owners consider the ACE price, which is either selling value of ACE or the *implied* ACE price, which is the downstream wholesale price minus the harvesting cost.

7. An important point is there are only rents in the fishery if fisher demand for ACE exceeds the supply of ACE. This is because the TACC limits the total harvest, so that fishers compete for a fixed quantity of ACE. As a result, theoretically, competition for ACE means that the ACE market clears, so that the marginal fisher earns zero profits.[7] At this point, the implied ACE price reflects the profits earned by the marginal fisher.[8]

8. With the above explanation in mind, there are two possible theoretical outcomes in the ACE market, which depend on whether the TACC binds or not. The two possibilities are:

    a. **Binding TACC implies there is a positive ACE price and therefore marginal rents**. That is, the ACE price reflects the willingness to pay (of the marginal fisher) to catch an additional fish. The interpretation is that the ACE price reflects the *marginal* rents in the fishery. These rents are likely to accrue to quota holders.

    b. **TACC *does not* bind**: if it is ***not*** profitable to harvest the full TACC. Therefore, there are no marginal rents and the theoretical ACE price is zero (or otherwise that the ACE is unsold).[9]

9. This is illustrated in Figure 1 and Figure 2 below, which show there is a positive ACE price equal to marginal rents when the TACC binds, and further there are no marginal rents (so the ACE price is zero) when the TACC does not bind. The downwards sloping line is the demand curve for ACE by fishers. It slopes downwards as costs increase in the harvested quantity increases costs e.g., by requiring each fisher to fish more or by requiring higher cost (less efficient) fishers to enter. The vertical line is the TACC.

[6] Therefore, increasing the ACE price is equivalent to reducing the harvest price paid to fishers, holding downstream fish prices constant.

[7] For simplicity, we focus on the ACE price rather than the harvest price paid to fishers. This is because the harvest price includes the ACE price, so in these relationships, there exists an implied ACE price.

[8] We mean this in the sense of the gross industry profits from fishing that fish, being the revenues that would be earned in downstream market, less the marginal costs of fishing that fish.

[9] Note that our graphs assume there is certainty over downstream demand and assume there is only one fish stock whose demand does is unrelated to the downstream demand or available ACE for other fish species.

Figure 1: Illustration of how the ACE market clears when TACC doesn't bind

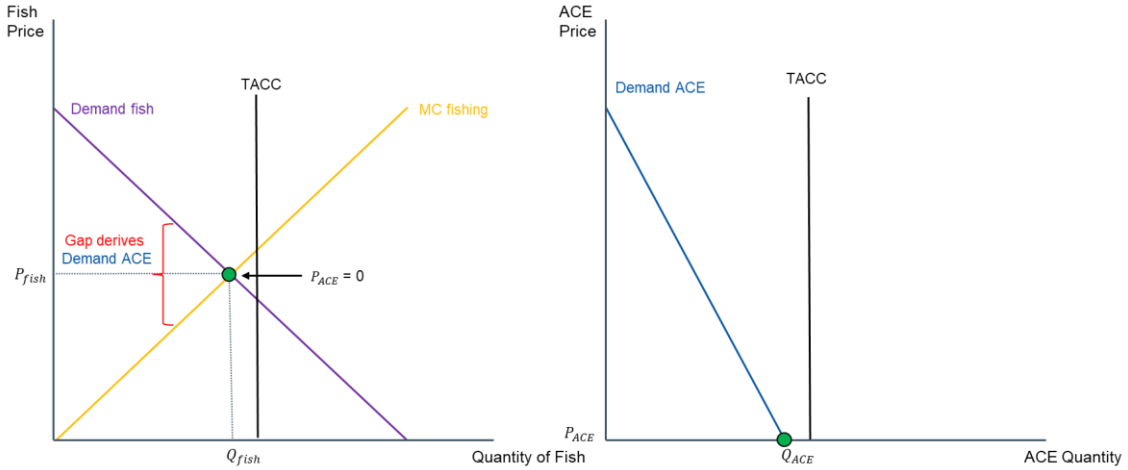
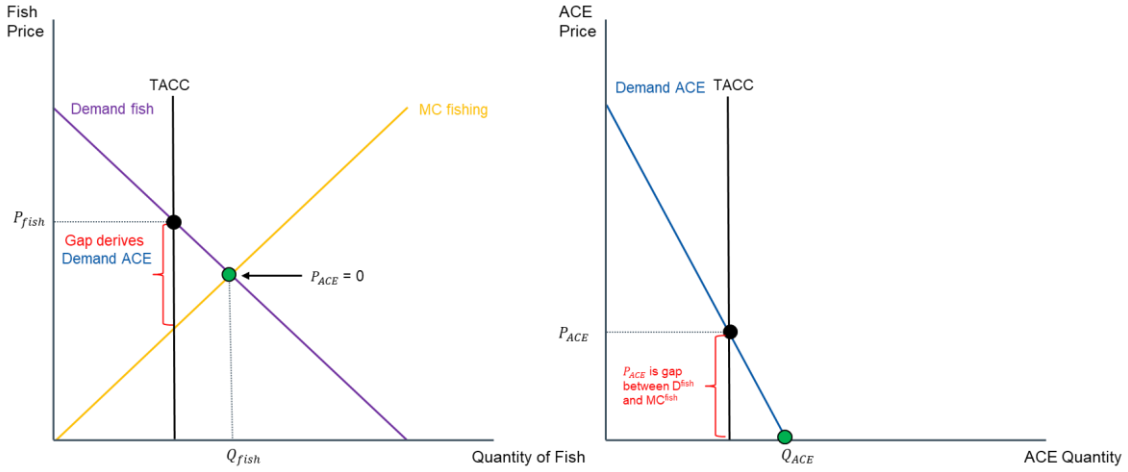


Figure 2: Illustration of how the ACE market clears when TACC binds



10. The graphs above are stylistic in that they effectively assume a fisher is only catching a single type of fish. However in a **mixed fishery** (such as the North Island QMAs), fishers catch multiple species. Therefore, the ACE price of a species would likely incorporate expectations of access to ACE of bycatch species, as the targeted species cannot be caught without access to ACE of the by-catch. In particular, we would expect the ACE price for a targeted species to decline, all other things being equal, as the ACE price of a by-catch species increases. In the limit, the ACE for the targeted species could fall to zero if ACE price of bycatch was too high.
11. Taken together, the fixed nature of the quotas and the by-catch nature of species such as Snapper means we would expect to observe:
    a. Positive ACE prices when the quotas are binding (i.e. there is excess demand for ACE); and
    b. Snapper ACE would have a higher price than other species, given holders of Snapper ACE will be able to capture some of the surplus associated with those other fisheries.
12. Table 1 below indicates this is the case, with Sanford's "top 5" fished species all having positive ACE prices (as measured by Sanford's own trades or independent market pricing data from Fishserve - though we understand Fishserve data is voluntarily reported and therefore may not be representative).

Table 1: Summary of ACE price ($/kg) by species (01/10/2022 – 02/08/2023), in QMAs overlapping with SNA1,2,8

	Fishserve	Sanford
Snapper	3.82	[ ]
Gurnard	0.56	[ ]
John Dory	0.91	[ ]
Tarakihi	1.33	[ ]
Trevally	0.51	[ ]

Source: provided by Sanford. Fishserve is average of all recorded transactions. Sanford is the Sanford price.
Note: Fishserve prices are voluntarily reported and thus may not be representative of market pricing.

3. ToH1 – vertical effects – leveraging bycatch ACE to reduce supply of other species

13. The first theory of harm in the SOI is that as a result of the acquisition, Moana may have considerable aggregation of ACE for fish stocks that are an important bycatch of other fish stocks, so are therefore an "input to supply". The specific potential market power concern is that Moana may increase the price of ACE of a key by-catch species (or withhold supply). This action would then increase the costs of harvesting other species and therefore decrease the harvest volumes of those other species. In this regard, the NZCC writes:[10]

> *"… we are assessing whether Moana, post-acquisition, would be able to profitably increase prices charged for surplus ACE or withhold supply. If so, this may have the effect of raising its rivals' costs of supplying a range of fish species, rendering rivals less competitive downstream and allowing Moana to raise wholesale prices of fish to customers (both wholesale and retail)."*

14. For ease of exposition, we focus on Snapper as the NZCC identifies that as a key fish stock that could potentially be leveraged:

> *"Moana's high share of Snapper ACE would mean that ACE Fishers would have no alternative but to acquire surplus Snapper ACE from Moana or risk paying deemed values because catching Snapper is unavoidable*."

15. For this theory to hold, Moana would need to have both the *ability* and *incentive* to raise the Snapper ACE price. In the rest of this section we:

    a. Assess whether Moana would have the *ability* to raise price by considering:

        i. Whether other quota holders have sufficient quota to supply any fishers Moana attempted to foreclose and considering the extent to which Moana would be a key supplier of "free float" Snapper ACE to other fishers (section 3.1);

        ii. Whether deemed value penalties would cap prices and the extent to which prices trade close to deemed value today (section 3.2).

    b. Assess Moana's *incentive* to implement a foreclosure strategy by considering:

        i. The extent to which prices would need to rise to foreclose rival fishing operations, given the mixed species nature of the catch and the positive ACE prices for these species. (section 3.3)

        ii. Whether upstream foreclosure in specific geographic areas would be likely to result in ability to increase downstream prices (section 3.4)

3.1. *Ability:* There is sufficient supply of "free float" ACE to supply by-catch fishers

16. For Moana to foreclose rivals by leveraging its Snapper ACE holdings requires that it has the *ability* to increase the ACE price paid by fishers that catch Snapper as bycatch. This is only a concern if both:

    a. Moana/Sanford are key suppliers of Snapper ACE to other fishers in the counterfactual; and

    b. There are not sufficient alternative quota holders that could supply these fishers with ACE if Moana attempted to raise the price.

[10] NZCC, *Statement of Issues Moana/Sanford*, July 2023, para 77 on p. 15.

17. Regarding the first point, data provided by Sanford shows that it uses the majority of its Snapper ACE itself and is only a seller of any material volumes of Snapper ACE in SNA8.

Table 2: Sanford Snapper ACE not "consumed" by Sanford's business 2022/23

	SNA1		SNA2		SNA8	
	kg	% of quota	kg	% of quota	kg	% of quota
Total Sanford Snapper ACE	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Volume sold via AFM (2022/23)(AFM volumes are outside the Transaction, and Sanford will continue to sell).	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Volume sold to other fishers (2022/23)[11]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Total	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Tables notes – Source for Auckland Fish Market *and ACE sales is data provided by Sanford on "SNA Ace other than consumed (ours and contracted)". Source for Sanford ACE from quota is the quota Shares as of 01-10-2022 from Fishserve.*

18. On the second point, Figure 3 is a summary of Moana's post-acquisition aggregation of ACE per QMA. [ ].

Figure 3: Aggregation per QMA of Sanford, Moana [ ]

[ ]

Source: Fishserve, quota share as of Oct 1 2022 [ ]

19. Figure 3 shows that Sanford *already* has 65% of ACE in SNA8, [ ]. That is to say, after the acquisition, aggregation in other Snapper fisheries would be below the 65% that currently exists in SNA8. In SNA8, the TACC is fully fished, and the ACE price charged by Sanford [ ].[12] Therefore, this is suggestive evidence that 65% aggregation does not appear to be sufficient aggregation to give the ability to raise price, or that only foreclosing SNA8 would benefit Sanford downstream today.
20. Given that post acquisition, Moana's ACE in SNA1 and SNA2 will be 54% ([ ]) and respectively 32% ([ ]), it seems unlikely that foreclosure could occur in these QMAs, as there are other material amounts of ACE ([ ]) that won't be controlled by Moana.
21. In SNA8 Moana will have 77% of ACE supply (and Sanford data suggests more "free float" sales to other fishers). It is therefore theoretically possible that Moana could raise the price in SNA8 in order to attempt to foreclose rival fishing businesses. In the remainder of this section, we explore whether Moana would have the ability and incentive to do so.
22. In addition, we understand from Sanford that the TACC for SNA8 is expected to be increased in the future as a result of existing increases in the Snapper stocks, which would increase the volume (but not share) of ACE held by other parties, which may mitigate this potential concern, to an extent.

[11] [ ]

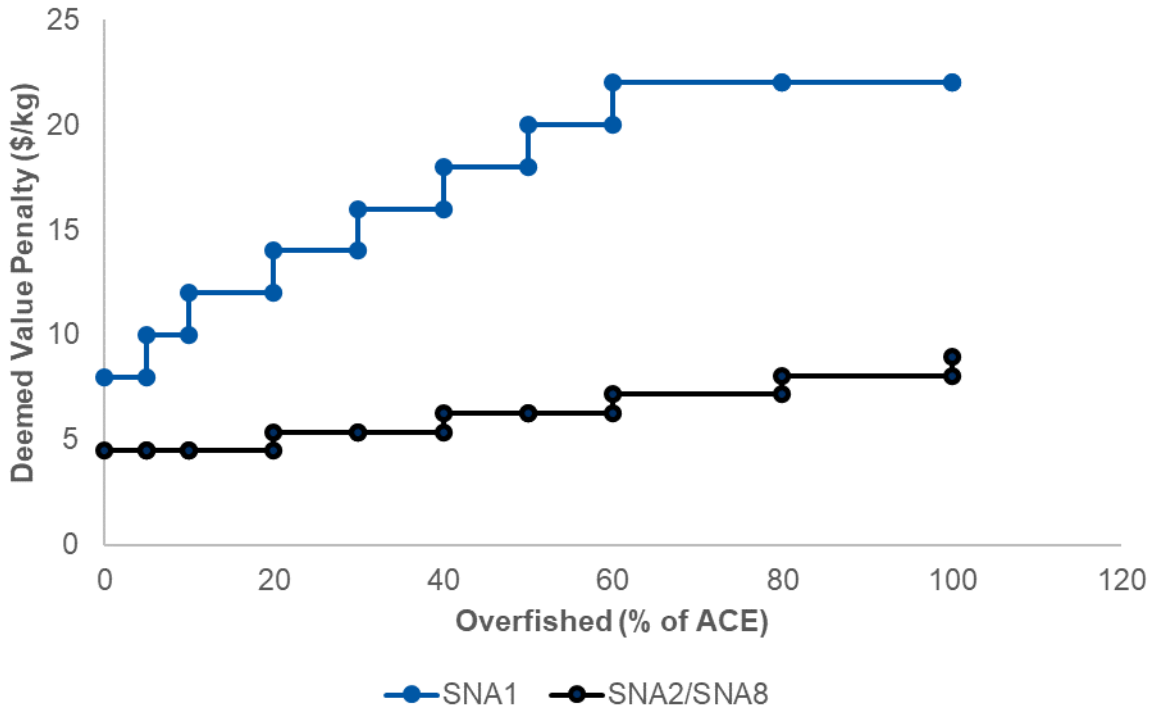
[12] [ ]

3.2. *Ability:* deemed value penalties would cap price increases for balancing trades, which often occur at a premium

23. The NZCC's theory of harm is essentially that in the counterfactual, Moana/Sanford would not have the ability to raise the SNA ACE price because the other firm would undercut the firm that attempted to leverage its Snapper position. Thus, the theory is the proposed transaction would remove the constraint on SNA ACE pricing, which would make Moana able to implement a foreclosure strategy.

24. Subject to whether other firms would provide a constraint and if Moana would even be a material supplier of SNA ACE to other fishers (as discussed in the previous section), we also note that paying deemed values penalties to MPI also places a cap on the price that could be charged for SNA ACE.[13]

Figure 4: Deemed value schedule for Snapper 1,2,8



Source: MPI, Deemed Value for 2022
Note: For SNA1 a "Special Differential" currently applies.

25. This is particularly the case for balancing trades that occur at the end of the season. We understand from Sanford that fishers generally do not fish if they don't have sufficient SNA ACE, in order to avoid deemed value payments. This suggests the willingness to pay for SNA ACE on an ex ante basis (i.e. when they can still decide whether to fish or not) is less than the deemed value penalty.

[13] We note that if a fish species was added to the Over-Fishing thresholds, there could be additional penalties/consequences beyond the deemed value payment. However, none of the species in question are currently the in schedule of stocks that have over-fishing thresholds. See Fisheries (Over-Fishing Thresholds for Quota Management Stocks) Order 2001 (SR 2001/257) (as at 01 October 2021) Contents – New Zealand Legislation.

26. However, at the end of the season, some fishers have caught more Snapper than their ACE allocation, though we understand the volumes are small and largely unintentional (because of the previous point – it doesn't appear to be profitable to do this intentionally). For these balancing trades, fishers have no choice but to acquire SNA ACE from another quota holder or pay the deemed value penalty. In this circumstance, the deemed value penalty would cap the price that a SNA ACE holder could charge a fisher.

27. In addition, we understand from Sanford that it sometimes receives offers for SNA ACE at the end of the year that are above the market price. We understand that Sanford currently sells SNA ACE [ ].

28. To illustrate that the deemed value payment is likely to be a binding cap on price increases we perform some illustrative calculations of the amount by which current Snapper ACE prices would need to rise to make it no longer profitable for a fisher targeting specific fish species in QMA1 to fish that species. Fisheries of NZ (FONZ) data shows the proportions of each fish caught by fishers targeting different species in QMA. Thus, for example, we can use the current SNA and TAR ACE price and the ratio of Tarakihi to Snapper a fisher targeting Tarakihi catches to work out how much the SNA price could rise before there is no value in catching Snapper. Thus, if the ratio of Tarakihi to Snapper is 2:1 and the ACE prices for TAR is $1, the SNA price could rise by $2 before there is no value in fishing Tarakihi.

29. Using actual prices and by-catch ratios between Snapper and the targeted fish, gives the results in Table 3 below, depending on whether use pricing data from Fishserve or Sanford.

Table 3: Required increase in the Snapper ACE price so unprofitable to fish other species (using average prices across all NI QMAs)

Targeted Species	By-catch Ratio %*	Increase of Snapper ACE price so TACC doesn't bind	
		Sanford	Fishserve
Gurnard	50%	[ ]	$1.12
John Dory	36%	[ ]	$2.54
Tarakihi	25%	[ ]	$5.32
Trevally	33%	[ ]	$1.55

*Table notes - *Bycatch ratio is estimated using the proportion of Snapper caught on average when targeting each species. For example, catching 25kg of Snapper when targeting Tarakihi leads to a bycatch ratio of 25%. The data is from https://fonz.kahawai.org.nz/summaries.html. We select each fish stock in QMA1 e.g., GUR1, JDO1, TAR1, and TRE1. Then we take the relative difference between the Target (e.g., Tarakihi) and Snapper for Bottom Trawl (BT) when looking Catch (%) by method and target species.*

30. This analysis is conservative in that it:

    a. Ignores the other fish species besides the targeted species, which would have positive value and thus would increase the required foreclosure price; and

    b. It assumes the fisher has no Snapper ACE and must purchase all of its Snapper ACE externally and pay a premium. If the fisher has its own Snapper ACE, the premium charged on the extra Snapper ACE it purchases externally would need to be even larger to make fishing the targeted species unprofitable.

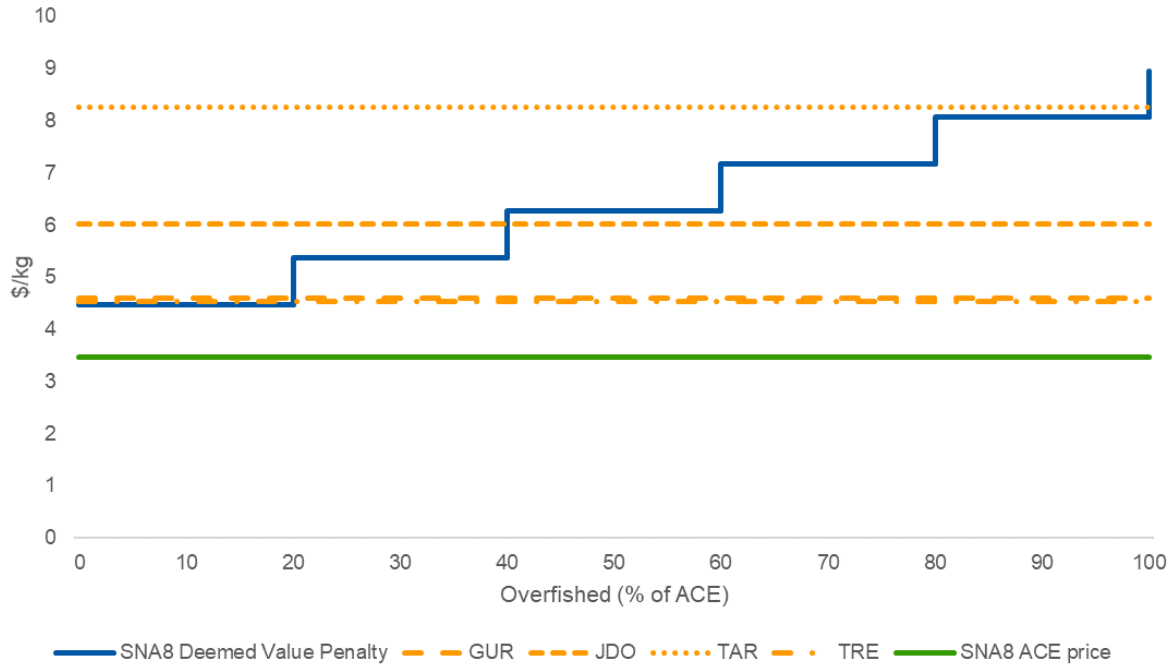
31. Therefore, a conservative analysis suggests SNA prices would need to rise materially in order to foreclose other fishers. We now compare the implied price to the deemed values for SNA8 in Figure 4 above, using Fisherve pricing data (noting again that Fishserve relies on voluntary reporting of trades so may not be representative).

32. This figure shows that average market prices are below the deemed value, but for low levels of overfishing (up to 10%), price would need to rise above the deemed value for a fisher to be

foreclosed (ignoring profits from fish besides the targeted species and self-supply of Snapper ACE, both of which would raise the foreclosure price). This suggests deemed values would place a constraint on the extent to which prices could rise to levels at which foreclosure would occur. As this graph shows, the constraint relaxes at higher levels of overfishing. Figure 6 below repeats this analysis using Sanford's prices for ACE.

33. In addition, there is evidence that prices are sometimes already close to deemed values. [ ] and Fishserve data records a maximum price of SNA8 of $5.00.

Figure 5: Comparison of SNA deemed values, average market ACE price and implied SNA prices to foreclose fishers targeting specific species in QMA1



Source: MPI, Deemed Value for 2022, and Fishserve prices for 2022-2023
Note: The solid blue is the SNA8 deemed value penalty and the green line is the SNA8 ACE price and the dotted yellow lines represent the SNA ACE prices that would foreclose fishers targeting Gurnard, John Dory, Tarakihi, and Trevally.

Figure 6: Comparison of SNA deemed values, Sanford's SNA price and implied SNA prices to foreclose fishers targeting specific species in QMA1

[ ]

Source: MPI, Deemed Value for 2022, and Sanford prices for 2022-2023
Note: The solid blue is the SNA8 deemed value penalty and the green line is the SNA8 ACE price and the dotted yellow lines represent the SNA ACE prices that would foreclose fishers targeting Gurnard, John Dory, Tarakihi, and Trevally.

3.3. *Incentive:* Snapper is scarce, so foreclosure would be costly

34. The foreclosure/raising rivals cost theory is premised on Moana having extra SNA that rivals would require and charging a high price such that rivals would exit/scale back their operations. However, because SNA ACE is already scarce, it already trades at high prices relative to other fish species. Because SNA is an important bycatch species, it is likely that much of the rents/profits available from catching other species in the bundle that must be fished are already

captured in the SNA price. This is demonstrated by Table 1 above which shows that SNA ACE trades at much higher prices than other species.

35. Thus, it is not clear that Moana would be incentivised to increase the price of SNA to the point that other fish stocks are not fished, given owners of SNA likely already capture much of the surplus associated with these fish stocks today. Put another way, the fact that SNA ACE is important for bycatch and the fact the SNA quota binds means that holders of surplus SNA ACE will likely already be extracting some value from the quota holders of other fish stocks.

36. Thus, if a foreclosure strategy were implemented, and this resulted in the SNA ACE being unused, this would impose a large cost on Moana that would need to be offset by large benefits in the downstream market (we discuss the prospect of downstream benefits in section 3.4).

3.4. *Incentive:* National downstream market for white fish means Moana could not meaningfully increase downstream price through foreclosure

37. The last point we set out is that even if Moana could be assumed to be able to increase the price of Snapper ACE (i.e. that there is not sufficient "free-float" supplied by competitors) and reduce the volume of other species (by making it unprofitable to harvest), Moana would not have the incentive to do so. In other words, Moana could not raise downstream prices even if it could foreclose competitors and therefore reduce harvest volumes.

38. The NZCC states in the SOI that the downstream market for fish is likely national is scope:[14]

> *"once landed, commercial fishing businesses appear to compete with one another on a national level to supply both unprocessed and processed inshore fresh fish to wholesale customers. While Moana and Sanford are based in Auckland, commercial fishing businesses operating in the South Island regularly send fresh fish to customers in the North Island in competition with Moana, Sanford and other commercial fishing businesses based in the North Island."*

39. Given the NZCC's view, we assess the materiality of the foreclosed supply given the ability of other firms to supply downstream to the North Island in the event that Moana were to reduce North Island harvest volumes (and also given that Moana would continue to supply). To do so, we:

    a. Compare the supply that could be foreclosed to the total supply, which is the QMAs in the South Island and those in the North Island that are unaffected by potential foreclosure through Snapper bycatch (in effect, consider the materiality downstream from a quantity perspective of any hypothetical foreclosure); and

    b. Consider the share of total supply that would be held by parties besides Moana, to assess whether other parties would have sufficient supply to defeat any attempted price increases downstream.

40. We conduct this analysis for two different foreclosure scenarios where we assume Moana could use Snapper ACE to foreclose non-Moana supply in the foreclosed QMAs:

    a. **Narrow foreclosure:** we consider a scenario where Moana could only foreclose SNA8.[15]

[14] NZCC, *Statement of Issues Moana/Sanford*, July 2023, para 52.2 on p. 10

[15] There is no exact area for other species that corresponds to SNA8 and thus for each species, we have estimated the area based on the map definition of each stock code. This results in the corresponding area of SNA8 being GUR1 and GUR8 for Gurnard, JDO1 for John Dory, TAR1 and TAR8 for Tarakihi, and TRE7 for Trevally. GUR1, JDO1, and TAR1 are all only partly corresponding to SNA8 and thus we have taken a portion of the total catch from each of these stock codes (60%) to accurately reflect the overlap between SNA8.

b. **Broad foreclosure:** we consider the more extreme case, in which Moana can foreclose all non-Moana supply in SNA1, SNA2, and SNA8.

41. Given these two scenarios, we estimate the volume of other fish species that are not controlled by Moana fished in these SNA areas and thus the volume of fish that can potentially be foreclosed. Combining this with fish volumes in other geographic areas gives the total volume of each species that would be controlled by Moana (which to be conservative, we assume includes leases held by Moana), and that which could be foreclosed. This analysis is shown in Figure 7.

Figure 7: Harvest that could potentially be foreclosed (harvest from 2021-2022)

[ ]

Source: ACE ownership by stock data provided by Fisheries for the year finishing Oct 2022

42. This suggests that in the narrow foreclosure scenario, there would be material volumes of fish of each of Sanford's "top 5" species controlled by other parties. In the broad foreclosure scenario, these shares shrink, though are still substantial for GUR, JDO and TAR.

43. In addition, in the broad foreclosure scenario, there are examples (in particular, Snapper and Trevally), in which the potentially foreclosed supply could be a significant fraction of total supply.

44. However, this analysis, which assumes downstream markets for individual species and broad foreclosure, is likely to be significantly overly conservative:

    a. First, downstream markets are likely much broader than a market per species, and this materially reduces the share of potentially foreclosed harvest;

    b. Second, it does not seem likely that Moana could foreclose the SNA1 and SNA2 regions given the share of ACE held by other parties. SNA8 is only a fraction of the size and overlaps with only a portion of the QMAs of most species.[16] This means that Moana could only foreclose on the harvest that is caught in the SNA8 region and not the harvest that is caught outside this region e.g., only approximately 60% of GUR1 is caught in the SNA8 region;

    c. Third, we have included Moana's "leased" ACE, which we are understand is contestable and thus not guaranteed to Moana beyond the term of any existing "lease".[17] Therefore, Moana's share may be overstated; and

    d. Fourth, the species with the most foreclosure concern – Snapper – also has the highest share of exports (47%), so therefore has the most ability to divert exports if the domestic price were to increase.

45. Regarding broader downstream markets, Table 4 lists out the total harvest volumes of several white fish that plausibly could compete with the "top 5" species. The NZCC in their statement of issues identifies Snapper, Tarakihi, and Gurnard as "popular" species as well as Gem Fish, Red Cod, Warehou as a selection of "less preferred" species yet are still closer alternatives than either frozen fish or salmon because "consumers are typically seeking a fresh white fish".[18] Given that the NZCC also notes these species are "amongst others", we also provide a list of ten species

[16] The corresponding area of SNA8 being GUR1 and GUR8 for Gurnard, JDO1 for John Dory, TAR1 and TAR8 for Tarakihi, and TRE7 for Trevally. GUR1, JDO1, and TAR1 are all only partly corresponding to SNA8 and thus we have taken a portion of the total catch from each of these stock codes (60%) to reflect the overlap between SNA8.

[17] While ACE is in fact purchased (whether on a short-term basis or covering terms longer than a fishing year), such arrangements are often referred to as a "lease" despite not actually being a "lease" in legal terms.

[18] See NZCC, *Statement of Issues Moana/Sanford*, July 2023 on para 50.1 and 50.2 on p. 9

listed in Castalia's report. These species additionally include Blue Cod, Bluenose, and Hapuka as inshore white fish, as well as Orange Roughy and Ling as deep water white fish.

46. To provide context as to the possible extent of export diversion, the last column also lists the export share per species. This value sets out the potential supply of exports that could be diverted to serve the domestic market in case of foreclosure.

Table 4: Harvest volumes and export shares of species that compete with Top 5

Type	Species	Not foreclosed (mil kg)		Export share (%)
		Wide	Narrow	
"Top 5" species	SNA	4.83	6.50	47%
	GUR	3.43	3.73	15%
	JDO	0.42	0.51	74%
	TAR	3.26	3.92	6%
	TRE	2.64	2.97	48%
Selection of other inshore fish	Red Cod	2.69	2.72	N/A
	Gem Fish	1.47	1.77	N/A
	White Warehou	0.70	0.70	N/A
	Blue Warehou	2.10	2.15	N/A
	Hapuka	0.65	0.77	43%
	Blue Nose	0.14	0.38	68%
	Blue Cod	1.70	1.70	3%
Deepwater white fish	Orange Roughy	9.68	9.92	82%
	Ling	15.20	15.87	79%
	Hoki	-	-	N/A

Note: For non-top 5 inshore species and deepwater white fish, we do not have Moana's market share for each species so we have conservatively assumed that the total catch in the respective areas are all foreclosable. No granular data available for Hoki to calculate potentially foreclosable catch.

47. Using these figures, Table 5 and Table 6, calculate the share of total supply that could be foreclosed under several downstream market definitions. This shows that in a narrow foreclosure scenario, the downstream quantity impact of foreclosure is likely to be low.

48. Figure 8 shows the share of supply held by parties other than Moana for different downstream market definitions. Note we have only shown the aggregations using Sanford's "top 5 species" and the NZCC's "popular" species as we do not have data on Moana's share of other species. This shows that even if Moana was successful in foreclosing these fish species in the North Island, there would be significant supply not controlled by Moana, particularly in the narrow foreclosure scenario.

49. In conclusion, we find that the broad foreclosure scenario is unlikely due to the material non-Moana SNA holdings in SNA1 and SNA2. In the narrow foreclosure scenario, there would be little benefit to Moana in downstream markets due to the limited quantity impact and material shares of supply held by other parties. In addition, the broader the downstream market, the benefit of foreclosure is smaller.

Figure 8: Share of quota held by Moana for different downstream aggregations

[ ]

Source: *ACE ownership by stock data provided by Fisheries for the year finishing Oct 2022. NZCC "popular" species as determined in their Statement of Issues paper.*

Table 5: Share of total supply foreclosed for different downstream market definitions (assuming non-Moana SNA in foreclose-able regions is foreclosed)

Foreclosure area	Sanford's "Top 5" species	NZCC mentioned species*		Castalia's "Top 10" species	
		"popular"	"popular" + "less preferred"	Only Inshore	Inshore + deepwater
Wide (SNA1,2,8)	24%	21%	18%	23%	15%
Narrow (SNA8)	5%	3%	4%	5%	5%

Notes – The NZCC mentions Snapper, Tarakihi, and Gurnard as "popular" species. The NZCC further notes that Gem Fish, Red Cod, Warehou may be "less preferred" noting that they are still closer alternatives than either frozen fish or salmon because consumers are typically seeking a fresh white fish. The NZCC also notes that there may be other species in this category. Castalia's category is Moana's top ten species in total sales. This divides into inshore species such as Snapper, Tarakihi, Trevally, hapuku & bass, bluenose, blue cod, Gurnard and John Dory and also deep water such as ling and Orange Roughy. Similar to what we have done for the top 5 species, we have analysed the QMAs that corresponds to the wide and narrow forecloseable area. For the broader categories that include species outside the "top 5" species, we do not take Moana's market share in terms of the catch so we have assumed that the total catch for the respective foreclosable areas is all foreclosable. This makes the calculations done in the right three columns a conservative estimate.

Table 6: Share of total supply foreclosed for different downstream market definitions (assuming non-Moana SNA in foreclose-able regions is <u>not</u> foreclosed)

Foreclosure area	Sanford's "Top 5" species	NZCC mentioned species		Castalia's "Top 10" species	
		"popular"	"popular" + "less preferred"	Only Inshore	Inshore + deepwater
Wide (SNA1,2,8)	13%	8%	9%	14%	11%
Narrow (SNA8)	3%	2%	3%	4%	5%

Notes – The NZCC mentions Snapper, Tarakihi, and Gurnard as "popular" species. The NZCC further notes that Gem Fish, Red Cod, Warehou may be "less preferred" noting that they are still closer alternatives than either frozen fish or salmon because consumers are typically seeking a fresh white fish. The NZCC also notes that there may be other species in this category. Castalia's category is Moana's top ten species in total salesl. This divides into inshore species such as Snapper, Tarakihi, Trevally, hapuku & bass, bluenose, blue cod, Gurnard and John Dory and also deep water such as ling and Orange Roughy. Similar to what we have done for the top 5 species, we have analysed the QMAs that corresponds to the wide and narrow forecloseable area. For the broader categories that include species outside the "top 5" species, we do not take Moana's market share in terms of the catch so we have assumed that the total catch for the respective foreclosable areas is all foreclosable. This makes the calculations done in the right three columns a conservative estimate.

4. ToH 2 – Buyer power – Reducing harvest price paid to fishers

50. The NZCC's second theory of harm is that the acquisition will mean that Moana could lower harvest payments to fishers. The market power concern is effectively a buyer power concern. That is the lower harvest payments would reduce the volume supplied to downstream markets (but increase Moana's profits). The NZCC explains this concern:[19]

> *"If this existing and/or potential competition is likely to place a significant competitive constraint on the price that Moana would pay for harvesting services, the Proposed Acquisition might give Moana the ability and incentive to reduce the price it pays for harvesting services. The impact of a reduction in the price paid to ACE fishers could impact on ACE Fishers ability and incentive to harvest fish for supply to downstream wholesale markets."*

51. We understand from Sanford that there is already currently little evidence of competition between Sanford and Moana to acquire harvesting services:

    a. Contracts with fishers [ ] focus on costs (which commercial fishers, particularly those who also operate their own fishing vessels such Sanford, have a good understanding of) and downstream realisable value rather than harvest prices available from Moana or other quota holders. Despite this [ ], suggesting that costs do not vary much between fishers.

    b. There are limited/no examples of fishers switching between Moana and Sanford.

52. This is consistent with the fixed and binding nature of the quota meaning that:

    a. Quota holders have some bargaining power in negotiations and may be able to push prices close to willingness to accept (WTA),[20] though the extent to which they do is tempered by the mutual dependency already mentioned.

    b. Quota holders have limited incentive to "steal" fishers from rivals if they do not also simultaneously acquire more ACE.

    c. Fishers and commercial fishing business typically have long term relationships, which reflects the mutual dependency between quota holders and fishers. Quota holders rely on fishers to catch their fish, not break rules (which would cause reputation harm to the commercial fishing business) and to provide high quality, fresh fish (as quality and freshness flows through to realisable value). Fishers cannot fish without access to ACE.

53. We interpret the NZCC's mention of a reduction in volumes available for downstream supply to mean that the theory of harm is the standard theory of buyer power whereby price is pushed below the competitive level such that reduced profits from lower volumes are offset by:

    a. An increase in prices in downstream markets; and/or

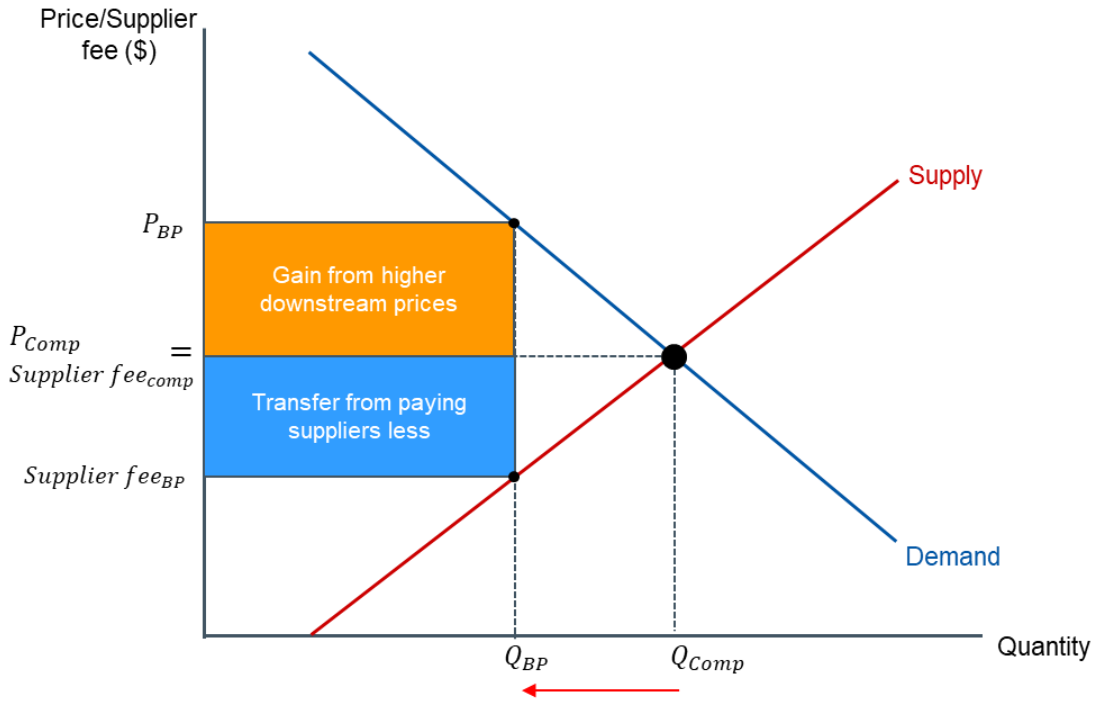
    b. A transfer from the remaining, more efficient, fishers who were earning rents prior to the reduction in harvest prices.

54. This is shown in Figure 9 below, which is an adaptation of the standard diagram showing how a firm with monopsony (i.e. buying) power benefits from decreasing prices paid to suppliers.

[19] NZCC, *Statement of Issues Moana/Sanford*, July 2023, para 85 on p. 17.

[20] WTA is the parallel concept to willingness to pay from the perspective of a seller of a good/service.

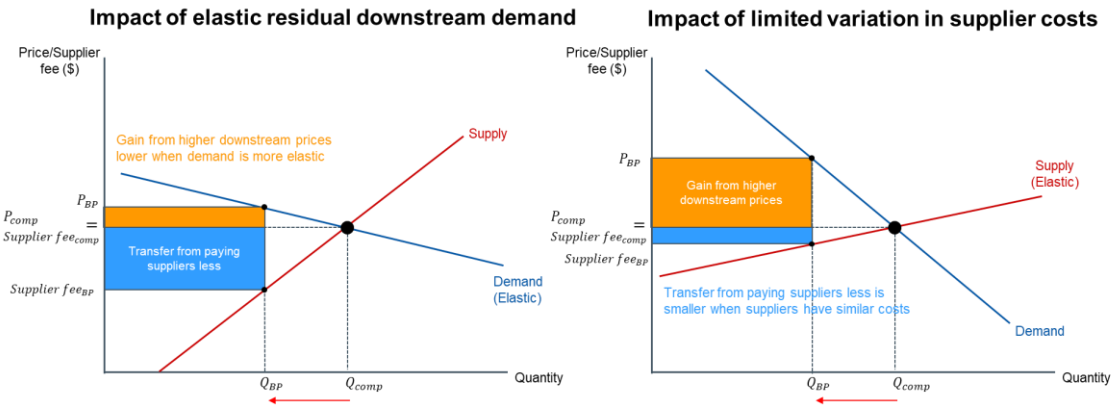
Figure 9: Standard illustration of benefits of exercising buyer power



55. In this diagram, the yellow rectangle is the benefit from downstream prices increasing due to a reduction in quantity and the blue rectangle is the benefit from extracting profits from more efficient/lower cost suppliers by lowering the price paid to suppliers.

56. In effect, for there to be a benefit from exercising buyer power requires that there is "steepness" in either the downstream residual demand curve faced by the firm (i.e. it is inelastic and thus a reduction in that firm's quantity will increase downstream prices) or the cost curve of its suppliers (i.e. there is large variation in the costs of suppliers such that there are more efficient firms that earn rents that can be extracted). This is illustrated by the figure below, which shows that a flat demand or cost curve reduces the benefits of exercising buyer power.

Figure 10: Illustration of situations where exercising buyer power has limited benefit



57. In the present context, it seems likely that the downstream residual demand curve faced by Moana will be elastic, given the downstream markets are likely to be national, include multiple fish

species, and with significant potential for export diversion, as discussed in section 3.4. As such any reduction in supply by Moana would likely be offset by increased supply from other suppliers and thus there would be minimal impact on downstream prices.

58. Regarding whether there is cost variation amongst suppliers, we understand that costs do not vary greatly amongst suppliers. Though costs will vary between long line and trawling operations, we understand from Sanford that costs between trawlers or long liners do not be vary materially as the technology used is relatively consistent and standardized.

59. In addition, the graphs above assume that the acquiring firm is not able to price discriminate amongst its suppliers and thus the only way to extract rents from efficient suppliers is to lower the uniform price paid to all suppliers. Uniform pricing, [ ]. [ ] in Figure 11 and Figure 12 below, [ ]. [ ] which as discussed above in para 4, [ ]. For instance, focusing on SNA1, [ ] [ ]. That translates to [ ] between two long line operators and [ ] between two trawl operators. Noting that because Sanford operates its own fishing vessels, it will have a good benchmark of the efficient costs of a fisher.

Figure 11: [ ]

[ ]

Source: Sanford provided [ ] ACE Contracts for 2022-2023 provided (anonymised as fishers 1-6)

Figure 12: [ ]

[ ]

Source: Sanford provided [ ] ACE Contracts for 2022-2023 provided (anonymised as fishers 1-6)

60. By way of summary, for Moana to benefit from exercising buyer, it must either be able to raise downstream prices or there needs to be material cost variation in fishers, such that there are inframarginal profits that can be extracted by pushing harvest prices down. On the first point, it seems unlikely that there would be a material downstream price benefit from Moana reducing the amount it fishes. On the second point, we note that costs are unlikely to greatly vary amongst suppliers because the technology used is relatively consistent and standardized. [ ].[21] While it is likely that some rents sit with fishers due to the long term relationship and mutual dependency with fishers and quota holders, it is unlikely to be competition between quota holders that stops this value from being extracted.

61. Therefore, our analysis suggests Moana would have limited incentive to exercise any buyer power post transaction.

[21] Noting, [ ] also rules out the theory that Moana would cause a deadweight loss by reducing harvest volumes paid to *all* fishers [ ].

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