Fonterra
Dairy for life

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**SUBMISSION ON THE COMMISSION'S DRAFT REPORT ON ITS REVIEW OF FONTERRA'S 2017/18 MILK PRICE**

## Introduction

This submission focuses on the Commission's comments on asset beta in its draft report on its *Review of Fonterra's 2017/18 base milk price calculation: Dairy Industry Restructuring Act 2001,* released on 15 August 2018, and the accompanying note prepared by Cambridge Economic Policy Associates (CEPA), *Re: Dairy asset beta – response to the second round of submissions,* dated 16 July 2018.

We do not have any comments on any other aspect of the Commission's draft report.

We have again commissioned Dr Alastair Marsden of the University of Auckland to prepare a response to specific aspects of the Commission's and CEPA's analysis. Dr Marsden's response should be read in conjunction with this submission.

In summary, we believe CEPA and the Commission have continued to understate the significance and / or relevance of the differences in systematic risk between the NP and the comparators. Once these are properly recognised it becomes clear that the differences between the exposure to systematic risk of the notional processor (NP) and the firms in CEPA's comparator set are so significant that it is not feasible to apply the Commission's preferred approach of starting with the average comparator asset beta and then adjusting for differences in systematic risk faced by the NP relative to the comparators.

We continue to maintain that the primary cause of the differences in the NP's exposure to systematic risk relative to the comparators is the combination of the quasi-regulatory milk price regime and the unique New Zealand market conditions that necessitate the use of this regime. In turn, we continue to believe that the NP's exposure to systematic risk is similar to ELBs, and that ELBs therefore represent an appropriate comparator for the NP.

However, if the Commission continues to maintain that our assessment is not sufficiently robust or otherwise supportable, the question then becomes one of 'what next'? A possible approach would be to benchmark the NP's exposure to systematic risk to firms in a range of regulated sectors.

Our submission is organised as follows:

- In the first section we explain why we consider the Commission's focus on the average asset beta for the overall comparator set and for various subsamples does not generate any particular insight into the question of what an appropriate asset beta is for the NP.
- In the following section we explain why we consider both the Commission and CEPA have materially understated the differences in the level and nature of the NP's exposure to systematic risk relative to the comparators, particularly with respect to systematic risk associated with growth options, asset stranding, and price and volume risk.

- In the final section we summarise our analysis and suggest a potential way forward.

**The Commission's focus on comparators' average asset beta**

The Commission and CEPA both acknowledge that the NP's asset beta will be below the average asset beta for the comparator set. Neither the Commission nor CEPA provide any particular insight into the magnitude of an appropriate downward adjustment, but both assert that the difference of circa 0.12 is nonetheless unlikely to be supportable.

CEPA's and the Commission's position that our implied adjustment of circa 0.12 is unlikely to be supportable appears, at least in part, to reflect the fact that the differences between the mean asset betas of CEPA's various subsamples are relatively minor. However, neither CEPA nor the Commission have presented any meaningful analysis of the differences, if any, in exposure to systematic risk between the firms allocated to each comparator set, or of the NP's exposure to systematic risk relative to the comparator subsamples. Any such analysis would simply highlight the significant differences in exposure to systematic risk for the comparators relative to the NP, per the discussion below on the key sources of systematic risk relevant to the NP as identified by CEPA and the Commission.

More generally, and despite the acknowledgement that some downward adjustment is required, much of the analysis underpinning the Commission's conclusion that our asset beta is unlikely to be practically feasible is based on comparisons of various sample means:

- CEPA's 'range' of comparator estimates of 0.45 – 0.58 is derived by taking the lowest and highest of the averages of CEPA's various subsamples and estimation methods / timeframes – it does not reference the range of the asset beta estimates for the individual comparators.[1]
- Similarly, the Commission's confidence interval estimates – see para B29 and footnote 30 – relate to the 90% confidence interval for the mean population asset beta given the sample means, sample sizes and standard deviations.

In our view, all that these various mean-based estimates indicate is that the 'true' discount implied by our selection of an asset beta of 0.38 could be anywhere between approximately nil and approximately 0.2. They do not, however, provide any insight into the appropriate quantum of a supportable discount for the NP.

Similarly, the Commission's argument in paragraph B132 also fails, in our view, to support the Commission's position:

> Dr Marsden's analysis indicated that there is only around a 25% chance of observing an asset beta of 0.38 if the true mid-point is the centre of his range. Dr Marsden's most recent report derives a similar 20-25% likelihood using CEPA's empirical analysis of asset beta. Dr Marsden's analysis implies that it is statistically feasible to observe an asset beta of 0.38. But, as we discussed above, providing for contestability requires more than just a theoretical or technical feasibility. It must also be achievable in practice. Dr Marsden's analysis implies an approximately 75% likelihood that the true asset beta is above 0.38. That is, there is approximately three times the likelihood that the true asset beta is above 0.38, than below it. Adoption of an asset beta of 0.38 to set the milk price is therefore unlikely to provide for contestability.

The Commission's conclusion in this paragraph appears to be predicated on an assumption that it is equally probable that the asset beta for each individual firm in the comparator set represents the 'true' asset beta for the NP.[2] However, our interpretation of Dr Marsden's analysis is that the fact

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[1] We therefore do not understand the Commission's argument in paragraph B114.2 that the fact that our point estimate of 0.38 is below the average asset betas from all the subsamples (which in turn can be expressed as a range comprising the lowest and highest of the subsample averages) supports the Commission's view that our asset beta is unlikely to be practically feasible.

[2] Similarly, the Commission's argument in paragraph B128.7 that "Dr Marsden's analysis indicates there is only a 25% chance of the **typical** dairy processor having an asset beta of 0.38 or less" (emphasis added) is correct only if we start with

that our selected asset beta for the NP sits at around the 25th percentile of the comparators' asset betas provides strong support for our position that the NP's asset beta is practically feasible, given both our view that the NP faces less exposure to systematic risk than both the 'average' (and for that matter, any) comparator, and the Commission's and CEPA's acknowledgement that the NP has at least a somewhat lower exposure to systematic risk than the average comparator.[3]

**Differences in systematic risk between the NP and CEPA's comparator set**

We consider both the Commission and CEPA have materially understated the differences in the level and nature of the NP's exposure to systematic risk relative to the comparators, particularly with respect to systematic risk associated with growth options, asset stranding, and price and volume risk.

*Growth options*

As noted in Dr Marsden's report, neither the Commission nor CEPA have addressed our point that the NP does not have any material growth options, from which it follows that growth options cannot be a significant source of systematic risk for the NP.

Instead, CEPA's 'rebuttal' rests on the erroneous claim that "UOA provides no evidence that investors don't value growth options". This assertion mischaracterises both Dr Marsden's and Fonterra's position. Dr Marsden and Fonterra have not represented that investors do not value growth options; rather, we have both emphasised the point that the NP has few, if any, growth options for investors to value, and that this is a very significant difference between the NP and the firms in the comparator set.[4]

Further, CEPA's list of reasons as to why investors value growth in regulated firms simply highlights that the NP's set of growth options is limited even when compared to a typical regulated firm, let alone the comparators:

- The NP's WACC is in effect a median or 50th percentile estimate. So to the extent the Commission's use of a 67th percentile WACC in other regulatory contexts (but not in the DIRA context) means that investments in regulated assets by firms subject to the relevant regime are viewed by investors as being NPV positive, and to the extent that investors' assessments are that the risk of those NPVs is systematic, then those regulated firms will be exposed to higher systematic risk than the NP.
- CEPA note that "stock market commentary on regulated businesses and the value of asset growth indicate that the market places a higher value on regulated business with investment growth prospects". Again, this statement further supports our position: the NP does not have any meaningful growth prospects, and could therefore be expected to be valued lower (and be exposed to lower systematic risk) than some other regulated businesses.
- Similarly, CEPA asserts that the evidence from asset betas in regulated industries indicates that these are sufficiently high that changes in the value of … future opportunities of … the business in the long-term must be the main contributor to the asset beta". We note that this assertion lends further support to our position, which is that the 'future opportunities' available to the NP are limited even when compared to other regulated firms, and that its systematic risk will therefore be lower.
- And our position is further supported by CEPA's final point, that asset betas for regulated firms with different growth prospects (and with growth prospects that are more or less highly correlated to the economy) are different. We accept this point, noting that it implies the NP is exposed to less systematic risk than some other regulated firms.

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the prior belief that the it is equally probable that the NP is exposed to the same level of systematic risk as any of the individual comparator firms (or equivalently, that all dairy firms face the same level of systematic risk). Instead, Dr Marsden's analysis shows that a statistically significant number of real-world dairy processors have asset betas of around or below the same level as the NP, which we consider lends further support to our position that the NP's asset beta is practically feasible.

[3] See for example page 45 of CEPA's initial report dated 28 March 2018 and paragraph B119 of the Commission's draft report.

[4] See for example paragraph 2.13 of Dr Marsden's report dated 5 July 2018.

Since CEPA does not even address, let alone rebut, our primary point – that the NP has few if any growth options – we do not understand the basis for the Commission rejecting our position in paragraphs B55 – B57: in all three paragraphs, the Commission references CEPA's erroneous assertion that Dr Marsden believes investors do not value growth options, and does not advance any additional arguments of its own.

We further note:

- As Dr Marsden explains, the Commission's view that commodity price and volume risk is not systematic necessarily implies that even if the NP did have positive NPV growth options, then the risk associated with variation in their value would also largely not be systematic.
- The Commission argues that investors might expect the NP to have growth options related to the expansion of its product portfolio if DIRA regulation was to be relaxed. However, Fonterra's maintenance of the Milk Price Manual and the NP construct does not rely on it being required to do so under DIRA: the Manual was introduced in 2008, prior to the introduction of Commerce Commission oversight under DIRA in 2012, and Fonterra is on record as confirming we will continue to maintain the Manual even if no longer required to do so under DIRA.[5]

*Asset stranding risk*

CEPA asserts, without providing any supporting analysis, that "we are confident that risk to the NP's valuation from asset stranding would be more similar to those risks faced by companies in the sample rather than ELBs. This is because the times when the NP's assets and the sample companies' assets might be stranded are more likely to be similar, whereas ELB asset stranding would be determined by different factors and therefore may occur at different times." The Commission repeats CEPA's arguments and conclusion in its draft report.

In addition to the points made by Dr Marsden, we note that:

- Like ELBs, and unlike any of the comparators, the NP also has a RAB that has no less of an effective guarantee than ELBs through the Milk Price Manual's quasi-regulatory framework. Both CEPA and the Commission overlook this point.
- The primary cause of asset stranding risk for all CEPA's comparators will most likely relate to risk around the consequences of competition or change in the markets for their outputs; i.e., some combination of risk of loss of market share and risk of decrease in market size. The risk of decreases in market size in particular will presumably be at least partly systematic (this risk can in turn can be decomposed into macro risk – systematic – and risk of change in consumer preferences – probably not systematic).
- In contrast the NP effectively faces no exposure to asset stranding from these sources. It will always be able to sell all its output at the going market price, with any downside consequences of changes in market size translating into lower prices, which are passed through in full to suppliers.
- Unlike any of the comparators, the NP's primary (and probably only) source of stranding risk is on the input side, where it is exposed to the risk of not being able to acquire the milk required to operate its plants. (Because of its much smaller scale, the only NZ comparator, Synlait, has a negligible exposure to this supply risk.)

We also note that the Commission (in paragraph B48) has departed from its previous position on the appropriateness of the Manual's assumption that the oldest assets will be removed from the asset base if the NP is found to have a material excess of actual over required capacity, explaining that:

[5] The Commission accepted this point in its 2016 Final report on its review of the state of competition in the New Zealand dairy industry, where at paragraph 5.111 the Commission explained that "we consider that there would not be significant changes to Fonterra's milk price setting if the DIRA Regulation is removed and that Fonterra would retain most aspects of the current milk price setting process, including its Milk Price Manual and milk price governance arrangements".

B48 We acknowledge that the Manual provides for the removal of the oldest assets from the asset base first. However, as indicated in the discussion of CEPA's response on this issue, this is not how processors (including Fonterra) would make decisions relating to asset stranding in the real world. An allowance for asset stranding risk which is less than that required by any processor other than the NP is unlikely to be practically feasible. This is therefore an issue that we will consider further in our review of the Milk Price Manual for the 2018/19 season.

B49 In their response to submissions on the emerging views paper CEPA suggest that forcing the NP to reduce the book value by removing the oldest assets first is not necessarily the best approach to reduce stranding risk. Removing the assets that are forecast to generate the least value would be a better approach than prescriptively removing the oldest asset. As a result, CEPA do not believe that this approach would reduce the asset beta to the extent that UOA and Fonterra state.

CEPA's argument overlooks the homogeneity of the NP's assets: because its material manufacturing assets are SMP and WMP plants, and because each SMP and WMP plant can manufacture the same products, it follows that the oldest plants (which are assumed to have higher operating costs and by definition have the shortest remaining useful lives) will also be the assets that are forecast to generate the least value. In turn this means that:

- CEPA's reliance on this argument to support its 'belief' that the Manual approach will not reduce the asset beta to the extent UOA and Fonterra expect means CEPA's conclusion is not supported.
- The Commission's new position that the Manual's approach to dealing with stranded assets may be generating "an allowance which … is unlikely to be practically feasible" is also founded on CEPA's erroneous premise that removal of the oldest assets is not synonymous with removal of the lowest value assets.

*Price and volume risk*

Even if we were to accept the Commission's and CEPA's position that commodity price and volume risk is not systematic we disagree with the Commission and CEPA that this assumption implies there is therefore little or no difference between the NP's and the comparators' exposure to price-related systematic risk. As we have previously emphasised, all the comparators in all the subsamples have very significant 'value-add' businesses. These value-add businesses will normally purchase their dairy inputs at commodity-equivalent prices, and will be exposed to normal price and volume risk in their output markets. It is inconceivable to us that the comparators' gross profits (defined as [selling prices less direct input costs, including the cost of dairy inputs] times volume) will not covary to varying degrees with the market. But while the comparators are all exposed to systematic risk with respect to their value-add returns, the NP is not, since by construction it does not undertake any value-add activities.

## Summary and implications

We conclude that:

- We have demonstrated that the NP's exposure to systematic risk is very different to the 'typical' comparator firm's exposure.
- While in their initial report CEPA, in our view, materially overstated the similarities in systematic risk between the NP and the comparators, they nonetheless acknowledged that there was "an argument for a small downwards adjustment" to the comparator average.[6]
- CEPA then simply asserted that they could not empirically estimate the required adjustment, but pointed to the Commission's previous adjustments of 0.05 for gas pipeline businesses and airports as representing "a reasonable precedent for the magnitude of an adjustment for these types of risk profile differences". CEPA did not, however, provide any comparison of the differences in risk it had identified with respect to the NP relative to the differences in relative risk which had underpinned the Commission's previous adjustments.
- This all highlights the fundamental problem with attempting to apply the Commission's preferred approach to the NP: there are very clearly significant differences in the NP's exposure to systematic risk relative to the comparators, but none of the Commission and its advisors or Fonterra and its advisors have to date been able to identify a means of empirically quantifying an adjustment that appropriately provides for these differences.
- We continue to maintain that the primary cause of the differences in the NP's exposure to systematic risk relative to the comparators is the combination of the quasi-regulatory milk price regime and the unique New Zealand market conditions that necessitate the use of this regime. In turn, we continue to believe that the NP's exposure to systematic risk is similar to ELBs, and that ELBs therefore represent an appropriate comparator for the NP. In particular, we continue to stand by the assessments of the NP's exposure to systematic risk relative to ELBs and the CEPA comparator set as summarised in:
    - Table 1 of Dr Marsden's report dated 9 May 2018, and
    - The 'concluding comments' section of our submission dated 5 July 2018 on the Commission's 'emerging views' paper.
- If the Commission continues, however, to maintain that our assessment is not sufficiently robust or otherwise supportable, the question then becomes one of 'what next'? A possible approach would be to start with a comparator set of regulated businesses, and to benchmark the NP's exposure to the relevant sources of systematic risk faced by regulated firms in different sectors.

Please contact me if you have any questions or would like further information.

Yours sincerely

Andrew Cordner

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6 See page 46 of the CEPA report dated 28 March 2018.