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Regulation Branch

Commerce Commission

11 September 2019

Dear Diego,

RE: Consideration of Partington and Satchell Report to Fonterra data 1 August 2019

Many thanks for inviting us to consider Graham Partington and Stephen Satchell (P&S) 'Report to Fonterra: Asset Beta and CEPA's response to Partington and Satchell' (hereafter referred to as P&S2) dated 1 August 2019.

After careful consideration of P&S2 we are of the opinion that the authors have not presented new arguments or evidence that we have not already considered. Therefore, we see no reason to change the conclusions we reached in our 2018 report for the Commission (CEPA, 2018a, 'Dairy Notional Processor's asset beta', dated March 2018).

Given how P&S has characterised how we addressed, or in their view failed to address, the points they previously raised we consider it appropriate to provide some clarifications, which we have done in the remainder of this letter.

Yours sincerely,

Signature

Dr Jonathan Mirrlees-Black
Director

Signature

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P&S2 Point 1

P&S2 state that in our response to their first report,[1] 'Report to Fonterra: Discussion of the Asset Beta for Use in Milk Pricing' dated 14 March 2019 (hereafter referred to as P&S1), we did not address one of their most important points. They refer to this point as relating to "*analysis of the effects of the revenue beta and operating leverage (fundamental industry characteristics) and the resulting conclusion that the asset beta for the notional processor must be low*".[2] P&S considered this as important because "[*t]he notional processors unique pricing arrangements for milk mean that the effect of operating leverage will be low and also lower than for other processors*."

We agree with P&S that operating leverage is an important determinant of asset beta, among other factors not considered by their simplified characterisation. The operating leverage of the notional processor construct and comparator companies has been discussed extensively in previous reports by Auckland UniServices, Dr Martin Lally, and ourselves.

We considered (we think reasonably) that P&S's explanation of Point 1 in P&S1 could be summarised as the simple premise that they did not consider that the Commission's comparator set was appropriate as no other processors could pass-through milk prices in the same way as a notional processor. We also note that we directly respond to P&S's operating leverage argument in CEPA (2019), page 5. Repeating this for the benefit of readers, our detailed analysis of the comparator set's characteristics showed that while we were unable to identify any processors that had precisely the same price pass-through arrangements as the Notional Processor, some comparators did have the ability to pass on prices relatively quickly. As we stated in our response to P&S1, "[*M]any companies, like the Notional Processor assumed by Fonterra, can pass through commodity price risk to suppliers, albeit with a lag, which would not materially affect long term value and beta"*[3]. We note that the cost pass-through sub-set, cost pass-through being that characteristic P&S appear to argue more weight should be placed on, in our report, had asset beta estimates in the middle of the broader comparator set's range.

P&S2's verbal analysis based on this asset beta derivation concludes that as a result of their deliberations, *"the revenue beta is going to be rather small…[and] the effect of operating leverage is also going to be rather small. As a result of a rather small asset beta and a rather small effect from operating leverage, the asset beta will also be rather small."*[4] We agree that the asset beta is 'small', but the question is how small, and unfortunately the verbal analysis of P&S does not provide a guide. We consider that our analysis of the asset beta of a carefully chosen comparator group provides sound evidence of the level of asset beta.

P&S refers to the (current construct) Notional Processor as having "*unique pricing arrangements*". As noted above, while we observed some processors with the ability to pass-through prices, this was with some form of lag. As we have previously noted, the Dairy Industry Restructuring Act 2001 (DIRA), section 150A, requires that the Notional Processor construct reflects a "*practically feasible"* producer.

P&S2 Point 2

P&S2 state that CEPA (2019) does not respond to their comments on the formula for de-levering. We did not respond to this as we considered we made this clear in CEPA (2018a); we used the simplified Brennan-Lally CAPM

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[1] CEPA (2019), 'RE: Notional Processor asset beta', a letter to the Commerce Commission, dated 11 July 2019.

[2] P&S2, page 4.

[3] CEPA (2019).

[4] P&S2, page 7.

for de-levering the equity beta.[5] We assume a debt beta of zero in our calculation. Our approach is in line with the Commission's IM approach that it has used since 2010.[6] The tax neutral formula takes the form of:

$$\beta_a = \beta_e(1 - L) + \beta_d L$$

Where β_a is the firm's asset beta, β_e is the firm's equity beta, β_d is the firm's debt beta, and L is the firm's leverage.

P&S2 Point 3.1– Use of comparator data and fuzzy sets

We accept that P&S did not reject the use of all data from comparators. In CEPA (2019), we said P&S "*reject the use of all data from comparators arguing that they have different characteristics to a notional processor*".[7] We consider that P&S's apparent judgement, in P&S1, on the beta of the Notional Processor was not based on the comparator data, and that is the reason for our statement.

We responded to P&S's 'fuzzy sets' proposal in CEPA (2019), pages 6 and 7. We are not against the use of fuzzy sets *per se,* however consideration needs to be given to whether the (unquantifiable) benefits of this approach outweigh the additional complexity and subjectivity that it introduces.

In regard to P&S2, we consider that P&S's representation of the Commission's approach as "*[t]he current procedure of Fonterra assigning 100% weight to EDB's, for example, whilst the Commerce Commission assigns a zero weight seems a crude approach to arriving at the right answer*" is misleading as it implies that no weighting process occurs. In CEPA (2018a), we identified, starting with the comparator set originally identified by Fonterra's consultant Auckland UniServices, a range of comparators that had similar characteristics to the Notional Processor and broke these into sub-samples based on specific characteristics. In other words, we placed weight on whether a company should be chosen as a comparator, broke these comparators up based on their characteristics, and provided this analysis to the Commission to use in its decision making process. A fuzzy sets approach adds a level of complexity to the existing approach; it requires even more detail (which is often not available) on the differences between comparators, judgement on what impact each characteristic has on the asset beta (e.g., operating leverage has a 10% weight on the asset beta), and then further judgement on the weight that should be assigned to each comparator.

P&S acknowledge "*[t]here would still be scope for disagreement as to the magnitude of the weights that should be used*".[8] However, it is not clear to us how P&S's proposed approach removes the risk of 'manipulation' of the comparator set.[9] P&S approach is based on using the existing comparator set.

We have worked for regulators in New Zealand, Australia, UK, Ireland, Western Europe, and emerging economies and we are not aware of a regulator applying fuzzy sets in the way P&S explain in P&S1. Although regulators routinely weigh up the evidence in reaching their decisions, P&S do not provide evidence of fuzzy sets being used by regulators or detail how the benefits outweigh the Commission's established approach. Therefore, *prima facie,* P&S's proposal does not solve the issue it purports to solve and, based on their explanation, does not fit with the principles of best practice regulation.

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[5] CEPA (2018a), page 22.

[6] Commerce Commission (2016), 'Input methodologies review decisions: Topic paper 4: Cost of capital issues', December, page 68, paragraph 295.

[7] CEPA (2019), page 1.

[8] P&S1, page 13, paragraph f.

[9] P&S1, page 12.

P&S2 Point 3.2 – International data

In CEPA (2019), we said "*P&S reject the use of all data from companies outside New Zealand*".[10] P&S1 discussed international data and found reasons why they considered that it isn't comparable. Their judgement on the beta of the notional processor makes no reference to the international data, nor did they suggest a practical method for making use of the data.

We note that in P&S2 they appear open to considering this data and derive a relationship that they suggest relates the asset betas of international companies to the New Zealand market. However, they provide no supporting application of this, so the approach cannot be assessed to determine if it would provide insight into the parameters for setting the cost of capital for an efficient processor.

The approach of CEPA (2018a) is consistent with the Commission's approach set out in its Input Methodologies papers in 2016. We also made it clear that it was open for the Commission to make adjustments if it considers that there are differences between the markets. To the best of our knowledge the Commission has not been minded to make these adjustments in the other sectors it regulates. We note that the approach is similar to that adopted by other international regulators which need to make determinations of beta.

P&S2 Point 3.3 – Inclusion of Fonterra in the comparator set

Our analysis, set out in CEPA (2019), concluded that Fonterra's distinct shareholding structure influences the way that Fonterra shares and units in the shareholder fund trade, making the beta a poor proxy for that of an efficient processor.

P&S responded that:

a) Fonterra is a cooperative, and that the notional processor construct is a cooperative;

b) effective regulation eliminates any distortion from the ownership structure;

c) it is not unusual for there to be shareholder clienteles;

d) Dr Lally considers that Fonterra's asset beta is the only useful beta estimate; and

e) Fonterra's shares do have sufficient liquidity, evidenced by the low two cents per share bid-ask spread on shares trading at $3.60.[11]

Our responses to these points respectively are:

a) The issue is whether the shareholding structure distorts the way that the shares of the company trade. Our analysis in CEPA (2019) shows this is likely. Whether or not the Notional Processor is a cooperative is not relevant. It is the actual structure of FCG or FSF that distorts trading in the shares, so that the beta statistic is not reliable as a proxy for the beta of an efficient processor. P&S did not rebut these arguments.

b) P&S2 is suggesting that if the regulation is successful, then the asset beta will be appropriate. That is not correct, because of the share trading distortions.

c) P&S2 are right to say that shareholder clienteles exist in financial markets, and in many circumstances do not distort share trading at the margin. But that is not evidence that share trading is not distorted by this particular share structure and does not rebut our analysis.

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[10] CEPA (2019), page 1.

[11] P&S2, pages 13-14.

d) Dr Lally argues that the beta for a notional processor is similar to that of ELBs. We have dealt with those arguments in CEPA (2018a) and (2019).

e) We note that special measures have been put in place to ensure liquidity in Fonterra shares. There is a market maker ("Registered Volume Provider", RVP), as required by the DIRA. At the time of the creation of the market the RVP was required to "*ensure that each quote it offers is maintaining a maximum bid-ask spread of $0.03 between the best bid/ask quotes*".[12] There are also special arrangements in the trading of the shares. The RVP continuously trades in the shares to "*promote price convergence between the prices of Shares trading on the Fonterra Shareholders' Market and the prices of Units trading on the NZX Main Board and ASX*".[13] The FSF units are securities that differ from the Fonterra shares in that they have the same rights to dividends, but do not have votes. For other companies that have different share classes with and without voting rights the securities without voting rights trade at a substantial discount to the prices of securities with voting rights. It is a reasonable inference that the trading of the FSF shares is distorted to achieve price convergence between the different types of security. We also note that farmer shareholders can legally trade in the shares of FCG and FSF while in possession of inside information.[14]

With all these special arrangements and distortions to trading on top of the structure points raised in CEPA (2019), we consider it unlikely that the beta of Fonterra shares is representative of the beta of an efficient processor. We therefore consider that Fonterra's asset beta should be excluded from the sample. To provider further context, however, we note that analysis we undertook for the Commission of including Fonterra in the sample had very little impact on the beta estimates.[15]

P&S2 Point 3.4 – Long-term systematic risk

In CEPA (2019), we represented the position of P&S as "*the systematic risk associated with the value of assets in the long-term is close to zero for a notional processor.*"[16] , and we go on to explain why we consider that that statement is inconsistent with the empirical evidence. P&S1 point 4 stated that:

> *"Risks due to asset stranding and growth options are likely to be relatively unimportant. Considering each of the foregoing risks, they are likely to have a very substantial idiosyncratic component and hence the systematic component (i.e. their contribution to the asset beta) is likely to be small."*[17]

P&S2 suggest that we misrepresented their point, saying *"[a]s we have explained earlier the view that we ignore risk in the long term is not true of our analysis."*[18] However, we did not say that P&S have not considered the long term, rather we are saying that P&S's assessment of the systematic risk associated with the long term is inconsistent with the evidence. We consider that our representation of P&S's point was, and is, reasonable.

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[12] Fonterra (2012). 'Fonterra shareholders' fund prospectus and investment statement', 26 October 2012, page 115.

[13] Fonterra (2012), page 116.

[14] Financial Markets Conduct (Insider Trading Fonterra Co-operative Group Limited) Exemption Notice 2014.

[15] CEPA (2018b), 'Dairy Notional Processor's asset beta – Response to submissions', June 2018.

[16] CEPA (2019), page 2.

[17] P&S1, page 6.

[18] P&S2, page 15.

P&S2 Point 3.5 – Similarity with the ELBs

In CEPA (2019), we represented P&S's argument as an 'assertion' that the form of regulation for the notional processor is similar to that of ELBs, leading to an inference that the beta is the same as that for ELBs. P&S consider that this misrepresents what they stated and claim that they did not assert anything. Referring back to P&S1, the full Point 5 text is:

> *"Does the notional processor have a similar asset beta to the ELBs? The issue here is whether it is regulation or the nature of the business that is the main determinant of the asset beta.* ***We find considerable merit in Lally's (2016) argument in favour an asset beta for the notional processor equal to an ELB.*** *We also find that the revenue betas for both ELBs and the notional processor will be low, but that the ELBs are likely to have a bigger effect from operating leverage. Thus, it is possible that the notional processor could have an asset beta lower than the ELBs, but we put this no higher than a possibility."*[19] *[emphasis added]*

We consider a reasonable interpretation of this statement is that P&S consider (and therefore assert) that the Notional Processor's asset beta is similar to that of ELBs.

P&S2 expand on their argument relating regulation and beta. They say "*we had no difficulty in finding empirical evidence showing the regulation affects beta"*, although they qualify this in a footnote by stating that "*the evidence we identify seems quite strong, but we have not conducted a comprehensive literature review and there may be countervailing empirical evidence that we have not seen.*"[20]

The Commission engaged Dr Lally in 2016 to investigate this issue and reported on this analysis in its IM papers. Dr Lally concluded that "*there is no empirical study that provides a clear conclusion on the effect of regulation on beta*".[21] In addition to Dr Lally's observations on Alexander et al. (1996),[22] that it is over 20 years old and only examined a period of five years, we note that the study covered a period immediately after price and revenue cap regulation were introduced and markets were still forming a view on the recently privatised and listed companies that were covered by these new forms of regulation. We highlighted the Commerce Commission analysis in CEPA (2019).

[19] P&S1, page 6.

[20] P&S2, page 14.

[21] Commerce Commission (2016), page 78.

[22] Lally, M., 'Review of WACC Issues', February 2016, page 20.