

Review of Fonterra's 2020/21 base milk price calculation: Dairy Industry Restructuring Act 2001

Draft report

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Date of publication: 16 August 2021



Associated key documents

Publication date	Title
27 July 2021	CEPA – Dairy asset beta and specific risk premium
5 July 2021	Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation - 2021
15 December 2020	Final report – Review of Fonterra’s 2020/21 Milk price manual: Dairy Industry Restructuring Act 2001
15 September 2020	Final report – Review of Fonterra’s 2019/20 base milk price calculation: Dairy Industry Restructuring Act 2001
12 December 2019	Final report – Review on Fonterra’s 2019/20 Milk price manual: Dairy Industry Restructuring Act 2001
12 September 2019	Final report – Review of Fonterra’s 2018/19 base milk price calculation: Dairy Industry Restructuring Act 2001
15 August 2017	Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation

Commerce Commission

Wellington, New Zealand

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Chapter 1 Introduction and how you can provide your views

Purpose of this report

- 1.1 This report sets out our draft conclusions from our statutory review of the extent to which Fonterra's 2020/21 base milk price calculation (**the calculation**) is consistent with the purposes of the base milk price monitoring regime (**monitoring regime**) under subpart 5A of the Dairy Industry Restructuring Act 2001 (**DIRA**).¹
- 1.2 This report follows our review of Fonterra's Milk Price Manual (**Manual**) for the 2020/21 season and builds on the analysis and conclusions from our previous Manual and base milk price calculation reviews.²

How this report is structured

- 1.3 Chapter 2 explains our review framework and the scope of our 2020/21 calculation review.
- 1.4 Chapter 3 sets out our draft conclusions from:
 - 1.4.1 our review of the focus areas for the 2020/21 calculation review; and
 - 1.4.2 our fit for purpose review of the assumptions adopted, and inputs and processes used by Fonterra when calculating the base milk price.
- 1.5 Appendix A provides a summary of, and responses to, submissions by stakeholders on our Proposed focus areas for the 2020/21 calculation review paper,³ for any arguments that are not addressed through this year's focus areas review.
- 1.6 Appendix B contains a simplified off-Global Dairy Trade (**GDT**) pricing 'decision tree'.
- 1.7 Appendix C provides a glossary of the key terms and abbreviations used in this draft report.

¹ The term 'base milk price' defined by DIRA is the price per kilogram of milk solids set by Fonterra for a dairy season. See also paragraph 2.5 below.

² See Commerce Commission "[Final report – Review of Fonterra's 2020/21 Milk price manual: Dairy Industry Restructuring Act 2001](#)" (15 December 2020).
For our reports on the reviews of the base milk price calculation for earlier seasons, see: <https://comcom.govt.nz/regulated-industries/dairy/milk-price-manual-and-calculation/milk-price-calculation>.

³ Commerce Commission "[Proposed focus areas for our review of Fonterra's 2020/21 base milk price calculation](#)" (8 April 2021).

How you can provide your views

Invitation to comment

- 1.8 As required under DIRA, we are consulting with Fonterra on this draft report.⁴ We have also extended our consultation process to other interested parties.
- 1.9 We welcome views on any aspects of this draft report before we finalise our conclusions. Your views on our draft report will help inform our final conclusions for our review.

Deadline for submissions

- 1.10 We invite submissions on this draft report from interested parties which we will consider when preparing our final report.
- 1.11 To allow us time to consider your views, submissions on this draft report must be provided to us no later than **12 noon, Wednesday 1 September 2021**.
- 1.12 On 27 July 2021 we published independent advice from our expert advisors, Cambridge Economic Policy Associates Ltd (**CEPA**), on the asset beta and specific risk premium for a notional milk processor. We have invited submissions from interested parties on the CEPA advice by 12 noon, Tuesday, 24 August 2021.
- 1.13 Our final report on the 2020/21 base milk price calculation will be published on 15 September 2021.

Format of submissions

- 1.14 Please make your submission via the [Milk price calculation – 2020/21 season page](#) on our website.⁵ The project page will direct you to a form with instructions on how to upload your submission. Your submission should be provided as an electronic file in an accessible form (eg, PDF, Word or an unlocked spreadsheet).
- 1.15 The protection of confidential information is something the Commission takes seriously. When including commercially sensitive or confidential information in your submission, we offer the following guidance.
- 1.16 Please provide a clearly labelled confidential version and a public version, and provide reasons why you consider information to be confidential or commercially sensitive. We intend to publish all public versions on our website.

⁴ DIRA, s 150U.

⁵ <https://comcom.govt.nz/regulated-industries/dairy/milk-price-manual-and-calculation/milk-price-calculation/milk-price-calculation-202021-season>

- 1.17 The responsibility for ensuring that confidential information is not included in a public version of a submission rests entirely with the party making the submission.
- 1.18 If we consider information disclosed in the confidential version to be in the public interest, we will consult with the party that provided the information before any such disclosure is made.

Chapter 2 Our review framework

Our framework for the calculation review

- 2.1 This report should be read with the framework paper "Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation" (15 August 2017) (**Approach paper**) which we have applied in this review and which forms part of this report. The framework paper provides an overview of the approach which we take in our reviews of Fonterra's Manual and base milk price calculation and includes:⁶
- 2.1.1 an overview of how the base milk price is set;
 - 2.1.2 our interpretation of key legislative provisions guiding our statutory reviews; and
 - 2.1.3 our practical approach to our statutory reviews.
- 2.2 The base milk price monitoring regime is intended to provide incentives for Fonterra to act efficiently, while providing for contestability in the market for the purchase of raw milk. The regime also promotes greater transparency of Fonterra's base milk price setting processes.⁷
- 2.3 In our Approach paper, we discuss both the efficiency and contestability dimensions in the context of the base milk price calculation review.⁸
- 2.3.1 Efficiency: Our view is that the assumptions adopted, and inputs and process used in the calculation will provide an incentive for Fonterra to operate efficiently where the calculation uses independent notional benchmarks for the revenue and cost inputs.
 - 2.3.2 Contestability: The contestability dimension is satisfied if the assumptions adopted, inputs and process used in the calculation are practically feasible for an efficient processor. The essence of contestability is that efficient firms can compete in the market. If efficient firms are able to compete in the market, then contestability is provided for.

⁶ Commerce Commission "[Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation](#)" (15 August 2017)

⁷ Dairy Industry Restructuring Amendment Bill (Government Bill) 2012, p. 2

⁸ Commerce Commission "[Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation](#)" (15 August 2017).

- 2.4 Our analytical approach to the efficiency and contestability dimensions is described in chapter 3 of the Approach paper.⁹
- 2.5 Under DIRA, we are required to review the calculation of the ‘base milk price’. The base milk price “in relation to a season, means the price per kilogram of milk solids that is set by [Fonterra] for that season”.¹⁰ The base milk price is currently forecast between \$7.45-\$7.65 per kilogram of milk solids for the season which ended on 31 May 2021 that is under review in this draft report.
- 2.6 We note that Fonterra uses the term farmgate (one word) milk price when referring to the base milk price in its Manual and annual Farmgate Milk Price Statement. In this draft report we use the term ‘base milk price’ in all cases unless quoting from Fonterra materials.
- 2.7 More information on the distinction between the base milk price, which is subject of our statutory reviews, and other prices in the dairy supply chain is provided in the updated version of our Approach paper on reviewing Fonterra’s Manual and base milk price calculation (**revised Approach paper**), published in July 2021.¹¹
- 2.8 While our revised Approach paper contains useful clarifications on terminology and our approach to the reviews of the base milk price, we note that the amendments to DIRA discussed in the revised Approach paper only came into force on 1 June 2021 and will apply for the reviews of the Manual and calculation for the next season (2021/22 season). For the calculation review discussed in this draft report we have applied the framework contained in our 2017 Approach paper.

Scope of our review of the 2020/21 calculation

- 2.9 Our review of the calculation builds on the conclusions from our previous reviews. Based on the information we gather, we determine the key areas to focus on for each calculation review.¹² These constitute our ‘focus areas’ for which we undertake more detailed analysis.

⁹ Commerce Commission "[Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation](#)" (15 August 2017).

¹⁰ DIRA, s 5.

¹¹ Commerce Commission "[Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation - 2021](#)" (5 July 2021). See in particular chapter 1.

¹² Commerce Commission "[Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation](#)" (15 August 2017), paragraphs 71-72.

- 2.10 For the other revenue and cost components of the calculation that are not part of the ‘focus areas’ analysis, we undertake a ‘fit for purpose’ review, which involves:¹³
- 2.10.1 an analytical verification of the values used in the component against our previous reviews of the same component; and
 - 2.10.2 a review of the consistency of the assumptions, inputs and processes related to the different components.
- 2.11 If any aspect of this ‘fit for purpose’ review identifies inconsistencies with our previous analysis or other components of the base milk price calculation model, we consider whether more analysis of that component is required.¹⁴ This year we have only identified one significant change in costs from previous years: the lactose cost.¹⁵
- 2.12 For this year’s calculation review, our focus areas are:
- 2.12.1 asset beta;
 - 2.12.2 specific risk premium (**SRP**);
 - 2.12.3 provision for asset stranding (this includes a review of the assumptions and inputs applied under Rule 33 of the Manual,¹⁶ and the asset stranding aspects of the asset beta and SRP); and
 - 2.12.4 inclusion of instantised skim milk powder (**ISMP**) as a reference commodity product.
- 2.13 We initially proposed the asset beta, SRP and provisions for asset stranding as focus areas for this year’s review.¹⁷ We added ISMP to our focus areas for this year’s review following stakeholder submissions on our proposed focus areas. This is because, due to its different functional properties, manufacturing process and purported significant price premium, stakeholders raised questions about whether ISMP should be included as a reference commodity product (**RCP**) qualifying for recognition in off-GDT sales.

¹³ Commerce Commission "[Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation](#)" (15 August 2017), paragraphs 73.

¹⁴ Ibid, paragraph 74.

¹⁵ See paragraphs 3.112 to 3.115 for further detail.

¹⁶ Fonterra "[Farmgate Milk Price Manual](#)" (1 August 2020), p. 50. For an explanation of Rule 33 see paragraph 3.42 below.

¹⁷ Commerce Commission "[Proposed focus areas for our review of Fonterra's 2020/21 base milk price calculation](#)" (8 April 2021), page 5.

- 2.14 With the exception of the ISMP, the submissions did not raise any matters that we consider should be added to our focus areas in this year's review.
- 2.15 Appendix A provides a summary of the matters raised in submissions that were not included in our focus areas and explains why we do not consider that we need to address these matters as part of this year's review. Where submitters raised points relevant to our focus areas, we have addressed these points in the body of the draft report, where appropriate.

Information considered in our review process

- 2.16 In reaching our draft conclusions we have considered:
- 2.16.1 submissions received on the proposed focus areas;
 - 2.16.2 Fonterra's reasons paper in support of the base milk price calculation for the 2020/21 season;¹⁸ and
 - 2.16.3 additional models and documentation that Fonterra provided to us in confidence during our review which show the application of the assumptions, inputs and processes used by Fonterra in the base milk price calculation.¹⁹

¹⁸ Fonterra "[Reasons paper on review of 2020/21 base milk price calculation – 1 July 2021](#)" (8 July 2021).

¹⁹ For the purposes of our review, we are provided with Fonterra's full model for calculating the base milk price, as well as any underlying models and documentation. The public version of Fonterra's base milk price model is available at Fonterra's website at <https://www.fonterra.com/nz/en/investors/farmgate-milk-prices/milk-price-methodology.html>.

Chapter 3 Draft conclusions

Purpose of this chapter

- 3.1 In this chapter we outline our draft conclusions on the extent to which the assumptions, inputs and processes of the base milk price calculation for the 2020/21 season are consistent with the s 150A purpose.
- 3.2 Specifically, we set out:
 - 3.2.1 a summary of our overall draft conclusion and draft conclusions on our focus areas review and fit for purpose review;
 - 3.2.2 our detailed findings from the review of the focus areas; and
 - 3.2.3 our detailed findings from the fit for purpose review.

Summary of overall draft conclusion

- 3.3 Our draft conclusion is that the assumptions adopted, and the inputs and processes used by Fonterra to calculate the 2020/21 base milk price are consistent with the contestability and the efficiency dimensions of the s 150A purpose.
- 3.4 In undertaking our review of this season's calculation, we have applied the s 150C requirements in DIRA, without the subsection (4) amendments that impose additional requirements for the calculation of the asset beta. This is because, as explained in paragraph 2.8 above, the amendments to DIRA came into force on 1 June 2021 and will apply to our reviews starting from the 2021/22 season. On this basis, our draft conclusions with respect to the asset beta consider whether the estimated value is likely to be appropriate for an efficient processor, but not whether the methodology applied to arrive at this value is consistent with s 150C(4).
- 3.5 We note, however, that in estimating the asset beta for this year's calculation Fonterra has sought to apply the new requirements of s 150C(4).²⁰ We have therefore commented on the extent to which we believe that the methodology Fonterra has adopted is consistent with the requirements in s 150C(4), to help inform Fonterra's application of the requirements for the 2021/22 base milk price calculation as well as our review next year.

²⁰ Fonterra "[Attachment 6: Asset beta and specific risk premium – Milk Price Group paper](#)" (8 July 2021) and Fonterra "[Annex to Attachment 6: Summary of comparators – Milk Price Group paper](#)" (8 July 2021).

Focus areas review

3.6 Our draft conclusion is that the assumptions adopted, and the inputs and processes used by Fonterra that we reviewed as part of our focus areas review, provide for contestability. Our reasoning is as follows.

3.6.1 We consider that the Milk Price Group (**MPG**) estimate of the asset beta, at 0.45, is within a reasonable range of asset beta values for an efficient processor. We disagree with some aspects of the methodology applied by the MPG and consider that the asset beta for an efficient processor might be somewhat higher than 0.45 if estimated using our preferred methodology. However, we acknowledge the statistical imprecision of estimating the asset beta and thus consider an asset beta of 0.45 to be practically feasible.

3.6.2 We consider that the use of cost and other inputs based on present standard plant capacity is practically feasible. Further, the Manual provides for a reduction of plant of up to 3% per annum, which allows Fonterra to retire fully depreciated assets in line with the potential decline in milk supply volumes. Therefore, we consider that the non-systematic risk of asset stranding is low and does not require up front compensation. On this basis, our draft conclusion is that an SRP value of nil is reasonable.

3.7 Our draft conclusion is that the assumptions adopted, and the inputs and processes used by Fonterra that we reviewed as part of our focus areas review are consistent with the efficiency dimension of the s 150A purpose. Our draft conclusion is based on the use of notional inputs for the asset beta, SRP and standard plant assumptions. The use of notional inputs provides an incentive to Fonterra to operate efficiently.

Fit for purpose review

3.8 In our fit for purpose review we identified a material variance from last year's costs for lactose costs. We did not identify any other material variances in inputs and assumptions compared with last year's base milk price calculation.

3.9 We make the following observations on the increase in lactose costs.

3.9.1 The increase is driven by changes in international lactose prices applied to the notional milk price volumes.

- 3.9.2 Prior to the beginning of the 2020/21 season Fonterra decided to use the competitor price series, reflecting actual costs for lactose landed in New Zealand. This is consistent with the Manual and with Fonterra's decision last year to use the competitor price series.²¹
- 3.9.3 Using the lower of Fonterra's or its competitors' actual lactose costs, in combination with notional lactose volume requirements that are significantly larger than Fonterra's actual volumes, incentivises Fonterra to reduce its actual lactose costs (ie, to operate efficiently).
- 3.9.4 The use of actual lactose costs means costs should be also achievable by an efficient processor. We therefore consider that the assumptions relating to lactose costs are practically feasible.
- 3.10 In its reasons paper in support of the 2020/21 base milk price calculation, Fonterra has confirmed that it has:
- 3.10.1 not made any substantive amendments to the Manual for 2020/21 in respect of the revenue calculation; and
- 3.10.2 not made any material changes to the calculation methodology.²²
- 3.11 We confirm that we rely on our conclusions from previous years' reviews for those aspects of the Manual and the calculation methodology that have not significantly changed from previous years.
- 3.12 Therefore, for the assumptions and inputs that we have analysed as part of the fit for purpose review, our draft conclusions are as follows:
- 3.12.1 the assumptions adopted, and the inputs and process used by Fonterra in calculating the 2020/21 base milk price are consistent with the efficiency dimension of the s 150A purpose; and
- 3.12.2 the assumptions adopted, and the inputs and process used by Fonterra to calculate the 2020/21 base milk price are consistent with the contestability dimension of the s 150A purpose.

²¹ Competitor price series refers to the volume weighted average price declared to New Zealand Customs by Fonterra or by other New Zealand processors, as reported by Statistics New Zealand, for lactose imported into New Zealand over a 12 month period that reasonably approximates the period over which the Notional Producer could be expected to import its lactose requirements for the season (Manual, Rule 16).

²² Fonterra "[Reasons paper on review of 2020/21 base milk price calculation – 1 July 2021](#)" (8 July 2021), page 11.

Detailed findings from our focus areas review

3.13 For our 2020/21 calculation review, we have included the following focus areas:

3.13.1 asset beta;

3.13.2 SRP;

3.13.3 provision for asset stranding (this includes a review of the assumptions and inputs applied under Rule 33 of the Manual, and the asset stranding aspects of the asset beta and SRP); and

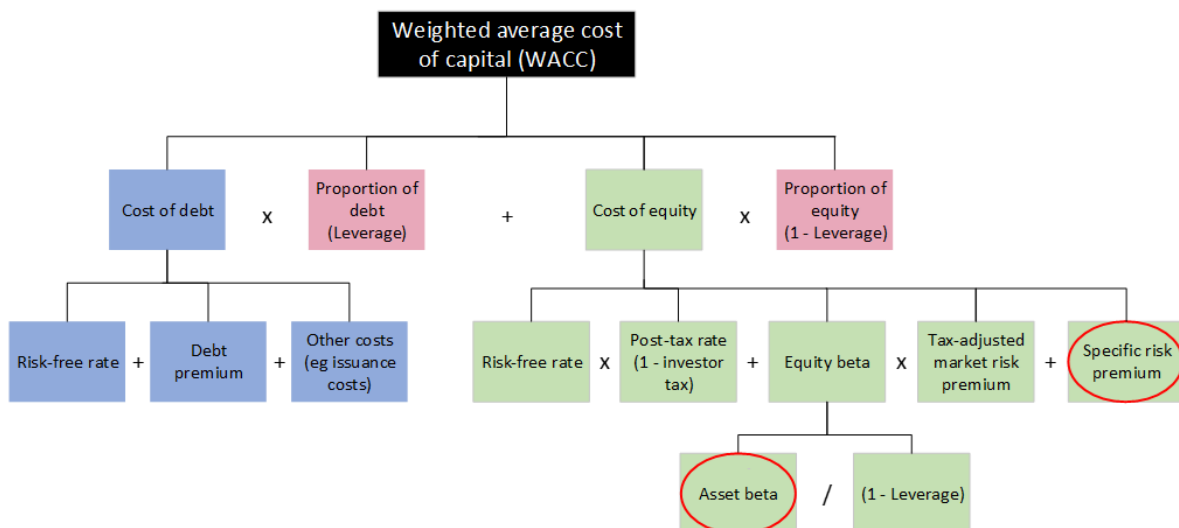
3.13.4 the inclusion of ISMP as a Qualifying Material.

The cost of capital for an efficient processor

3.14 The cost of capital is a material input into the base milk price calculation. It represents the best estimate of the return that an efficient processor has an opportunity to earn in a workably competitive market. Two of our focus areas in this season’s review, the asset beta and the SRP, are components of the cost of capital.

3.15 Figure 1 below illustrates how the different components of the weighted average cost of capital (WACC) calculation, including the asset beta and the SRP, fit together.

Figure 1: Weighted average cost of capital



3.16 The Manual specifies 2020/21 as a four-yearly review year for the asset beta (Rule 42) and SRP (Rule 43). Given the asset beta and SRP are material inputs to the cost of capital, we have included them as focus areas in this year’s review.

- 3.17 The asset beta provides an allowance for systematic risk faced by shareholders. Systematic risk measures the extent to which the returns of a company fluctuate relative to the equity returns in the stock market as a whole. Systematic risk cannot be diversified away by holding a portfolio of shares in different companies.²³
- 3.18 The SRP provides an *ex ante* allowance for non-systematic risk associated with asset stranding. We have therefore discussed the SRP in the context of the broader discussion of asset stranding below.
- 3.19 While the Manual does not specify a review year for the Post Tax Market Risk Premium (**PTMRP**), also known as the tax-adjusted market risk premium (**TAMRP**), we have also commented on this input to the cost of capital in a separate section below.

Asset beta

- 3.20 For this review we must conclude on the extent to which the assumptions adopted and the inputs and process used by Fonterra in calculating the base milk price for the season are consistent with the purpose in s 150A and any other relevant existing provisions.²⁴
- 3.21 Prior to the introduction of s 150C(4) with the legislative changes that came into effect on 1 June 2021, there were no existing specific requirements for calculating the asset beta. We must therefore assess the asset beta solely against the purpose in s 150A.
- 3.22 The Dairy Industry Restructuring Amendment Act 2020 introduced new requirements for the asset beta that came into effect on 1 June 2021. Section 150C of DIRA now states that:²⁵
- (3) For the purposes of subsection (1)(b), any estimate of the return on capital must be made applying the capital asset pricing model.
- (4) For the purposes of subsection (3), the asset beta used in the application of the capital asset pricing model must be consistent with the estimated asset betas of other processors of dairy and other food products that are—
- (a) traded in significant quantities in globally contested markets; and
- (b) characterised by uniform technical specifications.

²³ An asset beta removes the effect of the firm's capital structure by estimating the equity beta for an unlevered (zero debt) firm. Therefore, asset beta is a measure of systematic risk that can be compared across firms, without being affected by their specific financing strategies.

²⁴ For example, the 'safe harbour' provisions in s 150B.

²⁵ DIRA, s 150C.

(5) In subsection (4), asset beta means a measurement of a firm's exposure to systematic risk where systematic risk measures the extent to which the returns on a company fluctuate relative to the equity returns in the stock market as a whole.

- 3.23 The amendment clarifies the characteristics of firms to be used as comparators when estimating the asset beta. Fonterra has amended its 2020/21 Manual to have regard to these new requirements prior to them coming into effect for the 2021/22 season.
- 3.24 As explained in paragraph 3.5 above, we have therefore also made some observations in a separate section below on the consistency of Fonterra's methodology with the new requirements.

Assessment of asset beta value against the purposes at s 150A

- 3.25 Our draft conclusion is that an asset beta value of 0.45 is within a reasonable range of asset beta values for an efficient processor and thus practically feasible. Our reasoning is as follows.

3.25.1 MPG estimates an average asset beta value of 0.47 based on the core comparator set they identified by applying the new s 150C(4) requirements, and a value of 0.50 based on their full sample comparator set.²⁶ In addition to the firms in the core comparator set, MPG's full comparator set includes 5 additional comparators that comprise their extended comparator set. We consider that the estimate based on the core comparator set is more appropriate given that these companies were identified as the closest match to an efficient processor. An asset beta value of 0.45 is within the range of estimates based on the core comparator set.

3.25.2 Using different time periods in their analysis our expert advisors, Cambridge Economic Policy Associates (CEPA), estimated an average asset beta value of 0.53 based on MPG's core comparator, and a value of 0.55 based on MPG's full sample comparator set. While these average estimates are somewhat higher, CEPA conclude that the range of their estimates generally include the MPG average estimate.²⁷

²⁶ See Fonterra "[Annex to Attachment 6: Summary of comparators – Milk Price Group paper](#)" (8 July 2021), page 2.

²⁷ CEPA "[Dairy asset beta and specific risk premium – supporting material – 21 July 2021](#)" (27 July 2021), page 13.

- 3.25.3 In their 2018 report, CEPA concluded that the asset beta of an efficient processor is likely to be in the range of 0.45-0.58, based on the full comparator sample selected at the time that they had concluded is a good fit for an efficient processor.²⁸ In this year's advice, CEPA also re-estimated the asset betas for the comparator sample used in their 2018 report using more recent data. They concluded that an asset beta of 0.45 could be justified based on the range of revised estimates.²⁹
- 3.26 MPG estimated an asset beta of 0.45 for the notional milk processor by applying a downward adjustment of 0.05 to the average asset beta of 0.50 estimated using their full comparator set.³⁰ MPG note that the additional five firms added to their core comparator set to form the full comparator set "come 'close to' satisfying the s 150C(4) criteria".³¹
- 3.27 We consider that extending the core comparator set with firms that are less likely to have a similar risk profile to that of an efficient processor would not improve the robustness of the asset beta estimates. For this reason, our draft conclusion places more weight on the asset beta estimate for the core comparator set. Our draft conclusion is also supported by the conclusion in the CEPA advice.³²
- We regard the average of the core sample selected by MPG to be a reasonable estimate of the asset beta for a notional processor, which we find is slightly higher than 0.47.
- 3.28 CEPA also considered the evidence put forward by MPG for a downward adjustment of the asset beta estimate from the full sample average of 0.50. CEPA concluded that there is no robust evidence to support a downward adjustment.³³ We agree with this conclusion by CEPA.
- 3.29 After considering the MPG analysis and CEPA's advice, and acknowledging the statistical imprecision of estimating the asset beta, our draft conclusion is that an asset beta estimate of 0.45 is practically feasible for a notional milk processor. We note, however, the evidence presented by CEPA that supports a somewhat higher value for the asset beta (ie, 0.53 using MPG's core comparator set but estimating the asset beta over two 5-year periods instead of the periods used by MPG).³⁴

²⁸ CEPA "[Dairy notional processors' asset beta final report](#)" (28 March 2018), page 3.

²⁹ CEPA "[Dairy asset beta and specific risk premium – 21 July 2021](#)" (27 July 2021), page 2.

³⁰ Fonterra "[Attachment 6: Asset beta and specific risk premium – Milk Price Group paper](#)" (8 July 2021).

³¹ Fonterra "[Attachment 6: Asset beta and specific risk premium – Milk Price Group paper](#)" (8 July 2021), page 2.

³² CEPA "[Dairy asset beta and specific risk premium – 21 July 2021](#)" (27 July 2021), page 3.

³³ CEPA "[Dairy asset beta and specific risk premium – supporting material – 21 July 2021](#)" (27 July 2021), pages 16-18.

³⁴ CEPA "[Dairy asset beta and specific risk premium – supporting material – 21 July 2021](#)" (27 July 2021), page 13.

Observation on consistency of Fonterra methodology with the new DIRA requirements

- 3.30 As explained above, Fonterra has amended its 2020/21 Manual to have regard to the new s 150C(4) requirements for calculating the asset beta prior to these coming into effect for the 2021/22 season. Since Fonterra has implemented the new methodology in this year's calculation we think it would be helpful to Fonterra and other interested parties for us to comment on whether we think Fonterra's methodology would meet the new DIRA requirements when they come into force.
- 3.31 We are interested in stakeholder views on Fonterra's and the Commission's interpretation of the new s 150C(4) requirements, even though those provisions have not yet come into force.
- 3.32 The key areas where the new requirements come into play is in:
- 3.32.1 the requirement to apply the capital asset pricing model to estimate the asset beta; and
- 3.32.2 the prescription of criteria that have to be satisfied for firms to be included in the comparator set that is used for estimating the asset beta.

Comparator set

- 3.33 Pursuant to the Manual amendment, MPG has derived a core comparator set of 19 firms that they believe meet the requirements of s 150C(4). MPG acknowledges that the proportion of activity in its core comparator set that is entirely consistent with processors that trade in significant quantities in globally contested markets and are characterised by uniform technical specifications is relatively small.³⁵ We also note that MPG has identified a further five firms that arguably 'come close' to meeting the new s 150C(4) requirements (MPG's extended comparator set).³⁶
- 3.34 We engaged CEPA to advise us on whether the MPG analysis meets the new s 150C(4) requirements.³⁷ In summary CEPA consider MPG's method of selecting comparators to be reasonable, although noting that they have not completed a full audit of the 286 firms in MPG's 'long list' from which MPG produced the list of 19 firms which meet the s 150C(4) requirements based on MPG's interpretation.³⁸ This means that CEPA was unable to verify whether there were additional firms (not included in the MPG full comparator set) that may meet MPG's interpretation of the s 150C(4) requirements. CEPA pointed to five such potential firms that may

³⁵ Fonterra "[Attachment 6: Asset beta and specific risk premium – Milk Price Group paper](#)" (8 July 2021), page 2.

³⁶ Ibid.

³⁷ We have invited submissions from interested parties on the CEPA advice. See paragraph 1.12 above.

³⁸ CEPA "[Dairy asset beta and specific risk premium – supporting material – 21 July 2021](#)" (27 July 2021), pages 7-9.

meet the s 150C(4) requirements: Freedom Foods, WH Group Limited, Murray Goulburn, Boston Global Foods Companies and Inner Mongolia Yili.³⁹

- 3.35 We have considered the MPG analysis and the CEPA advice and we agree with CEPA's view that the method used to select comparators that would meet the s 150C(4) requirements is reasonable. We would encourage Fonterra to consider whether the additional firms identified by CEPA may also satisfy the s 150C(4) requirements, with one exception – Murray Goulburn. We consider that there are reasonable grounds for Murray Goulburn not to be included as a comparator given that the company was sold to Saputo in May 2018 and thus, financial data for this firm is not available over the entire period relevant to the analysis.

Estimation periods

- 3.36 MPG estimated 5-yearly asset betas using the following periodicities and end-dates:
- 3.36.1 daily (31/12/2020, 25/6/2020, 26/12/2019, 27/6/2019, 27/12/2018);
- 3.36.2 weekly (31/12/2020, 25/6/2020, 26/12/2019, 27/6/2019, 27/12/2018);
and
- 3.36.3 four-weekly (31/12/2020, 18/6/2020, 5/12/2019, 20/6/2019, 6/12/2018).
- 3.37 To produce the average asset beta estimate for each comparator set, MPG calculates the averages for each periodicity and end-date combination. This methodology results in individual periods getting different weighting in the analysis, as some years/periods are included only once while others may be included up to five times. We consider that it is more appropriate to use two non-overlapping 5-year periods in estimating the asset beta.⁴⁰
- 3.38 In their advice CEPA estimated the asset betas for the MPG comparator sets using our preferred methodology for the relevant estimation periods. CEPA's estimates indicate an average asset beta for the core comparator set of 0.53, and for the full comparator set of 0.55. CEPA note that while their average estimates are slightly higher than MPG's, the ranges include MPG's average estimates.⁴¹

³⁹ Ibid, page 14. See also CEPA "[Dairy asset beta and specific risk premium – 21 July 2021](#)" (27 July 2021), pages 1-2.

⁴⁰ See for example, Commerce Commission "[Final Report – Review of Fonterra's 2016/17 base milk price calculation](#)" (15 September 2017), paragraph 2.48.1 and Commerce Commission "[Input methodologies review decisions Topic paper 4: Cost of capital issues](#)" (20 December 2016), paragraphs 268-269.

⁴¹ CEPA "[Dairy asset beta and specific risk premium – supporting material – 21 July 2021](#)" (27 July 2021), page 13.

- 3.39 We would encourage Fonterra to consider these observations on their methodology when estimating the asset beta for the 2021/22 base milk price calculation, when the new s 150C(4) requirements will be in effect.

Asset stranding

How the Manual deals with asset stranding

- 3.40 There are three rules in the Manual relevant to the consideration of asset stranding:
- 3.40.1 Rule 32 – Adjustments for amendments to Reference Commodity Products;
 - 3.40.2 Rule 33 – Surplus capacity; and
 - 3.40.3 Rule 43 – SRP.
- 3.41 Rule 32 deals with plant stranded due to a change in the portfolio of RCPs produced by the notional producer (**NP**). In this case, Fonterra can, subject to two exceptions, continue to deduct the unrecovered cost of that plant from the base milk price. When assets are stranded due to a change in the portfolio of RCPs, farmers bear the costs of stranded plant through a lower base milk price in that season.⁴²
- 3.42 Rule 33 deals with adjustments to the asset base used in the base milk price calculation (referred to in the Manual as the ‘Farmgate Milk Price Fixed Asset Base’) where peak milk supply in a region has decreased by an amount that results in one or more standard plants being surplus to requirements.⁴³ Under these circumstances the asset is removed from the asset base. Because a standard plant has a life of approximately 32 years, around 3% of the assets in the base milk price calculation are replaced each year. This means that simply not replacing the plant can deal with the first 2-3% of milk supply reduction per year on average, without shareholders bearing the costs of any asset stranding. Shareholders do not miss out on expected returns as the asset removed from the asset base is fully depreciated.

⁴² The exceptions are when (1) this would result in Fonterra’s base milk price being significantly less than the milk price Fonterra’s competitors are able to pay for milk in New Zealand while still earning a reasonable risk-adjusted return on their invested capital; or where (2) Fonterra has previously been compensated for the risk of removal of the Reference Asset, whether under Rule 43 (Specific Risk Premium) or under any other provision of the Manual.

⁴³ Fonterra [“Farmgate Milk Price Manual”](#) (1 August 2020), page 47.

- 3.43 Rule 43 allows for compensation to investors in the NP business for asset stranding risks not otherwise covered in the base milk price methodology.⁴⁴ The SRP to be determined under this rule is an *ex-ante* allowance added to the notional cost of equity.
- 3.44 In our final report on the Manual review for the 2020/21 season we stated we intended to carry out a substantive review of Fonterra's provisions for asset stranding as part of this year's calculation review.⁴⁵ In reviewing the assumptions and inputs applied to determine whether there is surplus capacity under Rule 33, we have considered how static or declining milk volumes are factored into the base milk price calculation. As such, this review, together with our review of the asset beta and SRP, forms part of our review of provisions for asset stranding.

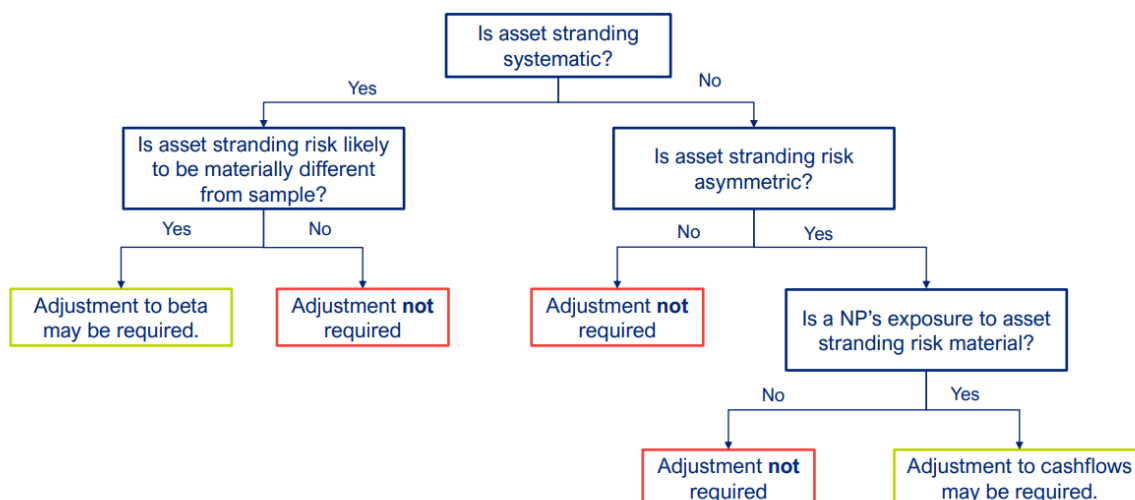
The SRP

- 3.45 For the seasons 2020/21 onwards, Fonterra has set the SRP to nil. Our draft conclusion is that this is appropriate for this season's calculation for the following reasons.
- 3.45.1 There is no conclusive evidence that the comparators included in either the core or full comparator sets used by MPG in estimating the asset beta have a materially different asset stranding risk to that of the NP. Therefore there does not appear to be a case for adjusting the asset beta estimate to compensate for such differences in risk through a (positive or negative) SRP.
- 3.45.2 While we believe that the NP may be exposed to some non-systematic asset stranding risk due to declining milk supply volumes or unforeseen changes in demand preferences, we accept that such risk is currently low. Further, Fonterra is able to mitigate asset stranding risk through alternative methods, such as not replacing fully depreciated assets in the asset base or shortening asset lives if appropriate. On this basis, our draft conclusion is that no *ex ante* compensation for non-systematic risk is required through the SRP.
- 3.46 We provide further details below.
- 3.47 CEPA's advice on the SRP includes a useful flow chart (reproduced in Figure 2 below) that can assist in answering the question of whether a SRP should be applied.

⁴⁴ The Manual refers to the base milk price as the farmgate milk price.

⁴⁵ Commerce Commission "[Final report – Review of Fonterra's Milk Price Manual](#)" (15 December 2020), paragraph X18.

Figure 2: CEPA's flowchart on the SRP⁴⁶



- 3.48 To the extent that asset stranding risk is systematic, the asset beta calculated under the Manual Rule 42 fully compensates shareholders unless there is evidence that the asset stranding risk of the comparators used to estimate the asset beta is materially different from that faced by the NP. In the absence of evidence to the contrary we consider that it is reasonable to assume that the NP's asset stranding risk is no higher than that of the average comparator in the sample.
- 3.49 However, we consider that some of the asset stranding risk faced by a NP might be non-systematic. For example, in our 2013/14 report on the milk price calculation, we stated that "[w]here the risk of asset stranding is provided for ex ante in the WACC, we do not consider that all of this should be through the asset beta as asset beta is a measure of an investment's exposure to market wide (systematic) factors, and we consider that most asset stranding risk is non-systematic."⁴⁷
- 3.50 Non-systematic stranding risk is dealt with by the Manual Rules listed in paragraph 3.40 above.
- 3.51 Specifically, the SRP was introduced into the Manual as Rule 41 (in 2020 changed to Rule 43) to address our position on asset stranding risk. The rule allows Fonterra to compensate for downside non-systematic risk associated with stranded assets that are not otherwise covered in the milk price calculation methodology. Prior to this year's review the SRP was a 0.22 increment to the cost of equity.

⁴⁶ CEPA "[Dairy asset beta and specific risk premium – supporting material – 21 July 2021](#)" (27 July 2021), page 21.

⁴⁷ Commerce Commission "[Final report - Review of Fonterra's 2013/14 base milk price calculation](#)" (15 September 2014), paragraph V9.

- 3.52 We note that CEPA considers that asset stranding risk caused by changes in demand for a notional milk processor is likely to be systematic.⁴⁸ This suggests that compensation for demand risk should be considered in the context of the asset beta.
- 3.53 CEPA also considers that asset stranding risk can arise from supply side factors. Specifically, CEPA notes that environmental regulation may reduce the supply of milk available to a notional processor and create assets which are surplus to requirements and by extension stranded. CEPA considers that supply-side stranding risk can be in part non-systematic, but they point out that the justification for a positive SRP to provide *ex ante* compensation for such non-systematic risk is weak.⁴⁹
- 3.54 Importantly, CEPA considers that no SRP is required to compensate for asset stranding risk, because the framework applying to a notional processor has flexibility in terms of the depreciation profile applied. If a notional processor can change the depreciation profile of assets at risk of stranding and is able to recover that depreciation, then the asset stranding risk is mitigated possibly entirely.
- 3.55 We continue to consider that not all asset stranding risk is systematic. For example, in the context of fibre regulation we made an additional allowance for non-systematic risk of 10 basis points largely due to the high degree of technological obsolescence associated with that technology and competition linked to technological change.⁵⁰
- 3.56 We consider the risk of technological change and competition effects to be lower in the dairy industry than in the fibre industry, but nonetheless we believe that non-systematic risks of stranding may also arise for a notional milk processor from other events such as a contraction in supply or changes arising from shifts in environmental policy. There could also be some changes in demand such as fundamental changes in tastes or preferences away from cow's milk that might be non-systematic in nature.
- 3.57 To assess the level of asset stranding risk that may arise from declining milk volumes we conducted a review of standard plant capacity and milk supply forecasts.

⁴⁸ CEPA "[Dairy asset beta and specific risk premium – 21 July 2021](#)" (27 July 2021), page 3 and CEPA "[Dairy asset beta and specific risk premium – supporting material – 21 July 2021](#)" (27 July 2021), page 23.

⁴⁹ Ibid.

⁵⁰ See Commerce Commission "[Fibre Input Methodologies – Main final decisions reasons paper](#)" (13 October 2020), Chapter 6.

Stranding of plants due to energy source conversion

- 3.58 Fonterra has committed to a decarbonisation strategy that will see it exiting coal as an energy source by 2037. Fonterra currently has 45 gas boilers and 22 coal-fired boilers. In so far as it affects the base milk price calculation Fonterra's near term plan, subject to developments in technology and the external environment, involves a combination of replacing old coal boilers with biomass boilers and converting newer coal boilers to biomass or wood pellet boilers.
- 3.59 The baseline assumption in the base milk price calculation is an annual replacement spend of around \$15m. The estimated cost of coal fired boilers at \$22m is similar to that of biomass-fired boilers at \$22m to \$25m.⁵¹
- 3.60 The average age of Fonterra's boilers (28 years) is considerably higher than that of the NP's boilers. It is therefore likely that the base milk price model implementation of the decarbonisation strategy will be weighted more heavily toward conversion rather than replacement, so as to fully utilise the remaining life of existing milk price assets and minimise capital costs.
- 3.61 An annual assessment will be carried out by Fonterra to assess whether any additional allowance for conversion costs, which are site specific, is necessary.
- 3.62 Because the boilers can be progressively replaced or converted, stranding of assets due to the need to convert to alternative energy sources is unlikely to occur.
- 3.63 The incremental cost of alternative energy supply automatically flows into the base milk price via the weighted average unit energy cost input.

Plant capacity and milk supply

Short term outlook

- 3.64 We reviewed the standard plant capacity analysis provided in Fonterra's experts' reports for FY22 and FY23. The supply forecasts for FY22 and FY23 are very similar to the actual milk supply in the FY20 peak. As such no change is expected in the peak milk supply forecast over the next few years.
- 3.65 All plants that were assumed to be mothballed in FY17 in response to the reduction in milk supply are now permanently closed. There is a one-for-one replacement plan assumed for the scheduled closure of plants which will operate at peak capacity, then be replaced by equivalent plant capacity in time for the start of the FY22 season. Therefore Fonterra assumes that overall processing capacity remains unchanged for FY21 and FY22.

⁵¹ Per a 2020 assessment by Aurecon.

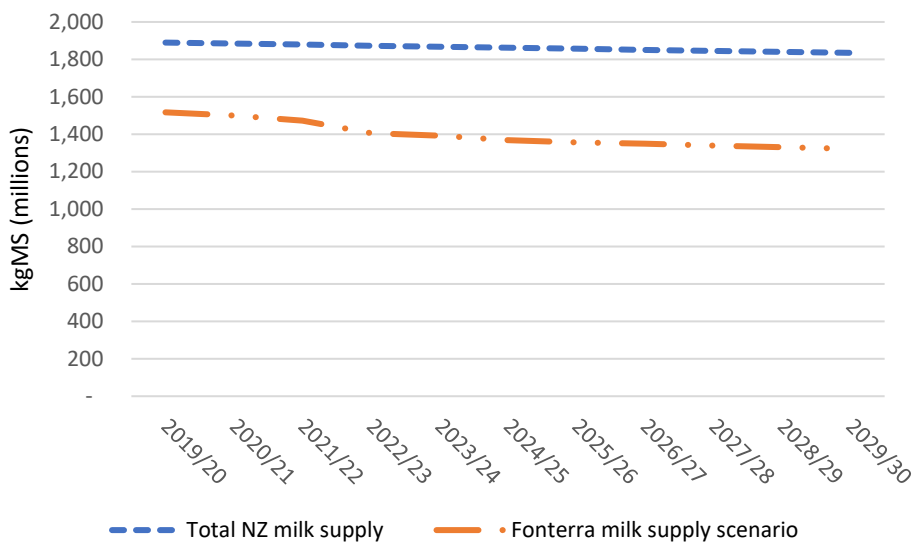
3.66 At the beginning of FY22 the NP has the option of reducing lactose standardising in the event of a capacity shortfall. Although this is considered to be an expensive option it is more cost effective than investing in excess capacity over the short term. A similar replacement strategy is assumed for plant closure and replacement in FY22 and FY23 as for FY21. Beyond FY23 Fonterra assumes replacement capacity will be installed in the region where closures are assumed. The asset footprint will therefore more or less match forecast milk supply meaning that no incremental plant is required.

3.67 In summary, Fonterra’s experts conclude that the short-term current plant capacity and milk supply are approximately in equilibrium and no additional plant needs to be added or retired.

Long term outlook

3.68 Figure 3 below shows Fonterra’s outlook of total NZ milk supply over the next 10 years, overlaid with a potential declining milk supply scenario presented by Fonterra in its recent Capital Structure consultation booklet, under which Fonterra’s supply could fall to 1,300m kgMS by 2030.⁵² As described in paragraph 3.42 above, Fonterra can manage up to a 3% reduction of milk supply in the base milk price model by not replacing fully depreciated assets each year.

Figure 3: 10 year view of total NZ milk supply and Fonterra milk supply scenario



⁵² Fonterra [“Capital Structure Consultation 2021”](#), page 22.

- 3.69 He Pou a Rangi, the Climate Change Commission (CCC) believes that the current production of milk can be sustained even with the cattle numbers declining by as much as 13% by 2030.⁵³ Notwithstanding this, CEPA has examined an alternative extreme scenario in which production declines similarly by 13%. In this scenario the industry processing asset value is reduced by around 8% (older assets removed).
- 3.70 Fonterra is already considering scenarios of flattening or even decreasing milk supply, as predicted in the long term, and will be adopting a strategy that maintains a focus on maximising sustainable milk volumes in New Zealand.⁵⁴
- 3.71 Informed by Fonterra's long-term milk supply forecasts and the CEPA analysis in the context of the CCC report, we consider the risk of asset stranding due to milk supply reduction in the long term to be low. On this basis, our draft conclusion is that an SRP value of nil is reasonable.

Conclusion on stranding risk due to reduction in milk volumes

- 3.72 Fonterra's analysis of milk supply suggests that overall supply is likely to marginally decline in the foreseeable future and Fonterra expects to maintain its current share of supply. We note that the competition for supply from farmers may increase in some regions but that this is unlikely to give rise to significant stranding risk.⁵⁵
- 3.73 Our draft conclusion is that the non-systematic risk associated with reduction in milk supply volumes is low. This is because the Manual provides for up to 3% of plant capacity to be reduced per annum by not replacing fully depreciated assets. In this context an SRP value of nil is reasonable.
- 3.74 We are however, interested in stakeholders' views on these inter-related issues, namely the issue of how the asset beta is estimated, the use of the SRP under Rule 43 of the Manual and both the asset beta and the SRP relationship to the issue of stranded assets in general.

⁵³ He Pou a Rangi, Climate Change Commission "[Ināia tonu nei: a low emissions future for Aotearoa](#)" (31 May 2021), page 117.

⁵⁴ We note that Fonterra's proposed capital restructure, if adopted, could make it easier for suppliers to join the co-op and help secure the milk supply in the future.

⁵⁵ For example, Olam International has recently announced its intention to build a new processing plant in Tokoroa.

Inclusion of Instantised Skim Milk Powder (ISMP) as a Qualifying Material.

- 3.75 As explained in paragraph 2.13 above, we have added an additional focus area to look more closely at the inclusion of ISMP sales in off-GDT qualifying sales.
- 3.76 In our 2018/19 calculation review we stated, “the key question regarding practical feasibility of off-GDT pricing is whether the inclusion criteria for RCP sales are appropriate and have been applied consistently from season to season.”⁵⁶
- 3.77 In its submission on our Proposed Focus Areas paper Miraka requested the Commission revisit points relating to the inclusion criteria raised in its previous submission on our draft report on the 2020/21 Milk Price Manual.⁵⁷ In respect of our focus on ISMP these points included:
- 3.77.1 whether ISMP should be attributed to the NP, given its specialised manufacturing process and whether the Commission has satisfied itself that qualifying material can be manufactured on Standard Plant;
 - 3.77.2 whether the costing principles underlying the Incremental Product Costs (IPCs) are fit for purpose, given they should not materially erode the premium achieved by ISMP over medium heat skim milk powder (MH SMP);
 - 3.77.3 whether ISMP can be a substitute for MH SMP given their different functional properties;
 - 3.77.4 whether the yields determined from the manufacture of just one SMP product (MH SMP) on Standard Plant designed to produce MH SMP as efficiently as possible would be impaired if the plant actually produced a range of SMP products.
- 3.78 We deal with each of these points under the respective headings below. We also then consider the materiality of the impact of ISMP sales on the base milk price calculation.

⁵⁶ Commerce Commission [“Final report = Review of Fonterra's 2018/19 base milk price calculation”](#) (12 September 2019), paragraph 2.100. We concluded that “Having reviewed the information provided by Fonterra, we are satisfied that the inclusion by Fonterra of off-GDT sales as a reference for prices used by the NP is practically feasible for an efficient processor and is therefore consistent with the contestability dimension in the section 150A purpose.”

⁵⁷ Miraka [“Submission on focus areas for milk price calculation 2020-21 – 29 April 2021”](#) (03 May 2021), pages 6-8, and Miraka [“Submission on 2020-21 milk price manual draft report”](#) (16 November 2020), pages 1-6.

Specialised manufacturing process and use of specialised plant

- 3.79 A product manufactured by Fonterra from milk supplied in New Zealand can only be included as a Qualifying Material if its manufacture does not require the use of Specialised Plant.⁵⁸
- 3.80 In our 2019/20 calculation review we confirmed with Fonterra that the range of Qualifying Materials has been manufactured on actual plants that are functionally equivalent to the Standard Plant. More specifically, based on plant information provided by Fonterra we were satisfied that the Notional Milk Price Business (NMPB) standard plant specification has the capability to agglomerate powders, a feature of plants required to manufacture ISMP.
- 3.81 A small amount of additional capital is required for vitamin (A/D) addition (for all vitaminized SMP and whole milk powder (**WMP**) products) which is captured within the IPCs. We do not consider that this constitutes Specialised Plant.
- 3.82 This year we considered the impact of the specialised manufacturing process, in particular what additional cost and set-up between production runs is required for the agglomeration plant that enables the production of ISMP and whether these are appropriately reflected in the IPC inputs.
- 3.83 ISMP requires shorter evaporator run lengths (hence extra losses and cleaning costs) and slightly slower throughput on the plant which is captured within the incremental fixed cost and depreciation.
- 3.84 ISMP has lower bulk density and as such has higher packaging and supply chain costs. It also has a higher risk of quality failure. All these additional costs are within the IPCs.
- 3.85 Based on our review of the costs included in the IPCs we are satisfied that the impact of differences in the manufacturing process for ISMP is appropriately accounted for and the costs are practically feasible.

⁵⁸ Commerce Commission, "[Attachment 1 – Fonterra’s marked up version of the 2020/21 Manual for the 2020-21 season – 1 August 2020](#)" (18 September 2020), page 65. Specialised Plant is defined as “plant that that can be used for the manufacture of Standard Specification Products but which has material modifications which are required for the manufacture of products with functional attributes that are materially different to the attributes of Standard Product Offerings.”

Does the effect of the IPCs imply the costing principles underlying the IPCs are not fit for purpose?

- 3.86 Miraka requested we address its suggestion that ISMP incremental product costs would neutralise the nominal premium on ISMP compared to MH SMP which provides reason to doubt the costing system is fit for purpose.⁵⁹
- 3.87 The Commission’s 2019/20 report, in respect of which Miraka’s suggestion was raised, stated that “We are satisfied that cost adjustments have been made to account for the difference in costs between Medium Heat Skim Milk Powder and ISMP. We consider that these explain a significant portion of observed price differences between the two.”⁶⁰
- 3.88 Fonterra’s data in the Figure 4 below shows Fonterra’s average ‘price achievement’ (net margin over GDT, after adjusting for IPCs) per metric tonne (MT) over the last two years on ISMP sales compared to the prices achieved on off-GDT sales of ultra heat treated (UHT) SMP, which is also sold on GDT.

Figure 4: Off-GDT price achievement per MT for the MTs informing the base milk price

Product	2019/20	2020/21
UHT SMP	██████████	██████████
ISMP	██████████	██████████
MTs ISMP informing milk price	4.3k	3.4k
Total MTs ISMP sold	██████████	██████████

- 3.89 We do not consider that the data underlying this summary suggests that ISMP commands such a premium that it may be clearly distinguished from other standard specification products (SSPs). Nor does it suggest that the IPCs create a systematic neutralisation of any nominal premium for ISMP that casts doubt over the fitness for purpose of the underlying costing system.
- 3.90 Fonterra has explained that it manufactures a number of ISMP specifications, some of which attract higher price achievement than others, but which do not necessarily inform the base milk price. For example, Fonterra does not include any ‘dry

⁵⁹ Miraka [“Submission on focus areas for milk price calculation 2020-21 – 29 April 2021”](#) (03 May 2021), page 7.

⁶⁰ Commerce Commission [“Final report - Review of Fonterra's 2019/20 base milk price calculation”](#) (15 September 2020), paragraph 2.41.

application' specifications of any RCPs in its milk price sales, which on average generate higher price achievement.⁶¹

- 3.91 The difference in average price achievement between ISMP and UHT SMP (and also MH SMP) reflect the fact that there is a range of customer and specification-specific reasons underlying the price achievement for any particular sale. The low level of price achievement for off-GDT ISMP in 2019/20 compared to UHT SMP reflects discounts that were driven by the need to clear distressed inventory.
- 3.92 Customers are sometimes willing to pay at levels representing a high price achievement for reasons that do not relate to differences in product specifications. One historic example of this was a requirement for specific volumes to be delivered in specific months to use country-related SMP quota, for which the customer was willing to pay a high premium to satisfy its tight logistics requirements. Another example was an urgent purchase for COVID-19 related food security reasons.
- 3.93 Because of this we do not consider that price or price achievement of itself is a reliable indicator that might provide a basis for differentiation of commodity products.

Materiality of ISMP sales

- 3.94 Due to the application of exclusion criteria, most of Fonterra's ISMP is not included in the base milk price calculation.⁶² Of the total sales of ISMP in 2019/20 and 2020/21 (██████████ and ██████████, respectively), just 4,300 MT and 3,400 MT respectively were included as price-informing sales in the base milk price calculation in those years.
- 3.95 If Fonterra had excluded ISMP from the 2019/20 base milk price, the base milk price would have been ~0.15 cents per kgMS lower, with most of this impact due to a decrease in the weight placed on off-GDT sales. We consider this impact to be immaterial.

Can ISMP can be a substitute for MH SMP given their different functional properties?

- 3.96 Miraka has criticised the Commission's review of fat and protein specifications and asserted that the Commission has failed to take account of the different functional properties of products in considering whether they constitute a commodity product.

⁶¹ Dry application products can be dry-blended with other products to manufacture infant formula, whereas wet application products with nutritional specifications are reconstituted and go through a further heat drier process.

⁶² The rules are contained in the 'decision tree' shown in Appendix B.

- 3.97 Our analysis of technical product specifications was intended to determine whether ISMP meets the uniform technical specifications criterion for a commodity as defined in the DIRA.⁶³

commodity means a product made by the processing of milk that is—
 (a) traded in significant quantities in globally contested markets; and
 (b) characterised by uniform technical specifications

- 3.98 Neither the DIRA nor the Milk Price Manual provide for distinguishing reference commodity products from other products on the basis of their different functional properties.
- 3.99 To the extent that the different functional properties arise from differences in the manufacturing process, we have considered the provision for the impact of manufacturing process differences at 3.82 above.

Impact on base milk price of shorter production runs

- 3.100 We also considered the impact of short-run production runs of ISMP on yield assumptions based on long production runs of SSPs and how this is accounted for.
- 3.101 ISMP requires shorter evaporator run lengths (hence extra losses and cleaning costs) and slightly slower throughput on the plant. This is reflected within the higher allowances for value component usage for plant losses apparent in the instant WMP IPCs.⁶⁴
- 3.102 We are satisfied that an adequate allowance has been made for the impact of ISMP production on yield loss assumptions, by way of higher allowances for value component usage accounted for in IPCs.

Review of PTMRP

- 3.103 The Manual's WACC specification in Rule 41 includes provision for a PTMRP that is to be updated along with the asset beta in each Review year. Unlike the asset beta and SRP no specific Review year is specified for the PTMRP in the Review year definition in the Manual's Glossary.
- 3.104 The Manual's Part C definition of the PTMRP is:

The amount used by the Commerce Commission in regulatory decisions in the 12 month period preceding the beginning of the Review Period, and if more than one amount is used by the Commerce Commission in that period, the amount which can most reasonably be

⁶³ DIRA, s 5.

⁶⁴ At this point a review of the corresponding allowances for instant SMP, particularly vitamin A&D fortified, is being considered by Fonterra, which may result in changes to future cost assumptions.

considered to represent the Commission's current position at the beginning of the Review Period.

- 3.105 We amended the PTMRP to 7.5% in our Input Methodologies for the fibre regime.⁶⁵
- 3.106 If the PTMRP had been assigned the same Review year as the asset beta and a review had been undertaken in 2020/21 then it appears clear that "the amount which can most reasonably be considered to represent the Commission's current position", per the Manual's Part C requirement, is now 7.5%. This would result in an increase in the PTMRP to 7.5% from 2021/22 onward.
- 3.107 We understand that Fonterra is now considering the processes that need to be put in place around an update for the PTMRP. Because an update would not be effective until 2021/22 at the earliest, our conclusion on the practical feasibility of the inputs to the WACC for 2020/21 is based on the existing PTMRP of 7%.

Detailed findings from our fit for purpose review

- 3.108 We received and reviewed Fonterra's base milk price calculation model, as well as supporting models for each of the key inputs. We requested and obtained further information on a confidential basis where we considered it necessary.
- 3.109 As part of the analysis set out above, we have also examined any changes in the following assumptions that have a high potential for impacting the base milk price:
- 3.109.1 changes in costs;
 - 3.109.2 inclusion of off-GDT sales as a reference for calculating commodity prices;⁶⁶
 - 3.109.3 changes in sales phasing;
 - 3.109.4 changes in timing or volume of milk collected; and
 - 3.109.5 yield and loss calculations.

⁶⁵ See [Fibre Input Methodologies \(initial value of financial loss asset\) Amendment Determination 2020](#) [2020] NZCC 24, clause 2.4.2(7). Our reasons for setting PTMRP at 7.5% can be found in Commerce Commission "[Fibre Input Methodologies: Main final decisions – reasons paper](#)" (13 October 2020), paragraph 6.523 and onwards.

⁶⁶ Fonterra has confirmed that it has not made any amendments to the process for identifying off-GDT 'price include' sales, see Fonterra "[Reasons paper on review of 2020/21 base milk price calculation – 1 July 2021](#)" (8 July 2021), page 48.

- 3.110 Our draft conclusion is that we consider that the inputs and assumptions and processes covered in our fit for purpose review are consistent with the efficiency and contestability dimensions of s 150A.

Changes in costs

- 3.111 Except for lactose costs, there has not been a significant increase in individual costs for the 2020/21 season.
- 3.112 Lactose costs have increased by \$138.4m or around 9c per kgMS for the 2020/21 season. The increase is driven by changes in international lactose prices applied to the notional milk price volumes.
- 3.113 Prior to the beginning of a season, Fonterra decides whether Fonterra's or the other processors' lactose price series will be used in the base milk price. For the 2020/21 season, Fonterra has used the competitor price series reflecting actual costs for lactose landed in New Zealand. We therefore consider that the assumptions relating to lactose costs are practically feasible.
- 3.114 We consider that using the lower of Fonterra's or its competitors' actual lactose costs in combination with notional lactose volume requirements that are significantly larger than Fonterra's actual volumes, incentivises Fonterra to reduce its actual lactose costs (ie, operate efficiently).
- 3.115 Therefore, our draft conclusion is that we consider the lactose cost assumptions are consistent with the efficiency and contestability limbs of s 150A.

Inclusion of off-GDT sales as a reference for calculating commodity prices

- 3.116 In our previous years' fit for purpose reviews we looked at the off-GDT prices and volumes against the previous season to obtain comfort in what was being used as a reference for prices used for the NP.
- 3.117 We obtained the same information for the 2020/21 season. This shows that the overall impact of off-GDT pricing for WMP, SMP and Anhydrous milk fat (**AMF**) was 10.2 compared with 10.9 in 2019/20, a reduction of 0.7c. We do not consider this to be significant.
- 3.118 Therefore, we continue to consider that the use of off-GDT sales pricing is practically feasible.
- 3.119 Also, since prices continue to be independently set, we continue to consider that the prices provide an incentive for efficiency.

Changes in sales phasing

- 3.120 Fonterra’s approach to sales phasing has not changed from previous years’ reviews. The revenue is recognised in the base milk price model based on the contracted prices, and the use of total phasing is consistent with the production profile of the notional business, therefore our final conclusion is that we consider that the phasing is practically feasible.
- 3.121 While the incentive to operate efficiently is potentially weaker than if notional data had been used, we continue to consider the current approach to sales phasing using Fonterra’s actual data to be consistent with the efficiency dimension of the purpose because:
- 3.121.1 there is insufficient data to develop a reasonable notional figure; and
 - 3.121.2 Fonterra only has limited discretion over its sales phasing.⁶⁷

Changes in volumes of milk collected

- 3.122 The 2020/21 volume of milk collected (1,539,422 kgMS) was around 1.5% higher than 2019/20. As a result of the higher volume, around 2,985 kgMS or 0.2% was processed as non-standardised product during the peak to manage excess supply.
- 3.123 In our focus area on asset stranding above, we have considered the outlook for future milk supply.

Yield and loss calculations

- 3.124 A full description of Fonterra’s process to update the loss assumptions can be found in its 2020/21 reasons paper.⁶⁸
- 3.125 The 2020/21 losses are in line with the losses achieved in the 2019/20 season.
- 3.126 We confirmed the calculated yield by performing a ‘mass balance’ calculation to verify that loss assumptions have been properly taken into account. This reconciles the milk solids in the total volume of raw milk purchased by the NP with the fat and protein milk solids components of the RCPs together with associated losses.
- 3.127 Having reviewed the information provided by Fonterra, and performing our own analysis on the calculated yield, we are satisfied that the yields can be achieved by Fonterra and that they are therefore practically feasible for an efficient processor.

⁶⁷ Commerce Commission [“Review of Fonterra’s 2014/15 base milk price calculation - Final report”](#) (15 September 2015), paragraphs 7.94 to 7.106.

⁶⁸ Fonterra [“Reasons paper on review of 2020/21 base milk price calculation – 1 July 2021”](#) (8 July 2021), page 13.

- 3.128 The process for setting the yield and loss calculation inputs is in line with that used in the 2019/20 base milk price calculation review, therefore our draft conclusion is that the yield and loss calculations are consistent with the efficiency dimension of the s 150A purpose.

Appendix A Points raised in submissions on the proposed focus areas that do not require focus area review

Submitter	Key points	Our response
Miraka	<p>Miraka submits that the policy change introduced by Fonterra in 2016/17 dramatically expanded the inclusion of off-GDT sales in NP revenues. In turn, this has had a profound impact on the base milk price process, calculations and outcomes, and has for example increased NP revenues by 11 cents/kg MS in the 2019/20 base milk price. Miraka remains of the view that the Milk Price Manual fails to provide a proper framework for assuring that increase in the NP revenues is supported by proper process and evidence in a manner consistent with the DIRA. While the Commission did include a range of issues concerning off-GDT sales in its review of the 2019/20 Milk Price Calculations, a large number of issues remain outstanding and continue to undermine confidence in credibility of the NP revenues. Miraka requests the Commission revisit this crucial matter in its review of the 2020/21 Milk Price calculations.⁶⁹</p>	<p>We included off-GDT sales as a focus area in our review of the 2019/20 milk price calculations. With the exception of the ISMP, discussed above in paras 3.77 to 3.102, we have not considered it necessary to include off-GDT sales in our review scope for 2020/21.</p>

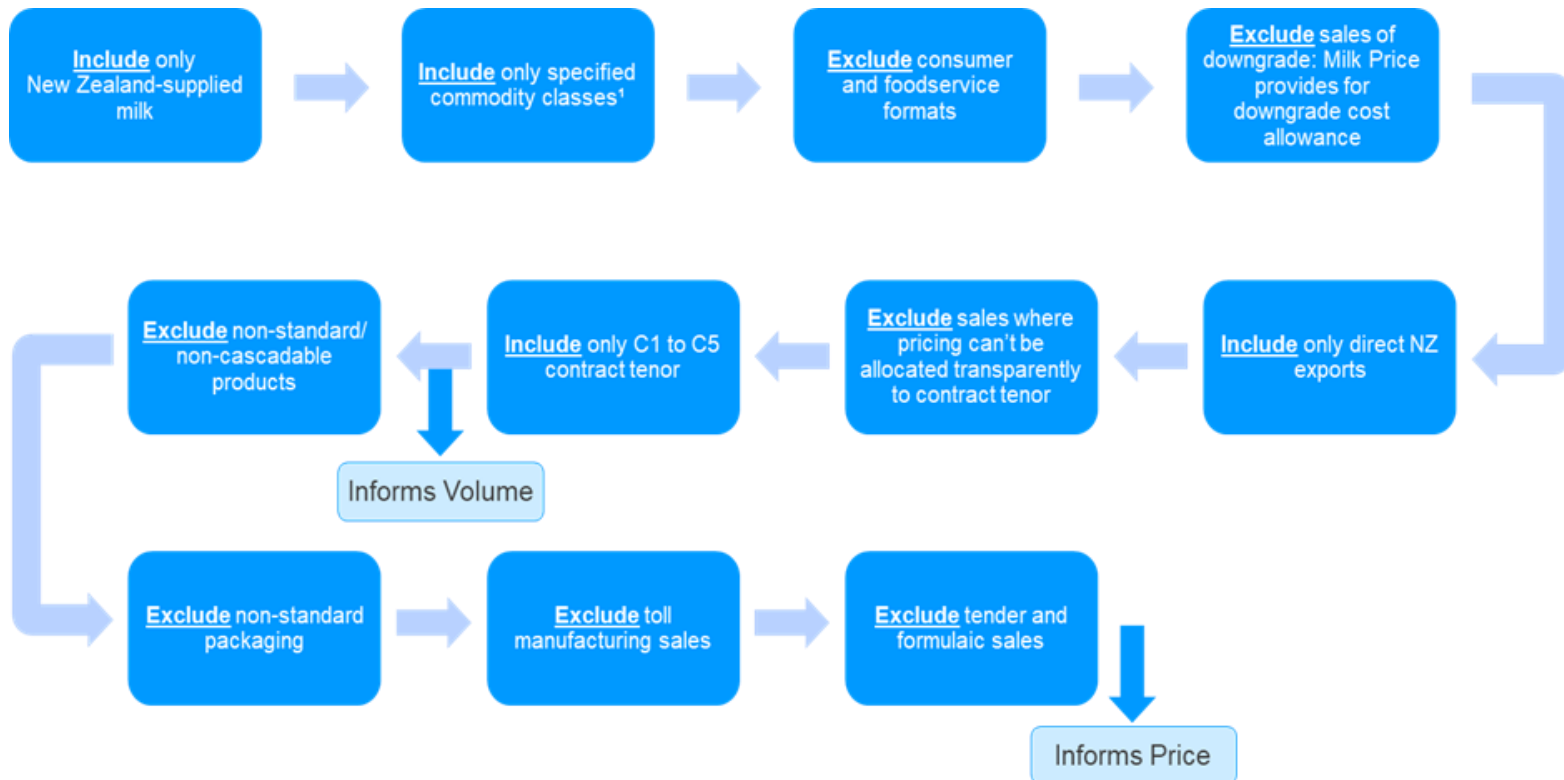
⁶⁹ Miraka "[Submission on focus areas for milk price calculation 2020-21 – 29 April 2021](#)" (3 May 2021), page 1.

Submitter	Key points	Our response
Synlait	<p>This amendment provides greater guidance around estimating asset beta in the milk price calculation. It makes it clear that a comparator set of dairy and food processors is to be used. This approach, using a comparator sample from within the sector, is consistent with how the Commerce Commission looks at asset beta in other regulated sectors.⁷⁰</p> <p>With regard to the SRP and surplus capacity (rules 33 and 43) Synlait list a number of risks associated with milk volumes and investment and encourage the Commission to consider the broader national milk environment within the context of the SRP and surplus capacity (asset stranding) as part of this year's calculation review. These risks include land conversion and land use changes, freshwater standards and greenhouse gas legislation as well as the Climate Change Commission's draft advice necessitating land use changes. Other risks mentioned include changes to lending requirements and increased on farm costs.⁷¹</p>	<p>We have had regard to the matters that Synlait raised, as far as we think is currently relevant. We note the broader risks raised by Synlait but consider these mid to long term risks to be beyond the scope of our review of the milk price calculation for the current season.</p>

⁷⁰ Synlait "[Submission on focus areas for milk price calculation 2020/21 - 29 April 2021](#)" (3 May 2021), page 2.

⁷¹ Ibid., page 4.

Appendix B Simplified off-GDT pricing decision tree



Appendix C Glossary of terms

Term/Abbreviation	Definition
AMF	Anhydrous milk fat
Base milk price	Means the price per kilogram of milk solids that is set by Fonterra for that season
BMP	Butter milk powder
Calculation review	Review of Fonterra's base milk price calculation for the prior season
Dairy season	1 June to 31 May
DIRA, or the Act	Dairy Industry Restructuring Act 2001
FX	Foreign Exchange
GDT	Global dairy trade, Fonterra's online auction platform used to sell commodities
IPC	Incremental product costs
ISMP	Instantised skim milk powder
kgMS	Kilogram of milk solids
Manual review	Review of Fonterra's Milk Price Manual for the current season
MH SMP	Medium heat skim milk powder
MPG	Milk price group, the independent group responsible for calculating the base milk price
Milk Price Manual or the Manual	Fonterra's Farm Gate Milk Price Manual generally referred to by the version relating to each dairy season (eg, 2016/17 Manual). The Manual contains the methodology used to calculate Fonterra's base milk price
MT	Metric tonne
Notional Producer, or NP	The notional commodity business that is used to calculate the base milk price
NMPB	Notional Milk Price Business, comprising the notional milk powder manufacturing business conducted by the Notional Producer as implied by Fonterra's Farmgate Milk Price Manual
PTMRP	Post Tax Market Risk Premium
RCP	Reference Commodity Product. These products, manufactured and sold by the Notional Producer, are in the Reference Basket. They currently include WMP, SMP, BMP, Butter and AMF
Reference Basket	The RCPs used to calculate the Base Milk Price
Reasons paper	Fonterra's Reasons paper which is provided alongside the Manual for each dairy season (this is also provided when Fonterra discloses its base milk price calculation at the end of each dairy season)
SMP	Skim milk powder
SRP	Specific risk premium
SSP	Standard specification products
TAMRP	Tax-adjusted market risk premium
UHT SMP	Ultra heat treated skim milk powder

Term/Abbreviation	Definition
WACC	Weighted average cost of capital
WMP	Whole milk powder