ISSN 1178-2560

Project no. 16.03/45109

Public version

Review of Fonterra's 2020/21 base milk price calculation:

Dairy Industry Restructuring Act 2001

Final report

The Commission: Sue Begg, Convenor
Elisabeth Welson
John Crawford
Vhari McWha

Date of publication: 15 September 2021

Associated key documents

Publication date	Title
16 August 2021	Draft report – Review of Fonterra's 2020/21 base milk price calculation: Dairy Industry Restructuring Act 2001
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

Purpose of this report

1.1 This report sets out our 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 conclusions from:

1.4.1 our review of the focus areas for the 2020/21 calculation review including considering the submissions received from stakeholders; 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, including Fonterra's reasons paper in support of the base milk price calculation for the 2020/21 season,[3] as well as additional models and documentation that Fonterra provided to us in confidence which show the application of the assumptions, inputs and processes used by Fonterra in the base milk price calculation.

1.5 Appendix A provides a summary of, and responses to, submissions by stakeholders received during our consultation processes for any points that are not addressed in Chapter 3 of this report. As part of this year's calculation review, we consulted on:

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

1.5.1 our paper on the proposed focus areas for the 2020/21 calculation review;[4]

1.5.2 the advice we received from our independent advisors Cambridge Economic Policy Associates (**CEPA**) on the dairy asset beta and specific risk premium;[5] and

1.5.3 our draft report on our review of Fonterra's base milk price calculation of the 2020/21 season (**draft report**).[6]

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 report.

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

5 CEPA "Dairy asset beta and specific risk premium – 21 July 2021" (27 July 2021); and CEPA "Dairy asset beta and specific risk premium – supporting material – 21 July 2021" (16 August 2021).

6 Commerce Commission "Draft report - Review of Fonterra's 2020/21 base milk price calculation" (16 August 2021).

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:[7]

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.[8]

2.3 In our Approach paper, we discuss both the efficiency and contestability dimensions in the context of the base milk price calculation review.[9]

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.

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

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

9 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.[10]

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".[11] The base milk price is currently forecast between $7.45-$7.65 per kilogram of milk solids (**kgMS**) for the season that is under review in this report which ended on 31 May 2021.

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 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 to 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.[12]

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 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.[13] These constitute our 'focus areas' for which we undertake more detailed analysis.

10 Ibid.

11 DIRA, s 5.

12 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.

13 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:[14]

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.[15] This year we have only identified one significant change in costs from previous years: the lactose cost.[16]

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,[17] 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 (**RCP**).

2.13 We initially proposed the asset beta, SRP and provisions for asset stranding as focus areas for this year's review.[18] 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 RCP qualifying for recognition in off-GDT sales.

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

15 Ibid, paragraph 74.

16 See paragraphs 3.149 to 3.153 for further detail.

17 Fonterra "Farmgate Milk Price Manual" (1 August 2020), p. 50. For an explanation of Rule 33 see paragraph 3.65 below.

18 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 on our proposed focus areas did not raise any matters that we considered had to be added to our focus areas in this year's review.

Information considered in our review process

2.15 In reaching our conclusions for this year's calculation review we considered:

2.15.1 submissions received on our draft report;[19]

2.15.2 submissions received on the CEPA advice on the dairy asset beta and specific risk premium;[20]

2.15.3 submissions received on the proposed focus areas for this year's review;[21]

2.15.4 Fonterra's reasons paper in support of the base milk price calculation for the 2020/21 season;[22] and

2.15.5 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.[23]

2.16 Where stakeholders raised points in submissions relevant to the focus areas in this year's review, we have addressed these points in Chapter 3, where appropriate. In Appendix A we provide a summary of, and responses to, other matters raised in submissions.

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19 Fonterra "Submission on draft report on review of Fonterra's 2020-21 base milk price calculation – 1 September 2021" (2 September 2021); Miraka "Submission on draft report on review of Fonterra's 2020-21 base milk price calculation – 1 September 2021" (2 September 2021); Open Country Dairy "Submission on draft report on review of Fonterra's 2020-21 base milk price calculation – 1 September 2021" (2 September 2021); Synlait "Submission on draft report on review of Fonterra's 2020-21 base milk price calculation – 1 September 2021" (2 September 2021).

20 Fonterra "Milk Price Group response to CEPA advice on dairy asset beta and specific risk premium – 24 August 2021" (25 August 2021); Miraka "Submission on CEPA advice on dairy asset beta and specific risk premium – 24 August 2021" (25 August 2021); Open Country Dairy "Submission on CEPA advice on dairy asset beta and specific risk premium – 26 August 2021" (26 August 2021).

21 Miraka "Submission on focus areas for milk price calculation 2020-21 – 29 April 2021" (03 May 2021); Synlait "Submission on focus areas for milk price calculation 2020-21 – 29 April 2021" (03 May 2021); and Fonterra "Submission on focus areas for milk price calculation 2020-21 – 29 April 2021" (03 May 2021).

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

23 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 Conclusions

Purpose of this chapter

3.1 In this chapter we outline our 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 conclusion and conclusions on our focus areas review and fit for purpose review;

3.2.2 our detailed findings from the review of the focus areas, including responses to submissions received; and

3.2.3 our detailed findings from the fit for purpose review.

Summary of overall conclusion

3.3 Our conclusion is that the assumptions adopted, and the inputs and processes used by Fonterra to calculate the 2020/21 base milk price are likely to be consistent with the contestability and the efficiency dimensions of the s 150A purpose.

3.4 We note that this conclusion is different from the one reached in our draft decision, which was that the assumptions adopted, and the inputs and processes used by Fonterra to calculate the 2020/21 base milk price *were* consistent with the contestability and the efficiency dimensions of the s 150A purpose. Our conclusion has changed from our draft decision because of our further consideration of matters raised in submissions on the estimate of the asset beta that would be practically feasible for an efficient processor. We set out the reasons for our revised conclusion on the asset beta in greater detail at paragraphs 3.21 to 3.62 below.

3.5 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 conclusions with respect to the asset beta are based on our assessment of whether the estimated value is likely to be appropriate for an efficient processor and meets the purposes at s 150A.

3.6 We note that in estimating the asset beta for this year's calculation Fonterra has sought to apply the new requirements of s 150C(4).[24] 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.

Focus areas review

3.7 Our 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 likely to provide for contestability. Our reasoning is as follows.

3.7.1 Based on the analyses provided by the Milk Price Group (**MPG**) and CEPA, and our consideration of points raised in submissions, our conclusion is that an estimate of the asset beta that is practically feasible for a notional producer is 0.48. We consider that primary reliance should be placed on the weekly and four-weekly estimates of the asset beta and that a downward adjustment away from the average estimate is not appropriate. We also accept MPG's arguments that the most recent 5-year period will provide a reasonable estimate of the asset beta of an efficient processor, though we note that giving some consideration to the longer period has merit.

3.7.2 We consider that the difference between the asset beta estimated using our preferred methodology, at 0.48, and the MPG asset beta estimate, at 0.45, does not have a material impact on the practical feasibility of the asset beta for an efficient processor. We also acknowledge the statistical imprecision of estimating the asset beta. We therefore consider an asset beta of 0.45 is likely to be practically feasible.

3.7.3 We consider that the use of cost and other inputs based on present standard plant capacity is practically feasible. We consider that the non-systematic risk of asset stranding is low. 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 does not require up front compensation. On this basis, our conclusion is that an SRP value of nil is reasonable.

[24] 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).

3.7.4 After considering the arguments put forward by submitters and the evidence provided by Fonterra, on balance we consider that the inclusion of ISMP as a reference commodity product does not undermine the practical feasibility of the use of off-GDT pricing for the base milk price for this season. However:

3.7.4.1 we recommended that Fonterra clarifies the definition of standard packaging and clarifies its application of the "cascadable product" rule in the Manual; and

3.7.4.2 given the matters related to ISMP we intend to examine more closely how the Manual gives effect to the DIRA definition of "commodity" in a future Manual review.

3.8 Our 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 likely to be consistent with the efficiency dimension of the s 150A purpose. Our 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

3.9 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.

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

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

3.10.2 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.[25]

[25] 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).

3.10.3 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).

3.10.4 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.

3.11 In its reasons paper in support of the 2020/21 base milk price calculation, Fonterra has confirmed that it has:

3.11.1 not made any substantive amendments to the Manual for 2020/21 in respect of the revenue calculation; and

3.11.2 not made any material changes to the calculation methodology.[26]

3.12 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.

3.13 Therefore, for the assumptions and inputs that we have analysed as part of the fit for purpose review, our conclusions are as follows:

3.13.1 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

3.13.2 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.

Detailed findings from our focus areas review

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

3.14.1 asset beta;

3.14.2 SRP;

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

3.14.3 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

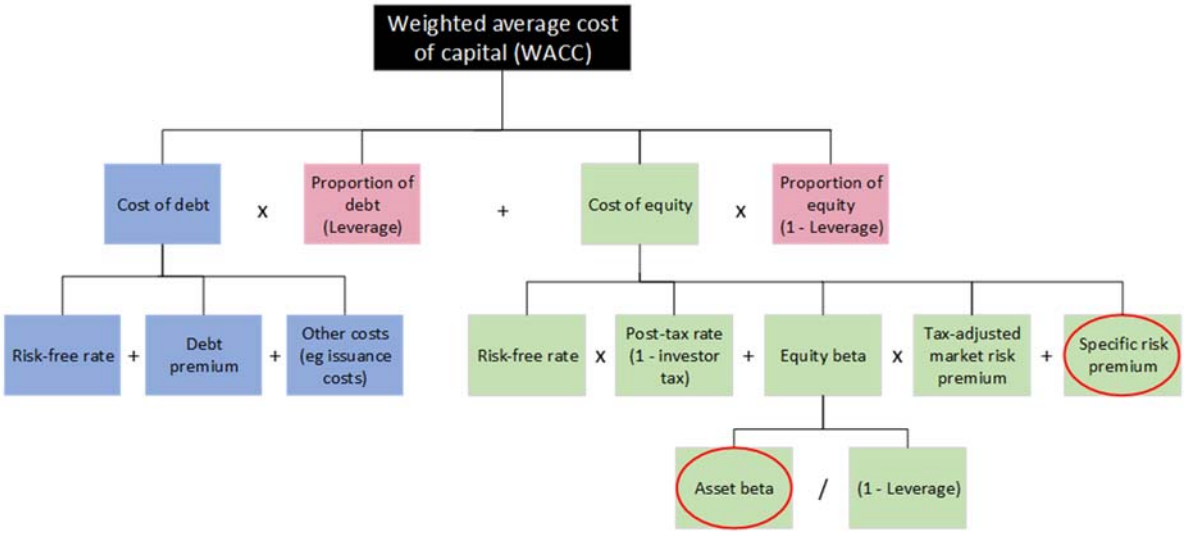
3.14.4 the inclusion of ISMP as a Qualifying Material.

The cost of capital for an efficient processor

3.15 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.

3.16 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



3.17 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.

3.18 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.[27]

[27] 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.

3.19 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.

3.20 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

3.21 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.[28]

3.22 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 against the purpose in s 150A.

3.23 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:[29]

> (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.
>
> (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.

[28] For example, the 'safe harbour' provisions in s 150B.

[29] DIRA, s 150C.

3.24 The fact that s 150C(4) is not yet in force for this calculation review does not preclude us from taking an approach that would be consistent with s 150C(4) when it comes into force, as s 150C(4) is itself consistent with the statutory purpose in s 150A. We must apply that approach from the next dairy season, but until then may apply that approach or any other approach we consider gives effect to the purposes in s 150A.

3.25 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.

3.26 We note that s 150C(4) necessarily requires an adoption of the average asset beta from the comparator set. Although that section does not prescribe that an average must be used, it recognises that the asset betas of multiple firms must be used. Without averaging, there is no practicable way to derive a single figure which can be used as the asset beta for DIRA purposes.

3.27 An asset beta based on the average estimated using a set of comparators that meets the requirements of s 150C(4)(a) and (b) will satisfy the efficiency and contestability requirements of s 150A. Any adjustment away from that average will not be consistent with the provisions of s 150C(4) once they come into force.

3.28 As explained in paragraph 3.6 above, we make 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

3.29 We consider that an estimate of the asset beta that is practically feasible for a notional producer is 0.48. We note that the difference between this estimate and the value of 0.45 used in this year's base milk price calculation does not have a material impact on the base milk price (less than 2c/kgMS). We therefore conclude that the asset beta used in this year's calculation is likely to be practically feasible for an efficient processor. We discuss the reasons for this conclusion below.

3.30 As part of Fonterra's reasons paper, MPG estimated 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.[30] In addition to the firms in the core comparator set, MPG's full comparator set included 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 applying the new s 150C(4) criteria.

3.31 Our expert advisors, CEPA, estimated an average asset beta value of 0.53 relying on the core comparator set originally compiled by MPG and using two five-year time periods (ending December 2015 and December 2020). They also estimated a value of 0.55 based on MPG's full sample comparator set. While these average estimates are somewhat higher, CEPA concluded that the range of their estimates include the MPG average estimate.[31] In addition, CEPA identified five additional firms as potentially meeting the s 150C(4) requirements.

3.32 In their submission on the CEPA advice, MPG agreed that the core comparator set is more appropriate in estimating an asset beta that would meet the requirements of s 150C(4) when they come into force. MPG also included three of the five additional firms identified by CEPA as potentially meeting the s 150C(4) requirements into the core comparator set.[32] On balance, we consider that MPG's approach used for selecting the comparator set is reasonable.[33]

3.33 In their submission on the CEPA advice, MPG also provided updated asset beta estimates using a five-year time period consistent with the most recent time period used by CEPA in its analysis. MPG argues that using the most recent 5-year period only is preferable to using two consecutive 5-year periods, ie a 10-year total, because the most recent data is more relevant. In this regard MPG notes that the Commission in its recent Fibre Input Methodologies (**Fibre IMs**) reasons paper compared and contrasted the pros and cons of each approach and concluded that the differences in estimation periods have little impact on our overall estimates for the fibre asset beta.[34]

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

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

32 Fonterra "Milk Price Group response to CEPA advice on dairy asset beta and specific risk premium – 24 August 2021" (25 August 2021), page 4.

33 We provide some further comments on the comparator set used to estimate the asset beta at paragraphs 3.53-3.56 below.

34 Fonterra "Milk Price Group response to CEPA advice on dairy asset beta and specific risk premium – 24 August 2021" (25 August 2021), page 3. See also Commerce Commissions "Fibre Input Methodologies – Main final decisions reasons paper" (13 October 2020), paragraphs 6.461-6.462.

3.34 While we agree with MPG that more recent data is likely to be more relevant, the use of a longer time period is likely to provide a more robust estimate of the asset beta.[35] Given the inherent uncertainty in estimating asset betas, we acknowledge MPG's arguments and accept that the most recent 5-year period will provide a reasonable estimate of the asset beta of an efficient processor. We note that giving some consideration to the longer period still has merit.

3.35 MPG's updated estimate of the asset beta is 0.47 or 0.46 for the five-year period ending 31 December 2020 (depending on whether the IFRS-16 adjustment to net debt is applied).[36] We note the limited impact of the IFRS-16 adjustment on the asset beta estimates and MPG's acknowledgement of CEPA's observation that applying the IFRS-16 adjustment may not be consistent with standard regulatory practice.[37] We may consider in future whether further expert advice on the appropriateness of this adjustment is necessary.

3.36 We arrived at our preferred estimate of the asset beta 0.48 by averaging the values from MPG's weekly and four-weekly estimates based on the core comparator set (amended to include the three additional companies), for the period ending in 31 December 2020, as reported by MPG in their submission on the CEPA advice.[38]

3.37 We have previously expressed the view (in our 2020 Fibre IMs reasons paper) that:[39]

> Daily asset beta estimates can be distorted by low liquidity stocks. To calculate an accurate asset beta estimate, it is important to measure contemporaneous changes in the individual firm's share price and the relevant market index. The shorter the estimation interval used (eg daily), the more difficult it is to capture a contemporaneous link, particularly where shares are traded infrequently.

3.38 We consider that the daily asset beta estimates can be useful as additional evidence, but an asset beta estimate based on the average from the weekly and four-weekly estimates is superior.

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35 See also CEPA "Response to submissions on the dairy asset beta and specific risk premium – 13 September 2021" (15 September 2021), pages 5-6.

36 Fonterra "Milk Price Group response to CEPA advice on dairy asset beta and specific risk premium – 24 August 2021" (25 August 2021), page 5.

37 Fonterra "Milk Price Group response to CEPA advice on dairy asset beta and specific risk premium – 24 August 2021" (25 August 2021), page 1.

38 Fonterra "Milk Price Group response to CEPA advice on dairy asset beta and specific risk premium – 24 August 2021" (25 August 2021), page 5.

39 Commerce Commissions "Fibre Input Methodologies – Main final decisions reasons paper" (13 October 2020), paragraph 6.463.1.

3.39 We note that the average estimate of 0.48 is consistent with CEPA's analysis using the most recent five years of data and their somewhat higher estimate using ten years of data. Our conclusion is also supported by the conclusion in the CEPA advice:[40]

> 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.

3.40 We further note that while the difference between our preferred estimate and MPG's preferred estimate of 0.45 might not be material for this year's calculation, deviating from the average estimate based on the core comparator set places into question the practical feasibility of the asset beta estimate used in the base milk price calculation. The larger the deviation from the average estimate, the less likely it is that the asset beta estimate will be practically feasible.

3.41 In their 2018 report, CEPA concluded that the asset beta of an efficient processor was 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.[41] 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.

3.42 MPG originally estimated an asset beta of 0.45 for the notional processor by applying a downward adjustment of 0.05 to the average asset beta of 0.50 estimated using their full comparator set.[42] In its submission on the CEPA advice, MPG still argues that a downward adjustment could be justified, but notes that its updated analysis brought its estimate of asset beta closer to 0.45 in any case.[43]

3.43 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 conclusion places more weight on the asset beta estimate for the core comparator set.

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

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

42 Fonterra "Attachment 6: Asset beta and specific risk premium – Milk Price Group paper" (8 July 2021), page 3.

43 Fonterra "Milk Price Group response to CEPA advice on dairy asset beta and specific risk premium – 24 August 2021" (25 August 2021), page 6.

3.44 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.[44] We agree with this conclusion by CEPA.

Submissions on a downward adjustment to the asset beta and our response

3.45 In their submission on the CEPA advice, Miraka does not agree that a downward adjustment to the asset beta is justified. They also point out that:[45]

> [I]f the asset beta process is credible, the concluded asset beta cannot fall away from an average or middle value and remain practically feasible. This is because such asset beta would reflect judgement bias either in favour of a higher economic return on capital (an asset beta above the mathematical average) or in favour of a lower economic return on capital (an asset beta below the mathematical average).

3.46 Synlait submitted that the Commission should re-consider its draft conclusion on the asset beta and suggested that, based on the work carried out by CEPA, an asset beta in the range of 0.53 - 0.56 would be more appropriate.[46] Open Country also submitted in favour of a higher asset beta.[47]

3.47 In its submission on the CEPA advice, MPG disagreed with CEPA's conclusions that a downward adjustment was not justified. In short, they argued the following:

3.47.1 Synlait's commodity processing asset beta could act as a proxy for its non-commodity business beta;

3.47.2 the Notional Processor would have lower systematic risk than the comparator set due to lower growth options;

3.47.3 the Notional Processor would have lower systematic risk than the comparator set due to the regulatory settings; and

3.47.4 the beta of the Fonterra Shareholder Fund (FSF) is representative of the beta of the Notional Processor.

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

45 Miraka "Submission on CEPA advice on asset beta and specific risk premium – 24 August 2021" (25 August 2021), paragraph 16 and 29.

46 Synlait "Submission on draft report on review of Fonterra's 2020-21 base milk price calculation – 1 September 2021" (2 September 2021), page 1.

47 Open Country Dairy "Submission on draft report on review of Fonterra's 2020-21 base milk price calculation – 1 September 2021" (2 September 2021), pages 1-2.

3.48 CEPA addressed each of these arguments in detail in their report responding to submissions on their original advice.[48] CEPA's responses can be summarised as follows.

3.48.1 While it is reasonable to expect that the asset betas of Synlait and a2 would be correlated, this does imply that a2's asset beta is a good proxy for the asset beta of Synlait's non-commodity business. Without support for this critical assumption, the remainder of this argument in favour of a downward adjustment falls through.

3.48.2 CEPA have previously responded to the arguments that the lack of growth options for the notional processor support a downward adjustment to the asset beta estimate.[49] CEPA points out that this theoretical argument was *inter alia* inconsistent with the empirical evidence on the asset beta for a practically feasible efficient processor as required by s 150A.

3.48.3 With regard to the regulatory effects on the asset beta, CEPA note that different approaches to price controls for a few years would have a small impact on the asset beta compared to factors affecting cash flows and valuation in the long term. They also point to the previous work by Dr Martin Lally that concluded that there was no empirical support for the claim that the type of price controls had a measurable impact on asset beta estimates.

3.48.4 On the matter of the Fonterra Shareholder Fund, CEPA concludes that the share structure was designed in the interests of farmer shareholders and Fonterra does not have pressure from third party shareholders to maximise returns to the processing activity. The value of the Fonterra units therefore does not reflect the fundamental value of the processing business and thus, the value of the asset beta would not be a good proxy for the asset beta of the processing business.[50]

3.49 We agree with the CEPA analysis responding to the points raised by MPG on the downward adjustment to the asset beta. We do not consider that the evidence supports a downward adjustment. In any case, as explained at paragraph 3.39 above, in our view deviating from the average estimate based on the core comparator set places into question the practical feasibility of the asset beta.

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48 CEPA "Response to submissions on the dairy asset beta and specific risk premium – 13 September 2021" (15 September 2021), pages 2-5.

49 See CEPA and Freshagenda "Dairy notional producers asset beta response to submissions – 4 June 2018" (14 June 2018), pages 13-15.

50 See also CEPA "Notional processor asset beta – 11 July 2019" (12 July 2019), pages 9-10.

3.50 After considering the MPG analysis, CEPA's advice and related submissions, our conclusion is that an estimate of the asset beta that is practically feasible for a notional producer is 0.48. We consider that primary reliance should be placed on the weekly and four-weekly estimates and that a downward adjustment away from the average estimate of the asset beta is not appropriate.

3.51 We consider that the difference between the asset beta estimated using our preferred methodology at 0.48, and the MPG asset beta estimate, at 0.45, does not have a material impact on the practical feasibility of the asset beta for an efficient processor. We therefore consider an asset beta estimate of 0.45 is likely to be practically feasible for a notional milk processor.

Observation on consistency of Fonterra methodology with the new DIRA requirements

3.52 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. The key areas where the new requirements come into play is in:

3.52.1 the requirement to apply the capital asset pricing model to estimate the asset beta; and

3.52.2 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

3.53 Pursuant to the Manual amendment, MPG originally derived a core comparator set of 19 firms that they believe meet the requirements of s 150C(4). MPG subsequently augmented the core comparator set with three additional companies identified by CEPA. 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.[51] We also note that MPG has identified a further

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

five firms that arguably 'come close' to meeting the new s 150C(4) requirements (MPG's extended comparator set).[52]

3.54 We engaged CEPA to advise us on whether the MPG analysis meets the new s 150C(4) requirements. 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.[53] 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.

3.55 CEPA pointed to five such potential firms that may meet the s 150C(4) requirements: Freedom Foods, WH Group Limited, Murray Goulburn, Boston Global Foods Companies, and Inner Mongolia Yili.[54] MPG and CEPA agree that three of these companies, namely Freedom Foods, WH Group and Boston Global Foods meet the criteria for inclusion into the core comparator set and MPG subsequently updated its analysis.[55] The reason why it is not appropriate to include Murray Goulburn in the core comparator set is because it was delisted in 2018, while Inner Mongolia Yili would not have satisfied the new s 150C(4) requirements prior to its acquisition by Westland Dairy 2019.

3.56 We have considered the MPG analysis and the CEPA advice and we agree with CEPA's view that the method used to select comparators would be consistent with s 150C(4) when it comes into force. We will consider reviewing the full list of comparators for next season's calculation review.

Estimation periods

3.57 In its original analysis, MPG estimated 5-yearly asset betas using the following periodicities and end-dates:

3.57.1 daily (31/12/2020, 25/6/2020, 26/12/2019, 27/6/2019, 27/12/2018);

3.57.2 weekly (31/12/2020, 25/6/2020, 26/12/2019, 27/6/2019, 27/12/2018); and

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52 Ibid.

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

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

55 See Fonterra "Milk Price Group response to CEPA advice on dairy asset beta and specific risk premium – 24 August 2021" (25 August 2021), page 4 and CEPA "Response to submissions on the dairy asset beta and specific risk premium – 13 September 2021" (15 September 2021), page 7.

3.57.3 four-weekly (31/12/2020, 18/6/2020, 5/12/2019, 20/6/2019, 6/12/2018).

3.58 To produce the average asset beta estimate for each comparator set, MPG calculated 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 non-overlapping periods in estimating the asset beta.[56] In its submission on the CEPA advice, MPG updated its analysis to use two non-overlapping periods ending on 31 December 2020 and 31 December 2015, respectively, consistent with the CEPA analysis. However, MPG argued that only the period ending on 31 December 2020 is relevant.[57]

3.59 In their advice CEPA estimated the asset betas for the MPG comparator sets using two non-overlapping 5-year periods and daily, weekly and four-weekly frequencies. 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 range of estimates for the different periods and frequencies include MPG's average estimates.[58]

3.60 In its updated analysis, MPG submitted that a single 5-year period could be an appropriate time-period for asset beta estimation and that it did not see strong justification for a 10-year period, using the Commission's recent Fibre IMs reasons paper as reference. As discussed above, we consider there is a trade-off between using the more relevant data from a shorter time period and the statistical robustness of using more data points from a longer time period. For example, in their report responding to submissions CEPA noted that:[59]

> The shorter the time-period considered the lower the number of observations and the higher the statistical uncertainty. The average beta obtained by using more relevant recent data may be more inaccurate than one obtained using a longer series.

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56 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.

57 Fonterra "Milk Price Group response to CEPA advice on dairy asset beta and specific risk premium – 24 August 2021" (25 August 2021), page 5.

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

59 CEPA "Response to submissions on the dairy asset beta and specific risk premium – 13 September 2021" (15 September 2021), page 6.

Downward adjustment of the asset beta

3.61 For the reasons explained at paragraphs 3.26 and 3.27 above, we consider that an adjustment away from the average asset beta estimated using a set of comparators that meet the requirements of s 150C(4)(a) and (b) will not be consistent with the provisions of s 150C(4) once they come into force.

3.62 We would encourage Fonterra to consider our comments 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

3.63 There are three rules in the Manual relevant to the consideration of asset stranding:

3.63.1 Rule 32 – Adjustments for amendments to Reference Commodity Products;

3.63.2 Rule 33 – Surplus capacity; and

3.63.3 Rule 43 – SRP.

3.64 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.[60]

3.65 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.[61] 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

[60] 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.

[61] Fonterra "Farmgate Milk Price Manual" (1 August 2020), page 47.

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.

3.66 Rule 43 allows for compensation to investors in the NP business for asset stranding risks not otherwise covered in the base milk price methodology.[62] The SRP to be determined under this rule is an *ex-ante* allowance added to the notional cost of equity.

3.67 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.[63] 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

3.68 For the seasons 2020/21 onwards, Fonterra has set the SRP to nil. Our conclusion is that this is appropriate for this season's calculation for the following reasons.

3.68.1 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 non-systematic and asymmetric risk, through a (positive or negative) SRP.

3.68.2 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 conclusion is that no *ex-ante* compensation for non-systematic risk is required through the SRP.

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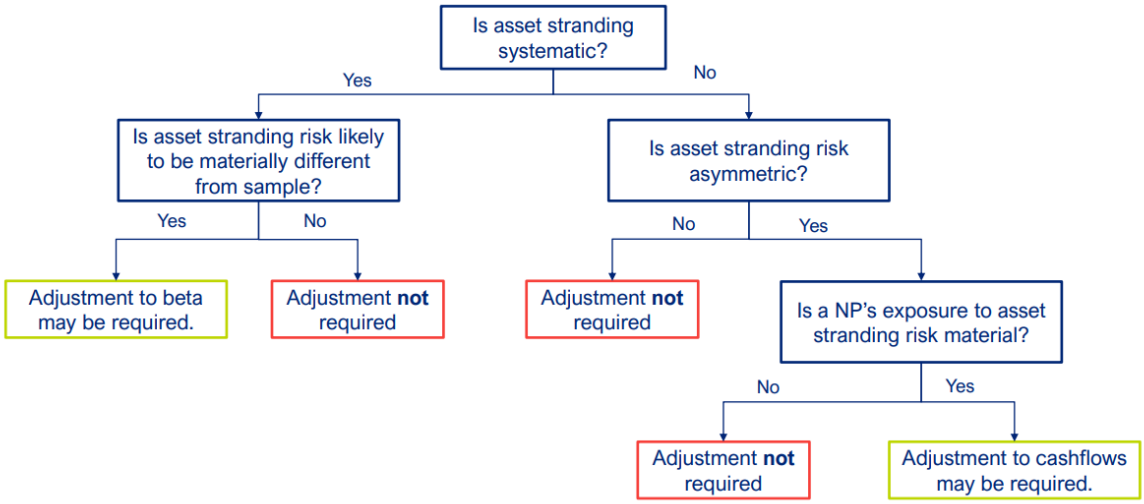
62 The Manual refers to the base milk price as the farmgate milk price.

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

3.69 We provide further details below.

3.70 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.

Figure 2: CEPA's flowchart on the SRP[64]



3.71 To the extent that asset stranding risk is systematic, the asset beta calculated under the Rule 42 of the Manual 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.

3.72 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."[65]

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

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

Submissions on the SRP and our response

3.73 Synlait submitted that if the SRP was retained at nil this would necessitate an adjustment to the asset beta (upwards).[66] They suggest the SRP being removed implies no stranding risk. Our conclusion as stated above is not that there is definitively no stranding risk. Rather our conclusion is that, given that we are satisfied that the asset beta caters for stranding risk that is systematic, no *ex-ante* compensation is required. For non-systematic stranding risk there are other measures available, for example changes to asset lives and/or depreciation profiles, to mitigate the risk of asset stranding. These alternative measures are discussed further below.

3.74 Open Country submitted that "[T]he removal of compensation in the WACC calculation for non-systematic risk of asset stranding is not justified".[67]

3.75 Miraka raised several points pertaining to the removal of the SRP and concluded that "[t]he removal of the SRP from the 2020/21 milk price is premature and has not been properly justified". They consider that the SRP should remain unchanged for this season and that the Commission should re-visit the issue in the 2021/22 season.

3.76 We are satisfied that the SRP has been appropriately considered within the context of asset stranding risk and given our conclusion on asset beta, and our conclusion on non-systematic risk, it follows that the removal of the SRP for the 2020/21 season is reasonable.

3.77 In their response to the submissions, CEPA's conclusions are consistent with our position. They state:[68]

> For an ex-ante SRP to be considered the risk needs to be material, non-systematic and asymmetric. Our judgement is asset stranding risk in this circumstance only meets one of these criteria – it is an asymmetric risk. The evidence that risks from environmental measures are material enough to strand assets remains weak.

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66 Synlait "Submission on draft report on review of Fonterra's 2020-21 base milk price calculation – 1 September 2021" (2 September 2021), page 2.

67 Open Country Dairy "Submission on draft report on review of Fonterra's 2020-21 base milk price calculation – 1 September 2021" (2 September 2021), page 2

68 CEPA "Response to submissions on the dairy asset beta and specific risk premium – 13 September 2021" (15 September 2021), page 8.

3.78 CEPA also noted in agreement with our position that a notional processor could mitigate stranding risk should it materialise through the utilisation of alternative measures. Measures such as changes to depreciation profiles for example, can effectively mitigate the risks of assets being stranded. Similarly, changes to asset lives can be an effective tool used against the materialisation of asset stranding risks.

3.79 For these reasons our conclusion on the SRP is to retain our position from the draft review.

Asset stranding risk

3.80 Non-systematic stranding risk is dealt with by the Manual Rules listed in paragraph 3.63 above.

3.81 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.

3.82 We note that CEPA considers that asset stranding risk caused by changes in demand for a notional milk processor is likely to be systematic.[69] This suggests that compensation for demand risk should be considered in the context of the asset beta.

3.83 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 at this time is weak.[70]

3.84 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 may be mitigated entirely.

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69 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.

70 Ibid.

3.85 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.[71]

3.86 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.

3.87 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.

Stranding of plants due to energy source conversion

3.88 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.

3.89 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.[72]

3.90 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, to fully utilise the remaining life of existing milk price assets and minimise capital costs.

3.91 An annual assessment will be carried out by Fonterra to assess whether any additional allowance for conversion costs, which are site specific, is necessary.

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

72 Per a 2020 assessment by Aurecon.

3.92 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.

3.93 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

3.94 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.

3.95 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.

3.96 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.

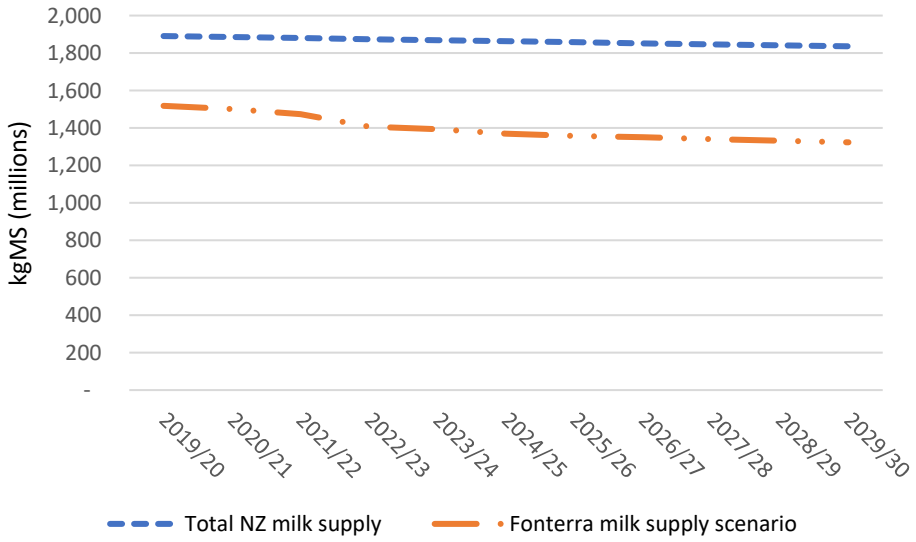
3.97 In summary, Fonterra's experts conclude that the short-term current plant capacity and milk supply are approximately in equilibrium and no additional plant needs to be added or retired.

Long term outlook

3.98 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.[73] As described in paragraph 3.65 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.

[73] Fonterra "Capital Structure Consultation 2021", page 22.

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



3.99 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.[74] 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).

3.100 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.

3.101 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 conclusion is that an SRP value of nil is reasonable.

Conclusion on stranding risk due to reduction in milk volumes

3.102 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.[75]

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

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

3.103 Our 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.

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

3.104 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.

3.105 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."[76]

3.106 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.[77] In respect of our focus on ISMP these points included:

3.106.1 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;

3.106.2 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**);

3.106.3 whether ISMP can be a substitute for MH SMP given their different functional properties;

3.106.4 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.

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[76] 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."

[77] 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.

3.107 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.

Specialised manufacturing process and use of specialised plant

3.108 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.[78]

3.109 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.

3.110 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.

3.111 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.

3.112 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.

3.113 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.

3.114 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.

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78 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?

3.115 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.[79]

3.116 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."[80]

3.117 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	[redacted]	[redacted]
ISMP	[redacted]	[redacted]
MTs ISMP informing milk price	4.3k	3.4k
Total MTs ISMP sold	[redacted]	[redacted]

3.118 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.

3.119 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

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

[80] 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.[81]

3.120 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.

3.121 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.

3.122 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

3.123 As part of our focused review of ISMP this year we considered the overall materiality of the impact of the inclusion of ISMP on the base milk price. Due to the application of exclusion criteria, most of Fonterra's ISMP is not included in the base milk price calculation.[82] 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.

3.124 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. The impact on the 2020/21 base milk price is similarly immaterial.

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

3.125 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

[81] 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.

[82] The rules are contained in the 'decision tree' shown in Appendix B.

properties of products in considering whether they constitute a commodity product.

3.126 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:[83]

> **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

3.127 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. However we accept that the uniform technical specifications criterion goes wider than product composition.

3.128 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 3.111 to 3.114 above and at 3.130 and 3.131 below.

Impact on base milk price of shorter production runs

3.129 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.

3.130 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.[84]

3.131 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.

Matters raised in submissions

3.132 Miraka has raised a number of detailed arguments about why ISMP should not be considered a qualifying material, and submits this as evidence that the rules and processes for off-GDT sales cannot therefore be relied upon.

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83 DIRA, s 5.

84 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.

3.133 The key arguments Miraka made are as follows.[85]

3.133.1 Miraka submit that ISMP is not a "qualifying material" because it is packed in non-standard packaging. Therefore ISMP cannot be considered cascadable to "general trade".

3.133.2 Miraka argue that to produce ISMP reliably and efficiently requires bespoke powder handling plant to protect the agglomerated milk powder particles. This plant would necessarily be classified as "specialised equipment" by comparison with plant specified for MH SMP.

3.133.3 Because Miraka consider that ISMP is not a "qualifying material" they argue that this adds weight to stakeholder concerns that rules and processes for off-GDT sales lack integrity.

3.133.4 Miraka request that we confirm that the "Manufacturers quotations" which Fonterra describes in its Reasons paper are based on requests for quotations that specify the "standard specification product" and that the resulting quotations do not include plant that is not required for the production of the "standard specification products".

3.133.5 They point out that the Commission discloses that "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". Miraka argue this means the product was not in fact fit for purpose or had not been sold as in-specification ISMP.

3.134 Because of its functional characteristics and processing requirements, we consider at this point that ISMP is a boundary product in respect of the feasible range of products constituting qualifying materials. We do not agree with Miraka that the detailed points it raises in respect of ISMP are equally applicable to other products and therefore constitute reasonable justification for questioning the integrity of the rules and processes for off-GDT sales in general. We note, for example that UHT SMP appears to enjoy significant price premiums over MH SMP, yet there is no question that UHT SMP constitutes a standard specification product, as it is also sold on GDT.

3.135 As discussed in paragraphs 3.123 to 3.124 above, the impact of ISMP itself on the milk price is immaterial at around 0.15 cents per kgMS.

3.136 Given our present view that ISMP constitutes a boundary product and that its impact on the base milk price is immaterial, its inclusion as a qualifying material

[85] Miraka "Submission on draft report on review of Fonterra's 2020-21 base milk price calculation – 1 September 2021" (2 September 2021), paragraphs 4-12.

does not detract from our overall conclusion that the use of off-GDT pricing is practically feasible.

3.137 Given the matters raised by Miraka in relation to ISMP we intend to examine more closely how the Manual gives effect to the DIRA definition of "commodity" in a future Manual review. This would likely be followed by a further review of the range of qualifying materials in light of our updated conclusion on how the Manual gives effect to the DIRA.

3.138 Miraka has also raised concerns about the circular nature of the definition of standard packaging in the Milk Price Manual and the application of Fonterra's off-GDT rules in respect of cascadable products.

3.139 Attachment 5 of Fonterra's Reasons Paper in Support of Fonterra's Base Milk Price for the 2020/21 Season explains that a cascadable product "can be used to satisfy an order for a standard product offering, such as regular WMP, without any additional notification to the customer". Miraka asserts that ISMP is not "cascadable to general trade materials" (i.e. could not be used to fill an order for MH SMP without further notification and negotiation).

3.140 We recommend that Fonterra:

3.140.1 clarifies the definition of standard packaging in the Manual to resolve the circularity described by Miraka; and

3.140.2 clarifies its application of the "cascadable product" rule in the Manual.

Review of PTMRP

3.141 The Manual's WACC specification in Rule 41 includes provision for a post-tax market risk premium 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 Glossary of Fonterra's 2020/21 Milk Price Manual.[86]

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

[86] Fonterra "Attachment 1 – Fonterra's marked up version of the 2020/21 Manual for the 2020-21 season – 1 August 2020" (18 September 2020), page 90.

3.143 We amended the PTMRP to 7.5% in our Fibre Input Methodologies.[87]

3.144 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%.

3.145 We note that Fonterra has amended the 2021/22 Manual to specify the Review year for the PTMRP as 2021/22 and to ensure that the timing of subsequent reviews will be aligned with the reviews of the asset beta and SRP.[88] Given our conclusion in the paragraph above, we expect that the PTMRP review will result in an increase in the PTMRP to 7.5% from the 2021/22 season onward.

Detailed findings from our fit for purpose review

3.146 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.

3.147 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:

3.147.1 changes in costs;

3.147.2 inclusion of off-GDT sales as a reference for calculating commodity prices;[89]

3.147.3 changes in sales phasing;

3.147.4 changes in timing or volume of milk collected; and

3.147.5 yield and loss calculations.

3.148 Our 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.

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87 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.

88 Fonterra "Attachment 1 – Base Milk Price Manual for the 2021-22 season (marked up version) – 30 July 2021" (18 August 2021), page 89.

89 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.

Changes in costs

3.149 Except for lactose costs, there has not been a significant increase in individual costs for the 2020/21 season.

3.150 Lactose costs have increased by $138.4m or around 9 cents per kgMS for the 2020/21 season. The increase is driven by changes in international lactose prices applied to the notional milk price volumes.

3.151 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.

3.152 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).

3.153 Therefore, our 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

3.154 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.

3.155 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 0.7 cents. We do not consider this to be significant.

3.156 Therefore, we continue to consider that the use of off-GDT sales pricing is practically feasible.

3.157 Also, since prices continue to be independently set, we continue to consider that the prices provide an incentive for efficiency.

Changes in sales phasing

3.158 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.

3.159 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:

3.159.1 there is insufficient data to develop a reasonable notional figure; and

3.159.2 Fonterra only has limited discretion over its sales phasing.[90]

Changes in volumes of milk collected

3.160 The 2020/21 volume of milk collected (1,539,223 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.

3.161 In our focus area on asset stranding above, we have considered the outlook for future milk supply.

Yield and loss calculations

3.162 A full description of Fonterra's process to update the loss assumptions can be found in its 2020/21 reasons paper.[91]

3.163 The 2020/21 losses are in line with the losses achieved in the 2019/20 season.

3.164 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.

3.165 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.

3.166 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 conclusion is that the yield and loss calculations are consistent with the efficiency dimension of the s 150A purpose.

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90 Commerce Commission "Review of Fonterra's 2014/15 base milk price calculation - Final report" (15 September 2015), paragraphs 7.94 to 7.106.

91 Fonterra "Reasons paper on review of 2020/21 base milk price calculation – 1 July 2021" (8 July 2021), page 13.

Appendix A Points raised in submissions that are not addressed in Chapter 3

Submitter	Ref[92]	Key point	Our response
Miraka	Para 14	At paragraph 3.88 and Figure 4, the Commission explains that Fonterra has provided a comparison of the price achievement of ISMP compared to UHT SMP for 2019/20 and 2020/21. The price achievements in Figure 4 have been redacted. The Commission considers that Figure 4 does not suggest "that the IPCs create a systematic neutralisation of any nominal premium for ISMP". Miraka wishes to more clearly understand the points the Commission is making. • In the first instance Miraka notes the description in paragraph 3.88 of the data in Figure 4 does not align with the title of Figure 4. Given the purpose of Figure 4, Miraka assumes Figure 4 actually compares an annual weighted average price for each of off-GDT UHT SMP and off-GDT ISMP, both after deducting IPCs, with the annual weighted average price for on-GDT MH SMP. These differences are assumed to be the "price achievements" referred to in the title of Figure 4. Price achievement for UHT SMP is presumably provided as a comparison point for ISMP although it is not clear why that is relevant. Miraka and other stakeholders have not questioned the inclusion of UHT SMP as a "qualifying material". The Commission is asked to confirm the Miraka interpretation of Figure 4. • Based on the previous conclusion of the Commission that IPCs largely neutralised the selling price margin between off-GDT ISMP with on-GDT MH SMP for 2019/20 (now clarified as being due to the sale of distressed product) Miraka assumes the redacted "price achievement" for ISMP (i.e. by comparison with MH SMP) for 2019/20 is close to zero. Miraka then assumes that the comparison between ISMP "price achievement" as disclosed in Figure 4 for 2020/21 compared to 2019/20 either shows: o a similar outcome to 2019/20, because 2020/21 also includes a substantial volume of downgrade product, as would be expected for ISMP produced on standard SMP plant; or o is materially higher, thus leading to the Commission's conclusion that IPCs do not "systematically neutralise" the premium on ISMP. But it is then necessary to conclude that unlike 2019/20, volumes in 2020/21 include a substantial volume of ISMP carrying the expected high price premiums. This then leads to the conclusion that this product was NOT manufactured on standard plant, required specialised plant, and is therefore not "qualifying material" (and of course cannot be "qualifying reference sales").	The table compares the annual weighted average price of off-GDT ISMP with off-GDT UHT SMP, a standard specification product. The Commission has previously considered and accepted Fonterra's explanations for why there could be a difference between weighted average prices achieved off-GDT and on-GDT, and so the focus of the analysis here is to consider differences between products in off-GDT price achievement. The results of our analysis are inconclusive because the price achievement in ISMP is lower in 2019/20 and higher in 2020/21.

[92] Submissions received on our draft report unless stated otherwise.

Submitter	Ref[92]	Key point	Our response
Miraka	Para 14	Miraka requests the Commission revisit the data in Figure 4 in the light of Miraka comments.	See our response above
Miraka	Para 29	Miraka considers that Fonterra should obtain a revised opinion of the external expert after they have reassessed losses on the basis of a production plan consistent with the detailed NP sales plan.	See our response above
Miraka	Para 17	On the one hand off-GDT sales expressly exclude tender sales which would typically be at lower prices but would otherwise meet the DIRA s 5 definition of commodities. On the other hand, it is now identified that off-GDT sales can include sales which capture rents associated with country related quotas (including what appears here to be due to country supply constraints). Miraka requests this different treatment be explained and justified.	See our response above
Miraka	Para 10	The Milk Price Manual does not provide a meaningful definition of "standard packaging": A "qualifying material" must be a "standard product offering" and must be packaged in "standard packaging". However "standard packaging" is then defined as packaging used for a "standard product offering"7That circular explanation renders meaningless the definition of "standard packaging."	This is a matter for our review of the Manual. We recommend that Fonterra clarifies the definition of standard packaging to remove the circularity described by Miraka.
Miraka	Para 24	Unlike UHT SMP however, ISMP is not "cascadable to general trade materials" (i.e. could not be used to fill an order for MH SMP without further notification and negotiation)20. This is because the lower density of the product means it cannot use "standard packaging" and adds to product handling costs (e.g. reduced pallet loads).	This is a matter for our review of the Manual. We recommend that Fonterra clarifies its application of the cascadable products rule in the Manual.
Miraka	Para 24	The Commission seems to consider that if the technical specifications of a product (such as ISMP) share the same milk component composition as the standard specification product (e.g. MH SMP) it must also be a commodity. This narrow interpretation of "technical specifications" is very unlikely shared by Fonterra and is not shared by the wider dairy industry.	This misrepresents what the Commission said at paras 3.97 to 3.99 which was to explain why technical specifications had been considered previously. We accept that the uniform technical specifications criterion goes wider than product composition.
Miraka	Para 36	Miraka sees no reason why the NP model does not include a production plan that delivers the NP full sales mix (including on and off-GDT), processing and matching all milk (by catchment area) with all factories (by fixed geographic location) from which to properly determine milk transport costs, monthly plant production assumptions, and production costs that reflect those plant production assumptions (including real world assumptions about processing run lengths and period of time operating at peak capacity). The absence of that plan means it is not possible to determine practical feasibility across a large range of production efficiency and cost assumptions.	This point raises matters previously raised and considered by the Commission. Refer to 2019/20 calculation review report (pages 34 to 35) for our response to submissions on plant modelling assumptions.
Miraka	Para 37	A final translation takes these monthly weighted average selling prices and applies them to a larger series of sales based on Fonterra actual sales of all RCPs including products which do not inform the NP selling prices. This larger sales series will inevitably carry different phasing	This point raises matters previously raised and considered by the Commission. Refer 2017/18

Submitter	Ref[92]	Key point	Our response
		to the "price inform" sales series and so the weighted average prices (the Benchmark Selling Prices) will be different to the weighted average prices for the price inform sales. In other words the resulting weighted average price does not reflect the average price achieved for any real world set of sales made by Fonterra, and those weighted average prices cannot therefore be represented to be practically feasible.	calculation review report (page 12) for our response to Miraka's previous submission on sales phasing.
Miraka	Para 42	The Commission indicates the materiality standard would apply to the "fit for purpose" review to determine if any change in a "component" under review merits more analysis. This seems to be a misstatement of intent. The "fit for purpose" review only applies to "revenue and cost components that are not part of the key areas that we focus on". This implies the materiality standard would not apply to the broader review framework which is "particularly focussed on the issues that are most likely to have a material impact on the [BMP] calculation"; it would also not apply to the more detailed process by which the Commission determines the "key focus areas" for its annual review.	This submission is relevant to the framework outlined in our revised Approach paper and not to this year's calculation review. We would like to point out that the materiality standard does apply to determining key focus areas as indicated in paragraph 103 and footnote 50 of our revised Approach paper. We will consider whether this point requires further clarification when we next update our Approach paper.
Miraka	Para 44	Miraka assumes the intention is to measure materiality with reference to the after tax WACC charge. For example, this would amount to NZ$1.8M in the case of the 2019/20 BMP (0.5% of NZ$361 M). That however seems a relatively low benchmark for materiality. A measure of materiality set to 5% of after tax WACC charges would equate to approximately 1 c/kg MS in 2019/20 and seems a more workable scale.	The calculation applies a 0.5% change to the existing WACC to calculate a new total capital charge. The difference between the existing capital charge and the new capital charge gave rise to a working materiality of around 2.3c per KgMS for 2020/21. We will consider clarifying the calculation when we next update our Approach paper. We note that in identifying our focus areas there are various considerations in addition to materiality that we have set out in our Approach paper.
Miraka	Submission on CEPA advice,[93] paras 3 and 11	In an earlier 2018 paper responding to submissions to the Commission on the asset beta, CEPA concluded Fonterra should not be included in the comparator set. Fonterra itself is not a typical processor because the separation between the interests of investors and of milk suppliers is blurred. Fonterra itself cannot therefore provide a default benchmark for practical feasibility of the NP asset beta and WACC. For the same reasons Fonterra itself should not be included in the comparator group for the NP asset beta.	This argument was considered in detail as part of the analysis provided by the experts in the course of our 2018/2019 calculation review. We point Miraka to our conclusion in the final report for the 2018/2019 calculation review where we noted that there are arguments both for and against including Fonterra in the comparator set and that in any case, the inclusion did not have a material impact on the estimate of the asset beta.[94]

93 Miraka "Submission on CEPA advice on asset beta and specific risk premium – 24 August 2021" (25 August 2021).

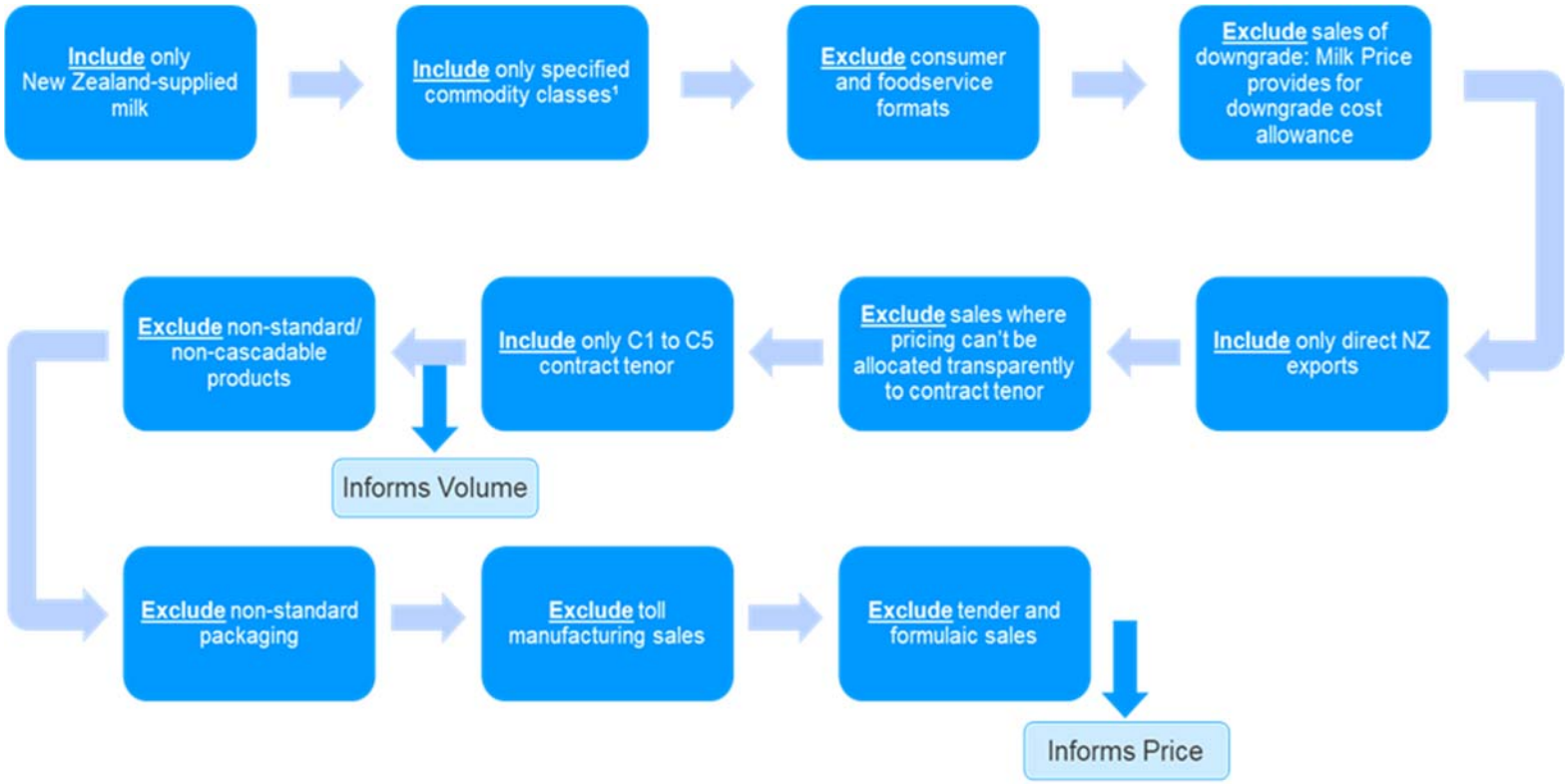
94 Commerce Commission "Final report – Review of Fonterra's 2018/19 base milk price calculation" (12 September 2019), paragraph 2.15.5.

Submitter	Ref[92]	Key point	Our response
Miraka	Submission on CEPA advice, paras 47-48	Miraka request that we check that the WACC formula in the Manual has been correctly applied in this year's calculation. They also request further information on the adjustment to costs for debt issuance.	The WACC calculation in the base milk price calculation is consistent with the formula specified in Section 1.4 of Part C of the Manual and the description at page 34 of Fonterra's 2020/21 Reasons Paper. We can confirm that the 35 basis point debt issuance costs does not include swap costs. We encourage Fonterra to make the full calculation transparent in its future Reasons Papers.
Synlait	Submission on proposed focus areas,[95] page 4	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.	We have had regard to the matters that Synlait raised, as far as we think they are 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. We have considered the long-term view in para 3.100 and in the conclusion on stranding risk due to reduction in milk volumes.
Open Country	Submission on CEPA advice,[96] page 1	Open Country note that a more transparent process should have been used in MPG's selection of firms, thus allowing CEPA to review the full list of firms considered. They also point out that even without the full list, CEPA has identified possible additional firms. This suggests some gaps in the MPG methodology.	We note that MPG included three of the five additional firms identified by CEPA as potentially also meeting the new s 150C(4) requirements in their revised analysis provided in the MPG submission on the CEPA advice. The remaining two firms were not included because data was not available for those firms for the entire period analysed. Nonetheless, we encourage MPG to consider the point regarding transparency of their methodology for season 2021/22.

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

96 Open Country "Submission on CEPA advice on asset beta and specific risk premium – 26 August 2021" (26 August 2021), page 1.

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