

Review of Fonterra's 2021/22 base milk price calculation: Dairy Industry Restructuring Act 2001

Final report

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Date of publication: 15 September 2022



Associated documents

Publication date	Title
15 August 2022	<u>Draft Report - Review of Fonterra's 2021/22 base milk price calculation: Dairy Industry Restructuring Act 2001 Calc review</u>
19 April 2022	<u>Proposed focus areas for our review of Fonterra's 2021/22 base milk price calculation</u>
15 December 2021	<u>Final Report – Review of Fonterra's 2021/22 milk price Manual: Dairy Industry Restructuring Act 2001</u>
15 September 2021	<u>Final Report – Review of Fonterra's 2020/21 base milk price calculation: Dairy Industry Restructuring Act 2001</u>
5 July 2021	<u>Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation</u>
13 October 2020	<u>Fibre input methodologies – Reasons paper main final decisions</u>
15 September 2020	<u>Final report – Review of Fonterra's 2019/20 base milk price calculation: Dairy Industry Restructuring Act 2001</u>
15 September 2016	<u>Final report – Review of Fonterra's 2015/16 base milk price calculation: Dairy Industry Restructuring Act 2001</u>
15 September 2015	<u>Final report – Review of Fonterra's 2014/15 base milk price calculation: Dairy Industry Restructuring Act 2001</u>

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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 2021/22 base milk price calculation (**the Calculation**) is consistent with the purposes of the base milk price 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 2021/22 season and builds on the analysis and conclusions from our previous Manual and review of Fonterra's Base Milk Price Calculation (**Calculation review**).²

Our overall conclusion

- 1.3 Our conclusion is that the assumptions adopted, and the inputs and processes used by Fonterra to calculate the 2021/22 base milk price are consistent with the contestability and the efficiency dimensions of the section 150A Purpose.

How this report is structured

- 1.4 Chapter 2 explains our review framework and the scope of our 2021/22 Calculation review.
- 1.5 Chapter 3 sets out our conclusions from:
 - 1.5.1 our review of the focus areas for the 2021/22 Calculation review; and
 - 1.5.2 our fit for purpose review of the assumptions adopted, and inputs and processes used by Fonterra when calculating the base milk price.
- 1.6 Attachment A provides a summary of 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:
 - 1.6.1 our paper on the proposed focus areas for the 2021/22 calculation review;³ and

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 2.6 below.

² [Commerce Commission "Final Report – Review of Fonterra's 2021/22 milk price Manual: Dairy Industry Restructuring Act 2001" \(15 December 2021\).](#)

³ [Commerce Commission "Proposed focus areas for our review of Fonterra's 2021/22 base milk price calculation" \(19 April 2022\).](#)

- 1.6.2 our draft report on our review of Fonterra’s base milk price calculation of the 2021/22 season (**draft report**).⁴
- 1.7 Attachment B provides a glossary of the key terms and abbreviations used in this report.
- 1.8 Attachment C of our draft report provides a detailed explanation of the process and impact of the change in application of the cascable product rule, as provided by Fonterra.⁵

⁴ [Commerce Commission “Draft report – Review of Fonterra’s 2021/22 base milk price calculation: Dairy Industry Restructuring Act 2001” \(15 August 2022\).](#)

⁵ [Commerce Commission “Draft report – Review of Fonterra’s 2021/22 base milk price calculation: Dairy Industry Restructuring Act 2001” \(15 August 2022\) at Attachment C.](#)

Chapter 2 Our review framework

Our approach for the Calculation review

- 2.1 This report should be read with our 2021 approach paper, Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation (**Approach paper**), which we have applied in this review and which forms part of this report.⁶ The Approach paper provides an overview of the approach we take in our reviews of Fonterra's Manual and base milk price calculation and includes:
- 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 analytical and 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 milk from farmers. The regime also promotes greater transparency of Fonterra's base milk price setting processes.⁷
- 2.3 In our Approach paper, we discuss both the efficiency and contestability dimensions in the context of the base milk price Calculation review.⁸ In summary:
- 2.3.1 Efficiency: our view is that the assumptions adopted, and inputs and processes 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 processes used in the Calculation are practically feasible for an efficient processor. The essence of contestability is that efficient firms can compete in the market. If efficient firms are able to compete in the market, then contestability is provided for.

⁶ [Commerce Commission "Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation" \(5 July 2021\).](#)

⁷ [Dairy Industry Restructuring Amendment Bill \(Government Bill\) 2012, at 2.](#)

⁸ [Commerce Commission "Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation" \(5 July 2021\), at 34-52.](#)

- 2.4 Our analytical and practical approach to our statutory reviews is described in Chapter 4 of the Approach paper.⁹
- 2.5 Under DIRA we are required to review the Calculation of the base milk price and assess the extent to which the assumptions adopted, and the inputs and processes used by Fonterra in setting the base milk price, are consistent with the efficiency and contestability dimensions, as outlined in section 150A of DIRA (the **section 150A Purpose**).
- 2.6 The base milk price in relation to a season means the price per kilogram of milk solids that is set by Fonterra for that season.¹⁰ The forecast for the base milk price is currently \$9.10 - \$9.50 per kilogram of milk solids (**kgMS**) for the season under review in this report, which ended on 31 May 2022.¹¹
- 2.7 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.
- 2.8 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 our Approach paper.¹²

Scope of our review of the 2021/22 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.
- 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 includes:¹⁴

⁹ [Commerce Commission "Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation" \(5 July 2021\), at 18-30.](#)

¹⁰ DIRA, section 5.

¹¹ See <https://www.nzx.com/announcements/391677>.

¹² [Commerce Commission "Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation" \(5 July 2021\).](#)

¹³ [Commerce Commission "Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation" \(5 July 2021\), at 101.](#)

¹⁴ [Commerce Commission "Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation" \(5 July 2021\), at 102-102.3.](#)

- 2.10.1 an analytical verification of the values used in each 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 material changes from our previous analysis of the base milk price reporting model, we will consider whether more analysis of that component is required.¹⁵ This year we have only identified material changes to two components compared to last year: the lactose cost and off-GDT prices.
- 2.12 For this year's Calculation review, our focus areas are:
- 2.12.1 asset beta;
 - 2.12.2 post tax market risk premium (**PTMRP**);
 - 2.12.3 Qualifying Materials and incremental product cost (**IPC**) adjustments;¹⁶ and
 - 2.12.4 cost inflation adjustments.
- 2.13 We initially proposed the asset beta, PTMRP, Qualifying Materials and IPC adjustments as focus areas for this year's review.¹⁷ We included cost inflation adjustments as a focus area in response to submissions requesting we review the impact on milk price costs of current inflationary pressures across the broader economy. This review is limited to a consideration of adjustments to capital asset costs and variable manufacturing costs.
- 2.14 With the exception of cost inflation adjustments, 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.

¹⁵ [Commerce Commission "Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation" \(5 July 2021\), at 103.](#) As described, for purposes of identifying changes which might become future focus areas we apply an 'indicative operational' materiality of an equivalent of 0.5% of the WACC used in the milk price reporting model for the season under review.

¹⁶ The meaning of these two terms is explained below in paragraphs 3.47 to 3.50 and 3.73.

¹⁷ [Commerce Commission "Proposed focus areas for our review of Fonterra's 2021/22 base milk price calculation" \(19 April 2022\).](#)

Information considered in our review process

- 2.15 In reaching our conclusions we have considered:
- 2.15.1 submissions received on the proposed focus areas for this year’s review;¹⁸
 - 2.15.2 submissions received on our draft report;¹⁹
 - 2.15.3 Fonterra’s reasons paper in support of the base milk price calculation for the 2021/22 season;²⁰
 - 2.15.4 the advice of Mr Greg Winter, technical advisor;²¹ 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.²²
- 2.16 Where stakeholders raised points in submissions relevant to the focus areas and fit for purpose section in this year’s review, we have addressed these points in Chapter 3. In Attachment A we provide a summary of responses to matters raised outside the scope of our focus area reviews.

¹⁸ Submissions on our Proposed Focus Areas Paper were received from four stakeholders (Fonterra Co-operative Group Limited, Miraka Limited, Open Country Dairy Limited and Synlait Milk Limited), available at <https://comcom.govt.nz/regulated-industries/dairy/milk-price-manual-and-calculation/milk-price-calculation/milk-price-calculation-202122-season>.

¹⁹ [Miraka, Open Country Dairy, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(30 August 2022\)](#); [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\)](#); [Fonterra Co-operative Group Limited "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\)](#).

²⁰ [Fonterra "'Reasons' Paper in Support of Fonterra's Base Milk Price for the 2021/22 Season" \(1 July 2022\)](#).

²¹ We engaged Mr Winter to provide technical expertise in support of our review of the Qualifying Materials & IPC adjustments. Mr Winter previously provided independent expert reports for our 2012/13 and 2015/16 Calculation Reviews. In this instance the scope of his engagement did not extend to the provision of a report. His advice is reflected in the conclusions set out in this report.

²² 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-price/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 2021/22 season are consistent with the section 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; 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 2021/22 base milk price are consistent with the contestability and the efficiency dimensions of the section 150A Purpose.
- 3.4 In undertaking our review of this season's calculation, we have applied the section 150C requirements in DIRA, including the requirements set out in section 150C(4) relating to the calculation of the asset beta. These requirements came into force on 1 June 2021 and therefore, apply from the season that is under review in this report.
- 3.5 On this basis, our conclusions with respect to the asset beta consider whether the estimated value is likely to be appropriate for an efficient processor *and* whether the methodology applied to arrive at this value is consistent with section 150C(4).
- 3.6 Although not matters that impact our assessment of the assumptions adopted and the inputs and processes used by Fonterra to calculate the base milk price for 2021/2022, we recommend that Fonterra:
 - 3.6.1 reconsider the inclusion of Fonterra data in the comparator set used to estimate the asset beta in its next review of the asset beta scheduled for the 2024/25 season;
 - 3.6.2 consider disclosing the information listed in paragraphs 3.137 to 3.139 in a way that it provides meaningful information to interested parties;

- 3.6.3 revise the Manual to include the requirements of the cascable product rule as it is applied, including clarifying the reference to "other standard product offerings" and the definition of standard packaging as discussed in paragraphs 3.73, 3.80 and 3.88; and
- 3.6.4 revise the Manual to provide guidance on the interpretation of what constitutes significant quantities and over what timeframe the assessment of quantity is made. This could include volume thresholds, further descriptors, or other indicators. This guidance would provide clarification about Fonterra's interpretation of leg (a) of the DIRA commodity definition. We also recommend that Fonterra reconsider the inclusion of the AMF 1250kg Goodpack format as a Qualifying Material based on this guidance.

Focus areas review

Contestability

- 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 consistent with the contestability dimension of the section 150A Purpose. We consider that:
 - 3.7.1 the Milk Price Group (**MPG**) estimate of the asset beta, at 0.48, is within a reasonable range of asset beta values for an efficient processor;
 - 3.7.2 the PTMRP input value of 7.5% reflects the Commerce Commission's most recent estimate prior to the beginning of the review period of the post-tax difference between the expected return on a market portfolio and the risk-free rate faced by investors in the broader market;²³
 - 3.7.3 the list of Qualifying Materials constituting the Reference Commodity Products (**RCPs**) can be manufactured using standard plant and could be sold by an efficient processor at prices that are consistent with the reference prices;
 - 3.7.4 the IPCs generated by Fonterra's internal costing system are achievable by Fonterra and an efficient processor; and

²³ [Commerce Commission "Fibre input methodologies – Main final decisions – reasons paper" \(13 October 2020\)](#).

- 3.7.5 the methods used for updating costs incorporate the effects of inflation and are appropriate for the capital asset and variable manufacturing cost lines to which they have been applied. The methods are based on industry trends in actual cost data and therefore we consider the outcomes they produce are practically feasible for an efficient processor.

Efficiency

- 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 consistent with the efficiency dimension of the section 150A Purpose. We consider that:
- 3.8.1 the asset beta input value of 0.48 is a notional value derived from independent data;
 - 3.8.2 the PTMRP input value of 7.5% is a notional value derived from an independent benchmark;
 - 3.8.3 although the Calculation revenues are based on Fonterra's actual sales of RCPs, as provided for in section 150C(1)(a), using a GDT or off-GDT benchmark set independently of Fonterra's current year performance provides an incentive to Fonterra to operate efficiently;
 - 3.8.4 given the IPCs in the Calculation are forecast costs, they provide an appropriate notional benchmark to beat; and
 - 3.8.5 for cost inflation adjustments, the rates used are compiled independently of Fonterra's current year performance and so provide an appropriate notional benchmark to beat.²⁴

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. This was driven by changes in international lactose prices applied to the notional milk price volumes and is outside Fonterra's control.
- 3.10 We also identified a material change in the impact of off-GDT pricing that requires consideration in relation to the contestability dimension of section 150A. Fonterra says that this was caused by unusually favourable market conditions which enabled the achievement of higher than normal off-GDT premiums.

²⁴ [Commerce Commission "Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation" \(5 July 2021\), at 75-79.](#)

- 3.11 Fonterra has provided a satisfactory explanation with supporting evidence for this material change.²⁵
- 3.12 We did not identify any other material variances in inputs and assumptions compared with last year's base milk price calculation.
- 3.13 In its reasons paper in support of the Calculation, Fonterra has confirmed that it has:
- 3.13.1 not made any substantive amendments to the Manual for 2021/22 in respect of the revenue calculation; and
 - 3.13.2 not made any material changes to the Calculation methodology since last year.²⁶
- 3.14 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.
- 3.15 Therefore, for the assumptions and inputs that we have analysed as part of the fit for purpose review, our conclusions are as follows:
- 3.15.1 the assumptions adopted, and the inputs and process used by Fonterra in calculating the 2021/22 base milk price are consistent with the efficiency dimension of the section 150A Purpose; and
 - 3.15.2 the assumptions adopted, and the inputs and process used by Fonterra to calculate the 2021/22 base milk price are consistent with the contestability dimension of the section 150A Purpose.

Detailed findings from our focus areas review

- 3.16 For our 2021/22 Calculation review, we have included the following focus areas:
- 3.16.1 asset beta;
 - 3.16.2 PTMRP;
 - 3.16.3 Qualifying Materials and IPC adjustments; and
 - 3.16.4 cost inflation adjustments.

²⁵ [Fonterra Co-operative Group Limited "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\).](#)

²⁶ [Fonterra "Reasons' Paper in Support of Fonterra's Base Milk Price for the 2021/22 Season" \(1 July 2022\), at 11, 20 and 32.](#)

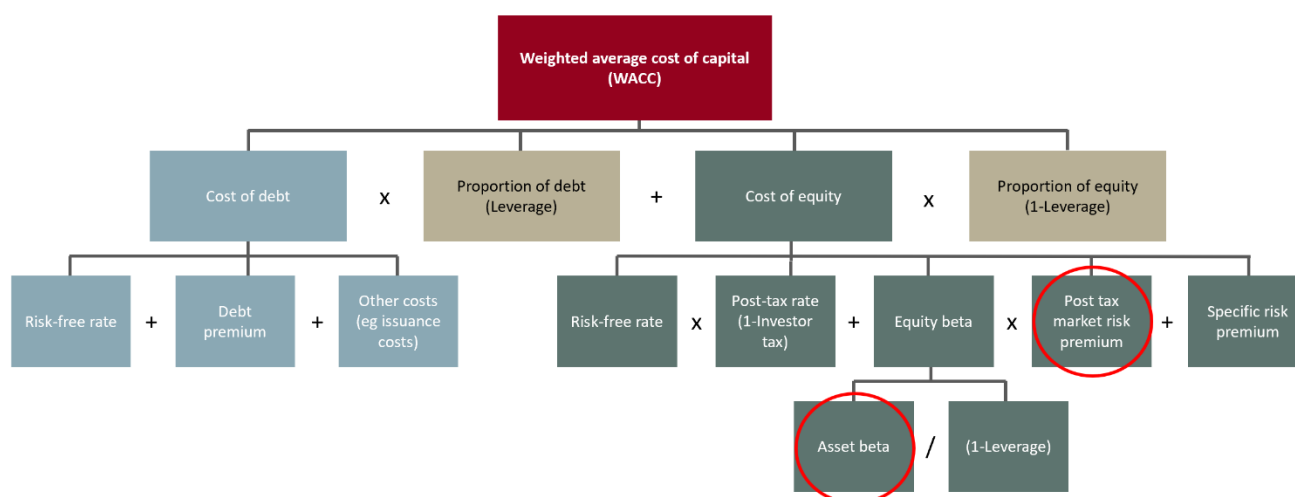
- 3.17 We have dealt with Qualifying Materials and IPC adjustments in separate sections below.

Asset beta

- 3.18 The asset beta is a material input into the weighted average cost of capital (**WACC**), which is a material input into the Calculation. The asset beta 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 PTMRP, are components of the WACC.

- 3.19 Figure 3.1 below illustrates how the different components of the WACC calculation fit together, including the asset beta and the PTMRP.

Figure 3.1 WACC components



- 3.20 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

- 3.21 The Dairy Industry Restructuring Amendment Act 2020 introduced new requirements for the asset beta that clarified the characteristics of firms to be used as comparators when estimating the asset beta. The amended provisions are contained in section 150C(4) of DIRA and came into force on 1 June 2021.

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.

- 3.22 In order to meet the purpose in section 150A, section 150C(4) requires Fonterra to use an asset beta that is consistent with the estimated asset betas of other processors of dairy and other food products that are:²⁸
- (a) traded in significant quantities in globally contested markets; and
 - (b) characterised by uniform technical specifications.
- 3.23 Prior to the introduction of section 150C(4) there were no specific requirements for calculating the asset beta.
- 3.24 Our final report on the 2020/21 Calculation review made two observations on what we consider to be an appropriate implementation of these provisions:
- 3.24.1 an asset beta based on the average, estimated using a set of comparators that meets the requirements of section 150C(4)(a) and (b), will satisfy the efficiency and contestability requirements of section 150A;²⁹ and
 - 3.24.2 any adjustment away from that average will not be consistent with the provisions of section 150C(4) once in force.³⁰
- 3.25 We encouraged Fonterra to consider our comments on their methodology when estimating the asset beta for the Calculation. Our view was that maintaining an adjustment away from the average asset beta would not be consistent with the provisions of section 150C(4) once in force.³¹
- 3.26 In our final report on the 2021/22 Manual review, we concluded that with regard to the asset beta, Rule 42, as currently worded, is inconsistent with section 150C(4) and is therefore inconsistent with the statutory purpose set out in section 150A of DIRA.³²
- 3.27 For completeness, we record that Fonterra has amended Rule 42 in the 2022/23 Manual to address our concerns. However, these amendments do not require consideration in the current review because the rule remains unchanged for the 2021/22 Calculation. The amendments applying from the 2022/23 season are as follows:

²⁸ DIRA, section 150C(4).

²⁹ [Commerce Commission "Review of Fonterra's 2020/21 base milk price calculation: Final report" \(15 September 2021\), at 3.27.](#)

³⁰ [Commerce Commission "Review of Fonterra's 2020/21 base milk price calculation: Final report" \(15 September 2021\), at 3.27.](#)

³¹ [Commerce Commission "Review of Fonterra's 2020/21 base milk price calculation: Final report" \(15 September 2021\), at 3.61-3.62.](#)

³² [Commerce Commission "Review of Fonterra's 2021/22 Milk Price Manual: Final report" \(15 December 2021\), at 30.](#)

- 3.27.1 Rule 42 now includes the requirement that the point estimate selected from a range of DIRA-compliant estimates reflects the value which best reflects the exposure to systematic risk of an efficient New Zealand-based manufacturer of RCPs, rather than one that reflects Fonterra-specific risk; and
- 3.27.2 Rule 42 now makes it explicit that the MPGs estimate **must** comply with section 150C(4).³³
- 3.28 This is the first Calculation review requiring consideration of the amended DIRA asset beta provisions after they took effect and on this basis, we proposed to include the asset beta as a focus area in our Proposed Focus Areas Paper.³⁴
- 3.29 The scope of our focus area review was to consider the asset beta value in light of our findings from the 2021/22 Manual review. This includes the application of Rule 42. In particular the finding that any asset beta that has been adjusted away from the comparator set on the basis of Fonterra-specific systematic risk would not be consistent with the estimated asset betas of other processors of dairy and other food products, and would therefore be inconsistent with section 150C(4).

Methodology for calculating the asset beta in the Calculation

- 3.30 Our review of the models and documentation supplied by Fonterra confirms that an asset beta value of 0.48 has been applied in the Calculation.
- 3.31 In its reasons paper in support of the Calculation, Fonterra outlines the reasoning for its adoption of an asset beta value of 0.48:³⁵
- 3.31.1 the MPG undertook a limited scope ‘within-period review’ under Rule 23 of the Manual, restricting the scope to the Commerce Commission’s conclusion in its final report on our Review of Fonterra’s 2021/22 Milk Price Manual; and
- 3.31.2 notes that the asset beta estimate of 0.45 used to calculate the 2020/21 base milk price has been increased to 0.48, removing the downwards adjustment Fonterra had previously applied.³⁶

³³ [Fonterra “Reasons’ Paper in Support of Fonterra’s Milk Price Manual for the 2021/22 Season” \(30 July 2021\), Rule 42, at 56.](#)

³⁴ [Commerce Commission “Proposed focus areas for our review of Fonterra’s 2021/22 base milk price calculation” \(19 April 2022\), at 15.](#)

³⁵ [Fonterra “Reasons’ Paper in Support of Fonterra’s Base Milk Price for the 2021/22 Season” \(1 July 2022\), at 34.](#)

³⁶ [Commerce Commission “Review of Fonterra’s 2020/21 base milk price calculation: Final report” \(15 September 2021\), at 3.51.](#)

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

- 3.32 Fonterra has resolved the concern we expressed in the Review of Fonterra's 2020/21 Milk Price Manual about the methodology applied to calculate the asset beta. The asset beta value is consistent with the value we estimated in last year's Calculation review, applying section 150C(4). Accordingly, our conclusions are:
- 3.33 That an asset beta value of 0.48 is a notional input based on assumptions and processes that incentivise Fonterra to operate efficiently and is therefore consistent with the efficiency dimension of the section 150A Purpose.
- 3.33.1 That an asset beta value of 0.48 is an appropriate value for an efficient processor and is therefore, practically feasible and therefore, consistent with the contestability dimension of the section 150A Purpose.
- 3.33.2 The methodology applied by Fonterra to arrive at this value is consistent with section 150C(4).

Comparator set

- 3.34 In their submissions on our Proposed Focus Areas Paper, Miraka and Synlait requested we include in our focus area review two matters regarding the comparator set used to establish the asset beta:
- 3.34.1 whether it is appropriate for Fonterra to be included in the comparator set,³⁷ and
- 3.34.2 a review of the full comparator set.³⁸
- 3.35 Regarding the inclusion of Fonterra in the comparator set, the concerns expressed by Miraka relate to the "restricted market discount" on the Fonterra share price "at least partially anticipated" by investors off the back of Fonterra's announcement of plans to change its capital structure in May 2021.³⁹
- 3.36 We note that the comparator set data utilised includes data only up to 31 December 2020. As this precedes Fonterra's restructuring announcement, the comparator set data excludes any "restricted market discount" effect.

³⁷ [Miraka Limited "Submission on the proposed focus areas paper for base milk price calculation 2021-22" \(6 May 2022\), at 44.](#)

³⁸ [Miraka Limited "Submission on the proposed focus areas paper for base milk price calculation 2021-22" \(6 May 2022\), at 41-43.](#)

³⁹ [Miraka Limited "Submission on the proposed focus areas paper for base milk price calculation 2021-22" \(6 May 2022\), at 44.](#)

- 3.37 Furthermore, in Fonterra's 2020/21 reasons paper it estimated that the exclusion of Fonterra from the comparator set at that time would result in a one or two basis point change (increasing the capital charge by a maximum of ~1 cent per kgMS) from the asset beta for the core comparator set and the full comparator set respectively. We do not consider this effect to be material and so have not included it for consideration in this year's focus area review.
- 3.38 However, we recommend the continued inclusion of Fonterra data in the comparator set used to estimate the asset beta is a matter for Fonterra to consider in its next review of the asset beta.
- 3.39 In their joint submission on our draft report, Miraka, Westland Milk Products and Synlait Milk noted that the underlying comparator set and related analysis that the asset beta is drawn from has neither been updated nor reviewed. They also commented on assuring reasonable overall compliance with DIRA and noted that:⁴⁰
- It cannot be acceptable that full and demonstrated compliance with the new section be subservient to the Fonterra Milk Price Manual and its timetable for annual reviews (i.e. until 2024/25 in the case of the asset beta). The Commission is accordingly requested to note that issues remain outstanding with regard to the compliance of the asset beta comparator set and related analysis, and that this will be subject to full review for the 2022/23 calculations.
- 3.40 With respect to the need to update and review the comparator set, we are satisfied that the core comparator set provides an appropriate benchmark as stated in para 3.36 above and does not need to be updated at this point to be compliant with section 150C(4).
- 3.41 Although we review matters specified in the Review Year in Fonterra's Manual in the respective year, we are not restricted by them. In our review of the calculation, we also consider a range of issues, such as previous reviews, submissions, amendments to the Manual, adjustments made to the base milk price by Fonterra, etc. These issues then form the key areas we focus on for each review.
- 3.42 We will review the comparator set, and data used to estimate the asset beta in the next scheduled review in 2024/25. At this point we will also consider Fonterra's continued inclusion in the comparator set.

⁴⁰ [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\) at 68.](#)

Post Tax Market Risk Premium

3.43 The Manual identifies 2021/22 as a review year for the PTMRP. This input is material to the WACC and the Calculation overall and we therefore proposed a review of the PTMRP in our Proposed Focus Areas Paper. We do not propose a change in the scope described in that paper and we received no substantive submissions from stakeholders on the PTMRP during consultation on our Proposed Focus Areas Paper.

3.44 The definition of the PTMRP in Part C of the Manual is:⁴¹

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.

3.45 In our final report on the 2020/21 Calculation review we recorded that:

3.45.1 The Manual's WACC specification in Rule 41 includes provision for a PTMRP that is to be updated along with the asset beta in each Review Year. Unlike the asset beta and specific risk premium, no year was specified for the PTMRP in the Review Year definition in the Glossary of Fonterra's 2020/21 Milk Price Manual.⁴²

3.45.2 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, would be 7.5%.⁴³

3.45.3 Fonterra amended the 2021/22 Manual to align the review of the PTMRP with the reviews of the asset beta and specific risk premium. We noted our expectation that the PTMRP review would result in an increase in the PTMRP to 7.5% from the 2021/22 season onward.⁴⁴

⁴¹ [Fonterra "Farmgate Milk Price Manual – Part A" \(1 August 2021\), at 78.](#)

⁴² [Commerce Commission "Review of Fonterra's 2020/21 base milk price calculation: Final report" \(15 September 2021\), at \[3.141\]; Fonterra "Attachment 1 – Fonterra's marked up version of the 2020/21 Manual for the 2020-21 season – 1 August 2020" \(18 September 2020\), at 90.](#)

⁴³ [Commerce Commission "Review of Fonterra's 2020/21 base milk price calculation: Final report" \(15 September 2021\), at 3.144.](#)

⁴⁴ [Commerce Commission "Review of Fonterra's 2020/21 base milk price calculation: Final report" \(15 September 2021\), at 3.145.](#)

- 3.46 Fonterra has adopted a PTMRP value of 7.5% for the Calculation, which we have confirmed through our analysis of the models and documents supplied to us. Fonterra sets out its reasoning in its reasons paper:⁴⁵

In October 2020, the Commission concluded on a value of 7.5% in the context of its review of fibre input methodologies. While the Commission has continued to use 7.0% in other contexts, pending its next scheduled review of Input Methodologies under Part 4 of the Commerce Act in 1986, we consider it reasonable in the circumstances to believe 7.5% represents the Commission's current position, and have therefore adopted that value.

Assessment of the PTMRP value against the purposes at section 150A

- 3.47 Our conclusion is that a PTMRP of 7.5% is a notional figure set independently of Fonterra which provides a benchmark for Fonterra. It therefore is consistent with the efficiency dimension of the section 150A Purpose.
- 3.48 Our conclusion is that a PTMRP of 7.5% is derived from the Commerce Commission's most recent estimate, prior to the beginning of the review period, of the difference between the expected return on a market portfolio and the risk-free rate faced by investors in the broader market. It is therefore consistent with the contestability dimension of the section 150A Purpose.
- 3.49 We did not receive submissions on our draft report on the PTRMP.

Qualifying Materials

- 3.50 A RCP is a commodity group in the reference basket required under section 150C(2) of the DIRA.
- 3.51 The term 'commodity' is defined in section 5 of the DIRA and all Qualifying Materials must meet the relevant criteria to be RCPs.
- 3.52 Qualifying Materials is a term used in the Manual:⁴⁶

A Qualifying Material is a product manufactured by Fonterra from milk supplied in New Zealand that can in the view of the MPG be reasonably regarded as being a relatively undifferentiated commodity product that in normal circumstances could be expected to transact at a comparable price to other products within the same RCPs, after adjusting for any costs that are normally recoverable from purchasers of the product.

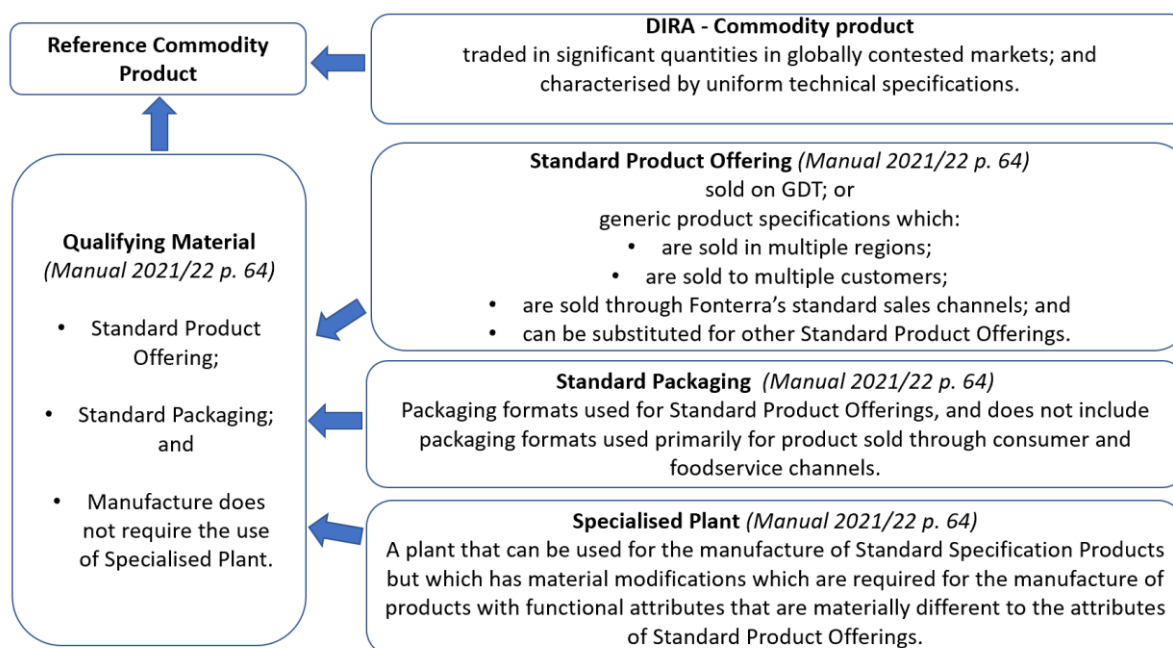
- 3.53 A product can only be a Qualifying Material if:
- 3.53.1 it is a Standard Product Offering (**SPO**);
 - 3.53.2 its packaging format is Standard Packaging; and

⁴⁵ [Fonterra "Reasons' Paper in Support of Fonterra's Base Milk Price for the 2021/22 Season" \(1 July 2022\), at 35.](#)

⁴⁶ [Fonterra "Farmgate Milk Price Manual – Part A: Overview" \(1 August 2021\), at page 64.](#)

3.53.3 its manufacture does not require the use of Specialised Plant.

Figure 3.2 RCP criteria



3.54 In our 2019/20 Calculation review we reviewed the inclusion of Instantised skim milk powder (**ISMP**) as a Qualifying Material and concluded that:⁴⁷

The range of products assumed to have been sold off-GDT constitute Reference Commodity Products that could be sold by the Notional Processor at prices that are consistent with the reference prices.

3.55 In this year's Calculation review, we have conducted a full review of the list of Qualifying Materials and engaged an expert to assist us with this review.⁴⁸ The purpose of this review was to determine whether the products meet the definition of 'commodity' in the DIRA and whether they constitute RCPs on a reasonable interpretation of the Manual. We also considered whether there are any aspects of the Manual rules for determining Qualifying Materials that need to be clearer.^{49, 50}

⁴⁷ [Commerce Commission "Review of Fonterra's 2019/20 base milk price calculation: Final report" \(15 September 2020\), at 2.9.1.](#)

⁴⁸ See Footnote 21.

⁴⁹ Specialised Plant is defined in the Manual as "[a] plant 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".

⁵⁰ In our previous Manual reviews, our assessment was that the Manual is consistent with the section 150C requirements relating to commodities.

3.56 We reviewed a sales report of products sold both on and off-GDT in 2021/22, including product descriptions, component specifications and sales volumes to consider whether:

3.56.1 on the basis of the descriptions, component specifications and sales volumes any of the products could be considered an outlier for closer review;

3.56.2 all of the products can be manufactured without the need to use Specialised Plant.

Table 3.1 Summary of products reviewed by RCP group

RCP Group	GDT product	Number of Qualifying Materials
WMP	WMP Reg FLC 25kg MBG	25
SMP	SMP Reg MH 25kg MBG	21
BMP	BMP REM/UHT 25kg MBG	2
Butter	Btr US 25kg CTN 6 High	13
AMF	AMF REG 210KG DRM	8

The commodity product criteria in the DIRA

3.57 With the possible exception of Premium AMF 1250kg Goodpack, which does not appear to have been sold in significant quantities, at least in respect of the current season, we consider that all the products on the list of Qualifying Materials meet the definition of 'commodity product' in section 5 of the DIRA.

3.58 We recommend that Fonterra considers whether Premium AMF 1250kg Goodpack should continue to be included in Qualifying Materials. Its impact on the 2021/22 BMP is estimated by Fonterra to be 0.02 cents per kgMS, which we consider is not material.

Manual criteria for Qualifying Materials

3.59 We did not identify any products that we considered do not meet the Manual criteria for Qualifying Materials, noting our finding in paragraph 3.84 that both the Manual and the DIRA do not provide guidance on what constitutes significant quantities for the purposes of determining whether a product is a commodity product.

Standard Product Offering

- 3.60 We consider that the products on the list of Qualifying Materials fall within the Manual criteria of a SPO.

Standard Packaging

- 3.61 Submitters have proposed that there can be only one standard packaging format for each RCP. While AMF is offered in both a drum and 1000kg SpaceKraft tote format on GDT, submitters argue that only the former should qualify on the standard packaging format criterion, notwithstanding the latter's GDT status. In principle, we consider there can be more than one standard packaging format provided each SPO individually meets the DIRA commodity definition. Fonterra has presented evidence that the 1000kg SpaceKraft tote format is widely used across its customer base and is offered by other NZ processors.^{51 52}
- 3.62 Submitters also suggest that the AMF 1250kg Goodpack format does not meet the standard packaging criterion because the customer must maintain product handling facilities specific to that packaging format. This is generally true for all packaging formats, in that the customer must have the requisite equipment to handle and process the product. The AMF 1250kg Goodpack format is widely used for ingredient food offerings and is available to any commodity dairy processor, therefore we consider this product meets the standard packaging criterion.⁵³
- 3.63 Our review of the product packaging descriptions did not identify any other Qualifying Materials with non-Standard Packaging. We therefore consider that all Qualifying Materials use a standard packaging format.⁵⁴

Specialised Plant

- 3.64 In our findings in the 2019/20 Calculation review, we concluded that the Qualifying Materials can be manufactured on Standard Plant without material modifications.⁵⁵ We reached this conclusion after reviewing actual plant production data supplied to us by Fonterra.

⁵¹ [Miraka, Open Country Dairy, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(30 August 2022\), at 30, and Attachment A footnote 10.](#)

⁵² Fonterra has observed that the 1000kg SpaceKraft tote format is offered as a standard packaging format for Westland's standard commodity AMF offering. See: <https://www.westland.co.nz/en/products/cream-products/anhydrous-milk-fat/>.

⁵³ [Miraka, Open Country Dairy, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(30 August 2022\), at 30, and Attachment A footnote 10.](#)

⁵⁴ It was also suggested that Instant SMP non-vitamised does not meet the standard packaging criterion, although it has a 25kg pack weight, it requires larger bags. We consider these larger bags to be the standard packaging for this SPO.

⁵⁵ [Commerce Commission "Review of Fonterra's 2019/20 base milk price calculation: Final report" \(15 September 2020\), at 2.9.3.](#)

- 3.65 A key area we considered in our previous review was whether Specialised Plant was necessary for the manufacture of ISMP, a product identified for review because it requires an additional agglomeration step in the manufacturing process. Our review confirmed that the notional Standard Plant has the capability to manufacture instant milk powders either by agglomeration and or addition of a wetting additive to enhance the dissolution of the powder. There is little set up time involved and if scheduled properly (refer to our discussion at paragraphs 3.97 to 3.99 below), this would not add to the product turnaround time, or lessen production run lengths.
- 3.66 Submitters have again suggested that ISMP cannot be manufactured on standard plant. Based on the evidence presented, we have not revisited our previous conclusion.⁵⁶
- 3.67 Submitters have also suggested that specialised equipment is required for ingredient handling and dosing of salted and lactic butter. We have verified that the standard plant includes the equipment necessary for manufacturing all the SPOs except for Instant WMP, where the costs are instead provided for in the IPCs. These include an allowance for incremental depreciation and return on capital for the required additional specialised plant which comprise the majority of the fixed specialised plant cost.⁵⁷
- 3.68 We did not identify any other product on the list of Qualifying Materials that requires an additional step in the manufacturing processes or otherwise requires the use of Specialised Plant. We therefore consider that all of the Qualifying Materials can be manufactured on Standard Plant.

Clarity of generic product specifications

- 3.69 We note that Fonterra has included a list of SPOs in Attachment 5 of its 2021/22 reasons paper. We consider this promotes greater transparency.
- 3.70 In our final report on the 2020/21 Calculation review, we recommended that Fonterra clarify the definition of Standard Packaging and its application of the cascable product rule in the Manual.⁵⁸

⁵⁶ [Miraka, Open Country Dairy, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(30 August 2022\) at 30.](#)

⁵⁷ [Miraka, Open Country Dairy, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(30 August 2022\) at 30.](#)

⁵⁸ [Commerce Commission "Review of Fonterra's 2020/21 base milk price calculation: Final report" \(15 September 2021\), at 3.7.4.1.](#)

- 3.71 While there has been no change to the Manual, Fonterra's 2021/22 reasons paper identifies a change in the application of the cascable product rule that relates to customer-specific product specifications and packaging. Under this rule, a product will qualify as a SPOs if it can be substituted for other SPOs.⁵⁹ Substitutable products are now excluded if there is a prima facie reason to believe prior consultation would be required with customers before substituting these products for a general trade product, including as a result of the packaging.⁶⁰
- 3.72 The off-GDT sales impact of this change in the application of the cascable product rule on the milk price, had it been applied in 2020/21, was a reduction of 2.7 cents per kgMS. This is discussed further in paragraph 3.152 below.
- 3.73 In order to improve transparency, we recommend the Manual be revised to include the requirements of the cascable product rule as it is applied.

Assessment of Qualifying Materials against the purposes of section 150A

- 3.74 Our conclusions are:
- 3.74.1 Although calculation revenues are based on Fonterra's actual sales of RCPs, as provided for in section 150C(1)(a), using a GDT or off-GDT benchmark set independently of Fonterra's current year performance provides an incentive to Fonterra to operate efficiently.
- 3.74.2 We are satisfied that the range of Qualifying Materials that have been sold off-GDT constitute RCPs that could be sold by an efficient Notional Processor (**NP**) at prices that are consistent with the reference prices. We are also satisfied that the list of Qualifying Materials can be manufactured using standard plant. Therefore, we consider that the use of these prices to inform the milk price is practically feasible for an efficient NP.

⁵⁹ Refer Manual definition of Standard Product Offering.

⁶⁰ [Fonterra "Reasons' Paper in Support of Fonterra's Base Milk Price for the 2021/22 Season" \(1 July 2022\), at 49.](#)

Submissions on Qualifying Materials and our response

- 3.75 In their joint submission, Miraka, Synlait, Open Country Dairy and Westland Milk Products, submit that the definition of cascability remains unsatisfactory and unclear. They observe that the Manual appears to require that a product can be “substituted to **other** standard product offerings” not to a product within the **same** standard product offering. They submit that “this renders the cascability test meaningless, doing little to confirm “uniform technical specifications” within the relevant RCP”.⁶¹
- 3.76 Based on this interpretation the submitters have conducted an analysis of the SPOs listed on GDT as disclosed in Fonterra’s Reasons paper, explaining why some of these SPOs should not be classified as Qualifying Materials.
- 3.77 This analysis effectively applies the cascable product rule to suggest that some GDT SPOs themselves should be excluded as Qualifying Materials and that the selling of SPOs on GDT does not itself automatically grant the status of Qualifying Material.⁶²
- 3.78 With reference to leg (b) of the DIRA definition of commodity, that it “is characterised by uniform technical specifications”, products offered on GDT must meet this DIRA requirement. This is because, for SPOs offered on GDT, the product bulletin sets out the technical specifications of the product, which remain largely unchanged from auction to auction (they may be updated from time to time but must meet minimum Codex food standards). Therefore, each offering of that product on GDT generally has the same technical specifications as previous offerings of the same product.
- 3.79 The cascable product test is only then relevant to similar SPOs sold off-GDT. This is consistent with the Manual, which only applies the cascable product test to generic product specifications sold off-GDT.

⁶¹ [Miraka, Open Country Dairy, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(30 August 2022\), at 27.](#)

⁶² [Miraka, Open Country Dairy, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22 - Attachment" \(30 August 2022\) at footnote \(5\).](#)

- 3.80 The application of the cascable product rule as explained by Fonterra in its Reasons paper, indicates the rule is applied in respect of materials within the same generic product specification, ie within the same SPO. These could be circumstances where the only difference between material A and material B is customer specific packaging formats or a difference in fat or protein content for material B that is not materially outside the expected normal range for material A. In practice, an SPO would not be substituted by another SPO. We agree that the Manual should be clarified regarding how the cascable product rule is applied. We have included this recommendation in paragraph 3.73.
- 3.81 Submitters have also suggested excluding some GDT products on the basis that they do not meet leg (a) of the DIRA definition of commodity, in that they do not sell in significant quantities in globally contested markets. An example is given for Regular HH HS SMP which it is submitted has not been sold on GDT since November 2019.⁶³
- 3.82 We note that the DIRA definition of commodity does not distinguish between GDT and off-GDT sales. Therefore, if the same product sold in significant quantities in globally contested markets off-GDT, then the same GDT SPO would in our view meet leg (a) of the DIRA commodity definition.
- 3.83 We have obtained information from Fonterra on the total sales volumes and the impact on the BMP of the SPOs that submitters have proposed be excluded. The values for the relevant SPOs are set out below:

Table 3.2 Sales volumes and impact on BMP of SPOs proposed for exclusion

	Sales volume MT*	MP Impact (\$/kgMS)
AMF 1,000 kg		(0.0046)
AMF 1,250 kg		(0.0002)
Lactic Butter		(0.0052)
Regular HH HS SMP		-
Regular HH SMP		(0.0000)
Regular LH SMP		(0.0002)
Instant SMP		(0.0008)
Instant WMP		(0.0329)

* Volumes includes both price-inform and non-price-inform sales

⁶³ [Miraka, Open Country Dairy, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(30 August 2022\) at 30.](#)

- 3.84 The Manual does not include guidance on what constitutes significant quantities and over what timeframe the assessment of quantity is made. This could include volume thresholds, further descriptors, or other indicators. We recommend that this guidance be added to the Manual to provide clarification about Fonterra's interpretation of leg (a) of the DIRA commodity definition. We recommend that Fonterra reconsider the inclusion of the AMF 1250kg Goodpack format as a Qualifying Material based on this guidance.
- 3.85 With the exception of Instant WMP, the total cumulative impact of the SPOs on the 2021/22 BMP is ~1 cent per kgMS. We do not consider this to be material.
- 3.86 In respect of Instant WMP, we consider this meets both of the DIRA commodity definition requirements and therefore appropriately informs the BMP.
- 3.87 As noted by the submitters, Fonterra has provided additional clarification on the cascability rule in its 2021/2022 Reasons Paper. This clarification is not reflected in the Manual.⁶⁴
- 3.88 We have previously sought further clarification on the cascable product rule and with the benefit of the submissions received, we consider this matter warrants further consideration in our upcoming review of Fonterra's Manual. Accordingly, we recommend that Fonterra takes this into account when considering any amendments to its Manual. We consider this does not materially affect our overall conclusion for this Review.

Incremental Product Cost adjustments

- 3.89 For a product that is a Qualifying Material, but which is not a Standard Specification Product (**SSP**), cost adjustments by way of IPCs are made to fully capture the product manufacturing costs. IPCs are defined as the net difference between the cost of manufacturing the product and the cost of manufacturing a SSP.
- 3.90 IPCs are generated by Fonterra's internal costing system used to value its inventory and for measuring relative product margin performance. The costing system is subject to regular internal and external audits, and the cost outputs are reviewed by Fonterra's independent expert on a quarterly basis. The variable costs, comprising the majority of the costs, are applied to the milk price calculation on a per metric tonne basis and so costs are automatically adjusted for the greater volumes of RCPs produced by the NP.

⁶⁴ [Fonterra "Reasons' Paper in Support of Fonterra's Base Milk Price for the 2021/22 Season" \(1 July 2022\), at page 49.](#)

3.91 In respect of the process used to generate IPCs, Miraka submitted on the 2021/22 Proposed Focus Areas Paper that:⁶⁵

In the case of milk cost, this is described in the Manual as “the implied value of milk components at the time the product is manufactured”. That potentially describes a complex process but in practice Miraka assumes milk components are costed in accordance with the finally determined Fonterra FGMP. If that is not the case, Miraka requests the Commission review the process for determining the cost rate for milk price components.

3.92 We have confirmed that the components are costed based on the monthly milk price which reflects the contracted sales and the full year sales forecast, including forecast average conversion rate, in that month. As such this is not based on the finally determined base milk price.

3.93 We consider this is a reasonable basis on which to calculate IPCs for application to monthly sales.

3.94 To carry out our review of IPCs we analysed an IPC extract report showing the breakdown of IPCs for each of the products we considered in our Qualifying Materials review.

3.95 We considered:

3.95.1 what changes, if any, should be made to the milk price production loss and yield assumptions of the IPCs to accommodate actual switching from the manufacture of one product to another to produce the quantities likely to inform the milk price;

3.95.2 whether the use of IPCs is practically feasible in light of the manufacturing capability of Standard Plant; and

3.95.3 whether the IPCs fully account for the different manufacturing costs (processing and overheads) and component costs (eg, protein, fat, minerals) of various products, including yield adjustments.

What changes, if any, should be made to the milk price production loss and yield assumptions?

3.96 Our review of the IPC extract report confirmed that milk solid composition adjustments affecting yield include incremental adjustments for the usage of protein, fat, lactose and whey.

⁶⁵ [Miraka Limited “Submission on the proposed focus areas paper for base milk price calculation 2021-22” \(6 May 2022\)](#), at 18 a.

- 3.97 Scheduling is critical to the maintenance of good quality control and the minimisation of downgrade product. Maintaining a plant on the same product for the length of time needed to fill production plan requirements gives the best outcome in terms of product consistency and low variable production costs. There is no evidence in the data supplied by Fonterra that product run lengths are sub-optimal.
- 3.98 The NP production plan only allocates production tonnage by commodity class (ie, AMF/Ghee, BMP regular, Butter, SMP regular and WMP regular). Fonterra IPCs capture the full costs of producing each non-standard product, including costs arising from slower throughput, all calculated by reference to the cost of producing the relevant SSPs under NP operating conditions. This was confirmed by our finding in our 2020/21 Calculation review that ISMP requires shorter evaporator run lengths (resulting in extra losses and cleaning costs) and slightly slower throughput on the plant which is captured within the incremental fixed cost and depreciation.⁶⁶
- 3.99 Assuming that the actual production scheduling giving rise to the IPCs is optimised, which we consider to be likely given the level of scrutiny over management product allocation decisions, means there is no need for further composition adjustments based on more frequent switching between products.
- 3.100 In its submission on the 2021/22 Proposed Focus Areas Paper, Miraka submitted:⁶⁷

The yields of qualifying reference sales which are not standard specification products will be different to the NP yields for the standard specification products. This is because of differences in product composition and product specification affecting difficulty of manufacture, but also because of the assumed NP highly efficient production of the standard specification products. The nominal volume of those qualifying reference sales which are not standard specification products will therefore be different to the nominal volume of highly efficient production of the standard specification products in effect displaced by those qualifying reference sales. IPCs will not adjust for this volume factor. Rolling up the prices for those qualifying reference sales accordingly requires a further “volume adjustment” to achieve equivalence with the volume of NP standard specification product before attributing those prices to the standard specification product. The Commission is requested to include a review of this further volume factor and its impact on practical feasibility of the NP selling prices.

⁶⁶ [Commerce Commission “Review of Fonterra’s 2020/21 base milk price calculation: Final report” \(15 September 2021\), at 3.112.](#)

⁶⁷ [Miraka Limited “Submission on the proposed focus areas paper for base milk price calculation 2021-22” \(6 May 2022\), at 33.](#)

- 3.101 Fonterra has explained that the value component (milk solid) costs within the IPC cost calculation allows for the composition/loss adjustment differences relative to the Standard RCPs. For example, instant WMP with 28% fat would have an additional fat cost of [] kgMT within the IPC, plus a further [] kgMT Lecithin ingredient fat cost to account for the 2% fat difference between instant and regular WMP. This effectively adjusts for the volume difference, ie, 100 MT of instant WMP would make 2 MT less AMF than 100 MT of regular WMP.
- 3.102 Submitters have commented on this particular example, suggesting that the volume adjustments are not correctly accounted for. Refer to our discussion at paragraphs 3.120 to 3.122. Having considered their submissions, we conclude that the IPCs achieve the "volume adjustment" described by Miraka above.

Is the use of incremental costs reasonable in light of the manufacturing capability of Standard Plant?

- 3.103 Fonterra's assumptions regarding the manufacturing capability of Standard Plant are set out in Attachment 3 of Fonterra's 2021/22 reasons paper.⁶⁸
- 3.104 As noted in our discussion in paragraphs 3.64 to 3.68 above, we consider that all of the Qualifying Materials can be manufactured on Standard Plant.

Do IPCs fully account for the different manufacturing costs and component costs of various products, including yield adjustments?

- 3.105 We reviewed the range of IPCs applied to account for the different manufacturing and component costs of products that are not SSP.
- 3.106 The IPC adjustments, excluding milk solid composition adjustments (see paragraph 3.96 above), include adjustments for:
- 3.106.1 fixed manufacturing costs;
 - 3.106.2 variable manufacturing costs;
 - 3.106.3 domestic storage and freight;
 - 3.106.4 downgrade product;
 - 3.106.5 packaging;
 - 3.106.6 ingredients;
 - 3.106.7 overhead costs;

⁶⁸ [Fonterra "Reasons' Paper in Support of Fonterra's Base Milk Price for the 2021/22 Season" \(1 July 2022\), at 45.](#)

- 3.106.8 commercial adjustments;
- 3.106.9 WACC working capital;
- 3.106.10 WACC asset footprint; and
- 3.106.11 manufacturing depreciation.

3.107 In respect of fixed costs and overheads, the Manual definition of IPC states that:⁶⁹

Reasonable provision should be made for any difference between fixed cost or overhead recoveries where such difference is in the normal course of events recovered by Fonterra from its customers through a higher selling price.

3.108 Miraka requested that the Commission review whether the exclusion of fixed costs occurs in practice when they do not meet this criterion and if so to consider whether the resulting selling price can be deemed “practically feasible” for the NP.⁷⁰

3.109 Fonterra has explained as follows:⁷¹

The majority of the circumstances where this situation arises are related to additional IPCs for GDT materials (normally due to country specific requirements) where this is a zero spec cost within the pricing build. In these situations a separate "GDT documentation fee" is setup within the SAP pricing build as a recovery mechanism for the IPCs not recovered within the spec cost. This fee is treated symmetrically to the cost, and is excluded from the base milk price.

3.110 In these cases, the product is the same as the GDT standard offering so there is no IPC associated with manufacturing according to a different specification, hence the term ‘zero spec cost’. There are administrative fixed costs which some customers prefer to have treated as a contract documentation fee. This is offset against the contract price with the same effect as if it were included as an IPC.

3.111 Fonterra identified that the application of this approach resulted in an under-recovery of fixed costs of ~\$430k in 2021/22. We consider this impact to be insignificant.

⁶⁹ [Fonterra “Farmgate Milk Price Manual – Part A: Overview” \(1 August 2021\)](#), at page 65.

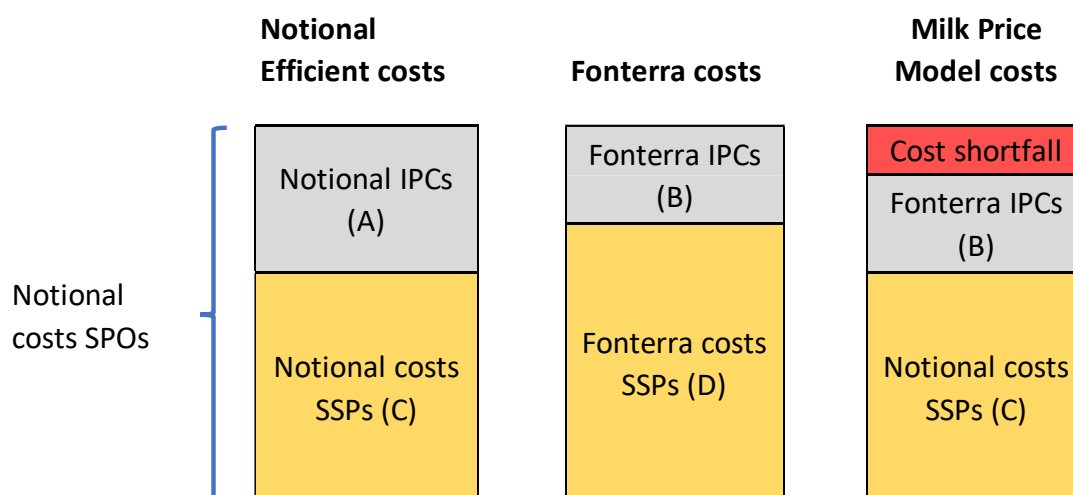
⁷⁰ [Miraka Limited “Submission on the proposed focus areas paper for base milk price calculation 2021-22” \(6 May 2022\)](#), at 18 b.

⁷¹ Fonterra response to Commerce Commission request for information.

Submissions on IPCs and our response

- 3.112 Submitters have asserted that the Fonterra internal costing system is designed for a different purpose and it is unreasonable to assume it is fit for purpose for determining the NP IPCs.⁷²
- 3.113 This assertion as we understand it proceeds from the assumption that the milk price model calculates costs on the basis of the Fonterra costs of producing SSPs and then calculates the IPCs as the difference between these costs and the costs of the SPOs. It is argued that as the NP costs of producing the SSPs (given its simplified and highly efficient production model) are lower than the Fonterra costs, then the IPC bridge from the NP costs of SSPs to the NP costs of SPOs (for which submitters accept that it is possible that the Fonterra costing system produces a meaningful estimate) will be greater than the IPC bridge calculated as the difference between Fonterra's SSP costs and SPO costs. We have illustrated our understanding of this argument below.

Figure 3.3 Illustration of claimed shortfall in IPC bridge



- 3.114 Fonterra calculates the IPC cost for the milk price model based on the difference between its SPO costs (ie the height of the middle column) and its estimate of notional costs of SSPs, based on Fonterra costs but taking into account NP operating conditions, including NP costs, plant utilisation, yields and losses. This means that the IPC costs in the milk price model (which are based on Fonterra's estimates) are likely to be a reasonable estimate of the notional IPCs.

⁷² [Miraka, Open Country Dairy, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(30 August 2022\), at 39 to 40.](#)

- 3.115 Another point raised by submitters is that the IPCs do not adequately account for volume differences associated with a change in product mix compared to the SSPs. They consider that the example provided in paragraph 3.101 above, does not adjust for the reduction in the total volume of butter, AMF and BMP which can be included in the NP product mix due to the higher volume of milkfat consumed by Instant WMP.⁷³
- 3.116 As long as incremental (or decremental) milk components are priced at their current values, the net impact on the calculated Milk Price of the two alternative approaches to accounting for differences in valued component usage between particular products and the relevant SSP, ie, whether you make changes to assumed volumes in the product mix used in the calculations which determine weighted average selling prices or make component value adjustments through the IPCs, should provide the same cost outcome.
- 3.117 Submitters have asserted that the separate value Fonterra attributes to fat and to protein do not reflect current market values but are based on a ratio of the relative value of fat to protein (Value Composition Ratio) to split the milk price into a separate price for fat and for protein. This is not correct. In previous reviews, we found that the values ascribed to the milk components for product costing purposes reflect the current values of those components based on current prices. Therefore, we consider that the IPCs properly account for the component values associated with volume differences.⁷⁴
- 3.118 It is unlikely the IPCs excluding milk solids adjustments in aggregate are materially understated. The non-milk solids IPC adjustments included in the 2021/22 BMP total ~NZD\$29m, with ~NZD\$9m of this relating to packaging and ingredients costs, these costs are expected to be the same for the NP and Fonterra. The remaining non-milk costs would have to be understated by an improbable degree to have a material impact on the BMP (an understatement of 75% would impact the BMP by 1 cent).
- 3.119 In response to our invitation to propose ways in which we can test whether Fonterra's internal costing system is fit-for-purpose, submitters have suggested a three-step testing process. While in principle these appear sensible, the first two of these tests will not provide additional meaningful information for the following reasons:

⁷³ [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\), at 27.](#)

⁷⁴ [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\), at 28.](#)

3.119.1 The first test is to assess how the cost of the SSP from the Fonterra costing system compares to the counterfactual cost of the associated RCP.

However, as the milk price model already optimises the Fonterra costs under NP operating conditions, including the notional yields and factory utilisations, there should be little, if any difference between the milk price model costs and the counterfactual product costs.

3.119.2 The second test proposed is to compare the NP yields and the typical composition of the SSP that Fonterra supplies on GDT. However, the relevant yield assumptions in the Fonterra product costing system are materially aligned to the corresponding NP assumptions which are based on Codex specifications as represented by GDT minimum specifications, rather than GDT typical specifications (requiring greater fat and protein content).⁷⁵

3.120 The third test involves the Commission reviewing the Fonterra costing principles, including the methods of calculating standard costs and cost allocation principles. We agree that this is important and have considered these principles in past focus area reviews of Review Year updates to cost assumptions. We will continue to review these when they change or periodically in the future to ensure they remain appropriate.⁷⁶

Assessment of IPC adjustments against the purposes of section 150A

3.121 Our conclusions are:

3.121.1 based on our analysis set out in paragraphs 3.112 to 3.118 we are satisfied the IPCs generated by Fonterra's internal costing system are achievable by Fonterra and an efficient processor. We therefore consider they are practically feasible; and

3.121.2 the IPCs in the Calculation are forecast costs and so provide an appropriate notional benchmark to beat. Therefore, we consider that the efficiency dimension is met.

Cost inflation adjustments

3.122 In response to submissions, we added as a focus area, a review of assumptions relating to the impact on milk price costs of current inflationary pressures across the broader economy.

⁷⁵ [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\), at 28.](#)

⁷⁶ For example, in our 2019/20 base milk price calculation review we carried out a detailed review of overhead and administration costs, including the basis of allocation to the BMP.

- 3.123 In its submission on the 2021/22 Proposed Focus Areas Paper, Open Country Dairy (OCD) submitted regarding the capital asset base:⁷⁷

We ask the Commission to ensure Fonterra correctly calculates the capital costs for the notional producer's capital asset base in a manner consistent with the contestability dimension, given the high and rising capital goods prices in recent years.

- 3.124 Synlait submitted on variable manufacturing costs:⁷⁸

As part of the 2021/22 milk price review Synlait recommends a focus on cost inflation assumptions. Covid-19 induced global supply chain disruptions have caused decades-high levels of inflation globally and domestically. Synlait expects higher than average cash cost inflation in 2021/22.

- 3.125 We have reviewed the processes for updating capital asset base and variable manufacturing costs to take account of the current cost environment.
- 3.126 In paragraph 3.134 we have provided a breakout of cost increases for variable manufacturing costs along with the basis for determining costs and estimated the rate at which the replacement cost of the capital asset base has increased.
- 3.127 The submitters appreciated this disclosure and requested the same disclosures for the remaining cash costs: milk collection costs, fixed manufacturing costs, repairs and maintenance costs, sales costs, other costs, including site overheads, general overhead costs and R&D costs. We have included this recommendation under Transparency matters not affecting our final conclusions below.

Capital asset base costs

- 3.128 Fonterra has carried out an annual update of capital goods inflation based on an independent report from Jones Lang LaSalle (JLL) using movements in Fonterra asset values.⁷⁹
- 3.129 We have reviewed the advisory report prepared by JLL for the purpose of valuation of specified plants and assets at various sites to assist with the milk price index pricing update.⁸⁰
- 3.130 The information sources used to create the capital cost index include, but are not limited to:
- 3.130.1 JLL Plant & Machinery Database;

⁷⁷ [Open Country Dairy Limited "Submission on proposed focus areas for base milk price calculation 2021-22" \(6 May 2022\), at 1.](#)

⁷⁸ [Synlait Milk Limited "Submission on proposed focus areas for base milk price calculation 2021-22" \(6 May 2022\), at 2.](#)

⁷⁹ From MPG 2021/22 work programme.

⁸⁰ JLL, Valuation Advisory, 24 May 2022.

3.130.2 searches of similar plant from internet websites;

3.130.3 discussions with suppliers and dealers of machinery & equipment; and

3.130.4 information provided by Fonterra such as receipts, fixed asset schedule and verbal advice as to original purchase costs and date of assets when acquired.

3.131 The overall increase in the replacement cost of the asset base from 2021 to 2022 was 10.5%. In its submission OCD identified both the Capital Goods Price Index: Plant, Machinery, and Equipment and the PPI Outputs Building Construction Index, as relevant benchmarks. We have performed a crosscheck against these benchmarks. The respective annual movements in these indices for the March 2022 quarter was 7.8% and 13.2%.^{81,82}

3.132 We therefore consider that the capital asset costs have been appropriately adjusted to take account of current inflationary effects and are practically feasible.

Variable manufacturing costs

3.133 We have reviewed the variable manufacturing cost lines to assess the appropriateness of the methods used to update the costs.

3.134 The list of the cost lines and the method applied to each line are outlined below.

Table 3.3 Variable manufacturing cost variances and methods

Cost line	Cents per kgMS delta*	% change*	Unit cost update basis	Usage rate basis
Packaging	+\$0.012	+10.2%	Actual unit packaging costs for Milk Price Base Product Specifications.	Packaging usage items as per Fonterra Product Specification, Wastage as per Fonterra actuals after outlier data exclusions.
Energy	+\$0.020	+10.6%	Actual rates	Actual usage rates from Milk Price Energy Audits on Fonterra Plants (Darfield / Pahiatua), Equipment supplier data for Butter, AMF and BMP.
Water	+\$0.000	+1.1%	Budget rates	Equipment supplier information.

⁸¹ Statistics NZ, Capital goods price index tables for March 2022 quarter.

⁸² Statistics NZ, PPI Outputs price index tables for March 2022 quarter.

Cost line	Cents per kgMS delta*	% change*	Unit cost update basis	Usage rate basis
Cleaning & CIP	+\$0.004	+34.9%	Actual rates	Equipment supplier Information and Plant acceptance testing information.
Consumables	+\$0.002	+13.2%	Actual rates	Equipment supplier Information.
Effluent	-\$0.000	-2.9%	Budget rates	Effluent kg's Fat/Protein from Milk Price Loss audit of Actual Fonterra Plants.
Laboratory	+\$0.001	+8.9%	Prior year actuals + Inflation (PPI)	Unit testing requirement as Per Fonterra Product specification, in-process testing requirements as per Fonterra actual in process costs for Benchmark plants comparable to NMPB plants.
Total	+\$0.039	+10.7%		

* Change from 2020/21 season

3.135 The allowable methods for updating variable manufacturing costs are specified in the Manual in table 3.1 Detailed Rules. We consider the cost assumptions have been updated in accordance with the Manual.

Assessment of Cost Inflation adjustments against the purposes of section 150A

3.136 Our conclusions are:

3.136.1 The methods used are appropriate for the capital asset and variable manufacturing cost lines to which they have been applied. They are based on industry trends in actual cost data and therefore we consider they are practically feasible; and

3.136.2 The rates used are compiled independently of Fonterra's current year performance and so provide an appropriate notional benchmark to beat. Therefore, we consider that the efficiency dimension is met.

Transparency matters not affecting our final conclusions

3.137 Although not matters that impact our assessment of the assumptions adopted and the inputs and processes used by Fonterra to calculate the base milk price, the following disclosures have been requested by submitters:

- 3.137.1 standard disclosure of break-down in movements of variable manufacturing costs and other cash costs.⁸³
- 3.137.2 monthly, quarterly, and annual RCP selling price information:
- 3.137.2.1 price include volumes and selling prices (weighted by price include volumes); and
 - 3.137.2.2 volume include volumes, and (price include) selling prices weighted by volume inform volumes.⁸⁴
- 3.137.3 GDT quarterly selling price information weighted by:
- 3.137.3.1 GDT sales (the new disclosure); and
 - 3.137.3.2 volume inform sales (the presumed current disclosure).⁸⁵
- 3.137.4 off-GDT quarterly selling price information weighted by:
- 3.137.4.1 off-GDT sales; and
 - 3.137.4.2 volume inform sales.⁸⁶
- 3.138 In our draft report we also recommended that Fonterra considers disclosing:
- 3.138.1 detailed description of weighted average selling price processes including phasing; and
 - 3.138.2 more information on the off-GDT sales inputs and how they affect off-GDT RCP prices.⁸⁷
- 3.139 We recommend Fonterra consider disclosing the above information in a way that is meaningful to interested parties.

⁸³ [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\), at para 62-63.](#)

⁸⁴ [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\), at 22.](#)

⁸⁵ [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\), at 23.](#)

⁸⁶ [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\), at 24.](#)

⁸⁷ [Commerce Commission "Draft report – Review of Fonterra’s 2021/22 base milk price calculation: Dairy Industry Restructuring Act 2001" \(15 August 2022\), Attachment A, at 38-39.](#)

Detailed findings from our fit for purpose review

- 3.140 We reviewed Fonterra's base milk price calculation model, as well as supporting models for each of the key inputs. We assessed further information on a confidential basis where we considered it necessary.
- 3.141 As part of the analysis set out above, we have also examined any changes in the following assumptions that could materially impact the base milk price:
- 3.141.1 changes in costs;
 - 3.141.2 inclusion of off-GDT sales as a reference for calculating RCP prices;
 - 3.141.3 changes in sales phasing;
 - 3.141.4 changes in timing or volume of milk collected; and
 - 3.141.5 yield and loss calculations.
- 3.142 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 section 150A.

Changes in costs versus prior year

- 3.143 Except for lactose costs, there has not been a significant increase in milk price component costs for the 2021/22 season.
- 3.144 Lactose costs have increased by \$31.7m or around 4 cents per kgMS for the 2021/22 season. The increase is driven by changes in international lactose prices applied to the notional milk price volumes and is outside Fonterra's control.
- 3.145 Prior to the beginning of a season, MPG decides whether the milk price calculation will use Fonterra's lactose price or that of other processors in calculating the base milk price based on its assessment of which of the competitor or Fonterra price is likely to be lower. For the 2021/22 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.
- 3.146 We consider that selecting the lower of Fonterra's or its competitors' actual lactose costs as a benchmark, prior to the beginning of the season, in combination with notional lactose volume requirements that are significantly larger than Fonterra's actual volumes, meaning that lactose costs are significantly multiplied in the Calculation, incentivises Fonterra to reduce its actual lactose costs (ie, operate efficiently).

3.147 Therefore, our conclusion is that we consider the lactose cost assumptions are consistent with the efficiency and contestability dimensions of section 150A.

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

3.148 In our fit for purpose review, 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.

3.149 We obtained the same information for the 2021/22 season as at 31 July 2022. This shows that the overall impact of off-GDT pricing for WMP, SMP and AMF was 10.6 cents per kgMS compared with 10.1 cents per kgMS in 2020/21, an increase of 0.5 cents (including the effect of the change in the cascability rule referred to in 3.72).

3.150 The overall impact for Butter and BMP was 0.9 cents per kgMS compared with 2.0 cents per kgMS in 2020/21, a decrease of 1.1 cents.

3.151 We obtained a breakdown of the annual change for WMP, SMP and AMF, which is shown below:

Table 3.4 Breakdown of annual change in off-GDT pricing impact (cents per kgMS)

2020/21 final impact	Cascadable product review impact	Revised start point 2020/21	Annual change	2021/22 June
+10.1	-2.7	+7.3	+3.2	+10.6

3.152 To provide a like-for-like comparison, the products excluded in 2021/22 as a result of the change in the application of the cascable product rule, have also been excluded from 2020/21, giving rise to the -2.7 cents per kgMS adjustment shown in Table 3.4. The remaining change in off-GDT impact is 3.2 cents per kgMS, which Fonterra has attributed to favourable market conditions.

3.153 We have reviewed the underlying product sales detail giving rise to the -2.7 cents per kgMS impact and are satisfied it supports this number.

3.154 The phasing impact analysis presented in Table 3.5 indicates that very little of the 3.2 cents (updated from 3.6 cents in our draft report) per kgMS can be attributed to any sales phasing mismatch.

3.155 We consider that the use of off-GDT sales pricing is practically feasible.

3.156 Also, since prices independently set on GDT continue to provide a benchmark for off-GDT sales, we continue to consider that the prices provide an incentive for efficiency.

Sales phasing

- 3.157 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 NP, therefore our conclusion is that we consider that the phasing is practically feasible.
- 3.158 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:
- 3.158.1 there is insufficient data to develop a reasonable notional figure; and
- 3.158.2 Fonterra only has limited discretion over its sales phasing.⁸⁸
- 3.159 Submitters assert there is a sales phasing mismatch whereby the weighted average prices attributed to the NP are different to the weighted average price of the price inform sales.⁸⁹
- 3.160 In the milk price model, prices attributed to the volume only sales are the weighted average prices of the price inform sales for the same contract month. Fonterra has provided the following analysis of the impact of removing the volume inform sales on the BMP for the last five milk seasons, thus quantifying the effect of any sales phasing mismatch.

Table 3.5 BMP impact of sales phasing mismatch

Milk Season	MP Impact (NZ\$/kgMS)
2017/18	-0.0091
2018/19	0.0113
2019/20	-0.0025
2020/21	0.0048
2021/22	0.0067

**Calculated as the resulting milk price based on price inform volume weighted prices (effectively, the price that results where only price inform sales are also volume informing).*

⁸⁸ [Commerce Commission “Review of Fonterra’s 2014/15 base milk price calculation - Final report” \(15 September 2015\), at 7.94 to 7.106.](#)

⁸⁹ [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\), at 13.](#)

- 3.161 We do not consider the impact on the BMP warrants further detailed analysis of the pricing approach for volume inform sales.

Changes in volumes of milk collected

- 3.162 The 2021/22 volume of milk collected (1,478m kgMS) was around 4% lower than 2020/21. As a result of the lower volume, only standardised product was processed. This means there has been no need to review the volume and manufacturing capacity calculations.

Yield calculations

- 3.163 A full description of Fonterra's process to update the specification offset and loss assumptions (the yield inputs) can be found in its 2021/22 reasons paper. This year's specification offsets and losses are in line with those achieved last 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 The yield input assumptions are based on manufacturing field trials of plants that are similar to the NP Standard Plant and recommendations by Fonterra's independent expert.
- 3.166 Having reviewed the information provided by Fonterra and performing our own 'mass balance' calculation using the yield input assumptions, we are satisfied that the yields of RCPs can be achieved by Fonterra and that they are therefore practically feasible for an efficient processor.
- 3.167 The specification offset and loss inputs are notional and provide a benchmark to beat. Therefore, our conclusion is that the yield inputs are consistent with the efficiency dimension of the section 150A Purpose.

Attachment A Matters raised outside the scope of our focus area reviews

Submitter(s)	Matters raised in submissions on our draft report	Our response
Prevailing Market Price Test		
Miraka, Westland Milk Products, and Synlait Milk⁹⁰	<p>The Submitters point out they are not in a position to provide new evidence on the prevailing market price test as there are no detailed disclosures for off-GDT sales and prices. The Submitters continue to raise the issue because it remains unaddressed: the assertion that qualifying reference sales are in line with prevailing market prices is a statement of principle but is not embedded in the milk price procedures.</p>	<p>We continue to consider that we have addressed the outstanding issues in respect of the application of the “prevailing market price” test. Our final report on our 2021/22 Manual Review concluded that the amendment to the benchmark selling price and the clarification of the term ‘prevailing’ are consistent with the contestability dimension of the s 150A Purpose. Submitters have not provided any new evidence or information on these matters and we therefore do not consider there further or revisit our previous conclusions regarding the use of exclusion criteria and the prevailing market price.</p> <p>We have recommended that Fonterra consider providing detailed disclosures for off-GDT sales and prices.</p>

⁹⁰ [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\), at 7.](#)

Yields		
Miraka, Westland Milk Products, and Synlait Milk⁹¹	<p>Submitters consider the NP yields are not demonstrably nor likely to be practically feasible. It was hoped that the review of IPCs for the 2021/22 calculations review would have included further consideration of this issue. That does not appear be the case.</p> <p>The Commission is requested to confirm it has reviewed the changes in specification offsets and loss allowances. Also noting that the specification offsets and loss allowances are hypothetical (and not the same as Fonterra’s own performance), the Commission is asked to recommend that Fonterra disclose the loss allowances and specification offset assumptions for each of the RCPs. This would go a long way to shine light on the NP yields issue.</p> <p>The Submitters request the Commission revisit its conclusions regarding the practical feasibility of NP yields.</p>	<p>The Commission has reviewed the specification offsets and loss allowances and these are both consistent with those used in the 2020/21 BMP calculation.</p> <p>We have considered the points raised by submitters and referred them to our technical advisor for review. We are satisfied that no new arguments or evidence have been presented that would cause us to revisit our previous conclusions regarding the practical feasibility of NP yields.⁹²</p>
Milk Collection Costs		
Miraka, Westland Milk Products, and Synlait Milk⁹³	<p>The Submitters seek a firm statement of the Commission intentions. If the Commission considers a review is warranted a firm commitment needs to be made to carry it out. On the other hand, if the Commission is undecided it should state how it will form a decision. It is unsatisfactory to simply leave it hanging. The Submitters seek a commitment by the Commission to address this in the 21/22 calculations review.</p>	<p>We will consider the inclusion of milk collection costs as a focus area in the 2022/23 Calculation review.</p>

⁹¹ [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\), at 47, 53 and 55.](#)

⁹² [Commerce Commission "Review of Fonterra’s 2015/16 base milk Price calculation: Final report" \(15 September 2016\), , para 4.70 to 4.94.](#)

⁹³ [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\), at 59.](#)

Mothballed Plants		
Miraka, Westland Milk Products, and Synlait Milk⁹⁴	<p>The Fonterra Reasons paper implicitly confirms that following the 2018/19 season the NP decommissioned 4 plants that had previously been assumed to be mothballed. The Submitters request the Commission clarify how de-commissioning costs were provided in whichever year the relevant de-commissioning was assumed to occur.</p>	<p>The model does not include any explicit provision for decommissioning costs, on the assumption these would materially net to nil.</p> <p>In particular:</p> <ol style="list-style-type: none"> 1. A single powder plant represents ~2% of total powder capacity, and we therefore consider it reasonable to no redundancy costs would be incurred, given some combination of redeployment and non-replacement of exiting staff in the run-up to plant closure. 2. Direct decommissioning cost would be materially offset by the plant's salvage value (spares used on other NP plants, sales of plant/equipment; scrap value or better), noting that the plants closed in the model incorporate current technology and are significantly newer (~35 years of age) than plants which are normally closed in practice.

⁹⁴ [Miraka, Westland Milk Products, and Synlait Milk "Submission on draft report for base milk price calculation 2021-22" \(1 September 2022\), at 69.](#)

Attachment B Glossary of terms

Term/Abbreviation	Definition
AMF	Anhydrous milk fat
Approach paper	Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation
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
Dairy season	1 June to 31 May
DIRA, or the Act	Dairy Industry Restructuring Act 2001
GDT	Global dairy trade, online auction platform used to sell dairy commodities
IPC	Incremental product costs
ISMP	Instantised skim milk powder
kgMS	Kilogram of milk solids
Manual review	Review of Fonterra's Milk Price Manual
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, 2021/22 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
SPO	Standard Product Offering
SSP	Standard Specification Product
the Calculation	Fonterra's 2021/22 base milk price calculation
PTMRP	Post tax market risk premium
WACC	Weighted average cost of capital
WMP	Whole milk powder