

ISSN 2382-0675

Project no.16.03/PRJ0047664

Review of Fonterra's 2024/25 Milk Price Calculation:

Dairy Industry Restructuring Act 2001

15 September 2025

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Associated documents

Publication date	Reference	Title	
1 August 2025	ISBN 978-1-99-133279-0	Draft report – Review of Fonterra's 2024/25 Base Milk Price Calculation: Dairy Industry Restructuring Act 2001	
6 March 2025	ISBN 978-1-99-133223-3	Proposed focus areas for our review of Fonterra's 2024/25 base milk price calculation	
16 December 2024	ISSN 2382-1779	Final report – Review of Fonterra's 2024/25 Milk Price Manual: Dairy Industry Restructuring Act 2001	
16 September 2024	ISSN 2382-0675	Final report – Review of Fonterra's 2023/24 Base Milk Price Calculation: Dairy Industry Restructuring Act 2001	
13 December 2023	ISBN 978-1-991085-69-6	Cost of capital topic paper: Part 4 Input Methodologies Review 2023 – Final decision	
15 September 2023	ISBN 978-1-99-101226-5	Final report – Review of Fonterra's 2022/23 Base Milk Price Calculation: Dairy Industry Restructuring Act 2001	
1 August 2023	ISBN 978-1-99-101282-1	Our approach to reviewing Fonterra's Milk Price Manual and Base Milk Price Calculation - 2023	
14 June 2023	ISBN 978-1-991085-03-0	Cost of capital topic paper: Part 4 Input Methodologies Review 2023 – Draft decision	
15 September 2022	ISBN 978-1-99-101230-2	Final report - Review of Fonterra's 2021/22 Base Milk Price Calculation: Dairy Industry Restructuring Act 2001	
15 September 2021	ISSN 1178-2560	Review of Fonterra's 2020/21 base milk price calculation: Dairy Industry Restructuring Act 2001	

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1. Introduction

- 1.1 This report sets out our conclusions from our statutory review of the extent to which Fonterra's 2024/25 base milk price calculation (the Calculation) is consistent with the purpose of the base milk price monitoring regime under subpart 5A of the Dairy Industry Restructuring Act 2021 (DIRA).¹
- 1.2 This report follows our review of Fonterra's Milk Price Manual (Manual) for the 2024/25 season and builds on the analysis and conclusions from our previous reviews of Fonterra's base milk price calculation (Calculation review) and Manual.²

How this report is structured

- 1.3 Chapter 2 explains our review framework and the scope of our 2024/25 Calculation review.
- 1.4 Chapter 3 sets out a summary of our conclusions from our review of the focus areas, and our fit for purpose review.
- 1.5 Chapter 4 sets out our detailed findings and conclusions from our review of the weighted average cost of capital.
- 1.6 Chapter 5 sets out our detailed findings and conclusions from our review of asset stranding.
- 1.7 Chapter 6 sets out our detailed findings and conclusions from our fit for purpose review.
- 1.8 Attachment A provides a summary of our responses to submissions on our draft report for our review of Fonterra's 2024/25 base milk price calculation, and responses to submissions on our proposed focus areas paper for the 2024/25 season, where we have not included them in our focus area or fit for purpose review in Chapters 3 to 6.3
- 1.9 Attachment B provides a summary of asset beta comparator set statistics.
- 1.10 Attachment C provides a glossary of key terms and abbreviations used in this report.

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 "<u>Final report – Review of Fonterra's 2024/25 Milk Price Manual: Dairy Industry Restructuring Act 2001</u>" (16 December 2024).

Commerce Commission "Proposed focus areas for our review of Fonterra's 2024/25 base milk price calculation" (06 March 2025).

1.11	Attachment D provides a detailed list of the cost lines we have considered in our inflation cost adjustment component of our fit for purpose review. It provides a detailed breakdown of cost drivers, and the method Fonterra has applied to each line, as well as variances.				

2. Our review framework

Our approach for the Calculation review

- 2.1 This report should be read alongside "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. 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.⁵
- 2.3 In our Approach paper, we discuss both the efficiency and contestability dimensions in the context of the base milk price calculation review. 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.⁷
 - 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.

Commerce Commission "Our approach to the milk price manual and milk price calculation reviews" (2023).

⁵ DIRA, s 150A.

Commerce Commission "Our approach to the milk price manual and milk price calculation reviews" (2023), at pages 12-13.

There may also be instances where it is necessary to use actual data, such as where there is insufficient information to determine an appropriate notional value or this would be too costly, and where Fonterra has very limited control over actual costs. Commerce Commission "Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation" (1 August 2023), at paragraph 93.

- 2.4 Our analytical and practical approach to our statutory reviews is described in Chapter 4 of the Approach paper.⁸
- 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 s 150A of DIRA (the s 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. The forecast for the base milk price is currently \$10.10 \$10.20 per kilogram of milk solids (kgMS) for the season under review in this report, which ended on 31 May 2025.
- 2.7 We note that Fonterra uses the term 'farmgate 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 We provide 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 in our Approach paper.

Scope of our review of the 2024/25 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. 11 These constitute our 'focus areas' for which we undertake more detailed analysis.
- 2.10 For this year's Calculation review, our focus areas are:
 - 2.10.1 all equity and debt components of the weighted average cost of capital (WACC) calculation; and
 - 2.10.2 provisions for asset stranding, which may include but are not limited to:
 - 2.10.2.1 specific risk premium, and asset beta with respect to asset stranding; and

See "Fonterra announces 2025/26 Farmgate Milk Price, continued strong FY25 earnings" (29 May 2025).

Commerce Commission "Our approach to the milk price manual and milk price calculation reviews" (2023), at pages 20-31.

⁹ DIRA, s 5.

¹¹ Commerce Commission "Our approach to the milk price manual and milk price calculation reviews" (2023), at paragraph 110.

- 2.10.2.2 assumptions and inputs applied under Rule 33 of the Manual in relation to surplus capacity.
- 2.11 We proposed these two focus areas in our Proposed Focus Areas paper for this year's review. 12 Having considered stakeholder submissions on our proposed focus areas, we expanded the WACC focus area from just a review of cost of equity components of WACC, to debt and equity components of the WACC calculation.
- 2.12 There were no other focus areas that we considered should also be reviewed this year.
- 2.13 We have addressed points raised by stakeholders on both the Proposed Focus Areas paper and our draft report that are relevant to the focus areas in this year's review, or to the fit for purpose review, in Chapters 3 to 6. In Attachment A we provide a summary of our responses to other matters raised in submissions on the draft report and on the proposed focus areas paper.
- 2.14 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:¹³
 - 2.14.1 an analytical verification of the values used in each component against our previous reviews of the same component; and
 - 2.14.2 a review of the consistency of the assumptions, inputs and processes related to the different components.
- 2.15 We will consider whether more analysis of a component is required if any aspect of this 'fit for purpose' review identifies material changes from our previous analysis of the base milk price reporting model.¹⁴ This year we have identified material changes to lactose and miscellaneous costs.
- 2.16 Our fit for purpose review for this season also considers relevant review year items specifically yields and variable manufacturing costs.

Commerce Commission "Proposed focus areas for our review of Fonterra's 2024/25 base milk price calculation" (06 March 2025), at paragraph 12.

Commerce Commission "Our approach to the milk price manual and milk price calculation reviews" (2023), at paragraph 111.

¹⁴ Commerce Commission "Our approach to the milk price manual and milk price calculation reviews" (2023), at paragraph 112. As described, for purposes of identifying changes which might be elevated to a focus area, 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.

Information considered in our review process

- 2.17 In reaching our conclusions we have considered:
 - 2.17.1 submissions received on the proposed focus areas;¹⁵
 - 2.17.2 submissions received on our draft report;16
 - 2.17.3 Fonterra's Reasons paper in support of the base milk price calculation for the 2024/25 season;¹⁷
 - 2.17.4 additional models and documentation that Fonterra provided to us during our review that show the application of the assumptions, inputs and processes used by Fonterra in the base milk price calculation; and
 - 2.17.5 expert advice that we commissioned from Cambridge Economic Policy Associates Ltd (CEPA).¹⁸

Submissions on our Proposed Focus Areas Paper were received from five stakeholders (Fonterra Co-operative Group Limited, and a joint submission by Miraka Limited, Open Country Dairy Limited, Westland Milk Products Limited and Synlait Milk Limited), available at https://comcom.govt.nz/regulated-industries/dairy/milk-price-manual-and-calculation/milk-price-calculation-202425-season?target=documents&root=364763

Submissions on our draft report were received from three stakeholders (Fonterra Co-operative Group Limited, Open Country Dairy Limited and Parker Business Services Limited), available at https://comcom.govt.nz/regulated-industries/dairy/milk-price-manual-and-calculation/milk-price-calculation-202425-season?target=documents&root=364766

¹⁷ Fonterra "'2024/25 base milk price reasons paper" (16 June 2025).

CEPA "Asset beta and specific risk premium: New Zealand Commerce Commission" (15 July 2025).

3. Summary of 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 2024/25 season are consistent with the s 150A purpose, including conclusions on our focus areas review and fit for purpose review.

Summary of overall conclusion

3.2 Our conclusion is that the assumptions Fonterra has adopted, and the inputs and processes it has used to calculate the 2024/25 base milk price are consistent with the contestability and the efficiency dimensions of the s 150A purpose.

Focus areas of our review

Weighted average cost of capital

- 3.3 Our conclusion is that the assumptions Fonterra has adopted, and the inputs and processes it has used that we reviewed as part of our focus areas are consistent with the contestability and efficiency dimensions of s 150A. We consider that:
 - 3.3.1 the assumptions Fonterra has adopted, and the inputs and processes it has used for calculating the weighted average cost of capital are practically feasible for an efficient processor; and
 - 3.3.2 the figure Fonterra has used for the weighted average cost of capital incentivises it to operate efficiently.
- 3.4 We do have some observations on Fonterra's approach, particularly on the asset beta estimation, which we recommend Fonterra considers in the next review year for asset beta.

Asset stranding

- 3.5 Our conclusion is that the assumptions Fonterra has adopted, and the inputs and processes it has used that we reviewed as part of our focus areas are consistent with the contestability and efficiency dimensions of s 150A. We consider that:
 - 3.5.1 the assumptions Fonterra has adopted, and the inputs and processes it has used for assessing asset stranding risk are practically feasible for an efficient processor; and
 - 3.5.2 the way in which asset stranding risk is accounted for incentivises Fonterra to operate efficiently.

Fit for purpose review

Review year items

- 3.6 Within our fit for purpose review, we noted that the 2024/25 season was a review year for both manufacturing yields and variable manufacturing costs.
- 3.7 We determined that the way in which losses are built up and composition targets are set is consistent with the s 150A purpose in the 2023/24 Calculation review. As Fonterra has made no change to the approach to determine yields in the 2024/25 Calculation, and it has supplied the relevant supporting evidence, our conclusion is that the yield assumptions are consistent with the s 150A purpose.
- 3.8 Our conclusion on manufacturing costs is that the updates Fonterra has made to variable manufacturing costs are consistent with the s 150A purpose. Fonterra derives the per unit variable manufacturing costs from Fonterra actual or budgeted values and derives the usage per tonne either from Fonterra audit data or external manufacturer-specified usage rates, so the variable manufacturing costs are practically feasible. As some per unit costs are based on budget values (though for energy, incorporate gains or losses from Fonterra hedging activities), and variable manufacturing costs are calculated based on notional rates of usage per tonne of finished product, rather than Fonterra actuals, they are consistent with the efficiency dimension of s 150A.

Review of other costs

- 3.9 We have reviewed Fonterra's explanations for cost category movements in relation to both variable and fixed cost components between the 2023/24 and the 2024/25 seasons.
- 3.10 We identified a material increase from last year's costs for lactose. This was driven by changes in international lactose prices and shipping costs applied to the notional base milk price volumes and is outside of Fonterra's control. We consider this increased lactose cost is consistent with the efficiency and contestability dimensions of the s 150A purpose.
- 3.11 We identified a material increase in miscellaneous costs from last year. Fonterra has indicated that this reflects costs associated with replacing its core system of record (enterprise resource planning software system) and migrating from SAP Corporate to S4 Hana. We accept that maintaining independent IT requirements for the Notional Processor is likely to be impractical. Therefore, we consider the inclusion of IT costs incurred by Fonterra, adjusted for differences between Fonterra and the Notional Processor, to be consistent with the efficiency and contestability dimensions of s 150A.

Commerce Commission "<u>Final report – Review of Fonterra's 2023/24 Base Milk Price Calculation: Dairy Industry Restructuring Act 2001</u>" (16 September 2024), at chapter 4.

- 3.12 We also identified a notable reduction in administration costs between the May and July milk price models, the largest proportion of which was associated with Fonterra's investment in AgriZero (a public-private partnership), which is also assumed for the Notional Processor. Costs associated with the investment were initially fully expensed, but in the final model are treated as an investment attracting an appropriate capital charge. We consider this change in treatment is reasonable. As there has been no change to the approach to administration costs in the 2024/25 Calculation, our conclusion is that we consider that the administration cost assumptions are consistent with the s 150A purpose.
- 3.13 We did not identify any inconsistencies or material variances in inputs and assumptions compared with last year's base milk price calculation that we have not addressed elsewhere in this report.
- 3.14 For cost inflation adjustments, the rates Fonterra used are compiled independently of Fonterra's current year performance and so provide an appropriate notional benchmark.
- 3.15 In its Reasons paper in support of the Calculation, Fonterra has confirmed that it has:
 - 3.15.1 not made any substantive amendments to the Manual for 2024/25 in respect of the revenue calculation; and
 - 3.15.2 not made any material changes to the Calculation methodology since last year.²⁰
- 3.16 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.
- 3.17 Therefore, for the assumptions adopted, and inputs and processes that we have analysed as part of the fit for purpose review, our conclusions are as follows:
 - 3.17.1 the assumptions Fonterra has adopted, and the inputs and processes it has used in calculating the 2024/25 base milk price, are consistent with the efficiency dimension of the s 150A purpose; and
 - 3.17.2 the assumptions Fonterra has adopted, and the inputs and processes it has used to calculate the 2024/25 base milk price, are consistent with the contestability dimension of the s 150A purpose.
- 3.18 The following chapters set out our detailed findings and reasons for our conclusions on each focus area, and our fit for purpose review.

²⁰ Fonterra "'<u>2024/25 base milk price reasons paper</u>" (16 June 2025), at pages 19, 28, 40.

4. Detailed findings and conclusions on the weighted average cost of capital focus area

Purpose of this chapter

- 4.1 In this chapter we outline our detailed findings from the review of the weighted average cost of capital (**WACC**), including the extent to which the assumptions, inputs and processes are consistent with the s 150A purpose.
- 4.2 This chapter considers the scope of the focus area, including each component of the WACC and a conclusion for the components.

Scope of focus area

- 4.3 We proposed the cost of equity components of the WACC as a focus area for this calculation review. We expected to include in our review:
 - 4.3.1 asset beta and the comparator set;
 - 4.3.2 Fonterra's inclusion in the comparator set; and
 - 4.3.3 post-tax market risk premium.
- 4.4 The joint submission from the Independent Dairy Processors (**IDPs**) on our Proposed Focus Areas requested that we expand this focus area to include all elements (equity and debt) of the WACC calculation.²¹
- 4.5 In response to the IDPs' submission, we have reviewed all components of the WACC calculation for the 2024/25 base milk price.

What is the cost of capital?

- 4.6 The cost of capital is the expected financial return investors require from an investment given its risk. Investors have choices and will not invest in an asset unless the expected return is at least as good as the return they would expect to get from a different investment of similar risk. The cost of capital is an estimate of that expected rate of return.
- 4.7 There are two main types of capital: debt and equity capital. Both have a cost from the perspective of the entity that is seeking funds from investors. For debt, it is future interest payments. For equity, it is the expectation of dividend payments by the entity and where profits are retained and reinvested, the expectation of larger dividend payments by the entity sometime in the future. WACC reflects the cost of debt and the cost of equity, and the respective portion of each that is used to fund an investment.

Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "Submission on proposed focus areas for base milk price calculation 2024/25" (27 March 2025), at paragraph 40.

- 4.8 WACC is estimated because it cannot be observed directly. The relevant estimate is the market's view of the cost of capital for providing the service, not the cost of capital specific to one supplier.
- 4.9 Figure 4.1 sets out the values of each component of the WACC for the Notional Processor and the basis on which Fonterra has calculated them.

Figure 4.1: WACC component values

Component	Sub-component	2023/24	2024/25	Basis of calculation
	Risk-free interest rate (annualised)	1.92%	2.49%	The average secondary market yield on five-year government stock as reported by the Reserve Bank of New Zealand for the 60 months preceding the first day of the Season.
Cost of debt	Debt premium	0.52%	0.50%	The average spread over US Treasury strips for A- rated debt with a five-year term to maturity issued by US industrial companies, as reported by Bloomberg for the 60 months preceding the first day of the Season, rounded to the nearest 5 basis points.
	Issuance/swap costs	0.45%	0.45%	Fixed values of 35 b.p. and 10 b.p. respectively.
	Debt premium with issuance/swaps	0.95%	0.95%	
	Cost of debt (after-tax)	2.06%	2.48%	
	Risk-free interest rate (annualised)	1.92%	2.49%	
	Company tax rate	28.0%	28.0%	NZ average corporate tax rate.
	Asset beta	0.48	0.44	Must be consistent with s 150C(4) and Rule 42 of the Manual.
Cost of equity	Farmgate Milk Price leverage ratio	40.0%	40.0%	Fixed at 40% since 2012/13.
	Equity beta	0.80	0.73	
	Post-tax market risk premium	7.50%	7.00%	The Manual requires Fonterra to adopt the amount used by the Commission in regulatory decisions in the 12-month period preceding the beginning of the Review Period.
	Specific risk premium	0.0%	0.0%	Determined in a Review Year.
	Cost of equity (after-tax)	7.38%	6.93%	
WACC rate ²²	WACC rate (rounded)	5.30%	5.10%	C. Forecast F25 Final" Excel file July models

Source: Fonterra, "10 Year WACC Forecast F25_Final" Excel file, July models.

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WACC formula: Fonterra "Base Milk Price Manual for the 2024/25 season – 1 August 2024" (15 August 2024), at page 79.

4.10 A focus area of this review is how Fonterra has estimated the asset beta. We start our review with asset beta estimation and then look at each of the other components of the WACC estimation.

Asset beta

- 4.11 The asset beta forms part of the calculation for the equity beta, which is part of the overall calculation of the WACC.
- 4.12 Asset beta is a measurement of a firm's exposure to systematic risk where systematic risk measures the extent to which the returns on a company fluctuate relative to the equity returns in the stock market as a whole. 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.
- 4.13 To estimate an asset beta for a firm in a particular industry, a set of comparable firms is used. The comparators should have similar business models and market exposure to the firm for which an asset beta is being calculated.
- 4.14 In setting the asset beta, Fonterra must have regard to s 150C(4). This requires that the asset beta used must be consistent with the estimated asset betas of other processors of dairy and other food products that are (a) traded in significant quantities in global markets; and (b) characterised by uniform technical specifications.
- 4.15 Asset betas are difficult to estimate and inevitably involve some exercise of judgement on which firms are appropriate comparators, even given the direction under s 150C(4). The choice of comparators can have a material impact on the estimated level of asset beta.
- 4.16 In our Proposed Focus Areas paper for the 2024/25 season, we noted that it is a review year for asset beta (Rule 42), and that in our Calculation review for the 2021/22 season, we indicated that we would review the asset beta comparator set, Fonterra's inclusion in the comparator set, and data used to estimate the asset beta in the 2024/25 Calculation review.²³
- 4.17 Fonterra has estimated an asset beta of 0.44 for the 2024/25 season. The comparator set it has used and its estimates for each comparator are set out in Attachment B. Details of Fonterra's methodology, as well as its technical reasons for excluding certain comparators, are contained in Fonterra's submission on our Proposed Focus Areas paper.²⁴

Commerce Commission "Proposed focus areas for our review of Fonterra's 2024/25 base milk price calculation: process paper" (6 March 2025), at paragraph 13.

Fonterra "Submission on the proposed focus areas for the review of Fonterra's 2024-25 base milk price calculation" (27 March 2025).

Determining the comparator set for asset beta estimation

- 4.18 Fonterra has identified 19 comparators for the 2024/25 season, consisting of 16 firms that were used in the 2020/21 Calculation review, and three new firms. In the 2020/21 Calculation review, Fonterra had a 'core' comparator set and an 'extended' comparator set that included five firms that arguably were close to meeting the s 150C(4) requirements. We considered the core comparator set to provide an appropriate benchmark. Fonterra also excluded several firms in the 2020/21 review. 26
- 4.19 Eight firms have been excluded from this season's initial comparator set:
 - three had been delisted;
 - three were listed in and primarily operated in substantively different markets;
 - one had negative gearing and high variability in beta estimates across estimation methods; and
 - one had a very high bid-ask spread.²⁷
- 4.20 We commissioned an independent assessment of the Milk Price Group's (MPG)²⁸ asset beta assessment from CEPA. CEPA are international experts in this area, and from whom we have previously commissioned expert advice in relation to the estimation of the asset beta for the base milk price. ²⁹
- 4.21 CEPA estimates an asset beta range of 0.42 to 0.50.³⁰ It considers that the MPG's estimate of 0.44 is supported by the evidence (including evidence provided by Fonterra and evidence CEPA procured during its assessment), and that there may be an argument for selecting an asset beta towards the bottom end of the range given recent trends in asset beta estimates.
- 4.22 Our review of Fonterra's material supporting its proposed asset beta and CEPA's advice has broadly raised two concerns:

These exclusions are detailed in Fonterra's submission on our Proposed Focus Areas paper: Fonterra "Submission on the proposed focus areas for the review of Fonterra's 2024-25 base milk price calculation" (27 March 2025), at page 16.

Commerce Commission "Review of Fonterra's 2020/21 base milk price calculation: Dairy Industry Restructuring Act 2001" (15 September 2021), at paragraph 3.53

Fonterra "Attachment 6: Summary of Comparators" (30 June 2021).

The Milk Price Group is a working group established by Fonterra and is responsible for ensuring that the base milk price is calculated in accordance with the Manual. It is independent from Fonterra's management and reports to the Milk Price Panel.

²⁹ CEPA "Asset beta and specific risk premium: New Zealand Commerce Commission" (15 July 2025).

^{0.50} would be achieved for the four-weekly estimate if marginal comparators (Savencia, Glanbia, Kerry Group, Astarta and Noumi) and FSF were excluded from the comparator set: CEPA "Asset beta and specific risk premium: New Zealand Commerce Commission" (15 July 2025).

- 4.22.1 the consistent application of rejection criteria to the comparator set and how that affects the inclusion or exclusion of marginal comparators; and
- 4.22.2 reservations over including Fonterra as a comparator given its unique capital structure and how that may impact on stock market data.
- 4.23 Given the importance of the comparator selection to the beta estimate, it is important that a consistent approach is applied. We recommend that Fonterra should more clearly demonstrate how it has applied a consistent approach to selecting comparators.³¹ Our consideration of these concerns is discussed below, in paragraphs 4.26 to 4.70.
- 4.24 We also make some observations on the selection of the comparator set and recommend potential changes. However, due to the lack of materiality of these changes, Fonterra's chosen estimate of 0.44 for the asset beta remains consistent with the estimates of beta, even if our recommendations are not followed in this review. Figure 4.2 shows our view of the materiality of any of the changes that could be made to the asset beta.

For example, in the 2023 Input Methodologies, the Commission sets out the values associated with different criteria used for screening comparators and it is therefore easier to assess how comparators differ from one another. See Commerce Commission "Cost of capital topic paper" (14 June 2023), Tables A1 and B1, at pages 169 and 174.

Figure 4.2: Materiality of comparator set observations

	Daily	Weekly	Four-weekly	Average of weekly and four-weekly ³²
Fonterra average estimates	0.42	0.43	0.44	0.44
CEPA average estimates	0.41	0.41	0.43	0.42
*If FSF were excluded	0.43	0.43	0.45	0.44
*If a one-year estimate were used for FSF	0.43	0.43	0.45	0.44
*If a2 Milk were included	0.43	0.42	0.42	0.42
*If Ausnutria and Emmi were included	0.43	0.44	0.46	0.45
*If China Mengniu Dairy Group were included	0.43	0.43	0.44	0.44
*If Noumi were excluded	0.43	0.43	0.45	0.44

*based on CEPA figures; Sources: Fonterra "Submission on the proposed focus areas for the review of Fonterra's 2024-25 base milk price calculation", CEPA "Asset beta and specific risk premium: New Zealand Commerce Commission", Commission estimates

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Fonterra has estimated daily, weekly and four weekly equity betas for each firm, over the five-year period to May 2024. For the weekly calculations, results are averaged by running five separate regressions on each Monday-Monday, Tuesday-Tuesday etc pair of percentage changes in share prices against percentage changes in the market indices. Four-weekly calculations are similarly averages over 20 separate regressions for each comparator. Fonterra's methodology is described in Fonterra's submission on our Proposed Focus Areas paper: Fonterra "Submission on the proposed focus areas for the review of Fonterra's 2024-25 base milk price calculation" (27 March 2025), at page 7.

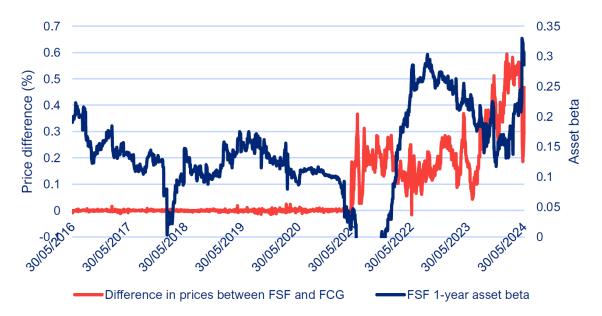
4.25 Given CEPA's overall view and the low materiality of the changes we have recommended, we are satisfied that Fonterra has adopted a credible asset beta for the Notional Processor. We consider the resulting asset beta to be consistent with s 150A. However, we recommend Fonterra consider our recommendations in its next review of the asset beta.

Inclusion of Fonterra in the comparator set

Robustness of FSF's asset beta

- 4.26 Fonterra has a unique capital structure. Fonterra Cooperative Group (**FCG**) shares are held by farmers, in proportion with their milk supply, and a limited group of other persons who are permitted by Fonterra's constitution to hold FCG shares. The Fonterra Shareholders' Fund (**FSF**) gives external investors the ability to invest in the economic rights in FCG shares, by purchasing units in the FSF. FSF units do not confer voting rights.
- 4.27 Fonterra has elected to keep FSF in the comparator set this season.
- 4.28 Fonterra went through a capital restructure during the estimation period that has been used to estimate the asset beta. This was announced on 6 May 2021 and implemented on 28 March 2023, following a change to legislation. This new capital structure made several changes to FCG shareholding rules, such as the number of shares farmers are required to hold proportional to their milk supply and the availability of shares to other types of dairy farm operators (for example sharemilkers and contract milkers). The restructure also removed the ability for shares to be exchanged into units as part of day-to-day trading and reduced the overall limit on the number of FSF units relative to FCG shares, from 20% to 10%.
- 4.29 The capital restructure calls into question whether movements in the FSF unit price during the relevant period were reflective of unitholders' estimate of the impact of the economy on future earnings or reflected views about the restructure.
- 4.30 There has been clear volatility in the FSF beta since Fonterra's capital restructure was announced. This volatility is illustrated in Figure 4.3, from CEPA's report.

Figure 4.3: Percentage difference between Fonterra Cooperative Group shares and Fonterra Shareholders' Fund units and 1-year FSF asset beta³³



Source: CEPA "Asset beta and specific risk premium: New Zealand Commerce Commission"

4.31 We think there has likely been an impact on movements in the FSF unit price over this period unrelated to commodity business-related factors, that would likely impact asset beta estimates. It is plausible that the period after the capital restructure is reflective of more 'normal' FSF unit price dynamics. Therefore it would be more appropriate to either exclude FSF from the comparator set or adopt beta estimates using a one-year estimate after 28 March 2023, rather than the five-year estimate that is currently used.

The risk of convertibility

- 4.32 CEPA has also presented the argument that there is a risk of conversion of FCG shares into FSF units. FSF units are priced higher than FCG shares and so there is opportunity for Fonterra to issue new FCG shares to convert into units and realise significant profit.
- 4.33 Fonterra suggests this risk is low due to the cap on the size of the Fund. FSF is constitutionally limited to 10% of shares on issue, and is currently at 6.7% of shares on issue. The Board is able to issue FCG shares to be converted into FSF units below this threshold. However, Fonterra suggests this is also low risk, for reasons including:

CEPA "Asset beta and specific risk premium: New Zealand Commerce Commission" (15 July 2025).

- 4.33.1 Fonterra has an incentive to maintain a limit below this level to maintain flexibility in its capital management strategy, which may include conducting buybacks, noting Fonterra's Constitution also requires that the number of aggregate shares on issue should not exceed the share standard by more than 15%.
- 4.33.2 Fonterra's strong balance sheet gives it no reason to raise additional equity capital. Fonterra suggests even if it were to raise capital in this way, the risk is no different to any other company undertaking the same action, as there would only be a negative impact on the unit price if investors perceived Fonterra would not be able to generate an appropriate return on the new capital.
- 4.33.3 Any exchange of shares into units would not have a dilutionary effect on earnings or dividends per unit.
- 4.34 CEPA has responded to Fonterra's arguments. It agrees that there is no dilutionary effect, in that the conversion itself from FCG shares to FSF units would not change the total combined number of shares and units. However, a sudden increase in units may still impact unit prices. Whether investors think this is likely and the materiality of the impact is difficult to judge. CEPA also notes it is unclear how binding the cap on the size of the Fund is, and whether a shareholder vote would be necessary to raise it (though it assumes this would be the case).
- 4.35 We consider the risk of convertibility appears low. Supporting this is that the percentage of units relative to shares has remained at 6.7% since the ability for shares to be exchanged into units as part of day-to-day trading was removed on the announcement of the change to the capital structure in 2021. However, we agree with CEPA that it is unclear exactly how binding the cap is, and that investor sentiment on the likelihood of such changes is difficult to judge.

Arguments raised by IDPs and Fonterra

- 4.36 In addition, the IDPs reiterated in their submission on our Proposed Focus Areas that Fonterra shares trade in a restricted market and are thus subject to a restricted market discount. 34
- 4.37 There is no evidence of a restricted market discount on FSF units. FCG shares may have a restricted market discount, however it is FSF that has been included in the comparator set.
- 4.38 Fonterra has also presented arguments for including FSF in the comparator set that:

Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "Submission on proposed focus areas for base milk price calculation 2024/25" (27 March 2025), at paragraphs 42-43.

- 4.38.1 farmers that hold more shares than those which are proportional to their milk supply have a strong interest in Fonterra's earnings performance;
- 4.38.2 there are performance incentives for Fonterra's senior management tied to the FCG share price, which incentivises maximising earnings; and
- 4.38.3 a unit in FSF entitles the shareholder to the same economic returns as a share in FCG, making the incentives on the FCG share price relevant to FSF unit-holders.
- 4.39 Fonterra's arguments appear to be more applicable to factors that may move the FCG share price than any consideration of factors that may affect FSF. The fact that FSF unit holders do not have voting rights means that Fonterra does not have pressure from third party shareholders to maximise returns to the processing activity that is, incentives are skewed towards FCG and any separate market effects on FSF may not be recognised.

Overall assessment of FSF as a comparator

- 4.40 We note that Fonterra is the closest comparator to the Notional Processor, with the same scale and closest range of products, as well as being located in New Zealand. The FSF estimate is therefore valuable information as it is indicative of how a dairy processor like the Notional Processor would operate.
- 4.41 There are only three dairy processors listed on the NZX Fonterra (through both FCG and FSF), Synlait, and The a2 Milk Company. Synlait would be the next best likeness to the Notional Processor and is also included in the comparator set. The a2 Milk Company has been excluded from the comparator set for other reasons, which we discuss in paragraphs 4.52 to 4.57.
- 4.42 CEPA suggests that it's possible that the cessation of day-to-day convertibility means that FSF units will trade more like normal shares going forward. As such, a one-year estimate for FSF rather than a five-year estimate may be more appropriate, due to the volatility in the FSF beta during the period of the capital restructure, as outlined in paragraphs 4.26 to 4.31.
- 4.43 CEPA estimates a 0.3 asset beta for FSF using a one-year estimate, compared to 0.14 using a five-year estimate.³⁵ However, using CEPA's one-year estimate for FSF, instead of the five-year estimate, does not have a material effect on the overall asset beta. The average weekly and four-weekly estimate remains at 0.43 when using the one-year estimate, based on CEPA's figures.

CEPA "Asset beta and specific risk premium: New Zealand Commerce Commission" (15 July 2025), at page 15. We note that Fonterra's estimate for FSF is slightly higher, at 0.18. All figures use the average of weekly and four-weekly estimates.

4.44 At the next review year for asset beta, Fonterra should revisit the stability of the asset beta in the context of any further changes relating to Fonterra's capital structure. Fonterra should consider whether Fonterra's unique financial structure has had any continued impact on the FSF share price and beta estimates.

Robustness of estimated asset betas

- 4.45 Several factors can affect the robustness of asset beta estimates, and Fonterra has used such factors as reasons for exclusion, for example: high variability in asset beta estimates, delisting or winding up of the company in some way (Hochdorf Holdings AG, Beston Foods, Ros Agro PLC); negative leverage (The a2 Milk Company); and a high bid-ask spread (Seaboard Corporation).
- 4.46 We consider these can be valid reasons for exclusion but it is not clear that judgement has been consistently applied.

Company performance

- 4.47 Noumi Limited has been included in the comparator set. However, CEPA has suggested that it could be excluded from the comparator set, as Noumi has a low asset beta caused by high gearing, and there is material uncertainty whether the company can continue to operate. CEPA notes that these factors may indicate that Noumi's observed equity and asset betas are not robust.
- 4.48 Noumi is an addition to the comparator set this season. CEPA recommended adding the company in the last review of the asset beta, under its previous trading name of Freedom Foods. Fonterra has included the company as it sells dairy nutritional ingredients in bulk, in global markets, and so meets the requirements of s 150C(4).
- 4.49 Noumi was the subject of a shareholder class action brought in Victoria, Australia in 2020. The proceeding alleged that eligible shareholders acquired Noumi securities at an inflated price during the claim period (7 December 2014 to 24 June 2020) due to misleading conduct and contravention of continuous disclosure obligations.³⁶
- 4.50 We consider that this class action is likely to have influenced Noumi's share price, separate from any commodity market effects. Figure 4.4 shows that Noumi's share price dropped considerably once the class action was announced and has not recovered. Consequently, the reliability of Noumi's asset beta representing the firm's exposure to systematic risk is questionable and it seems unsound to include Noumi in the comparator set.

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³⁶ Slater + Gordon, "Noumi Limited Class Action".



Figure 4.4: Noumi Limited (NOU) monthly average stock price (AUD)³⁷

Source: ASX "NOU overview"

4.51 The Victorian Supreme Court recently (in June 2025) approved the terms of a settlement agreed between the parties, which marks the end of the class action. It's therefore possible that there may be some recovery in Noumi's business making it more suitable to include in the comparator set in future.

Negative leverage

- 4.52 Fonterra has excluded The a2 Milk Company (a2) from the comparator set due to negative leverage and because a2 owns 20% of Synlait, which is included in the comparator set. Negative leverage is when a company has greater cash holdings than debt. Where this financial structure is adopted to offset other business environment risks then that may indicate asset beta estimates are a less reliable indicator of systematic risk.
- 4.53 CEPA notes that companies do not necessarily need to be excluded from a comparator set due to negative leverage. It has also suggested that if a2's other investments qualified for inclusion under the s 150C(4) criteria, then an alternative would be to exclude Synlait from the comparator set and include a2.
- 4.54 We agree with CEPA that negative leverage on its own is not necessarily a reason for a company to be excluded from a comparator set, though it may be indicative of other reasons for exclusion.³⁸

ASX "NOU overview" accessed 16/07/2025.

We note we have previously excluded airport firms with negative leverage where we considered this reflected market dynamics in countries where the business risk of operating an airport may have been relatively high. See Commerce Commission "Cost of capital topic paper: Part 4 Input Methodologies Review 2023 – Final Decision" (13 December 2023), paragraphs 4.134 to 4.138.

- 4.55 a2's other investment was, until recently, in Mataura Valley Milk, whose sales are primarily to a2 and so are not directly in globally contested markets.³⁹ It is unlikely that Mataura Valley Milk would qualify under the s 150C(4) criteria.
- 4.56 However, we also consider that a2's 20% stake in Synlait is not especially material in the context of the full comparator set. This makes the exclusion of a2 a more marginal judgement call.
- 4.57 Fonterra's decision to exclude a2 from the comparator set for the asset beta is not unreasonable, though we recommend Fonterra ensure it is consistent in its application of judgement.

Liquidity

- 4.58 Fonterra excluded Seaboard Corporation due to a high bid-ask spread, although Fonterra does not clearly note what the spread it has assessed is or how that compares to other comparators retained in the comparator set.
- 4.59 Bid-ask spreads are an indicator of liquidity, indicating the difference between the highest price a buyer is willing to pay and the lowest price a seller is willing to accept. A 'high' spread indicates low liquidity. These securities tend to be more lightly traded and so less likely to be responsive to market-wide events, because they are traded less than other securities.
- 4.60 We observe that other companies included in the comparator set also have relatively high spreads. For example, Kerry Group, Saputo and Savencia all have high spreads relative to other companies in the comparator set. Our calculation of these spreads is included in Attachment B. Again, we recommend Fonterra ensure it is consistent in its application of inclusion or exclusion criteria.

Geographic filters

- 4.61 Fonterra excluded three companies from the comparator set on the basis that they operate in substantially different markets than that of the Notional Processor: China Mengniu Dairy Company, Inner Mongolia Yili Group and Sao Martinho. Fonterra stated that it has attempted to align to the Commission's 2023 Input Methodologies Review.
- 4.62 In the 2023 Input Methodologies Review, we based some decisions on whether to exclude companies on market comparability, with particular reference to the Financial Times Stock Exchange (FTSE) Equity Country Classification process, although noting other references could be used. China (Mengniu, Yili) is classed as secondary emerging by FTSE, and Brazil (Sao Martinho) as advanced emerging.

As part of its annual results announcement in August 2025, The a2 Milk Company stated that it has divested it's shareholding in Mataura Valley Milk to Open Country Dairy. See announcements at https://www.nzx.com/announcements/456904

- 4.63 CEPA has suggested the way in which Fonterra has implemented the exclusion of comparators on geographic grounds is not consistent with the geographic filter implemented in the 2023 Input Methodologies Review.
- 4.64 While China Mengniu primarily operates in China, it is listed in Hong Kong and trades some commodities globally, albeit Fonterra notes its commodity sales are just 0.1% of revenue. CEPA notes that we included some airport comparators that were listed in Hong Kong in the 2023 Input Methodologies review, which would support including Chinga Mengniu in the comparator set. The low value of China Mengniu's commodity sales implies that any events in commodity markets are unlikely to affect China Mengniu's share price and thus its beta estimate. This is potentially a stronger reason for exclusion than the geographic reasoning.
- 4.65 Yili primarily operates in China and is listed on the Shanghai Stock Exchange. Sao Martinho primarily operates in Brazil and is listed on the Brazil Stock Exchange. These exclusions appear to be consistent with the 2023 Input Methodologies Review.
- 4.66 The geographic filter Fonterra has applied does not appear to be entirely consistent with the Commission's 2023 Input Methodologies Review. China Mengniu Dairy Company could be considered for inclusion in the comparator set due to its difference in listing location. Its low value of commodity sales may lend more weight to its exclusion.

Additional comparators

- 4.67 CEPA has identified three additional comparators that could meet the s 150C requirements: Ausnutria, Emmi AG and China Shengmu Organic Milk.
- 4.68 Ausnutria and Emmi AG both appear likely to meet the s 150C(4) requirements, as they appear to sell commodity food products in globally contested markets.
- 4.69 China Shengmu does not appear to meet the s 150C(4) criteria. While it sells a commodity product (raw milk), these sales appear to largely occur within China, not on global markets.
- 4.70 We note that both Ausnutria and Emmi AG have previously been considered for inclusion in the comparator set and were excluded on the basis that they did not sell commodities at the time. It's unclear how much this may have changed but given that both companies currently appear to meet the s 150C(4) requirements of selling commodity products on global markets, we recommend Fonterra reconsider their inclusion.

Submissions on asset beta and our response

Inclusion of the Fonterra Shareholders' Fund

- 4.71 Fonterra acknowledged our observations on the asset beta, including the application of rejection criteria, in its submission on our draft report. It disagrees with some of our and CEPA's observations on the impact of Fonterra's capital structure on the FSF's suitability as a comparator.⁴⁰
- 4.72 OCD submitted that inclusion of Fonterra's own listed units as comparators introduces circularity in the comparator set and undermines the objectivity of the asset beta estimation process. OCD remains opposed to the logic of Fonterra including what is effectively its own asset beta.⁴¹
- 4.73 The IDPs have also raised concerns with the inclusion of FSF in the comparator set in prior seasons.
- 4.74 We note our comment at paragraph 4.40 that Fonterra is the closest comparator to the Notional Processor and therefore the FSF estimate is potentially indicative of the asset beta relevant to a dairy processor like the Notional Processor. However, we acknowledge that there are arguments both for and against including Fonterra units as a comparator. We note our comments at paragraphs 4.26 4.31 that there is evidence pointing to a period of low asset betas for FSF that may be more attributable to uncertainties about Fonterra's capital structure than market movements relating to the dairy commodity business.
- 4.75 We note Fonterra's commitment in its submission to having regard to our observations in the next review year for the asset beta, for the 2028/29 season, as well as considering the issues that have been raised with including FSF in the comparator set.⁴² We are comfortable with Fonterra reviewing the inclusion of FSF in the comparator set at the next review year given excluding it in this review does not make a material difference to the asset beta estimate.

Post-COVID trend in asset betas

4.76 OCD submitted that the asset beta should be reflective of the post-COVID downward trend in asset betas, with a value at the lower end of the range. This would better align with current market risk profiles and help prevent overstatement of the WACC.⁴³

Fonterra "Submission on the draft report – review of Fonterra's BMP Calculation 24/25" (15 August 2025), at page 1.

Open Country Dairy "<u>Submission on the draft report – review of Fonterra's BMP Calculation</u> 24/25" (15 August 2025), at page 1.

Fonterra "Submission on the draft report – review of Fonterra's BMP Calculation 24/25" (15 August 2025), at page 1.

Open Country Dairy "<u>Submission on the draft report – review of Fonterra's BMP Calculation</u> 24/25" (15 August 2025), at page 1.

- 4.77 CEPA raised a similar point that there may be an argument for selecting an asset beta near the lower end of the range it identified due to the post-COVID downward trend. CEPA also commented, however, that it is too early to tell whether there is a structural shift, noting that there is a trade-off between using recent data (which may better reflect current financial conditions) and more data (leading to a more statistically robust estimate).
- 4.78 The range CEPA identified was 0.42 0.50. We note that the 0.44 that Fonterra is using is towards the lower end of this range.
- 4.79 In its asset beta analysis, Fonterra raised the possibility that post-COVID betas are systematically lower. Fonterra also found there were significant differences between weekly and four-weekly estimates in its November 2021 May 2024 calculations for a number of firms, which would require further investigation.
- 4.80 We consider that Fonterra's estimate is not unreasonable in light of the range of asset beta estimates determined by both CEPA and Fonterra.

Company performance - inclusion of Noumi

4.81 OCD submitted in support of our draft conclusion that the reliability of Noumi's asset beta is questionable, and that it seems unsound to include Noumi in the comparator set. OCD noted that the company's financial position undermines the reliability of its beta and makes its inclusion inappropriate. 44 We note, however, that excluding Noumi has very minimal impact on the MPG's asset beta estimate. The end of the class action may mean that Noumi is a more suitable comparator in the future.

Approach to refreshing the comparator set

- 4.82 OCD submitted that Fonterra has not refreshed its comparator set using a systematic, transparent search. OCD considers that this risks omitting appropriate comparators, such as Ausnutria and Emmi AG, that may better reflect the competitive and operational profile of an efficient dairy processor. 45
- 4.83 The Commission agrees that in future reviews Fonterra should refresh the comparator set using a systematic, transparent search, ensuring that it has included all appropriate comparators, and clearly demonstrating its decisions. Notwithstanding these recommendations, Fonterra's chosen asset beta is not unreasonable in the context of the asset betas calculated by both Fonterra and CEPA.

Open Country Dairy "<u>Submission on the draft report – review of Fonterra's BMP Calculation</u> 24/25" (15 August 2025), at page 1.

Open Country Dairy "Submission on the draft report – review of Fonterra's BMP Calculation 24/25" (15 August 2025), at page 1.

Overall conclusion on asset beta

- 4.84 Although we have raised a number of concerns in the preceding sections, our assessment is that none of them have a material effect on the consistency of the resulting asset beta estimate with the s 150A purpose or with s 150C(4).⁴⁶
- 4.85 In particular, we note that each of the matters raised makes a small impact on the asset beta estimate. The chosen 0.44 asset beta estimate is supported by the data and the observed trend decline in asset beta in more recent years.
- 4.86 We will reassess Fonterra's approach to the asset beta at the next review year, in particular the consistency of Fonterra's approach to comparator selection and exclusion. Fonterra should more clearly demonstrate how it has applied a consistent approach to selecting comparators; for example, through a table showing how each comparator performs against the each of the selected criteria.⁴⁷
- 4.87 Our conclusion is that the assumptions, inputs and processes used in calculating the asset beta are practically feasible for an efficient processor and meet the s 150A purpose.

Review of other WACC components

4.88 At the request of IDPs, we have reviewed all other WACC components as part of this focus area, excluding the asset beta addressed in paragraphs 4.11 to 4.87, and the Specific Risk Premium addressed in paragraphs 5.39 to 5.50. Specifically, we have considered the following elements of the WACC calculation and their consistency with s 150A:

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4.88.1 risk-free interest rate;
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4.88.2 debt premium;

4.88.3 debt issuance costs;

4.88.4 currency swap costs;

4.88.5 company tax rate;

4.88.6 leverage ratio; and

We note it's not unusual for there to be a degree of uncertainty in beta estimates. In our 2023 Input Methodologies review, we set standard error estimates of between 0.13 and 0.19 for the asset beta (Commerce Commission, Cost of capital topic paper: Part 4 Input Methodologies Review 2023 – Final decision (13 December 2023), Table 5.5 at page 206.

For example, in the 2023 Input Methodologies, the Commission sets out the values associated with different criteria used for screening comparators and it is therefore easier to assess how comparators differ from one another. See Commerce Commission "Cost of capital topic paper" (14 June 2023), Tables A1 and B1, at pages 169 and 174.

4.88.7 post-tax market risk premium.

Risk-free interest rate

Methodology

- 4.89 The risk-free rate in the WACC calculation is the expected interest rate when there is no risk of default. Debt issued by the New Zealand Government and denominated in New Zealand dollars is considered to be free of default risk. The rate of interest on government issued debt can generally be readily observed from trading on the debt market.
- 4.90 The risk-free interest rate applied to the Notional Processer is calculated as follows:

$$\left(1+\frac{R}{2}\right)^2-1$$

Where R is the average secondary market yield on five-year government stock as reported by the Reserve Bank of New Zealand for the 60 months preceding the first day of the Season.⁴⁸

4.91 This methodology can be described as reflecting a five-year trailing average, and is one of several ways in which a risk-free interest rate could potentially be calculated. An alternative approach would be to determine a risk-free rate that reflected prevailing market conditions.

Discussion on the trailing average approach

- 4.92 A five-year trailing average approach to determining the risk-free rate is currently resulting in a notably lower risk-free rate than if a prevailing rate approach were used. For the 2024/25 season, the annualised risk-free interest rate used in the WACC calculation is 2.49%, while the spot rate at the start of the season (for example) was 4.57%.
- 4.93 However, we note that the trailing average approach has been applied consistently since the current base milk price calculation framework was introduced. This has resulted in a higher risk-free rate (and therefore cost of debt) applied to the Notional Processor than the spot rate in nine of the last thirteen seasons.

Fonterra "Base Milk Price Manual for the 2024/25 season – 1 August 2024" (15 August 2024), at page 80.

- 4.94 The merits of adopting a prevailing rate approach to calculating the risk-free interest rate could be considered in light of the contestability limb of the s 150A purpose. A new entrant needing to raise finance is likely to need to do so at current rates, and at times the difference between the risk-free rate calculated on a prevailing approach versus a trailing average may result in materially different estimations.
- 4.95 However, we also recognise a new entrant may enter gradually, with a longerterm view on financing costs, and that a trailing average may be higher or lower than the current prevailing rate.

Conclusion on the risk-free interest rate

- 4.96 Our conclusion is that the risk-free rate applied in the 2024/25 Calculation is consistent with the s 150A purpose.
- 4.97 The annualised risk-free rate of 2.49% reflects the five-year trailing average of government stock as reported by the Reserve Bank of New Zealand and reflects the approach outlined in the Manual. This provides a reasonable reflection of interest rate costs incurred in the broader market and therefore is consistent with the contestability dimension.
- 4.98 The risk-free rate is set independently from the corresponding Fonterra values. Therefore, we consider this input to be consistent with the efficiency dimension.
- 4.99 We do note however that the use of a trailing average in the cost of debt is likely to be an area of focus at the next Input Methodologies review of the cost of capital. Fonterra should continue to consider any implications arising from our wider work on the cost of capital. Please refer to our notice of intentions, as listed in the footnote.⁴⁹

Debt premium

Methodology

4.100 A debt premium, in the context of WACC calculation, reflects an incremental interest rate that is applicable due to the firm's risk of default and the inferior liquidity of corporate bonds relative to government bonds.

⁴⁹ Commerce Commissions "Notice of Intention – Cost of Capital Review 2027" (27 March 2025); and here; Commerce Commissions "Notice of Intention – Fibre Input Methodologies Review 2027" (27 March 2025).

- 4.101 The Manual defines the debt premium as the sum of:
 - a) the average spread over US Treasury strips for A- rated debt with a five-year term to maturity issued by US industrial companies, as reported by Bloomberg for the 60 months preceding the first day of the Season, rounded to the nearest 5 basis points;
 - b) a reasonable provision for any costs that would ordinarily be incurred in swapping item (a) to NZD; and
 - c) a reasonable provision for the annualised cost associated with issuing debt, to the extent such items are not provided for.⁵⁰
- 4.102 For the purposes of this section, we refer to component (a) as the 'debt premium', and address components (b) and (c), which form part of the debt premium calculation in the Manual, separately.
- 4.103 In their submission on our Proposed Focus Areas paper, IDPs have raised the concern that there is insufficient clarity regarding the way in which the debt premium is calculated.⁵¹ In this section, as well as the following sections in relation to debt issuance and currency swap costs, we seek to provide additional clarity on these components alongside our conclusions.
- 4.104 Fonterra has advised that the debt premium is calculated as a five-year rolling average of the average spread of five-year A- rated vanilla debt issued by US industrials over five-year US treasuries. The specific Bloomberg instruments used in the calculation of the debt premium are as follows:
 - a) USD Industrials A BVAL Yield Curve 5 Year (ticker: BVCSN05, previously C0075Y). This index is constructed daily with prices of USD denominated senior unsecured fixed rate bonds issued by US industrial companies with a composite rating of A-.
 - b) USD United States Treasury Strip Coupon BVAL Yield Curve 5 Year (ticker: BV005079, previously C0795Y). The index is constructed daily with prices of USD denominated senior unsecured fixed rate bonds issued by US Treasury Strip Coupon.

Fonterra "Base Milk Price Manual for the 2024/25 season – 1 August 2024" (15 August 2024), at page 80.

Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "Submission on proposed focus areas for base milk price calculation 2024/25" (27 March 2025), at pages 11-12.

4.105 Fonterra has indicated that the decision to use US data to estimate the debt premium was made during the design of the Farmgate Milk Price mechanism in 2007, with a key design principle being to minimise subjectivity in the selection of inputs where practicable. Fonterra states that it considered New Zealand corporate debt markets (unlike US markets) too thin to permit the use of a purely formulaic approach to setting the debt premium. Fonterra considers this fact is acknowledged by the Commission in its use of a tiered approach, necessitating the application of judgement, in the Input Methodologies framework.

Discussion on the debt premium

- 4.106 We consider that the justification provided by Fonterra for using US data to calculate the debt premium is reasonable.
- 4.107 We note that the approach has been in place and applied consistently since the current base milk price calculation framework was introduced.
- 4.108 We also note that the largest portion of Fonterra's borrowings is denominated in USD.⁵² We consider that it is reasonable to assume that the same could be true for the Notional Processor.

Conclusion on the debt premium

- 4.109 Our conclusion is that component (a) of the debt premium rate applied in the 2024/25 Calculation is consistent with the s 150A purpose.
- 4.110 The premium of 0.50% reflects the spread between the A- rated debt with a five-year term to maturity issued by US industrial companies a relevant substitute for the Notional Processor. This is consistent with costs incurred by a hypothetically efficient processor in the broader market and therefore is consistent with the contestability dimension of s 150A.
- 4.111 The debt premium is set independently from the corresponding Fonterra values and is therefore consistent with the efficiency dimension of s 150A.

Debt issuance costs

Methodology

- 4.112 Issuance costs are an allowance for annualised debt issuance and other debt-related costs.
- 4.113 The issuance costs are specified in Fonterra's Reasons paper as a fixed value of 35 basis points.⁵³

Fonterra "<u>FY24 Fonterra Annual Report</u>" (24 September 2024), at page 72.

Fonterra, "2024/25 base milk price reasons paper" (16 June 2025), at page 42.

Discussion

- 4.114 The 35-basis point value reflects the allowance used by the Commission in Part 4 Input Methodologies, prior to the 2016 Input Methodologies Review.
- 4.115 In the 2016 Input Methodologies review, the Commission reduced its allowance to 20 basis points, including a provision for fixed to floating swap costs. This value was held constant in the 2023 Input Methodologies Review.
- 4.116 While we consider that it would be more accurate if the debt issuance costs were aligned with the Commission's current Part 4 Input Methodologies, and the resulting 15 basis point 'buffer' were moved to the currency swap costs (refer to paragraphs 4.120 to 4.129), this does not impact the combined value of the debt issuance and currency swap costs.

Conclusion on debt issuance costs

- 4.117 Our conclusion is that debt issuance costs are consistent with the s 150A purpose.
- 4.118 The issuance costs reflect the Commission's estimate prior to 2016 of the issuance costs incurred by debt issuers, with similar volumes, in the broader market. They are consistent with the contestability dimension.
- 4.119 The issuance costs are a notional value derived from an independent regulatory reference and so are consistent with the efficiency dimension.

Currency swap costs

Methodology

- 4.120 This is a provision for debt swap costs into NZ dollars.
- 4.121 The base milk price model has an implied fixed allowance of 10 basis points for swap costs.

Discussion

4.122 Figure 4.5 shows how the NZD/USD basis spread for swap costs has changed over time.

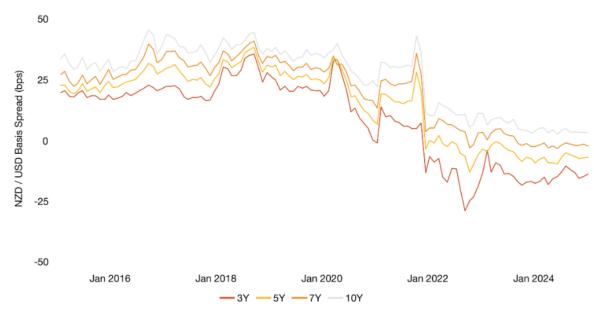


Figure 4.5: NZD/USD basis spread (end of month) over time⁵⁴

Source: PwC New Zealand, "<u>Treasury Broadsheet: The drop in the NZD/USD basis swap following</u>
the shift to US SOFR"

- 4.123 Prior to the Global Financial Crisis, there was minimal cost to basis swap spreads given a general abundance of US dollar funding spread through global financial markets.
- 4.124 NZD/USD basis swap spreads moved higher following the Global Financial Crisis, to ~25 basis points for 5-year tenors. A positive spread essentially means that New Zealand borrowers were forced to pay a premium to swap out of USD lending into NZD denominated debt.
- 4.125 The US Treasury has subsequently replaced its benchmark lending rate, which has driven a material move lower in NZD/USD basis swaps since late 2021.
- 4.126 The 10 basis points for swap costs assumed in the WACC calculation for the Notional Processor appear to be sufficient to cover current market costs to swap from USD denominated debt to NZD denominated debt. There is also a buffer for volatility within the overall debt issuance and swap cost provision.

Conclusion on currency swap costs

- 4.127 Our conclusion is that currency swap costs are consistent with the s 150A purpose.
- 4.128 Currency swap costs are consistent with the contestability dimension, as they are sufficient to cover the market costs to swap USD denominated debt to NZD denominated debt.

PwC New Zealand, "<u>Treasury Broadsheet: The drop in the NZD/USD basis swap following the shift to US SOFR</u>" (April 2025).

4.129 Currency swap costs are a notional value derived from an independent benchmark and so are consistent with the efficiency dimension.

Company tax rate

Methodology

- 4.130 This relates to the tax rate used to discount taxation from the gross risk-free rate in cost of equity paid to the investor, and interest paid in the cost of debt.
- 4.131 The Manual uses the Company tax rate in the cost of equity calculation:

```
Calculated for a Year as: \begin{aligned} k_{_{c}} &= R_{_{f}} \big( 1 \text{--} T_{_{C}} \big) + \beta_{_{c}} PTMRP + SRP \text{ ,} \\ \text{where} \end{aligned} where
```

T_c is the Company Tax Rate

Discussion

4.132 The current statutory corporate tax rate is 28%. The calculation of WACC is consistent with the expectation that both equity and debt investors (through currency swaps) are NZ-based and therefore incur NZ statutory taxes.

Conclusion on the company tax rate

- 4.133 Our conclusion is that the company tax rate is consistent with the s 150A purpose.
- 4.134 The company tax rate is consistent with the contestability dimension, as it is consistent with the current statutory corporate tax rate.
- 4.135 The company tax rate is a notional value derived from an independent statutory obligation and so is consistent with the efficiency dimension.

Leverage ratio

Methodology

4.136 The leverage ratio is a measure of debt. The Manual details a fixed amount of 0.4.55

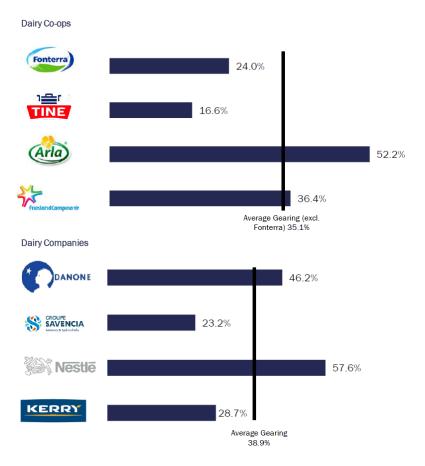
Discussion

4.137 The leverage ratio has been static at the same amount since 2012/13. It is largely in line with the leverage estimate the Commission has used for gas and electricity businesses with an A- credit rating, which is the same credit rating assumed for the Notional Processor.

⁵⁵ Fonterra, "<u>Farmgate milk price manual 2024/25</u>" (1 August 2024), at page 80.

4.138 Leverage ratios of comparable dairy companies are in-line with the Notional Processor's assumed leverage ratio, illustrated by figure 4.6. Fonterra's recent leverage ratios also indicate that a 40% value should be practically feasible for the Notional Processor, illustrated by figure 4.7.

Figure 4.6: Leverage ratios of comparable dairy companies⁵⁶



Source: Northington Partners, "Review of FY24 Performance"

Northington Partners, "Review of FY24 Performance" (November 2024), at page 43.

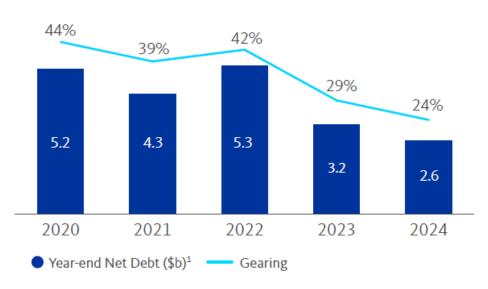


Figure 4.7: Fonterra's leverage ratios over the past five years⁵⁷

1 As at 31 July.

Source: Fonterra, "FY24 Fonterra Annual Report"

Conclusion on the leverage ratio

- 4.139 Our conclusion is that the leverage ratio is consistent with the s 150A purpose.
- 4.140 The leverage ratio value of 0.4 is consistent with the contestability dimension as it falls within the range of observed gearing ratios of comparable dairy companies, as well as Fonterra's historical gearing. It is also consistent with the leverage estimate for electricity and gas businesses with an A- credit rating determined in the 2023 Input Methodologies Review.
- 4.141 The leverage ratio value of 0.4 is a notional value derived from an independent benchmark, and so consistent with the efficiency dimension.

Post-tax market risk premium

Methodology

- 4.142 The post-tax market risk premium (**PTMRP**) reflects the additional expected return above the risk-free rate required to compensate investors. It represents the premium investors can expect to earn for bearing systematic risk.
- 4.143 The Manual requires Fonterra to adopt the amount used by the Commission in regulatory decisions in the 12-month period preceding the beginning of the Review Period. 58

Fonterra, "<u>FY24 Fonterra Annual Report</u>" (24 September 2024), at page 29.

Fonterra, "Farmgate milk price manual 2024/25" (1 August 2024), at page 81.

Discussion

- 4.144 Fonterra has used the tax-adjusted market risk premium the Commission decided in the 2023 Input Methodologies Review of 7%.⁵⁹
- 4.145 Fonterra's approach is consistent with both the Manual and the Commission's recent decisions.

Conclusion on the post-tax market risk premium

- 4.146 Our conclusion is that the PTMRP is consistent with the s 150A purpose.
- 4.147 The PTMRP input value of 7.0% reflects the 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. It is consistent with the contestability dimension.
- 4.148 The PTMRP input value of 7.0% is a notional value derived from an independent benchmark and so is consistent with the efficiency dimension.

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Commerce Commission "Part 4 Input Methodologies Review 2023 – Final decision" (13 December 2023), at page 173.

5. Detailed findings and conclusions on the asset stranding focus area

Purpose of this chapter

- 5.1 In this chapter we outline our detailed findings from our review of provisions for asset stranding, including the extent to which the assumptions, inputs and processes are consistent with the s 150A purpose.
- 5.2 This chapter considers the scope of the focus area, including an issue raised by IDPs in their submission on our proposed focus areas paper, and a conclusion for these elements.

Scope of focus area

- 5.3 We proposed model provisions for asset stranding as a focus area for this Calculation review. We noted that this may include but was not limited to:
 - specific risk premium, and asset beta with respect to asset stranding; and
 - assumptions and inputs applied under Rule 33 of the Manual in relation to surplus capacity.⁶⁰
- 5.4 In their joint submission on our proposed focus areas, IDPs raised a concern regarding the commercial feasibility of asset stranding risks for the Notional Processor. ⁶¹ We have also sought to address this concern as part of this focus area.

Summary of asset stranding provisions in the Manual and base milk price model

Manual rules related to asset stranding

- 5.5 There are three rules in the Manual relevant to the consideration of asset stranding:
 - 5.5.1 Rule 32 Adjustments for amendments to Reference Commodity Products;
 - 5.5.2 Rule 33 Surplus capacity; and
 - 5.5.3 Rule 43 Specific Risk Premium.

Commerce Commission "<u>Proposed focus areas for our review of Fonterra's 2024/25 base milk price calculation: process paper</u>" (6 March 2025), at paragraph 12.2.

Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "Submission on proposed focus areas for base milk price calculation 2024/25" (27 March 2025), at pages 12-13.

Rule 32 – Adjustments for amendments to Reference Commodity Products

- 5.6 Rule 32 deals with plant stranded due to a change in the portfolio of Reference Commodity Products (**RCPs**) produced by the Notional Processor. In this case, Fonterra can, subject to two exceptions, continue to deduct the unrecovered cost of that plant from the base milk price. When assets are stranded due to a change in the portfolio of RCPs, farmers bear the costs of the stranded plant through a lower base milk price in that season.⁶²
- 5.7 2024/25 was a review year item for Rule 32, however as there has been no change to the RCP basket, this Rule is not relevant to the current review period.

Rule 33 – Surplus capacity (due to a decrease in milk supply)

- 5.8 Rule 33 deals with adjustments to the asset base used in the base milk price calculation (referred to in the Manual as the 'Farmgate Milk Price Fixed Asset Base') where peak milk supply in a region has decreased by an amount that results in one or more standard plants being surplus to requirements. Under these circumstances the asset is removed from the asset base. When an asset is removed because it is stranded due to a loss of milk volumes, investors bear the cost as they are not able to recover the remaining annuity stream from this asset. We have confirmed with Fonterra that an asset can only be specified for removal under this Rule in a review year.
- 5.9 2024/25 was a review year for Rule 33, and Fonterra has confirmed that no assets will be removed under this Rule in this review period.
- 5.10 Separate from removing surplus Standard Plants under Rule 33, Fonterra can alternatively manage a reduction in milk supply by choosing that the Notional Processor not replace Standard Plants reaching the end of their economic life (of 30-32 years). This is equivalent to a milk supply reduction of approximately 3% each season in the base milk price model that could be managed by not replacing fully depreciated assets each year.

Rule 43 – Specific Risk Premium

5.11 Rule 43 allows for compensation to investors in the Notional Processor business for asset stranding risks not otherwise covered in the base milk price methodology. The Specific Risk Premium (**SRP**) to be determined under this rule is an ex-ante allowance added to the notional cost of equity.

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

5.12 2024/25 was a review year for Rule 43, and we discuss the application of this Rule for the current review period in paragraphs 5.39 to 5.50.

Asset stranding risk due to a reduction in milk volumes

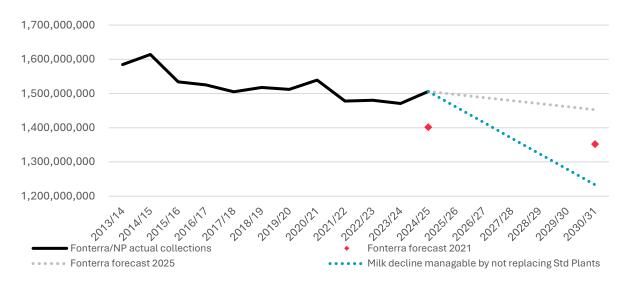
Processing capacity and milk supply outlook

Short-term outlook

- 5.13 We reviewed the Standard Plant capacity analysis provided in Fonterra's experts' reports for FY26 and FY27. The forecasts for FY26 and FY27 continue to project a gradual decline in peak day milk supply. However, we note that Fonterra management has indicated that there remains uncertainty with the milk forecast over the next few years.
- 5.14 For the 2025/26 season, Fonterra has elected not to replace the old Standard Plants (pre-2012 vintage) in the Notional Processor's asset footprint that are scheduled for closure by the end of the 2024/25 season.
- 5.15 A small shortfall in capacity over peak in the South Island is anticipated in the immediate term. As seen in the 2023/24 and 2024/25 calculations, this is managed by the Notional Processor producing a small volume of unstandardised whole milk powder (**WMP**) and skim milk powder (**SMP**). Although this is considered to be an expensive option, it is more cost effective than investing in excess capacity over the short term.
- 5.16 As noted in paragraph 5.9, Fonterra has confirmed that no assets will be removed under Rule 33 in this review period.
- 5.17 In summary, short-term current plant capacity and milk supply are forecast to be broadly aligned following the decision not to replace Standard Plants scheduled for closure by the end of the 2024/25 season.

Medium-term (10-year) milk supply outlook

Figure 5.1: Fonterra/Notional Processor milk supply actual and forecast scenarios by season (kgMS)



Sources: Fonterra, "Our Choice: A capital structure for a better future, together"; Commerce
Commission

- 5.18 Figure 5.1 shows Fonterra's current central forecast scenario for 2030/31 season milk supply, as well as a declining milk supply scenario produced by Fonterra in its 2021 Capital Structure consultation booklet.⁶³
- 5.19 Fonterra's latest medium-term (to 2030/31) full season milk forecast has increased by approximately 100 million kgMS relative to its 2020/21 scenario. This largely reflects higher actual milk collections over the last four years than assumed for the 2020/21 scenario.
- 5.20 CEPA has noted that at a national level the actual dairy cattle reductions, as well as dairy cattle productivity, observed over the last few seasons are approximately in-line with the trends anticipated from the Climate Change Committee's June 2021 reference case. 64 That reference case anticipated a decline in cattle numbers by 8% between 2019 and 2030, but with milk supply declining by only 4% in total over that period.

Fonterra, "Our Choice: A capital structure for a better future, together" (2021), at page 6.

CEPA "Asset beta and specific risk premium: New Zealand Commerce Commission" (15 July 2025), at page 23.

5.21 In Figure 5.1 we have also overlaid a scenario intended to approximate the milk decline that could be managed by the Notional Processor not replacing Standard Plants reaching the end of their economic life. As described in paragraph 5.10, the Notional Processor can manage an approximately 3% reduction of milk supply in the base milk price model by not replacing fully depreciated assets each year.

Conclusion on asset stranding risk due to a reduction in milk volumes

5.22 Informed by:

- Fonterra's current milk supply forecast;
- the observed trend in total milk collections in recent seasons; and
- the considerable buffer between the milk supply decline that is manageable through not replacing Standard Plants, and plausible milk supply forecast scenarios based on current supply risk factors;

we consider the risk of asset stranding due to milk supply reduction to be low in the medium-term horizon.

- 5.23 Gradual milk supply declines anticipated for the Notional Processor can be managed through not replacing fully depreciated assets. The removal of additional processing assets under Rule 33 is not required in the current review period, and the use of this Rule is unlikely to be required in the medium-term unless market dynamics change significantly.
- 5.24 Based on these factors, our conclusion is that the model assumptions and inputs made in relation to processing capacity relative to anticipated milk supply are consistent with the s 150A purpose.
- 5.25 The asset base assumed in the base milk price model is notional, and the milk supply outlook is a forecast, and so these elements are consistent with incentivising Fonterra to operate efficiently.
- 5.26 As the Notional Processor's capacity in each Region is materially aligned to Fonterra's, and the milk supply outlook is the same as that which Fonterra is using to inform its own asset base considerations, these assumptions are practically feasible.

IDP concern regarding the commercial feasibility of asset stranding risks for the Notional Processor

IDP concern raised

- 5.27 In their submission on our proposed focus areas, the IDPs stated their view that it is not commercially feasible that the risks of asset stranding are low simply because of the assumed "brief" economic life of the Notional Processor's assets (ie, Notional Processor assumed plant economic life is shorter than Fonterra actual plants). They argue that it requires a leap from reality to assume assets have been acquired uniformly over time, and that capacity is infinitely fluid across geography (in relation to stranding due to reduced milk supply). 65
- 5.28 IDPs' view is that the risk of asset stranding from supply competition is focussed in pockets of milk catchment zones. IDPs consider that in the incidence of a stranding event from supply competition, it would only be coincidental that this is the same zone where plants come up for replacement in a commercially feasible operation. The same is the case for stranding arising from declining milk production. The IDPs requested that we consider this when considering the commercial feasibility of capturing the costs of asset stranding as an ex-ante charge in the cost of capital. 66
- 5.29 The IDPs' concern appears to be related to the way that capacity is allocated in the model, ie to Regions rather than sites or milk catchments. Given this, we have sought to assess whether the way that capacity is allocated (and subsequently retired) in the model minimises asset stranding risk to a level that is not practically feasible.

Our analytical approach to examining this concern

- 5.30 We have undertaken analysis that considered an alternative modelling approach, under which capacity is allocated and fixed at a sub-Region level, rather than at a North Island/South Island level. This analysis defined six sub-Regions Upper/Central/Lower North Island and Upper/Central/Lower South Island, which broadly appears to reflect the way that Fonterra optimises plant utilisation.
- 5.31 Our analysis then sought to establish relatively severe milk decline forecast scenarios for the Notional Processor in each sub-Region. These were generated by combining total milk decline scenarios (ie, reflecting all milk collections in a sub-Region) and relatively severe market share decline forecast assumptions for the Notional Processor in each sub-Region. We then examined whether this alternative approach resulted in materially increased asset stranding risk in any of the individual sub-Regions.

Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "Submission on proposed focus areas for base milk price calculation 2024/25" (27 March 2025), at paragraph 62.

Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "Submission on proposed focus areas for base milk price calculation 2024/25" (27 March 2025), at paragraph 63.

5.32 We note that while the analysis still assumes that assets were acquired evenly over time, we calculated how frequently the equivalent of a full Standard Plant's capacity is retired in each sub-Region, as a proxy for the frequency that plants may have been acquired in a 'real-world' scenario.

Analysis findings

- 5.33 Even under relatively severe Notional Processor milk decline scenarios at a sub-Region level, the risk of asset stranding using this alternative approach to capacity allocation remains low.
- 5.34 Milk declines, in all six sub-Regions, could be managed by choosing not to replace Standard Plants reaching the end of their economic life within each sub-Region. In the key Notional Processor milk production sub-Regions of Central North Island, Lower North Island, and Central South Island (where the majority of milk volume is produced), the equivalent of at least one whole Standard Plant in capacity could be retired and not replaced every 2-4 seasons.

Conclusion on the commercial feasibility of asset stranding risks for the Notional Processor

- 5.35 As we addressed in our 2023/24 Calculation review, we consider the allocation of plants to 'Regions', and not individual sites, is a modelling simplification that avoids a situation whereby the milk price model effectively replaces all of Fonterra's assets at each site with the Notional Processor's asset base. We consider this would be excessively complex, costly, and not necessary to determine a milk price that is consistent with the dimensions of contestability and efficiency.⁶⁷
- 5.36 Our analysis suggests that it is unlikely that modelling simplifications, and particularly the allocation of Standard Plants to Regions, are materially impacting asset stranding risk. This is because the asset life assumed for Standard Plants has been set at a level that appears to sufficiently mitigate asset stranding risks.
- 5.37 Even if this modelling simplification were adjusted (resulting in the allocation of Standard Plants to sub-Regions instead of Regions), the Notional Processor appears likely to be able to manage a decline in milk production by not replacing fully-depreciated assets. A rapid and sustained decline in the Notional Processor's milk collections would be required to see stranded processing assets. We have no reason to anticipate that such a decline is likely in the medium term (for example, a 10-year horizon) in any of the sub-Regions we have considered.

Commerce Commission, "Review of Fonterra's 2023/24 base milk price calculation: Dairy Industry Restructuring Act 2001" (16 September 2024), at paragraph 4.19.

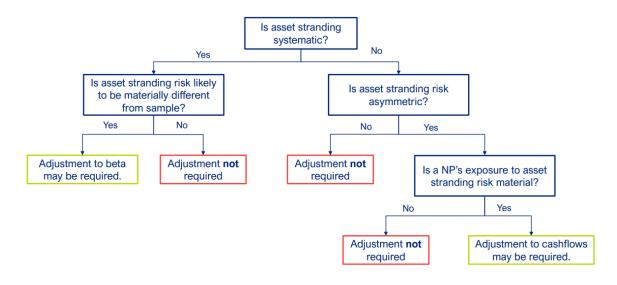
5.38 Based on this analysis, we continue to consider that there are circumstances where it may be appropriate for asset stranding risk to be reflected as an ex-ante charge within the cost of capital. Where these conditions are met, we would likely consider an SRP value greater than zero to be consistent with the s 150A purpose. However, we also note that the Notional Processor could alternatively mitigate stranding risk, should it materialise, through changes to depreciation profiles or asset lives.

The Specific Risk Premium (SRP)

Background on the SRP

- 5.39 Non-systematic stranding risk is dealt with by the Manual Rules listed in paragraph 5.5.
- 5.40 Specifically, the SRP was introduced into the Manual as Rule 41 (in 2020 changed to Rule 43) to address our position on asset stranding risk. The rule allows for compensation for downside non-systematic risk associated with stranded assets that are not otherwise covered in the milk price calculation methodology.
- 5.41 In our 2020/21 Calculation review we sought advice from CEPA on the SRP. To assist with our assessment, CEPA provided the framework outlined in Figure 5.2.

Figure 5.2: CEPA's 2021 asset stranding risk framework⁶⁸



Source: CEPA," Dairy asset beta and specific risk premium – supporting material – 21 July 2021"

⁶⁸ CEPA, "Dairy asset beta and specific risk premium – supporting material – 21 July 2021" (27 July 2021), page 21.

- 5.42 CEPA considered in 2021, and reaffirmed in its advice for the 2024/25 season, that asset stranding risk has both systematic and unsystematic elements. For supply, regulation related risks may be partially unsystematic and may have asymmetric impacts. CEPA considers that competition related risks are likely to be predominantly systematic and unlikely to be materially different from the sample.
- 5.43 We note that CEPA considers that asset stranding risk caused by changes in demand for a notional milk processor is likely to be predominantly systematic and can be captured in the asset beta. In this case no adjustment via the SRP would be required.
- 5.44 In the 2020/21 season, CEPA concluded that the justification for an SRP for non-systematic and asymmetric asset stranding risk remained weak for two reasons:
 - 5.44.1 It was considered unlikely that the New Zealand Government would rapidly and without notice phase in new environmental measures that led to asset stranding risk being realised by the Notional Processor.
 - 5.44.2 The Notional Processor has flexibility in terms of the depreciation profile applied. If a Notional Processor can change the depreciation profile of assets at risk of stranding and is able to recover that depreciation, then the asset stranding risk is mitigated, possibly entirely.

The SRP for this review period

- 5.45 For the review period beginning from the 2024/25 season, Fonterra has set the SRP to nil, as was the case in the last review period. Fonterra refers to our conclusions from the 2020/21 Calculation review to justify this position:
 - 5.45.1 There is no conclusive evidence that the comparators included in either the core or full comparator sets used by the MPG in estimating the asset beta have a materially different asset stranding risk to that of the Notional Processor.
 - 5.45.2 While we believe that the Notional Processor may be exposed to some non-systematic asset stranding risk due to declining milk supply volumes or unforeseen changes in demand preferences, we accept that such risk is currently low. Further, Fonterra can mitigate asset stranding risk through alternative methods, such as not replacing fully depreciated assets in the asset base or shortening asset lives if appropriate. On this basis, our conclusion is that no ex-ante compensation for non-systematic risk is required through the SRP. ⁶⁹

Commerce Commission, "Review of Fonterra's 2020/21 base milk price calculation: Dairy Industry Restructuring Act 2001" (15 September 2021), at paragraph 3.68.

- 5.46 Fonterra notes its view that the Commission's 2020/21 analysis remains valid because:
 - 5.46.1 the updated comparator set is substantially unchanged from 2021, and there have been no changes in the core assumptions underpinning the Notional Processor construct; and
 - 5.46.2 Fonterra does not face a heightened risk of declining milk supply relative to 2021, and there has also not been any change in the range or effectiveness of the options available to Fonterra or the Notional Processor to mitigate asset stranding risk.⁷⁰
- 5.47 As we did in 2021, we have sought expert advice from CEPA regarding whether a SRP should be included.⁷¹ CEPA remains of the view that a SRP for non-systematic and asymmetric asset stranding risk is not justified. Their arguments can be summarised as follows:
 - 5.47.1 CEPA considers non-systematic industry-wide supply side risk due to declining milk supply volumes to not be material currently. CEPA also notes that in any case, the Notional Processor has sufficient flexibility to mitigate any residual risk.
 - 5.47.2 CEPA also notes that the consequences of competition for supply are likely to be a diversifiable risk. It could be argued that any downside for Fonterra produces an identical upside for its competitor. An investor holding a diversified portfolio that includes both companies is no worse off, and by extension does not require additional compensation for this risk.
 - 5.47.3 The updated comparator sample is characterised by firms that operate in competitive markets and are therefore considered to have materially similar asset stranding risk as the Notional Processor.

Conclusion on the Specific Risk Premium

5.48 We agree with CEPA's conclusions in relation to the SRP on the basis that:

5.48.1 our analysis in paragraphs 5.18 to 5.21 supports the view that undiversifiable supply risk does not appear to be material in the medium term, even if considered at a more detailed sub-Regional level;

Fonterra "Submission on the Proposed focus areas for the review of Fonterra's 2024/25 base milk price calculation" (27 March 2025), at pages 2-3.

CEPA "Asset beta and specific risk premium: New Zealand Commerce Commission" (15 July 2025).

- 5.48.2 the current comparator set is characterised by firms that operate in competitive markets and are likely to have materially similar asset stranding risk as the Notional Processor; and
- 5.48.3 the Notional Processor could alternatively mitigate stranding risk, should it materialise, through changes to depreciation profiles or asset lives.
- 5.49 We are satisfied that the SRP has been appropriately considered within the context of asset stranding risk. Given our conclusion on asset beta, and our conclusion on non-systematic risk in the medium term, it follows that an SRP value of 0% is reasonable.
- 5.50 We consider that the SRP is consistent with the s 150A purpose. As the SRP is a notional value, it is consistent with the efficiency objective. As the Notional Processor is likely to have a materially similar asset stranding risk to the comparator sample, we consider that an SRP value of 0% is practically feasible.

6. Detailed findings and conclusions from our fit for purpose review

Purpose of this chapter

6.1 In this chapter we outline our detailed findings from our fit for purpose review, including the extent to which the assumptions, inputs and processes are consistent with the s 150A purpose.

Scope of fit for purpose review

- 6.2 We have reviewed Fonterra's base milk price calculation model, as well as supporting models for each of the key inputs. We have assessed further information on a confidential basis where we considered it necessary.
- 6.3 For this review specifically, we have provided comments on other important review-year items for the 2024/25 season, as specified in the Manual:
 - 6.3.1 updates to yield assumptions under Manual Rule 7; and
 - 6.3.2 changes to variable manufacturing cost assumptions under Manual Rule 12.
- 6.4 We have also examined any changes in the following assumptions that could impact the base milk price:
 - 6.4.1 changes in other costs;
 - 6.4.2 inclusion of off-GDT sales as a reference for calculating RCP prices;
 - 6.4.3 changes in sales phasing; and
 - 6.4.4 changes in volumes of milk collected and a check against modelled processing capacity.
- 6.5 We note the impact on costs from the reclassification of the Te Rapa site from a 'Medium Large' site to 'Medium' site due to the closure of two driers.
- 6.6 At the request of IDPs, we have also included commentary regarding cost inflation adjustments, as we have provided in recent seasons.

Conclusion

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

Detailed findings

Review-year updates to yield assumptions under Manual Rule 7

Yield updates

- 6.8 Product yields are described in the Manual as the factors for converting milk supply into RCPs, having regard to the actual composition of the milk supply for the relevant period, as well as the valued component usage for each standard specification product.⁷² The valued component usage incorporates the composition target specification of the final product, as well as any milksolids that may have been lost in the manufacturing process.⁷³
- 6.9 In our 2023/24 Calculation review, we noted that Fonterra had reverted to the use of yield inputs established in 2020/21 to achieve compliance with the Manual.⁷⁴ The reason for the change was to address an inconsistency identified in the frequency of the updates to the yield inputs, which have been occurring annually rather than four-yearly as indicated by Rule 7 of the Manual. Rule 23 of the Manual (amended in 2020/21) allows for within period reviews (ie between Review Years) only in exceptional circumstances, such as where there is reason to believe there would be a material impact on the base milk price. The updates made to the yield inputs annually do not meet this threshold.
- 6.10 The 2024/25 season is a review year for yields under Rule 7 of the Manual. With the review-year updates to yields, loss assumptions have been increased slightly in this review period for SMP and butter milk powder (**BMP**) and reduced slightly for butter and anhydrous milkfat (**AMF**), with WMP unchanged. This results in a small net increase in overall assumed kgMS losses for the Notional Processor from 0.35% in 2023/24 to 0.37% in 2024/25.⁷⁵
- 6.11 Review-year updates to RCP specification offsets have resulted in an implied reduction of 0.58% (vs 0.62% in 2023/24) in the volume of finished product relative to a 'nil offset' counterfactual. The MPG's independent expert has determined that improvements in Fonterra's plant operations supported minor decreases in the assumed SMP protein offset, WMP fat offset and BMP fat offset for the 2024/25 calculation. The expert also determined that a decrease in BMP fat composition required a minor increase in the BMP protein composition assumption to meet Codex standards. All other product compositions remain unchanged.

Fonterra "Farmgate milk price manual 2024/25" (1 August 2024), at page 63.

Fonterra "Farmgate milk price manual 2024/25" (1 August 2024), at page 64.

Commerce Commission "<u>Final report – Review of Fonterra's 2023/24 Base Milk Price Calculation: Dairy Industry Restructuring Act 2001</u>"(16 September 2024), at page 9.

Fonterra, "2024/25 base milk price reasons paper" (16 June 2025), at page 22.

Fonterra, "2024/25 base milk price reasons paper" (16 June 2025), at page 22.

Conclusion on review-year updates to yield assumptions

- 6.12 In the 2023/24 Calculation review we determined that the way in which losses are built up and composition targets are set by Fonterra in its yield assumptions is consistent with the s 150A purpose.⁷⁷
- 6.13 As there has been no change to the approach to determine yields in the 2024/25 Calculation, and the relevant supporting evidence has been supplied by Fonterra, our conclusion is that we consider that the yield assumptions are consistent with the s 150A purpose.

Changes to variable manufacturing cost assumptions under Manual Rule 12

Variable manufacturing cost updates

- 6.14 The 2024/25 season is a review year for variable manufacturing costs under Rule 12 of the Manual. We have reviewed Fonterra's explanations for variable cost component movements between the 2023/24 and the 2024/25 seasons expressed on both a c/kgMS and an absolute cost basis.
- 6.15 Total variable operating costs per kgMS have decreased by -7.0% (or -3.6c/kgMS) as a result of the review year updates for 2024/25 relative to 2023/24. The key drivers of this are a reclassification of some energy costs from variable to fixed costs, as well as a reduction in the cost of consumables, with other cost lines relatively unchanged.
- 6.16 Some energy costs have been reclassified from variable to fixed costs, with the overall energy costs relatively unchanged compared to the final 2023/24 season model on a c/kgMS basis. Fonterra has noted that unit electricity costs for 2024/25 are lower than prior year, reflecting the net results of Fonterra's hedging activities. Unit steam costs for the season are higher than prior year, driven by a higher mix of biomass and electricity fuel sources replacing cheaper coal. We note that capital expenditure relating to biomass and electrode boiler installation was included in 2023/24 season costs.
- 6.17 Fonterra states that the reduction in consumables costs is a result of:
 - 6.17.1 packaging gas optimisation work by Fonterra in the aftermath of the CO₂ supply shortage in 2022 after closure of the Marsden Point refinery; and
 - 6.17.2 updated gas flushing usage requirements provided by equipment suppliers during the 2024 capital reset.

Commerce Commission "<u>Final report – Review of Fonterra's 2023/24 Base Milk Price Calculation: Dairy Industry Restructuring Act 2001</u>" (16 September 2024), at chapter 4.

Conclusion on review-year updates to variable manufacturing cost assumptions

- 6.18 Our conclusion is that we consider the updates to variable manufacturing costs are consistent with the s 150A purpose.
- 6.19 As the per unit variable manufacturing costs are derived either from Fonterra actual or budgeted values, and the usage per tonne is derived either from Fonterra audit data or external manufacturer specified usage rates, the variable manufacturing costs are practically feasible.
- 6.20 As some per unit costs are based on budget values (though for energy, incorporate gains or losses from Fonterra hedging activities), and variable manufacturing costs are calculated based on notional rates of usage per tonne of finished product, rather than Fonterra actuals, they are consistent with the efficiency dimension of s 150A.

Changes in other costs

- 6.21 Base milk price component costs for the 2024/25 season are higher, with non-milk expenses increasing by NZD 194m relative to the 2023/24 season. When expressed on a per kgMS basis, non-milk expenses have increased by around 7.2c per kgMS. Higher lactose costs and miscellaneous costs are the primary drivers of this.
- 6.22 In addition to the changes between seasons, we also identified a notable decrease in administration costs between the May and July models of NZD 22.3 million.

Lactose costs

- 6.23 Lactose costs for the 2024/25 season have increased by NZD 82m or around 4.5c per kgMS relative to the 2023/24 season. The increase is driven by changes in international lactose prices applied to the notional milk price volumes and is outside Fonterra's control.
- 6.24 We have undertaken a review of international lactose price movements and note a similar trend in international lactose prices as that which has applied to the Notional Processor.
- 6.25 Prior to the beginning of a season, Fonterra chooses whether it will use its own lactose price or that of other processors in calculating the base milk price. For the 2024/25 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.

- 6.26 We consider that selecting Fonterra's competitors' actual lactose costs as a benchmark, prior to the beginning of the season, in combination with the Notional Processor's lactose volume requirements that are significantly larger than Fonterra's actual volumes, incentivises Fonterra to reduce its actual lactose costs (ie, operate efficiently).
- 6.27 Therefore, our conclusion is that we consider the lactose cost assumptions are consistent with the efficiency and contestability dimensions of s 150A.
- 6.28 We note, for completeness, that in their submission on our proposed focus areas paper, the IDPs requested that we review lactose costs as a focus area in this Calculation review. Our response to this request is captured in Attachment A

Miscellaneous costs

- 6.29 Miscellaneous costs for the 2024/25 season have increased by NZD 38m, or around 2.5c per kgMS. Fonterra has indicated that this reflects costs with replacing its core system of record (enterprise resource planning software system) and migrating from SAP Corporate to S4 Hana.
- 6.30 Fonterra considers it is impractical and unfeasible for the Notional Processor to independently establish its IT requirements and associated costs. Therefore Fonterra has always established the Notional Processor allowances for both IT operating and capital costs by reference to Fonterra's actual costs and assets, adjusted (normally in the course of the four-yearly overheads reset) for differences between Fonterra and the Notional Processor. Under this approach the Notional Processor is assumed to replace / upgrade its relevant IT systems at the same time as Fonterra.
- 6.31 In addition, Fonterra notes that it is undertaking a broader programme of business transformation and acting to leverage technological advances in AI and simplify its business (with the broader project, inclusive of the core system of record replacement, referred to as 'Pūnaha'). Fonterra indicates that a portion of this transformation programme will potentially result in lower overhead costs for the Notional Processor at the next 'reset' of overheads costs in 2027/28. It therefore considers it appropriate to allocate a portion of Pūnaha costs to the base milk price.
- 6.32 We accept that maintaining independent IT requirements for the Notional Processor is likely to be impractical. Therefore, we consider the inclusion of IT costs incurred by Fonterra, adjusted for differences between Fonterra and the Notional Processor, to be consistent with the efficiency and contestability dimensions of s 150A.
- 6.33 We will assess any resulting implications for overheads in the 2027/28 review year.

Administration costs

- 6.34 We identified a reduction in administration costs between the May and July milk price models of NZD 22.3 million. The largest proportion of this (NZD 19.1 million) was associated with AgriZero (a public-private partnership).
- 6.35 Fonterra has advised that the cash contribution to Agrizero has been capitalised and classified as an investment in Fonterra's accounts, and that the asset's value will be expensed over time as Agrizero incurs operating costs and losses. The Milk Price treatment is aligned to Fonterra's. In addition, an NZD 1 million WACC charge has been applied to reflect the financing costs for the 2024/2025 season of the capitalised contribution.
- 6.36 Fonterra has advised that the remaining movement under the administration cost category primarily relates to the update of insurance costs from budget to actual.
- 6.37 We have no concerns regarding the treatment of these costs or their applicability to the Notional Processor. We considered Fonterra's approach to sustainability related costs in the 2023/24 calculation review. This approach appears to be consistent with that considered in 2023/24. As there has been no change to the approach to administration costs in the 2024/25 Calculation, our conclusion is that we consider that the administration cost assumptions are consistent with the s 150A purpose.

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

- 6.38 In our recent fit for purpose reviews, we have looked at off-GDT prices and volumes for informing sales to assess the impact on average prices assumed for the Notional Processor.
- 6.39 We obtained the same information for the 2024/25 season as of 30 April 2025. The overall impact of off-GDT pricing for RCPs was an increase of 11.1c per kgMS. This compares to 11.2 cents per kgMS in 2023/24. Off-GDT sales continue to be benchmarked against on-GDT sales prices, and the price differential between on- and off-GDT sales has not notably shifted.
- 6.40 Given the process for including off-GDT sales has not changed since last year's calculation review, and there is a similar magnitude in the overall impact of off-GDT pricing, we continue to consider that the use of off-GDT sales pricing is practically feasible.

Commerce Commission, "<u>Review of Fonterra's 2023/24 base milk price calculation: Dairy Industry Restructuring Act 2001</u>" (16 September 2024), at pages 31 and 32.

6.41 GDT provides a transparent RCP pricing reference point for New Zealand dairy market participants as well as a benchmark for off-GDT sales. It therefore provides an incentive for Fonterra to operate efficiently in the context of s 150C(1)(a).

Changes in sales phasing

- 6.42 Fonterra's approach to sales phasing assumptions for the Notional Processor has not changed from previous years' reviews. The revenue is recognised in the base milk price model based on the contracted prices, and the use of total phasing is consistent with the production profile of the Notional Processor, therefore our conclusion is that we consider that the phasing is practically feasible.
- 6.43 Furthermore, as Fonterra's approach to sales phasing is unchanged from previous years' reviews, we are relying on our conclusion from our previous calculation reviews, that the approach to sales phasing is consistent with the contestability dimension of s 150A.
- 6.44 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 s 150A because:
 - 6.44.1 there is insufficient data to develop a reasonable notional figure; and
 - 6.44.2 Fonterra only has limited discretion over its sales phasing.

Changes in volumes of milk collected and check against modelled processing capacity

- 6.45 The 2024/25 volume of milk collected of 1,509 million kgMS was 2.6% higher than 2023/24.
- 6.46 Fonterra conducted a review of the fixed asset base in the 2024/25 season that will apply for the 2024/25 to 2027/28 review period. This resulted in a decision to maintain the assumed processing capacities of incremental and replacement plants for the manufacture of all five RCPs at the same levels assumed for the previous review period (ie the 2020/21 to 2023/24 period).
- 6.47 The total modelled RCP manufacturing capacity of the Notional Processor for both the North Island and South Island was sufficient to process the available 2024/25 season milk solids, including a small volume of unstandardised WMP and SMP. Around 4,200 tonnes of un-standardised WMP/SMP (equivalent to around 2.2m kgMS) was modelled to be produced by the Notional Processor over October and November in the South Island to manage peak milk flows in this Region.

Impact of Te Rapa site re-classification on fixed costs

- 6.48 Fonterra has noted that the closure of Te Rapa Driers 1 and 2 will see the Milk Price site size for Te Rapa reduce from a Medium-Large site classification (3-4 plants) to a Medium site from the 2024/25 season onwards.
- 6.49 The Notional Processor's site footprint is assumed to be aligned with Fonterra's, and the peak processing capacity by site is also materially aligned. Fonterra's actual sites are each allocated a specific size classification in the base milk price model based on the equivalent number of Standard Plants assumed to operate at each site. Where Fonterra's actual site processing capacity has been increased or reduced, the relative size classification for the corresponding site in the milk price model will also be adjusted where necessary.
- 6.50 The implication of the change to the classification of the Te Rapa site is a small reduction in fixed costs, relative to if the site remained classified as a Medium-Large site. This is primarily captured under the 'Wages & ERE' and 'Site overheads' cost categories. The milk price impact of this change is less than 0.5c per kgMS.

Cost inflation adjustments

- 6.51 Our review of Fonterra's 2022/23 and 2023/24 base milk price calculations included a review of assumptions relating to the impact on milk price costs of inflationary pressures across the broader economy. This was in response to a request from IDPs to review all cash costs and to update the cost of the capital base as focus areas in the context of the high inflation environment at the time.
- 6.52 In their submission on our proposed focus areas, IDPs requested that we continue to review price inflation adjustments, noting that while inflationary pressures in New Zealand have declined they remain relevant to the 2024/25 season.⁷⁹
- 6.53 This section follows the same approach to this topic as we included in our recent Calculation reviews.

Capital asset base costs

- 6.54 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.
- 6.55 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.

Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "Submission on proposed focus areas for base milk price calculation 2024/25" (27 March 2025), at paragraph 72.

- 6.56 The information sources used to create the capital cost index include, but are not limited to:
 - 6.56.1 JLL Plant and Machinery Database;
 - 6.56.2 searches of similar plant from internet websites;
 - 6.56.3 discussions with suppliers and dealers of machinery and equipment; and
 - 6.56.4 information provided by Fonterra such as receipts, fixed asset schedule and verbal advice as to original purchase costs and date of assets when acquired.
- 6.57 The overall increase in the replacement cost of the asset base from 2024 to 2025 was 3.1%, as calculated by JLL. In our 2021/22 Calculation review, we used the Producer Price Index Outputs Building construction index as a relevant benchmark. We have performed a crosscheck against these benchmarks. The annual movement for this index to the June 2024 quarter was 3.2%.80
- 6.58 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

- 6.59 We have reviewed the variable manufacturing cost lines to assess the appropriateness of the methods used to update the costs.
- 6.60 The list of the cost lines and the method applied to each line are outlined in Attachment D.
- 6.61 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.

Other cash costs

6.62 We have reviewed all other cash cost lines to assess the appropriateness of the methods used to update the costs.

6.63 The list of the cost lines and the method applied to each line are outlined in Attachment D.

The Producer Price Index Outputs building construction index is available from <u>Statistics New</u> Zealand Infoshare.

Depreciation expense

- 6.64 We have reviewed the depreciation expense cost line and noted an increase of 2.7c/kgMS relative to 2023/24, or an increase of 16.4%.
- 6.65 The capital charge methodology uses a tilted annuity approach as it results in a constant annual capital cost in real terms (ie, the capital cost increases in time only by the forecast rate of inflation in capital costs). Without this assumption, the depreciation and capital charges would fluctuate from year to year.
- 6.66 The increase in depreciation, at a rate higher than inflation, is consistent with the prior year's expectations for a greater increase in depreciation expense expected in this and following years. This expectation reflected a return to lower inflation, shifting the future value of the asset base downwards, and creating a flatter tilt. To ensure the tilt is net present value neutral, the current season's depreciation is a rate higher than inflation.

Assessment of cost inflation adjustments against the s 150A purpose

6.67 Our conclusions are that:

- 6.67.1 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
- 6.67.2 the rates used are compiled independently of Fonterra's current year performance and so provide an appropriate notional benchmark.

 Therefore, we consider that the efficiency dimension is met.

Attachment A Other matters raised

Responses to other matters raised in submissions on our draft report

Submitter(s)	Key points	Our response
PBS	PBS seeks clarity on the interpretation of Commerce Commission metrics for changes in cash costs, specifically Lactose costs, as outlined in Table 1 of its submission. ⁸¹ PBS also questions a variance between their calculated cost delta values and those included in our draft report.	We confirm that the submitter's interpretation of these metrics is aligned with our approach. We note that the variance appears to be due to differences in the milk volumes applied. The calculations in our draft report were based on a mid-May forecast of 1,504 million kgMS, whereas the submitter's calculation used the full season actual value of 1,509 million kgMS.
PBS and OCD	OCD and PBS question the credibility of the explanation for a reduction in the Consumables sub-line item, by 51.74%, and seek a review of this reduction. 82,83	We have sought further supporting information on this matter. Fonterra has provided us with an extract from an Aurecon report that shows the latest supplier-provided usages for nitrogen and CO_2 packing (2024) vs. prior values (2020). The report appears to support an assumption of lower packing gas usage requirements for WMP for the Notional Processor, and no packing gas usage for SMP/BMP. Previously, SMP/BMP packing gas usage was the same as for WMP. Fonterra has confirmed that the reduction in packing gas usage requirements is due to process optimisation rather than a change in technology. Fonterra notes that the supporting technical analysis was prompted by the spike in CO_2 prices in 2023 following the Marsden Point refinery closure.

Parker Business Services "Submission on the Commerce Commission draft report: Review of Fonterra's 2024/25 base milk price calculation" (15 August 2025), at paragraphs 2-5.

Open Country Dairy "Submission on draft report: Review of Fonterra's 2024/25 base milk price calculation" (15 August 2025), page 1.

Parker Business Services "<u>Submission on the Commerce Commission draft report: Review of Fonterra's 2024/25 base milk price calculation</u>" (15 August 2025), at paragraphs 6-8.

Submitter(s)	Key points	Our response
PBS and OCD	OCD and PBS submit that Wages and ERE decreasing by 1.59% when compared with 2023/24 appears difficult to achieve given negotiated pay rate increases for the 2024/25 period, and request a review of the drivers of this reduction. 84,85	The main driver for this is the impact on labour units from the decision not to replace the WMP/SMP standard plants at the end of their economic life coming into the 2024/25 season, with the change to the Te Rapa site classification also a contributing factor. As a result, there is a lower quantity of labour required which offsets wage price increases. We do not have any concerns with this aspect of the calculation.
PBS	PBS requests a review of whether there is sufficient buffer processing capacity to mitigate the risk of processing unstandardised product during unexpected peaks in milk volumes, given the Notional Processor's production of unstandardised product during the 2024/25 milk season. ⁸⁶	We note that Notional Processor capacity in the North Island was modelled to be sufficient to process peak milk without producing unstandardised WMP or SMP. In the South Island, peak month milk collection volumes in the 2023/24 and 2024/25 seasons were increased against the observed trend of gradual decline seen in recent prior seasons. This required the Notional Processor to process ~2.5% of October milk and ~1.2% of November milk as unstandardised WMP or SMP in 2024/25. This option is considered more cost effective for short periods over the peak than investing in additional asset capacity. This effectively means that the Notional Processor "gives away" some milksolids rather than processing into standardised product, which would require additional plant capacity that would only be utilised for very short periods. Given the comparatively small volumes of unstandardised WMP/SMP currently modelled to be produced, and the fact that the Notional Processor capacity assessment is aligned to Fonterra's formal annual refresh of its long run milk supply forecasts (see Reasons paper page 41), we have no current concerns with the level of processing capacity assumed for the Notional Processor.

Open Country Dairy "Submission on draft report: Review of Fonterra's 2024/25 base milk price calculation" (15 August 2025), page 2.

Parker Business Services "<u>Submission on the Commerce Commission draft report: Review of Fonterra's 2024/25 base milk price calculation</u>" (15 August 2025), at paragraphs 9-10.

Parker Business Services "Submission on the Commerce Commission draft report: Review of Fonterra's 2024/25 base milk price calculation" (15 August 2025), at paragraphs 11-12.

Submitter(s)	Key points	Our response
PBS	PBS requests clarification associated with the inflationary cost variances disclosed in Attachment D - whether it reflects all costs under each category, or only those listed in the table. PBS also seeks to understand whether the values in these tables can be calculated from disclosed material. 87	We confirm that Other Cash costs contains only the sub-line items listed in Attachment D: Commission costs, Collection costs, Lactose, Inland freight costs, Other supply chain costs, Storage costs, Administration, and Miscellaneous costs. We note a divergence in the labelling of cost line items used in Attachment D compared to the material disclosed by Fonterra under s 150QA. While this may have caused some confusion for submitters, we consider that it does not give rise to any substantive issue as the same information is captured. "Total Fixed Manufacturing Costs" in Attachment D of our draft report refers to Fixed Operating costs, and "Variable Manufacturing Costs" in Attachment D of our draft report refers to Variable operating costs in the Milk Price Reporting Models published by Fonterra under s 150QA. The five sub-line items of Water, Cleaning and CIP, Consumables, Effluent, and Laboratory are included under Variable operating costs in the S150QA disclosures for the 2023/24 Base Milk Price calculation review. We will align wording more closely with that of the Fonterra disclosures for future calculation reviews.
PBS	PBS reports difficulty in ascertaining the impact of inflationary cost variances in Attachment D of the draft report, where numbers are not separately disclosed as part of s150QA disclosures. 88	 We will, in future Calculation reviews, align commentary on cost movements to cost line items that are set out in Fonterra disclosures. For transparency, the year-on-year line movements for Supply chain costs, aligned with disclosures, are below: Variable supply chain costs have increased by 3.9% on a NZD/kgMS basis against 2023/24 costs. Fixed supply chain costs have decreased by 2.7% on a NZD/kgMS basis against 2023/24 costs.

Parker Business Services "<u>Submission on the Commerce Commission draft report: Review of Fonterra's 2024/25 base milk price calculation</u>" (15 August 2025), at paragraphs 13-15.

Parker Business Services "<u>Submission on the Commerce Commission draft report: Review of Fonterra's 2024/25 base milk price calculation</u>" (15 August 2025), at paragraphs 16-18.

Submitter(s)	Key points	Our response
PBS and OCD	OCD and PBS seek clarity around the inputs used to calculate energy costs, in particular the adjustment for the consequences of Fonterra's hedging activities, incurred from actual energy cost rates, being applied to budget energy cost rates. The submitters seek reconciliation of this apparent contradiction. The submitters request review of the appropriateness of using actual energy cost rates, given the immaterial impact on the efficiency element. ^{89, 90}	We have sought clarification from Fonterra on this matter. Fonterra's Reasons paper states that "the unit cost assumptions along with the provisions for transmission charges represent budgeted estimates of the average prices expected to be paid by Fonterra, adjusted for the consequences of Fonterra's energy hedging activities". 91 Fonterra has noted that while correct, this explanation is not as clear as it could be, since the net result is to effectively take Fonterra's actual unit costs, which is not immediately obvious given the budget reference. Fonterra has noted that in practice, a portion of Fonterra's energy requirements are contracted at the start of the season, and the budgeted and contracted rates for that portion will be identical. Fonterra is exposed to the spot market for the balance of its requirements, and undertakes hedging activities during the season in respect of that exposure. The "gains or losses from Fonterra's energy hedging activities" referenced in the Reasons paper 92 are calculated by reference to budgeted rather than spot prices, but the result is the same: the average unit price assumed in the base milk price calculation is the average actual unit price paid by Fonterra, inclusive of the outcome of its hedging activities. We recommend Fonterra consider clarifying the wording on this matter for future calculation Reasons papers.

Open Country Dairy "Submission on draft report: Review of Fonterra's 2024/25 base milk price calculation" (15 August 2025), page 2

Parker Business Services "<u>Submission on the Commerce Commission draft report: Review of Fonterra's 2024/25 base milk price calculation</u>" (15 August 2025), at paragraphs 19-23.

Fonterra, "2024/25 base milk price reasons paper" (16 June 2025), at page 33.

⁹² Fonterra, "2024/25 base milk price reasons paper" (16 June 2025), at page 32.

Submitter(s)	Key points	Our response
OCD	OCD submits that the inclusion of major IT upgrades may not be relevant for an efficient stand-alone operator. 93	It would be reasonable to expect that a business the size and scale of the Notional Processor would have IT systems that would periodically require significant upgrades. Attempting to determine this notionally in our view would be impractical, so we accept Fonterra's approach of establishing these costs by reference to Fonterra's actual costs adjusted for differences between Fonterra and the Notional Processor. ⁹⁴ We consider that the inclusion of these costs (vs. not capturing such costs) is appropriate in establishing the cost base of the Notional Processor. For these reasons, we maintain our conclusion on this matter outlined in paragraph 6.32.

Open Country Dairy "Submission on draft report: Review of Fonterra's 2024/25 base milk price calculation" (15 August 2025), page 2

Fonterra, "2024/25 base milk price reasons paper" (16 June 2025), at page 39.

Responses to points raised in the IDP submission on our proposed focus areas

Key points	Our response
The IDPs consider the base milk price itself does not (and is unlikely to) incentivise Fonterra efficiency and the Commission's approach to the s 150A efficiency requirement is misplaced. IDPs believe that Fonterra can subsidise the milk price from returns received in value-added segments through setting difficult targets in the base milk price assumptions. The IDPs consider the efficiency purpose of s 150A would be better served if the base milk price processes were assessed on the basis they cannot be interpreted as being able to disincentivise Fonterra efficiency or to stand in the way of incentivising efficiency. They state that the base milk price should accordingly not be able to be enlarged artificially by comparison to reasonable measurements of Fonterra actual commodity performance. 95	 We note the IDPs' comments in relation to the efficiency purpose of s 150A, but we respectfully disagree. We note that: While Fonterra's Constitution does seek to maximise the base milk price in a given season, it caveats that Fonterra must also earn a risk adjusted return that would warrant long-term investment in new and replacement assets.⁹⁶ Over time we review each of the inputs, processes and assumptions underpinning the calculation for consistency with both the efficiency and contestability dimensions of s 150A. We will revisit our conclusions on individual assumptions if new evidence comes to light. The interpretation of the efficiency dimension set out here by the IDPs is not consistent with the Commission's interpretation of s 150A. Please see our response to this matter as set out in our 2024/25 Manual review.⁹⁷
IDPs argue that the way the s 150B(1) assumptions are used, including the Notional Processor business model itself, are not commercially	We examined the way in which s 150B(1) assumptions are used in our most recent Manual and Calculation reviews. 101 We concluded that

⁹⁵ Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "<u>Submission on proposed focus areas for base milk price calculation 2024/25</u>" (27 March 2025), at paragraph 18.

Fonterra "Farmgate milk price manual 2024/25" (1 August 2024), at page 9.

⁹⁷ Commerce Commission "Review of Fonterra's 2024/25 Milk Price Manual" (16 December 2024), at page 47.

See the Commerce Commission's <u>2022/23</u> and <u>2023/24</u> Calculation reviews, and <u>2023/24</u> and <u>2024/25</u> Manual reviews.

Key points	Our response
feasible. 98 The IDPs consider the Commission has given undue weight to Fonterra's "entitlement" to use assumption (d) of s 150B(1) (volume of milk processed) to permit its use in a manner that is not commercially feasible. 99 The IDPs consider the Commission review of the s 150B(2) amendment has fallen short of what is required, and request review of that approach and, thereby, the Commission's conclusions. 100	the way in which they were used is consistent with the efficiency and contestability dimensions of s 150A. We further explained our approach to reviewing the s 150B(1) assumptions in our 2024/25 Manual Review, including a response to each of the points raised by IDPs in Appendix I of their submission. We respectfully disagree with the IDPs' perspective on our review of the s 150B(2) amendment. At this time, there is no new information or evidence that would otherwise warrant us to undertake a further review.
The IDPs propose that the Commission seek an independent assessment of the costs and yields that are feasibly achieved in Fonterra's commodity business. They believe that this would provide an appropriate basis for setting the Rules and the base milk price costs, yields, plant investment and distribution across the country. 103	Please see our response to this matter as set out in our 2024/25 Manual review. ¹⁰⁴

⁹⁸ Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "<u>Submission on proposed focus areas for base milk price calculation 2024/25</u>" (27 March 2025), at paragraph 36.

⁹⁹ Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "<u>Submission on proposed focus areas for base milk price calculation 2024/25</u>" (27 March 2025), at paragraph 27.

Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "Submission on proposed focus areas for base milk price calculation 2024/25" (27 March 2025), at paragraph 37.

Commerce Commission "Review of Fonterra's 2024/25 Milk Price Manual" (16 December 2024), at pages 11, 31-32, and 42-47.

Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "Submission on proposed focus areas for base milk price calculation 2024/25" (27 March 2025), at paragraph 38.

Commerce Commission "Review of Fonterra's 2024/25 Milk Price Manual" (16 December 2024), at page 42.

Key points	Our response
The IDPs submit that the Commission should include in its assessment of the significance of an item that might be overstated or understated the lapsed time for which a possible error might impact the base milk price. ¹⁰⁵	Our conclusion is that the assumptions adopted, and the inputs and processes used by Fonterra to calculate the 2024/25 base milk price are consistent with the contestability and the efficiency dimensions of the s 150A purpose. As such we have not identified any item that might have been materially overstated or understated for a lapsed time.
IDPs request disclosure of all WACC components, including calculations, in the Farmgate Milk Price Statement (MPS) and in the end of season s 150QA disclosures. 106	S 150QA requires Fonterra to make publicly available all non-sensitive information requested by or provided to the Commission in relation to its review of the base milk price calculation. WACC components and calculations have been disclosed under these requirements, for example, see the "10 Year WACC Forecast F24" model disclosed under the "31 January" models for the 2023/24 season. 107 We note that some specific WACC inputs for the new review period starting from 2024/25 (primarily the asset beta and SRP) would not have been finalised at that time. The Farmgate Milk Price Statement falls outside of our remit under DIRA.
IDPs request consideration of whether Fonterra disclosures in relation to lactose are compliant with the requirements of s 150QA. ¹⁰⁸	We have considered this matter separately from the Calculation review. Our assessment is that Fonterra's disclosures in relation to lactose are compliant with the requirements of s 150QA.

Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "Submission on proposed focus areas for base milk price calculation 2024/25" (27 March 2025), at paragraph 44.

Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "Submission on proposed focus areas for base milk price calculation 2024/25" (27 March 2025), at paragraphs 47-48

Available on Fonterra's website at: https://www.fonterra.com/nz/en/investors/farmgate-milk-price/dira-disclosures.html

Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "Submission on proposed focus areas for base milk price calculation 2024/25" (27 March 2025), at paragraph 71.

Key points	Our response
The IDPs further request review of any assumptions of declining costs that might result from Fonterra cost saving initiatives. 109	We have not identified any cost saving initiatives that have been included in the 2024/25 calculation.

Miraka, Open Country Dairy, Synlait Milk and Westland Milk Products "Submission on proposed focus areas for base milk price calculation 2024/25" (27 March 2025), at paragraph 72.

Attachment B Summary of comparator set statistics

Average asset beta estimates for MPG's comparator set

	MPG estimates					CEPA estimates				
	weekly All			Average: All methods	Average: Weekly & four- weekly	Daily	Weekly	Four- weekly	Average: All methods	Average: Weekly & four- weekly
Averages	0.42	0.43	0.44	0.43	0.44	0.41	0.41	0.43	0.42	0.42

Individual company asset beta estimates for MPG's comparator set

	MPG e	stimates				СЕРА е	estimates			
	Daily	Weekly	Four- weekly	Average: All methods	Average: Weekly & four- weekly	Daily	Weekly	Four- weekly	Average: All methods	Average: Weekly & four- weekly
Archer-Daniels-Midland Company	0.63	0.56	0.58	0.59	0.57	0.63	0.55	0.63	0.60	0.59
Astarta Holding PLC	0.34	0.41	0.38	0.38	0.40	0.34	0.41	0.39	0.38	0.40
Bega Cheese Limited	0.61	0.46	0.30	0.46	0.38	0.62	0.47	0.62	0.57	0.55
BRF S.A	0.47	0.53	0.55	0.52	0.54	0.48	0.54	0.48	0.50	0.51
Bunge Global SA	0.52	0.53	0.59	0.55	0.56	0.52	0.52	0.52	0.52	0.52
First Resources Limited	0.62	0.74	0.92	0.76	0.83	0.62	0.74	0.87	0.74	0.81
Fonterra Shareholders Fund	0.11	0.21	0.15	0.15	0.18	0.13	0.12	0.13	0.13	0.13
Glanbia plc	0.42	0.45	0.51	0.46	0.48	0.42	0.44	0.42	0.43	0.43
Golden Agri-Resources Ltd	0.54	0.60	0.71	0.62	0.66	0.41	0.46	0.54	0.47	0.50
Graincorp Limited	0.44	0.40	0.45	0.43	0.42	0.43	0.45	0.51	0.46	0.48
Kerry Group plc	0.44	0.39	0.45	0.43	0.42	0.44	0.39	0.44	0.42	0.42
Minerva S.A	0.30	0.28	0.30	0.29	0.29	0.30	0.28	0.30	0.29	0.29
Noumi Limited	0.09	0.10	0.07	0.09	0.08	0.10	0.10	0.10	0.10	0.10
Olam Group Limited	0.24	0.27	0.28	0.26	0.27	0.24	0.26	0.24	0.25	0.25
Saputo Inc	0.54	0.46	0.44	0.48	0.45	0.52	0.44	0.52	0.49	0.48
Savencia SA	0.12	0.24	0.34	0.23	0.29	0.12	0.21	0.12	0.15	0.17
Synlait Ltd	0.42	0.51	0.39	0.44	0.45	0.46	0.52	0.46	0.48	0.49
Wilmar International Ltd	0.46	0.40	0.41	0.42	0.40	0.47	0.39	0.40	0.42	0.40
WH Group Limited	0.62	0.65	0.57	0.61	0.61	0.59	0.61	0.52	0.57	0.57

Summary asset beta statistics

	MPG esti	mates				CEPA estimates					
	Daily	Weekly	Four- weekly	Average: All methods	Average: Weekly & four- weekly	Daily	Weekly	Four- weekly	Average: All methods	Average: Weekly & four- weekly	
75th percentile	0.54	0.53	0.56	0.54	0.55	0.52	0.52	0.52	0.52	0.52	
Average	0.42	0.43	0.44	0.43	0.44	0.41	0.42	0.43	0.42	0.42	
Median	0.44	0.45	0.44	0.44	0.44	0.44	0.44	0.46	0.45	0.45	
25th percentile	0.32	0.34	0.32	0.33	0.33	0.32	0.34	0.35	0.33	0.34	

Average bid-ask spread for companies in the comparator set

	Average spread June 2019 – May 2024 ¹¹⁰	
Archer-Daniels-Midland Company	1.2%	
Astarta Holding PLC	6.0%	
Bega Cheese Limited	4.1%	
BRF S.A	1.0%	
Bunge Global SA	2.6%	
First Resources Limited	0.9%	
Fonterra Shareholders Fund	2.3%	
Glanbia plc (Euronext listing)	1.8%	
Glanbia plc (London Stock Exchange listing) ¹¹¹	55.9%	
Golden Agri-Resources Ltd	0.3%	
Graincorp Limited	6.9%	
Kerry Group plc (Euronext listing)	28.0%	
Kerry Group plc (London Stock Exchange listing) ¹¹²	127.2%	
Minerva S.A	0.0%	
Noumi Limited	0.7%	
Olam Group Limited	0.8%	
Saputo Inc	13.0%	
Savencia SA	43.8%	
Synlait Ltd	4.9%	
Wilmar International Ltd	0.8%	
WH Group Limited	0.2%	

¹¹⁰ Calculated by the Commission using Bloomberg data.

Note Glanbia is dual listed on the Euronext Dublin exchange and the London Stock Exchange.

Note Kerry Group is dual listed on the Euronext Dublin exchange and the London Stock Exchange.

Attachment C Glossary of key terms and abbreviations

Term/Abbreviation	Definition
AMF	Anhydrous milkfat
Approach paper	Commerce Commission's overview of the approach we take in our reviews of Fonterra's Manual and base milk price calculation.
Base milk price	Base milk price, in relation to a season, means the price per kilogram of milk solids (kgMS) that is set by Fonterra for that season.
ВМР	Butter milk powder
Calculation review	Commission's review of Fonterra's base milk price calculation for the prior season.
СЕРА	Cambridge Economic Policy Associates Ltd
Dairy season	1 June to 31 May annually
DIRA	Dairy Industry Restructuring Act 2001
FCG	Fonterra Cooperative Group – farmer-only shareholdings in Fonterra that are relative to milk supply.
FSF	Fonterra Shareholders' Fund – open to outside investors.
FTSE	Financial Times Stock Exchange
GDT	Global Dairy Trade, online auction platform used to sell dairy commodities
Manual review	Commission's review of Fonterra's Milk Price Manual for the current season.
Milk Price Manual or the Manual	Fonterra's Milk Price Manual
MPG	Milk Price Group
МРР	Milk Price Panel
Notional Processor	The notional commodity business that is used to calculate the base milk price. (In its Reasons paper Fonterra uses the term 'notional producer').
PTMRP	Post-tax market risk premium

Term/Abbreviation	Definition
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).
Regions	Defined in the Manual as the North Island and the South Island
Review Period	With respect to an item subject to review in the Manual, this generally refers to a period of four financial years.
SMP	Skim milk power
SRP	Specific risk premium
WACC	Weighted Average Cost of Capital
WMP	Whole milk powder

Attachment D Inflationary cost variances and cost drivers

Variable operating costs

Cost line	Change (NZD/kgMS basis)	Unit cost update basis	Usage rate basis
Packaging	-2.0%	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	-7.4%	Actual rates	Usage rates from milk price energy audits on relevant Fonterra plants (Darfield / Pahiatua). Equipment supplier data for Butter, AMF and BMP.
Water	-2.4%	Budget rates	Equipment supplier information.
Cleaning & CIP	4.3%	Actual rates	Equipment supplier information and plant acceptance testing information.
Consumables	-47.5%	Actual rates	Equipment supplier information.
Effluent	7.1%	Budget rates	Effluent kgs fat/protein from milk price loss audit of actual Fonterra plants.
Laboratory	-2.1%	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 those assumed for the Notional Processor.
Total	-7.0%		

Fixed operating costs

Cost line	Change (NZD/kgMS basis)	Unit cost update basis	Usage rate basis
Wages & ERE	-2.1%	Actual rates	Staffing requirements, by level, for each of Fonterra's standard plants, average per cent overtime as per Fonterra's actuals, average per cent temporary labour as per Fonterra's actuals, average per cent employee related expenses as per Fonterra actuals.
Repairs & maintenance	1.0%	Actual rates	Actual R&M spend as a per cent of total replacement cost of eight most similar manufacturing sites of Notional Processor. Total replacement cost of milk price asset base.
Energy - fixed	83.8%	Budget rates	Equipment supplier information for peak energy demand.
Site overheads	-1.2%	Actual rates	Average direct and indirect cost rates as per Fonterra's actuals, FTE provisions for non-plant site labour.
Total	5.7%		

Other cash costs

Cost line	Change (NZD/kgMS basis)	Unit cost update basis	Usage rate basis
Commission	2.6%	Notional unit costs	Calculated; once every four years an update is made to sales overheads.
Collection costs	4.8%	Actual rates	Calculated usage rates from production plan using asset footprint and product mix.
Lactose	11.5%	Notional/actual rates	Yield calculations as per Fonterra actuals and loss allowance based on Fonterra actuals.
Inland freight costs	2.2%	Actual rates	Calculated production volumes of each RCP at each site, with respect to actual volume milk allocated by Fonterra.
Other supply chain costs	0.6%	Actual/notional rate	Fixed usage rates for certain activities, reviewed at 4-year review.
Storage costs	9.6%	Actual rates and notional rates	Peak production volume of RCPs and lactose requirements based on notional, fixed storage.
Administration	-8.7%	Actual rates	Adjustments to exclude activities not incurred by Notional Processor.
Miscellaneous costs	468.0%	Actual rates	As incurred as per Fonterra actuals.
Total	5.0 %		