

Review of Fonterra's 2018/19 base milk price calculation: Dairy Industry Restructuring Act 2001

Draft report

The Commission: Sue Begg, Convenor
Dr Stephen Gale
Elisabeth Welson
John Crawford

Date of publication: 15 August 2019



Associated key documents

Publication date	Title
14 December 2018	Final report – Review of Fonterra’s 2018/19 Milk price manual
15 September 2018	Final report – Review of Fonterra’s 2017/18 base milk price calculation
15 December 2017	Final Report – Review of Fonterra’s 2017/18 Milk Price Manual: Dairy Industry Restructuring Act 2001
15 September 2017	Final report - Review of Fonterra's 2016/17 base milk price calculation: Dairy Industry Restructuring Act 2001
15 August 2017	Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation

Commerce Commission

Wellington, New Zealand

Table of Contents

CHAPTER 1	INTRODUCTION	4
	PURPOSE OF THIS REPORT	4
	SCOPE OF OUR REVIEW OF THE 2018/19 CALCULATION	5
	INFORMATION CONSIDERED IN OUR REVIEW PROCESS	6
	HOW THIS REPORT IS STRUCTURED	6
	OUR REVIEW FRAMEWORK	6
CHAPTER 2	DRAFT CONCLUSIONS.....	7
	PURPOSE OF THIS CHAPTER.....	7
	SUMMARY OF OVERALL CONCLUSIONS	7
	<i>Focus areas review.....</i>	7
	<i>Fit for purpose review</i>	8
	FOCUS AREAS REVIEW	9
	<i>Asset beta</i>	9
	<i>Administration and other overhead costs.....</i>	12
	<i>Environmental costs.....</i>	16
	<i>Decarbonisation plans</i>	17
	<i>Materiality</i>	18
	FIT FOR PURPOSE REVIEW	22
	<i>Changes in costs.....</i>	23
	<i>Inclusion of off-GDT sales as a reference for calculating commodity prices.....</i>	23
	<i>Changes in volumes of milk collected</i>	26
	<i>Yield and loss calculations</i>	26
	<i>Other matters – Estimate of FX conversion</i>	27
CHAPTER 3	HOW YOU CAN PROVIDE YOUR VIEWS	28
	INVITATION TO COMMENT	28
	FORMAT OF SUBMISSIONS	28
	DEADLINE FOR SUBMISSIONS	28
APPENDIX A	GLOSSARY OF TERMS	30

Chapter 1 Introduction

Purpose of this report

- 1.1 This report sets out our draft conclusions from our statutory review of the extent to which Fonterra's 2018/19 base milk price calculation (**the calculation**) is consistent with the purpose of the base milk price monitoring regime (**monitoring regime**) under subpart 5A of the Dairy Industry Restructuring Act 2001 (**the Act**).¹
- 1.2 We invite submissions on this draft report from interested parties which we will take into account when preparing our final report.²
- 1.3 Submissions are due by **12pm, 2 September 2019**.³
- 1.4 This report follows our review of Fonterra's Milk Price Manual (**Manual**) for the 2018/19 season and builds on the analysis and conclusions from our previous Manual and base milk price calculation reviews.⁴
- 1.5 This report should be read with the framework paper "Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation" (15 August 2017) which we have applied in this review and which forms part of this report. The framework paper provides an overview of the approach which we take in our Manual and base milk price calculation reviews and includes:⁵
 - 1.5.1 an overview of how the base milk price is set;
 - 1.5.2 our interpretation of key legislative provisions guiding our statutory reviews; and
 - 1.5.3 our practical approach to our statutory reviews.

¹ The term 'base milk price' used by the Act is the price per kilogram of milk solids set by Fonterra for a dairy season. This is currently set at \$6.35 per kilogram of milk solids for the season just ended on 31 July 2019 that is under review in this report. This report uses the terms 'farm gate milk price' and 'base milk price' interchangeably.

² Our final report will be published on 12 September 2019.

³ More details on how you can provide your views can be found in Chapter 3.

⁴ For our report on the 2018/19 Manual review, see:

https://comcom.govt.nz/_data/assets/pdf_file/0021/110496/Final-report-Review-of-Fonerras-2018-19-milk-price-manual-14-December-2018.pdf

For our reports on our reviews for earlier seasons, see: <http://www.comcom.govt.nz/regulated-industries/dairy-industry/review-of-fonterra-s-farm-gate-milk-price-and-manual/statutory-review-of-milk-price-calculation-2/>.

⁵ [Commerce Commission "Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation" \(15 August 2017\)](#).

Scope of our review of the 2018/19 calculation

- 1.6 In our proposed approach paper, we stated that the key focus areas for this year's review were:⁶
- 1.6.1 **asset beta** – Fonterra commissioned a new report on asset beta.⁷ We have considered the arguments raised, in particular whether the report provides any new material points and/or compelling evidence that could warrant changing our established approach to calculating the asset beta;
 - 1.6.2 **environmental costs** – we have asked how the milk price calculation factors in any environmental costs, in particular how the renewal of resource consents are dealt with, and costs of updating existing plants to meet more stringent consent requirements than those that applied when the plants were first constructed;
 - 1.6.3 **energy costs** – we have asked how Fonterra's decarbonisation plans have or will be factored into the calculation model, and over what timeframes; and
 - 1.6.4 **materiality** – we have sought information on how Fonterra and its auditors approach materiality with respect to the components of the milk price calculation and how the materiality assessments are used to inform any work undertaken on Manual amendments, calculation amendments or site audit work programmes (if relevant). We are also interested in Fonterra's and other stakeholders' views on whether (and if so, how) materiality should play a role in setting the scope of work for our reviews.
- 1.7 Since we published the proposed approach paper on 7 June 2019, we have decided to add the following matter as a focus area of our review. This was not identified as a focus area in our proposed approach paper as the change was first signalled by Fonterra in its reasons paper, which we received on 1 July 2019.⁸
- 1.7.1 **administration and other overhead costs** – approximately \$45m of additional costs have been included for the 2018/19 season. Fonterra has explained that the increase is to account for higher-than-inflationary movements in some categories of costs and changes in the external environment.

⁶ [Commerce Commission "Proposed approach and focus areas for our review of Fonterra's 2018/19 base milk price calculation – 7 June 2019" \(7 June 2019\).](#)

⁷ [Graham Partington and Stephen Satchell "Report to Fonterra: Discussion of the asset beta for use in milk pricing" \(14 March 2019\).](#)

⁸ Fonterra is required to provide its reasons for the view expressed in its certificate about the extent which it believes that the inputs, assumptions and processes used in the proposed base milk price calculation are consistent with the purpose in section 150A of the Act, as required by section 150T of the Act.

- 1.8 In addition, we conducted a **fit for purpose review** of the assumptions adopted, and inputs and process used by Fonterra when calculating the base milk price.⁹

Information considered in our review process

- 1.9 In reaching our draft conclusions we have considered:
- 1.9.1 Fonterra’s reasons paper in support of the base milk price for the 2018/19 season;¹⁰
 - 1.9.2 additional models and documentation that Fonterra provided to us in confidence in the course of our review; and
 - 1.9.3 additional material that Fonterra provided to us,¹¹ and material that we commissioned,¹² relevant to our assessment of asset beta.

How this report is structured

- 1.10 Chapter 2 sets out our draft conclusions from our review of the focus areas and our fit for purpose review of the assumptions adopted, and inputs and processes used by Fonterra when calculating the base milk price.
- 1.11 Chapter 3 outlines how you can provide your views on this draft report.
- 1.12 Appendix A provides a glossary of the key terms and abbreviations.

Our review framework

- 1.13 As noted above, this report should be read with our framework paper as we have conducted this review in accordance with the framework set out within it.¹³

⁹ For the other revenue and cost components that are not part of the focus areas, we undertake a ‘fit for purpose’ review. This is explained in further detail in our framework paper - Commerce Commission, above n 5, at 73.

¹⁰ [Fonterra “Reasons paper in support of Fonterra's base milk price for the 2018/19 season” \(1 July 2019\).](#)

¹¹ Partington and Satchell, above n 7.

¹² [Cambridge Economic Policy Associates “Notional Processor Asset Beta” \(11 July 2019\).](#)

¹³ Commerce Commission, above n 5.

Chapter 2 Draft conclusions

Purpose of this chapter

- 2.1 In this chapter we outline our draft conclusions on the consistency of the assumptions, inputs and processes of the base milk price calculation with the section 150A purpose.
- 2.2 Specifically, we set out:
 - 2.2.1 a summary of our overall draft conclusions for the key focus areas and the fit for purpose review;
 - 2.2.2 our detailed findings from the review of the key focus areas; and
 - 2.2.3 our detailed findings from the fit for purpose review.

Summary of overall conclusions

Focus areas review

- 2.3 With the exception of administration and other overhead costs on which we have been unable to conclude due to timing constraints,¹⁴ our draft conclusion is that the assumptions adopted, and the inputs and process used by Fonterra in calculating the 2018/19 base milk price are consistent with the efficiency dimension of the section 150A purpose.¹⁵
- 2.4 With the exception of the asset beta, our draft conclusion is that the assumptions adopted, and the inputs and process used by Fonterra to calculate the 2018/19 base milk price are consistent with the contestability dimension of the section 150A purpose.
- 2.5 We consider that it is appropriate for us to conduct a focused review of administrative and other overhead costs and also more generally of the allocation methodologies for deriving Notional Milk Price Business (**NMPB**) costs from Fonterra costs, where applicable, in our 2019/20 calculation review. Although we have not reached a conclusion on Fonterra's administrative and other overhead costs, we have nevertheless made some observations about the approach that Fonterra has taken.¹⁶

¹⁴ Fonterra provided the detailed supporting information regarding administration and overhead costs after the 1 July 2019 deadline, on 25 July 2019. This is explained further at paragraphs 2.27-2.35 below.

¹⁵ Our discussion of Fonterra's administration and other overhead costs and the timing constraints we have faced are set out in greater detail from paragraphs 2.27 below.

¹⁶ The observations are set out at paragraph 2.36 - 2.46 below.

- 2.6 Having considered the additional material provided by Fonterra regarding the asset beta of the notional producer (**NP**), and having commissioned our own independent advice on asset beta, we reaffirm our conclusion from our 2017/18 calculation review that an efficient processor with a similar risk exposure to the NP is unlikely to have an asset beta as low as Fonterra's estimate of 0.38.¹⁷ On balance we consider that this asset beta estimate is therefore unlikely to be practically feasible for an efficient processor, as referred to in section 150A(2) of the Act. Accordingly, our draft conclusion is that we do not consider that this aspect of the base milk price calculation is consistent with the contestability dimension of the section 150A purpose.

Fit for purpose review

- 2.7 For the areas that we have analysed as part of the fit for purpose review (i.e. not the focus areas), and on which we are required to reach a conclusion, our draft conclusions are as follows:
- 2.7.1 the assumptions adopted, and the inputs and process used by Fonterra in calculating the 2018/19 base milk price are consistent with the efficiency dimension of the section 150A purpose; and
 - 2.7.2 the assumptions adopted, and the inputs and process used by Fonterra to calculate the 2018/19 base milk price are consistent with the contestability dimension of the section 150A purpose.
- 2.8 In its reasons paper for the 2018/19 price calculation, Fonterra has confirmed that it has not:
- 2.8.1 made any amendments to the Milk Price Manual for 2018/19 in respect of the revenue calculation; and
 - 2.8.2 made any material changes to the relevant calculation methodology.¹⁸
- 2.9 We confirm that we rely on our conclusions from previous years' reviews for those aspects of the Milk Price Manual and the calculation methodology that has not changed from previous years.

¹⁷ Fonterra's asset beta estimate of 0.38 has remained the same since the 2014/15 base milk price calculation. We were subsequently unable to conclude that the asset beta was practically feasible for an efficient processor until our conclusion in the 2017/18 calculation review.

¹⁸ Fonterra, above n 10.

Focus areas review

Asset beta

Introduction

- 2.10 In our 2017/18 calculation review, we concluded that an efficient processor with a similar systematic risk exposure to the NP was unlikely to have an asset beta¹⁹ as low as Fonterra's estimate of 0.38, and on balance, we considered that this asset beta estimate was therefore unlikely to be practically feasible for an efficient processor.²⁰
- 2.11 Following our 2017/18 review, Fonterra commissioned academics Graham Partington and Stephen Satchell (**P&S**) of the University of Sydney to review and assess the reports prepared in estimating the asset beta for the NP for our 2017/18 review. We have published their report on our website.²¹
- 2.12 We commissioned Cambridge Economic Policy Associates (**CEPA**) to consider the arguments raised by P&S and to advise whether any of those arguments would have changed the conclusions of CEPA's 2018 report. In addition, we asked them whether there was any material in the P&S report that would warrant reconsideration of our approach to estimating the asset beta.²²
- 2.13 Having reviewed the P&S report, CEPA confirmed that the P&S report has not led them to make any changes to its 2018 report conclusion.²³ CEPA also did not find anything else in the P&S report that warrants reconsideration of their approach to estimating asset beta.
- 2.14 We note that Fonterra has commissioned P&S to respond to CEPA's 2019 report on the asset beta and has provided us their response. As we only received this new report on 1 August 2019, we have had insufficient time to consider the arguments raised in it for this draft report. However, we have published this new report on our website for interested parties' consideration.²⁴

¹⁹ The 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.

²⁰ For our interpretation of practical feasibility and the efficient processor see Commerce Commission, above n 5.

²¹ Partington and Satchell, above n 7.

²² CEPA, above n 12.

²³ [Cambridge Economic Policy Associates "Dairy Notional Processors' Asset Beta" \(28 March 2018\).](#)

²⁴ [Graham Partington and Stephen Satchell "Report to Fonterra: Asset beta and CEPA's response to Partington and Satchell" \(1 August 2019\).](#)

Our view

- 2.15 We have considered the arguments made by P&S as well as CEPA's response. Our view is that there are no new material points that have not already been considered by us, either in dairy work, or more widely in our cost of capital work. As such, there is no new or compelling evidence that warrants changing our established approach to calculating asset beta or our conclusion on the asset beta in our 2017/18 review report.²⁵
- 2.16 In their response, CEPA has cited some of their (and our) past analysis where we have considered some of the important points that P&S make. We do not repeat this analysis here and refer readers to CEPA's paper.²⁶
- 2.17 At a high level, in our approach to estimating the asset beta, where possible, we:
- 2.17.1 favour empirical evidence over theory;²⁷
 - 2.17.2 construct as large a sample as reasonably possible with comparators from the same industry. This limits the need to make subjective judgement calls regarding whether each of the companies in the sample should be included. We have included international comparators as it is difficult to find a sufficient number of comparable New Zealand based businesses, so we cannot rely solely on domestic data. We agree with CEPA's defence of the appropriateness of using data from different markets in this context;
 - 2.17.3 use the sample average as a starting point, and only depart from it where there are sound reasons for doing so;²⁸ and
 - 2.17.4 avoid placing too much weight on a single comparator to minimise the statistical unreliability potentially associated with an estimate from a single firm.

²⁵ [Commerce Commission "Review of Fonterra's 2017/18 base milk price calculation" \(14 September 2018\).](#)

²⁶ CEPA, above n 12.

²⁷ Asset beta is not directly observable; we estimate it empirically using historic estimates of average asset betas as asset beta is expected to be relatively stable over time and historical asset betas are indicative of future asset betas.

²⁸ Regarding any adjustments for regulatory differences, Dr Lally concluded that "there is no empirical study that provides a clear conclusion on the effect of regulation on beta". For further information see [Martin Lally "Review of WACC issues" \(25 February 2016\)](#) at 24.

- 2.18 This approach was established following extensive consultation with interested parties and was thoroughly tested in the Part 4 merits appeals to the High Court. We reviewed and confirmed this approach in our 2016 review of the Input Methodologies.²⁹
- 2.19 On the question of whether Fonterra is a relevant comparator for the NP, our approach allows us to include as a comparator the same firm that we are estimating the asset beta for, as long as it is a relevant comparator.
- 2.20 However, we note CEPA has concluded that the same company that we are estimating the asset beta for should not be used as a major/sole source of evidence for the asset beta of the NP. We agree with this conclusion as it is consistent with our established approach. We also consider that CEPA has made a strong case suggesting Fonterra is not a relevant comparator, mainly because share trading in Fonterra is driven by factors that are very different from that of other shares. We remain open to considering further arguments for including it as an additional data point in the sample.
- 2.21 Regarding the composition of the comparator sample (or modifying it with weights, sub-samples or other means as S&P propose), our current position was outlined in the IM review:³⁰
- “Although reviewing the composition of the comparator sample (as suggested by TDB) has merit in principle, and is something we will explore again (and in further detail) in subsequent reviews, we consider that the benefits are not sufficient given our concerns regarding the overall robustness (relative to alternative approaches) to change our approach for this review.”*
- 2.22 Therefore, we remain open to considering asset beta estimates for the NP calculated from a sample of dairy comparators using alternative methodologies to derive the asset beta estimates from the data. Any chosen methodology will need to demonstrate that the estimates produced are more accurate than those derived using the methodology used by CEPA, and sufficiently robust.

²⁹ The pan-sector approach to estimating the cost of capital commenced with the release of the draft cost of capital guidelines in 2005, and led to the cost of capital input methodologies for electricity lines, gas pipeline and specified airport services in December 2010, and underlines the approach to estimating the cost of capital for the final pricing principle for UCLL and UBA in December 2015. The Part 4 Merits Review decision was reported in [“Wellington International Airport Ltd & Others v Commerce Commission \[2013\] NZHC 3289” \(11 December 2013\)](#).

³⁰ [Commerce Commission \(2016\), “Input Methodologies Review Decisions Consolidated Reasons papers”, page 698.](#)

Draft conclusion

- 2.23 The material provided by Fonterra, in conjunction with the P&S report, raises no new material points and no sufficiently compelling evidence that we should change our established approach to estimating the asset beta.
- 2.24 Therefore, we maintain that an efficient processor with a similar risk exposure to the NP is unlikely to have an asset beta as low as Fonterra's estimate of 0.38, and on balance, we consider that this beta estimate is therefore unlikely to be practically feasible for an efficient processor.³¹
- 2.25 We are relying on our conclusion from our 2017/18 calculation review, that the asset beta used by Fonterra in calculating the 2018/19 base milk price is consistent with the efficiency dimension of the section 150A purpose.³²

Next steps

- 2.26 We invite feedback on our response to the P&S report, arguments raised by the P&S report and CEPA's paper in response to the P&S report.

Administration and other overhead costs*Introduction*

- 2.27 Approximately \$45m out of around \$90m of additional costs has been included in the provisions for administration and other overhead costs for the 2018/19 season. Fonterra did not quantify the additional costs described in its reasons paper but explained that the increase is to account for higher-than-inflationary movements in some categories of costs and changes in the external environment.³³ Fonterra also noted that these additional allowances have been provided for under Rule 19 (non-recurring costs) for the 2018/19 season, but for next season the remainder will be provided for under the provisions of the Manual relating to overhead costs (primarily Rule 18).

Draft conclusion – contestability dimension

- 2.28 Given we have previously concluded that the assumptions, inputs and process associated with administration and other overhead costs are practically feasible, we consider that an increased level of costs, absent any significant change in other assumptions or in the operating environment, must also be practically feasible and therefore consistent with the contestability dimension of the section 150A purpose.

³¹ We note that draft changes to the Act, including in relation to the approach to asset beta, have been proposed by the government. At the earliest, implementation of the changes are unlikely to occur until the 2019/20 milk season. The terms of the reviews of the Manual and calculation are likely to be unaffected for the 2018/19 season.

³² Commerce Commission, above n 25, at 2.4.

³³ Fonterra, above n 10, at 30.

Our draft conclusion therefore is that they are consistent with the contestability dimension of the section 150A purpose.

Efficiency dimension

- 2.29 We have not been able to reach a conclusion on whether the assumptions, inputs and process underlying the calculation of administration and other overhead costs provide an appropriate incentive to Fonterra to operate efficiently under section 150A(1) of the Act. We have been unable to reach a conclusion because Fonterra did not provide us with sufficiently detailed reasons on this matter by 1 July 2019 (as required by section 150T(c) of the Act) and we have therefore had insufficient time to consider the relevant material before the publication of this draft paper. We explain our position in further detail below.
- 2.30 On 1 July 2019 Fonterra provided to us its reasons paper that set out its reasons for its certification that the inputs, assumptions and process used in calculating the proposed base milk price were consistent with the section 150A purpose, as required by section 150T of the Act. On 3 July 2019, Fonterra notified us that it would be providing us with additional information on administration and other overhead costs.
- 2.31 We considered that the information provided to us in Fonterra's reasons paper on administration and other overhead costs on 1 July 2019 was insufficient for us to be able to assess the extent to which the assumptions, inputs and process underlying Fonterra's administrative and other overhead costs provided an appropriate incentive to Fonterra to operate efficiently, in light of the increase in these costs.
- 2.32 In our view, Fonterra failed to comply with section 150T(c) as it did not provide, by 1 July 2019, the reasons for its certification in section 150T(b) in sufficient detail to allow us to assess the extent to which the assumptions adopted and the inputs and process used were consistent with the section 150A purpose, as we are required to report on pursuant to section 150P of the Act. We consider that section 150T(c) requires the reasons to be sufficiently detailed to allow us to carry out our reporting task under section 150P.
- 2.33 Fonterra provided additional information on administration and other overhead costs on 25 July 2019.
- 2.34 We have had insufficient time to consider this additional information and assess the extent to which the underlying assumptions, inputs and process provide an appropriate incentive for Fonterra to operate efficiently under section 150A(1) before the publication date of this draft report. Under section 150U, we are required to publish our draft report on the base milk price calculation for the 2018/19 year by 15 August 2019.

- 2.35 In terms of our final report, we also consider that we will have insufficient time to conclude on this dimension of administrative and other overhead costs. We are required to publish the final report by 15 September 2019 under section 150Q. Even if we did have sufficient time to make internal conclusions on this matter, if it were to be included in our final report, Fonterra and other interested parties would not have had an opportunity to submit on our conclusions.

Observations on explanatory information provided by Fonterra

- 2.36 Although we have been unable to conclude on the extent to which the assumptions, inputs and process underlying Fonterra's administration and other overhead costs provide an incentive to Fonterra to operate efficiently, we make the following observations about the explanatory material we have received.

Application of Rule 19 of the Manual

- 2.37 We understand that the total value of the adjustment of approximately \$90m was determined by way of a four-yearly review of costs and that the costs have been reviewed by an independent reviewer in accordance with Rule 18 of the Manual. The total value is to be split between 2018/19 (approximately \$45m) under Rule 19 of the Manual (Non-recurring costs) and 2019/20 (approximately \$45m) in accordance with Rule 18 of the Manual. On the face of it, the application of Rule 19 in 2018/19 may not be appropriate for all of these costs given that some appear to relate to ongoing changes to administration and other overhead costs.³⁴
- 2.38 The total costs have been allocated between the two seasons broadly on the basis that costs that could be reasonably deferred have been deferred to 2019/20, but that costs which are necessarily incurred should be included in the 2018/19 calculation. Fonterra's view is that the inclusion of the necessarily incurred costs in 2018/19 will therefore ensure that the calculation is practically feasible.

Equality of principles in section 150A

- 2.39 Fonterra's explanatory information states that it considers the 'efficiency principle' is necessarily subsidiary to the 'practical feasibility' principle inasmuch as that it must always demonstrate practical feasibility while it is not always possible to set an input in a manner which provides for efficiency.

³⁴ In our 2015/16 base milk price review, we expressed the view that costs related to the Velocity adjustment (a one-off adjustment to staff numbers assumed in the NMPB for 2015/16) could be included in the non-recurring costs line item to provide greater transparency. It appears that up to \$20m of the costs being reinstated relates to the original Velocity adjustments. See below para 2.43 for further information.

- 2.40 The Commission's view is that the two dimensions in section 150A must both be satisfied and that they have equal weight. In our framework paper, we stated that to "satisfy the provisions in section 150A, our interpretation is that our statutory reviews must assess both dimensions", and that we "attach equal weight to both dimensions in our assessment."³⁵

Use of actual instead of notional values

- 2.41 In considering the use of notional inputs under the efficiency dimension of section 150A, we have identified two situations where it may be reasonable to use actual data when setting the milk price:

2.41.1 when there is insufficient information to know what an appropriate notional value would be, or it would be unreasonably costly to obtain this information; or

2.41.2 Fonterra has very limited control over the actual costs.³⁶

- 2.42 It is not clear to us that either of these two situations apply to the setting of administrative and other overhead costs, such that the use of actual costs with regard to the increase is reasonable.

Comments on efficiency dimension

- 2.43 We note that around \$20m of costs allocated to each of the 2018/19 and 2019/20 seasons (\$40m total) relates either to the failure to achieve efficiencies provided for in the 2015/16 setting of provisions for administrative and other overhead costs or to errors in the allocation process at that time between Fonterra's costs and the costs of the NMPB.
- 2.44 A small portion (\$7.6m) of the costs allocated to 2018/19 relate to changes in the allocation model rather than higher-than-inflationary movements.
- 2.45 Without having performed a detailed review of this information, the limited analysis we have undertaken in the time available raises a number of lines of enquiry that we would want to be satisfied about before we could reach any conclusion in relation to the efficiency dimension in section 150A.

³⁵ Commerce Commission, above n 5, at 13 and footnote 8.

³⁶ Commerce Commission, above n 5, at 52.

Concluding comments

- 2.46 Given these observations and the magnitude of the increase, we consider that it is appropriate to conduct a focused review of administrative and other overhead costs and also more generally of the allocation methodologies for deriving NMPB costs from Fonterra costs, where applicable, in our 2019/20 calculation review.

Environmental costs

- 2.47 There has been increasing public concern about the significant impact of dairy activities on the environment. With respect to milk processing this is driving changes in the use of energy to reduce emissions, and better management of processing-effluent and water use. For example, Fonterra has recently installed a water-recycling innovation at its Pahiatua plant that will save about a half a million litres of water a day during the processing season.³⁷ Also driving changes to plant and processing costs are more stringent resource consent requirements. We have asked Fonterra how the base milk price calculation factors in any environmental costs, renewal of resource consents, and costs of updating existing plants to meet more stringent consent requirements than those that applied when the plants were first constructed. Fonterra has responded as follows:³⁸

“the milk price calculation does not explicitly factor in any environmental costs. However, the capital costs for incremental and replacement plants reflect the costs of obtaining resource consents for the Darfield D1 dryer and site infrastructure in 2011/12, and the Pahiatua P3 dryer in 2013. While the model did not assume any replacement plants were installed between the 2016/17 and 2018/19 seasons, it normally assumes 1.1 WMP/SMP plants are replaced each year, with Darfield/Pahiatua-level implied resource consent costs therefore included in the calculation in most years. F20 is a ‘reset’ year for capital costs, and we will therefore be revisiting these allowances as part of that process.”

- 2.48 Fonterra has in recent years typically spent around \$1m - \$1.5m in opex per annum on renewing between 2 and 5 consents related to water take, discharge to air and wastewater. The associated costs comprise Resource Management Act 1991 costs, consultants and legal costs. A further \$680k for 2019 will be capitalised.
- 2.49 This annual spend has approximately doubled over the past 10 years. Fonterra has estimated the cost of renewing an individual consent can vary between \$40k and \$1m.
- 2.50 Given the milk price calculation takes into account the cost of resource consents, and there are no significant immediate changes in costs, our draft conclusion is therefore that environmental costs in the milk price calculation are practically

³⁷ [Fonterra, Media report - “Fonterra releases its Sustainability Report 2018” \(29 November 2018\).](#)

³⁸ Commerce Commission questions to Fonterra, Q10.

feasible for an efficient processor and accordingly, satisfy the contestability criteria in section 150A.

- 2.51 We are relying on our conclusion from our 2017/18 calculation review, that environmental costs in the milk price calculation are consistent with the efficiency dimension of the section 150A purpose.³⁹
- 2.52 We invite feedback on whether there are particular aspects of environmental costs not considered above or that may require a more detailed review, including for our future reviews.

Decarbonisation plans

- 2.53 There is an increasing drive towards reducing carbon emissions in the economy more generally but also in relation to milk processing in particular. The costs associated with substituting carbon energy for alternatives may be significant and will be incurred over time by a notional processor.
- 2.54 Fonterra's manufacturing sites source around 40% of their current processing energy from coal. Fonterra has recently announced its plans to reduce emissions by 30% across all its manufacturing operations by 2030 and to achieve net zero emissions by 2050.⁴⁰ To better understand this issue, we asked Fonterra how its decarbonisation plans have or will be factored into the base milk price calculation models, and over what timeframes.
- 2.55 Fonterra has advised that:⁴¹

"The model takes Fonterra's actual mix of energy sources (coal, gas, electricity ex grid, electricity ex co-generation plants) by site, together with the average prices paid by source by site. Consequently, as alternative energy sources are used by Fonterra on its commodity ingredients sites, the Milk Price model will begin using those sources at the same time, and in the same proportions, as Fonterra.

The extent that additional capital is required to adapt a plant (e.g. coal boilers) to the use of alternative energy sources, Fonterra management will provide the Milk Price Group [MPG] with relevant details, and the MPG will if required seek external independent advice. As a general proposition, however, the Milk Price model can be expected to take into account the relevant capital costs, modified as necessary for differences between the notional Milk Price asset base and Fonterra's actual asset base, in the same year as Fonterra.

The only potentially relevant capex spend for [the 2018/19 milk price season] was on an electrode boiler... at a non-RCP plant.

Fonterra has made commitments to reduce coal use across its New Zealand manufacturing plants over the longer term. The MPG will factor specific initiatives

³⁹ Commerce Commission, above n 25, at 2.4.

⁴⁰ [Fonterra, Media announcement - "No new coal boilers for Fonterra" \(18 July 2019\)](#).

⁴¹ Commerce Commission questions to Fonterra, Q11.

into their specifications for replacement plants for the Asset base for the Notional Milk Price Business.”

- 2.56 We further note that there have not been any changes to investments in alternative energy use which would warrant an adjustment for the 2018/19 milk price. However, any investments in the future will need to be considered in further detail.
- 2.57 We understand that conversion costs are plant specific and at present, energy costs are provided for on the basis of actual costs. As such, we do not consider that there would be any reason to suggest an independent benchmark is needed.
- 2.58 Having reviewed the information provided by Fonterra, we are satisfied that the base milk price calculation takes into account any changes to date arising out of Fonterra’s decarbonisation plans and are practically feasible for an efficient processor. Therefore, our draft conclusion is that the energy and capital costs associated with Fonterra’s decarbonisations plans are practically feasible for an efficient processor and accordingly, satisfy the contestability criteria in section 150A.
- 2.59 The way in which these costs are set has not changed, therefore we are relying on our conclusion from our previous calculation reviews, that the energy and capital costs associated with Fonterra’s decarbonisations plans are consistent with the efficiency dimension of the section 150A purpose.
- 2.60 We invite feedback on whether there are particular aspects of energy conversion costs as a result of decarbonisation that we have not considered above or that may require a more detailed review, including for our future reviews.

Materiality

- 2.61 In our proposed approach paper, we stated that we were interested in how Fonterra and its auditors approach materiality with respect to the components of the milk price calculation and how each uses its materiality assessment to inform any work undertaken on Manual amendments, calculation amendments or site audit work programmes. We also indicated that we are interested in Fonterra’s and other stakeholders’ views on whether (and if so, how) materiality should play a role in setting the scope of work for our reviews.
- 2.62 We note, for the avoidance of doubt, that this incorporates several different dimensions of materiality, namely:
- 2.62.1 the judgements or approximations applied by Fonterra in preparing or making changes to the milk price calculation;

- 2.62.2 the audit materiality applied by Fonterra's auditor in its audit of the Farmgate Milk Price including work done on each component in accordance with its audit work programme;
- 2.62.3 materiality considerations made by Fonterra in undertaking Manual amendments. These are more relevant to our review of the Manual and we intend to address this aspect of materiality as part of our upcoming review of the Manual; and
- 2.62.4 the judgements we make, as set out in our Approach Framework, in determining:
 - 2.62.4.1 our key areas to focus on in our calculation reviews;⁴² and
 - 2.62.4.2 the areas we focus on as part of our fit for purpose review.⁴³
- 2.63 Although we included materiality as a focus area in our issues paper we note, for the avoidance of doubt, materiality is not a matter that we are required to reach a conclusion on in terms of section 150A.
- 2.64 Nevertheless, we believe the application of materiality at various stages of the milk-price setting process, and by us when reviewing the milk price calculation, is important for interested parties to be able to understand why we have targeted particular areas for our review.

How Fonterra applies materiality in preparing the milk price calculation

- 2.65 For inputs derived from actual and notional transactions, Fonterra has advised that it does not apply a materiality threshold, as the objective is to directly input the actual value into the base milk price calculation. However, for notional inputs, there are ranges prescribed by the Manual that Fonterra maintains are supportable.
- 2.66 We consider that this approach is appropriate for the preparation of the base milk price calculation.

Materiality applied by Fonterra's auditors

- 2.67 In performing our reviews, we place reliance on the governance processes surrounding changes to the Manual and the setting of the base milk price. In

⁴² Commerce Commission, above n 5 at 72.

⁴³ Commerce Commission, above n 5 at 73.

particular we rely on audit processes to verify the reliability of the numbers used to calculate the milk price components.⁴⁴

- 2.68 Audit materiality is defined by auditing standards but takes account of uncertainties inherent in the measurement of amounts based on the use of estimates, judgement and the consideration of future events.⁴⁵
- 2.69 Fonterra has informed us that for the purposes of expressing its independent assurance opinion on the Farmgate Milk Price for 2018/19, Fonterra’s auditor, PricewaterhouseCoopers, has adopted an overall materiality threshold of one percent of the 2018/19 May forecast farmgate milk price.
- 2.70 While we are not seeking views on the level of materiality adopted by Fonterra’s external auditor, as that is a matter for its professional judgement, we think that it is important for interested parties to understand the level of materiality that Fonterra’s auditors apply.
- 2.71 We rely on the audited information provided by Fonterra. This is consistent with our practice in other regulatory contexts, where we take audited numbers as being reliable for regulatory purposes, unless we have specific reason to believe they are not reliable.
- 2.72 We apply our own discretion as to the scope and depth of our reviews, as discussed below. We note that we take into account the work undertaken by Fonterra’s auditors when determining the scope of our calculation reviews. For example, if Fonterra’s auditors undertook a review of a particular area, we would be less likely to include that area as a focus of our calculation reviews.

Our view of materiality

- 2.73 In the proposed approach paper, we indicated that we are interested in Fonterra’s and other stakeholders’ views on whether (and if so, how) materiality should play a role in setting the scope of work for our reviews.
- 2.74 Materiality in this context is relevant to the scope of our calculation reviews in two ways:
- 2.74.1 we use materiality to determine the areas that we choose as the key focus areas for each calculation review; and
- 2.74.2 for the aspects of the base milk price calculation that are not part of the key focus areas, we undertake a “fit for purpose” review. When

⁴⁴ The Commission exercises its discretion to look more closely into matters where it considers it is unable to rely on these governance processes. For example, certain assumptions may not be subject to a detailed level of audit in every year.

⁴⁵ See International Standard on Auditing (New Zealand) 320 - Materiality in Planning and Performing an Audit.

determining the areas we should focus on for the fit for purpose review, we apply a materiality approach.

- 2.75 We explain the materiality approach we apply for each of these parts of our calculation review below.
- 2.76 We determine the key focus areas as a matter of judgment based on the information that we have gathered on the following matters:⁴⁶
- 2.76.1 outstanding issues from our previous calculation and Manual review(s);
 - 2.76.2 issues arising from submissions made by interested parties;
 - 2.76.3 Fonterra's review of components in its Manual;
 - 2.76.4 Fonterra's amendments to the current season's Manual;
 - 2.76.5 any amendments to Fonterra's approach to calculating the components that do not require a Manual amendment;
 - 2.76.6 sensitivity of components to the milk price; and
 - 2.76.7 any adjustments made to the milk price by Fonterra.
- 2.77 For the fit for purpose review, we determine the areas of focus by undertaking:⁴⁷
- 2.77.1 an analytical verification of the values used in the component against our previous reviews of the same component; and
 - 2.77.2 a review of the consistency of the assumptions, inputs and processes related to the different components.
- 2.78 If any aspect of this fit for purpose review identifies inconsistencies with our previous analysis or other components of the base milk price calculation model, we will consider whether more analysis of that component is required.⁴⁸
- 2.79 Materiality therefore assists in informing the degree of priority we assign to our review of particular assumptions, inputs and processes. We also apply a degree of judgement in each case when determining the scope of examination and the level of evidence we require to support a particular position on any changes to the inputs, processes and assumptions adopted in setting the base milk price.

⁴⁶ Commerce Commission, above n 5, at 71.1-71.7 and 72.

⁴⁷ Commerce Commission, above n 5, at 73.

⁴⁸ We are provided with the full model, its underlying models and documentation for purposes of our review. The public version of Fonterra's milk price model is available at Fonterra's website. We expect Fonterra to update this annually. [Fonterra, "Milk Price Methodology: Milk Price Statements"](#).

- 2.80 Because we are not required to reach a conclusion on the extent to which materiality is consistent with the section 150A purpose, we do not intend to address this matter in our final report. We will, however, take submissions on this matter into account when we conduct a future review of our framework paper.⁴⁹

Next steps

- 2.81 With the exception of determination of audit materiality, we seek stakeholders' views on the following matters:
- 2.81.1 whether materiality should play a role in setting the scope of our calculation reviews; and
 - 2.81.2 how materiality should play a role in setting the scope of our calculation reviews, including whether materiality should play a role in the ways set out above, or whether materiality should play a role in some alternative way.

Fit for purpose review

- 2.82 We received and reviewed Fonterra's milk price calculation model, as well as supporting models for each of the key inputs. We requested and obtained further information on a confidential basis where we considered it necessary.
- 2.83 With the exception of fixed energy costs, we did not identify any material inconsistencies with previous milk price calculations. We therefore confirm our reliance on the conclusions from previous years' reviews for those aspects of the base milk price calculation that have not materially changed.
- 2.84 As part of the analysis set out above, we have also examined in some detail any changes in the following assumptions that have a high potential for impacting the base milk price:
- 2.84.1 changes in pricing assumptions, including reference to Global Dairy Trade (GDT) and off-GDT sales data;⁵⁰
 - 2.84.2 changes in sales phasing;

⁴⁹ We intend to conduct a review of the framework paper in the near future. The review will include a consideration of materiality and may include a consideration of other matters.

⁵⁰ In its 2018/19 reasons paper, Fonterra has confirmed that it has not made any amendments to the process for identifying off-GDT 'price include' sales. Fonterra, above n 10, at 46.

2.84.3 changes in timing or volume of milk collected; and

2.84.4 yield and loss calculations.⁵¹

2.85 We have also examined Fonterra's estimate of the FX conversion rate, as this was something we flagged for follow-up in our review of the 2018/19 Manual.

Changes in costs

2.86 Fixed energy costs increased by 165% from the 2017/18 season. This increase was due to the impact of energy hedging costs. Gains and losses from Fonterra's energy hedging activities are included in this line, and Fonterra was forecasting at 31 May 2019 a hedging loss of \$ [REDACTED] for 2018/19, compared to a gain of \$ [REDACTED] in 2017/18.

2.87 Having reviewed the information provided by Fonterra, we consider it appropriate that fixed energy costs include the results of Fonterra's energy hedging activities, as the hedging activities do not involve the application of strategies or access to hedging products that would not be available to and reasonably adopted by an efficient processor.

2.88 Our draft conclusion is therefore that the fixed energy costs in the milk price calculation are practically feasible for an efficient processor and accordingly, satisfy the contestability criteria in section 150A.

2.89 The way in which these fixed energy costs are set has not changed, therefore we are relying on our conclusion from our previous calculation reviews, that the fixed energy costs are consistent with the efficiency dimension of the section 150A purpose.⁵²

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

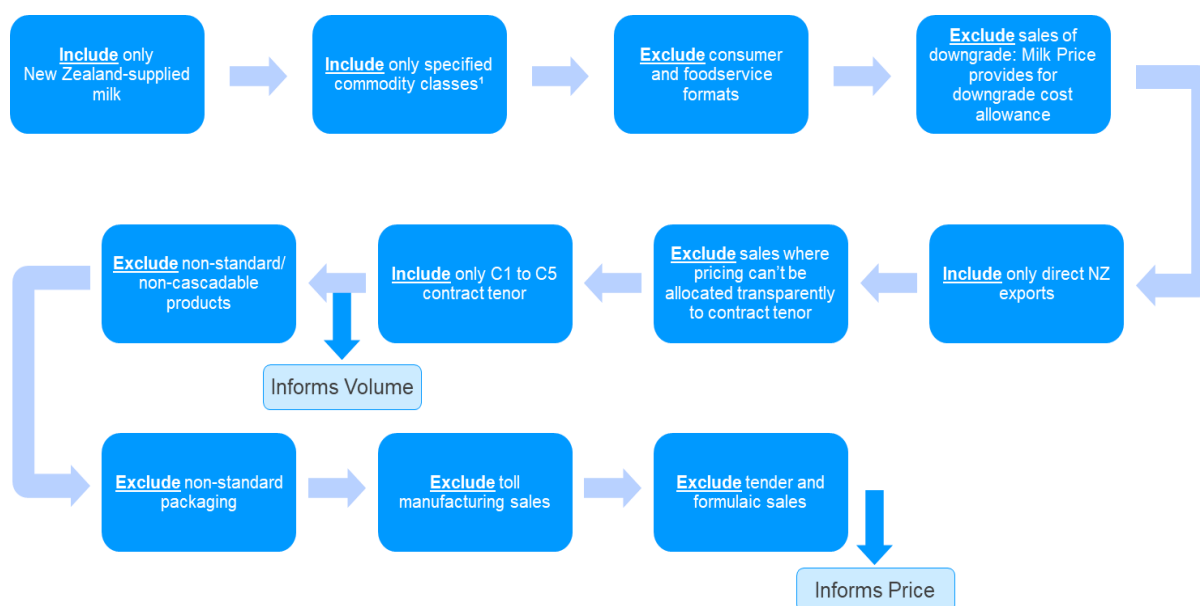
2.90 In our 2017/18 calculation review we looked at the off-GDT prices and volumes against the previous season to obtain comfort in what was being used as a reference for prices used for the NP.

2.91 Fonterra maintains a decision tree describing the process/decision points for filtering out non-milk price informing sales. Figure 2.1 is a simplified version of this decision tree.

⁵¹ For a full description of Fonterra's process to update the loss assumptions see Fonterra, above n 10, at 13.

⁵² See Commerce Commission, above n 25, at 2.4.

Figure 2.1 Off-GDT milk price decision tree – Product to be determined in milk price calculation



- 2.92 In our 2017/18 calculation review final report we stated that we continue to consider that there should be more transparency around how Fonterra has determined the off-GDT sale prices used for the NP.
- 2.93 Accordingly, in our 2018/19 Manual review we said we would seek clarification of what Qualifying Outlier Sales (**QOS**) comprise or are likely to comprise and will identify whether they have had an impact on the selling prices of the NP.
- 2.94 Fonterra has explained that the QOS rule provides that a sale which otherwise satisfies the Qualifying Reference Sale (**QRS**) definition first has to be excluded from the Milk Price revenue calculation by the MPG on the basis that the price is 'too low' (and therefore in the MPG's view has not been undertaken at 'prevailing market prices'). The MPG seeks explanations from Fonterra management of each of the relatively few QRSs undertaken at materially below the relevant prevailing GDT price but has not excluded any sale on the basis that the price was too low since at least 2016. Consequently, the Panel has not been asked to consider the inclusion of any sales under the rule in that timeframe (and indeed, has not been asked to consider any potential QOS since around 2009).
- 2.95 For this year's review, in confirming the detailed application of the decision tree we asked Fonterra to provide:
- 2.95.1 an analysis of the impact of off-GDT sales on the milk price;
 - 2.95.2 an explanation of how assurance is provided that the rules included in the decision tree are actually implemented in the milk price models and ensure that the base milk price is only informed by off-GDT contracts that are consistent with commodity contracts priced on-GDT;

- 2.95.3 an explanation of the factors that inform the commercial judgement used in applying the include/exclude criteria to individual sales; and
- 2.95.4 an explanation of the impact that automated decision criteria have on the milk price compared to the application of criteria that involve some degree of commercial judgement.
- 2.96 Fonterra advised that the MPG meets with management each month to assess all new stock-keeping-unit (**SKUs**), and to consider the extent to which each SKU should be considered a Qualifying Material (assessed against the decision tree). The Milk Price Steering Committee (a group of Fonterra Senior Managers) meets monthly to assess these new SKUs for consideration as to whether such SKUs should be considered a Qualifying Material, and to consider the decisions made by the MPG and management.
- 2.97 Following this process, Fonterra management make recommendations to the MPG for approval. PwC, as part of its audit of the farm gate milk price, audits changes including the addition or deletion of Qualifying Materials.
- 2.98 PwC also periodically tests the application of the automated criteria to off-GDT sales data uploads in the milk price models on a sample basis. We have requested the results of this testing for 2018/19 and have taken account of these results in our draft conclusions..
- 2.99 Fonterra has confirmed that for 2018/19 the forecast base milk price solely reflects the application of automated criteria and does not involve criteria that require commercial judgement.
- 2.100 We have reviewed a comparison of off-GDT price-include and price-exclude data and are satisfied that the prices included in the base milk price are not systematically higher than those of sales that are not included. There is also no evidence of off-GDT pricing higher than that which can be achieved by other New Zealand processors.
- 2.101 The proportion of off-GDT sales to on GDT sales for 2018/19 for AMF, SMP and WMP is 42/58. The proportion is slightly down from the 2017/18 season (46/54). Fonterra has included the necessary costs for the NP as a result of including off-GDT sales for WMP, SMP and AMF.
- 2.102 Having reviewed the information provided by Fonterra, we are satisfied that the inclusion by Fonterra of off-GDT sales as a reference for prices used by the NP is practically feasible for an efficient processor, and is therefore consistent with the contestability dimension in the section 150A purpose.

- 2.103 Because the process for including off-GDT costs has not changed since last year's calculation review, our draft conclusion is that the inclusion by Fonterra of off-GDT sales as a reference for prices in calculating the 2018/19 base milk price is consistent with the efficiency dimension of the section 150A purpose.

Changes in volumes of milk collected

- 2.104 In our review of Fonterra's Milk Price Manual 2018/19, we concluded that in respect of issues raised by static or declining volumes of milk collected by Fonterra, our best course of action would be to monitor the asset stranding rules against real world behaviours for the time being with a more substantive review to be included in the 2020/21 season alongside Fonterra's review of the specific risk premium.
- 2.105 We note that the 2018/19 milk volume forecast is greater than the 2017/18 total volume, so there are no additional short-term plant mothballing issues we consider we need to address in this year's review of the Calculation. We will look to include the long-term issue of asset stranding in our review of the 2019/20 Manual, after its four-yearly update later this year.

Yield and loss calculations

- 2.106 We have reviewed Fonterra's updated input assumptions on losses. We conclude that the updates to these inputs are supported by loss survey data and expert review of the loss specification offsets. A full description of Fonterra's process to update the loss assumptions can be found in its 2018/19 reasons paper.⁵³
- 2.107 In carrying out our review we obtained and reviewed the independent loss survey audit report from Aurecon which covered the audit process, completeness and results for the 2018 Lichfield survey. We have also obtained and reviewed the Recommendations for FY19 Milk Price Manufacturing Loss Allowances report from Fonterra's independent expert, Tina Gandell.
- 2.108 The 2018/19 losses are in line with the losses achieved in the 2017/18 season. There were minor increases to some of the effluent loss benchmarks and a small decrease in the SMP fat composition target.
- 2.109 We confirmed the calculated yield by performing a 'mass balance' calculation to verify that loss assumptions have been properly taken into account. This reconciles the milk solids in the total volume of raw milk purchased by the NP with the fat and protein milk solids components of the RCPs together with associated losses.
- 2.110 Having reviewed the information provided by Fonterra, and performing our own analysis on the calculated yield, we are satisfied that the input assumptions of manufacturing losses are correctly recorded in the models and that there is sufficient assurance around the process of measuring and verifying the loss survey data.

⁵³ Fonterra, above n 10, at 13.

- 2.111 We are satisfied that the yields can be achieved by Fonterra and that they are therefore practically feasible for an efficient processor, and as such, consistent with the contestability dimension of the section 150A purpose.
- 2.112 Because the process for setting the yield and loss calculation inputs is in line with that used in the 2017/18 base milk price calculation review, our draft conclusion is that the yield and loss calculations are consistent with the efficiency dimension of the section 150A purpose.

Other matters – Estimate of FX conversion

- 2.113 For completeness, we have followed up TDB Advisory's concern from our 2018/19 Manual review that Fonterra's FX disclosures in the Farmgate Milk Price Statement should be more precise and therefore less misleading.⁵⁴
- 2.114 Fonterra has advised that the additional precision requested by TDB in Fonterra's disclosure in the Milk Price Statement of its forecast hedge position for the current season would not in fact provide any additional information to third parties given the level of forecasting uncertainty at the time of publication of the Milk Price Statement (approximately seven weeks into the season). The "approximately 73%" calculation cited by TDB in its submission reflects the forecast at that time of full season USD cash receipts, which in turn depends directly on forecast average commodity prices and forecast full season milk supply, among other things. Just a 5% difference between forecast and actual commodity prices, coupled with perfect forecasting accuracy with respect to all other inputs, would, for example, move the 73% estimate by around +/- three percentage points.
- 2.115 We do not consider that we are required to reach a conclusion on section 150A consistency on this matter.

⁵⁴ [TDB Advisory "Submission on draft report on review of Fonterra's 2018/19 draft milk price manual" \(15 November 2018\) at 2.](#)

Chapter 3 How you can provide your views

Invitation to comment

- 3.1 As required under the Act, we are consulting with Fonterra on this draft report.⁵⁵ We have also extended our consultation process to other interested parties.
- 3.2 This chapter outlines how you can provide your views on our draft report.
- 3.3 We welcome views on any aspects of this draft report or any additional issues that you think should be considered in respect of the Calculation before we finalise our conclusions. Your views on our draft report will help inform our final conclusions for our review.

Format of submissions

- 3.4 Submissions must be provided electronically in a format suitable for word processing and publication on our website.
- 3.5 We intend to publish all submissions on our website. If you would like the published electronic copy to be 'locked', we ask that you provide multiple versions of your comments. At least one version should be provided in a file format which is suitable for word processing.

Deadline for submissions

- 3.6 To allow us time to consider your views, submissions must be provided to us by no later than **12 noon, Monday 2 September 2019**.
- 3.7 Please address your submission to:
Stephen Bass, Compliance Manager, Regulation
regulation.branch@comcom.govt.nz
- 3.8 We will consider submissions and publish our final report by **Thursday 12 September 2019**.

Requests for confidentiality

- 3.9 We encourage full disclosure of submissions so that all information can be tested in an open manner. However, we offer the following guidance where you wish to provide information in confidence:
- 3.9.1 If you include confidential material in a submission, both confidential and public versions of the submission should be provided; and

⁵⁵ Section 150U(1) of the Act.

- 3.9.2 The responsibility for ensuring that confidential information is not included in a public version of a submission rests entirely with the party making the submission.
- 3.10 You can also request a confidentiality order under section 100 of the Commerce Act 1986. Any request for a section 100 order must be made at the time the relevant information is supplied to us, outlining the reasons why the relevant information should not be made public. We will provide further information on section 100 orders if requested.⁵⁶

⁵⁶ A key benefit of such orders is to enable confidential information to be shared with specified parties on a restricted basis for the purpose of making submissions. However, any section 100 orders will apply for a limited time only as specified in the order. Once an order expires, we will follow our usual process in response to any request for information under the Official Information Act 1982.

Appendix A **Glossary of terms**

Table A1 Glossary

Term/Abbreviation	Definition
The Act, or DIRA	Dairy Industry Restructuring Act 2001
AMF	Anhydrous milk fat
Base milk price	Farm gate milk price expressed per kilogram of milk solids
BCP	Base commodity price, or FAS-equivalent commodity price
BMP	Butter milk powder
Calculation review	Review of Fonterra's base milk price calculation for the prior season
Capex	Capital expenditure
Dairy season	1 June to 31 May
FX	Foreign Exchange
GDT	Global dairy trade, Fonterra's online auction platform used to sell commodities
kgMS	Kilogram of milk solids
Manual review	Review of Fonterra's Milk Price Manual for the current season
Milk Price Manual or the Manual	Fonterra's Farm Gate Milk Price Manual generally referred to by the version relating to each dairy season (e.g., 2016/17 Manual). The Manual contains the methodology used to calculate Fonterra's base milk price
Notional Producer	The notional commodity business that is used to calculate the base milk price
NP	Notional producer
NMPB	Notional Milk Price Business, comprising the notional milk powder manufacturing business implied by Fonterra's Farmgate Milk Price Manual
Opex	Operating expenditure
RCP	Reference Commodity Product. These products are manufactured and sold by the Notional Producer. This currently consists of WMP, SMP, BMP, Butter and AMF
Reference Basket	The basket of RCPs used to calculate the Farmgate Milk Price
Reasons paper	Fonterra's Reasons paper which is provided alongside the Manual for each dairy season (this is also provided when Fonterra discloses its base milk price calculation at the end of each dairy season)
SMP	Skim milk powder
WACC	Weighted average cost of capital
WMP	Whole milk powder
QOS	Qualifying Outlier Sale
QRS	Qualifying Reference Sale
MPG	Milk Price Group, the independent group responsible for calculating the base milk price
MPP	Milk Price Panel