

Our approach to reviewing Fonterra's Milk Price Manual and base milk price calculation

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Chapter 1 Introduction

Purpose of this paper

1. This paper provides an overview of our approach to the annual reviews of Fonterra's Milk Price Manual (the Manual) and the base milk price calculation (the calculation).¹
2. We recommend this paper is used as a frame of reference when considering our reports on our statutory reviews of the Manual and the calculation. It provides context for the conclusions and reasoning surrounding ~~the~~our Manual and calculation reviews. This paper forms part of our Manual and calculation draft and final reports for the 2021/2022 season onwards.
3. ~~For each review~~When appropriate, we will update this paper with any major changes in our approach.

Our review process

4. The Dairy Industry Restructuring Act 2001 (~~the Act~~DIRA) requires us to complete two separate, but related, reviews of Fonterra's setting of the base milk price for each dairy season:²
 - 4.1 following the start of each dairy season, a review of the Manual that considers Fonterra's methodology for calculating its base milk price for that season; and
 - 4.2 following the end of each dairy season, ~~a review~~ of Fonterra's calculation of the base milk price.
5. Figure 1.1 outlines the key dates for our reviews of the Manual and the calculation each season. These dates are set out in ~~the Act~~DIRA.

¹ ~~The Dairy Industry Restructuring Act 2001 refers to the farm gate milk price as the base milk price.~~ Our approach to the Manual and the calculation reviews are broadly the same. We note that there will be some repetition throughout this paper.

² The dairy season runs from 1 June until 31 May.

Figure 1.1 Key dates for our reviews each season³



Definitions of key terms used in this paper

Base milk price

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”.⁴ This is the price the calculation of which is subject to a review by us under the DIRA.
7. The Milk Price Panel (Panel) recommends a base milk price to Fonterra that is calculated using the rules in the Manual. This recommendation becomes the base milk price once it is set (approved) by Fonterra’s Board. Fonterra’s Board may set a base milk price different from the Panel’s recommended price, or in the absence of a recommendation from the Panel, its own base milk price, provided it follows the processes set out in s 150N of DIRA.⁵ Fonterra may also change the base milk price after the Commission releases its final report on the base milk price calculation but must follow the process set out in s 150R.
8. We note that the farmgate (one word) milk price is a term used by Fonterra in its annual Farmgate Milk Price Statement. The farmgate milk price is the average price paid by Fonterra for each kilogram of milk solids (kgMS) supplied by Fonterra’s

³ We start our reviews before Fonterra provides its Reasons Paper for the Manual and calculation to allow sufficient time to complete the reviews.

⁴ DIRA, s 5.

⁵ All statutory references in this paper are to the DIRA unless otherwise specified.

farmer-shareholders under Fonterra’s standard terms of supply. It is calculated in accordance with the Manual. Therefore, this price equates to the base milk price recommended by the Panel.

9. On those occasions when the Board has adjusted the price calculated under the Manual in accordance with s 150N, the new price has been described by Fonterra as the “final farmgate milk price”.⁶ Because the “final farmgate milk price” is the price set by the Board it likewise equates to the base milk price as defined in the DIRA.

Farm gate milk price

10. The term “farm gate milk price” is defined in DIRA as “the total cost of milk divided by kilograms of milk solids that Fonterra pays out to shareholder farmers in a season”.⁷
11. The farm gate milk price is different from the base milk price. The farm gate milk price is calculated from the sum of the actual payments made by Fonterra that constitute the total cost of milk less total organic milk and total winter premium milk payments.⁸ These payments include fixed price payments that have already been made under Fonterra’s fixed milk price offer for the relevant season.⁹
12. On the other hand, the base milk price recommended by the Panel, as calculated in accordance with the Manual, divides the total Manual-calculated costs, similarly excluding total organic milk and total winter premium milk costs, by the total kilograms of milk solids supplied, but makes no adjustment for fixed price payments. Example 1 below provides a simplified example of how the base milk price differs from the farm gate milk price.¹⁰

⁶ Fonterra Farmgate Milk Price Statement 2018, page 2 and Fonterra Farmgate Milk Price Statement 2014, page 2. See <https://www.fonterra.com/nz/en/investors/farmgate-milk-prices/milk-price-methodology.html>.

⁷ See s 5. The terms “total cost of milk” and “kilograms of milk solids” are also defined in s 5.

⁸ See footnote 21 for an explanation of the winter premium milk payments.

⁹ Fonterra’s fixed milk price offer enables farmers to manage price volatility risk by offering a fixed price for a portion of their milk supply, up to a maximum of 5% of collections in a milk season. The fixed price could end up being lower or higher than the base milk price and is set based on an average of the daily settlement price of the NZX Milk Price Futures contract on each NZX trading day during the three days following the first Global Dairy Trade (GDT) event of each month. The fixed price and available volumes on offer are published for each trading month.

¹⁰ The weighted average fixed price in the example is a composite of the fixed prices and volumes offered for all the GDT trading months. For more details, see for example Fonterra “Fixed Milk Price 2020/2021”, available at: <https://nzfarmsource.co.nz/assets/Fixed-Milk-Price/Fixed-Milk-Price-Booklet-2020-FINAL.pdf>.

Example 1Base milk price = \$7.50Weighted average fixed price = \$7.00% of collections A - applying base milk price = 95%% of collections B - applying fixed price = 5%Farm gate milk price = % collections A * base milk price + % collections B * fixed priceFarm gate milk price = 95% * \$7.50 + 5% * \$7.00 = \$7.475How we use these terms

13. Wherever we refer to our statutory Milk Price Manual and milk price calculation review processes we use the term 'base milk price'.
14. Because our reviews do not consider the farm gate milk price, we do not use the term as defined in the DIRA except in chapter 2, and specifically paragraphs 18-26, to distinguish the price for the purchase of raw milk at the farm gate from the factory gate milk price, wholesale milk price and retail milk price in our discussion of the milk supply chain.

How this paper is structured

6-15. In this paper we set out our approach to the reviews. It includes an overview of:

15.1 how the base milk price is set (chapter 2);

6-15.2 our interpretation of key legislative provisions guiding our reviews; (chapter 3);

~~6.2 how Fonterra sets its base milk price;~~

15.3 our practical approach to the statutory reviews (chapter 4);

6-315.4 the notional producer and its key assumptions;¹¹ (Attachment A); and

6-415.5 governance supporting the calculation- (Attachment B).

¹¹ Attachment E of the Milk Price Calculation Review 2014/15 provides an infographic showing what the notional producer looks like for the purposes of calculating Fonterra's base milk price. Commerce Commission "Review of Fonterra's 2014/15 base milk price calculation: Dairy Industry Restructuring Act 2001" (final report) 15 September 2015.

Chapter 2 Overview of how the base milk price is set

Purpose of this chapter

7-16. This chapter:

7-16.1 outlines the different milk prices within the milk supply chain;

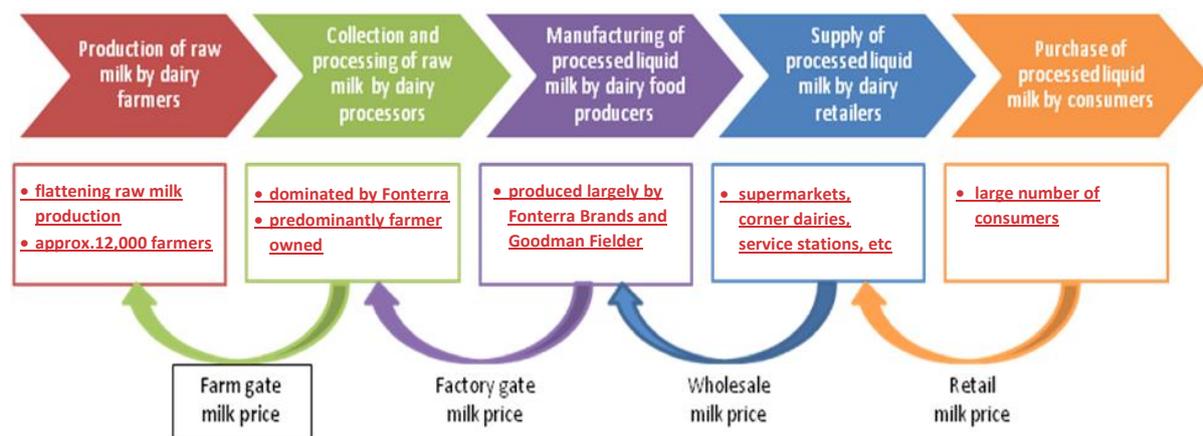
7-16.2 explains the unique nature of the farm gate milk market in New Zealand; and

7-16.3 explains the methodology Fonterra uses to calculate ~~its farm gate~~ the base milk price.¹²

Milk prices in New Zealand

8-17. The phraseterm 'milk price' can have different meanings depending on which stage of the milk supply chain is being considered. Figure 2.1 describes the milk supply chain in New Zealand. It shows the different components of the 'milk price' as generated by different milk markets within the supply chain.

Figure 2.1 Milk supply chain in New Zealand



9-18. As shown in Figure 2.1, the 'milk price' in New Zealand is made up of the following four components:

9-18.1 farm gate milk price: the price paid by dairy processors (eg, Fonterra) to dairy farmers for raw milk;¹³

¹² The Act uses the term "base milk price" and all references here to the farm gate milk price should be read as meaning the same.

¹³ See paragraph 14 above for an explanation of why we use the term 'farm gate milk price' in this chapter.

~~9.2~~18.2 factory gate milk price: the price paid by dairy processors and dairy food and beverage producers (eg, Goodman Fielder) to other dairy processors for either raw milk or dairy ingredients;

~~9.3~~18.3 wholesale milk price: the price paid by dairy retailers (eg, supermarkets) to dairy food and beverage producers for processed milk; and

~~9.4~~18.4 retail milk price: the price paid by dairy consumers to dairy retailers for processed milk.

~~10.19.~~ Approximately 95% of the total raw milk produced in New Zealand is exported in one or more product forms. ~~This means the prices of all four components of the ‘milk price’ are~~ The price at each step of the milk chain is influenced by both the international dairy market’s demand and supply and by foreign exchange fluctuations. Our reviews focus solely on the farm gate base milk price and not any other milk price within the milk supply chain.

Farm gate milk market in New Zealand

~~11.20.~~ In a workably competitive farm gate milk market, the level of the farm gate milk price would be determined through:

~~11.1~~20.1 _____ competition between suppliers of raw milk (ie, farmers) to processors; and

~~11.2~~20.2 _____ ~~through~~ those processors competing ~~in~~ both for the purchase of raw milk and in its onward sale after processing.

~~12.21.~~ Currently in New Zealand there is not a workably competitive market process to derive a farm gate milk price.¹⁴ Therefore, ~~the Act~~DIRA requires Fonterra to determine ~~such a price~~ using an administrative methodology.¹⁵

Fonterra’s approach to calculating ~~its farm gate~~the milk price paid at the farm gate

~~13. From its formation in 2001 until 2009, Fonterra’s payment to dairy farmers for their raw milk was bundled together with the returns for their shareholding. During that~~

¹⁴ As at the end of the ~~2014/15~~2018/19 season, Fonterra ~~collects~~collected approximately ~~85~~81% of total raw milk supply in New Zealand. ~~Commerce~~See for example, TDB Advisory for the NZ Productivity Commission “Final Report: Review of the state of competition in the New Zealand Dairy Industry” (1 March 2016), paragraph D30 “The Dairy Sector in New Zealand: Extending the Boundaries” (October 2020), page 8.

¹⁵ ie, the Manual and the base milk price calculation model.

~~time, Fonterra's farm gate milk price was calculated only for purpose of estimating its long-run earnings for share valuation purposes.~~

~~14.22.~~ Shareholding dairy farmers have always had two separate but related interests in Fonterra. They are recompensed through two revenue streams:

~~14.122.1~~ payment for the raw milk they supply; and

~~14.222.2~~ dividend payments for the share capital they hold in the cooperative.¹⁶

~~15.23.~~ Consequently, ~~supplier~~farmer-shareholders tend to be interested in the total return on raw milk and share capital invested in Fonterra, rather than the individual parts.

~~24.~~ From its formation in 2001 until 2009, Fonterra's payment to dairy farmers for their raw milk was bundled together with the returns for their shareholding. During that time, Fonterra's milk price paid at the farm gate was calculated only for the purpose of estimating its long-run earnings for share valuation purposes.

~~16.25.~~ In 2009, Fonterra unbundled its total return to farmers into the ~~farm gate~~ milk price paid for raw milk at the farm gate and the returns on share capital. With the unbundling came the need to set the ~~farm gate~~ milk price at the farm gate independently of Fonterra's share valuation processes. The new unbundled price was introduced into DIRA in 2012 as the base milk price.

~~17.26.~~ In ~~2010~~2012, Fonterra shareholders voted to change Fonterra's capital structure to implement Trading Among Farmers (TAF).¹⁷ TAF lets outside investors buy units in Fonterra. These investors get the economic benefits of shares but do not have the right to vote.¹⁸ Under TAF, the economic interests of ~~external~~outside (non-farmer) investors will beare for Fonterra to maximise the share price and the return on share capital invested in Fonterra, rather than the return on raw milk.

¹⁶ To supply raw milk to Fonterra, dairy farmer-shareholders are required to hold one share for every kilogram of milk ~~solids~~solid they wish to supply to the cooperative. ~~We understand that an average Fonterra supplier holds approximately half a million dollars in Fonterra shares at the current share valuation.~~ There are a small number of dairy farmers who supply Fonterra with raw milk on a contract supply basis and do not hold shares.

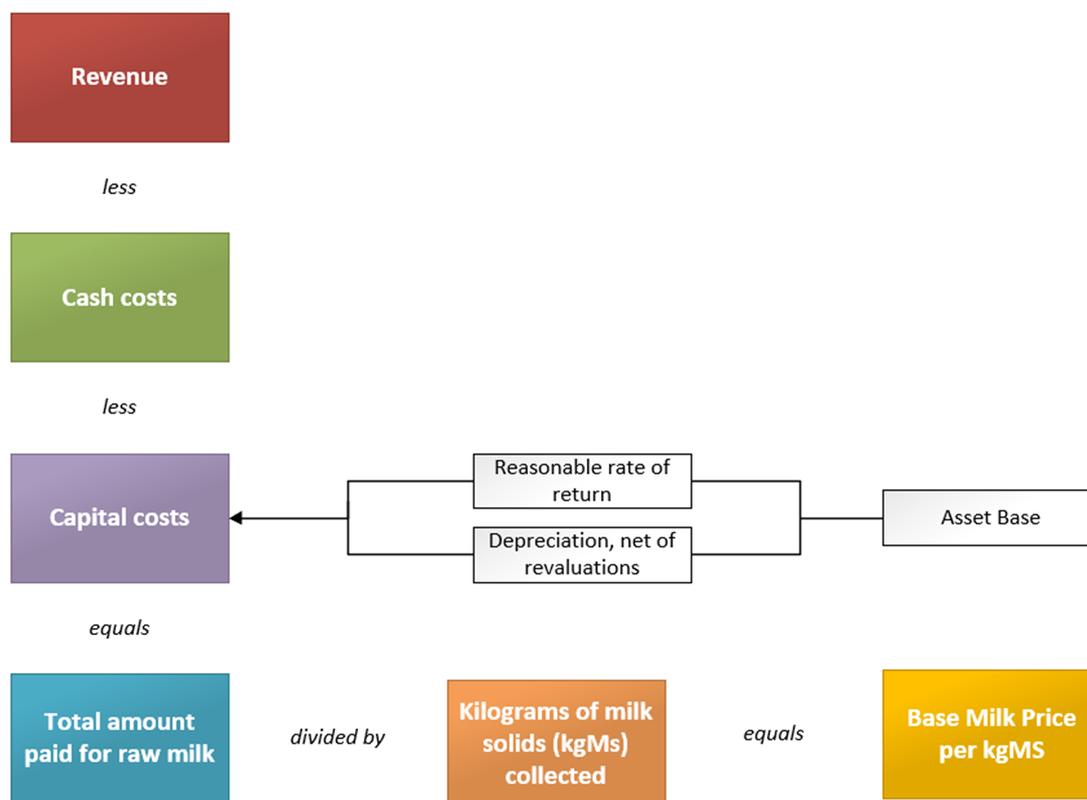
¹⁷ TAF was endorsed by Fonterra shareholders in June 2012 with the live trading of shares commencing on 30 November 2012. TAF replaced the Fonterra share purchase and sale process, which involved the issuing and redemption of shares by Fonterra.

¹⁸ ~~TAF was endorsed by Fonterra shareholders in June 2012 with the live trading of shares commencing on 30 November 2012.~~ We note that in May 2021 Fonterra proposed changes to its capital structure that, if accepted, could remove the ability of non-farmer investors to invest via the Fonterra Shareholders Fund.

Fonterra's methodology for setting ~~its farm-gate~~ the base milk price¹⁹

~~18-27.~~ Fonterra's methodology for calculating ~~its farm-gate~~ the base milk price is guided by a set of principles set out in its Constitution and outlined in ~~its~~ the Manual. Figure 2.2 provides a visual representation of Fonterra's methodology.

Figure 2.2 Fonterra's base milk price methodology



~~19-28.~~ The ~~farm-gate~~ base milk price is expressed in terms of dollars per ~~kilograms of milk solids~~ (kgMS) supplied to Fonterra. This price represents an average price paid to farmers. The actual payments to individual farmers for their milk are adjusted for the composition of the milk supplied²⁰ and the timing of supply.²¹

~~20-29.~~ Fonterra calculates the ~~farm-gate~~ base milk price from the total pool of money available for payment to farmers for their raw milk supply each season. This is determined by:

¹⁹ As explained in paragraphs 8-9 above, in describing its methodology Fonterra uses the term farmgate milk price to refer to the same concept defined in DIRA as the base milk price.

²⁰ In terms of the fat and protein components.

²¹ Eg, milk supplied during the winter period attracts certain premiums. The winter premiums are not included in the base milk price, although they are paid out to farmers.

~~20.1~~29.1 the revenue Fonterra would earn in NZ dollars if the equivalent of all the raw milk supplied to Fonterra in New Zealand was converted into the Reference Commodity Products (RCP) product mix, and sold on international dairy markets;²² less

~~20.2~~29.2 the 'cash' costs (or operating costs) of collecting raw milk from farms, processing it into the RCP product mix and transporting this product to the point of export from New Zealand, plus the costs of selling the finished product, administration/overhead, and tax expenses; less

~~20.3~~29.3 the capital costs, which provide for depreciation of fixed assets, return on ~~and of~~ capital investment, and working capital.

~~21.30.~~ Fonterra makes ~~a number of several~~ payments to farmers for raw milk during the dairy season (based on its Advanced Payment Rate Schedule which is linked to its forecast ~~farm gate~~ milk price). However, ~~its~~ Fonterra's current policy is to confirm the final ~~farm gate~~base milk price after the end of the season.²³ Fonterra's final ~~farm gate~~base milk price is typically set in September following the end of the season financial year (31 July), at which time sales of most of the season's production have been completed. This results in end of year 'wash-up' payments to farmers.

~~22. Any changes to the Manual take effect in the financial year after the year in which the changes are made.~~²⁴

²² See paragraphs 55-57 below for an explanation of the RCP.

²³ ~~The dairy season runs from 1 June to 31 May.~~

²⁴ ~~Fonterra's financial year is from 1 August to 31 July.~~

Chapter 3 Our interpretation of key legislative provisions

Purpose of this chapter

~~23.31.~~ In this chapter we set out our interpretation of the following key legislative provisions in ~~the Act~~DIRA that guide our reviews:

~~23.131.1~~ the purpose of the base milk price monitoring regime [s 150A];

~~23.231.2~~ ‘safe harbours’ [s 150B];

~~23.331.3~~ ‘mandatory assumptions’ [s 150C];

~~23.431.4~~ our Manual review and report [ss 150H, 150I and 150J]; and

~~23.531.5~~ our calculation review and report [ss 150O, 150P and 150Q].

Policy objectives of the base milk price monitoring regime

~~24.32.~~ The base milk price monitoring regime is intended to provide incentives for Fonterra to act efficiently while providing for contestability in the market for the purchase of raw milk.

~~25.33.~~ ~~It also~~The regime promotes greater transparency of Fonterra’s base milk price setting processes.²⁵

~~26. The regime monitors whether the base milk price set by Fonterra provides incentives for it to operate efficiently while not precluding efficient processors from potentially competing.²⁶~~

The s 150A purpose

~~27.34.~~ Section 150A sets out the purpose of Subpart 5A of ~~the Act~~DIRA, which gives effect to the base milk price monitoring regime:

150A Purpose of this subpart

²⁵ Dairy Industry Restructuring Amendment Bill (Government Bill) 2012, p.2.

²⁶ ~~Synlait submitted that this statement understates the contestability purpose, while Miraka submitted that the statement reflected a bias towards incentivising the Fonterra efficiency purpose over the contestability purpose. Synlait "Submission on the Commerce Commission's 2015/16 base milk price calculation review draft report" (1 September 2016), paragraph 13, Miraka "Submission to the Commerce Commission Draft Report (1 August 2016): Review of Fonterra's 2015/16 base milk price calculation" (1 September 2016), paragraph 2.2. We disagree that our framing understates this purpose. The essence of contestability is that efficient firms are able to compete in the market. If efficient firms are able/not precluded from competing in the market then contestability is provided for.~~

- (1) The purpose of this subpart is to promote the setting of a base milk price that provides an incentive to new co-op to operate efficiently while providing for contestability in the market for the purchase of milk from farmers.
- (2) For the purposes of this subpart, the setting of a base milk price provides for contestability in the market for the purchase of milk from farmers if any notional costs, revenues, or other assumptions taken into account in calculating the base milk price are practically feasible for an efficient processor.

~~28-35.~~ Our reviews of the Manual and the calculation consider the ~~'efficiency'~~efficiency and ~~'contestability'~~contestability dimensions.²⁷ They focus on ~~whether~~the extent to which the Manual and the calculation provide:

~~28-135.1~~ 28.135.1 an incentive for Fonterra to operate efficiently (the 'efficiency dimension'); and

~~28-235.2~~ 28.235.2 for contestability in the market for the purchase of raw milk from farmers (the 'contestability dimension').

~~29-36.~~ To satisfy the provisions in s 150A, our interpretation is that our statutory reviews must assess both dimensions.²⁸ We attach equal weight to both dimensions in our assessment.

37. The High Court has endorsed the Commission's interpretation of the efficiency dimension and the contestability dimension.²⁹

Interpretation of the ~~'efficiency'~~efficiency dimension

~~30-38.~~ Section 150A(1) refers to incentives ~~to~~for Fonterra to "operate efficiently".

~~31-39.~~ There are many factors which can, and do, incentivise Fonterra to operate efficiently. We have interpreted the primary focus of the efficiency dimension to be providing incentives for Fonterra to drive cost efficiencies (ie, productive, and dynamic efficiency) through setting the base milk price.³⁰

²⁷ These two interlinked dimensions form the s 150A purpose under Subpart 5A of DIRA ~~(2001).~~

²⁸ ~~We attach equal weight to both dimensions in our assessment.~~

²⁹ Open Country Dairy Ltd v Commerce Commission [2020] NZHC 334 at [61].

³⁰ Productive efficiency is ~~present~~achieved when producers use inputs in such a manner as to minimise costs, subject to technological constraints. Dynamic efficiency relates to decisions made over time which result in improvements in productive efficiency. We are primarily concerned with productive and dynamic efficiencies when reviewing Fonterra's costs. -For revenue items where productive efficiency is not relevant (such as the selection of reference commodity products and sales prices), ~~where productive efficiency is not relevant~~, we necessarily focus on allocative efficiency. Allocative efficiency occurs when there is an optimal distribution of goods and services, and involves ~~taking into account~~considering consumers' preferences.

~~32.40.~~ When assessing the efficiency dimension, we focus on the following:

~~32.140.1~~ our review of the Manual requires us to report ~~whether~~on the extent to which the methodology for calculating the base milk price in the Manual incentivises Fonterra to operate efficiently; and

~~32.240.2~~ our review of the calculation requires us to assess ~~whether~~the extent to which the assumptions adopted, ~~and the~~ inputs and process used by Fonterra in setting the base milk price incentivise Fonterra to operate efficiently.

~~33.41.~~ Our view is that the methodology for calculating the base milk price in the Manual ~~and the assumptions adopted,~~will provide an incentive for Fonterra to operate efficiently where the Manual provides for independent notional benchmarks for the revenue and cost inputs in the calculation. Our view is that the assumptions adopted, ~~and~~ inputs and process used in the calculation will provide an incentive for Fonterra to operate efficiently where the ~~Manual provides for independent notional benchmarks for the revenue and cost inputs in the calculation and the~~ calculation uses these benchmarks for the revenue and cost inputs.

~~34.42.~~ This is consistent with ~~the Act~~DIRA, which envisages the use of notional values, and involves the assumption of a notional milk processing and collecting business (the 'notional producer').

Interpretation of the ~~'contestability dimension'~~dimension

~~35.43.~~ Section 150A(2) outlines the ~~'contestability dimension'~~dimension as a function of whether any notional costs, revenues, or other assumptions taken into account in the calculation are ~~"practically feasible"~~"feasible" for an efficient processor.

~~36.44.~~ Our interpretation is that the contestability dimension is satisfied if:

~~36.144.1~~ ~~The~~the Manual provides for the assumptions used in setting the base milk price to be practically feasible for an efficient processor; and

~~36.244.2~~ ~~The~~the assumptions adopted, inputs and ~~processes~~process used in the calculation are practically feasible for an efficient processor.

~~45.~~ In our view 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.

What is practically feasible for an efficient processor?

~~37.46.~~ The terms 'practically feasible' and 'efficient processor' are not defined in ~~the~~ActDIRA.

~~38.47.~~ Our interpretation is that practical feasibility under s 150A goes further than theoretical feasibility and technical feasibility. Subject to the safe harbours in s 150B and the mandatory requirements in s 150C, practical feasibility includes commercial feasibility in the sense that it must be possible for an efficient processor operating in New Zealand to replicate or achieve the component being assessed.

~~39.48.~~ In our view, there is clear evidence that a notional cost, revenue, or other assumption is commercially feasible if it can be demonstrated that an existing plant, or processor, can achieve the revenue, cost, or other assumption (eg, the unit costs achieved at one existing plant, or the gross values achieved in a part of Fonterra's current business).

~~40.49.~~ Our interpretation of the term 'efficient processor' is that it is a processor that ~~is able to~~can operate at least cost over time. This is consistent with our view that the primary focus of the efficiency dimension is on improving incentives for Fonterra to drive cost efficiencies over time.³¹

~~41.50.~~ We consider a new entrant or existing processor expanding in the New Zealand farm gate milk market is more likely to achieve a lower cost of operation over time. This is because a newly built plant would be able to take advantage of the latest technology. This 'incremental' plant could be built at a capacity to take the best possible advantage of cost efficiencies in activities such as the collection and processing of milk.

~~42.51.~~ Our interpretation of the term ~~efficient processor~~efficient processor is not limited to the existing processors, as other potential entrants exist and may enter the market for the purchase of milk from farmers. Under ~~the Act~~DIRA, it does not matter whether existing independent processors can necessarily achieve that efficiency in practice or not. ~~As long as~~if Fonterra or some other potential entrant can achieve that level of efficiency, then that ensures that the base milk price reflects a practically feasible level, and would provide a normal return on the incremental investment.

~~43.52.~~ We therefore consider the base milk price setting is consistent with the contestability dimension if the assumptions adopted, and inputs and ~~processes~~process used are practically feasible for Fonterra, or another processor, that is efficiently building an incremental plant.

'Safe harbours' – s 150B

~~44.53.~~ Section 150B lists certain assumptions that, if used in the Manual or the calculation, ~~are do~~not considered to detract from the achievement of the purpose set out in s 150A. We interpret s 150B as being intended to create 'safe harbours', where

³¹ ie, productive, and dynamic efficiency.

Fonterra can use these assumptions without affecting the conclusions of our reviews.³²

54. We note that while the use of the safe harbour provisions by Fonterra is discretionary, s 150B provides a conclusive presumption that the assumptions it contains do not detract from the purpose set out in s 150A (including the contestability purpose).

‘Mandatory assumptions’ – s 150C

~~45.55. In order to~~To achieve the purpose of s 150A, s 150C requires the base milk price to be set in a way that is consistent with certain principles. In particular, the revenues and costs (including capital costs and a return on capital) taken into account in calculating the base milk price must be determined from the prices of a portfolio of ‘Reference Commodity Products’ (RCPs). A "commodity" is defined in s 5 of DIRA as:

a product made by the processing of milk that is—

(a) traded in significant quantities in globally contested markets; and

(b) characterised by uniform technical specifications.

~~46.56. This portfolio of commodities is referred to in s 150C-(2) of the Act. It).~~ Section 150C(2) requires the base milk price to include the commodities that are likely to be the most profitable over a period not exceeding 5 years and for the commodities to utilise all components of the milk. The setting of the base milk price must include the costs of processing milk into the same portfolio of RCPs.

57. Section 150C(3) requires any estimate of the return on capital to be made by applying the capital asset pricing model. In turn, the asset beta used in the application of the capital asset pricing model must be consistent with the estimated asset betas of other processors of dairy and other food products that are:³³

57.1 traded in significant quantities in globally contested markets; and

³² ~~We note Miraka's submission that the safe harbour provisions are discretionary and that Fonterra is permitted, but not required to rely on them to meet the purpose of subpart 5A. We also note Miraka's submission that reliance on the safe harbour provisions does not make the Notional Producer practically feasible. Miraka "Submission to the Commerce Commission Draft Report (1 August 2016): Review of Fonterra's 2015/16 base milk price calculation" (1 September 2016). In this regard, we agree that the safe harbour provisions are discretionary, but note that s150B provides a conclusive presumption that the assumptions it contains do not detract from the purpose set out in section 150A (including the contestability purpose).~~

³³ 'Asset beta' is defined in s 150C(5) as "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."

57.2 characterised by uniform technical specifications.

Interpretation of assumptions, inputs, and process for the calculation review

~~47.58.~~ We interpret the terms “assumptions adopted, and the inputs and process used” to have the following meaning:³⁴

~~47.158.1~~ assumptions: the underlying rationale as to why certain inputs and process were selected (ie, ‘the why’);

~~47.258.2~~ inputs: what data or description of data sources are used to populate the calculation (ie, ‘the what’); and

~~47.358.3~~ process: how inputs are being transformed into the components of the calculation (ie, ‘the how’).

Our review and report requirements

The Manual review requirements

~~48.59.~~ We have a statutory requirement to review the Manual for each dairy season.³⁵

~~49.60.~~ ~~The Act~~DIRA requires us to ~~then~~ publish a report on the extent to which the Manual for each dairy season is consistent with the s 150A purpose.³⁶ In providing our report, we must consider the following information provided by Fonterra:

~~49.160.1~~ the Manual;

~~49.260.2~~ Fonterra’s ‘reasons’ paper outlining its view on the extent of the consistency of the Manual with the s 150A purpose; and

~~49.360.3~~ Fonterra’s submission on our draft report (if provided).

~~50.61.~~ ~~The Act~~DIRA requires us to provide the draft report and consult with Fonterra on ~~our~~the draft report unless another procedure is agreed between us and Fonterra.³⁷

The calculation review requirements

~~51.62.~~ We have a statutory requirement to review the calculation for each dairy season.³⁸

³⁴ ~~DIRA, s 150P.~~

³⁵ ~~SDIRA, s 150H-of the Act.~~

³⁶ ~~SDIRA, ss 150I and s-150J-of the Act.~~

³⁷ ~~SDIRA, ss 150K and 150M-of the Act.~~

³⁸ ~~SDIRA, s 150O-of the Act.~~

~~52.63.~~ ~~The Act~~DIRA requires us to ~~then~~ publish a report on the extent to which the assumptions adopted and the inputs and process used by Fonterra in calculating the base milk price for the season are consistent with the s 150A purpose.³⁹ In providing our report we must consider the following information provided by Fonterra:

~~52.163.1~~ Fonterra's 'reasons' paper outlining its view on the extent of the consistency of the calculation with the s 150A purpose; and

~~52.263.2~~ Fonterra's submission on our draft report (if provided).

~~53.64.~~ ~~The Act~~DIRA requires us to provide ~~and consult with Fonterra on our~~ draft report ~~to Fonterra and Fonterra must either make a submission on the draft report or notify us that it does not wish to make a submission on the draft report,~~ unless another procedure is agreed between us and Fonterra.⁴⁰

Our interpretation of our review roles

~~54.65.~~ Our review roles under ~~the Act~~DIRA are intended to support the setting of a base milk price by Fonterra that provides incentives for Fonterra to operate efficiently while also providing for contestability. As stated in paragraphs ~~1235~~ and ~~1336~~ above we consider both ~~of these~~ interlinked dimensions when carrying out our reviews.

~~55.66.~~ When reviewing the Manual, our role is not to determine how the base milk price should be calculated ourselves. Similarly, when reviewing Fonterra's calculation our role is not to determine the assumptions, inputs, and ~~processes~~process of the calculation ourselves, but to review those ~~set~~used by Fonterra.

~~56.67.~~ ~~In order to~~To conclude on the extent to which the components of the calculation are consistent with the efficiency and contestability purposes of s 150A our review role may require us to consider what component values would meet those purposes. However, our role does not include developing an alternative approach to calculating the base milk price or suggesting alternative components of the calculation that we think would better promote the efficiency and contestability purposes under s 150A. Further, in making our report on the calculation, we are not required to calculate the costs of an independent processor and must not state what we consider the base milk price should be.⁴¹

~~68.~~ As stated by the High Court in *Open Country Dairy Ltd v Commerce Commission*:⁴²

³⁹ ~~SDIRA, ss 150P and s-150Q of the Act.~~

⁴⁰ ~~SDIRA, ss 150S and s-150U of the Act.~~

⁴¹ ~~SDIRA, s 150P(3) of the Act.~~

⁴² *Open Country Dairy Ltd v Commerce Commission* [2020] NZHC 334 at [13]-[14].

The Commission's role does not extend to developing an alternative approach to calculating the base milk price nor to suggesting alternative components for the calculation that it might consider better promotes the efficiency and contestability purpose under the DIRA.

Moreover, in making its report on the calculation the Commission is not required to calculate the costs of an independent processor and it is expressly prohibited from stating what it considers the base milk price should be.

57-69. Our reviews are also constrained by the safe harbours under s 150B, the mandatory principles under s 150C, and the test for contestability set by s 150A(12).⁴³

58-70. Our review roles under subpart 5A of ~~the Act~~ DIRA are therefore not the same as our roles under those regulatory regimes where we are the primary regulatory decision-maker (for example under Part 4 of the Commerce Act 1986 and under the Telecommunications Act 2001) ~~and~~. Under these other regimes, we are specifically required (and have the express power) to make determinations that give effect to the objects of those enactments.

⁴³ SSection 150A(2) ~~of the Act~~ states that "the setting of a base milk price provides for contestability in the market for the purchase of milk from farmers if any notional costs, revenues, or other assumptions taken into account in calculating the base milk price are practically feasible for an efficient processor".

Chapter 4 Our practical approach to the statutory reviews

Purpose of this chapter

~~59-71.~~ This chapter describes our analytical and practical approach to carrying out the statutory reviews.

~~60-72.~~ We cover our analytical approach to each dimension, followed by our practical approach to both the Manual review and the calculation review.

Our analytical approach to the efficiency dimension

~~61-73.~~ There are many factors which can, and do, incentivise Fonterra to operate efficiently. Improvements in efficiency end up being passed through to a higher base milk price or to a higher Fonterra dividend.⁴⁴

~~62-74.~~ Our reviews are concerned with ~~whether~~the extent to which the Manual and the calculation are consistent with promoting the setting of a base milk price that incentivises Fonterra to operate efficiently. We focus on:

~~62-174.1~~ _____ the use of notional inputs in the calculation of the base milk price; and

~~62-274.2~~ _____ instances when it may be reasonable to use actual data in setting the base milk price.

The use of notional inputs in the base milk price

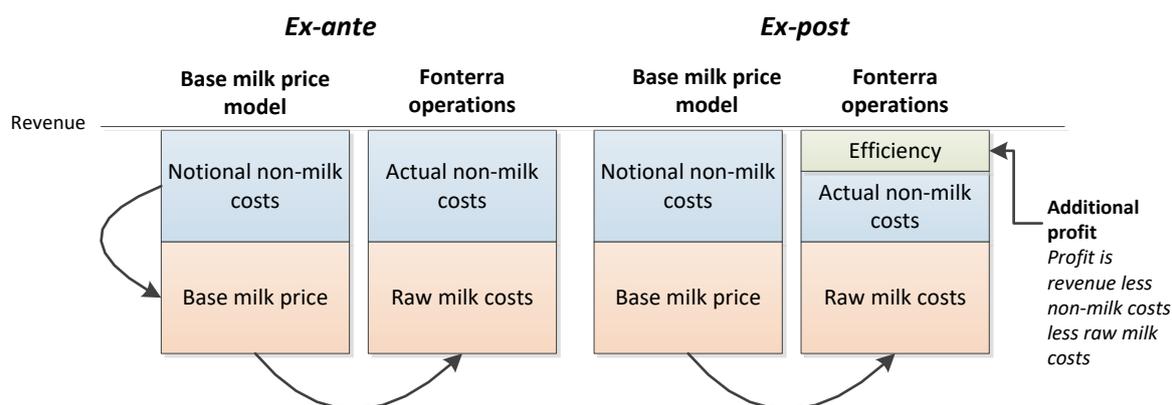
~~63-75.~~ Our view is that Fonterra has a stronger incentive to operate efficiently when the base milk price is set independently of Fonterra's actual performance.⁴⁵

~~64-76.~~ The efficiency incentive ~~effects~~affects Fonterra's profitability. This is because the price of milk is Fonterra's largest cost driver. For a given level of revenue, any improvements in actual cost efficiency relative to the notional values used in setting the base milk price will result in higher profits. There is no unique price that needs to be ascertained to provide incentives for Fonterra to improve its efficiency. Figure ~~34~~34.1 illustrates how the use of notional data to set the base milk price can lead to higher profits.

⁴⁴ ie, through Fonterra earning greater profit.

⁴⁵ ie, the calculation uses notional data.

Figure 4.1 Efficiency incentive effect on Fonterra's profitability



[65-77.](#) Using notional data provides Fonterra with a benchmark to beat.⁴⁶ This increases transparency to shareholders about whether the extent to which Fonterra is achieving efficiency gains relative to the alternative of using data on Fonterra's actual performance to set the base milk price.

[66-78.](#) In some cases, the notional data used in setting the base milk price is based on Fonterra's actual data in a previous year or years. Therefore, efficiency savings achieved in one year (which result in a reduction in actual costs) may lead to a higher base milk price in a later year.

[67-79.](#) ~~Subpart 5A of the Act~~ This approach is consistent with ~~this approach~~ Subpart 5A of DIRA. It envisages the use of notional values and the assumption of a notional milk processing and collecting business (the 'notional producer').

Instances when it may be reasonable to use actual data in setting the base milk price

[68-80.](#) There are instances where it may be reasonable to use actual data in setting the base milk price, for example:

[68-180.1](#) 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

[68-280.2](#) Fonterra has very limited control over the actual costs.

[69-81.](#) Where actual data has been used to set the base milk price, we explore whether notional data could reasonably have been used instead. We assess whether the use of this data may distort or weaken Fonterra's incentives to operate efficiently. For

⁴⁶ Ideally the benchmark should be stable over time ~~in order~~ to provide an incentive to operate efficiently over time and to provide transparency to shareholders on efficiency gains achieved.

example, whether it provides Fonterra with an opportunity to earn higher profits without achieving efficiencies.⁴⁷

Fonterra has incentives to improve efficiency to maximise profits

~~70.82.~~ We consider that Fonterra has an incentive to maximise its overall payments to farmers and to shareholders, including unitholders in the publicly listed Fonterra Shareholders' Fund, (FSF), which was created in 2012 as part of ~~Trading Amongst Farmers (TAF)~~.⁴⁸ Improvements in efficiency may be passed through into a higher base milk price ~~or a~~ benefitting farmer-shareholders or result in higher dividend (ie, profit) profits for Fonterra potentially benefiting outside investors in FSF through higher dividends.⁴⁹

~~71.83.~~ We consider Fonterra's management has an incentive to maximise profits (which benefits both farmers and shareholders, including unit holders in the publicly listed ~~Fonterra Shareholders Fund~~ FSF).⁵⁰ This incentive is reinforced by the transparency associated with the listing on the stock exchange of the non-voting units, and the importance to Fonterra of ensuring that its TAF regime works.⁵¹

Our analytical approach to the contestability dimension

~~72.84.~~ ~~Section~~ As explained in chapter 3, s 150A(2) of the Act sets out the approach to assessing the contestability dimension:

~~S 150A(2)~~

~~(1) For the purposes of this subpart, the setting of the base milk price provides for contestability in the market for the purchase of milk from farmers if any notional costs, revenue, or other assumptions taken into account in calculating the base milk price are practically feasible for an efficient processor.~~

⁴⁷ For example, through a combination of using actual and notional values in the base milk price calculation.

⁴⁸ This replaced the Fonterra share purchase and sale process, which involved the issuing and redemption of shares by Fonterra. More details about TAF can be found in para 94 of this document. See also paragraph 26 above.

⁴⁹ The use of the term 'profits' throughout this report refers to the difference between Fonterra's revenues and costs (including the cost of raw milk) and includes dividends paid to shareholders (including farmers and unit holders in the publicly listed FSF).

⁵⁰ The use of the term 'profits' throughout this report refers to the difference between Fonterra's revenues and costs (including the cost of raw milk) and includes dividends paid to shareholders (including farmers and unit holders in the publicly listed Fonterra Shareholders Fund). Under TAF, farmers buy and sell Fonterra shares among themselves, rather than directly with Fonterra.

⁵¹ As noted in footnote 18, in May 2021 Fonterra announced proposed changes to its capital structure that, if accepted, could remove the ability of outside investors to invest via the FSF. Such changes, if accepted, are likely to require an amendment to the TAF provisions under DIRA.

~~73.85.~~ For the Manual review, we consider ~~whether~~the extent to which any notional costs, revenues, or other assumptions ~~taken into account~~considered in the Manual are 'practically feasible' for an efficient processor.

~~74.86.~~ For the calculation review, we consider ~~whether~~the extent to which the assumptions adopted, and inputs and process used in the calculation are practically feasible for an efficient processor. If it is practically feasible for either Fonterra or another processor then it is consistent with the contestability dimension.

Our practical approach to the Manual review

~~75.87.~~ Our Manual review for each season builds on the conclusions from our previous reviews. In the Manual review we consider:

~~75.187.1~~ _____ Fonterra's amendments to the Manual for the dairy season;

~~75.287.2~~ _____ outstanding issues from previous Manual reviews;

~~75.387.3~~ _____ issues arising from our previous calculation review (including submissions), which relate to the Manual; and

~~75.487.4~~ _____ issues arising from submissions by interested parties during the Manual review.

~~76.88.~~ Our review groups issues by common themes and is particularly focused on the issues that are most likely to have a material impact on the calculation. Our approach involves:

~~76.188.1~~ _____ assessing the extent to which the Manual provides incentives for Fonterra to operate efficiently;

~~76.288.2~~ _____ assessing ~~whether~~the extent to which the Manual provides for the notional costs, revenues and other assumptions that are individually practically feasible for Fonterra; and

~~76.388.3~~ _____ performing cross-checks to ensure the Manual provides for the notional costs, revenues and other assumptions that are practically feasible in the aggregate.

~~89.~~ We rely on past conclusions for the provisions in respect of which:

~~89.1~~ _____ Fonterra has not made any amendments to the Manual for the season; and

~~77.89.2~~ there are no outstanding issues.

Assessing whether Fonterra's Manual assumptions are individually practically feasible

~~78-90. We examine whether~~Where the Manual provides for notional costs, revenues, and other assumptions ~~in the Manual that are to be~~ used in calculating the base milk price, we examine whether these are practically feasible for Fonterra. ~~We consider that this approach is appropriate because, more often than not, the Manual provides for the use of parameters that reflect Fonterra's 'average' plant rather than its most cost-efficient plant(s). An~~ to determine whether such notional costs, revenues or other assumptions would individually be practically feasible for an efficient processor ~~building an incremental plant should be able to achieve lower costs than this.~~

~~79-91. The~~This is because the Manual largely provides for the use of performance parameters~~inputs~~ that are based on the average across all relevant notional RCP plants used in the calculation, rather than on any single recently built Fonterra plant. This is consistent with assuming that there is a national network of facilities for the collection and processing of milk.⁵²

~~80. Also, the notional plants provided for in the Manual approximate the average capacity of Fonterra's actual plants.~~⁵³

~~92. The use of parameters that reflect Fonterra's actual 'average' plant capacity rather than its most cost-efficient plant(s) means an efficient processor building an incremental plant should be able to achieve lower costs than this.~~

Assessing whether the Manual provides for practically feasible assumptions in aggregate

~~81-93.~~ We also examine whether our assessment is affected by unique features which are not subject to 'safe harbour' provisions. For example, we consider whether the Manual provides for assumptions that are individually practically feasible for Fonterra due to features unique to Fonterra, and which do not relate to Fonterra acting efficiently. In that case, any such notional costs, revenues, or other assumptions may not be practically feasible for another efficient processor.⁵⁴ therefore the assumptions in aggregate may not be practically feasible for another efficient processor.⁵⁵

⁵² Consistent with the safe harbour provision in s 150B(a)~~of the Act.~~

⁵³ Consistent with the safe harbour provision in s 150B(b) of the Act.

⁵⁴ There are no features specific to Fonterra that have a material impact on our conclusions. Ocean outfall which impacts effluent costs is an example of this. For more details see "Final Report Review of Fonterra's 2012-13 base milk price calculation" 16 September 2013, para M12, p. 104.

⁵⁵ For example, Ocean outfall which impacts effluent disposal costs provides a useful illustration of features that are not subject to safe harbour provisions and which may not be practically feasible for another efficient processor.

~~82.94.~~ We also consider:

~~82.194.1~~ the internal consistency of provisions in the Manual; and

~~82.294.2~~ the overall impact of any assumptions in the Manual which may not be individually practically feasible or that we are unable to conclude on in our review.⁵⁶

Assessing components under the safe harbour provisions

~~83.95.~~ Where revenue or cost components of the calculation apply the ‘safe harbour’ provisions of s 150B they are excluded from our assessment against the s150A purpose.

~~84.96.~~ Our analysis of these components is limited to verifying whether ~~their~~the methodology is consistent with the ‘safe harbour’ provisions in s 150B.

Assessing mandatory assumptions with the Manual

~~85.97.~~ Our Manual review involves examining whether the assumptions in the Manual are consistent with the principles outlined in s 150C ~~of the Act.~~

~~98.~~ We may not be able to conclude on the extent to which some aspects of the Manual are consistent with the s 150A purpose.

~~86.99.~~ ~~We~~As the Manual's rules are not always prescriptive, we may not be able to conclude on the efficiency and contestability dimensions of all notional costs, revenues, and assumptions referenced in the Manual. If so, we will, to the extent possible, assess them during our review of the calculation in the season that the Manual relates to.

Our practical approach to the calculation review

~~87.100.~~ Our review of the calculation builds on the conclusions from our previous reviews. In each calculation review we consider:

~~87.1100.1~~ outstanding issues from our previous calculation and Manual review(s);

~~87.2100.2~~ issues arising from submissions made by interested parties;

⁵⁶ We refer to the methodology in the ~~manual~~Manual as the notional assumptions. In some cases we may not be able to conclude on the practical feasibility of the notional assumptions until we see how they are actually applied in the base milk price calculation.

~~87.3~~100.3 Fonterra’s review of assumptions and components in its Manual;⁵⁷

~~87.4~~100.4 Fonterra’s amendments to the current season’s Manual;

~~87.5~~100.5 any amendments to Fonterra’s approach to calculating the components that do not require a Manual amendment;

~~87.6~~100.6 sensitivity of ~~components to the~~ base milk price to changes in components; and

~~87.7~~100.7 any adjustments made to the base milk price by Fonterra.⁵⁸

~~88.~~101. Based on the information we gather, we determine the key areas to focus on for each calculation review.

~~89.~~102. For the ~~other~~ revenue and cost components that are not part of the ~~more-detailed analysis~~ key areas that we focus on, we undertake a ‘fit for purpose’ review, which involves:

~~89.1~~102.1 ~~an analytical verification~~ a review of the consistency of input values ~~used in the component and assumptions~~ against ~~our previous reviews of those previously used for~~ the same component; and

~~89.2~~102.2 a review of the internal consistency of the assumptions, and inputs ~~and processes related to the~~ between different components.

102.3 a review of any structural changes to Fonterra’s base milk price reporting model.⁵⁹

~~90.~~103. If any aspect of this ‘fit for purpose’ review identifies ~~inconsistencies with material changes from~~ our previous analysis ~~or other components~~ of the base milk price ~~calculation reporting~~ model, we will consider whether more analysis of that component is required.⁶⁰

⁵⁷ The summary calculation of the base milk price is broken down into various revenue and cost components. The Manual requires Fonterra to review certain assumptions and revenue and cost components every four years (or when the ~~Milk Price~~ Panel chooses to complete a review).

⁵⁸ See discussion in paragraphs 118-122.

⁵⁹ ~~We are provided with the full model, its underlying models and documentation for the purposes of our review. The public version of Fonterra’s milk price reporting model is available at Fonterra’s website.~~

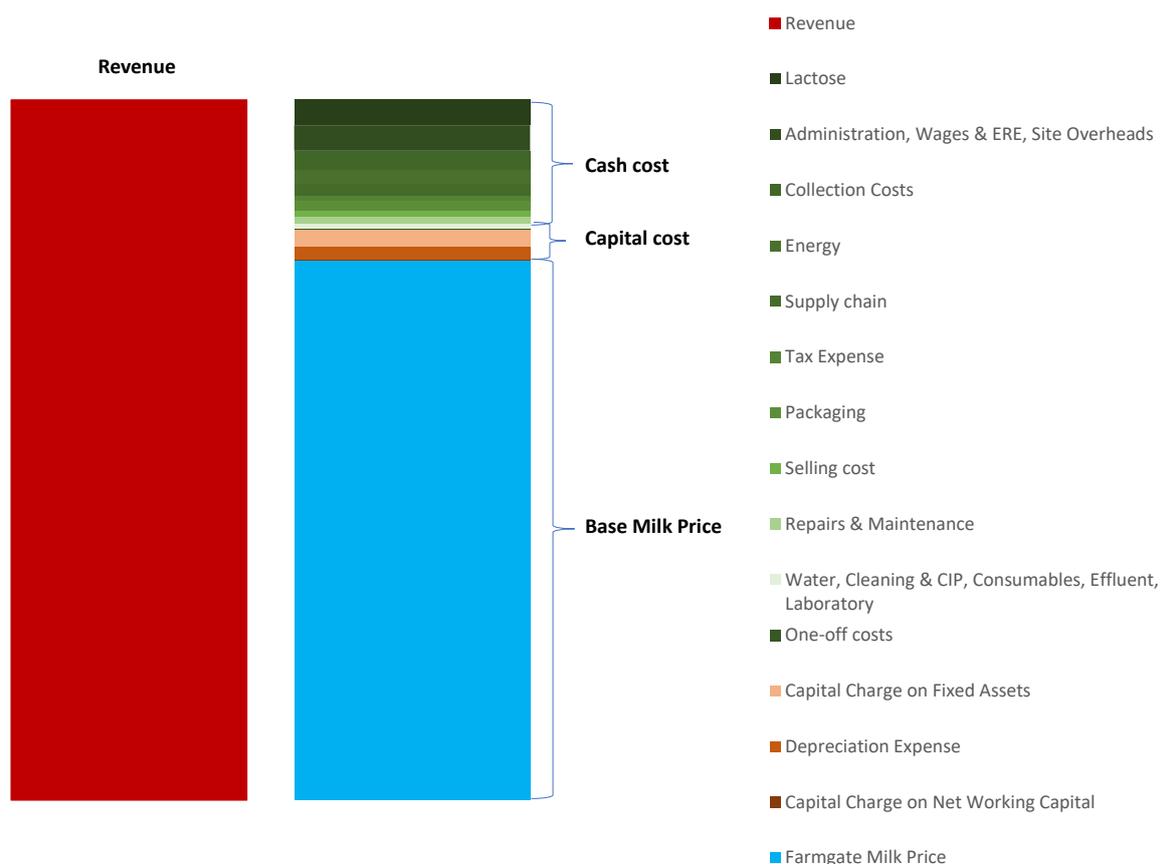
⁶⁰ ~~We are provided with the full model, its underlying models and documentation for purposes of our review. The public version of Fonterra’s milk price model is available at Fonterra’s website. We expect Fonterra to update this annually. “Milk Price Methodology: Milk Price Statements” (2014/15)~~

~~91.104.~~ Figure ~~34.2~~ shows the relative size of each component of the base milk price calculation, based on ~~2014/15 figures.~~⁶⁴ data from the 2019-2020 season. The relative size of each cash and capital costs component is relatively stable over time.

~~<<http://www2.fonterra.com/our-financials/milk-price-methodology>> (Viewed on 5 May 2016).~~ For the purposes of identifying changes which might become focus areas we apply an 'indicative operational' materiality of an equivalent of 0.5% of the WACC used in the milk price reporting model for the season under review.

⁶⁴ ~~The relative size of each cash and capital costs is relatively stable over time.~~

Figure 4.2 Relative size of components of the base milk price



Assessing components under the safe harbour provisions

~~92-105.~~ Like the ~~manual~~ Manual review, we exclude ~~components~~ assumptions and inputs which apply ~~the~~ 'safe harbour' provision from assessment against the s 150A purpose.

~~93-106.~~ Our analysis of these ~~components~~ assumptions and inputs is limited to verifying whether their calculation is consistent with the 'safe harbour' provisions in s 150B.

Assessing mandatory assumptions with the calculation

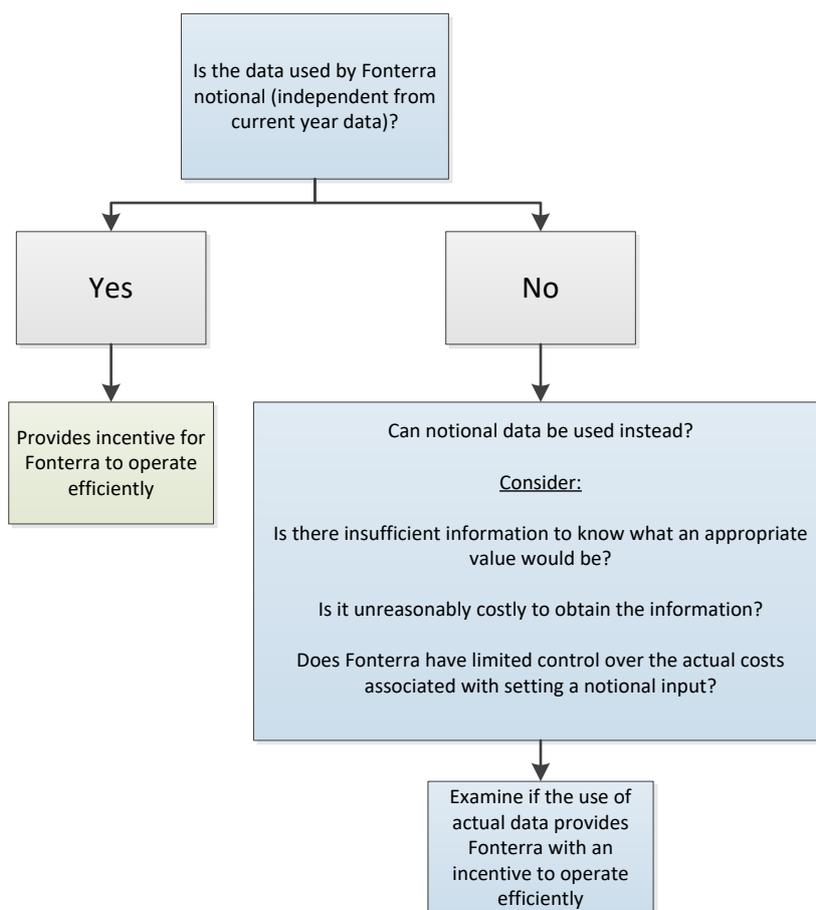
~~94-107.~~ Our calculation review involves examining whether the calculation of the milk price is consistent with the ~~principles~~ mandatory assumptions outlined in s 150C ~~of the Act.~~

Assessing the efficiency dimension

~~108.~~ The way we apply our analytical approach for testing the efficiency dimension of the different ~~components~~ assumptions, inputs and process is outlined in ~~Figure 3.3~~ Figure 4.3.

~~95.~~

Figure 4.3 Process for assessing the efficiency dimension



Assessing the contestability dimension

96.109. Our approach to assessing the contestability dimension involves:

96.1109.1 assessing whether the extent to which the assumptions adopted, inputs and ~~processes~~ process are individually practically feasible for Fonterra or an efficient processor; and

96.2109.2 performing cross-checks to ensure the assumptions adopted, inputs and ~~processes~~ process are practically feasible in aggregate. This involves analysing whether the extent to which the assumptions, inputs and ~~processes~~ in process are consistent between the various cost components and are also consistent between the revenue and cost components ~~are consistent with each other~~.⁶²

⁶² For example, the assumed production yields and site costs should be achievable based on consistent with the ~~number of sites, different types of sites and location~~ plant capacity and capital costs assumed in the model.

~~97.110.~~ ~~Our calculation We~~ review starts by deconstructing the base milk price into the line-item breakdown of components to which incorporate the assumptions ~~adopted, and the~~ inputs and ~~processes used~~ process adopted by Fonterra ~~relate~~.⁶³

~~98.111.~~ We ~~then~~ assess whether the individual assumptions, inputs and ~~processes~~ process relating to the different components are practically feasible for an efficient processor (building an incremental plant). This involves examining, wherever possible, whether the assumptions, inputs and ~~processes~~ process reflect activities and achievable levels of performance based on evidence provided by Fonterra.

112. For the majority of the data ~~that we have available to us~~, we can examine whether the assumptions adopted, and inputs and process used to calculate the base milk price are practically feasible for Fonterra.

~~99.113.~~ This approach is appropriate because, ~~more often than not~~ by and large, the data used reflects the costs of Fonterra's 'average' plant rather than its most cost-efficient plant(s). Therefore, an efficient processor (building an incremental plant) should be able to achieve lower costs.

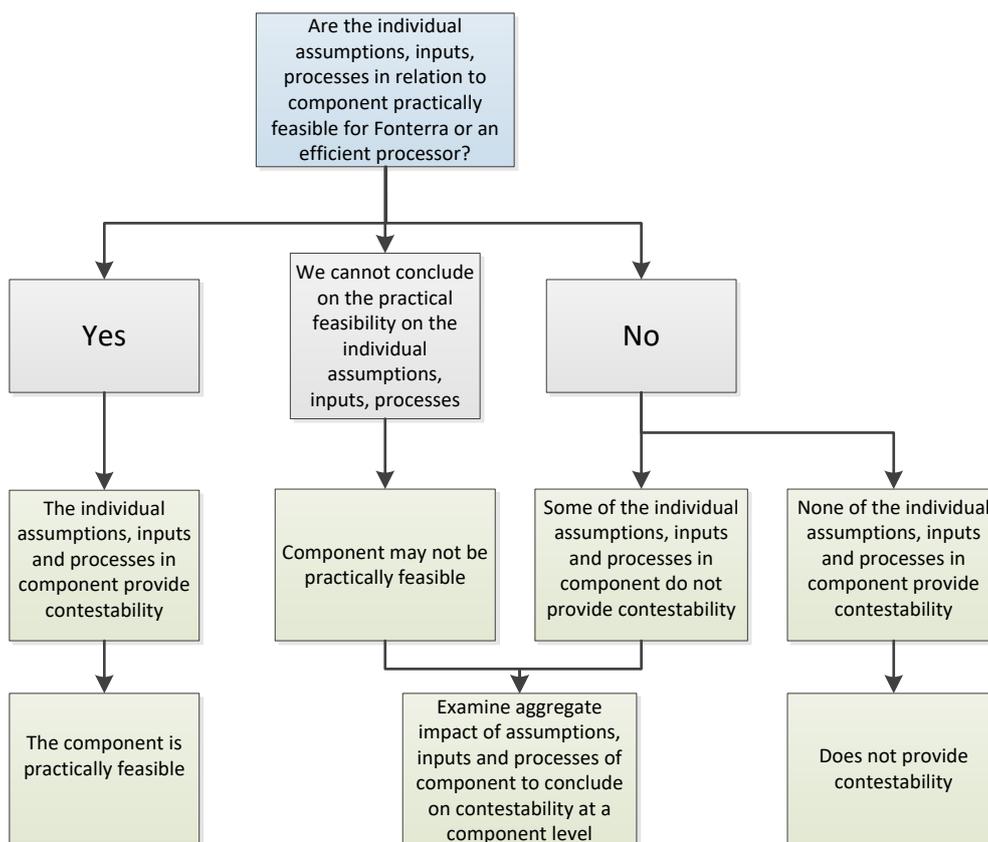
~~100.114.~~ Where we are unable to conclude that Fonterra's notional average values are practically feasible or where average data has not been used, ~~we rely on data from Fonterra's specific recently built plants. In these circumstances then~~, if some part of Fonterra's business (such as a specific plant), is able to achieve those costs,⁶⁴ an efficient processor (building an efficient incremental plant) should also be able to achieve them.

~~101.115.~~ Our process for assessing the contestability dimension is outlined in Figure 34.4.

⁶³ The ~~deconstruction~~ breakdown of the base milk price into line-item components can be found in ~~figure 3.2~~ Figure 4.2 and Fonterra's seasonal Reasons Paper in support of its base milk price calculation.

⁶⁴ Subject to the safe harbour provisions, ~~s150B DIRA 2001~~ in s 150B.

Figure 4.4 Process for assessing the contestability dimension



102.—To reach our conclusion on the practical feasibility of the individual components assumptions, inputs, and process, as a cross-check we consider whether the assumptions, inputs and processes process are practically feasible for Fonterra due to features unique to Fonterra, (which do not relate to Fonterra acting efficiently). In that case, the assumptions, inputs, and processes process may not be practically feasible for another efficient processor.

103.116._____ We acknowledge there is a potential risk that the individual assumptions, inputs, and processes process may not collectively be practically feasible. We undertake the following cross-checks:

103.116.1_____ checking the assumptions, inputs and processes process used to determine the base milk price are internally consistent with each other;

~~103.2~~116.2 whether the combined assumptions adopted, inputs and process used are practically feasible;⁶⁵ and

~~103.3~~116.3 checking the overall impact on the base milk price of the assumptions, inputs and ~~processes~~process which are not individually practically feasible or that we are unable to conclude on.⁶⁶

~~Cross-check~~Consistency of ~~the~~ calculation with the Manual

~~104.117.~~ We also~~Before assessing the contestability dimension we~~ perform a ~~cross-~~check on whether the calculation is consistent with the provisions set out in the Manual.

Our practical approach to the calculation review if Fonterra makes an adjustment to the base milk price

~~105.118.~~ The Fonterra Board sets the base milk price for each dairy season based on the recommendations of the ~~Milk Price~~ Panel ~~(Panel)~~.⁶⁷ It is expected that the Panel will recommend the setting of the base milk price equal to the milk price set in accordance with the Manual.⁶⁸

~~106.119.~~ However, if Fonterra does not set the base milk price in accordance with ~~the Manual (as recommended a recommendation~~ by the Panel~~), or without having received a recommendation from the Panel~~, it is required to ~~publicly~~ make a public statement about its reasons for doing so.⁶⁹

~~107.120.~~ If Fonterra ~~adjusts~~does not set the base milk price in accordance with the Panel recommendation, our calculation review includes an analysis of the way the adjustment amount is determined. This also enables us to conclude on ~~whether the extent to which~~ applying an adjustment to the base milk price set by the ~~manual~~Manual is consistent with the efficiency and contestability dimensions.⁷⁰ in s 150A.

⁶⁵ Recognising the extent to which ~~the Act~~DIRA allows Fonterra to use certain assumptions and the assumptions Fonterra must use in calculating the base milk price (ie, the safe harbour and mandatory assumptions).

⁶⁶ ~~I.e. for example if~~ the overall impact of ~~the base milk calculations~~such an assumption was small, we would conclude that the assumption relating to that component ~~is~~was not practically feasible but that the impact was small.

⁶⁷ The Milk Price Panel was established under s 150D ~~of the Act.~~

⁶⁸ Chapter 42 outlines how Fonterra sets the base milk price and Attachment B contains more information about Fonterra's governance surrounding the setting of the base milk price.

⁶⁹ SDIRA, s 150N ~~of the Act.~~

⁷⁰ ~~Efficiency and contestability dimensions outlined in s 150A purpose statement of the Act.~~

121. Along with the assessment of the adjusted price, we still complete our assessment of the base milk price calculated under the ~~manual~~Manual. This involves assessing the extent to which Fonterra's assumptions adopted, and inputs and ~~processes~~process used in calculating the base milk price are consistent with the efficiency and contestability dimensions.⁷¹

122. If Fonterra changes the base milk price after we have published our final report on the base milk price calculation, Fonterra is required to publish the new base milk price and its reasons for changing the base milk price without delay.⁷²

⁷¹ The extent of analysis is dependent on the size of the adjustment. Documenting our component analysis ~~help~~helps in undertaking our next calculation review and provides ~~interested parties with~~ an ongoing trend assessment.⁷²

⁷² DIRA, s 150R.

Attachment A The notional producer and its key assumptions

Purpose of this attachment

A1 This attachment provides a description of the notional producer by outlining the following:

A1.1 ~~The~~the notional producer concept; and

A1.2 ~~Key~~key assumptions ~~of~~relating to the notional producer.

The notional producer concept

A2 Fonterra calculates the base milk price by using a notional construct that we call ‘the notional producer’.

A3 The aim is to use this notional construct to set an efficient milk price (ie, a milk price that is derived by Fonterra or another efficient processor producing only commodity dairy products).

~~A4~~—The notional producer has the same total site footprint as Fonterra’s manufacturing site footprint but only produces Fonterra’s five most profitable commodity products.

~~A5~~A4 The notional producer uses actual Fonterra data to reflect some of its revenue and cost components, such as Fonterra’s actual revenues for certain commodities sold on its ~~global dairy trade~~Global Dairy Trade (GDT) auction platform, off-GDT revenues, and ~~Fonterra’s~~the foreign exchange rates that have produced Fonterra’s gains and losses.⁷³

A5 This is distinct from an efficient processor as referred to in DIRA, which could be an entrant building a single plant.

A6 The key assumptions made in determining the revenue and costs associated with the notional producer are set out in Table A1.

⁷³ GDT is owned by Fonterra but is operationally separate. It operates an online global dairy auction platform and as such provides a transparent reference price for dairy ingredients. See www.globaldairytrade.info.

Table A1 Key assumptions made for the Notional Producer

Assumption	Details
Commodity business	Standard dairy commodity manufacturer that produces: <ul style="list-style-type: none"> • whole milk powder (WMP) • skim milk powder (SMP) its by-products: <ul style="list-style-type: none"> • butter • anhydrous milk fat (AMF) • buttermilk powder (BMP). Collectively these are known as the RCPs. ⁷⁴
Milk Collection	Collects and uses the same amount of milk as Fonterra each season. The notional producer also uses the same milk composition.
Production and export	All products <u>are</u> produced in New Zealand, and all <u>are</u> exported.
Site footprint	Site footprint is the same as Fonterra's commodity processing site footprint. ⁷⁵
Sales channel	Sells products through GDT and off-GDT sales channels. ⁷⁶
Pricing	Prices achieved are aligned to Fonterra's prices achieved for the reference commodity products. ⁷⁷
Conversion rate	Sales revenue converted to NZD at the same <u>foreign currency</u> conversion rates as achieved by Fonterra.
Lactose	Lactose for standardising milk powders <u>is</u> imported.
Company structure	Like Fonterra, the notional producer is assumed to be a co-operative.
Capital charge	Uses a 'spread back' asset approach, which results in capital charges in both the initial year <u>of installation</u> and in subsequent years which are independent of the year in which the notional producer's assets were assumed to have been installed.

⁷⁴ ~~Section 150C of the Act~~ requires Fonterra in setting the base milk price to include the commodities that are likely to be the most profitable over a period not exceeding 5 years and for the commodities to utilise all components of the milk. It should be noted that there are separate commodities within each Reference Commodity Product category as sellers provide technical specifications at this 'sub-Reference Commodity Product' level, and not at the Reference Commodity Product level. See Commerce Commission "Review of Fonterra's 2019/20 base milk price calculation: Dairy Industry Restructuring Act 2001" (15 September 2020) paragraph 2.21.

⁷⁵ This means that collection costs to primary sites (with WMP and SMP plants) are aligned to Fonterra's collection costs to primary sites.

⁷⁶ ~~Previous assumption was that~~ We previously assumed the notional producer sells 90% of its products on the GDT and the remaining 10% sold to government procurement agencies. Fonterra amended its Manual for the 2016/17 season to include Fonterra off-GDT sales as a reference to calculate WMP, SMP and AMF prices.

⁷⁷ Prices are derived from Fonterra's GDT and off-GDT prices. ~~The Manual~~ allows Fonterra to use prices derived from Fonterra's off-GDT sales.

A7 Table A2 outlines the plant and site assumptions of the notional producer.

Table A2 Notional producer plant and site assumptions

Plant and site assumption	Details
Site size	Three site sizes: Small: 1 plant; Medium: 2 plants; and Large: 3 or more plants.
Unstandardised products	If there is a shortage in plant capacity within an island to process milk, plants process unstandardised milk powders to create additional capacity <u>in the event of excess milk volumes</u> . ⁷⁸ Unstandardised products are assumed to be sold at <u>the equivalent</u> standardised <u>product</u> prices achieved by Fonterra.
Processing capacity	Processing capacity assumed in <u>on</u> an island basis (North <u>North</u> and South Island <u>South Island</u>); Total processing capacity by site is materially aligned to Fonterra's capacity.
Specification of product	Plants producing <u>Each plants produces</u> one <u>or more specifications of products per standard</u> specification of product per commodity product: <ul style="list-style-type: none"> • WMP: Regular – NZ; • SMP: Medium Heat – NZ; • Butter: Unsalted – NZ; • AMF: Premium 210kg drum – NZ; and • BMP: UHT – NZ.
Technology	All plants operate at a level consistent with modern efficient technology.
Replacement of manufacturing plants	All <u>Each</u> manufacturing plants are <u>plant is</u> replaced in full at the end of a weighted average effective life of 31 years.

⁷⁸ These unstandardised milk powders contain extra protein.

Attachment B Governance supporting the base milk price calculation

Purpose of this attachment

B1 This attachment outlines the governance surroundings supporting the calculation of the base milk price. ~~The governance structure is made up of internal and external bodies and processes which aim to satisfy the integrity of the calculation.~~

Base Fonterra's base milk price calculation governance and assurance processes

B2 The Panel and base milk price ~~methodology is calculation are~~ supported by governance and assurance mechanisms provided by both internal and external parties. Fonterra's governance structure and processes are described in detail in its Reasons Papers supporting the base milk price calculation and its annual Farmgate Milk Price Statements.⁷⁹

B3 These mechanisms are intended to ~~satisfy~~ ensure:

B3.1 ~~the integrity of the data, methodology, extracted from Fonterra's systems and used in the calculation of the base milk price;~~

B3.2 ~~the integrity of the calculation methodology (for example, that the financial models used to calculate the base milk price are arithmetically correct, and that they contain the correct inputs);~~

B3.3 ~~the consistency of the calculation, and methodology with the rules set out in the Manual;⁸⁰ and~~

~~B2~~B3.4 ~~the consistency of changes to the Milk Price Manual. Manual, and of the application of the Manual, to the Milk Price Principles, as set out in Fonterra's constitution and in section 2 of Part A of the Manual.⁸¹~~

~~B3~~ ~~Although our reviews are for a statutory function and do not perform an audit, assurance or decision-making function in respect of the base milk price, they contribute to the overall package of governance functions.~~

⁷⁹ The Reasons Paper incorporates Fonterra's reasons for its certified view on the extent to which the assumptions adopted and the inputs and process used in calculating the proposed base milk price are consistent with the purpose in s 150A.

⁸⁰ Any changes to the Manual take effect in the calculation for the same season. For example, changes to the 2020/2021 Manual must be applied in the milk price for the 2020/2021 season.

⁸¹ Fonterra "Reasons Paper in Support of Fonterra's Base Milk Price for the 2019/20 Season", (1 July 2020), page 5.

B4 The bodies which support the integrity of the base milk price calculation are outlined in ~~Table B1 and Table B2 below~~. Table B1 and Table B2 below.

Table B1 Outline of milk price calculation internal reviews

Internal Parties	
<p>Board of Directors</p> <p>The Board of Directors are is accountable for overall setting of the Milk Price <u>base milk price</u>, any adjustments and making it publically <u>publicly</u> available, including reasons for setting a price different to what has been recommended by the Milk Price Panel.</p>	<p>Internal Audit Team</p> <p>Fonterra's internal audit team provides assurance over the integrity of data sourced from Fonterra's systems, including with respect to the controls maintained to ensure ongoing data integrity.</p> <p>This team assesses the operational effectiveness of controls over source input data to the Milk Price Model. The internal audit also focuses on the risks and controls work completed from the external auditors' Controls Review.</p>
<p>Milk Price Management Steering Group <u>Committee</u></p> <p>The Milk Price Management Steering group <u>Committee</u> co-ordinates <u>with</u> the Milk Price Group to provide management input on farm-gate Milk Price <u>base milk price</u> matters.</p> <p>This includes ensuring the Milk Price <u>base milk price</u> calculation takes into account the full range of costs and matters impacting the revenue of a manufacturer of commodity milk powders and their by-products.</p> <p><u>The Committee also oversees the internal control environment for Fonterra's business processes that support the milk price.</u></p>	<p>Group risk and compliance Fonterra Senior Managers</p> <p>The group risk and compliance review provides additional assurance over the robustness of the model and its inputs. Fonterra senior managers provide internal oversight of <u>the calculation of the actual and forecast base milk price in accordance with the Manual and detailed models and procedures. Fonterra management is also responsible for operational engagement with the Commerce Commission.</u></p>

Table B2 Outline of milk price calculation external reviews

External Parties	
<p>Milk Price Group (MPG) External Auditors</p> <p>Fonterra's external audit providers complete two audits annually which focus on the mechanics of the calculation.</p> <p>Their work includes providing assurance on the accuracy of the calculation and of data sourced from Fonterra's systems, and <u>The MPG is a working group established by Fonterra. The Head of the MPG is independent of Fonterra's management and reports directly to the Chair of the Panel. The functions of the MPG are contracted out to Ernst & Young and other technical experts who are not employees of Fonterra. Its responsibilities include:</u></p> <ul style="list-style-type: none"> <u>ensuring that the calculation base milk price is undertaken/calculated in accordance with the Manual, and making recommendations in respect of the base milk price to the Panel;</u> <u>considering any proposed amendments to the Manual, including those the Milk Price Group itself considers are appropriate, and ensuring they are in accordance with the Milk Price Principles in Fonterra's Constitution;</u> <u>providing assurance to the Fonterra Board over the calculation of the base milk price;</u> <u>managing engagement with external reviewers;</u> <u>engaging with the Commerce Commission on matters relating to the Manual and calculation of the milk price, including to ensure full disclosure of all material aspects of the base milk price derivation each year.</u> 	<p>Commerce Commission Milk Price Panel (the Panel)</p> <p>The Commission reviews both the Manual and the base milk price calculation.</p> <p>This involves assessing whether the assumptions, inputs and processes used in calculating the milk price provide an incentive for Fonterra to operate efficiently and for contestability in the market for the purchase of milk from farmers. <u>The Panel has been maintained by Fonterra since the introduction of the current milk price mechanism in 2008, and is now statutorily required to be maintained under s 150D of DIRA. The Panel has five members, who are appointed by Fonterra, with one of the members nominated by the Minister. Fonterra must ensure that a majority of members of the Panel are independent (including the Chair), as that term is defined in s 5 of DIRA.</u></p> <p><u>The Panel is responsible for providing recommendations to the Board on changes to the Manual and assurance to the Board that the base milk price each year has been calculated in accordance with the Manual. The Panel recommends the base milk price to Fonterra.⁸²</u></p>
External Auditors Milk price group (MPG)	Milk Price Panel (MPP)

⁸² DIRA, s 150D(3).

The milk price group is made up of three members. They include an independent member appointed by the board (Director), external member appointed by the board, auditor audits the base milk price each year and an analyst provided by an external provider.

Responsibilities include:

- Calculating provides assurance that the base milk price for the season; has been determined in accordance
 - Providing assurance to board with respect to milk price forecasts;
 - Advising the Panel on the interpretation the Milk Price Principles, Methodologies and administration detailed rules of the Manual (including recommending amendments);
 - Appointing and overseeing work of independent experts and reviewers; and
- Determining continued consistency of the Manual and its application with the milk price principles.

The MPP is formed from the Fonterra Board of Directors. Four of the members are independent, with one internal member. Therefore, the MPP is majority independent.

The MPP oversees the governance of the Milk Price and the Manual, including changes to the Manual and verification by independent external experts. They are responsible for providing recommendations to the board.

Summary of statutory governance processes

B5 — Under s 150F of the DIRA Fonterra must maintain the Manual that sets out how the base milk price is calculated. The base milk price calculation is extensively audited each year must be set in a way that is consistent with five separate reviews conducted:

B5.1 — two external audit reviews focussing on the mechanics of the model;

B5.2 — an internal audit the principles set out in s 150C and group risk and compliance declaration provide additional assurance over the robustness of the model and its inputs; and

B5.3 ~~B5~~ allowing for the Commission's calculation review assesses the consistency of the inputs, processes and 'safe harbour' assumptions with the purpose statement in s 150A of the Act. described in s 150B.

B6 — The Panel is established under s 150D of the DIRA. The appointment of its members by Fonterra is prescribed in s 150E and must include one member who is nominated by the Minister.

B7 — The Panel must, for each season,

(a) supervise the calculation of the base milk price; and

(b) advise Fonterra as necessary on the application of the base milk price manual; and

(c) recommend to Fonterra the base milk price.⁸³

B8 The Panel may, as it considers necessary or desirable, make recommendations to Fonterra in respect of the milk price manual, including a recommendation that it should be amended and a recommendation that a proposed amendment should not be made.

B9 If the Board of Fonterra sets a base milk price other than in accordance with a recommendation by the Panel or in the absence of a recommendation by the Panel it must follow the process set out in s 150N.

B10 If the Board of Fonterra changes the base milk price after the Commission has made its report under s150P it must follow the process set out s 150R.

B11 If the Board of Fonterra does not amend the Manual in accordance with a recommendation by the Panel, contrary to a recommendation by the Panel or in the absence of a recommendation by the Panel, it must follow the process set out in s 150G.

⁸³ DIRA, s 150(D)(3).