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Asset beta discussion

Introduction

The Commerce Commission is unable to conclude that the asset beta used by Fonterra is not practically feasible.

To assist with a conclusion on the consistency of the asset beta with the contestability dimension of the s 150A purpose in the milk price setting, the Commerce Commission recommended that Fonterra provide detailed evidence of the extent to which firms in the sample transfer price risk to farmers or others, and how this compares to a Notional Producer that fully passes through that risk. The Commerce Commission needs to be satisfied that stakeholders have made all reasonable efforts before concluding that obtaining this information is not possible or proportionate.

The risk being referred to above is commodity price risk.

Background

Figure 1 USD & NZD whole milk powder prices

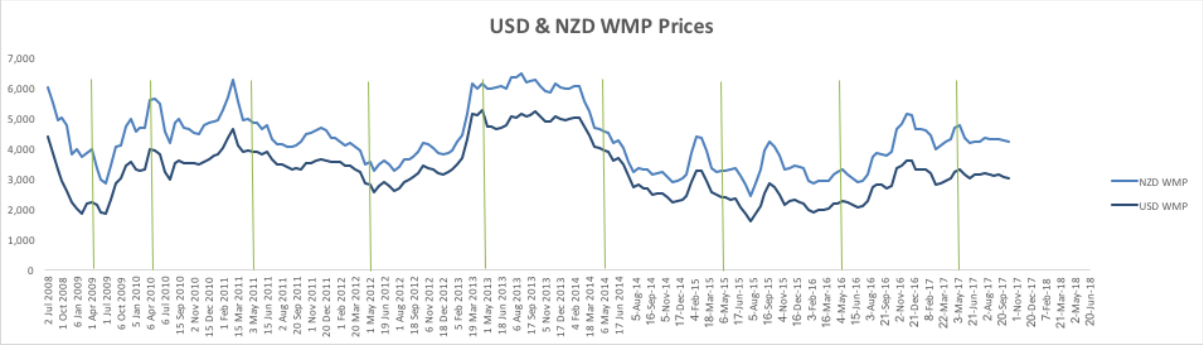

Figure 1 is a graph of the USD and NZD prices per tonne of whole milk powder (WMP) since the establishment of the global dairy auction. WMP is an effective proxy[1] for the reference commodity

[1] We need to use a proxy because sales of the various reference commodity products on the global dairy auction started on different dates.

products (RCP) as it is the largest component of the RCP and the correlation between the price of WMP and the RCP is strongly positive.

The graph illustrates two of the three relevant components of the aggregate commodity price risk passed through to farmers by the notional producer:

1. Price range – from a high of US$5,245 in April 2013 (approximately NZ$6,125 at the time) to a low of US$1,590 (NZ$2,525) in August 2015. In farmgate milk price-equivalent terms (using approximate current costs), that is an approximate range of NZ$9.75 / kgMS to NZ$2.80 / kgMS. The average price has been approximately US$3,200 and the average farmgate milk price over that time has been $6.08.

2. Price volatility – within the 2012/13 season, the weighted average price of WMP ranged between US$2,550 (NZ$3,275) and US$5,050 (NZ$5,900). The actual farmgate milk price for that season was $5.84 but it could have been higher or lower depending on the notional processor's sales phasing benchmark. That is, if the notional processor sold more product earlier in that season the farmgate milk price would have been lower. If it sold more later, it would have been higher.

The third component of aggregate commodity price risk is product mix. At one level, that is essentially the choice between WMP and SMP within the notional processor's physical production configuration and at another level the choice between RCP and non-RCP.

It is worth noting that approximately 75% of the notional processor's costs are the cost of milk, which means that it (and Fonterra and the independent processors) has very limited ability to take any commodity price risk.

It is also worth noting that the break-even milk price in 2015/16 was estimated to be approximately $4.93, down from $6.35 two years earlier[2].

The farmgate milk price equation is the mechanism that transfers all of the RCP commodity price risk to farmers because the equation assumes that the notional processor is a toll processor – that is, is able to maintain its margin regardless of commodity price fluctuations. The notional processor is an artificial construct.

The farmgate milk price methodology assumes that **all** milk collected is converted into the RCP. The farmgate milk price is the sum of all the revenue associated with the sale of the RCP minus the costs of producing, selling, and earning a return from those RCP. In contrast, Fonterra converts approximately 70%[3] of the milk it collects into the RCP, which means that Fonterra is taking commodity price risk from a product mix perspective on 30% of the milk it collects.

The basis for farmgate milk price methodology is the amount that Fonterra's near-term efficient competitors could pay for milk given what they are most likely to produce.

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[2] DairyNZ Economic Survey 2015-16, p.26

[3] Farmgate Milk Price Manual, effective date 1 August 2017, p.6

Fonterra's commodity price risk

Fonterra has two businesses: 1) Ingredients and 2) Consumer and Foodservice (C&F). The Ingredients business collects and processes all milk. The Ingredients business then sells its milk products to internal or external customers. The internal customer is C&F. C&F pays (approximately) the farmgate milk price for its milk purchases.

The Ingredients business has two components: 1) an RCP component and 2) a non-RCP component. Therefore, we could say that Fonterra has three businesses: 1) Ingredients RCP, 2) Ingredients non-RCP, and 3) C&F. The Ingredients RCP business is similar to but is not the notional processor.

The biggest risk for Fonterra is that it loses milk supply as a result of it not being able to afford to pay farmers the farmgate milk price (and retain its processing margin) because its sales phasing for the relevant period was different (and worse) than the notional processor's[4] or because its product mix was different (and worse) than the notional processor's. In such instances, Fonterra would have to:

1. Pay farmers less than the farmgate milk price or
2. Reduce its margin in order to pay farmers the farmgate milk price or
3. Some combination of 1 and 2.

Option 1 represents a transfer of commodity price risk to farmers because Fonterra has maintained its margin. This option is the least favoured because farmers can choose to sell their milk elsewhere. It is the option Fonterra took in the 2013/14 season when it paid farmers 53 cents less than the calculated farmgate milk price.

Option 2 represents some level of commodity price risk being taken by Fonterra.

Option 3 also represents some level of commodity price risk being taken by Fonterra. This is the option Fonterra took in the 2016/17 season when it paid it farmers 1 cent less than the calculated farmgate milk price and the Ingredients business's gross margin was only two thirds of what it had been the year before.

The way that Fonterra can manage commodity price risk is by the Ingredients business trying to match the notional processor's product mix and sales phasing.

Fonterra's Annual Results 2017 presentation dated 25 September 2017 states that margins in the Ingredients business were "impacted by rising reference product prices relative to non-reference – stream returns down significantly from last year". In other words, Fonterra didn't match the notional processor's product mix either because management decided not to or because it didn't physically have enough capacity to (or both).

4 The volatility of the dairy commodity markets means that sales phasing is the single biggest margin risk that Fonterra Commodities and the Independent Processors face.

Independent Processors' (IPs) commodity price risk

The biggest risk for IPs is that they lose milk supply because they cannot pay farmers enough for it. Therefore, the biggest risk for IPs is the same as Fonterra's. The way that IPs could manage this risk is the same way that Fonterra could manage it – by trying to match the notional processor.

If an IP was unable to afford to pay farmers the farmgate milk price for their milk (and retain its margin) it would have the same three options as Fonterra does. Option 1 is the least favoured because it puts milk supply at risk. The IP would therefore rationally choose either option 2 or 3, which means that it would be taking some level of commodity price risk.

On the basis of the above discussion, while accepting that the notional processor does not take any commodity price risk, it seems unreasonable to argue that the asset beta used to calculate the farmgate milk price should be materially lower than that of other processors in the industry even though Fonterra actually faces the same risks as they do. It would be reasonable for Fonterra to argue that its asset beta should be less than average because it has better information about the notional processor than anyone else.

Other observations

1. Fonterra has commented that "In no other jurisdiction are the milk prices paid by any processor, let alone the market-leading processor, governed by a milk price mechanism like the Milk Price Manual which results in the mechanistic translation of average realised commodity prices into a milk price."[5]

   The Commerce Commission has asked for a validation of the comment. With respect to "the mechanistic translation of average realised prices into a milk price" we note:

   - Fonterra sets the milk price. It is not mechanically set by the Milk Price Manual. If it was then the farmgate milk price in the 2013/14 season would have been 53 cents more than it actually was. Fonterra made the distinction clear in the Farmgate Milk Price Statement 2017 in which it distinguished between the farmgate milk price as calculated according to the Milk Price Manual, which was $6.13, and the "announced" farmgate milk price, which was $6.12.
   - The notional processor is not Fonterra.
   - Fonterra could have semi-annual or quarterly or monthly milk prices without any increase in risk for either Fonterra or for farmers.

2. The Commerce Commission commented: "In our reviews to date of Fonterra's Milk Price Manual, we have concluded that the Manual has been largely consistent with the statutory purpose set out in section 150A of the Act. Inherent to the Manual is an assumption that the Notional Producer (or any other New Zealand commodity milk processor) could shift the risk

[5] Commerce Commission, Draft Report: Review of Fonterra's 2016/17 base milk price calculation: Dairy Industry Restructuring Act 2001, p.14.

of changes in international commodity product prices to farmer suppliers via changes in the farmgate milk price."[6]

If the Manual does assume that "any other New Zealand commodity milk processor could shift the risk of changes in international commodity product prices to farmer suppliers via changes in the farmgate milk price" then the assumption is incorrect. Farmers require the processors to all pay a similar price for milk. The benchmark is the farmgate milk price. If a processor is unable to pay a similar price, farmers will shift their supply to a processor that can[7]. Processors manage their commodity price risk by trying to match (particularly) the sales phasing of the notional processor. Managing their risk effectively is not the same as being able to transfer it.

3. The Commerce Commission notes that Dr Alastair Marsden, on behalf of Fonterra, argues that "the Manual process results in all NZ processors being able to pass through to suppliers their milk price benchmark levels of commodity price risk, foreign exchange risk, milk supply (or volume) risk and the industry-wide cost risk"[8].

   For the same reasons as stated in 2 above, we disagree with this statement. Being able to pay farmers the farmgate milk price is not the same as being able to transfer or pass through commodity price risk to farmers. Being able to pay the farmgate milk price is the consequence of being able to closely match the sales phasing and product mix of the notional processor. For example, the peak USD price in the 2012/13 season was almost double the low price in the same season. From a farmgate milk price equivalent basis, the gap between the high and the low would have been approximately $5.00. The consequences for an IP of getting the sales phasing wrong in that year would have been significant.

4. The Commerce Commission notes that "whether an actual processor elects the same commodity price risk exposure as the Notional Producer is another matter. We would expect that if it chose to structure or organise itself differently, it would be because that affords a competitive advantage over the Notional Producer (eg, it may be able to attract more risk averse farmers by offering a less volatile, but lower, price) and so the risk exposure assumptions of the Notional Producer are consistent with promoting contestability."[9]

   The Commerce Commission's expectation is theoretically correct. It would require IPs to enter into longer dated contracts with their customers or to use derivative products to achieve the same outcome. History suggests that this is easier said than done. A number of years ago Fonterra's forward sales were longer dated. That, in theory, created more certainty with respect to milk price outcomes and less volatility. In 2011 when prices dropped

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[6] Commerce Commission, Draft Report: Review of Fonterra's 2016/17 base milk price calculation: Dairy Industry Restructuring Act 2001, p.14.

7 The exception is Westland where Westland farmers based on the West Coast do not have any supply alternative.

8 Commerce Commission, Draft Report: Review of Fonterra's 2016/17 base milk price calculation: Dairy Industry Restructuring Act 2001, p.15.

[9] Commerce Commission, Draft Report: Review of Fonterra's 2016/17 base milk price calculation: Dairy Industry Restructuring Act 2001, p.16.

dramatically, a number of Fonterra's (and the other processors') customers tried to renegotiate these longer dated contracts at lower prices. Fonterra's CEO at the time announced that, as a consequence, Fonterra would shorten its forward sales.

The milk price derivative market is a developing market and farmers have started to use it to take volatility out of their revenue lines (given their costs are relatively fixed).

Summary

We agree that the notional processor is by definition able to transfer commodity price risk to farmers and therefore its asset beta would be lower than its comparator group. However, Fonterra is not the notional processor and it faces the same commodity price risks as its competitors. The ability of Fonterra and independent processors to effectively manage their commodity price risk is not the same as them being able to transfer it. The ability to transfer it implies the constant margins of a toll processor and we would then expect that we could see different processors paying different prices for their milk without any consequence. In fact, what we can observe is probably exactly the opposite. That is, different processors paying a similar price for milk but earning varying margins year-on-year.

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