2016/17 base milk price calculation review workshop – responses to Commission's request for follow-up comments

Attachment A

Introduction

In this attachment we:

- Address the Commission's request for more detailed evidence of the extent to which firms in the comparator sample transfer commodity price risk to farmers, and how this compares to a notional producer that fully passes through that risk. The Commission understands that some companies in the comparator sample may employ different pricing mechanisms to those employed in NZ. However, the key issue is the ability to transfer commodity price risk to farmers, regardless of what the specific pricing mechanism looks like;
- Restate and expand on our comments on the necessity of decomposing the asset betas of real world dairy processors into a weighted average of the asset betas applicable to commodity processing operations and other business activities.

Context

In his accompanying report Dr Marsden finds that there is no evidence that the incremental risk faced by Fonterra's actual commodity processing business and the commodity processing businesses of other NZ dairy processors relative to the earnings risk of the 'notional milk price business' established under the Milk Price Manual framework is systematic.

As is well recognised, the Manual process results in all NZ processors being able to pass through to suppliers via their milk prices benchmark levels of commodity price risk, foreign exchange risk, milk supply (or volume) risk and industry-wide cost risk, essentially leaving them with a guaranteed **expected** margin on their marginal units of supply irrespective of domestic or global supply and demand conditions. NZ processors do not, however, enjoy a similar guaranteed expected margin on any other part of their businesses, such as sales of nutritional powders or sales into food service or FMCG channels. Like any other business operating in the relevant markets, the relevant earnings will likely be correlated with domestic or global economic conditions, leaving them exposed to the usual sources of systematic risk with respect to non-commodity earnings.

The only two listed NZ processors, Fonterra and Synlait, both have material non-commodity businesses, which Dr Marsden addressed with the analysis presented in paragraphs 7.23 – 7.32 of his report dated 12 May 2017 reconciling our estimated asset beta for the notional milk price business to an estimate of the asset beta for Fonterra's actual total business. Similarly, and as we noted at the workshop, all the non-NZ businesses in our comparator set have extensive non-commodity businesses. Their observed asset betas will therefore reflect the (value) weighted averages of the asset betas for their commodity and non-commodity businesses respectively. It is our view that that differences in the relative value weightings of the commodity and non-commodity businesses of the various comparator businesses is likely to be a far more significant source of variation in observed asset betas than differences in the level of systematic risk to which the comparators' commodity businesses are exposed to, whether as a consequence of differences in milk pricing frameworks or other factors. [1] A point which we made at the workshop, and which we provide further evidence on below, is that the value weights attributable to Fonterra and Synlait's commodity businesses are far larger than those applicable to any of the non-NZ comparator businesses.

Ideally, we would have sufficient information on each company in our comparable company set to be able to cleanly decompose their businesses, by value, into 'pure' commodity processing businesses and other activities. We do not, however, have this level of information. However, in the discussion below we provide indicative analysis and commentary on the scale of the commodity processing activities undertaken by the dairy companies in our data set relative to other activities, in addition to comments on our understanding of how the prices they pay for dairy inputs are established.

We have restricted our analysis in this note to the 22 businesses in our comparator company set which have material dairy businesses.

Comparators with 'material' commodity exposure

We identified in our comparative company set five dairy companies with 'material commodity' exposures, comprising Bega, Fonterra, Glanbia PLC, Murray Goulburn and Synlait. Four of these companies were discussed in Dr Marsden's report dated 12 May 2017, and some of the material below has been extracted from that report. We provide further detail in this section on the nature of the business activities actually undertaken by these companies, and on our understanding of the processes used to establish their milk prices.

Bega Cheese

In his report of 12 May Dr Marsden noted (based on advice from Fonterra) that Bega has two milk pools, each of approximately 300 million litres, with separate pricing arrangements. These are:

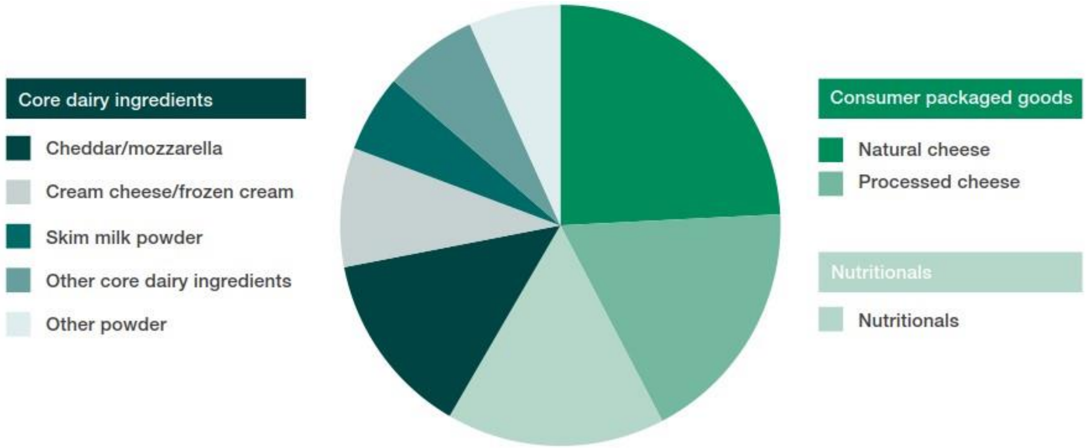
a. The Tatura pool located in northern Victoria, where Bega faces competition for milk from Fonterra and Murray Goulburn, and where Bega has traditionally benchmarked off the Murray Goulburn and Fonterra prices. To the extent general commodity price movements are reflected in the Murray Goulburn and Fonterra prices, they will also be reflected in the Bega milk price, but Bega does not have the direct ability to transfer reductions in Bega-specific revenue through into its milk price; and

b. The Bega Cheese pool is located in New South Wales, where Bega does not face material competition. Fonterra does not have a significant amount of information on the detail of Bega's pricing arrangements for this pool, but considers it is likely that Bega has at least a theoretical ability to pass late in the season movements in actual vs forecast milk prices onto its suppliers. Fonterra is not aware of any evidence, anecdotal or otherwise, of Bega passing late in the season movements in actual vs forecast returns through into its milk price in recent seasons.

[1] Cross-company variances in underlying or observed asset betas will also reflect differences in the nature and operations of the comparators' non-commodity businesses.

Figures 1 and 2 below are extracted from Bega's FY16 annual report.[2]

Figure 1: Bega's 2016 production by volume



Source: Bega Cheese Annual Report 2016, p.15

Figure 2: Bega's 2016 and 2015 sales by category

	Bega Cheese $'000	Tatura Milk $'000	Group Eliminations $'000	Group Total $'000
Year ending 30 June 2016				
Core dairy ingredients	50,616	259,328	(42,211)	267,733
Consumer packaged goods	708,548	-	-	708,548
Nutritionals	-	219,686	-	219,686
Sales by category	**759,164**	**479,014**	**(42,211)**	**1,195,967**
Year ending 30 June 2015				
Core dairy ingredients	41,504	285,775	(44,462)	282,817
Consumer packaged goods	683,470	-	-	683,470
Nutritionals	-	146,343	-	146,343
Sales by category	**724,974**	**432,118**	**(44,462)**	**1,112,630**

Source: Bega Cheese Annual Report 2016, p.45

From Figures 1 and 2, whereas around 40 percent of Bega's production by volume in 2016 was in the 'core dairy ingredients' category, this category only generated 22.4 percent (AUD 268m) of Bega's total revenue, with the balance resulting from the sale of consumer packaged goods and nutritionals. (Bega does not provide any detail on earnings by category.)

We also note:

2 http://www.begacheese.com.au/wp-content/uploads/2012/10/00-Bega-Cheese-2016-Annual-Report_interactive.pdf

- 72% of Bega's external sales in 2016 were to domestic customers, and 28% to export customers, implying Bega has a far more significant exposure to the domestic Australian market than NZ processors have to the NZ market.[3]
- Bega's core dairy ingredients business includes significant volumes of cream cheese and frozen cream, with the former in particular not considered a pure commodity by Fonterra.
- Bega notes that returns to its Bega Cheese division are relatively stable due to its exposure to retail and food service markets, and that the milk price for the supporting milk pool is less reflective of global commodity markets.[4]
- If we were to use sales by category as a proxy for value weight, the asset beta for Bega's pure commodity processing business would contribute no more than around 20 percent to Bega's total asset beta.

Murray Goulburn

In respect of Murray Goulburn (MG), Dr Marsden noted (again based on advice from Fonterra) that:

a. Murray Goulburn is committed to a mechanistic formula under which in the normal course, between 92.5 – 96.5 percent of actual net earnings prior to paying for milk (but after all other costs, including interest and tax) would be allocated to the milk price, and the balance to equity holders. The lowest percentage would apply when the resulting milk price exceeded AUD 7.00 and the highest when the resulting milk price was less than AUD 5.00.

b. The mechanism results in the final milk price directly reflecting actual revenues and costs for the year, so in this respect results in differences between forecast and actual revenue (or >90% thereof) flow directly to the milk price.

c. While the mechanism and original offer price of the Murray Goulburn units was presumably designed to deliver an appropriate expected return to equity holders, the actual return will vary directly with commodity prices, with a one to one correlation between actual returns and commodity returns per kgMS less than around AUD 5.20 and greater than around AUD 7.50, and greater than a one to one correlation otherwise. Implied returns to equity holders are therefore more volatile under this mechanism relative to the Fonterra mechanism.

d. The events subsequent to Murray Goulburn's milk price downgrade in April 2016 imply Murray Goulburn faces additional constraints around its milk price, the impact of which may be to further increase volatility of returns to equity holders. In particular, various investigations under way into Murray Goulburn, including by the Australian Competition and Consumer Commission and Australian Securities & Investments Commission suggest Murray Goulburn is likely to adjust its payment mechanism, potentially by adopting an

[3] Bega Cheese, FY16 Annual Report, Note 2C, p.44.

[4] Bega Cheese Investor Presentation, FY2016 Full Year Results: 24 August 2016, http://www.begacheese.com.au/investors/announcements/

advance payment system akin to those employed by NZ processors, to minimise the likelihood of having to make late in the season negative adjustments to its milk price.[5]

In principle, the Murray Goulburn pricing mechanism potentially resulted in some systematic earnings risk for MG, since it potentially implies structurally lower earnings when commodity prices are high compared to earnings when commodity prices are low. In practice, however, the mechanism has not been applied in the two financial years during which MG's units have been listed on the ASX, and MG has recently "announced the start of a comprehensive strategic review of 'all aspects of its strategy and corporate structure' – including its capital structure and profit sharing mechanism with outside investors".[6]

In its FY17 half-year results presentation, MG reported that Ingredients sales of AUD 390m comprised 33 percent of total revenue of AUD 1.2b. (In comparison revenue from Dairy Foods business, 88 percent of which was from domestic sales, totalled AUD 558m and revenue from nutritionals sales totalled AUD 91m.)[7]

Glanbia PLC

Figure 3 has been extracted from Glanbia PLC's FY16 annual report, and shows reported revenue and earnings before interest, tax, amortisation and exceptional items (EBITA) for each of its operating divisions as follows:[8]

Figure 3: Glanbia PLC's revenue & earnings by division

2016		Glanbia Performance Nutrition €'000	Glanbia Nutritionals €'000	Dairy Ireland €'000	Joint Ventures & Associates €'000	Group €'000
Total gross segment revenue		1,007,499	1,250,368	616,843	–	2,874,710
Inter-segment revenue		–	(26,182)	(636)	–	(26,818)
Revenue		1,007,499	1,224,186	616,207	–	2,847,892
Total Group earnings before interest, tax, amortisation and exceptional items (EBITA)	(a)	162,585	111,813	30,687	44,673	349,758

Glanbia describes its operating divisions as follows:

- Glanbia Performance Nutrition earns its revenue from performance nutrition products.
- Glanbia Nutritionals earns its revenue from the manufacture and sale of cheese, dairy and non-dairy nutritional ingredients and vitamin and mineral premixes. In its supporting results release, Glanbia describes the major contributors to Glanbia Nutritionals revenue as being the Glanbia Nutritionals division, with FY16 revenue of Euros 488 million, and the US Cheese division, with revenue of Euros 736 million, but did not provide any detail on each division's contribution to earnings. The Nutritionals division is described as "as leading marketer of advanced-technology whey protein, specialist vitamin and mineral blends, plant based ingredients and functional beverages", and is therefore clearly not a commodity processing business. The US Cheese division is described as "the number one marketer of American-style cheddar cheese in the US

5 See for example https://www.accc.gov.au/media-release/accc-takes-action-against-murray-goulburn
6 MG sets $4.70 opening milk price, starts strategic review, The Land, 6 June 2017.
7 http://www.mgc.com.au/media/45546/1h17-results-supplier-roadshow-presentation.pdf
8 https://www.glanbia.com/~/media/Files/G/Glanbia-Plc/documents/2016-full-year-results/2016-annual-report-glanbia.pdf, p.122.

supplying to leading brand owners and other food processors." The division is therefore arguably a commodity processing business, though it may be exposed to systematic risk relating to US domestic market economic conditions.

- Dairy Ireland manufactures and sells a range of consumer products and farm inputs.
- Joint venture and associates revenue and earnings reflects the sale of cheese and dairy ingredients. (The major contributor to this segment is Glanbia PLC's 40 percent interest in Glanbia Ingredients.)

It follows that 55.3% of Glanbia PLC's FY16 earnings (GPN and Dairy Ireland) clearly did not result from the sale of commodity products. In addition, an unknown but likely significant portion of the earnings attributable to the Global Nutritionals business and a smaller proportion of the circa 12 percent of earnings derived from Glanbia Ingredients also did not.[9]

Glanbia PLC does not directly acquire milk from Irish dairy farmers, whose supply relationship is with Glanbia Ingredients. Per above, only a relatively small proportion of Glanbia's earnings relate to its ownership interest in Glanbia Ingredients. Glanbia Ingredients, which processes around one-third of all Irish milk, sets the (final) price it pays for milk supplied in a month around the middle of the relevant month. About 20 percent of milk is supplied under fixed price schemes, with the fixed price for most such schemes set prior to the start of a season,[10] although we understand Glanbia fully hedges the milk supplied under these schemes with fixed price contracts with its customers.

Glanbia Ingredients is therefore able to pass much of its commodity price exposure through to suppliers. We again note its relatively insignificant contribution to Glanbia PLC's earnings, which implies that the Glanbia Ingredients asset beta would only attract a 10 – 15 percent weighting when calculating the value-weighted average asset beta for Glanbia PLC.

Synlait

Commodity ingredients comprise a substantially higher proportion of Synlait's production than for any of the non-NZ processors discussed above. In its FY17 half-year investor presentation, for example, Synlait note sales of 54,695 MT of powder and cream products, and 6,349 MT of consumer packaged infant formula.

Other comparator companies

Our comparator company set included six dairy processors in the 'commodity and brand' category and eleven in the 'predominantly branded' category. Commodity dairy ingredients do not comprise a substantial proportion of the total output of any of these processors, and their estimated asset betas are therefore, in our view, of very limited relevance in an assessment of the appropriate asset beta for the notional Milk Price business. We provide summary comments on the nature of their operations, and on our understanding of their milk pricing arrangements, in the attachment.

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[9] Glanbia Ingredients product range includes a number of 'value add' products that incorporate proprietary technology, but we do not have any information on the relative contribution of these products and commodity products to Glanbia Ingredients' earnings. See for example https://www.glanbiaingredientsireland.com/about-us/our-business-sectors.

[10] See for example http://www.farmersjournal.ie/glanbia-opens-two-fixed-milk-price-and-margin-schemes-243018

Concluding comments

It is not possible to precisely distinguish the extent to which dairy processors located outside NZ face different levels of systematic risk with respect to their commodity processing businesses relative to NZ processors. In particular:

- The market dynamics underpinning the milk prices paid by processors in most relevant markets (particularly Europe and Australia) are complex. While milk prices clearly vary with commodity prices, the combination of the relatively small share of milk that goes into production of commodity products in those markets and the influence of dairy co-operatives, which tend to bundle most of their returns into their milk prices, means it is likely that milk prices generally incorporate some element of 'value-add' returns, and that the correlation between milk prices and commodity prices will therefore not be quite as high as it is in NZ. And to the extent that (a) some variance in non-commodity returns goes to milk prices and (b) those variances are correlated to the market, milk prices will include an element of systematic risk that is not present in New Zealand.
- Put differently, 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.

We also emphasise that 'the' asset beta for any real world company comprising a mix of different businesses will reflect the weighted average of the asset betas for each of those underlying businesses, and that (a) the companies in our comparator set with by far the highest implied weights on a commodity processing business are Synlait and Fonterra and (b) the commodity processing businesses of most dairy companies in the comparator do not comprise a significant proportion of the relevant companies total businesses.

Attachment – Summary comments on other dairy comparators

Company & headquarters	Summary Comments	Ingredients? (Y/N)	Type of Ingredients	Commodities? (Y/N)	Type of Commodities	Segment Details (revenue/earnings breakdown)	Milk Price Structure
Saputo Inc. **Canada**	Brand focused Canadian dairy company with manufacturing and ingredients operations.	Yes	Dairy ingredients such as: protein concentrate, whey protein isolate, skim milk powder, whole milk powder, acid casein, lactose, whey powder, de-proteinized whey and functional dairy blends.	Yes	Milk Powders, casein, cheese.	Canada: 36% of revenue. Largest cheese (33% market share) & liquid milk (36%) supplier in Canada. 64% of revenue from Retail Division, 34% from Foodservice & 2% Industrial. 10.5% EBITDA margin F15; 11.5% F14. USA: 49.5% of revenue. 44% from retail segment, 50% foodservice, 6% industrial. Main product cheese. 13.5% EBITDA margin F15. International (Aus, Argentina & dairy ingredients): 14.5% revenue. F15 EBITDA margin 7.9%.	Acquires raw milk in Canada, US & Australia: Canada: highly regulated, milk prices set by 'negotiation', no ability to retrospectively adjust milk prices paid. US: no ability to retrospectively adjust. Australia: see discussion under Bega.
Savencia SA **France**	Global leader in specialty cheeses. Manufactures range of other branded, food service products and ingredients, including fresh and UHT cream ingredients butters and cream for consumer and food service; and dairy ingredients	Yes	Potentially lactose, milk powders, cheese.	Yes	Lactose, milk powders	56% revenue in Cheese products, 44% Other Dairy Products.	Collects milk in 14 countries. No visibility on pricing structure, but will require milk on year-round basis. Paid materially more than market average in Europe in 2016.

Company & headquarters	Summary Comments	Ingredients? (Y/N)	Type of Ingredients	Commodities? (Y/N)	Type of Commodities	Segment Details (revenue/earnings breakdown)	Milk Price Structure
	for the agro-food, health, and nutrition industries.						
Dairy Crest Group plc UK	Sold fresh milk business late 2015. Now primarily sell branded cheese, butters, spreads & oils, and functional ingredients (demineraliesd whey and galacto-oligosaccharide (GOS)).	Yes	Dairy	No	Some powders		Formula based milk price. Driven off published dairy and farm costs indices. Takes into account dairy market returns. Model is run on a monthly basis. Does not appear to have any ability to retrospectively adjust price.
Bright Dairy & Food Co., Ltd China	products primarily include milk, functional milk, and flavored milk; children's products; fresh milk, fresh yogurt, lactobacillus drinks, milk at room temperature, room temperature yogurt, cheese and cream cheese, and butter; milk powder, including infant formula, adult milk, and industrial milk powder products; and juices, such as bright fruit juices and light trap.	Yes	n/a	Yes	n/a	No segment information available.	No visibility.
Inner Mongolia Yili Industrial Group Co., Ltd China	Relatively diversified dairy product manufacturing company. China focused. Produces liquid milk, yoghurt, ice cream and milk powders.	Yes	Dairy. Assume that some of the Milk Powders are ingredient focused, unsure of the details.	No	n/a	Appears to be 79% revenue in liquid milk, 11% in milk powders and milk products.	Limited information available. Fonterra management advise that there is virtually no ability to restrospectively adjust the milk price paid.

Company & headquarters	Summary Comments	Ingredients? (Y/N)	Type of Ingredients	Commodities? (Y/N)	Type of Commodities	Segment Details (revenue/earnings breakdown)	Milk Price Structure
Chr. Hansen Holding A/S Denmark	Largely manufacturer of highly specialised ingredients for dairy products. No commodity production.	Yes	Cultures, enzymes, probiotics etc.	No	na	Focused on specialised dairy ingredients. About 60% revenue in cultures and enzymes (of which dairy is a key focus).	N/A - does not purchase liquid milk.
Kerry Group plc Ireland	Somewhat dairy focused. Highly diversified branded manufacturer.	Yes	Protein products	Not clear.	Demineralised whey powder, SMP, cheese.	84% FY16 trading profit from Consumer Foods segment and balance from Taste and Nutrition segment. A portion of Taste and Nutrition earnings is commodity-related, but contribution is not clear. Majority appears to relate to higher spec functional products.	Similar to Glanbia (monthly milk prices, no retrospective adjustments)
Want Want China Holdings Ltd. China	Majority of revenue is dairy focused. Brand-focused manufacturer. Chinese company.	No	n/a	No	n/a	53% revenue in dairy products and beverages. Others are rice crackers and snack foods.	
Danone France	Large dairy component. Highly branded manufacturer. Internationally diversified.	No	n/a	No	n/a	50% FY16 revenue in Fresh Dairy Products, 21% Water, 23% Early Life, 7% Medical Nutrition.	Acquires raw milk in numerous countries, most significantly as an input into its Fresh Dairy business (yogurts etc)
Parmalat SpA Italy	Brands focused. Dairy focused manufacturer.	No	n/a	No	n/a	35% FY16 EBITDA from milk & cream. Cheese, yogurt & other fresh products 61%. Fruit based drinks at 4%.	Acquires raw milk in numerous countries, as input into fresh dairy products. Milk supply contracts therefore focused on consistent year-round supply with only an indirect link to commodity prices.

Company & headquarters	Summary Comments	Ingredients? (Y/N)	Type of Ingredients	Commodities? (Y/N)	Type of Commodities	Segment Details (revenue/earnings breakdown)	Milk Price Structure
Yakult Honsha Co. Ltd. China	Dairy focused manufacturer. Key products are probiotic yogurt drinks.	No	n/a	No	n/a	87% revenue in probitic food and beverages. 8.3% in Pharmaceuticals. Remainder in "other".	
Grupo Lala Mexico	Consumer dairy products focused manufacturing company.	No	Mainly consumer-focused goods.	No	n/a	50% revenue from milk; 20% yogurt; 5% juice; balance other branded dairy product -- mainly fresh & chilled, but some formula.	Farmer owned. Morgan Stanley view that Mexican dairy market is sufficiently concentrated (largest 3 processors ~ 65% market share) that companies able to shift price movements back into milk price, albeit with a lag.
Nestlé S.A. Switzerland	Brands focused manufacturer. Significant dairy focus - bulk of product offerings have a dairy component.	No	n/a	No	n/a	Around 18% of revenue from dairy products, all of which is branded products, including the Nido/Nan range of infant formula milk powders. Procures milk from farmers in a number of markets. However, raw milk makes up relatively minor share of Nestle's total input costs, with much of its dairy inputs purchased from other processors, including Fonterra.	Relatively minor impact, but with fresh milk procurement spread across a number of countries with differing pricing arrangements.
Dean Foods Company USA	Fresh milk focused. Branded.	No	Fresh milk focused company.	No	n/a	73% revenue in fluid milk. Rest are creams, ice creams, beverages etc.	Most milk purchased under the US 'Class III Pricing' structure, where component prices of butterfat, protein and other solids are used to calculate the

Company & headquarters	Summary Comments	Ingredients? (Y/N)	Type of Ingredients	Commodities? (Y/N)	Type of Commodities	Segment Details (revenue/earnings breakdown)	Milk Price Structure
							milk price. This formulaic approach, which is calculated monthly, means there no limited ability to retrospectively correct the milk price for changes in Dean Foods' revenues and costs.
Mead Johnson Nutrition Company USA	Brand focused. Infant formula focused.	No	n/a	No	n/a	57% revenue in infant formula, 41% children's nutrition. Brand focused, and sources most if not all its dairy ingredients from other dairy processors.	N/A
China Mengniu Dairy Co. Ltd. China	Manufacturing and distribution of dairy products. Largely liquid milk. China focused.	No	Dairy.	No	n/a	Mostly liquid milk (85% revenue). 8% in milk formula and branded dairy products.	Limited information available. Fonterra management believe virtually no ability to retrospectively adjust milk price.