THE UNIVERSITY OF AUCKLAND
BUSINESS SCHOOL

Champions Trophy
Case Competition 2014

Case 4: Fonterra Co-operative Group Limited

1 February 2014

Case prepared by Samantha Hewlett and Korey Te Hira under the supervision of Sunny Gu. This case has been prepared solely for the Champions Trophy Case Competition. All data in this case has been obtained from publically available sources and Fonterra Co-operative Group Limited. This case is not intended to serve as an endorsement, a source of primary data or an illustration of effective or ineffective management. Fonterra does not warrant the accuracy of the information in this case study.

Fonterra
Dairy for life

Phillipa Philanthropy

From: Samantha Hewlett; Korey Te Hira

Sent: 1 February 2014

To: Fonterra Project Team

CC: Michelle Money; David Dollar; Peter Partner; Warren Wallstreet; John Jobs

Subject: Fonterra Strategy Presentation

Good morning all,

Today's client, Fonterra Co-operative Group Limited, is a dairy co-operative and New Zealand's largest company. Fonterra is a leading producer of dairy nutrition, comprising one third of global dairy trade, and supplies products to more than 140 markets.

Fonterra's vision is to be the natural source of dairy nutrition for everybody, everywhere, every day. To do this, the co-operative must carefully manage a complex supply chain that stretches "from grass to glass" – from the dairy farms of its shareholders through to the end consumer of the final product.

Issues can arise when factors outside of Fonterra's control affect the supply of raw milk. There are a number of factors that may cause deviations from predictable production. Key factors are genetic differences in herds, on-farm management factors, environmental factors, and seasonal production.

Supply variances have an effect on Fonterra's entire value chain and its market presence. With continuously growing milk production alongside the possibility that adverse weather events may become more common as a result of climate change, Fonterra is seeking to be more prepared for variations in milk supply and be able to respond quickly in order to maintain its strong position in the global dairy market.

Fonterra has come to us today to determine how best to optimise for uncertainty and how to best deploy its resources during challenging situations.

The members of the executive team are looking forward to your presentation of the issues facing Fonterra and the strategies that you propose.

You will have ten minutes to present to Fonterra, which will be followed by a ten-minute question and answer session to clarify any issues. Our research team has compiled some relevant information, which is attached to this email.

Regards,

Samantha Hewlett and Korey Te Hira

Company Profile

Fonterra
Dairy for life

Fonterra Co-operative Group Limited

Fonterra's vision is to be "the natural source of dairy nutrition for everybody, everywhere, every day". Today, Fonterra is a world-leading exporter of dairy products and one of the largest diversified milk processing companies.

Fonterra has built strong partnerships with other leading global dairy companies through supply chain integration and innovation. The co-operative sells products globally to over 140 markets with sales and marketing being managed through principal hubs in Auckland, Singapore, Tokyo, Sao Paulo, Santiago, Shanghai, Melbourne, Dubai, Mexico City, Chicago and Amsterdam.

In addition to being a leader in commodity dairy nutrition for export, including milk powders, cheese and butter, Fonterra has substantial interests in consumer-branded businesses across Asia, Latin America, Australia and the home market of New Zealand. Fonterra has five core brands whose products encompass the dairy spectrum: Anchor, Anlene[1], Anmum[2], Mainland and Tip Top (see Appendix 5 for more information about Fonterra's brands). The products under these brands range from milk and cheese to prenatal, infant and growing up formulas to yoghurt, ice cream and innovative snacks.

Background

New Zealand's dairy industry dates back to 1814, when missionary Samuel Marsden brought a bull and two heifers into the country. The industry grew steadily, aided by the temperate climate.

The first co-operative[3] cheese company was formed in 1871 on the Otago Peninsula. It was established to benefit from the power of pooled resources. By the start of the 20th Century, the majority of dairy factories in New Zealand were owned by co-operatives. Numbers rose to more than 400 by the 1930s.

Meanwhile, dairy co-operatives started selling their products overseas. It became increasingly difficult for hundreds of small New Zealand dairy companies to service foreign markets. So in 1923 the government established the Dairy Export Produce Control Board to control all dairy exports. The Dairy Board gave farmers power to access new markets and earn greater returns for their products. As a result the industry grew and prospered.

Industry maturity brought consolidation. Co-operatives began joining forces to become more efficient, aided by improved technologies in transport and refrigeration. These included wholemilk collection by tanker from 1951, and on-farm cooling of milk, introduced in 1955. By the 1960s, 400 co-operatives had become 168.

During the 1960s, the industry began to diversify both its markets and product ranges. The Dairy Board started to enter new markets when Britain (New Zealand's largest export market) joined the European Economic Community, leading to a severe limitation of the amount of product Britain imported from New Zealand.

By the 1980s the Dairy Board had 19 overseas subsidiaries and associated companies, rising to 80 by 1995. At this time the New Zealand Dairy Board was the world's largest dedicated dairy marketing network.

However, inefficiencies remained within production. In order to overcome these and increase competitiveness in foreign markets, the industry consolidated further. New Zealand's dairy co-operatives had to become much more efficient. By 1996 there were only 12 dairy companies.

In conjunction with foreign market expansion, product development and diversification resulted in increased returns to farmers. The industry developed a consumer marketing infrastructure and created new brands. Co-operatives shifted their capabilities from butter and cheese - the mainstay of UK exports - to milk powders. New products included the world's first spreadable butter, developed by New Zealand technologists in 1991.

By the end of 2000 more than 95 percent of the industry was represented by two major companies: New Zealand Dairy Group and Kiwi Co-operative Dairies (two smaller co-operatives held the remaining five percent).

1 Anlene is a range of dairy products specially formulated for adults to help maintain bone health. Currently available in 12 countries across Asia, the Middle East, and Australasia (including New Zealand).

2 Anmum is a range of clinically proven dairy products targeting the needs of pregnant women and aiding brain development in children. Currently available in Indonesia, Malaysia, China, Philippines, Singapore, Hong Kong, Taiwan, Thailand, and Vietnam.

3 A co-operative is a firm that is owned, controlled and operated by a group of users for their own benefit, with each member contributing equity capital and sharing in the control of the firm.

In July 2001, 84 percent of farmers involved voted in favour of a merger of the two largest co-operatives, New Zealand Dairy Group and Kiwi Co-operative Dairies (together with the New Zealand Dairy Board, which had been the marketing and export agent for all the co-operatives). This single integrated company put an end to the competition between New Zealand's leading dairy co-operatives, as well as providing the advantages of economies of scale.

The merger was initially turned down by the New Zealand Commerce Commission, but was later approved by the New Zealand Government, with subsequent legislation deregulating the dairy industry and allowing for the export of dairy products to be undertaken by any company. The two smaller co-operatives, Tatua and Westland, did not join the merger, preferring to remain independent. The merger was consummated in October 2001 and Fonterra Co-operative Group Limited was created. To resolve potential internal conflicts, Fonterra was set up as a new company that bought the assets of both co-operatives and the Dairy Board. Fonterra is co-operatively owned by New Zealand dairy farmers, representing about 89 percent of all dairy farmers in the country.

Organisation

As a co-operative, Fonterra is owned by 10,500 farm entities comprising 23,500 shareholders in New Zealand, and these farmer shareholders provide Fonterra's source of capital. A farmer's shareholding is based on the amount of milk supplied to Fonterra by each farmer. (Appendix 2 has an overview of the flow of finances throughout the company's value chain).

New Zealand farmers are the only farmers who are able to be shareholders, however as Fonterra continues to cement its presence around the world it has begun to develop milk pools outside of New Zealand as a way to grow supply of its raw product and enable local production in international markets. The vast majority of Fonterra's milk is sourced in New Zealand and will continue to be for the foreseeable future, but with time these overseas milk pools are expected to grow. At present, Fonterra collects 17 billion litres of milk in New Zealand (89 percent of total New Zealand milk production), as well as 2.3 billion litres of milk outside of New Zealand (mainly in Australia and Chile) and a further 2.6 billion litres though overseas joint ventures (mainly in South America).

Fonterra's primary processing sites are located throughout New Zealand and in key markets around the world. These sites manufacture a number of products including milk powder, butter, cheese, casein, nutritional powders, lactose and whey protein concentrate.

Each year in New Zealand, Fonterra's 480 tankers make 2.6 million collections. Fonterra ships two million tonnes of product out of New Zealand annually, and sells another 260,000 tonnes of non-New Zealand product each year. Each hour, 350 tonnes of Fonterra product is sold.

All Fonterra operations are aligned either with the processing of dairy nutrition or sales of branded products to consumers.

Milk production factors

There are a number of factors that can affect the amount of raw product supplied to Fonterra. The most significant of these are genetic differences, management factors, environmental factors, and seasonal production.

1. Genetic differences

Different breeds of cow produce different amounts of milk as well as differently composed milk in terms of fat and protein content, which is what New Zealand farmers are paid for. The main breeds in New Zealand are Holstein-Friesians, Jerseys and crosses of these two breeds. Friesians are large cows that have high milk production which has high concentrations of protein and lactose. Jerseys are smaller and more efficient as more can be kept per hectare of land; they also give more butterfat per litre of milk than Friesians. Friesian-Jersey crosses are medium-sized and more productive, and provide extra performance that manifests itself through higher rates of conception, calving, and milk production (the typical life cycle of a cow is illustrated in Figure 1; cows usually have four to six lactation cycles in their lifetimes).

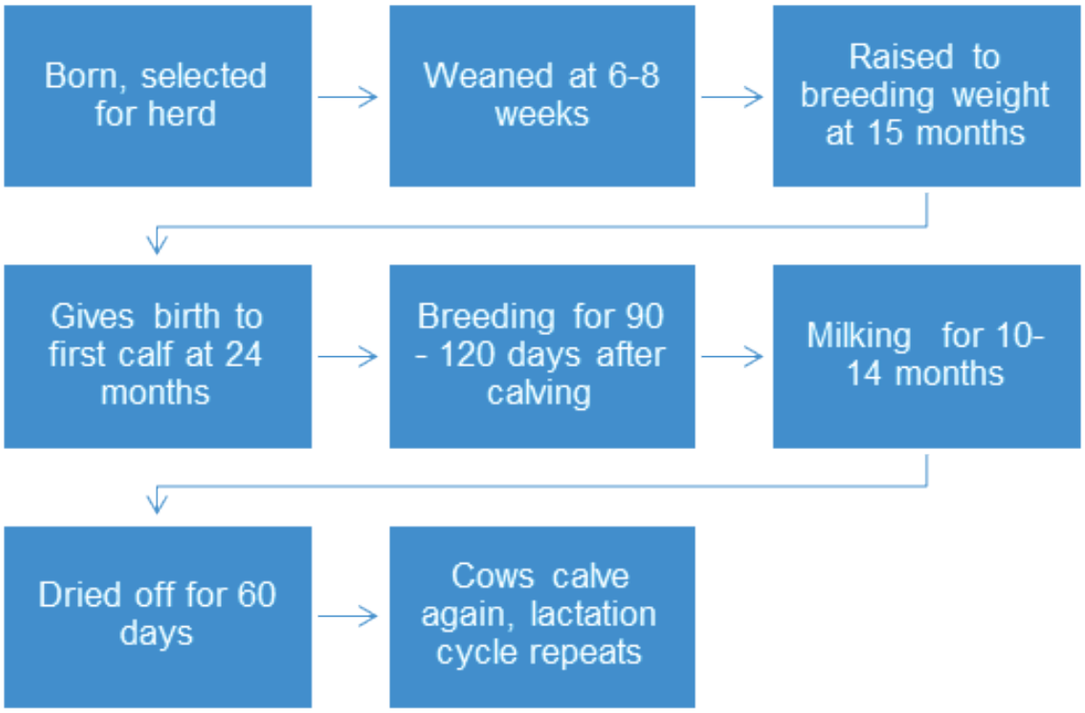


Figure 1: Typical Life Cycle of a Cow

2. Management factors

Management factors affect the milk production of cows. An important part of this is nutrition, which also affects reproductive ability. Nutrient requirements vary by age and stage of reproduction, but all cows need to have adequate body fat to produce milk. If they are too fat or too thin, there is a greater risk of metabolic problems developing. Also important in dairy cow management is frequency of milking. Farmers have the option to milk cows once or twice per day. Once a day milking may be chosen to reduce workload on farmers, especially earlier in the season when milk production volumes are lower. However, once a day milking also means that total milk production is lower in comparison to milking twice a day. Assuming that they are provided with adequate nutrition, when cows are milked more frequently they produce more milk.

3. Environmental factors

Alongside genetic and management factors, which the farmer has some control over, environmental factors also play an important role in determining milk production. There are two sides to this: climate and disease.

Like all animals, dairy cows have a temperature range that is most conducive to health and performance. New Zealand's temperate climate makes it ideal for dairy cows, which has been an important part of the success of the New Zealand dairy industry historically. However, dairy cattle in New Zealand are largely kept in pastoral systems and so are exposed to the effects of the weather. In some cases, the weather can produce welfare risks which endanger the cows as well as reducing milk production. When it gets too cold, the core body temperature of cows drops below the normal range and cows become listless. When it gets too hot, cows begin to eat less and drink more, and cow body temperatures get too high. Both of these scenarios can lead to a marked reduction in milk production as cows do not eat optimally and their body condition is adversely affected. In severe cases, cow deaths become a risk. There are ways that farmers can attempt to manage this through shelter and feeding, however this is a very real challenge that is set to become greater as climate change affects temperatures and weather patterns globally.

Additionally, extreme adverse weather events seem to have been increasing in frequency over the last few years. In the last season alone, Fonterra farmers have endured first a drought and then a series of severe storms that have had significant effects on their ability to maintain the optimal condition of their herd and to maximise their milk production (and so the amount of money they can earn from their farming operation).

As well as adverse weather events, disease epidemics can strike at any time. Epidemics such as that of Aphthae epizooticae/ foot-and-mouth disease in the United Kingdom in 2001 (which is estimated to have cost the country £8 billion) are rare, but the dairy industry must constantly be on the lookout for signs of disease that lead to widespread vaccination requirements, trade restrictions/quarantines, or the slaughter of large numbers of animals. Disease outbreaks may be able to be controlled from an early stage, but if they are not, disease can affect large numbers of cows, sharply reduce milk production, and potentially lead to difficulties in exporting New Zealand milk products to international markets.

4. Seasonal production

By far the largest effect on milk volumes comes from seasonal production factors, and this is the area that creates the most challenges for Fonterra each year.

New Zealand milk production follows a predictable seasonal model known as the milk curve. Milk production is not standard throughout the year, peaking in October. For the 2012 – 2013 season, milk supply varied from six million litres a day during the off season to approximately 85 million litres a day during the peak. This peak period lasts for approximately 12 weeks. The organic and bacterial nature of milk means that processing cannot be delayed, and milk produced in the peak must therefore be processed during the peak.

The milk curve is directly correlated to the growth of grass. In the spring months grass growth is at its highest; most farmers want maximum use of this freely available grass and so align their peak production to these times. This ensures that New Zealand's relatively low-cost farming model is maintained. During the remainder of the year grass availability is lower. To achieve the same levels of milk production, farmers would need to put in extra effort to store food or undertake extra costs to purchase extra food for their herd.

Fonterra reflects the value of peak and non-peak milk. Slightly less is paid for milk during the peak, and there is a premium for milk supplied in winter months which is generally supplied to meet third-party requirements. Currently this has little effect on "flattening" milk production, as can be seen in the continued peak in the milk curve. This is because the additional cost for farmers of buying and storing feed during times when grass is not available rarely outweighs the benefits of freely available grass. Figure 2 shows Fonterra's milk curve for the last three seasons.

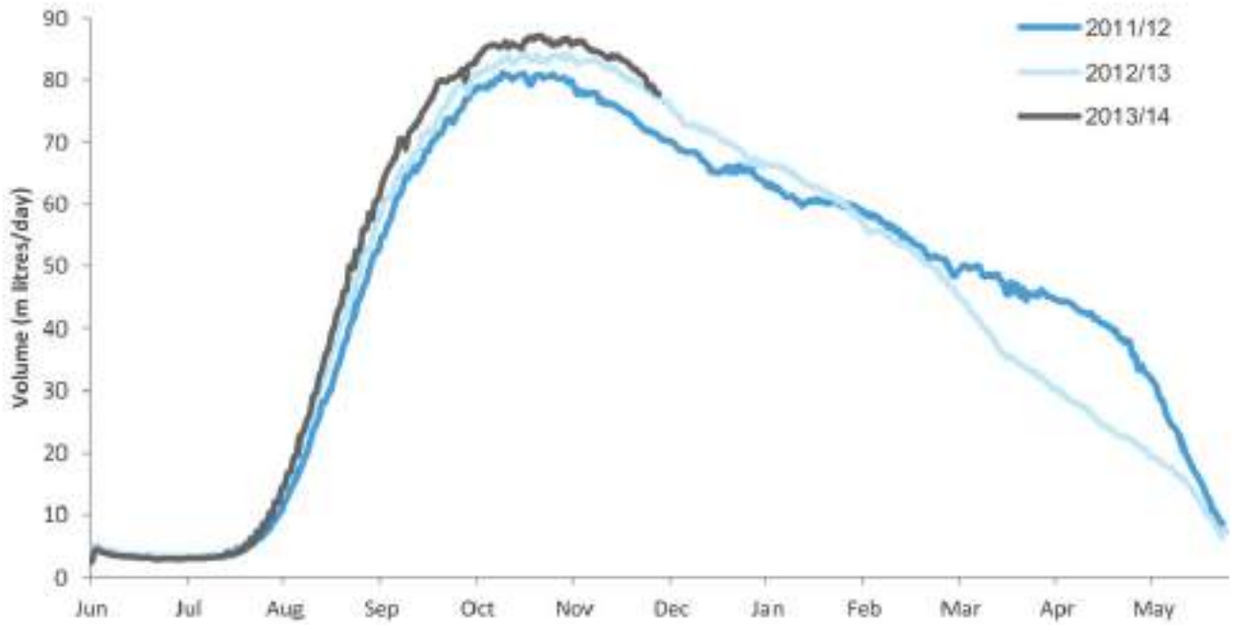


Figure 2: New Zealand milk production

NB: The decline in milk production seen in March-May 2013 compared to the previous season is a result of the drought experienced in New Zealand during this time.

Season ending:	July 2013	July 2012	July 2011	July 2010	July 2009
Total NZ milk collection (million litres)	16,673	16,951	15,427	14,746	14,764
Highest daily volume (million litres)	84.8	81.2	76.8	72.3	73.7

Looking back over the last 5 years, there is an upwards trend in both total milk volumes over the season and the volume collected on the "peak" production day. This is expected to continue, with growth estimates sitting at two to three percent per year.

Milk production has exceeded estimates a number of times in the past few years, often as a result of ideal weather conditions – ample sunshine along with a good amount of rain leading to abundant pasture growth – meaning that milk received is well above milk forecasted, which has implications on Fonterra's planned production across a season.

These factors affecting milk production mean that supply is not constant and cannot be precisely predicted. One season may have ideal weather and management conditions, meaning that Fonterra gets significantly more milk than predicted, while the next season may bring an adverse weather event which means that optimal management is impossible and milk production is far below predicted volumes. Fonterra and farmers can both plan ahead, but often there are practical and financial limitations on how prepared they can be. The challenge for Fonterra is that in all cases the organisation must still have the resources on hand to deal with whatever comes up.

Effect on the co-operative

Supply variances have a range of effects, differing in longevity, associated cost and severity. In cases where milk supply decreases sharply, the effects are felt most by farmers, whereas in cases where it increases sharply, the effects are felt most by Fonterra.

Decreased supply

When milk supply decreases sharply, one of the most noticeable results of this is in the markets for dairy products. A dramatic reduction in the quantity of raw milk available to be processed can cause its price to spike, as well as those of its final products such as cheese or yoghurt – although these price increases will generally be less pronounced compared to raw milk. This is not

necessarily bad news for the farmers as the margins on goods sold will now be higher, assuming underlying costs are the same. This becomes an additional financial cost for the consumer to bear. However, when coupled with the decrease in volumes sold due to the product's negative price elasticity of demand, total income that Fonterra receives, and hence money available for distribution to farmers, is usually reduced.

Follow on effects of lower payouts to farmers is a reduced ability to invest in their farms and/or service their debt. In response, farmers may need to resort to other sources of financing, such as debt financing, which may have a higher cost of capital. This means that on-farm improvements or growth initiatives which would have a positive effect on quality and quantity of milk production are put on hold.

In addition, herd sizes may also be affected. Environmental factors play an important part in decisions made by farmers on the number of cows they have reproducing in order to be milk producers and the number of cows sent to slaughter each season. For example, in the case of a severe drought, good, consistent grass growth is likely to be sporadic or not eventuate at all. With there being an inherent unpredictability in rainfall, there is no guarantee on the length of the drought or when favourable weather will resume. Farmers therefore need to judge whether they have access to sufficient levels of feed to sustain their herd throughout the drought. If not, they need to decide whether they should purchase additional feed to make up the shortfall based on the financial impact and risk of doing so, or whether they should decrease the size of their herd and/or move to once a day milking to allow for less feed being available. In this situation, short term cost reductions may result in unintended long term consequences, with additional expenditure required in future seasons to recover herd levels.

Increased supply

In situations where milk supply is greatly increased, it falls to Fonterra to find the capacity to be able to process all the milk that is supplied as it is supplied. This can be particularly complex if milk volumes are greatly above forecast and therefore production plans need to be modified during the season.

Fonterra does have the option to adjust the mix of products it produces, although deviating from planned production does carry additional costs and can be complicated due to the complex nature of dairy production. The amount of product that can be produced from one litre of milk varies from product to product based on the yields of each product. For example, one litre of milk can produce 0.1526 kg of whole milk powder or 0.1069 kg of skim milk powder. This means that switching between products can mean less or more final product available than originally planned. The yields of Fonterra's base products can be seen in Table 1 following.

Table 1: Product yields

Base Product	Yield (kg per L)
Mozzarella	0.1084
Gouda	0.1200
Caseinate	0.0288
Rennet Casein	0.0313
Milk Protein Concentrate 85	0.0397
Acid Casein	0.0302
Cheddar	0.1223
Skim Milk Powder	0.1069
Milk Protein Concentrate 70	0.0472
Whole Milk Powder	0.1526

When valuing products, it is not only the base product that is taken into account, but also all of the "downstream" products that are produced. For example, when Fonterra produces whole milk powder some of the excess cream is removed from the milk. This cream can be used to produce butter. Further to this, a by-product of butter is buttermilk, which in turn can then be processed into buttermilk powder. When making decisions, Fonterra values the "stream" of whole milk powder, butter and buttermilk powder, not just whole milk powder in isolation. The value of streams can vary significantly with changes in market conditions, adding additional considerations to the decision to move between products. See Appendix 3 for more detail on milk streams.

As well as the complexity of the products themselves, not all production sites can produce all products, so changing the product mix may mean having to change the destination of milk tankers. The sites themselves can also be a high additional cost in this kind of scenario. Running a factory costs a lot, and the opportunity cost of running a site below capacity is high. In addition to this, some factories have a shut down period each year when milk supply is at its lowest, and initial start-up costs are also high. Starting up a factory to run under capacity is extremely expensive and cost-inefficient.

Adding to this is the challenge of Fonterra's factory asset portfolio. The development of Fonterra from the consolidation of New Zealand dairy co-operatives has led to a set of assets over which Fonterra has had little control, as the assets of each company were combined with each merger. This legacy asset footprint creates capacity constraints which inhibit Fonterra's ability to produce the most optimal mix of products for market conditions. The major challenge to addressing the issues created by the asset footprint has been cost. Because building new factories is expensive, the emphasis has been on the maintenance of existing assets. While some investment into new assets has occurred to deal with milk growth, this growth is expected to continue so additional strategising around how to manage it in the future is essential. See Appendix 7 for more information about Fonterra's factories.

Fonterra's response

Corporate response

An important part of dealing with variation in supply in the global market is maintaining a reputation of being a reliable supplier of high quality dairy products as well as getting the best possible prices for its products – both are crucial if Fonterra is to continue to be a major player in global dairy trade.

Customers desire certainty in knowing that their orders will arrive on time, and if not, that action is being taken to resolve the situation. Completing this in a timely and professional manner is key to retaining existing customers and also improving the Co-operative's ability to secure new ones. At the same time, Fonterra is continuously seeking the best price for its products, which becomes challenging in times where there is a surplus of product.

The question then becomes how Fonterra identifies which customers and distribution channels are priorities. In any given year, Fonterra looks at forecasted milk production as per the milk curve and commits a certain percentage of the total towards existing and/or anticipated supply and tender contracts[4]. The remainder is allocated to Global Dairy Trade (GDT)[5] auctions. Supply contracts typically have a higher margin/return per tonne of product sold than GDT sales due to provisions in the contacts which provide additional value to the customers, such as price certainty and guaranteed supply, allowing Fonterra to charge a higher price. Given the differential in the financial return on offer, fulfilling the obligations of the supply contracts is a higher priority compared to selling product on GDT.

A range of factors are considered before a final decision is made. These include the overall strategic importance of individual customers (due to contribution to annual revenue, their access to specific markets, or geographic regions), the attainable product mix from a finite amount of raw milk compared to supply obligations, and likelihood of receiving repeat business in the future. GDT is the least ideal option for clearing surplus product in situations where there is more milk than forecasted due to the loss of price premium that comes with that distribution channel.

The order of importance for various customer types is typically:

1. Strategically important long term supply contracts
2. Short-term supply contracts
3. Tender options
4. GDT volume

Ultimately, Fonterra needs to make a series of decisions as to what combination of products it will produce and how it will allocate these, and how this process can remain optimised throughout variations in supply.

4 Requests for tenders are periodically placed by purchasing agents who seek dairy companies to bid on an invitation to supply a specified amount and mix of products.

5 GDT is an internationally-used online dairy trading platform set up by Fonterra; trades are dominated by Fonterra products.

Response to farmers

In times of crisis, farmers have greatly differing levels of ability to cope. For farms that are larger operations or more financially secure, there is often a greater ability to endure negative conditions and not be too adversely affected by them. The hardest hit tend to be smaller operations, often family-run, who do not have the resources to cope and bounce back so easily. For these farmers, adverse events can cause a great deal of financial and emotional stress and have effects that last over multiple seasons as they try to recover.

Fonterra has some processes in place for helping farmers in times such as these. At-risk farmers are contacted, and in an uncontrollable event that stops Fonterra from collecting farmers' milk, Fonterra will pay for the milk it would have collected. In addition, the co-operative may coordinate other parties to ease the situation for farmers, such as providing farmers with the ability to purchase generators during times when they have lost power. Fonterra also has a field team who are knowledgeable in farm management who can provide recommendations to farmers to reduce the impact of adverse events. In extreme cases, Fonterra may request that farmers take actions such as reduce feed inputs to bring down milk production volumes, move to once a day milking or dry off their herd[6] earlier than normal.

However, Fonterra does not currently assist farmers with other aspects of managing crises, which may include disposal of milk that cannot be picked up, damage to property, reduced availability of feed, and a number of other issues which may impact on a farm's profitability. Fonterra draws a clear line between its assistance with farm management and the day-to-day operations of the business as its own entity, which should be covered by the insurance farmers have to cover their farms. If the number of events that severely impact farmers rise, Fonterra may have to consider whether it should increase the types and value of assistance and guidance it provides with farm management relative to other industry bodies. Fonterra's actions during these critical times can have a large effect on the perception of Fonterra by its farmer shareholders; it is in Fonterra's best interest to ensure this remains positive so as not to lose suppliers to competitors.

Looking forward

With milk volatility set to increase as adverse events become more frequent while total milk supply continues to grow, Fonterra needs to become more prepared to respond more quickly and effectively to variations in supply – both upwards and downwards – if they are to survive in the global dairy market and to quickly seize opportunities to grow as they become available. To do this, Fonterra must determine how best to have the options it needs to optimise for inevitable uncertainty, both in a commercial sense and in how the co-operative interacts with its farmers when milk supply issues arise.

This comes in three key parts:

1. Dealing with large variations from predicted milk volumes as a result of either ideal or adverse conditions
2. Managing the seasonal milk curve as volumes continue to grow but asset footprint, and so processing capacity, remains largely the same
3. Dealing with crisis events, where how Fonterra acts impacts the perception of the co-operative throughout its supplier base.

What is the best strategy for maximising the value that the co-operative returns to its farmer shareholders? What should Fonterra stop, start, or continue in the next one, five and ten years to manage growth and the rising number of events that impact milk supply and Fonterra's entire operations?

6 "Drying off" is the management technique of ceasing to milk cows that are still lactating so that they produce no more milk in that season; this usually happens once milk production has fallen below a profitable level or cows are getting close to reproduction. For optimal cow condition, cows should have a chance to rest and regenerate mammary tissue between lactations to prepare for reproducing and lactating in the next season. Cows are normally dried off for 6 – 8 weeks each year.

Selected news articles

Fonterra
Dairy for life

Drought dries up spending

7.45am, Thursday 6 June 2013

Bay of Plenty dairy farmers have closed their wallets after losing an estimated $74 million as a result of last summer's drought.

Tauranga Chamber of Commerce chief executive Max Mason said the impact of the lost revenue was being felt across the region's economy, especially by businesses that rely on the agricultural sector.

"The small and large firms who supply the industry are often forgotten and the drought will have impacted on their livelihoods and survival. Also, our growing national business confidence falters because every time yet another big event affects our economy, there is less positivity."

Te Puke company Bradstreet Contractor's income was down $450,000 this year and its workload had halved because of the drought. Owner Peter Bradstreet said this had a big impact on the business but he had learned "to go with the flow".

Another business owner, Kerry Masters of The Equipment Centre, said farmers were not buying or maintaining machinery unless it was absolutely needed.

"I'm only called in when they can't wait any longer, most of the work is towed in on a truck and I've just billed out $16,000 for a new gear box on a tractor."

His revenue had dropped $50,000 this winter, he said.

Figures from Dairy NZ show an 11 per cent drop in Bay milk production compared to the previous season which equates to an average loss of $95,000 to $135,000 per farm. Farmers were also having to borrow more money.

Nationally, they racked up $2.5 billion of debt with banks from January to April this year. The Ministry for Primary Industries' pastoral farm monitoring report says rural debt was $50 billion in December 2012 with dairy farmers owing $33 billion. BNZ economist Doug Steel said cash flows in the dairy industry had been restricted.

"But [Fonterra's $7/kg of milk solids forecast] from Fonterra is certainly a big plus looking further afield into 12 to 18 months so in some sense it will relieve some concerns."

Te Puke Economic development group managing director Mark Boyle said trades and services work had slowed but the district's economy was already sluggish due to Psa.

Bay of Plenty Federated Farmers provincial president Rick Powdrell said many farmers were running their overdrafts at higher levels to cover costs.

Feed costs had increased by 20 per cent to $25,000 to $45,000 per farm.

Dairy NZ regional team manager Craig McBeth said the sector was used to peaks and troughs.

"It's pretty tough in a season not to make any money or lose money, but next season the payout is looking stronger."

Farm losses rise as land remains lake

6pm, Tuesday 3 April 2007

Edwin Smith looked over his flooded Hikurangi Swamp farm and said: "It's worse than Cyclone Bola."

The catastrophic cyclone in 1988 hadn't cut Mr Smith's farm off from Hikurangi via Jordan Valley Rd, but the deluge last week flooded this route and it was still under water and impassable yesterday.

As for the 100ha providing the milking platform for the Smith family's 400 dairy cows - like its neighbours, most of it was under water yesterday when the flat lower land in the drained former swamp resembled a huge inland lake.

"It took 17 days for the Bola flood to recede. This one is expected to take three weeks," Mr Smith said. "We got 300mm of rain here. At the top of Puhipuhi they got 600mm and it all had to come this way."

Eighteen swamp dairy farms were inundated. Nearly 400 cows were feared swept away by floodwaters and although scores of them have since been found marooned but safe, many others were drowned. Flooding kills pasture and 70ha of the Smith farm will need regrassing when the flood recedes. He had heard that a total of 5000ha would need new grass.

The Whangarei District Council has estimated the cost of repairs to the Hikurangi Swamp flood protection scheme and the loss of production by flooded dairy farms there could total $20 million.

Mr Smith said his farm - which was targeted to reach 1500kgms/ha this season - would have a $120,000 direct production loss.

On top of that, many thousands of dollars would be spent regrassing, grazing stock off-farm, and replacing stockpiled winter feed now being fed to the 300 cows still being milked.

Mr Smith said that 30 cows had been culled from the herd, 30 more were sent to a farmer at Maketu and all young stock were moving from the farm's hills to off-farm grazing today so the milking cows could graze the hills.

Using the winter supplements now was a concern, but Mr Smith said they would worry about that when winter arrived.

"Our philosophy is that the stock come first."

The situation was the same on the other flooded swamp farms, Mr Smith said. All were taking the crisis "on the chin", assessing their losses and getting on with the job of getting their land back into production.

Mr Smith said he couldn't praise council, Fonterra and Dexcel staff enough. They had been "absolutely magic" providing support and help.

The response from trucking companies, seed merchants and many others had also been ``brilliant'' among ``terrific offers of help from everywhere''.

The president of the Whangarei, Far North and Kaipara province of Federated Farmers, Denis Anderson, said the 0800 335 663 hotline set up to help flooded farmers had produced several offers of grazing and labour, but few farmers appealing for assistance.

Meanwhile, Apata's national manager for avocados, Tony Snushall of Matarau, said the storm had not created problems for avocado growers.

"The wind probably had the greatest affect, knocking 2-3 percent of the crop to the ground. But at this time of the year avocado trees drop fruit naturally, so it was all part of their natural cycle," he said.

Zespri's Melanie Palmer said the storm had been inconvenient for kiwifruit growers, holding up the harvest, but had not damaged fruit.

New Zealand Citrus Growers said the flooding had "no negative impact" on satsuma mandarins expected to be on sale from the end of the month.

Rabobank Global Dairy Top-20 Survey: Consolidation accelerates, Chinese players rise, and US companies slip

Monday 9 September 2013

In its latest survey of the world's largest dairy companies, Rabobank highlights the trends affecting the giants of one of the world's most dynamic food sectors. While the top-5 dairy players – Nestlé (Switzerland), Danone (France), Lactalis (France), Fonterra (New Zealand), and FrieslandCampina (Netherlands) – continue to drive consolidation and maintain a firm hold on their positions, elsewhere there is much movement. Chinese players Yili and Mengniu continue their ongoing rise, while U.S. giants such as Kraft Foods slipped down the rankings.

"While the top five remain unchanged, there are now two Chinese companies in the top-15. There were none in the top 20 until 2008," commented Rabobank analyst Tim Hunt. "In contrast the lack of a US-based global consolidator is seeing the rankings of US companies decline."

Nestlé extended its lead at the top of the table, with organic growth and the purchase of Pfizer's infant nutrition business contributing to 23 percent revenue growth in dairy sales. Despite Nestlés performance, almost all of the top-20 felt the stiff headwinds of a slow global economy, EU recession and maturing Western dairy markets in 2012. At least six companies saw their dairy revenues actually decline in 2013 (in local currency terms). Slowing organic growth potential is placing more pressure on companies to consolidate local industries and to seek growth via acquisition, contributing to the flurry of recent activity in the top-20. Companies are also actively positioning themselves to access stronger growth markets abroad.

The Chinese government's desire for domestic consolidation and vertical integration, together with local market growth, will almost certainly underpin further growth of the Chinese giants Yili and Mengniu. A combination of confinement to the domestic market and a lack of sizeable acquisitions has seen the rankings of US companies decline in recent years. Kraft slipped seven places following the split of its US grocery business from Mondelez, while Dairy Farmers of America saw sales decline in 2012 on an organic basis. Dean foods fell a place on the back of the sale of WhiteWave and Morningstar and the contraction of the US fluid market.

"With the rapid growth of the Chinese giants, it is quite possible that the US giants will be pushed further down the list in coming years, with the global landscape largely being shaped by others at present," explained Hunt. "Size should not be a goal in itself, and US companies can participate in growth offshore by developing their export businesses. However, with much of the growth opportunities in dairy likely to come outside of the US in coming years, US companies will need to think about whether being an unaligned exporter with no offshore footing will be enough to secure a fair share of the growth and value available in coming years.

Appendices

Fonterra
Dairy for life

Appendix 1: Financial information for FY13 (August 2012 – July 2013)

Fonterra Co-operative Group Limited is a co-operative company incorporated and domiciled in New Zealand. Fonterra is registered under the Companies Act 1993 and the Co-operative Companies Act 1996, and is an issuer for the purposes of the Financial Reporting Act 1993. Fonterra is also required to comply with the Dairy Industry Restructuring Act 2001. The parent entity owns the co-operative shares, buys milk from farmer shareholders, and contains the group corporate functions. The group financial statements are for the parent entity, its subsidiaries and the group's interests in its equity accounted investees.

KEY FINANCIALS

NZD MILLION	YEAR ENDED 31 JULY 2013	YEAR ENDED 31 JULY 2012	CHANGE
Volume ('000 MT)	3,958	3,941	
Revenue	18,643	19,769	(6%)
Gross margin	3,032	3,048	(1%)
Gross margin percentage	16.3%	15.4%	
Operating expenses	(2,256)	(2,238)	1%
EBIT	937	987	(5%)
Normalised EBIT	1,002	1,028	(3%)
Normalised EBIT percentage	5.4%	5.2%	
Normalised EBITDA	1,532	1,520	1%
Net profit after tax	736	624	18%
Earnings per share (cents per share)	44	41	7%
Milk collected 2012/13 Season (million kgMS)	1,463	1,493	(2%)
Operating cash flows	997	1,390	(28%)
Investing cash flows	(868)	(826)	5%
Debt to debt plus equity ratio	39.6%	39.1%	
Return on Capital Employed	8.8%	9.3%	

VOLUME

NZ MILK PRODUCTS SALES VOLUME

↑1%

AUSTRALIA & NEW ZEALAND[1]

↓2%

ASIA, AFRICA & MIDDLE EAST

↑11%

LATIN AMERICA

↑6%

VALUE

FINAL CASH PAYOUT

$6.16 ↓4%

NORMALISED EBIT

$1,002M ↓3%

NET PROFIT AFTER TAX

$736M ↑18%

EARNINGS PER SHARE

44CPS ↑7%

NORMALISED EBIT

$1BN[1]

INCOME STATEMENT

FOR THE YEAR ENDED 31 JULY 2013

	NOTES	GROUP $ MILLION		PARENT $ MILLION	
		31 JULY 2013	31 JULY 2012	31 JULY 2013	31 JULY 2012
Revenue from sale of goods		18,643	19,769	8,649	9,050
Dividends received		–	–	264	114
Total revenue		18,643	19,769	8,913	9,164
Cost of goods sold	1	(15,611)	(16,721)	(8,649)	(9,050)
Gross profit		3,032	3,048	264	114
Other operating income		105	132	55	56
Selling and marketing expenses		(622)	(568)	(13)	(10)
Distribution expenses		(514)	(501)	–	–
Administrative expenses		(766)	(784)	(240)	(241)
Other operating expenses		(354)	(385)	(56)	(73)
Net foreign exchange losses	3	(7)	(7)	–	–
Share of profit of equity accounted investees		63	52	–	–
Profit/(loss) before net finance costs and tax	2	937	987	10	(154)
Finance income	4	25	30	276	263
Finance costs	4	(294)	(340)	(251)	(287)
Net finance costs		(269)	(310)	25	(24)
Profit/(loss) before tax		668	677	35	(178)
Tax credit/(expense)	5	68	(53)	195	226
Profit for the year		736	624	230	48
Profit for the year is attributable to:					
Equity holders of the Parent		718	609	230	48
Non-controlling interests		18	15	–	–
Profit for the year		736	624	230	48

		GROUP $	
		31 JULY 2013	RESTATED[1] 31 JULY 2012
Earnings per share:			
Basic and diluted earnings per share	24	0.44	0.41

1 Restated for impact of the non-cash Bonus issue of shares, issue date 24 April 2013.

EQUITY					
Subscribed equity		5,807	5,690	5,807	5,690
Retained earnings		1,249	1,078	(900)	(584)
Foreign currency translation reserve		(266)	(211)	–	–
Cash flow hedge reserve		(82)	63	(60)	(67)
Total equity attributable to equity holders of the Parent		6,708	6,620	4,847	5,039
Non-controlling interests		40	35	–	–
Total equity		6,748	6,655	4,847	5,039

STATEMENT OF FINANCIAL POSITION

AS AT 31 JULY 2013

	NOTES	GROUP $ MILLION		PARENT $ MILLION	
		31 JULY 2013	31 JULY 2012	31 JULY 2013	31 JULY 2012
ASSETS					
Current assets					
Cash and cash equivalents		330	1,033	42	793
Trade and other receivables	8	2,054	2,302	9,112	9,125
Inventories	9	3,078	2,981	–	–
Tax receivable		26	18	–	–
Derivative financial instruments		100	275	103	270
Other current assets		58	83	–	–
Total current assets		5,646	6,692	9,257	10,188
Non-current assets					
Property, plant and equipment	10	4,807	4,569	208	210
Investment in subsidiaries		–	–	6,895	6,895
Equity accounted investments	11	449	439	–	–
Intangible assets	12	2,858	2,882	87	77
Deferred tax asset	16	217	99	444	385
Derivative financial instruments		127	198	127	198
Other non-current assets		269	238	10	9
Total non-current assets		8,727	8,425	7,771	7,774
Total assets		14,373	15,117	17,028	17,962
LIABILITIES					
Current liabilities					
Bank overdraft		1	42	–	–
Borrowings	15	1,569	1,204	1,321	999
Trade and other payables	13	1,491	1,386	7,033	7,053
Owing to suppliers		711	1,083	780	1,134
Tax payable		23	28	–	–
Derivative financial instruments		149	255	146	247
Provisions	14	82	83	14	20
Other current liabilities		52	44	–	–
Total current liabilities		4,078	4,125	9,294	9,453
Non-current liabilities					
Borrowings	15	3,108	3,745	2,508	3,015
Derivative financial instruments		346	413	346	413
Provisions	14	76	81	33	42
Deferred tax liability	16	6	85	–	–
Other non-current liabilities		11	13	–	–
Total non-current liabilities		3,547	4,337	2,887	3,470
Total liabilities		7,625	8,462	12,181	12,923
Net assets		6,748	6,655	4,847	5,039

Cash flows from financing activities				
Cash was provided from:				
– Proceeds from borrowings	**3,188**	2,215	**2,914**	1,206
– Proceeds from issue of equity instruments	**653**	505	**611**	505
– Proceeds for equity instruments not yet issued	**–**	44	**42**	44
– Proceeds from settlement of borrowing derivatives	**3**	13	**–**	–
– Interest received	**26**	31	**13**	18
Cash was applied to:				
– Interest paid	**(334)**	(406)	**(297)**	(309)
– Repayment of borrowings	**(3,268)**	(2,097)	**(2,998)**	(1,214)
– Settlement of borrowing derivatives	**–**	(5)	**–**	–
– Surrendered/cancelled equity instruments	**(475)**	(155)	**(475)**	(155)
– Dividends paid to non-controlling interests	**(14)**	(19)	**–**	–
– Dividends paid to equity holders of the Parent	**(546)**	(475)	**(546)**	(475)
– Equity transaction costs	**(18)**	–	**(18)**	–
– Other cash outflow	**(1)**	–	**–**	–
Net cash flows from financing activities	**(786)**	(349)	**(754)**	(380)
Net (decrease)/increase in cash and cash equivalents	**(657)**	215	**(751)**	223
Cash and cash equivalents at the beginning of the year	**991**	762	**793**	570
Effect of exchange rate changes on cash balances	**(5)**	14	**–**	–
Cash and cash equivalents at the end of the year	**329**	991	**42**	793
Reconciliation of closing cash balances to the statement of financial position:				
Cash and cash equivalents	**330**	1,033	**42**	793
Bank overdraft	**(1)**	(42)	**–**	–
Closing cash balances	**329**	991	**42**	793

Parent undertakes financing activities for the Group. As a result receipts and payments from and to subsidiaries for operating and financing activities (including dividends) are settled on a net basis and presented in investing activities as net loans from Group entities.

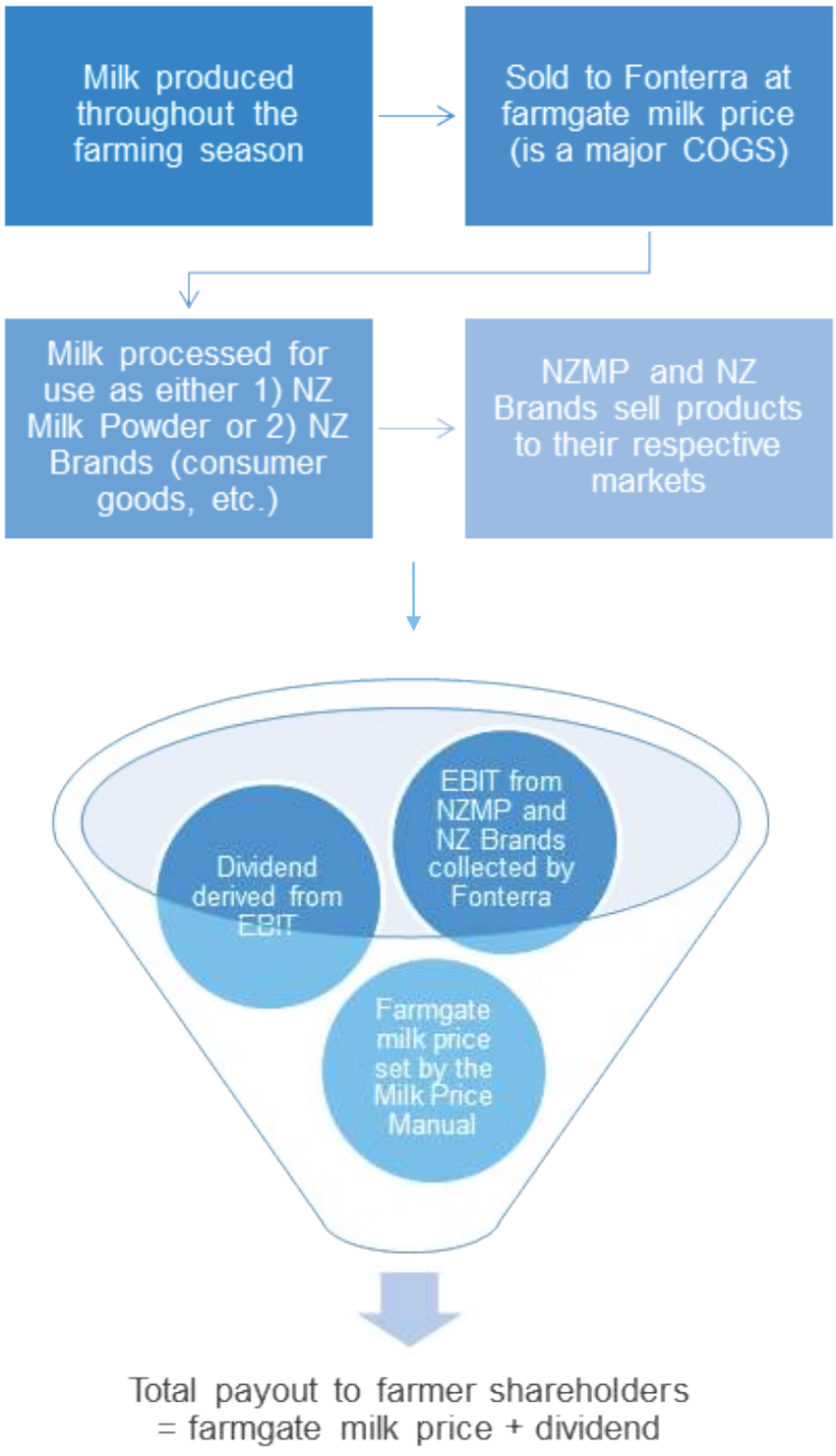
CASH FLOW STATEMENT

FOR THE YEAR ENDED 31 JULY 2013

	GROUP $ MILLION		PARENT $ MILLION	
	31 JULY 2013	31 JULY 2012	31 JULY 2013	31 JULY 2012
Cash flows from operating activities				
Profit/(loss) before net finance costs and tax	937	987	10	(154)
Adjustments for:				
Foreign exchange losses	1	16	–	–
Depreciation and amortisation	530	492	45	41
Movement in provisions	(17)	109	(8)	(9)
Other	(16)	(7)	(264)	(112)
	498	610	(227)	(80)
Increase/(decrease) in working capital:				
Inventories	(43)	307	–	–
Trade and other receivables	38	196	(3)	19
Amounts owing to suppliers	(410)	(567)	(396)	(561)
Payables and accruals	68	(64)	18	(12)
Other movements	(8)	(13)	–	–
Total	(355)	(141)	(381)	(554)
Cash generated from operations	1,080	1,456	(598)	(788)
Net taxes paid	(83)	(66)	–	–
Net cash flows from operating activities	997	1,390	(598)	(788)
Cash flows from investing activities				
Cash was provided from:				
– Proceeds from disposal of property, plant and equipment	22	11	–	–
– Proceeds from settlement of net investment hedges	–	26	–	–
– Proceeds from sale of Group entities and other business operations	5	–	–	–
– Net loans from Group entities	–	–	654	1,435
– Other cash inflow	5	–	–	–
Cash was applied to:				
– Acquisition of property, plant and equipment	(701)	(673)	(27)	(19)
– Acquisition of intangible assets	(147)	(184)	(26)	(25)
– Outflows on settlement of net investment hedges	–	(2)	–	–
– Acquisition of Group entities and other business operations	(49)	–	–	–
– Advances made to equity accounted investees	(2)	(4)	–	–
– Other cash outflow	(1)	–	–	–
Net cash flows from investing activities	(868)	(826)	601	1,391

Appendix 2: Basic overview of financial flows throughout the value chain

The purchase of milk is a cost to Fonterra of sourcing the raw ingredients needed in order to sell NZ Milk Powder and products under the umbrella of NZ Brands. Fonterra's responsibility to its farmer shareholders is to pay out the maximum sustainable milk price as set by the Fonterra Board by reference to the milk price derived by the Milk Price Manual. However, doing so tightens its margins and reduces the profitability of Fonterra through increased costs. Consequently, when the dividend payment for the year is being set by the Board, there is generally a negative relationship between the farmgate milk price and dividend. Fonterra reconciles the competing incentives within this relationship by the Milk Price Manual being written so that the milk price is set in an independent way free of the incentive the co-operative would have to pay a lower milk price and hence reduce its costs.



Appendix 3: Possible product combinations from raw milk production

There are five basic combinations (or "streams") of various milk derived products that can be made, each necessitating their own extraction and filtration process. The below graphic illustrates which combinations of products can be made and where in the stream each product sits relative to one another.

1. Whole Milk Powder → Butter → Butter Milk Powder

2. Skim Milk Powder → Butter ↑ → Butter Milk Powder
   Skim Milk Powder → Anhydrous Milk Fat → Butter Milk Powder

3. Cheese → Butter → Butter Milk Powder → Sweet Whey Powder
   Cheese → Butter → Butter Milk Powder → Whey Protein Concentrate Lactose

4. Casein → Butter → Butter Milk Powder → Whey Protein Concentrate → Lactose or Alcohol

5. Milk Protein Concentrate → Butter → Butter Milk Powder → Milk Permeate

6.

NB: "↑" indicates that there is a large increase in the amount of butter that can be made in this stream compared to the whole milk powder stream.

Appendix 4: Application of Dairy Products

Product	Application
Milk powder	Recombination of milk
	Bread making
	Pastry dough
	Egg substitute in baking
	Chocolate
	Sausages
	Ingredient in nutritional products
	Ice cream
Butter	Butter spreads
	Cooking/baking ingredient
Cheese	Standard cheese
	Specialty cheese
	Shredded cheese
	Processed cheese
Casein	Ingredient in nutritional products
	Coffee creamer
	Processed cheese
	Imitation cheese
	Bakery glazes
	Infant formula
	Coating for paper/cardboard
	Adhesive for wood
	Synthetic fibres
	Leather tanning
	Paints
	Plastics
Whey powder	Desserts
	Soups/sauces
	Clinical foods
	Baby food
	Sports supplements
	Chocolate
	Bakery products
	Ice cream
Milk protein concentrate	Nutritional drinks
	Cheese
	Cultured foods/yoghurt

Appendix 5: Fonterra Brands

Fonterra's Consumer Brands businesses include Fonterra Australia/New Zealand, Fonterra Asia/Africa, Middle East and Fonterra Latin America. As well as trusted consumer brands, these businesses also sell foodservice solutions in conjunction with Fonterra's global foodservice business.

In both Australia and New Zealand Fonterra holds the number one or two leadership positions in cheese, spreads, yoghurt and dairy desserts. In New Zealand this is also the case for milk, flavoured milk and ice cream.

The Anmum Materna™ product is the leading milk for pregnant women across five markets in Asia, and the Anlene™ beverage is the clear leader in the bone health milk segment across Asia and the Middle East.

Consumer products produced by Fonterra's Soprole business hold around a quarter of the total dairy market in Chile, while Fonterra's consumer business in other Latin American countries operate through the Dairy Partners Americas (DPA) joint venture in Brazil, Venezuela, Ecuador and Argentina.

Mainland, Anchor, Fresh 'n' Fruity, Anlene, Anmum, Fernleaf, Ratthi, Saprole, Dos Alamos and Huesitos are trademarks of the Fonterra group of companies.

Appendix 6: Fonterra's global presence

Top 20 export destinations for Fonterra – product tonnes, 2012

Destination/Product	Cheese	Fluid and Fresh Dairy	Milk Fat	Other Products	Powder	Protein	Whey Products	
Algeria	3,156	15	8,310	0	65,473	13	0	**76,966**
Australia	39,491	12,959	16,394	65,041	29,613	2,073	9,838	**175,409**
China	14,288	24,707	36,251	1,231	433,427	9,084	8,113	**527,101**
Egypt	9,957	0	32,266	0	15,815	22,516	474	**81,027**
Europe	16,703	1,671	39,904	6,336	3,332	14,977	18,600	**101,524**
Indonesia	10,773	2,886	8,289	321	58,637	2,685	1,339	**84,931**
Japan	55,582	4,359	4,110	13,062	15,970	8,978	7,402	**109,464**
Korea, Republic of	20,083	3,107	3,021	9,628	1,616	2,766	672	**40,892**
Malaysia	4,871	6,571	9,012	3,575	69,811	2,535	6,199	**102,573**
Mexico	3,243	44	22,595	20	14,123	5,370	669	**46,063**
Nigeria	17	807	4,360	0	43,752	0	235	**49,170**
Philippines	8,833	32,451	13,537	1,063	45,017	1,286	401	**102,587**
Saudi Arabia	15,844	2,120	18,248	300	58,667	3,247	0	**98,426**
Singapore	1,529	7,186	9,397	4,879	49,217	3,716	3,252	**79,174**
Sri Lanka	247	115	461	13	51,859	24	153	**52,872**
Taiwan	4,952	4,659	10,252	1,258	36,076	305	478	**57,981**
Thailand	2,250	9,938	7,004	3,546	53,795	100	1,143	**77,775**
United States	11,462	65	15,958	3,151	3,490	80,863	43,228	**158,217**
Venezuela	810	374	259	0	87,719	627	23	**89,812**
Vietnam	909	1,909	11,381	253	37,689	106	470	**52,717**
	225,002	**115,942**	**271,007**	**113,676**	**1,175,095**	**161,270**	**102,690**	**2,164,682**

Top 20 export destinations for Fonterra – value of products shipped to country, $US, 2012

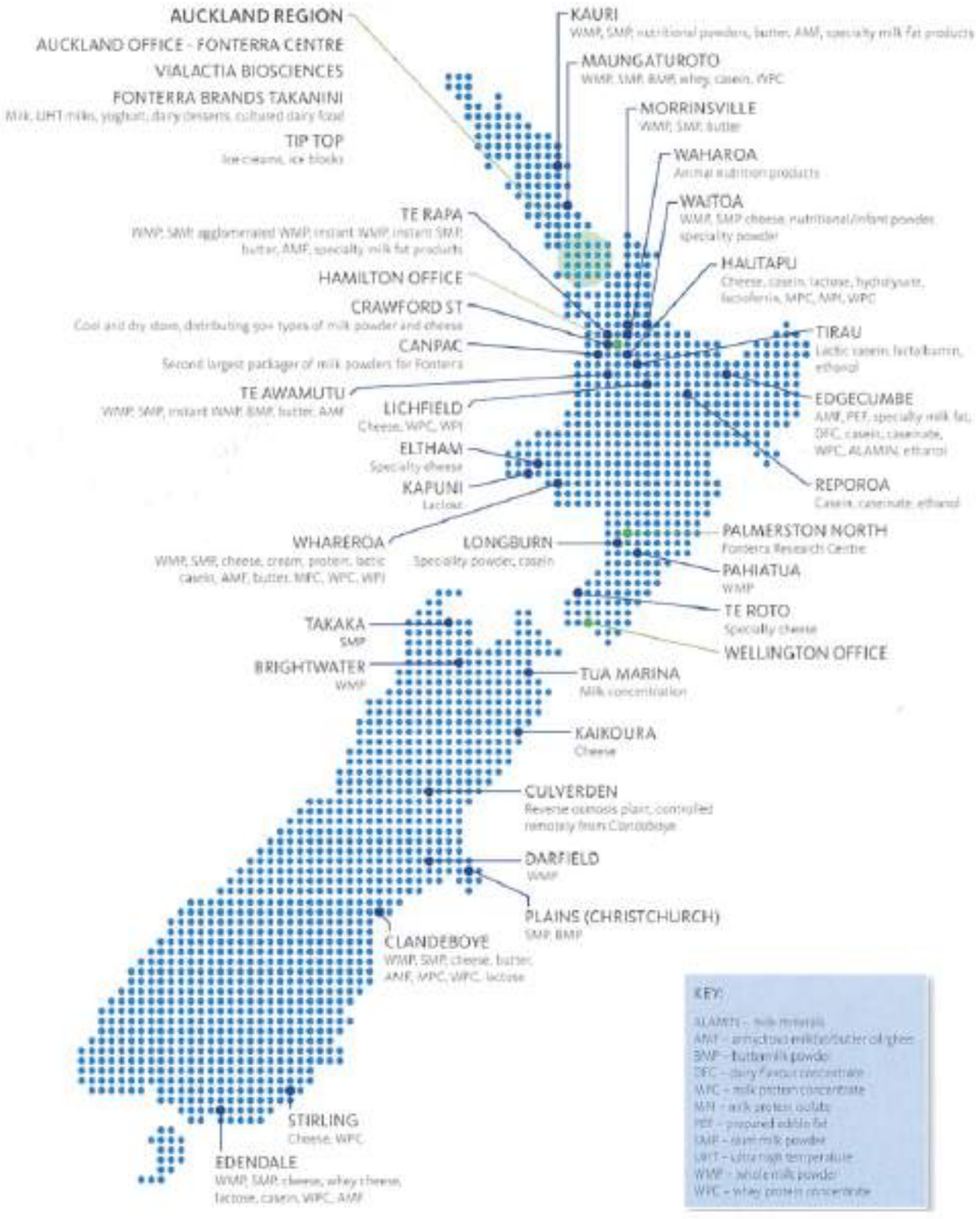
Destination/Product	Cheese	Fluid and Fresh Dairy	Milk Fat	Other Products	Powder	Protein	Whey Products	
Algeria	12,616,166	45,728	33,832,833	0	252,176,035	96,004	0	**298,766,765**
Australia	164,965,109	43,179,094	59,773,570	394,185,947	119,351,148	20,450,292	34,497,169	**836,402,330**
China	64,011,997	51,767,780	142,654,819	17,022,975	1,579,524,835	81,210,923	74,571,948	**2,010,765,276**
Egypt	39,187,645	0	117,116,093	0	57,069,555	32,163,412	2,476,789	**248,013,494**
Europe	64,156,977	7,238,419	140,263,142	35,727,454	16,110,872	126,611,129	47,712,551	**437,820,544**
Indonesia	41,948,209	7,632,271	31,801,007	2,877,205	205,630,814	25,300,870	3,654,167	**318,844,543**
Japan	236,958,869	15,116,373	13,215,288	50,215,220	47,491,304	99,017,234	55,116,149	**517,130,438**
Korea, Republic of	84,720,499	7,449,000	11,814,607	38,139,001	15,831,824	30,319,119	4,768,149	**193,042,199**
Malaysia	21,572,685	16,570,430	35,751,079	24,246,758	282,886,343	16,165,011	23,859,146	**421,051,452**
Mexico	13,273,621	139,612	87,094,336	86,605	50,568,043	44,043,620	6,896,334	**202,102,170**
Nigeria	51,720	2,593,786	15,737,455	1,687	143,569,695	5,563	535,205	**162,495,113**
Philippines	33,038,179	48,191,779	45,763,517	8,010,560	160,036,245	9,116,215	2,358,649	**306,515,144**
Saudi Arabia	55,685,342	5,983,745	64,112,462	1,620,581	201,428,780	17,762,612	0	**346,593,523**
Singapore	9,656,264	11,810,858	33,648,255	17,993,538	156,155,170	25,069,467	17,671,304	**272,004,855**
Sri Lanka	1,077,722	245,061	1,857,776	165,207	192,218,634	235,867	321,279	**196,121,545**
Taiwan	20,800,213	7,823,847	38,325,170	7,160,374	147,426,039	2,893,765	3,746,001	**228,175,408**
Thailand	10,382,107	31,457,235	27,731,064	9,793,186	193,584,057	1,007,064	2,866,887	**276,821,600**
United States	40,469,259	146,058	53,379,589	28,516,203	9,811,656	510,887,105	127,116,071	**770,325,941**
Venezuela	3,489,533	1,506,965	991,070	0	319,657,459	4,242,692	327,978	**330,215,697**
Vietnam	3,428,285	3,214,263	39,190,890	1,063,225	126,939,234	811,327	565,624	**175,212,848**
	921,490,401	**262,112,305**	**994,054,021**	**636,825,726**	**4,277,467,743**	**1,047,409,291**	**409,061,400**	**$8,548,420,886**

NB:

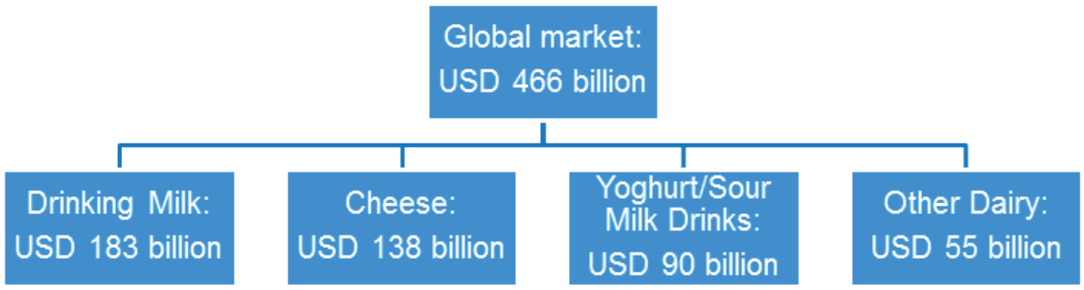
- Financial figures above are not necessarily indicative of the potential revenue from the sale of each product category, and are only a measure of the value of products being shipped.
- Fonterra exports (in the form of various products) approximately 84 percent of all milk produced in New Zealand.
- All figures above have been calculated using publically available trade data.

	Current % of Global Consumption	Market Type	Opportunities for Fonterra	Constraints for Fonterra	Fonterra Presence
EU	19%	Mature	High dairy consumption, high incomes	Economic uncertainty, saturated, predicted supply surplus, strong trade protectionism	5 sales offices, strong presence in pharmaceutical applications
North America	13%	Mature	High dairy consumption, high incomes	Saturated, trade quotas for dairy, free trade agreement in place among North American countries	2 sales offices, joint venture with Dairy Farmers of America, 1 technical centre
Southern Cone (Argentina, Brazil, Chile, Paraguay, Uruguay, Venezuela)	7%	Emerging	Growing incomes, traditional consumers of dairy	Free trade agreement in place among South American countries	4 sales offices, majority share in dairy manufacturer Soprole (including 1 manufacturing site in Brazil), joint venture with Nestlé across Latin America
Middle East/North Africa	7%	Emerging	Growing incomes, growing awareness of health benefits of dairy	Tariffs in place	8 sales offices, 1 processing site (in Saudi Arabia), strong consumer brands retail presence
India	17%	Emerging	Growing incomes, traditional consumers of dairy	High tariffs in place, aiming for self-sufficiency	Small office maintained
China	6%	Emerging	Growing incomes, growing awareness of health benefits of dairy	Tariffs in place	4 sales offices, Fonterra-owned farms
Southeast Asia	7%	Emerging	Growing incomes, growing awareness of health benefits of dairy	Tariffs in place	10 sales offices, 4 manufacturing sites (in Sri Lanka and Malaysia), strong consumer brands retail presence
Russia	5%	Emerging	Growing incomes, traditional consumers of dairy	Tariffs in place	None

Appendix 7: Fonterra factory information

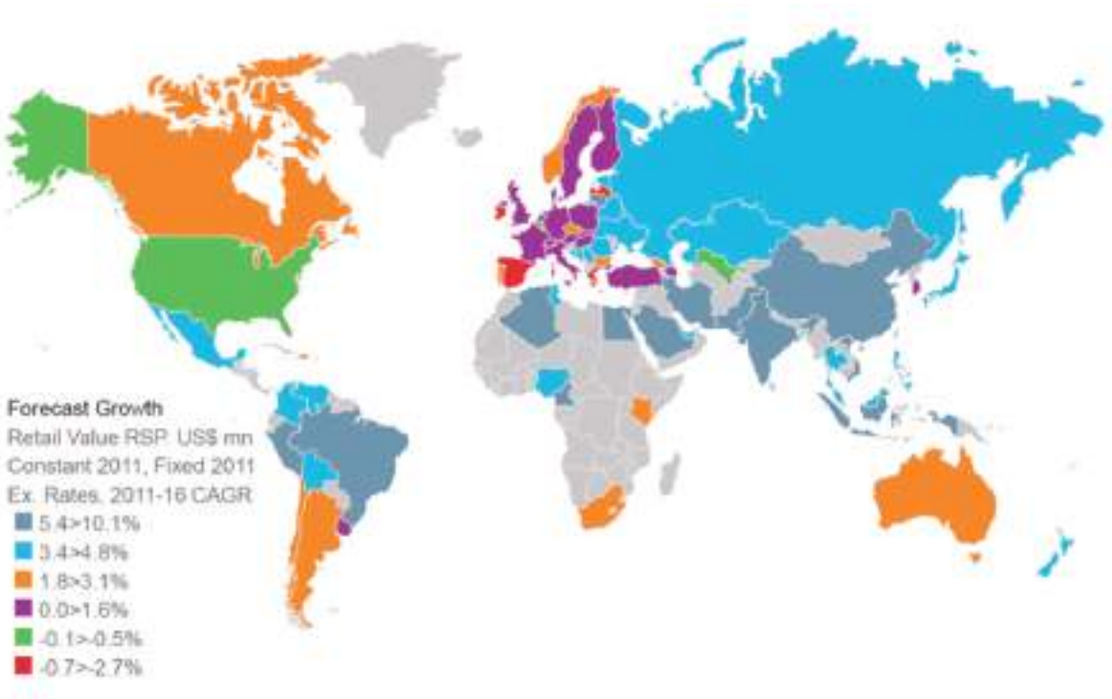


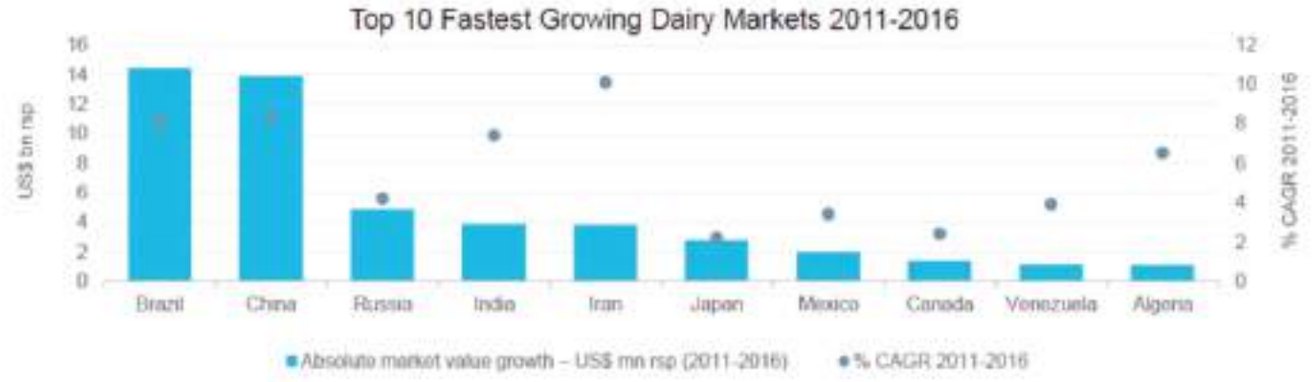
Appendix 8: Global market data



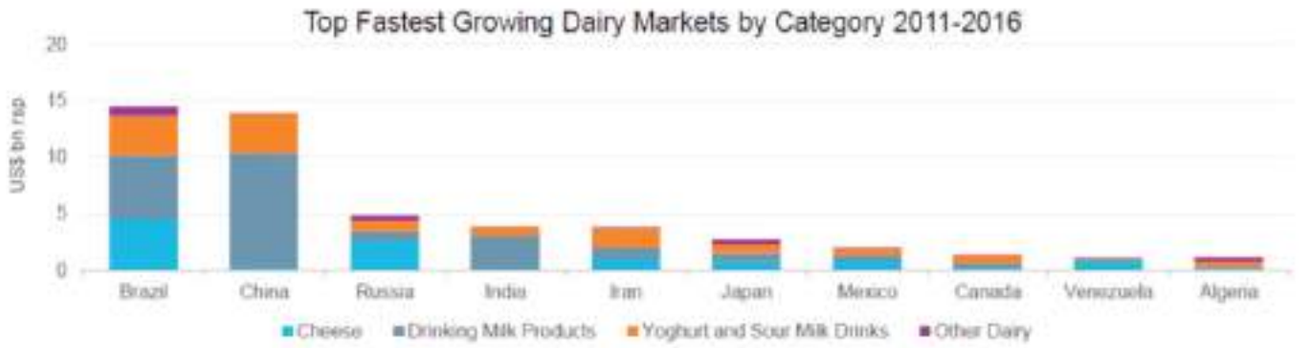
Key trends:

- The global dairy market is expected to have a cumulative average growth rate of three percent through to 2016 to a value of US$480 billion.
- Emerging markets are expected to contribute 95 percent of growth out to 2016.
- By 2016, regional contribution to global dairy sales is expected to have shifted; North American and Western European shares will decline while Asia Pacific, Latin American and Middle Eastern shares will increase.
- With CAGRs of eight percent, Brazil and China are expected to be the largest contributors to this regional shift. Other key growth markets are expected to be India, Russia and Iran.
- Large populations (88 percent of the global population are expected to live in emerging markets by 2016), high growth in GDP and disposable incomes, and currently low consumption will be the drivers of high growth rates.
- Key challenges in emerging markets will be underdeveloped infrastructure and supply chains, fragmented retail networks and rapid market consolidation as a result of heavy investment in expansion by multinational and leading local players.
- Growth in North America and Western Europe will be driven by trends of health, convenience, on-the-go consumption and value for money in difficult economic times.





Drinking milk products are expected to be the key driver of emerging market dairy growth. In China in particular, drinking milk products are predicted to account for 73 percent of total dairy market value expansion through to 2016.



Presence of key players in the global market:

	EU	North America	Latin America	Middle East/ North Africa	India	China	South-east Asia	Russia
Arla	✔	✔	✔	✔	✘	✔	✘	✔
Danone	✔	✔	✔	✔	✔	✔	✔	✔
Fonterra	✔	✔	✔	✔	✘	✔	✔	✘
Kraft	✔	✔	✔	✔	✔	✔	✔	✔
Lactalis	✔	✔	✔	✔	✘	✘	✘	✔
Mengniu	✘	✘	✘	✘	✘	✔	✘	✘
Nestlé	✔	✔	✔	✔	✔	✔	✔	✔
Parmalat	✔	✔	✔	✘	✘	✔	✘	✔
Sodiaal	✔	✔	✔	✘	✘	✔	✘	✘

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