

The Dairy Sector in New Zealand

Extending the Boundaries



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Share price data in this report is updated to September 30, 2020. In most cases financial results and market share data is provided up to the 2019 financial year as that is the latest year for which results for all companies are available.

Table of contents

Executive summary.....	3
History of dairy in New Zealand	4
Economic significance of the industry	5
Regulatory environment	6
Growing competition in the dairy sector	8
Competing corporate strategies	11
Competing organisational forms	13
Future challenges.....	15
Conclusions.....	16
Annex 1: OCD and Synlait	17

Executive summary

The dairy industry has long played a significant role in the New Zealand economy. Currently the sector accounts for around 20% of New Zealand's exports and around 3% of GDP.

The industry is highly exposed to international competition. Several of New Zealand's largest and, in some cases, most successful firms operate in the sector. These companies include majority farmer-owned co-operative Fonterra, publicly listed companies The a2 Milk Company and Synlait, privately owned companies Open Country Dairy and Miraka and several overseas-owned processing companies.

The structure and performance of the industry in New Zealand has changed significantly over the last few decades and has been heavily influenced by government policy. In particular, the Dairy Industry Restructuring Act, 2001 (DIRA) sought to promote a "national champion" for the dairy sector, Fonterra. At the same time, DIRA removed the single-exporter status of the NZ Dairy Board. This effectively deregulated dairy exporting by permitting dairy processors to sell their products on international markets.

As a national champion, Fonterra has fallen well short of expectations. Industry leaders projected that Fonterra's revenue was to grow at 15% p.a. to \$30 billion by 2010 as the company diversified into high-value consumer products. In reality, revenue has grown by less than 2.5% p.a. and the company has had to write-down millions of dollars from unsuccessful overseas investments.

The deregulation of dairy processing and exporting however has proven successful:

- several major new and innovative firms have entered the sector offering different products, with different business models and different corporate strategies. The most successful, The a2 Milk Company, now has a market capitalisation of around \$11 billion, almost twice that of Fonterra (approx. \$6.4 billion);

- the different companies have focused on and added value for the economy at different parts of the "value chain". Open Country, for example, has been highly successful at manufacturing and exporting base-ingredient cheese and milk powders while, at other end of the "value chain", companies like The a2 Milk Company and Synlait have developed B2B or high-end brands and distribution channels; and
- there is also competition for corporate form, with no single model (eg, co-operative, listed companies or private companies) proving dominant across the sector.

Competition for milk at the farmgate has increased gradually over the last two decades, with Fonterra's market share falling from 96% to 81% of the 21 billion litres of milk now produced each year. Nationwide, around 74% of farmers now have access to more than one processor to take their milk.

Looking ahead, there are numerous challenges facing the sector. These challenges include the international economic ramifications of COVID-19, higher community expectations for the environment and changing technologies and consumer tastes, with the competitiveness of new artificial products like synthetic milk as yet unknown.

The dairy industry will need to adjust and adapt to meet these challenges. But the openness of the sector to international competition, the range of different corporate strategies and structures and the ability of the sector to innovate and adapt mean it is likely to be well placed to continue to expand its production frontier and to play a major role in the New Zealand economy.

History of dairy in New Zealand

New Zealand has a long history of dairying. Traditionally, the dairy processing sector was comprised primarily of small co-operatives and some individually or corporately-owned factories. In 1920, 85% of the 600 dairy factories were co-operatives. From then on, more efficient transport and economies of scale in processing progressively led to larger factories and the closure of smaller ones. Co-operatives merged until, by the 1990s, the sector was dominated by the two largest dairy co-operatives, New Zealand Co-Operative Dairy Group Limited (NZDG) and Kiwi Co-operative Dairies Limited (Kiwi), alongside the sole statutory exporter, the New Zealand Dairy Board (NZDB).

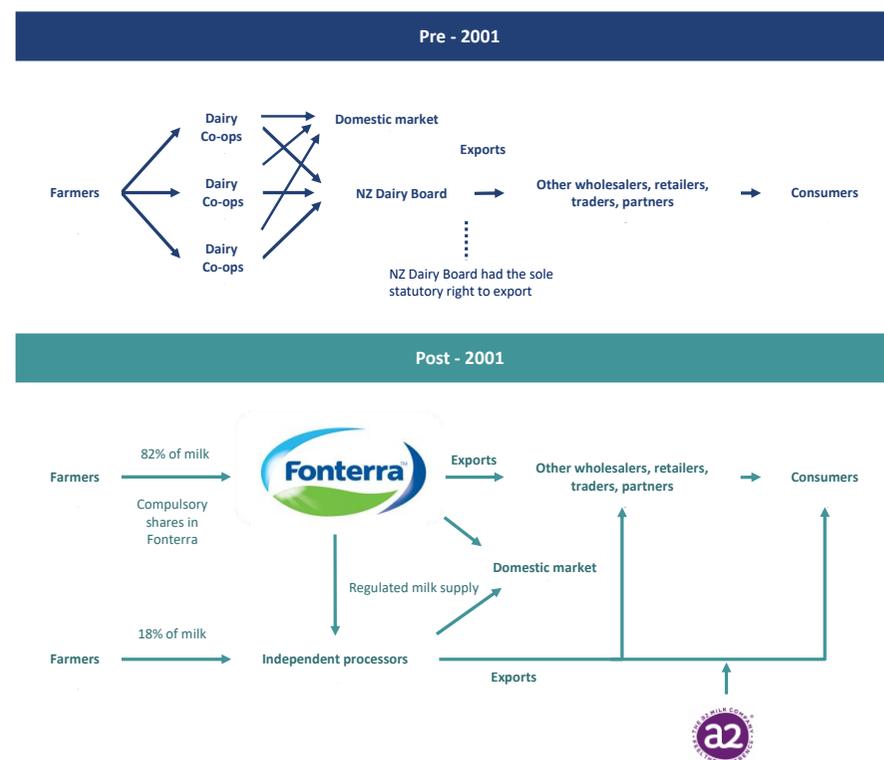
In 2001, an amalgamation of NZDG, Kiwi and NZDB established New Zealand's largest dairy processor, Fonterra. The amalgamation and establishment of Fonterra was made possible by legislation, the Dairy Industry Restructuring Act, 2001 (DIRA) which enabled the merger to bypass the Commerce Commission. Through the merger, the industry sought to realise efficiencies of scale and scope in the collection and processing of farmers' milk and to compete more effectively in international dairy markets.

Upon its creation, Fonterra collected approximately 96% of New Zealand's raw milk production. The remaining 4% was collected by Westland Milk Products (Westland) and Tatua Co-operative Dairy Company (Tatua), the only two co-operatives which elected not to participate in the amalgamation. Throughout the 2000's, new dairy processing companies entered the milk processing and exporting market, including Open Country Dairy (OCD), Synlait, Oceania Dairy and Miraka.

Around 95% of New Zealand dairy products is exported. That is, New Zealand produces almost twenty times more dairy products than the domestic market can consume.

Figure 1 shows the structure of the dairy industry pre and post the Fonterra amalgamation.

Figure 1: Changes in market structure following DIRA

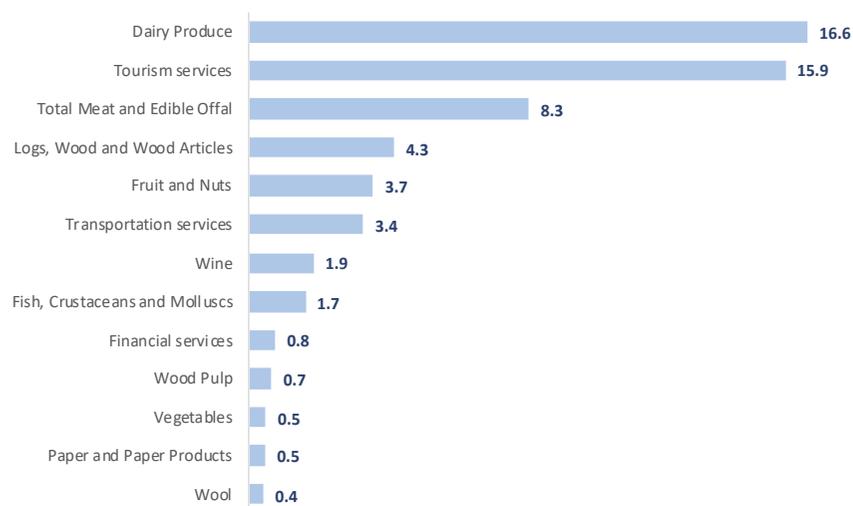


Post DIRA (2001) companies were legally allowed to export New Zealand dairy products for the first time in over fifty years. As is discussed below, at the same time as it created a dominant processor, Fonterra, DIRA also established an environment that facilitated innovation, allowing firms like the a2 Milk Company (A2M), Synlait and OCD to enter the market and compete on the international stage.

Economic significance of the industry

The dairy industry forms a significant part of the New Zealand economy, accounting for around 3% of GDP. Dairy is New Zealand's biggest export earner, with exports of approximately \$17 billion a year, accounting for 20% of our total exports (refer Figure 2).

Figure 2: Value of key New Zealand exports, 2020, \$ billion



Reflecting the large increase in milk volumes over the period, New Zealand's dairy exports have grown at an average rate (CAGR) of around 6.5% per year

¹ https://nzier.org.nz/static/media/filer_public/9f/0e/9f0e40ea-0178-4ef9-950f-5546ef483eec/dcanz_2018_final.pdf

² <https://www.mbie.govt.nz/assets/ebd383c353/investors-guide-to-the-new-zealand-dairy-industry-2017.pdf>

³ Nestlé is now a multiproduct food and beverage business, with dairy products contributing around 20% of revenue.

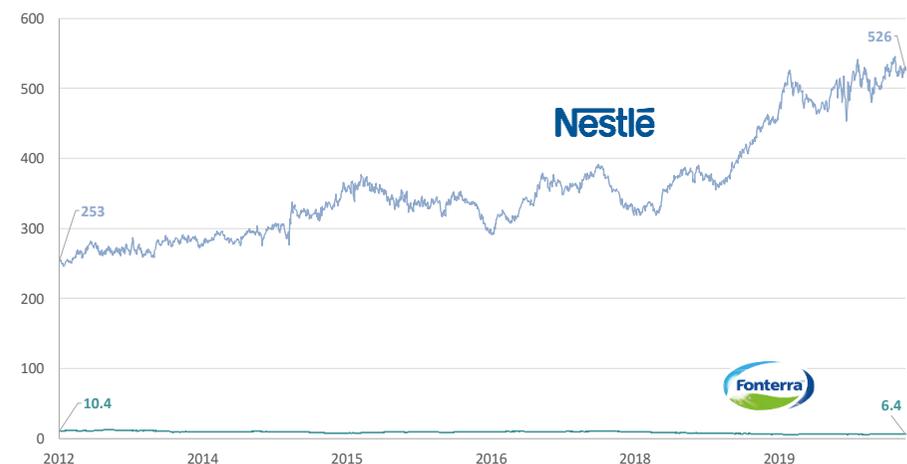
between 2004 and 2020. The value of dairy exports has almost tripled over the period, going from \$6.1b to \$16.6b p.a.

The dairy sector employs around 40,000 workers, with around 27,500 on farm and a further 13,000 in dairy processing. Employment in the sector has grown more than twice as fast as total employment, at an average of 3.7% per year since 2000.¹

While dairy is a significant part of the NZ economy, on an international stage New Zealand dairy remains a small player. NZ dairy exports account for around 3% of world dairy production.²

Several of NZ's dairy companies have established strong international niche-market positions (eg. ingredients for Fonterra and infant formula for Synlait), though are small in scale internationally. The NZDB was once compared to Nestlé as a major player on international markets. NZDB's successor, Fonterra, however, is a minor player compared to Nestlé, whose market capitalisation of \$526b dwarfs that of Fonterra's \$6b (refer Figure 3).^{3, 4}

Figure 3: Fonterra vs Nestlé market capitalisation, 2012-2020, \$ billion



⁴ Fonterra's share market capitalisation of approximately \$6.4b is consistent with the value of the company's reported net worth as at 31 July 2020 of \$6.7b. The market value of Fonterra would probably be higher if the company was not a co-operative, as the share price is likely to be discounted for the reduced liquidity of the shares and the absence of a premium for control.

Regulatory environment

The creation of Fonterra resulted in a lessening of competition at the farmgate and for the New Zealand domestic consumer. As a result, DIRA imposed requirements on Fonterra to promote contestability and efficiency in New Zealand dairy markets. Specifically, section 4(f) stipulates the purpose of the DIRA regulatory requirements is to “promote the efficient operation of dairy markets in New Zealand by regulating the activities of Fonterra to ensure New Zealand markets for dairy goods and services are contestable”.

The regulatory regime was designed to expire if and when the New Zealand dairy markets are considered to be sufficiently competitive, so that industry-specific regulation is no longer required over and above the normal application of general competition law.

Dairy Industry Restructuring Amendment (No 3) Act

In July 2020, DIRA was amended to reduce some of the regulatory requirements on Fonterra including by:

- removing (from June 2023) the open-entry provision that required Fonterra to accept milk from farmers and allowing Fonterra to refuse milk supply from farmers where milk is not compliant with Fonterra’s standards of supply or is supplied from newly converted dairy farms; and
- removing (from June 2021) the requirement for Fonterra to supply regulated milk to independent processors with their own supply of 30 million litres or above in a single season.

Some have expressed concern that these changes will make it hard for any new start-ups in the dairy sector, as the absence of the automatic right of farmers to switch back to Fonterra may reduce farmer’s willingness to switch processors.⁵

⁵ <https://keithwoodford.wordpress.com/2020/08/23/big-win-for-fonterra-from-latest-dira-amendments/>

At the same time, the Amendment provides for a review of the need for DIRA every four to six years. The Amendment also increased the volume of milk supplied by Fonterra to Goodman Fielder for the domestic market, as discussed below.

Domestic dairy-products market

Given the dominant position Fonterra was granted under the DIRA and the absence of any real prospect of a competing supply of milk for a domestic-orientated processor, DIRA required Fonterra to supply its main competitor in the domestic market, Goodman Fielder, sufficient milk to supply around half the New Zealand domestic dairy products market.

The Commerce Commission has estimated that if the domestic dairy products market-oriented DIRA regulations were removed, the domestic raw milk price would increase by around 25%. This significant increase in the milk price reflects, amongst other things, Fonterra’s dominance at the farmgate, the seasonality of New Zealand milk supply and the unattractiveness of the domestic market owing to its size relative to the export market for New Zealand processors.

Deregulation: environment for innovation

As noted above, before the deregulation of dairy exporting in 2001, all exports of dairy products had to be sold and marketed through the NZDB. In addition, the NZDB’s pricing behavior was exempt from the Commerce Act, 1986 and only co-operatives were able to hold shares in the NZDB. Under the 2001 merger legislation, the NZDB’s statutory marketing privileges were revoked and the export regime was liberalized.⁶

The deregulation of dairy exporting has created an environment that allowed new dairy processors to enter the market, encouraged innovation in product design, business strategies and organizational form, and allowed a range of dairy companies to compete on the international front. The threat of competition has also put some pressure on Fonterra to improve its efficiency and innovate.

⁶ <https://www.oecd.org/daf/competition/abuse/35910977.pdf>

Synlait, OCD and A2M are all examples of now sizeable new companies that have emerged since deregulation of dairy exporting. Figure 4 below presents the market capitalisations of the three share-market listed dairy exporters - Fonterra, A2M and Synlait – over the last six years.

Figure 4: Market capitalisations, 2014-2020, \$ billion



As Figure 4 illustrates, A2M in particular has recorded strong growth over the last six years and now has a market capitalisation of around NZ \$11b, just under twice that of Fonterra (\$6.4b). Fonterra’s market value declined between 2018 and 2019, though it has recovered somewhat in recent months as the company has sold down non-performing overseas assets, reduced debt and focused on its core businesses of milk collection and supplying ingredients on the international market. At the same time, competitors Synlait and unlisted OCD have gained a greater foothold in the market. Annex 1 tells the OCD and Synlait stories in more detail.

The following sections present further discussion of the range of companies now operating in the New Zealand dairy processing sector, their competing organisational forms, business strategies and different product lines. We also discuss briefly the increasing competition the industry may face from new products like plant-based milk substitutes and synthetic liquid products, alongside some other challenges the industry is facing.

Growing competition in the dairy sector

As noted above, Fonterra was formed with the view to it being a “national champion” for the dairy industry – an example of a state-backed “frontier firm”. Fonterra, however, has underperformed relative to its proponents’ expectations. Industry leaders projected at the time of its establishment that Fonterra’s revenue could grow at 15% p.a. to \$30 billion by 2010 as the company diversified into high-value consumer products. In reality, revenue has grown by less than 2.5% p.a. and the company has had to write-down millions of dollars from unsuccessful overseas investments.⁷

Fonterra’s share of the milk processed in NZ has fallen steadily from 96% to 81% as new entrants have entered the market and established themselves successfully. These competitors now collectively process 19% of New Zealand’s milk (refer Figure 5).

Figure 5: Domestic market share of dairy companies, 2001 and 2019, %

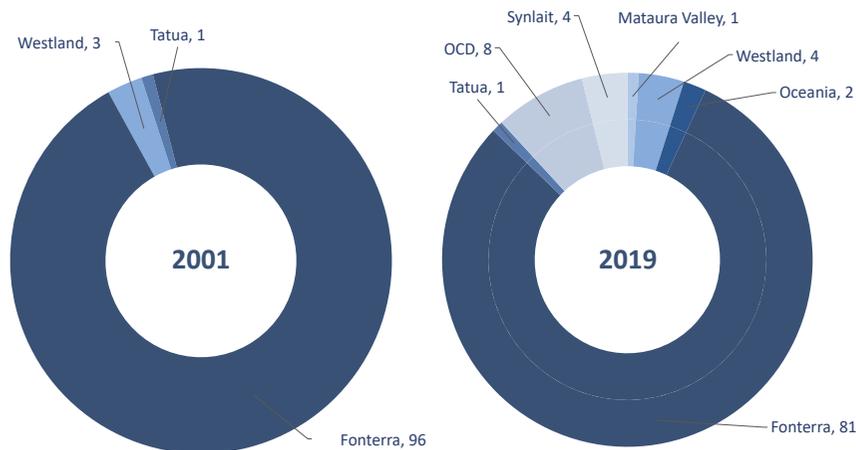
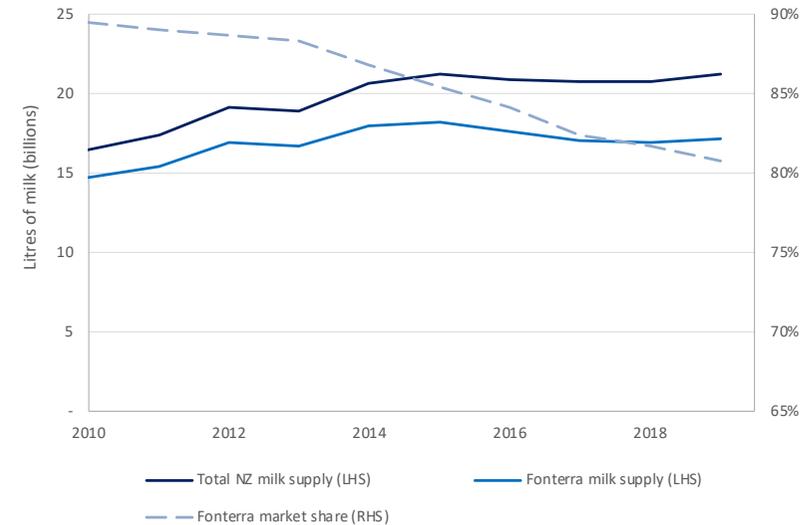


Figure 6 below presents the change in market share of Fonterra between 2001 and 2019.

Figure 6: NZ milk supply and Fonterra’s market share, 2010-2019



Despite the recent slowing in NZ milk production, from 2001 to 2017 total NZ milk volumes grew by 52% in total (or by around 470m litres per year). Accordingly, while Fonterra’s market share has fallen, its milk volume collections have grown by 37%. For a highly perishable product that can’t be stored, that growth carries with it the consequence of having to invest in increased processing capacity for the forecast seasonal peak milk volumes. This level of growth means that it has been very difficult to do anything with the additional volume other than to channel it into commodity exports.

⁷ <https://www.tdb.co.nz/TDB-Advisory-Fonterra-Long-Run-Financial-Assessment-Sept-18.pdf>

Rise of competitors since deregulation

Since the deregulation of dairy exporting in 2001, the collective size of Fonterra’s processing competitors has become significant. Figure 7 presents our estimated 2019 milk processing volumes for the six most substantial NZ competitors to Fonterra.

Figure 7: Milk volumes, 2019, litres billion

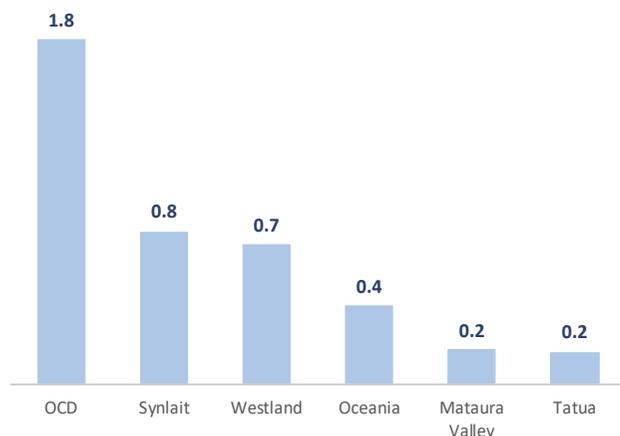
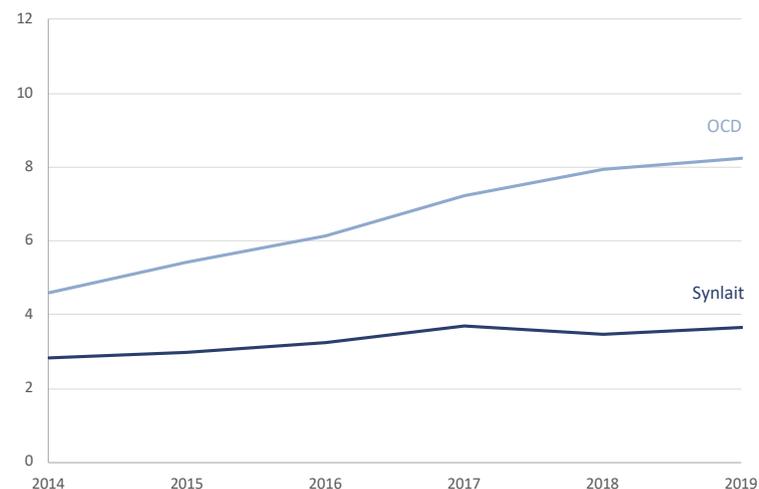


Figure 8 (right) presents the market shares of OCD and Synlait in terms of volume of New Zealand milk processed over the last six years. Both have an upward trend with OCD showing stronger growth.

Figure 8: OCD and Synlait market share (litres of milk), 2014-2019, %



A2M: The Uber of the dairy sector

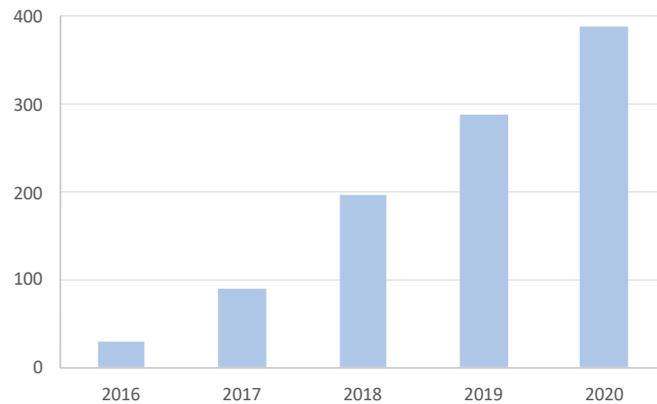
The a2 Milk Company (A2M) was founded in 2000, positioning itself as offering a healthier alternative to other cows’ milk via its a2 beta-casein certification. The company has seen exponential growth as a global leader in branded nutritional dairy products. A2M’s shares are publicly listed on the NZX and ASX. As Figure 4 in the previous section illustrates, its share price has grown rapidly, with the company now being one of the largest companies listed on the NZX.

Owning no cows, no farms and no processing factories, the company can be considered the “Uber of New Zealand’s dairy sector”. At least so far, A2M has been strictly a marketing and distribution company, having entered into strategic supply agreements with dairy processors in both foreign and domestic markets.⁸

⁸ A2M has recently announced it is looking to take a majority stake in Southland processor Mataura Valley Milk.

A2M has recorded strong revenue and profit growth, reporting a further 30% increase in profit in the 2020 financial year, as is visible in Figure 9 below. The company's market value today reflects its successes and its growth prospects in Australia, New Zealand, China and the USA across a range of fresh milk and milk-based nutritional products.

Figure 9: A2M Net profit after tax, 2016 – 2020, \$ million



A2M is a New Zealand success story and an example of how deregulation has led to the rise of highly successful companies in the New Zealand dairy industry, without special government support or promotion. Synlait and OCD are other examples (see Annex One).

Competing corporate strategies

As noted in the previous section, a feature of the New Zealand dairy industry over the last two decades has been the emergence of different processing and exporting companies, with different business strategies, positioning themselves at different points on the so-called “value chain”. The “value chain” for the dairy sector is illustrated in Figure 12 on the following page.

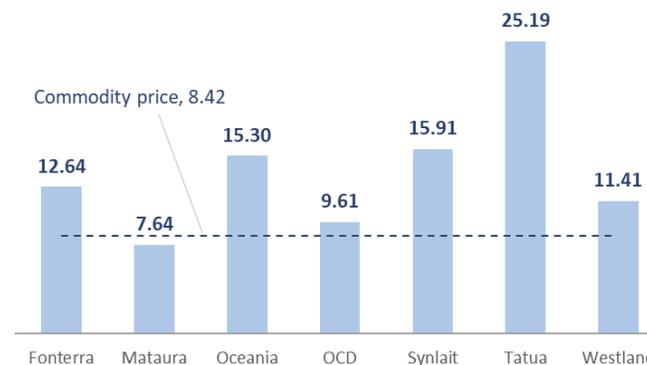
Open Country, for example, focuses on the cost-efficient production and distribution of more basic dry commodities like whole-milk powder, milk proteins and block cheese. At the other end of the “value chain”, A2M and Tatua have focused on supplying consumer-branded or niche-market products. Fonterra attempted to span the “value chain”, not only in New Zealand but across a number of different countries. Synlait has tended to operate in the middle of the “value chain”, with a business to business (B2B) strategy.

Market positioning and strategic direction

One measure of where a dairy company sits on the “value chain” is the company’s revenue per kilogram of milk solids (kgMS). High revenue per unit of product output indicates production of more specialised and higher cost (and potentially value-added) ingredients whereas low revenue per unit of output reflects a commodity focus for the firm. Figure 10 below provides the revenue per kgMS of each company in 2019. The revenue per kgMS acts as a proxy for the product mix of the firms.

Figure 10 depicts the differences in product choice among the competing dairy firms. OCD is primarily a commodity and base ingredients processor (though it has other products including own-brand organic milk) and exports all of its production. It received revenue per kgMS that is close to the regulated base milk price (\$8.42) as a result. At the other end of the spectrum Tatua produces specialty dairy products like hydrolysates, bionutrients, caseinates and whey compounds. As a result, Tatua receives a high level of revenue per kgMS. The other competing firms have a mixture of business strategies and receive revenue per kgMS somewhere between OCD and Tatua.

Figure 10: Revenue per kgMS, 2019, \$



Moving up the “value chain” - increased value or increased costs?

Figure 11 on the following page plots profitability (ROCE) per kgMS against total revenue per kgMS for the six dairy processors for which data is available. The relative size of each point on the diagram reflects the relative volumes of milk processed by each company. Tatua’s ROCE has been adjusted upwards to allow for part of its return to farmer-shareholders coming through a higher milk price payout.

Figure 11 illustrates that profitability (and thus economic value) can be created anywhere on the “value chain”. Open Country, for example, has regularly created economic value (ie, exceeded its cost of capital) by focusing on the cost-efficient production and distribution of basic dry commodities and ingredients like whole-milk powder, milk proteins and block cheese. At the other end of the so-called “value chain”, A2M, Synlait and Tatua have consistently performed well supplying B2B or consumer-branded or niche-market products.

These examples indicate that productivity (outputs/inputs) can be improved by reducing costs (inputs) or by increasing the volume or value of outputs.

Figure 11: ROCE and revenue per kgMS, 2010 – 2019

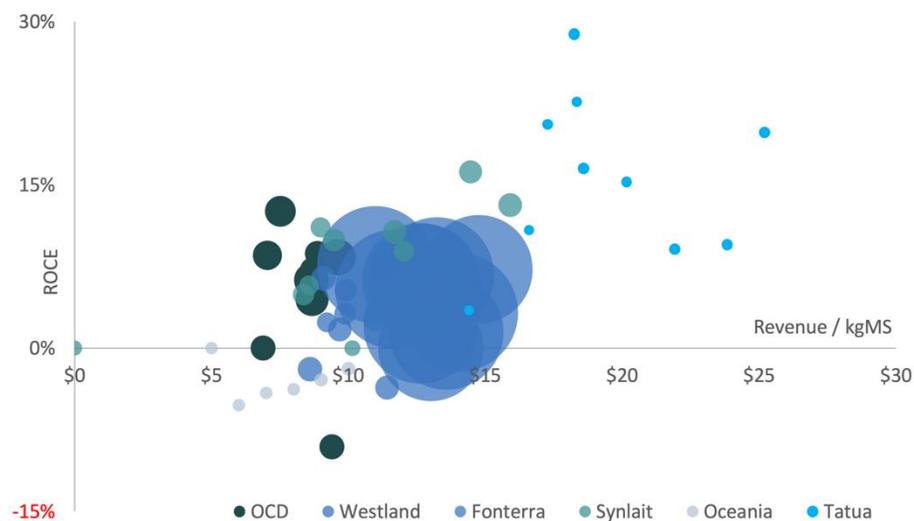
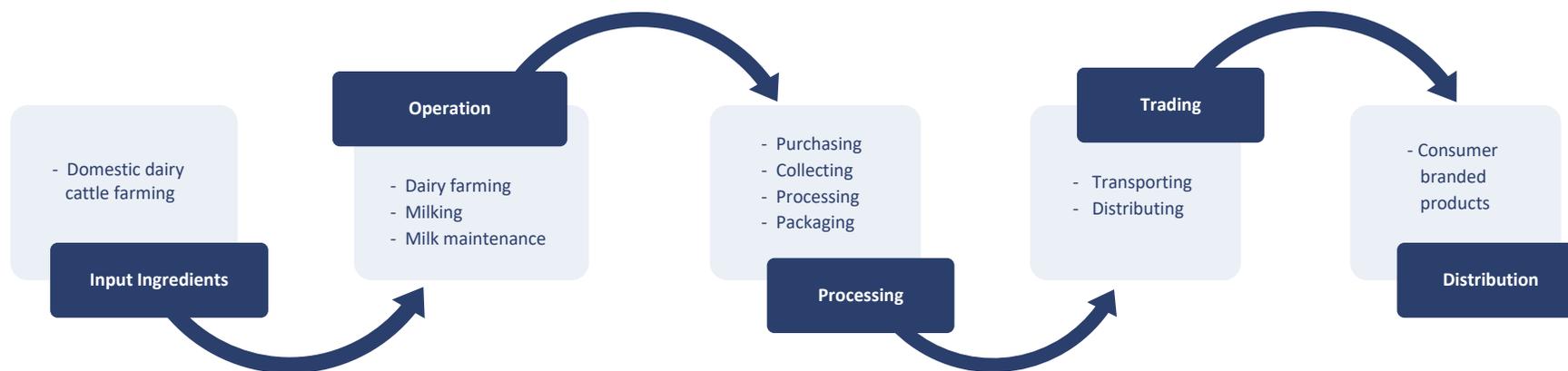


Figure 12: The “value chain” for the dairy sector



Fonterra and Westland both attempted to move up the “value chain” and into consumer brands. Moving up the “value chain” proved to be too costly, risky and capital intensive for either company to sustain. Fonterra’s core milk collection and ingredients (Foodservice) businesses have performed well, and the company has been successful in developing partnerships with a number of its major customers including Nestlé, Kraft and Abbott. However, Fonterra’s so called “Value-Add” segment, including its Consumer Services, China Farms and international milk pools units have tended to subtract rather than add value.⁹

Fonterra has over the last year or so refocused on a more conservative, core-business strategy. The company’s latest (31 July 2020) results report good progress in stabilising its financial position, with net interest-bearing debt down by \$1.1 billion (to \$4.7 billion) and dividends once more being paid.

The experiences from the dairy sector over the last two decades illustrate that to prosper at a company-level and a national level it is not necessary to move up the “value chain”. What adds value to a company and to the economy is growing revenue more quickly than costs are increasing. Moving up the “value chain” can destroy value in the company and the economy if it results in costs increasing faster than revenues.

⁹ Refer Northington Partners “Independent Assessment of Fonterra’s Financial Performance since Inception”, a report for Fonterra Shareholders’ Council, Nov 2018.

Competing organisational forms

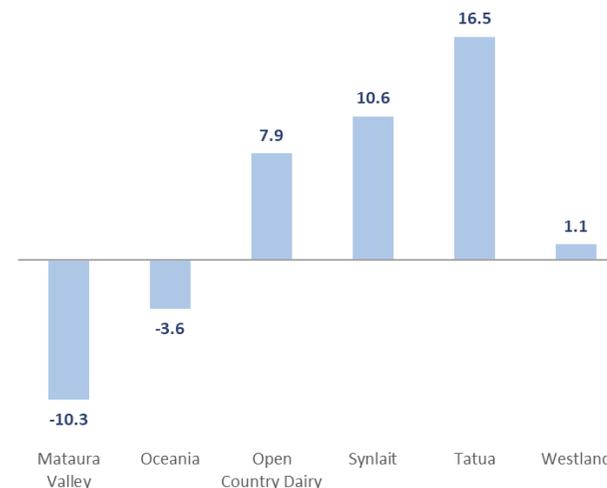
Throughout the last century co-operatives have dominated the dairy industry in New Zealand. In 2020 two main dairy-processing co-operatives remain: Fonterra the dominant milk processor in the country and Tatua, a highly successful niche operator producing specialised high-value products.

The corporate structures of the dairy companies now operating in New Zealand vary widely. The different corporate forms include:

- a majority farmer-owned co-operative (Fonterra);
- a wholly farmer-owned co-operative (Tatua);
- Westland Milk, a former co-operative and now owned by Chinese conglomerate, Yili Group;
- a publicly-owned but unlisted NZ company (OCD);
- NZX and ASX listed companies (A2M and Synlait) with proportions of each firm owned by offshore trade investors;
- a privately-owned company (Miraka) with an offshore trade investor with offshore distribution channels; and
- three privately-owned subsidiaries of offshore food companies (Mataura Valley, Oceania and Yashili), some with farmer shareholders and some with significant offshore distribution channels.

Figure 13 (right) provides the average return on capital employed (ROCE) over the last six years for the dairy processing companies.¹⁰ While the sample is small, there is no clear relationship between organisational form and financial performance. Some non co-operative companies like Synlait and OCD have had high average returns while others like Oceania have experienced low or negative returns. Some co-operatives, like Tatua, have performed well while others like Fonterra and Westland (a co-operative until 2019) have seen lower returns.

Figure 13: Average Return on Capital Employed, 2014 - 2019, %



The co-operative structure can be well suited to certain parts of the dairy sector. The high costs of transport and the perishable nature of raw milk mean farmers are typically highly dependent on their local processor and may wish to control it through a supplier-owned co-operative.

The co-operative structure however may well have impeded Fonterra's ambitious international growth plans. Fonterra's growth strategy required access to significant amounts of capital. As a supplier-owned cooperative, Fonterra's access to capital was constrained. Furthermore, arguably the priority for its limited capital tended to be given to building new factories to process the growing milk volumes rather than to market development and creating consumer brands. At least in part, the priority given to growing milk volumes reflected the requirement under DIRA (removed from June 2023) for Fonterra to accept virtually all milk.

¹⁰ ROCE is calculated as earnings before interest and tax divided by capital employed (net debt plus equity). Data is available for five of the dairy companies for six years with two years' data

available for Mataura Valley. Tatua's ROCE has been normalised to allow for the return to its famer-shareholders coming in part through a higher milk payout.

Ultimately, the optimal form for an organisation is a matter for its owners to decide. Different organisational forms will suit different circumstances. A key lesson from Fonterra is that it is important that the organisational form chosen is consistent with the strategy. From a public policy perspective, however, there is no reason for the government to promote one organisational form over another when it comes to commercial businesses.

Future challenges

Like other sectors in the economy, the dairy sector faces a number of challenges in the years ahead. These challenges include COVID-19, environmental concerns and potentially increasing competition from new products.

COVID-19

The international economic crisis arising from COVID-19 will have ramifications for many years. The economic downturn will impact on the demand for dairy products but not as much as sectors like tourism and education which have been particularly strongly hit by the virus.

Environmental challenges

Environmental concerns around water quality and New Zealand's ambition of being carbon neutral by 2050 are placing pressure on the dairy industry.

Over the past few years the government and the farming community have taken a number of steps to improve water quality. The Sustainable Dairy: Water Accord is a five-year voluntary commitment from New Zealand's dairy farmers, DairyNZ and dairy processors to improve New Zealand waterways. Measures taken include fencing off dairy cattle from waterways and installing bridges and culverts at stock crossing points.¹¹

The government has recently released the Freshwater National Policy Statement 2020 and the National Environmental Standards for Freshwater which provide direction to local authorities on managing activities that affect the health of freshwater catchments. Key policies include requiring mandatory and enforceable farm environment plans, putting controls on high-risk farm practices such as winter grazing and feedlots and setting stricter controls on nitrogen pollution.¹²

While improvements have been made and many dairy farmers are actively involved in restoring waterways and complying with environmental standards, water quality will continue to be a challenge for dairy farming.

On the carbon emissions front, Fonterra is the country's second largest coal user and approximately one third of the company's 30 manufacturing sites rely on coal as their primary source of energy. There are opportunities to convert coal boilers to burn wood pellets, but with natural gas unavailable in the South Island and transmission and distribution line upgrades required to use electricity, transitioning to cleaner fuels is a challenge.

Plant-based proteins and synthetic liquids

Demand for plant-based milk substitutes (eg, soy milk) is growing. Synthetic liquid products are also being developed that may pose threats to New Zealand's dairy-milk sector. There are a number of factors driving these trends such as environmental concerns, global population growth, rising income levels, food security, land and water scarcity and concern for animal welfare.

While the alternative protein industry is not currently considered a direct threat to New Zealand's meat and dairy industries, there is a sense of urgency for the agriculture sector to respond. Investing in the industry now or in the near future will help firms diversify and capture the economic, social and environmental benefits.

Many of the requirements for isolating and manufacturing plant proteins are similar to those for dairy proteins, creating an opportunity for expertise from the dairy industry to be applied to the development of plant-based proteins. Fonterra has already responded by investing in Motif, an ingredient innovation company with the goal of 'unleashing the promise' of plant-based foods. The challenge will be to adapt and apply the engineering expertise and manufacturing capabilities currently held within the dairy industry to develop new opportunities in plant-based proteins.

¹¹ <https://www.dairynz.co.nz/news/five-years-of-water-accord-shows-dairy-farmers-doing-their-bit-to-improve-water-quality/>

¹² <https://www.beehive.govt.nz/release/new-rules-place-restore-healthy-rivers>

Conclusions

Benefits of competition

- Fonterra was promoted as a “national champion” and meant to be a leading example of a frontier firm not only in the dairy industry but for New Zealand as a whole.
- Fonterra has disappointed on this front and has been overtaken in economic value creation by A2M, which has grown strongly despite no special support from the government.
- Deregulation of dairy exporting has seen a range of major processing companies enter the sector and prosper.

Innovation

- Innovation has been encouraged by open entry and competitive markets. The deregulation of dairy exporting has seen dairy processors enter the market and innovate and compete in terms of their products, business models, corporate strategies and organisational forms.
- Different companies have succeeded across different parts of the “value chain”. OCD has been highly successful at manufacturing and exporting cost-efficient commodity cheese and milk powders while towards the other end of the “value chain”, companies like Synlait and A2M have developed B2B or high-end brands and distribution channels.

Challenges for the dairy sector

- New Zealand’s Zero Carbon Plan requires the agriculture sector to cut greenhouse gas emissions by 43 - 60% by 2050.
- Synthetic products could replace traditional production due to lower carbon emissions during processing and longer shelf-life.
- The dairy sector has overcome a number of challenges in the past and is expected to continue to do so.

Lessons from the dairy industry

- The government backing winners may work sometimes, however it’s a risky strategy.
- As Jack Mintz, Fellow at University of Calgary School of Public Policy puts it, “governments aren’t great at picking winners but losers are great at picking governments”.
- The market will determine winners. A key lesson from the dairy sector over the last twenty years is that the sector has performed well where the government has removed barriers to entry and innovation and promoted competition.

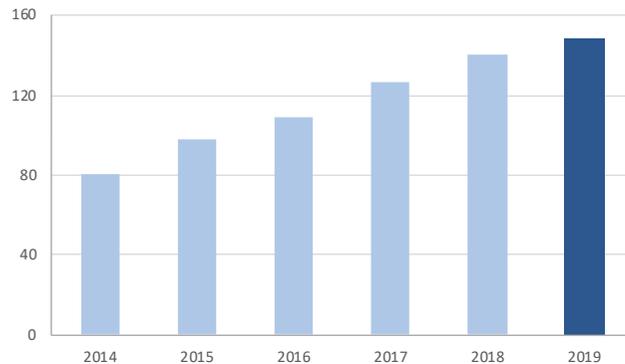
Annex 1: OCD and Synlait

Open Country Dairy

OCD began as a commodity cheese manufacturer in the Waikato in 2002 and has since expanded with powder plants in Southland, Taranaki and the Waikato. OCD is the second largest milk processor in New Zealand and the world's second largest supplier of whole milk powder (behind Fonterra). OCD is a public unlisted company with an initial public offer of securities in 2002 and is majority owned by Talley's Group Limited.

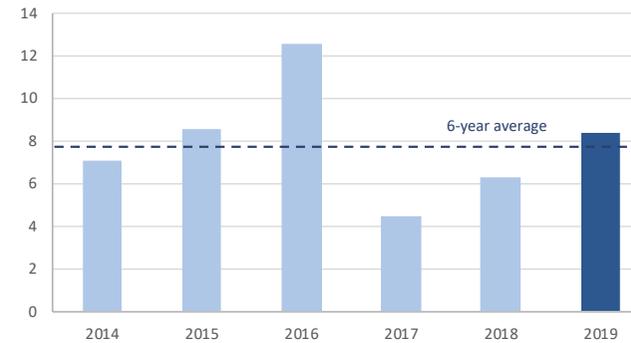
OCD has established itself as the benchmark base-ingredient producer in New Zealand. With the lowest operating costs in the sector, the company has delivered strong profitability, notwithstanding having the lowest value product mix of the major processors.

Volume, 2014-2019, kgMS millions



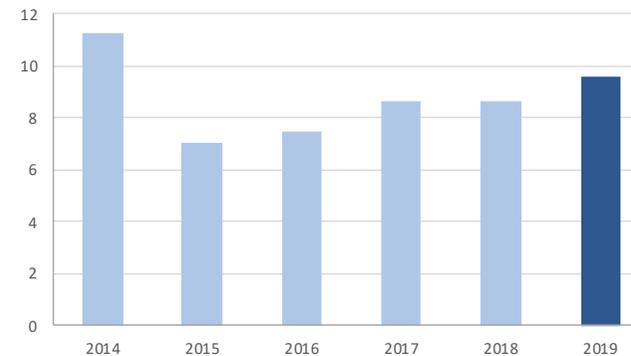
On a milk-volume basis, OCD has been the fastest growing processor in New Zealand. Its milk volumes have grown by almost 12% p.a. over the last six years and OCD processed 8.25% of New Zealand's total milk supply in the 2019 season. OCD is continuing its volume-based strategy but is now extending its product range to allow it to optimise production according to prevailing commodity prices. It has invested in increased cheese capacity and is producing high-quality milk proteins and milk fats.

Return on capital employed, 2014-2019, %



OCD's highest return on capital employed was in 2016 (15%) and since then it has not exceeded 10%. The six-year average ROCE for Open Country is 9.3%.

Revenue per kgMS, 2014-2019, \$



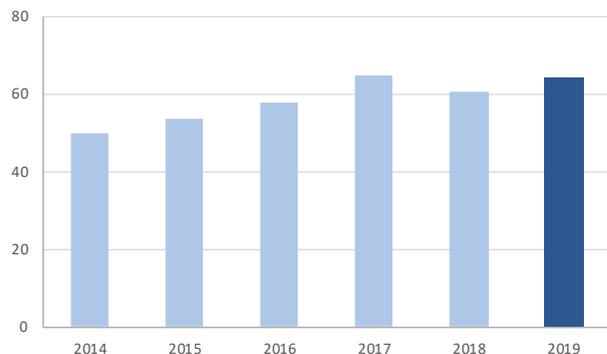
OCD's revenue per kgMS dropped sharply in 2015 (to \$7.17/kgMS) and has since steadily risen to \$9.61/kgMS by FY19, but is still below 2014 levels

Synlait

Synlait began in 2000 as a collection of large-scale Canterbury dairy farms. Synlait Milk Ltd was established in 2007 and began processing milk in 2008. Since the initial listing of its shares in 2013, Synlait has successfully positioned itself as a business-to-business (B2B) manufacturer of high-value specialty ingredients. It has progressively shifted more volume to infant formula base powders, canned infant formulas and cream. As a result, Synlait has generated an increasing premium per kgMS over commodity values.

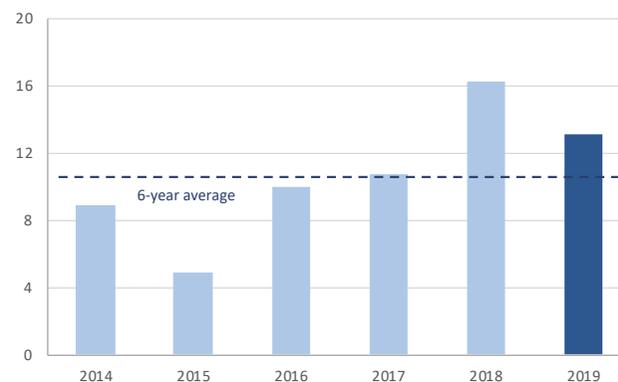
Synlait's B2B strategy means that it is focused on making a margin that reflects the value it brings to contracted relationships while mitigating exposure to price risk, either on the farmer side with the milk cost or on the customer side. Synlait's increasing EBIT margin trend over the last six years indicates that it has done this very well. However it has seen a drop in its EBIT margin from 13% in 2018 to 9% in 2019.

Volume, 2014-2019, kgMS millions



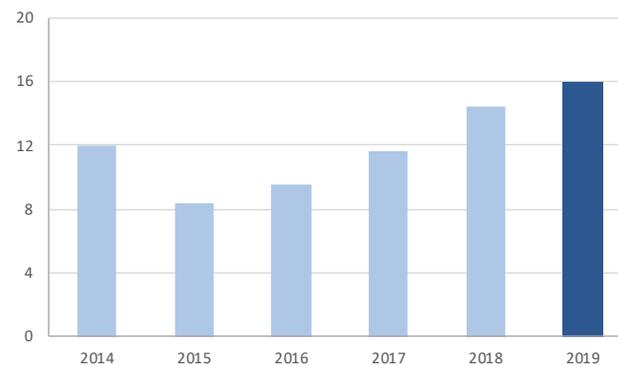
Synlait has been increasing volume by between four to seven million kgMS each financial year between 2014 and 2017. 2018 saw volumes decline by four million kgMS but volumes subsequently recovered the following year.

Return on capital employed, 2014-2019, %



Synlait has recorded positive return on capital employed (ROCE) in each of the last six years. ROCE peaked at 16.2% in 2018, before decreasing to 13.1% in 2019. Synlait's six-year average ROCE was 10.6%.

Revenue per kgMS, 2014-2019, \$



Synlait's revenue per kgMS peaked in FY19 at \$15.50/kgMS. After dropping sharply between 2014 and 2015, revenue per kgMS has increased each year by approximately \$2 per kgMS.



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