New Zealand Dairy Companies Review

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This report has been prepared on a pro bono basis. TDB confirms that it has no conflict of interest that could affect its ability to provide an unbiased report. For completeness, the following disclosures are made.

The principal contacts for this report, as noted above, are:

- investors in Fonterra (FSF) shares;
- directors of other dairy farming businesses that are Fonterra Co-operative Group Limited suppliers and shareholders or Synlait Milk Limited suppliers or MyMilk suppliers; and
- investors in and former directors of Open Country Dairy Limited.

In the last 24 months, TDB has advised on:

- the sale of shares in Open Country Dairy Limited; and
- various issues for Goodman Fielder, Westland, Open Country Dairy

TDB confirms that this report was not commissioned or sponsored by any entity and no other entity – including none of the dairy companies nor Goodman Fielder – had any input into it whatsoever other than each entity covered in the report being given the opportunity to check the factual accuracy of the section of the report relating to itself. The dairy company information disclosed in this report is all publicly available information.

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Overview

The recent release of an independent review of Fonterra's performance by Northington Partners (Northington)[1], and the release of the 2018 reported annual accounts by the competing dairy companies are triggers for us to update our April 2018 review of the performance of New Zealand's dairy companies.

In previous reports we have shown the comparative performance of returns across New Zealand's dairy companies. However, some judgement was required when unbundling the multiple businesses within Fonterra to allow for clear comparative analysis. The Northington report improves transparency of Fonterra's different businesses. Most significantly, it discloses the performance of Fonterra's core business, the NZ processing segment within Fonterra. The segments, as defined in the Northington report are:

- the Ingredients segment is the Commodity business (including advanced ingredients) in New Zealand *only*, plus general group costs; and
- the Value-Add segment is all other businesses, including Consumer and Food Service, China Farms and international milk pools.

It is the separate reporting of the NZ Ingredients segment that allows a more accurate comparison with other NZ dairy processing companies.

The message given by Fonterra's Shareholders' Council (SC) in the Northington report is that Fonterra's performance is unambiguously poor. We think this is a harsher judgement than is supported by the report. While Fonterra's return on capital of 6% was more than 1% below its cost of capital, the surprise from our point of view in the analysis is how relatively good the return was from the NZ Ingredients business. It is the NZ Ingredients business that is the core of Fonterra in that it collects, processes and sells the milk of its NZ farmer suppliers and co-op shareholders. It is also the NZ Ingredients business that is regulated under the Dairy Industry Restructuring Act, employs about 50% of Fonterra's capital, and represents the co-op that most farmers identify with.

In this report we have updated our financial performance methodology to mirror that used in the Northington report. Specifically, we have adopted Return On Capital Employed[2] (ROCE) as our key performance metric. Consistent with prior versions of this report we consider and analyse only the reported public results of NZ's milk processing companies. This report finds that, over the last five years, Tatua has achieved the highest return on capital of the milk processors (with 19% ROCE on average p.a.), followed by Open Country Dairy (OCD) (11%), Synlait (9%), Fonterra (6%) and Westland (2%).

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[1] Northington Partners report commissioned by Fonterra Shareholders' Council titled *"Independent Assessment of Fonterra's Financial Performance since Inception"*, published November 2018.

[2] Based on book values rather than market values.

In addition, we highlight a flat outlook for NZ milk production volumes and forecast that within the NZ milk pool Fonterra's competitors have a higher growth outlook. Fonterra's market share is, in our view likely to continue to fall by between 1 and 2 percentage points per year to 75% by 2021 – this is fairly consistent with the steady decline of Fonterra's market share over the last 17 years since Fonterra was established.

Financial performance

This report focuses on the Return On Capital Employed (ROCE) of the competing dairy companies. The five dairy companies we consider are Tatua, Open Country Dairy (OCD), Synlait, Fonterra and Westland. Our focus on ROCE is consistent with the recent Northington report on Fonterra's performance that disclosed ROCE for both Fonterra's NZ Ingredients business and the Value-Add business.

For the competing firm comparison analysis we only consider Fonterra at the group level but we analyse Fonterra segment's as detailed in the Northington report later in this report.

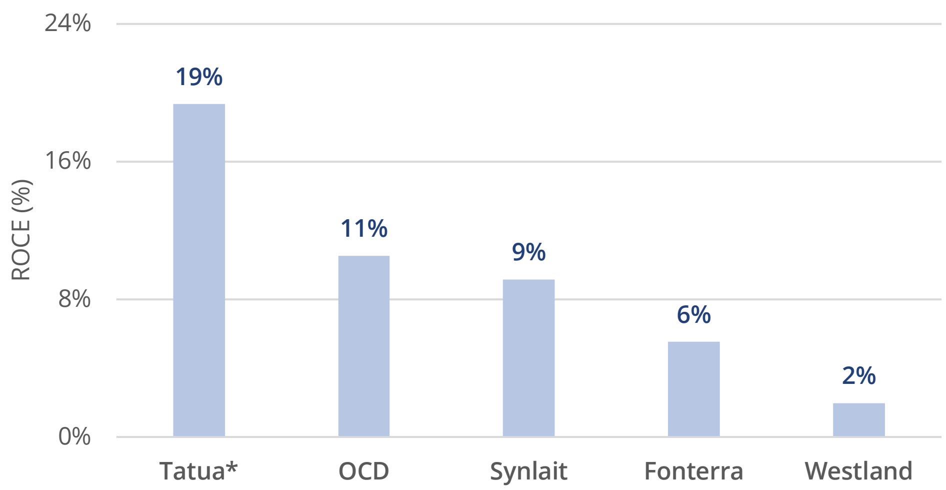
We note that the Northington report used both the market value and book value of capital as performance measures. We have used just book values because we want to compare across the industry against invested capital employed and because a very small portion of invested capital has a market value.

We have used the last five years as our period of comparison because that is what Fonterra has indicated they will use on an annual basis for their financial metrics.

Return On Capital Employed

Figure 1 below shows the average ROCE[3] of each firm over the last five years.

Figure 1: 5-year average ROCE



**Tatua's ROCE is calculated using earnings adjusted for milk price deviation from FGMP*

Source: Company annual reports & TDB Advisory analysis

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[3] ROCE = earnings before interest and tax x (1 – effective tax rate) / book value of capital employed. ROCE is therefore an after-tax measure

Analysis of the Northington report on Fonterra's financial performance

In previous years' TDB NZ Dairy Companies reviews we have shown the comparative performance of returns across New Zealand's dairy companies. However, some judgement was required to unbundle the multiple businesses within Fonterra to allow for clear comparative analysis. The Northington report improves the transparency of Fonterra's different businesses by disclosing the performance of Fonterra's core NZ processing business, being the regulated segment within Fonterra. The segments within Fonterra, as defined in the Northington report are:

- the Ingredients segment, which is the Commodity business (including advanced ingredients) in NZ *only*, plus general group costs; and
- the Value-Add segment, which is all other businesses, including Consumer and Food Service, China Farms and international milk pools.[4]

Fonterra's core processing business is the NZ Ingredients segment and it is the separate reporting of that segment that allows a more accurate comparison with other NZ dairy processing companies.

The message given by the Fonterra Shareholders' Council in the Northington report is that Fonterra's performance is unambiguously poor. We think this is a harsher judgement than supported by the Northington report. The report showed in our opinion a surprisingly positive performance from the NZ Ingredients business that was then dragged down by low returns from the Value-Add business such that overall performance was poor at an overall group level.

The Northington report is concise and transparent: it helps answer several queries we had in our April 2018 review. Each key question raised by TDB's analysis and addressed in the Northington report is presented and commented on in Table 1 below.

While the Northington report concludes that Fonterra's return on capital of 6% is more than 1% below its cost of capital, the surprise from our point of view in the analysis is how relatively good the return from the NZ Ingredients business was. It is that business that is the core of Fonterra in that it collects, processes and sells the milk of its NZ farmer suppliers and co-op shareholders. It is that business that is regulated under the Dairy Industry Restructuring Act, employs about 50% of Fonterra's capital and represents the co-op that most farmers identify with. Since the release of the Northington report Fonterra has communicated that it will re-evaluate all investments, major assets and partnerships to ensure they still meet the co-op's needs. We consider that it is in the interests of Fonterra's shareholders to maximise the value of all of the non-NZ Ingredients business (being $5 billion plus of book value of capital). If Fonterra could return a large amount of that capital to shareholders and still maintain a similar earnings per share from the Ingredients business, it would clearly be a positive option for shareholders to consider.

[4] Pg 8 of the Northington report.

Table 1: TDB's comments on Northington analysis[5]

TDB April '18 review/issue	Northington report answer	Comment
What is the unbundled return within Fonterra from its "core" business of processing NZ milk and exporting it?[Pg11,para2]	The return from the Ingredients business, in NZ only, in the last five years, was 6.8% Return On Capital Employed versus a WACC for the Ingredients business over the last five years of 5.6%.[Pg7]	This is the first disclosure we have seen of the financial performance of the NZ processing and exporting businesses. It is a surprise to see that the regulated business is performing this well and delivering returns above the cost of capital. It does highlight that the flip side of this is the rest of Fonterra (being all other business, including Consumer & Foodservice, China Farms and international milk pools) are subtracting value.
Given the lack of evidence of an adequate risk-adjusted return for Fonterra's supplier shareholders, it seems reasonable for Fonterra's shareholder farmers to ask how much capital is employed in the "value add" consumer and food service segments.	For the first five years since inception (FY02 – FY 06), the value-add business accounted for 36% of Fonterra's capital. This has increased to 50% of Fonterra's capital over the last 5 years (FY14 – FY18).[Pg7]	Fonterra's total book value of equity plus debt is $12.8 billion. This suggests that Fonterra has an even split of $6.4 billion of capital employed in the NZ processing business and the value-add businesses.
It would not be unreasonable for Fonterra's farmer shareholders to query why Fonterra has not achieved a higher return on average than OCD given Fonterra is invested in a range of more risky activities than just commodity processing.[Pg12]	Over the last ten years OCD has delivered an average pre-tax return on capital employed of 7.0% which is lower than Fonterra's group pre-tax level performance over the last ten years of 8.3%.[Pg9]	Again, this surprised us, and we have updated our financial analysis using the same methodology as the Northington review. Our analysis confirms the Northington finding and is shown in Figure 4. Our conclusion of the analysis is that while Fonterra's group average has been better than OCD's as a whole, OCD's average return has been dragged down due to losses in its start-up period.
Fonterra's global "volume into value" strategy has not resulted in additional shareholder value beyond what could have been expected from a NZ-based commodity and ingredients processor.	Fonterra's pre-tax return on capital has been 8.1% p.a. since its formation in 2002, and 6.8% in the last five years.[Pg 9]	It is the last five years of returns that are more relevant because that is the period that captures both the volume into value strategy and the NZX listing and trading of shares. When we compare the ROCE for OCD (being our benchmark for a NZ-based commodity exporter) with Fonterra Group over the last five years it shows a post-tax return of 10.5% versus 5.5%. See Figure 4.

[5] Superscript references in the table refer to page numbers in the Northington report where the information was sourced from.

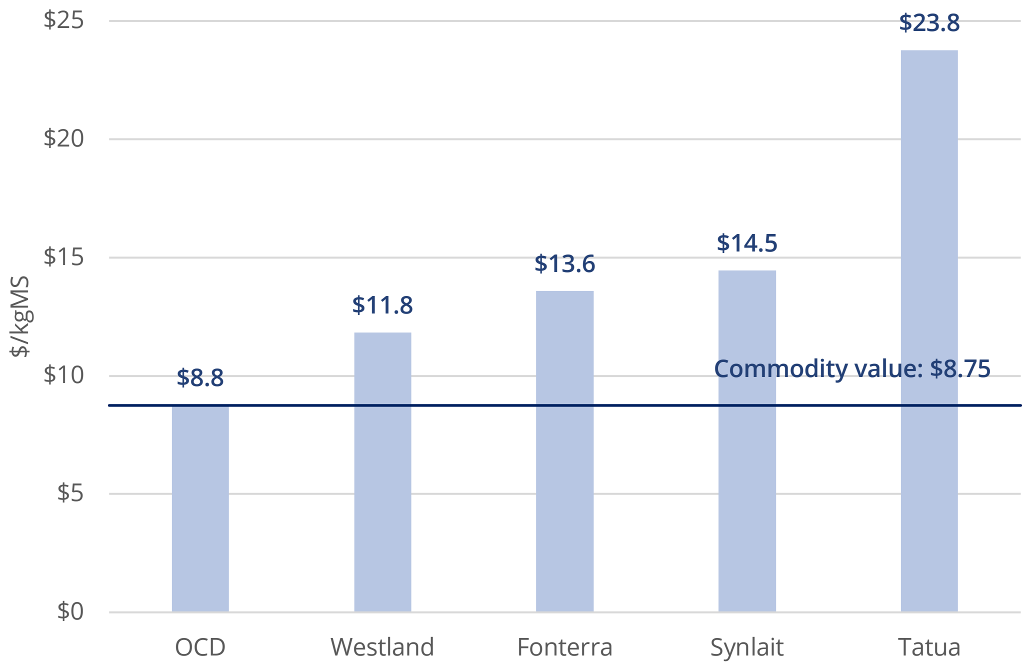
Market positioning and strategic direction

As discussed in our April 2018 report, the competing dairy processors have adopted a range of different strategies. In this section we look at the different strategies and reflect on the trade-off between risk and return.

Commodities through to consumer products

Figure 2 below provides the revenue per kgMS of each company in 2018. The revenue per kgMS acts as a proxy for the product mix of the firms. 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 2: Revenue per kgMS, 2018



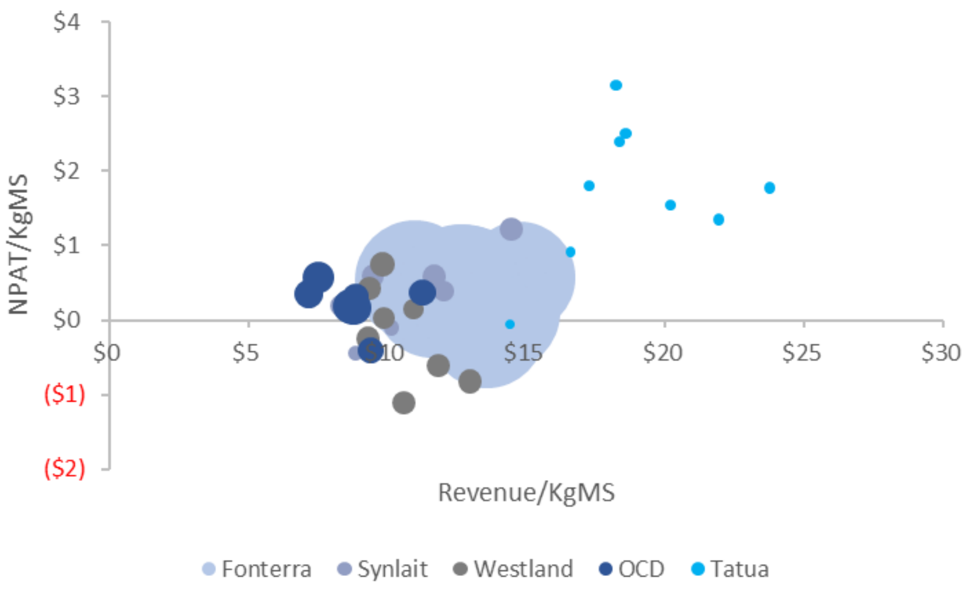
Source: Fonterra 2018 milk price statement, Company annual reports & TDB Advisory analysis

The line on Figure 2 represents the regulator's estimate of the NZ dollar value of a benchmark commodity product mix (milk powders and by products) and is used by the regulator as a benchmark for deriving Fonterra's regulated base milk price. Overall, Figure 2 depicts the differences in production choice among the competing dairy firms. OCD is a commodity processor and exports all of its production. It receives revenue per kgMS that is very close to the regulated base milk price as a result. On the other end of the plot there is Tatua which is engaged in very speciality ingredient production. As a result, Tatua receives a high level of revenue per kgMS it produces. The other competing firms have a mixture of business units and overall receive revenue somewhere between OCD and Tatua.

Profit from value add?

Our previous reports have highlighted how difficult it is to deliver shareholder value by growing the value-added component of milk sales. The Northington report confirms that to be the case for Fonterra. Figure 3 below plots NPAT per kgMS against total revenue per kgMS for the five dairy processors. The point size reflects the total milk volumes collected.

Figure 3: NPAT and revenue per kgMS, 2010-2018



Source: Company annual reports & TDB Advisory analysis

Figure 3 shows some correlation between high value product revenue and profit when Tatua is included, but very low correlation across the rest of the industry. This suggests that, other than for Tatua, a greater focus on 'higher value' products has not shown strong correlation with increased profits, despite the increased risk involved.

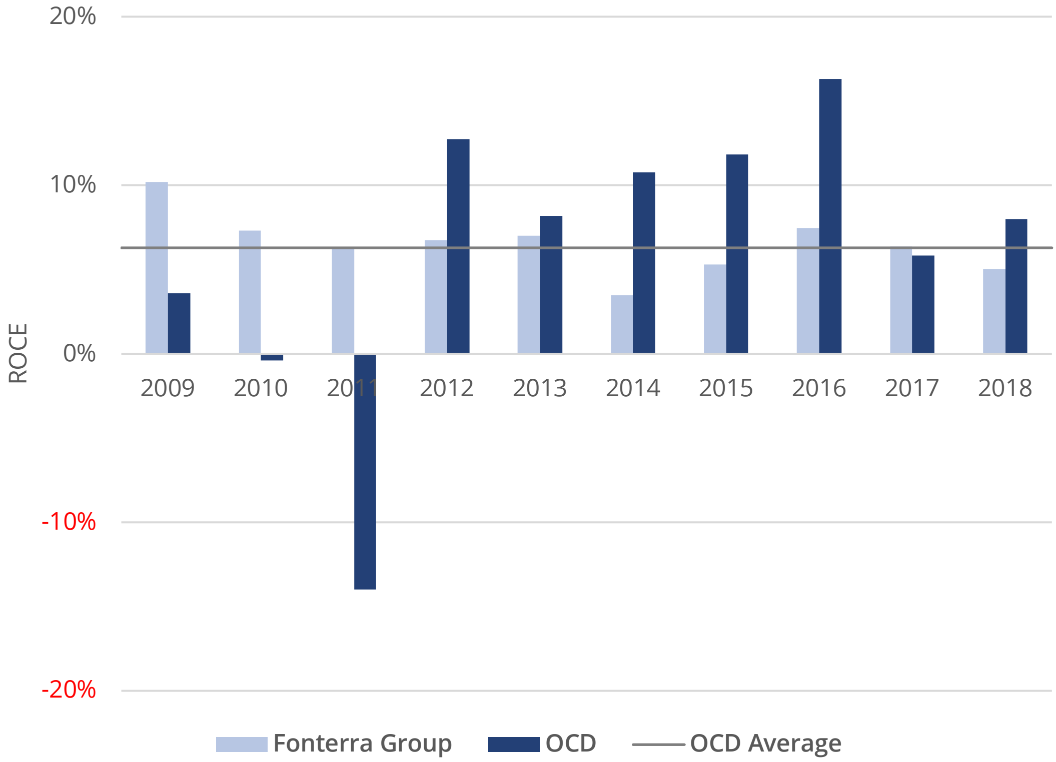
Adequate returns from NZ commodity processing

The section above, and the Northington report, shows the difficulty in converting higher cost milk products into profit. What is clear from our, and Northington's analysis is that generally adequate returns can be achieved from less risky commodity products distributed into the export market.

The Northington report comments "of the local processors OCD is arguably the most comparable to Fonterra because it is the largest competitor and is predominantly focused on commodity ingredients. Over the last ten years OCD has delivered an average pre-tax Return on Capital Employed of 7.0% p.a., which is lower than Fonterra's equivalent return of 8.3% across the same period".

The relative tax adjusted performance of the two businesses, by year, across the ten years is shown in Figure 4 below.

Figure 4: ROCE for OCD and Fonterra NZ, 2009-2018



Source: Company annual reports & TDB Advisory analysis

Our interpretation of Figure 4 above is that while Fonterra's group average return has been better than OCD's over the ten years as a whole, the underlying dynamic is OCD's low and volatile returns in its earlier start up years followed by more stable and generally rising returns in the last five years.

If we compared performance over the last five-years, the comparison shows a Fonterra average tax adjusted ROCE of 5.5% p.a. and an OCD average of 10.5% p.a.

Growth rates and forecast market share

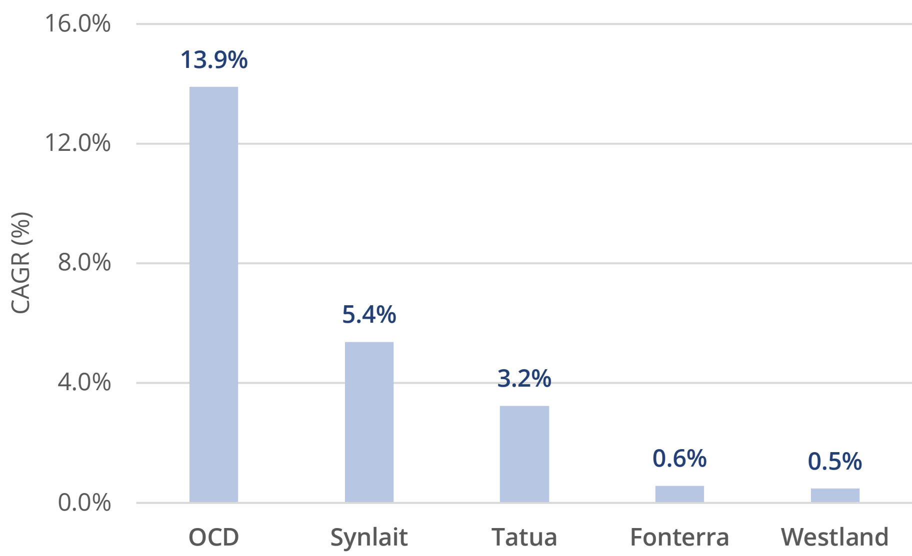
This section reviews the position of each of the five dairy processing companies in advance of what may be significant changes in the industry from slower growth NZ milk volumes and Fonterra's announcements of asset reviews and debt reduction.

We estimate the growth of each of the competitors to Fonterra based on their committed investments, access to capital, and in Westland's case, a return to competitiveness that retains its current volumes. Given our estimates for growth by the competitors we assume that Fonterra makes up the remainder of the milk production.

Companies historic growth rates

Figure 5 presents the compound annual growth rates (CAGR) of milk collections for each of the firms over the last five years.

Figure 5: Five-year CAGR of milk collections (%), 2014-2018



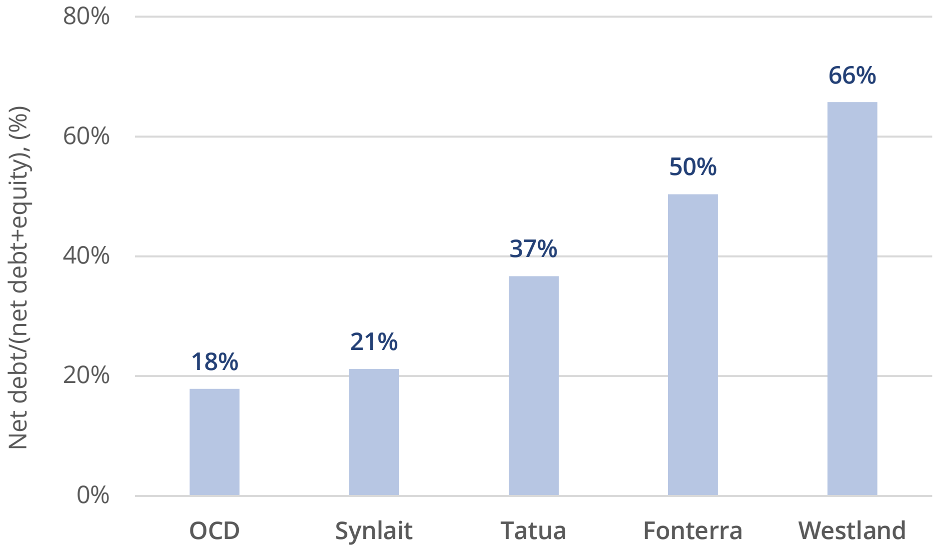
Source: Company annual reports & TDB Advisory analysis

Figure 5 highlights the growth of the competitors' milk volume collections relative to Fonterra's and Westland's over the last five years.

Access to debt capital

Figure 6 shows the widely ranging gearing (debt to debt plus equity ratios) across the processing companies. Both Westland and Fonterra have acknowledged their limited financial flexibility, and both have plans to reduce their debt.

Figure 6: Debt to debt plus equity, 2018



Source: Company annual reports & TDB Advisory analysis

Figure 6 highlights the fact that OCD and Synlait continue to fund growth through retained profits. With no dividends forecast by either company, we expect their debt to remain low compared with the other processing companies. The industry has historically funded its longer-term assets with approximately 50% debt so the low debt levels of OCD and Synlait reinforces their forecast high growth positions.

Forecast growth rates to 2021

Table 2 presents the historical and forecast growth in milk volumes, the current dividend pay-out ratio, and net debt to total assets for each company. We have also included two smaller processors, Miraka and Oceania, in this analysis.

Table 2: Milk volume growth rates and leverage

Companies	Growth rates 2013-2018 (% p.a.)	Forecast growth rates 2019-2021	Dividend pay-out ratio, 2018	Debt to Total Assets, 2018
Fonterra	0.6%	-2.5%	42%**	36%
OCD	13.9%	8.0%	0%	12%
Synlait	5.4%	9.4%	0%	14%
Westland	0.5%	0.0%	not applicable	40%
Tatua	3.2%	0.0%	not applicable	27%
Miraka	3.5%+*	0.0%	not applicable	not disclosed
Oceania	15.0%+*	28.1%	0%	0%

*TDB estimates.
** Calculated using normalised EPS.

We project that OCD's processing volumes will increase by 8% per year. This is a slow-down from its 2013-2018 growth rate of 13.9%per year. The forecast growth is driven by OCD's opening of a new plant in Waikato for the 2019 year and higher than average milk growth of its existing supplier base.

We project that Synlait's processing volumes will increase by 9% p.a. through to 2021 as its new plant in the North Island is commissioned and South Island volumes are optimised.

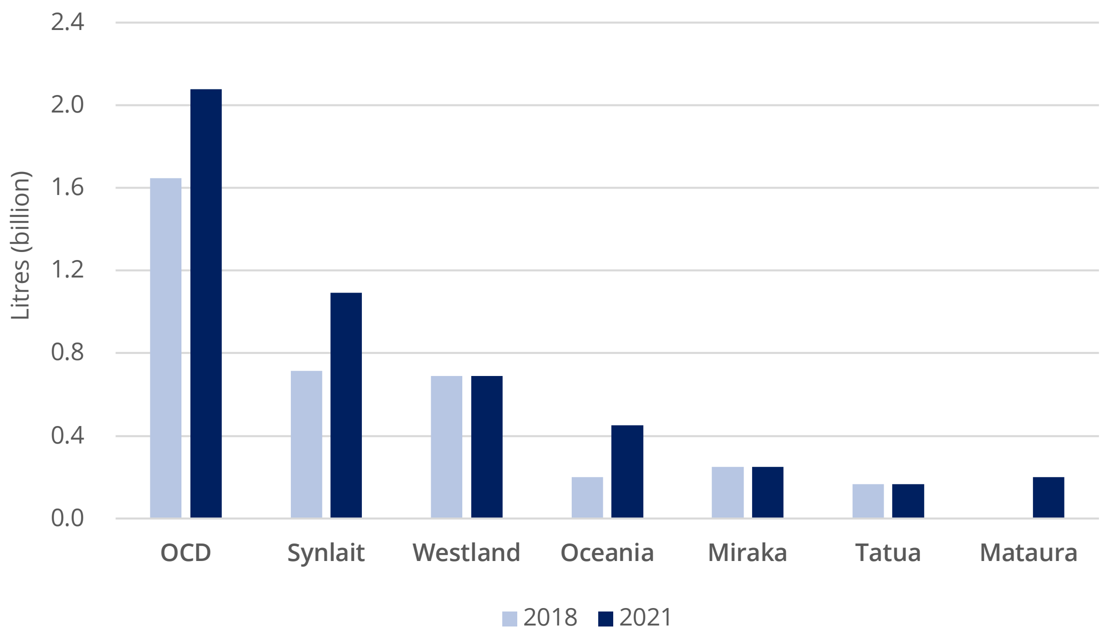
We assume no growth for Westland, Tatua and Miraka because we are not aware of any planned increase in production or capacity for these firms. Lastly, we project 28% p.a. growth in processing volumes for Oceania as it continues to attract milk to its stage two plant.

If NZ's total milk production remains constant out to 2021 our projections for the other companies imply that Fonterra will lose 2.5% of its processing volume each year.

Forecast market shares

Taking the growth rates from the previous section, the forecast volumes for Fonterra's competitors to 2021 are shown in Figure 7. We also include Mataura Valley Milk (Mataura) in the comparison presented below.

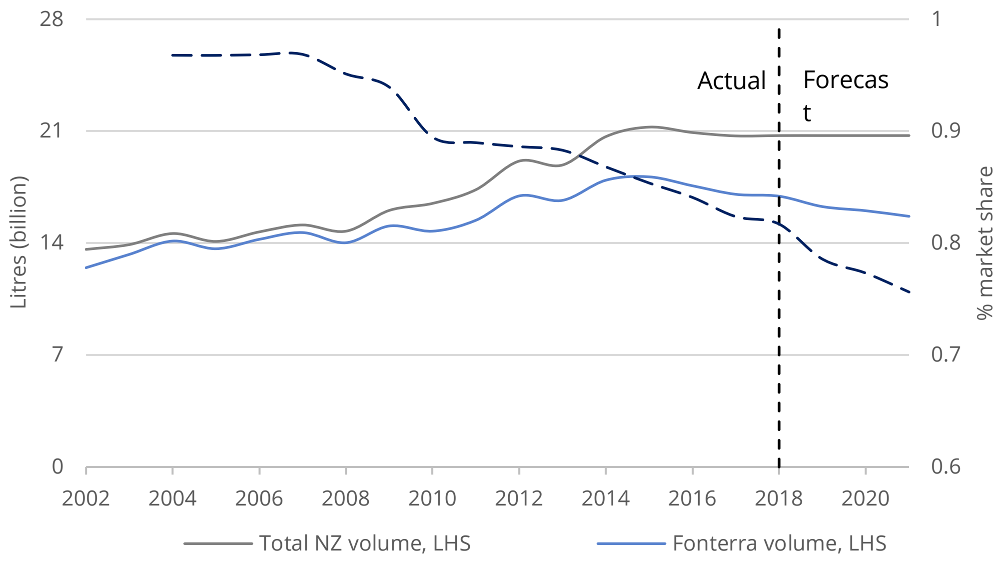
Figure 7: Forecast milk collection volumes, 2018-2021



Source: Company annual reports & TDB Advisory analysis

If we overlay the above volumes and assume nil growth in industry milk volumes through to 2021, we arrive at the projection for Fonterra's market share presented in Figure 8 below. The right-hand axis presents total milk volumes and the left-hand axis is Fonterra's NZ market share of collections. In this scenario Fonterra would lose approximately one billion litres of milk. That decline in Fonterra market share is generally consistent with the steady changes in market share over the previous decade. Given the capital-intensive nature of diary processing, some decline in Fonterra's market share may be helpful for Fonterra's aims of reducing CapEx as part of its debt reduction targets.

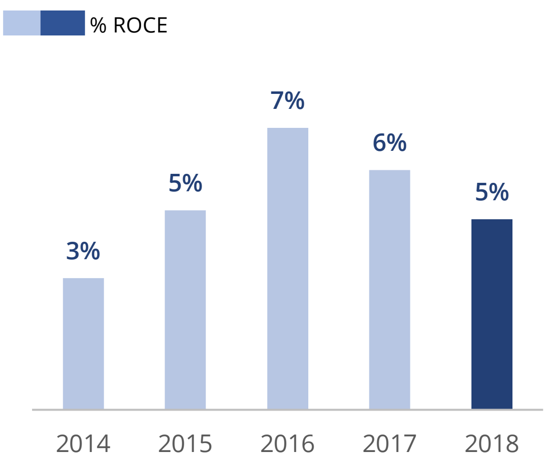
Figure 8: NZ and Fonterra's milk volumes, 2000-2021



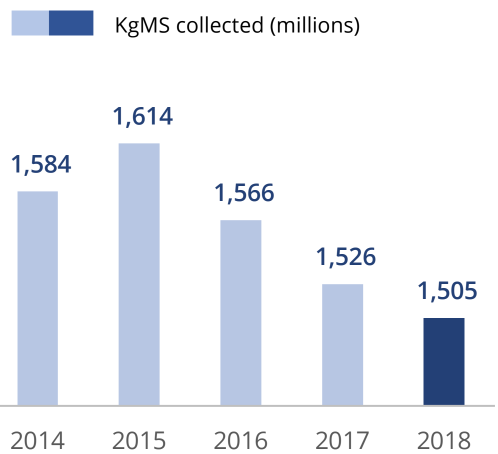
Source: DairyNZ, Fonterra annual reports & TDB Advisory analysis

Fonterra Co-operative

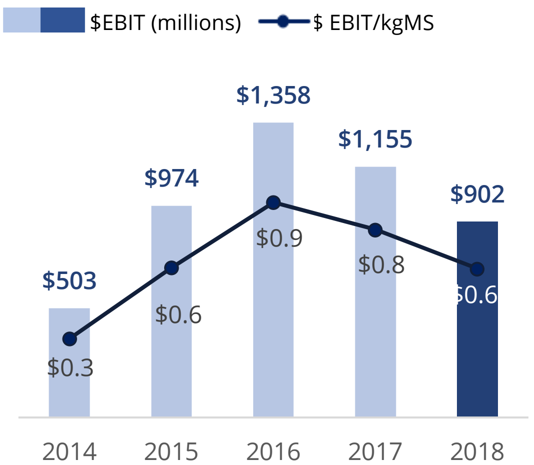
Return On Capital Employed



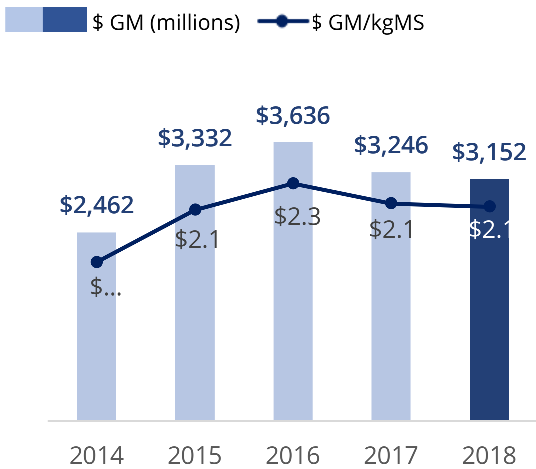
Milk collections



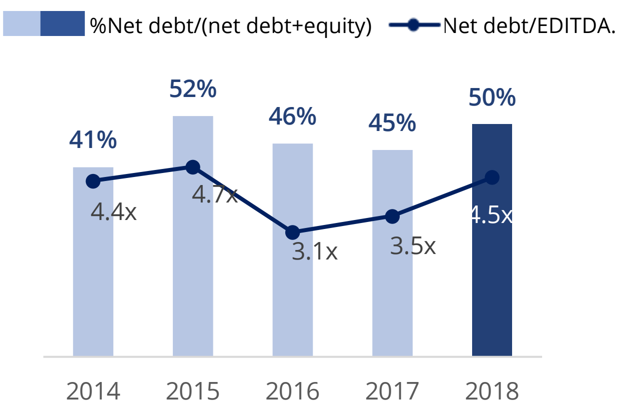
Normalised EBIT



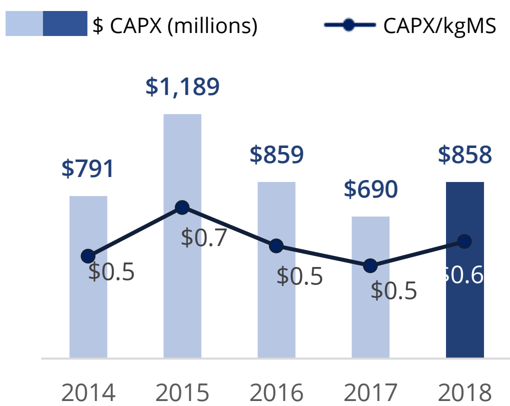
Normalised gross margin



Leverage

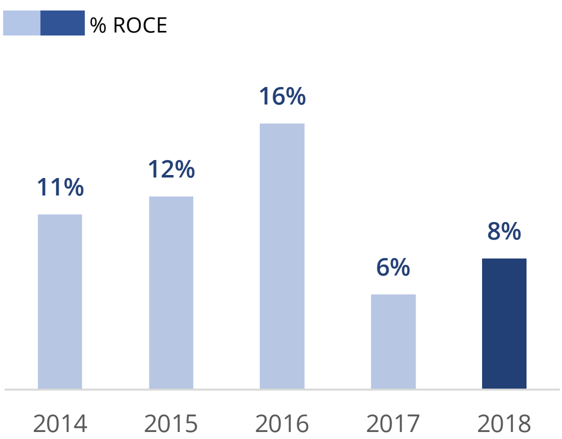


Capital expenditure

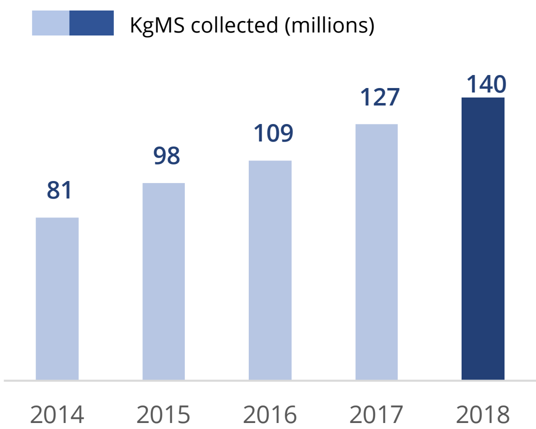


Open Country Dairy

Return On Capital Employed



Milk collections



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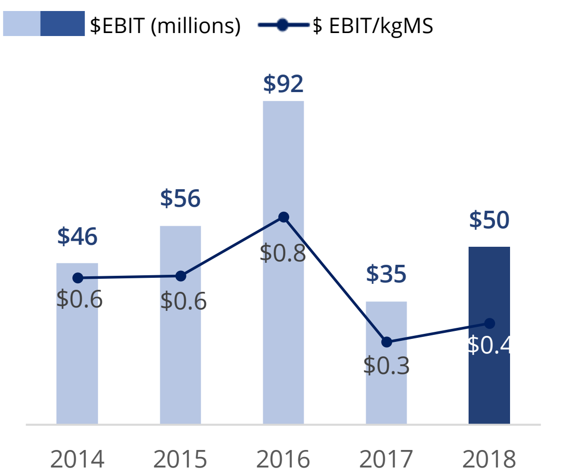

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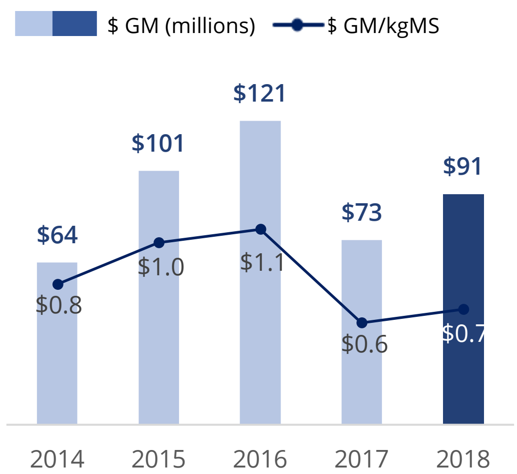

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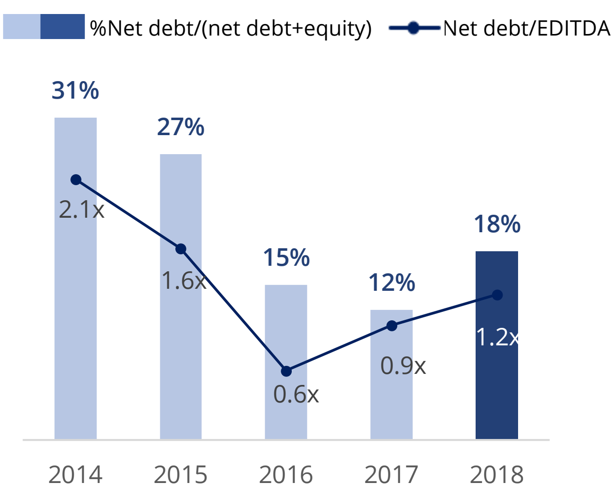
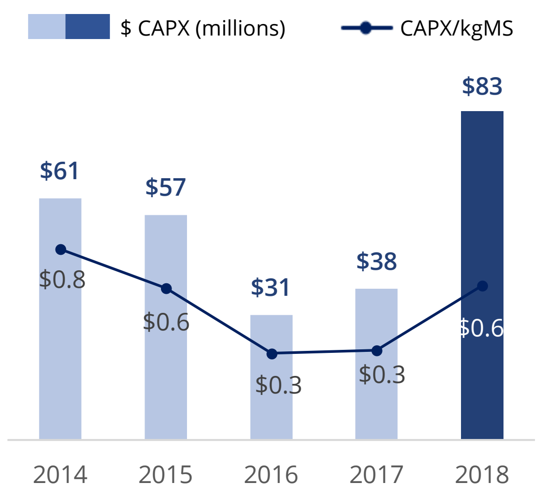
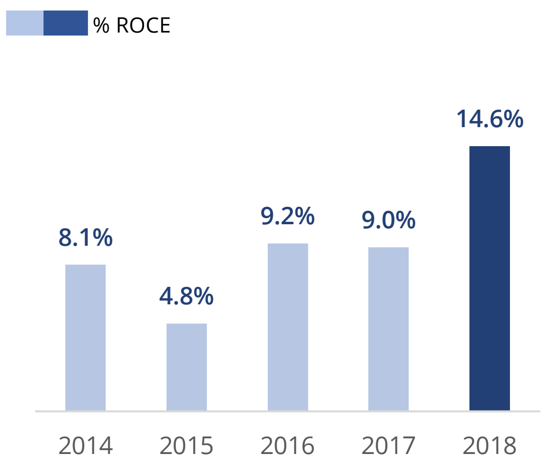


Capital expenditure

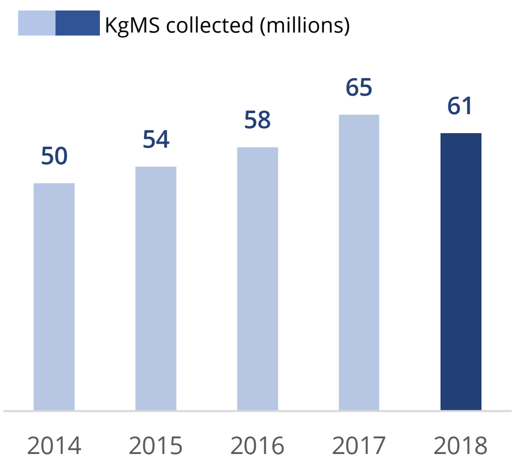


Synlait Milk

Return On Capital Employed



Milk collections



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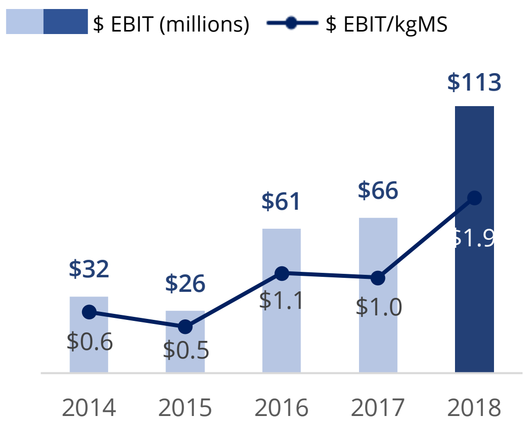
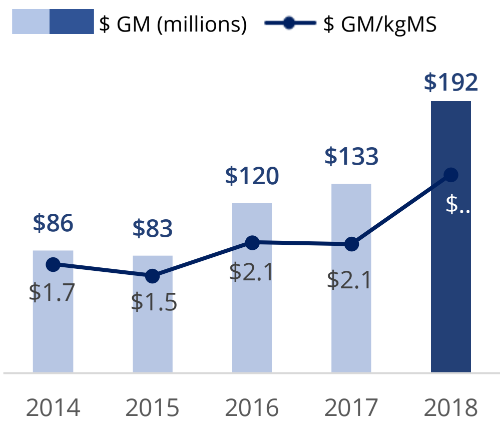


Normalised gross margin



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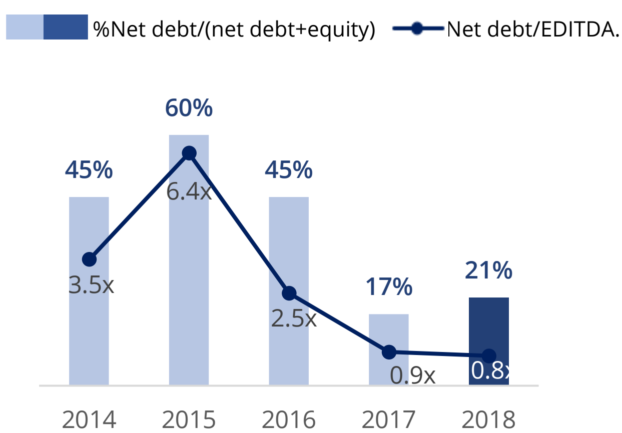
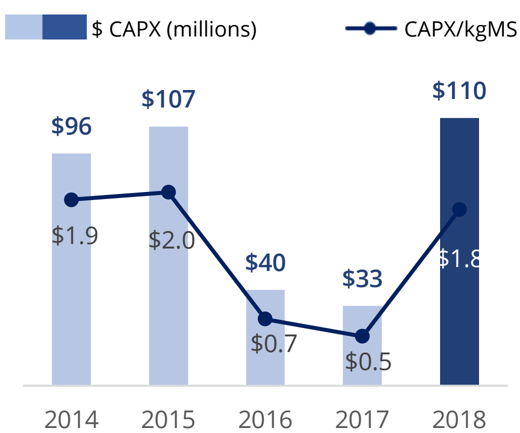
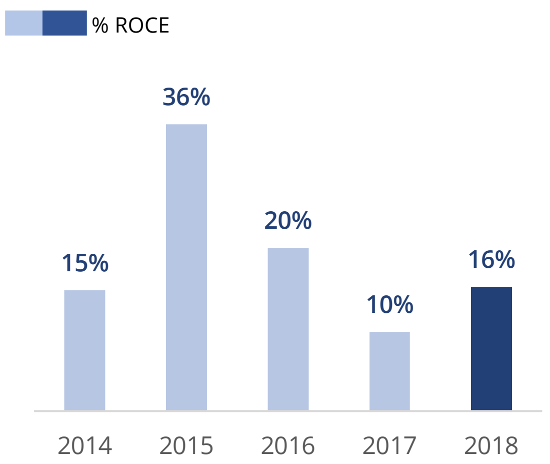


Capital expenditure

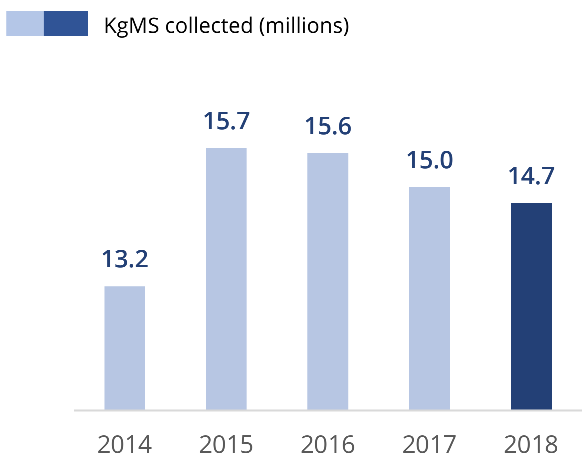


Tatua Co-operative

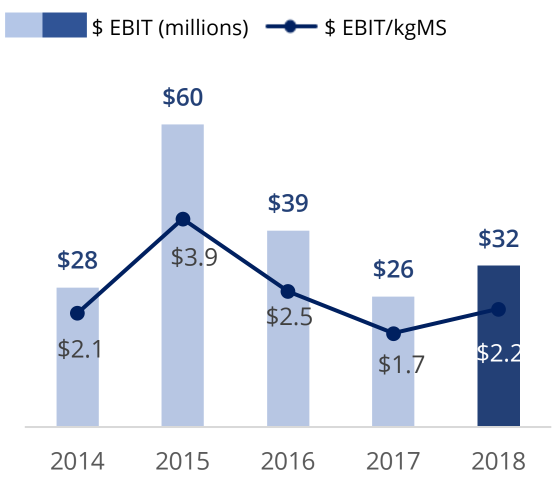
Return On Capital Employed



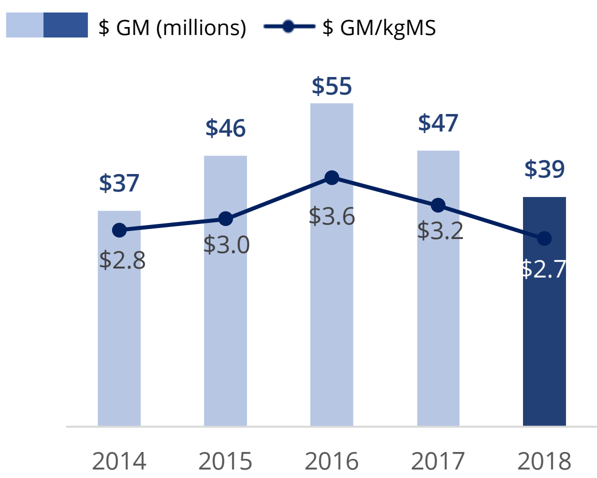
Milk collections



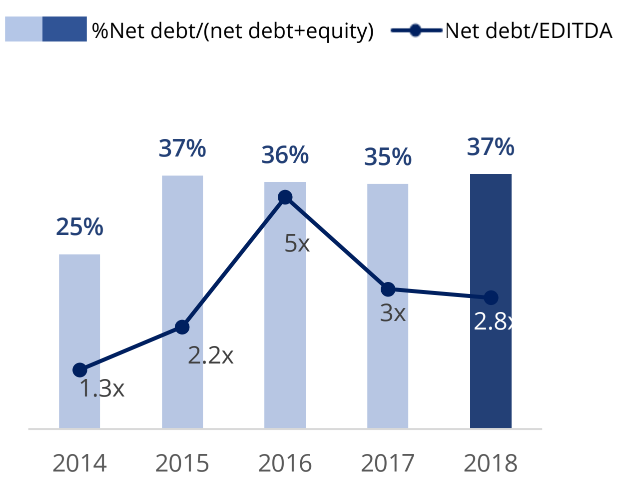
Normalised EBIT



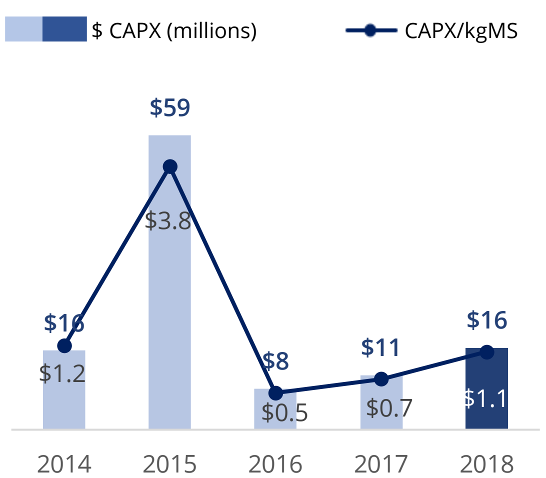
Normalised gross margin



Leverage

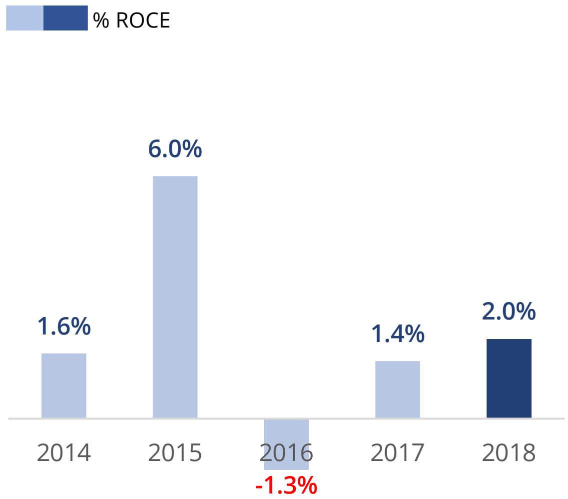


Capital expenditure

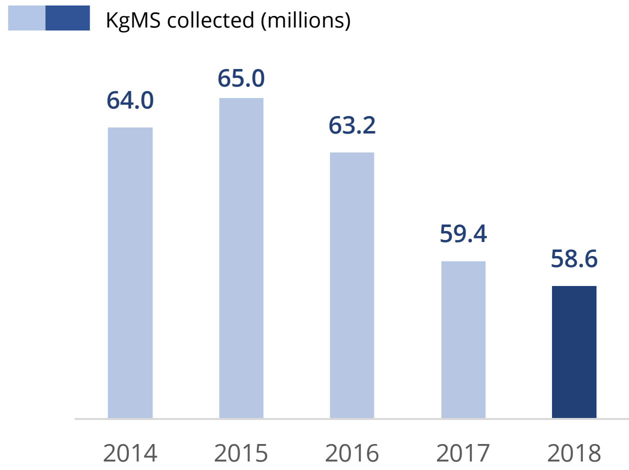


Westland Co-operative

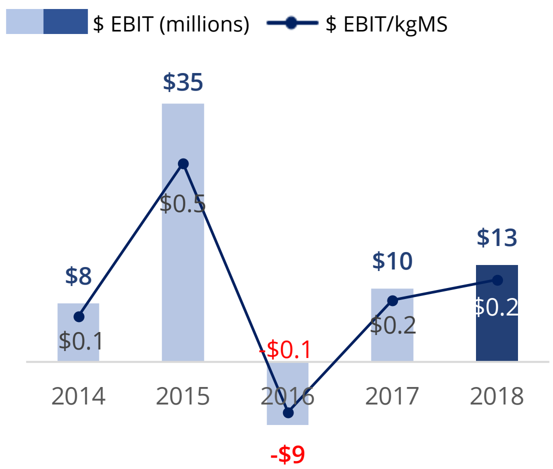
Return On Capital Employed



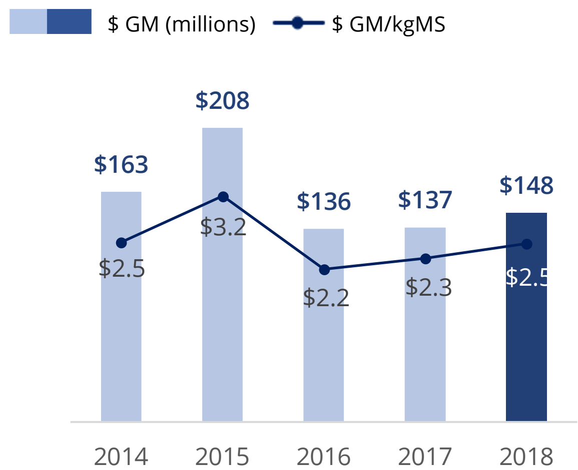
Milk collections



Normalised EBIT



Normalised gross margin



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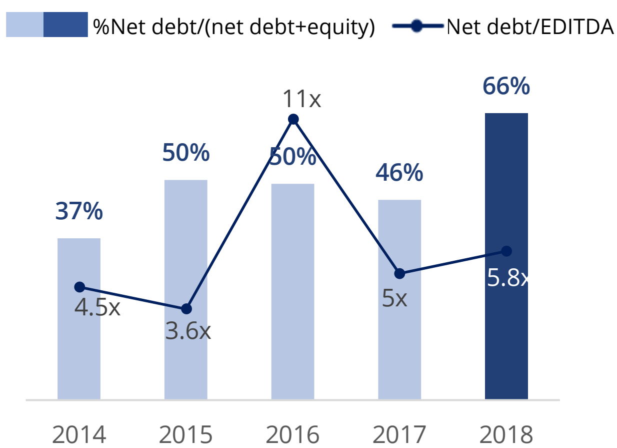

Capital expenditure