

NEW ZEALAND DAIRY REPORT MONTHLY

16 July 2018

OVERVIEW

- Dairy prices fell 5.0% at the latest GlobalDairyTrade auction event bringing our milk price model estimate down to NZD 6.60/kgMS, well below Fonterra's initial price guidance of NZD 7.00/kgMS.
- The latest decline in dairy prices is consistent with our view that fundamental pricing pressures remain skewed to the downside and we have lowered our projection for the farmgate milk price to NZD 6.25 ±0.25/kgMS.
- Reserve Bank lending statistics suggest that the improvement in dairy prices over the past two seasons provided little support for farmers as farmer indebtedness and non-performing loans in the sector continue to rise amid softening farmland prices.
- Global production growth remains in expansion but has slowed since end 2017. Meanwhile external demand may be softening with NZ posting a decline in export volumes in May while exports from EU-28 were broadly flat in April.

The latest GlobalDairyTrade auction event (3 July) delivered a disappointing result with the overall GDT Price Index falling 5.0% from two weeks prior, marking three consecutive declines since the dairy season began in June with this magnitude of decline last seen in March 2017. This was in line with weakness across NZX dairy futures observed since May.

The price of Whole Milk Powder (WMP) slumped (-7.3%) while Skim Milk Powder (SMP) also posted a significant fall (-4.6%) along with Cheddar (-4.3%) and Butter (-4%). Consistent with a seasonal pick-up in production, maximum auction supply increased 22.2% from the last event — Fonterra is now selling on a forward basis into the season's peak supply period — with the number of participating bidders falling from 165 last auction to 152.

We had argued for some time that the balance of risks to international dairy prices support our more conservative stance on the farmgate milk price. Notably, the risks include: i) lactose costs may rise or fall, ii) upside risk to global supply given rising production and EU intervention stockpiles, iii) NZ supply disruptions relating to the M. bovis cattle disease, iv) possible correction in the milk fat premiums, and v) FX conversion rate may become more supportive. Consistent with this view we had expected a farmgate milk price of NZD 6.75 ±0.25/kgMS — with the season's payout supported by around NZD 0.15/kgMS from a weaker NZD — but we have now revised down our expectation to NZD 6.25 ±0.25/kgMS.

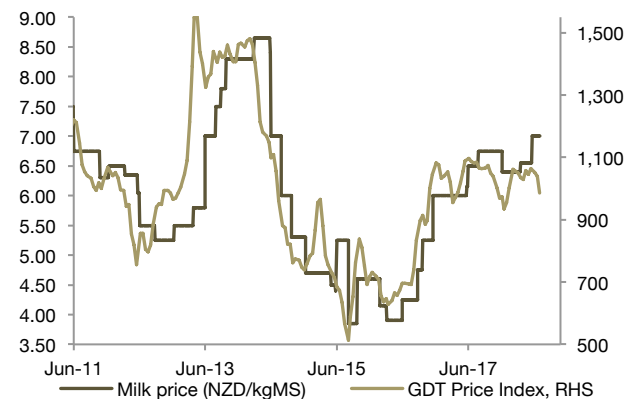
In our opinion, farmers face significant challenges over the coming season with regard to dairy prices and farm income, but their balance sheets are also under increasing pressure as farm equity ratios deteriorate driven by softening dairy farm prices alongside the gradual transition of interest-only loans to principal-plus-interest repayment terms. The Reserve Bank of New Zealand recently reported an increase in non-performing loans as a portion of total dairy sector lending, and we are wary that their earlier statistics which indicated a steep increase in watchlist loans in the agricultural sector suggest scope for a much greater portion of lending to be categorized as non-performing over the coming year particularly given tighter regulatory standards and banking requirements stemming from guidance from the Australian Prudential Regulatory Authority (APRA) and RBNZ as well as autonomously from banks, possibly spurred on by the recent Australian Royal Commission into misconduct in the banking, superannuation and financial services industry.

Figure 1: GDT Weighted average price (3 July 2018)

Group	Product	Weighted average price (USD/MT)	Change from last event (%)	Change from last year (%)
Reference Commodity Products	WMP	2,905	-8.9%	-6.6%
	SMP	1,913	-4.5%	-8.5%
	AMF	5,937	-2.0%	-10.0%
	BMP	2,480	7.2%	9.5%
	Butter	5,390	-3.9%	-6.7%
Others	Cheddar	3,713	-3.5%	-8.3%
	Casein	5,089	3.9%	-17.0%

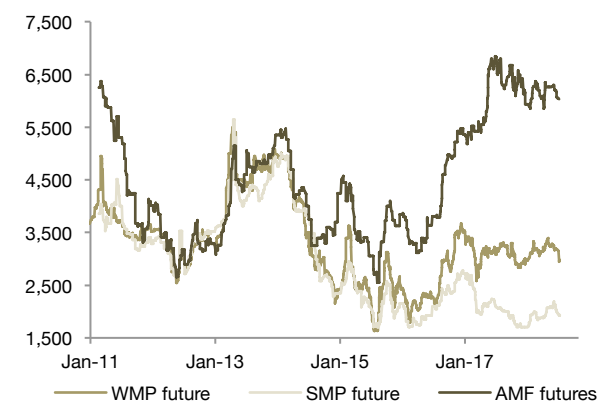
Source: GlobalDairyTrade

Figure 2: Fonterra milk price & GDT Price Index



Source: Fonterra, GlobalDairyTrade

Figure 3: NZX Generic 3rd dairy futures contract, USD/MT



Source: Bloomberg, Redward Associates

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Forecasting Fonterra's farmgate milk price

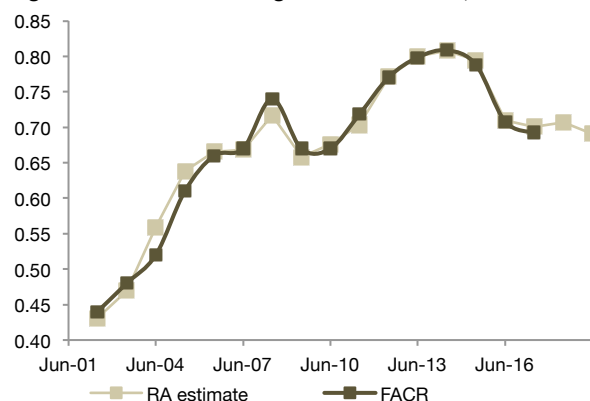
Our cash flow forecast model is constructed in accordance with Fonterra's Farmgate Milk Price Manual, whereby revenue is derived from the Reference Commodity Products and "prices primarily reflect U.S. dollar prices achieved by Fonterra at its twice-monthly Global Dairy Trade (GDT) events, converted to New Zealand dollars". Meanwhile, the three main categories of expenses are identified to be: i) lactose purchases, ii) cash costs and iii) capital costs. Recall, we forecast the milk payout by varying the GDT prices and the NZD/USD rate, while the expenses are either directly, or indirectly, scaled to the volume of milk collection.

The latest fall in GDT prices lowers our farmgate milk price estimate for the 2018/19 season, based on prices remaining unchanged at current spot, to NZD 6.60/kgMS (-0.41/kgMS). This assumes that the average price of WMP is down by 5.1% this season relative to 2017/18 with AMF and Butter also lower by 8.1% and 1.0% respectively, while the average price of SMP is up by 0.4% from last season. The downgrade in our milk price model estimate is in spite of a more supportive average FX conversion rate estimate for the season of NZD/0.6906.

Should the latest bout of weakness in the NZD/USD exchange rate gradually extend towards NZD/0.63 over the coming year in line with our baseline expectation, our back-of-the-envelope calculation suggests that this would bring Fonterra's hedged FX conversion rate to around NZD/0.6794, adding NZD 0.14/kgMS to the farmgate milk price assuming all else unchanged. In conjunction with the modestly higher NZX dairy futures for WMP, SMP and AMF, our second model points to a payout of NZD 6.79/kgMS.

At present, NZX Milk Futures for 2018/19 are trading at NZD 6.61/kgMS, in line with our model estimate and below Fonterra's initial guidance of NZD 7.00/kgMS for the season.

Figure 4: Fonterra's average conversion rate, NZD/USD



Source: Bloomberg, Fonterra, Redward Associates

Figure 5: Farmgate milk price models

	2018/19: Spot & Season average	2018/19: Spot & Futures
NZD/USD rate	0.6906	0.6794
Prices (USD/MT)		
WMP	2,929	2,978
SMP	1,923	1,931
Butter	5,407	5,261
AMF	5,954	5,989
BMP	2,466	2,496
Milk collection (million kgMS)		
	1,525	1,525
Volumes (million kgMS)		
WMP (63%)	1,825	1,825
SMP (21%)	619	619
Butter (9%)	256	256
AMF (5%)	154	154
BMP (2%)	63	63
Revenue (USD)		
	8,989,615	9,052,972
Revenue (NZD)		
	13,017,124	13,325,667
Lactose purchases		
Quantity ('000 MT)	351	351
Price (USD/MT)	626	626
Costs (USD)	219,421	219,421
Costs (NZD)	317,726	322,981
Net revenue (NZD)		
	12,699,398	13,002,686
Cash costs (NZD)		
	1,822,468	1,822,468
Capital costs (NZD)		
	895,523	895,523
Revenue available for Milk Price (NZD)		
	9,981,407	10,284,695
Farmgate milk price (NZD/kgMS)		
	6.55	6.74
Plus: Spot Sales Premium (NZD 0.05/kgMS)		
	6.60	6.79

Source: Bloomberg, Fonterra, NZX, Redward Associates

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Dairy sector indebtedness is a key vulnerability

In last month's report, we outlined our estimates for farmer costs of production and our view that farmers are likely to experience a significant uplift in costs this season driven by a rise in debt-servicing and taxation costs. We continue our discussion that farmers have no room for complacency as pressure on their financial positions continue to intensify.

On 30 May, the Reserve Bank of New Zealand published their bi-annual Financial Stability Report (FSR). According to the Reserve Bank, despite positive cash flows over the past two seasons the dairy sector remains highly indebted — debt exceeds an estimated NZD 25/kgMS for about 63% of farms with 28% of farms exceeding NZD 35/kgMS — and that “around 20 percent of banks’ dairy sector loans, by value, are being closely monitored... due to concerns about borrowers’ financial strength”.

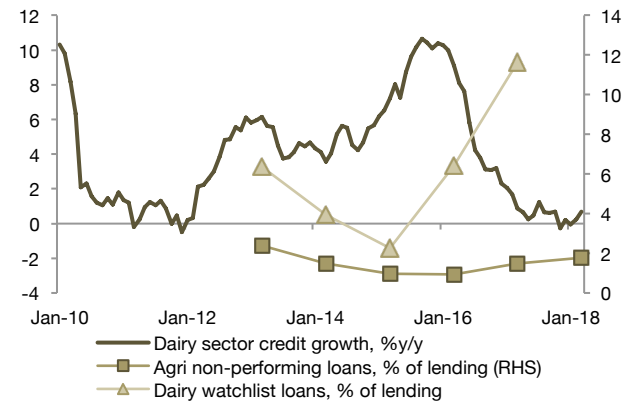
While 90% of dairy farms are expected to remain cash flow positive this season based on Fonterra’s initial farmgate guidance, it is apparent that the previous two seasons have provided only minor support to farmer financial positions. Moreover, were our projection of NZD 6.25/kgMS to transpire, our back-of-the-envelope calculations suggest that farm retained earnings — once Fonterra’s dividend and other income are factored in alongside household drawings and taxation payments — would fall by around 60% compared to a farmgate milk price of NZD 7.00/kgMS.

The Reserve Bank reports that non-performing loans (NPL) in the agricultural sector has risen from 1.0% in 2015/16 to 1.8% of agricultural lending as of March. While the Bank did not update these statistics for the dairy sector specifically, its November 2016 FSR reported a steady rise in watchlist loans from a low of 2.2% at the beginning of 2015 to 11.6% as of October 2016, suggesting that dairy sector NPL could be considerably higher and rising.

Consequently, the Reserve Bank is encouraging lenders to “continue to lend prudently” and increasingly move loans with interest-only terms to repaying principal, with the Bank’s review of bank capital requirements possibly leading to even tighter lending standards. This is consistent with ANZ’s latest Business Outlook survey (June) which highlights persistently weak business confidence in the agricultural sector with ‘ease of credit’ cited as the most prevalent concern.

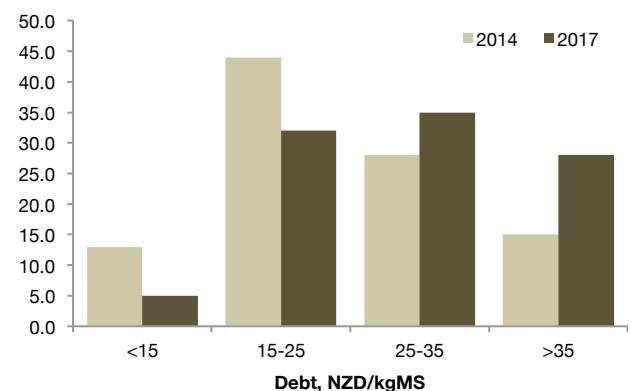
Meanwhile according to REINZ, dairy farm prices have been softening for some time and while prices in May marked a modest 0.4% 3m/3m gain, this is 8.2% weaker than a year ago. We believe that this likely over-states price strength as we understand from anecdotal reports that farms with higher cost of production are being held off market and/or are not transacting. Subdued international dairy prices suggest little upward support in the near term and we expect this to add to pressures from tighter lending standards and we believe farmers are likely to remain highly reliant on positive cash flows this season.

Figure 6: Dairy sector lending & loan quality



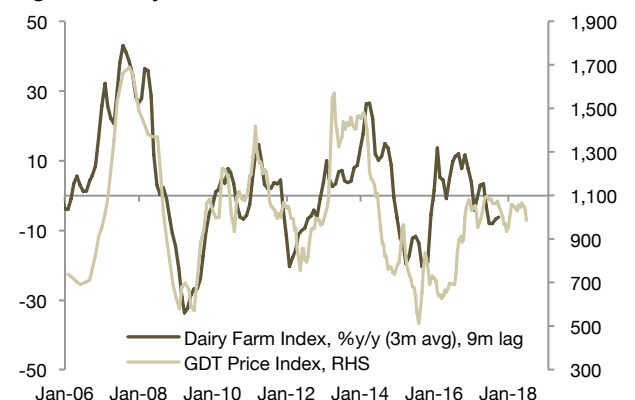
Source: Reserve Bank of New Zealand, Redward Associates

Figure 7: Distribution of dairy sector debt, % of lending



Source: DairyNZ, Reserve Bank of New Zealand

Figure 8: Dairy Farm Price Index & GDT Price Index



Source: REINZ, GlobalDairyTrade, Redward Associates

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Milk production and supply

The Dairy Companies Association of New Zealand (DCANZ) reported a 6.2% increase in national milk production in May relative to May 2017, totalling 869k MT, and this rebound in late season production brings full season output up by 0.1% relative to 2016/17. In terms of milksolids, production is up by 5.7% in May to 88.81mil kgMS and full season production is down by 0.6%.

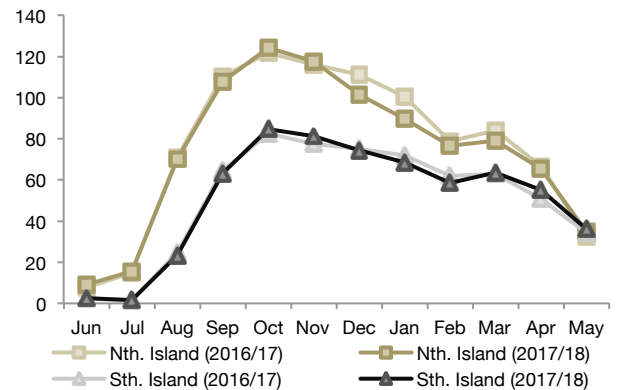
This compares to Fonterra's latest statistics where milk collections increased 6.6% in May supported by strength in both the North Island and South Island. Fonterra marks a 1.4% decline in full season collections, totalling 1,505mil kgMS, driven largely by their ongoing loss of market share with only partial contribution from unfavourable weather conditions in late summer.

Australian also remains in expansion, producing 701.4k MT of milk in May, which is up by 2.5% from a year ago. Similar to the recent months, this growth can be largely attributed to output in Tasmania (+14.7k MT) with modest gains in South Australia (+3.4k MT) and Victoria (+1.1k MT). On a NZ-equivalent basis, Australian milk production increased by 3.4%/y in the 2017/18 season (+312k MT).

US milk production increased by 0.8% in May relative to May last year, totalling 8.67mil MT. The US Department of Agriculture (USDA) reports that this can be largely attributed to further improvements in milk yield per cow, with the number of milk cows nationwide only about 0.03% higher than a year ago. On a NZ-equivalent basis, US milk production increased by 1.3% in the 2017/18 season (+1.30mil MT).

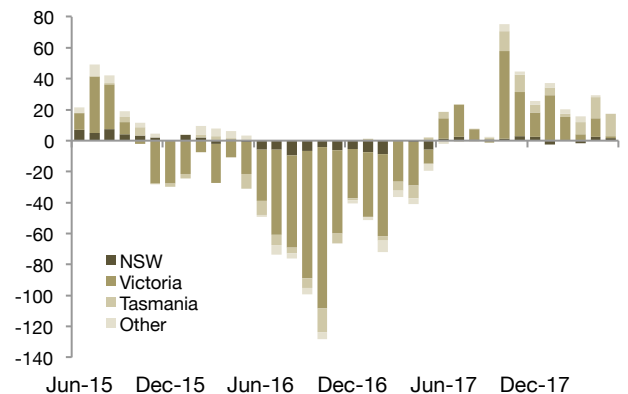
Milk production in EU-28 also remains solid although it has slowed relative to the rate of growth observed much of the past year. Output totalled 13.84mil MT in April, marking a 1.4% increase relative to the same month last year. The expansion remains driven by a rise in production in Italy (+90.6k MT) and Germany (+94.2k MT) with support from Poland (+35.8k MT) although Ireland has posted a considerable contraction (-43.8k MT) along with weakness in the Netherlands (-20.7k MT) and the United Kingdom (-10.2k MT). While the Northern Hemisphere is now heading into peak production months, recent drought conditions particularly in Ireland are likely to be a headwind. On a NZ-equivalent basis, EU-28 milk production increased by 3.4% in the 2017/18 season-to-April (+4.73mil MT).

Figure 9: Fonterra milk collections, mil kgMS



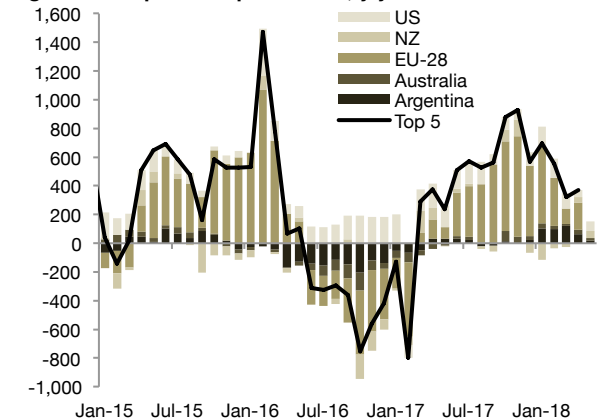
Source: Fonterra

Figure 10: Australia milk production, '000 MT



Source: Dairy Australia

Figure 11: Liquid milk production, y/y mil litres



Source: AHDB Dairy, USDA, Eurostat, Dairy Australia, DCANZ

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Milk demand and trade

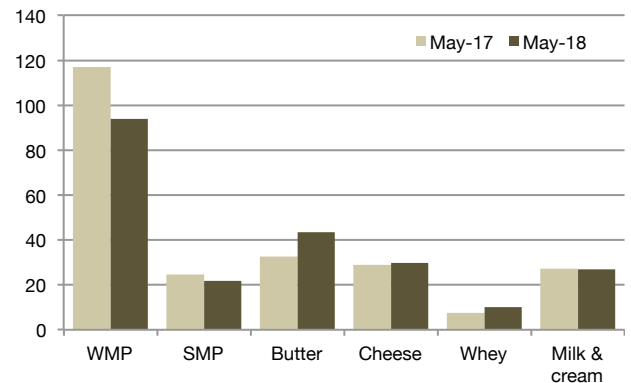
New Zealand dairy exports totalled 225.9k MT in May, marking a modest 5.1% decline in volume relative to May 2017. This reflected a considerable contraction in demand for WMP (-23.0k MT) along with SMP (-2.9k MT) and Milk & Cream (-0.5k MT), although this was partially offset by stronger volumes of Butter (+10.9k MT), Whey (+2.7k MT) and Cheese (+0.6k MT). We note that this follows a considerable ramp up in WMP exports in recent months – WMP volumes have increased by 66.7k MT between December 2017 and April 2018 relative to the same period last year (+10.6%).

Australia exported 75.4k MT of dairy products in May, which is up by 3.7% from May 2017. Relative to the same month a year ago, the latest ramp up SMP export volumes through February to April has reversed, with external demand moderating slightly in May (-2.3k MT). Meanwhile, Milk remains in solid expansion for the eighth consecutive month (+1.8k MT) and Mixtures also expanded (+3.3k MT). Butter represents a small portion of dairy exports by volume – totalling 701MT in May – but it is interesting to note that Butter exports have been trending down for a few years now, declined on a same-month basis for 17 consecutive months. This coincides with a trend increase in exports of Milk over the same period.

In May, US dairy exports totalled 220.4k MT, gaining 14.1% in volume from the same month last year with this trend increase consistent with steady production growth. With the exception of Cheese, where volumes moderated 15.5% relative to May 2017 (-5.5k MT), demand for all other major dairy products remained in solid expansion particularly for WMP which is up 138% (+2.5k MT) and Butter up 121% (+2.2k MT). However, the largest contribution to overall dairy export growth remains SMP (+11.5k MT), Lactose (+10.0k MT), and Whey (+8.7k MT).

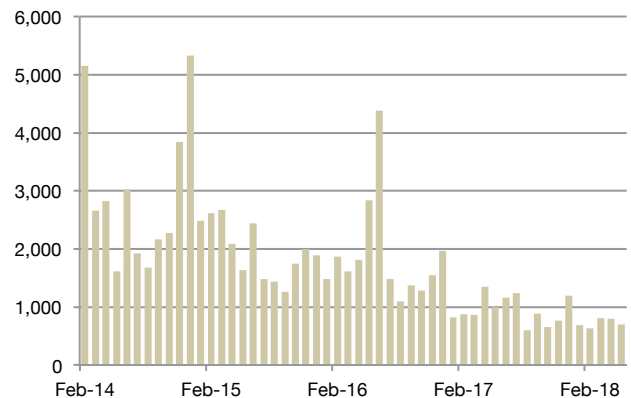
Exports of EU dairy products increased in April but at a slower pace, up by 0.6% from a year ago to total 367.0k MT. This was driven by mixed results with Milk & Cream volumes strengthening (+8.8k MT) and SMP also solid (+5.0k MT) with Buttermilk up (+2.5k MT), but against weaker volumes in Butter (-4.9k MT), Cheese (-2.5k MT) and Whey (-1.7k MT).

Figure 12: NZ dairy exports, '000 MT



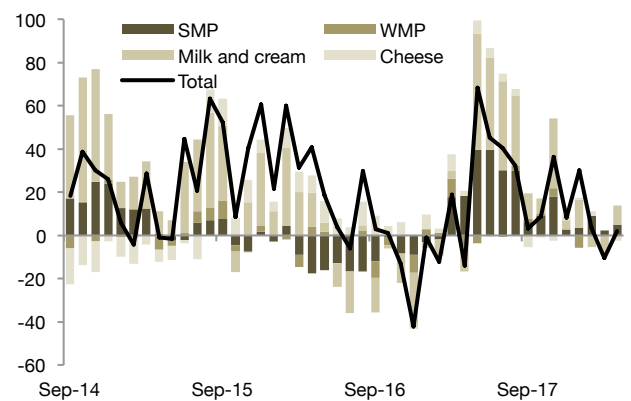
Source: Statistics New Zealand

Figure 13: Australian Butter exports, MT



Source: Dairy Australia

Figure 14: EU-28 dairy exports, m/m '000MT



Source: Eurostat

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<i>Global Dairy Trade Trading Event Calendar & Fonterra Key Dates</i>	
Event 216	Tuesday, July 17 th
FY19 Forecast earnings announcement	July (TBC)
Event 217	Tuesday, August 7 th
Event 218	Tuesday, August 21 st
Event 219	Tuesday September 4 th
Event 220	Tuesday September 18 th
FY18 Annual Results announcement	Late September (TBC)
Event 221	Tuesday, October 2 nd
Event 222	Tuesday, October 16 th
Event 223	Tuesday, November 6 th
Event 224	Tuesday, November 20 th
Event 225	Tuesday, December 4 th
Event 226	Tuesday, December 18 th
FY19 Q1 Business Update	December (TBC)

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