

The Good Oil

Refining Margins Sink — Dec 2019

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November 2019 has not panned out as expected for refining margins. Instead of increasing, with higher diesel demand more than offsetting a falling sulphur fuel oil demand, both crack spreads have dropped ~US\$4/barrel and ~US\$9/barrel respectively in November 2019. We estimate that the November 2019 Refining NZ (NZR) gross refining margin (GRM) was US\$5.99/barrel and the spot margin is a little above US\$5.00/barrel. This has had a material negative flow-on effect to NZR's FY19 earnings outlook and a modest impact on ZEL's FY20 earnings.

GRM continues to fall on the back of IMO 2020 regulations

We estimate that NZR's GRM for November 2019 was US\$5.99/barrel, down -US\$2.37/barrel from October. The fuel oil crack spread had the largest absolute drop, falling -US\$8.20/barrel, jet fuel and diesel crack spreads also declined steeply, down ~-20% and ~-22% respectively. The large decline in fuel oil continues as a result of the low sulphur regulations due to come in in 2020. NZR has reported that its GRM for Sept/Oct 2019 was US\$6.16/barrel giving it a low +US\$2.16/barrel uplift over the Singapore benchmark margin. We cut our FY19 NPAT forecast -\$39m to \$6m, highlighting the operating leverage in the business.

Refining NZ (NZR) has indicated that NPAT will be reduced by between NZ\$1.5M and NZ\$2.5M as a result of the power outage in Northland on 27 November. NZR had to completely power down for safety reasons with business critical systems maintained using back up power.

MBIE importer margins up again in November

MBIE provisional importer margins for November show diesel and petrol margins up +6% and +10% respectively. This makes it four consecutive months of month on month growth for diesel importer margins and three months of growth for petrol importer margins. These increases contradict the anecdotal evidence that retail competition continues to be tough.

ComCom final report looms in front of ZEL

On Thursday 5 December, the ComCom will be releasing its final Retail Market Fuel Study. We believe it is likely to walk back from some of its draft statements, with retail fuel market competition intensifying in the past few months. Our understanding is that retail competition remains tough and hence ZEL's earnings remain under pressure. In addition, the low refining margins are causing additional margin pressures for ZEL such that we have trimmed our FY20 EBITDAF forecast -\$7m to \$389m (slightly below guidance).

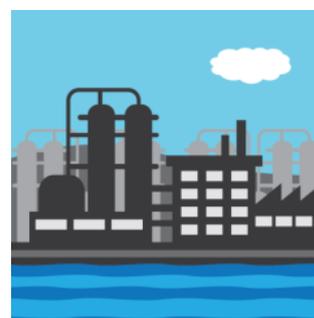


Figure 1. Summary company valuation metrics

Company	Price	Target		Rating	1 year forward		
		Price	Return		EV/EBITDA (x)	PE (x)	Gr Yld (%)
NZR	1.97	2.00	7.6%	NEUTRAL	7.0	>100	2.8
ZEL	5.14	5.11	8.8%	NEUTRAL	7.5	13.8	13.0

Source: Forsyth Barr analysis

Investment View

We have NEUTRAL ratings on both NZR and ZEL. Whilst there are positive upside scenarios, both stocks also face challenges. ZEL has difficult trading conditions and its underlying earnings level is unclear. NZR's challenge is to control opex and capex to ensure it remains competitive with import options. In addition, the GRM outlook is negative.

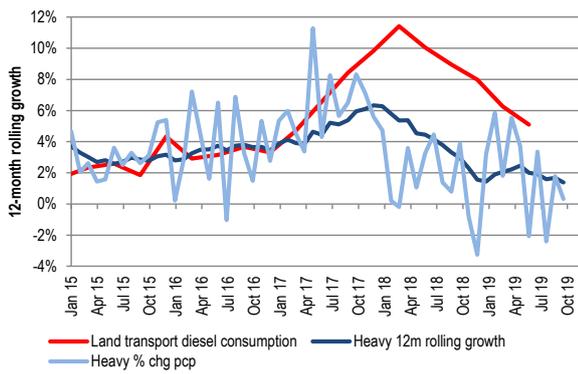
Downstream — Fuel volume indicators

Vehicle traffic

Traffic volume growth continues

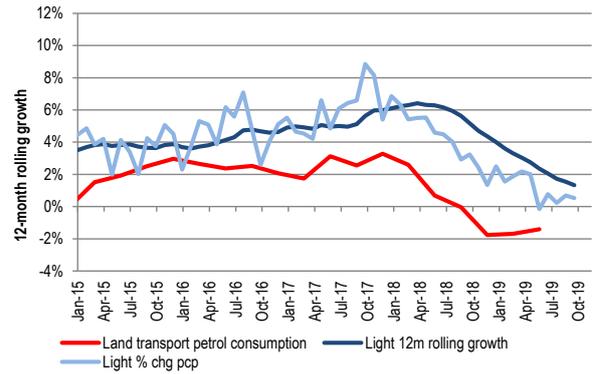
Heavy vehicle traffic in October 2019 ticked up +0.3% vs. the pcp. Light traffic was also up, reporting +0.5% growth compared to October 2018. The 12-month rolling growth rate for heavy traffic is down to +1.4% and light traffic volume growth continues to gradually decline.

Figure 2. Heavy vehicle traffic vs. MBIE diesel consumption



Source: MBIE, ANZ, NZTA, Forsyth Barr analysis

Figure 3. Light vehicle vs. MBIE petrol consumption



Source: MBIE, ANZ, NZTA, Forsyth Barr analysis

Vehicle sales

Commercial vehicle sales growth slides further

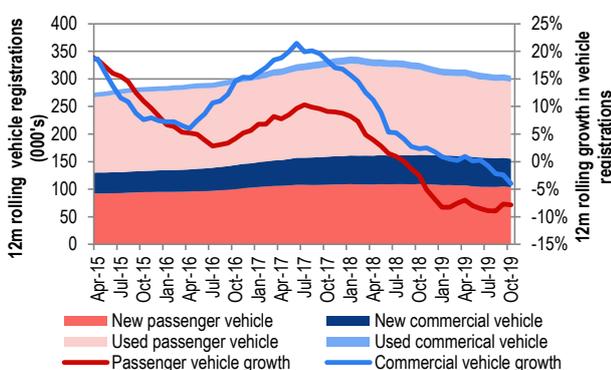
Total commercial vehicle sales in October 2019 were down -11% on the prior consecutive period, with new commercial vehicle registrations down --12% and used commercial vehicle registrations down --4%. This follows 6 months of steady decline and brings the 12 month rolling growth value down to -4%.

Passenger vehicle sales had another small increase, up +2% from September, but overall 12 month rolling growth continues to be negative at --8%.

The number of heavy vehicle/SUV/ute sales per EV remained the same in October despite electric vehicle sales decreasing from the record high set in September.

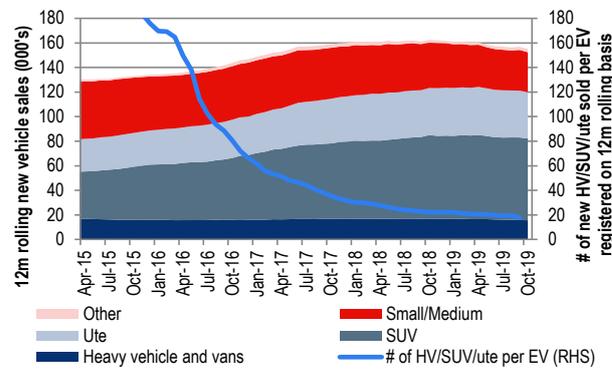
At the time of publishing, November 2019 data had not been released. For October 2019 EV statistics please refer to *The Good Oil — importer margins up?* released in November 2019.

Figure 4. 12 month rolling vehicle registrations



Source: MIA, Forsyth Barr analysis

Figure 5. 12 month rolling vehicle sales by type



Source: MIA, Forsyth Barr analysis

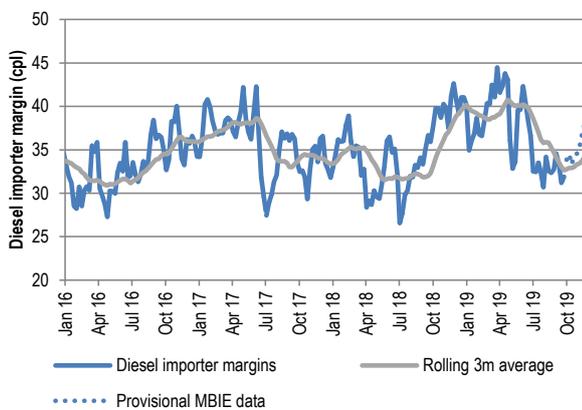
Downstream — MBIE importer margins

Importer margins up again

Both diesel and petrol importer margins ticked up in November 2019 with petrol up +10% on the prior month, and diesel up +6%. This is the fourth consecutive month of growth for diesel importer margins which averaged 36.1cpl over the month. However, these steady increases do not appear to correlate with anecdotal evidence that retail competition remains tough.

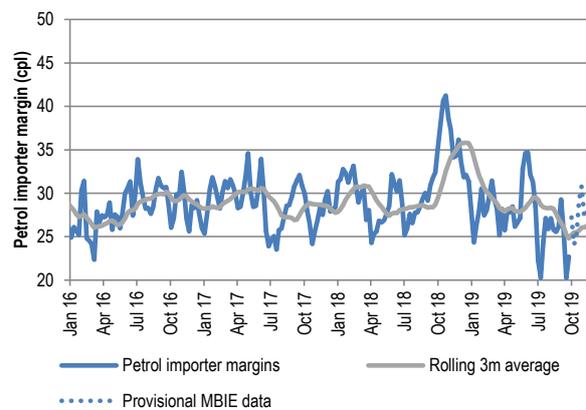
The average petrol importer margin is -11% below the FY19 YTD level, whereas the average diesel margin is +1.7cpl above the corresponding FY19 YTD period.

Figure 6. Rolling 3-month diesel importer margin



Source: MBIE, Forsyth Barr analysis

Figure 7. Rolling 3-month petrol importer margin



Source: MBIE, Forsyth Barr analysis

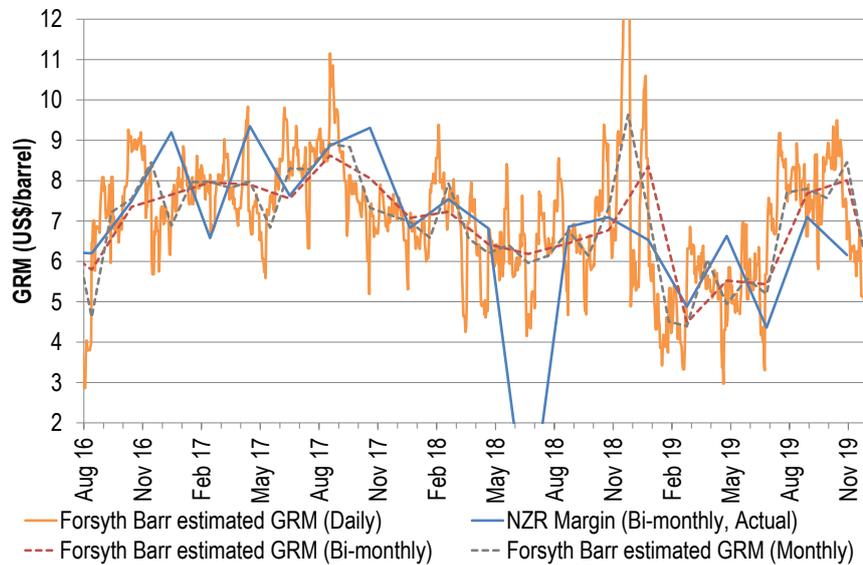
Figure 8. Key statistics

	Monthly Average			% chg	Spot Margin	YTD FY19	YTD FY20	% chg	FY18	FY19	% chg
	Sep-19	Oct-19	Nov-19								
MBIE importer margin - diesel (cpl)	32.8	34.0	36.1	6%	38.0	34.0	35.7	5%	34.9	35.0	0%
MBIE importer margin - petrol (cpl)	24.5	26.4	29.0	10%	30.3	30.7	27.3	-11%	29.0	30.2	4%

Source: Forsyth Barr analysis

Downstream — Refining margins

Figure 9. NZR refining margin (forecast vs actual)



Source: NZR, Bloomberg Forsyth Barr analysis

Note: Forsyth Barr estimates exclude the impact of the hydro-cracker outage in May/June 2018. NZR actual includes the impacts

November estimated gross refining margins decline

In November NZR reported a Sept/Oct 2019 GRM of US\$6.16/barrel, ~US\$2/barrel lower than our estimate. The uplift over the Singapore benchmark margin was +US\$2.16/barrel, which is the lowest uplift since Nov/Dec 2013 (excluding NZR maintenance outage periods). We have cut our FY19 NPAT forecast -\$39m to \$6m, highlighting the operating leverage in the business.

Our estimate for NZR's November 2019 gross refining margin (GRM) was US\$5.99/barrel, down ~28% from our estimate of US\$8.36/barrel in October 2019. In addition, our spot estimate is US\$5.17/barrel. We suspect these estimates err on the high side given NZR commentary that its shipping benefit is ~US\$1/barrel lower than normal.

The GRM decline was due in part to the fuel oil crack spreads continuing to decrease on the back of the IMO 2020 low-sulphur oil requirements. Fuel oil spreads averaged -US\$21.6/barrel, which is -US\$8.77/barrel down from the prior month. It wasn't just fuel oil decreasing, however, as all spreads were down in November, with average jet fuel and diesel spreads down ~20% and ~22% respectively. These declines come as a modest surprise as diesel and jet fuel were expected to increase as a result of IMO 2020 regulations.

Figure 10. Key statistics

	Monthly average				Spot estimate	YTD FY18	YTD* FY19	% chg	FY17	FY18	% chg
	Sep-19	Oct-19	Nov-19	% chg							
Forsyth Barr estimated GRM (US\$/barrel)	7.62	8.36	5.99	-28%	5.17	5.42	6.04	11%	8.10	5.69	-30%
NZDUSD	0.634	0.634	0.640	1%	0.643	0.691	0.659	-5%	0.711	0.693	-3%
Estimated processing fee (NZ\$m)	29.4	32.3	22.9	-29%	n/a	230.5	253.3	10%	328.9	255.1	-22%

Source: Bloomberg, Forsyth Barr analysis

*Includes Forsyth Barr estimate for October and November 2019

Financial year is the year to 31 December

Upstream — Brent oil price

Figure 11. Brent oil price (spot)



Source: Bloomberg, Forsyth Barr analysis

Figure 12. Brent oil price forecasts (Bloomberg consensus)



Source: Bloomberg, Forsyth Barr analysis

Spot prices rebound

The average Brent crude price for November 2019 was ~US\$63/barrel. After the decline in prices in October, prices have rebounded up above the September average price. November also saw a decrease in volatility with spot prices ranging between just ~US\$61/barrel and ~US\$64/barrel.

In the last few days of November the oil price fell as a result of the resignation of Iraq's president which investors have speculated will reduce the anti-government unrest in the country. There is also speculation around the upcoming meeting of OPEC and Russia in early December, and continued uncertainty around US-China trade talks, both of which will be impacting prices.

Consensus forecasts in November 2019 were slightly up for 2020 and 2021, although still well below the August consensus forecasts of US\$64.4/barrel and US\$65.5/barrel for 2020 and 2021 respectively.

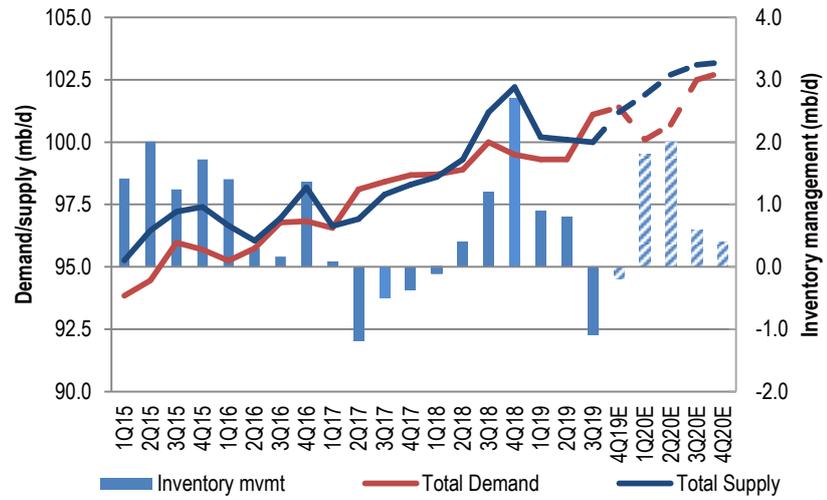
Figure 13. Key statistics

	Monthly average			% chg	Spot price	YTD 2018	YTD 2019	% chg	2017	2018	% chg	
	Sep-19	Oct-19	Nov-19									
Historic prices (Period average)												
Brent crude price (US\$/bbl)	62.3	59.6	62.7	5%	62.4	72.8	64.1	-12%	54.8	71.5	30%	
Brent crude price (NZ\$/bbl)	98.2	94.1	98.0	4%	97.2	105.3	97.2	-8%	77.2	103.6	34%	
Forecast prices (Month end)												
Bloomberg consensus forecast 2019	64.7	64.0	64.0	0%								
Bloomberg consensus forecast 2020	62.0	60.1	60.9	1%								
Bloomberg consensus forecast 2021	61.1	61.9	62.1	0%								

Source: Bloomberg, Forsyth Barr analysis

Supply and demand

Figure 14. IEA daily oil supply/demand



Source: IEA, Forsyth Barr analysis

Global oil supply rose +1.5mb/d in October as a result of increased production from Canada, the US, and Norway, as well as Saudi Arabian production returning to normal. However, world oil production was down 1.2mb/d yoy. OPEC+ (OPEC + Russia) compliance was 111% in October, down from 202% in September, although that was largely due to the Saudi outage during the month.

Refining NZ (NZR)

Priced as at 02 Dec 2019: NZ\$1.97

December year end

Forsyth Barr valuation		Valuation Ratios				2017A	2018A	2019E	2020E	2021E	
Valuation methodology	Blend of spot valuations, weighted to multiples				EV/EBITDA (x)	3.6	5.4	7.0	4.4	4.5	
					EV/EBIT (x)	6.5	14.8	41.4	9.3	10.3	
12-month target price (NZ\$)*	2.00	Spot valuations (NZ\$)			PE (x)	7.8	20.8	>100x	10.3	11.5	
Expected share price return	1.5%	1. DCF		1.99	Price/NTA (x)	0.8	0.8	0.8	0.8	0.8	
Net dividend yield	6.1%	2. Market multiples		1.87	Free cash flow yield (%)	16.8	-9.4	4.6	4.4	10.0	
Estimated 12-month return	7.6%	3. n/a		n/a	Net dividend yield (%)	9.1	3.8	2.0	6.1	6.1	
					Gross dividend yield (%)	12.7	5.3	2.8	8.5	8.5	
					Imputation (%)	100	100	100	100	100	
Key WACC assumptions		DCF valuation summary (NZ\$m)			Pay-out ratio (%)	72	79	213	63	70	
Risk free rate	2.00%	Total firm value		902							
Equity beta	1.00	(Net debt)/cash		(281)							
WACC	8.5%	Value of equity		621	Capital Structure	2017A	2018A	2019E	2020E	2021E	
Terminal growth	0.0%	Shares (m)		313	Interest cover EBIT (x)	9.0	4.0	1.6	8.8	8.6	
					Interest cover EBITDA (x)	16.0	11.1	9.7	18.6	19.7	
Profit and Loss Account (NZ\$m)	2017A	2018A	2019E	2020E	2021E	Net debt/ND+E (%)	16.4	25.3	25.6	24.0	21.9
Sales revenue	414.6	362.5	356.2	422.1	416.9	Net debt/EBITDA (x)	0.7	1.7	2.1	1.3	1.2
Normalised EBITDA	220.3	152.6	125.6	197.4	192.6						
Depreciation and amortisation	(96.1)	(97.1)	(104.5)	(103.7)	(108.1)	Key Ratios	2017A	2018A	2019E	2020E	2021E
Normalised EBIT	124.2	55.6	21.1	93.7	84.5	Return on assets (%)	9.3	4.0	1.5	6.6	6.0
Net interest	(13.7)	(13.8)	(13.0)	(10.6)	(9.8)	Return on equity (%)	9.9	3.9	0.8	7.6	6.7
Associate income	-	-	-	-	-	Return on funds employed (%)	10.1	4.6	2.2	7.1	6.4
Tax	(31.9)	(12.2)	(2.3)	(23.3)	(20.9)	EBITDA margin (%)	53.1	42.1	35.3	46.8	46.2
Minority interests	-	-	-	-	-	EBIT margin (%)	30.0	15.3	5.9	22.2	20.3
Normalised NPAT	78.5	29.6	5.9	59.8	53.8	Capex to sales (%)	22.8	44.8	22.3	32.5	22.5
Abnormals/other	-	-	-	-	-	Capex to depreciation (%)	98	167	76	132	87
Reported NPAT	78.5	29.6	5.9	59.8	53.8						
Normalised EPS (cps)	25.1	9.5	1.9	19.1	17.2	Operating Performance	2017A	2018A	2019E	2020E	2021E
DPS (cps)	18.0	7.5	4.0	12.0	12.0						
						Revenue Breakdown (NZ\$m)					
Growth Rates	2017A	2018A	2019E	2020E	2021E	Processing fee revenue	327.4	258.9	250.8	317.1	309.9
Revenue (%)	17.1	-12.6	-1.7	18.5	-1.2	Natural gas recovery	24.4	32.0	39.8	40.6	41.4
EBITDA (%)	31.7	-30.7	-17.7	57.2	-2.4	Other refining revenue	11.7	13.6	14.8	13.5	13.8
EBIT (%)	55.2	-55.3	-62.0	>100	-9.9	Pipeline revenue	37.8	44.1	37.0	38.1	38.8
Normalised NPAT (%)	66.5	-62.3	-80.2	>100	-10.1	Other revenue	13.3	13.9	13.9	12.9	13.0
Normalised EPS (%)	66.5	-62.3	-80.2	>100	-10.1	Total revenue	414.6	362.5	356.2	422.1	416.9
DPS (%)	100.0	-58.3	-46.7	>100	0.0	Processing fee revenue growth (%)	18.4	-20.9	-3.1	26.4	-2.3
						Total revenue growth (%)	17.1	-12.6	-1.7	18.5	-1.2
Cash Flow (NZ\$m)	2017A	2018A	2019E	2020E	2021E	Processing fee drivers					
EBITDA	220.3	152.6	125.6	197.4	192.6	Refining margin (USD/barrel)	8.0	6.2	5.5	7.0	7.0
Working capital change	22.5	(38.8)	(4.5)	1.1	(6.3)	NZDUSD	0.71	0.69	0.66	0.66	0.68
Interest & tax paid	(36.9)	(25.2)	(24.7)	(33.9)	(30.7)	Throughput (mbls)	41.7	40.4	43.2	43.0	43.0
Other	(8.0)	16.0	11.4	-	-	Refining margin (NZD/barrel)	7.9	6.2	5.8	7.4	7.2
Operating cash flow	198.0	104.6	107.8	164.6	155.6	Margin cap (USD/barrel)	9.0	9.0	9.0	9.0	9.0
Capital expenditure	(94.6)	(162.3)	(79.6)	(137.3)	(93.8)	Fee floor (estimated) (USD/barrel)	3.2	3.3	3.0	3.1	3.2
(Acquisitions)/divestments	-	-	-	-	-	Operating cost breakdown (NZ\$m)					
Other	(0.4)	-	-	-	-	Process materials and utilities	45.9	49.2	59.4	54.1	50.6
Funding available/(required)	103.1	(57.7)	28.3	27.3	61.8	Natural gas costs	24.4	32.0	39.8	40.6	41.4
Dividends paid	(37.5)	(46.9)	(20.3)	(18.8)	(37.5)	Materials & contractor payments	31.0	29.0	31.1	31.5	31.8
Equity raised/(returned)	(0.7)	(0.3)	(0.3)	-	-	Wages & salaries	59.0	61.3	62.3	63.6	64.9
Increase/(decrease) in net debt	(64.8)	104.9	(7.7)	(8.5)	(24.3)	Admin & other expenses	33.8	38.4	38.0	35.0	35.7
						Total expenses	194.3	209.8	230.7	224.7	224.3
Balance Sheet (NZ\$m)	2017A	2018A	2019E	2020E	2021E						
Working capital	(17.0)	19.5	23.1	22.0	28.4						
Fixed assets	1,128.9	1,191.9	1,168.7	1,202.3	1,188.0						
Intangibles	8.1	14.3	17.9	17.9	17.9						
Other assets	-	0.0	0.1	0.1	0.1						
Total funds employed	1,120.1	1,225.7	1,209.8	1,242.3	1,234.3						
Net debt/(cash)	155.1	260.3	257.8	249.3	225.0						
Other non current liabilities	172.2	195.8	203.8	203.8	203.8						
Shareholder's funds	792.3	769.2	747.8	788.8	804.1						
Minority interests	0.4	0.4	0.4	0.4	1.4						
Total funding sources	1,120.1	1,225.7	1,209.8	1,242.3	1,234.3						

* Forsyth Barr target prices reflect valuation rolled forward at cost of equity less the next 12-months dividend

Z Energy (ZEL)

Priced as at 02 Dec 2019: NZ\$5.14

March year end

Forsyth Barr valuation					Valuation Ratios					
Valuation methodology					Blend of spot valuations					
					2018A	2019A	2020E	2021E	2022E	
12-month target price (NZ\$)*					5.11	Spot valuations (NZ\$)				
Expected share price return	-0.6%	1. DCF	4.93		EV/EBITDA (x)	6.4	6.4	7.5	7.2	7.3
Net dividend yield	9.3%	2. Dividend Yield	5.33		EV/EBIT (x)	8.3	8.9	12.0	10.8	10.9
Estimated 12-month return	8.8%	3. Market Multiple	5.21		PE (x)	9.7	10.5	13.8	12.5	12.5
Key WACC assumptions					DCF valuation summary (NZ\$m)					
Risk free rate	2.00%	Total firm value	3,044		Price/NTA (x)	16.4	8.8	45.9	33.6	27.5
Equity beta	0.84	(Net debt)/cash	906		Free cash flow yield (%)	14.8	13.8	-0.8	11.3	11.8
WACC	7.1%	Value of equity	2,055		Net dividend yield (%)	6.3	8.4	9.3	9.3	9.3
Terminal growth	-2.0%	Shares (m)	400		Gross dividend yield (%)	8.7	11.6	13.0	13.0	13.0
					Imputation (%)					
					Pay-out ratio (%)					
					Capital Structure					
					2018A					
					2019A					
					2020E					
					2021E					
					2022E					
Profit and Loss Account (NZ\$m)					2018A	2019A	2020E	2021E	2022E	
Sales revenue	4,570	5,450	5,166	5,169	5,079					
Normalised EBITDA	448	435	389	420	413					
Depreciation and amortisation	(102)	(122)	(147)	(141)	(137)					
Normalised EBIT	347	312	241	279	276					
Net interest	(52)	(51)	(64)	(63)	(59)					
Associate income	1	(1)	(1)	-	-					
Tax	(82)	(61)	(47)	(60)	(61)					
Minority interests	-	(2)	(19)	(9)	(8)					
Normalised NPAT	211	196	149	164	164					
Abnormals/other	(6)	(16)	(35)	-	-					
Reported NPAT	205	180	114	164	164					
Normalised EPS (cps)	52.9	49.0	37.1	41.0	41.1					
DPS (cps)	32.3	43.0	48.0	48.0	48.0					
Growth Rates					2018A	2019A	2020E	2021E	2022E	
Revenue (%)	18.3	19.3	-5.2	0.1	-1.7					
EBITDA (%)	6.9	-2.9	-10.7	8.2	-1.6					
EBIT (%)	3.3	-10.1	-22.8	15.7	-0.9					
Normalised NPAT (%)	8.2	-7.4	-24.1	10.4	0.1					
Normalised EPS (%)	8.2	-7.4	-24.1	10.4	0.1					
DPS (%)	10.2	33.1	11.6	0.0	0.0					
Cash Flow (NZ\$m)					2018A	2019A	2020E	2021E	2022E	
EBITDA	448	435	389	420	413					
Working capital change	61	(159)	16	(8)	7					
Interest & tax paid	(103)	(161)	(140)	(130)	(128)					
Other	(15)	223	(192)	(4)	(4)					
Operating cash flow	391	338	72	279	289					
Capital expenditure	(87)	(55)	(88)	(46)	(47)					
(Acquisitions)/divestments	18	(28)	36	-	-					
Other	12	4	2	6	6					
Funding available/(required)	334	259	22	239	247					
Dividends paid	(134)	(152)	(198)	(192)	(192)					
Equity raised/(returned)	(2)	(1)	(14)	(14)	(14)					
Increase/(decrease) in net debt	(198)	(106)	190	(33)	(41)					
Balance Sheet (NZ\$m)					2018A	2019A	2020E	2021E	2022E	
Working capital	196	358	363	370	364					
Fixed assets	870	830	806	781	757					
Intangibles	750	668	785	733	685					
Other assets	134	161	219	219	219					
Total funds employed	1,950	2,017	2,173	2,103	2,024					
Net debt/(cash)	824	827	1,071	1,044	1,008					
Other non current liabilities	269	270	263	257	249					
Shareholder's funds	857	920	839	802	766					
Minority interests	-	-	-	-	-					
Total funding sources	1,950	2,017	2,173	2,103	2,024					
Operating Performance					2018A	2019A	2020E	2021E	2022E	
Product volumes (m litres)										
Petrol					1,204	1,165	1,136	1,139	1,126	
Diesel - retail					461	454	446	438	427	
Diesel - commercial					807	812	799	831	846	
Diesel - biofuels					-	1	6	14	22	
Other fuels					1,153	1,193	1,156	1,171	1,186	
Supply - domestic					520	544	551	566	574	
Supply - industry & export					178	280	82	102	100	
Sub-total					4,145	4,168	4,094	4,159	4,180	
Total Fuels					4,323	4,448	4,176	4,260	4,280	
Retail service stations					343	343	340	336	339	
Petrol/service station (m litres)					3.64	3.53	3.45	3.48	3.44	
Diesel/service station (m litres)					1.34	1.32	1.31	1.29	1.26	
Gross profit (NZDm)										
Fuels					685	700	654	658	653	
Refining					77	54	63	72	69	
Non-fuels					76	81	76	80	82	
Flick Electric					-	1	4	7	9	
Gross profit					838	836	798	816	813	
Fuels gross margin (cpl)					16.5	16.8	16.0	15.8	15.6	
Fuels margin incl refining (cpl)					17.6	17.0	17.2	17.1	16.9	
Fuels margin excl supply (cpl)					18.3	18.0	17.5	17.5	17.3	
Non-fuels revenue/station (NZD 000)					373	398	378	397	407	
Refining volume (m barrels)					21.3	19.7	20.8	21.2	21.3	
Sales sourced from refinery (%)					82	75	81	81	81	
ZEL refining margin (USD/barrel)					8.6	6.2	6.4	7.0	7.0	
Flick customer numbers (000)					-	20.5	20.2	26.2	31.7	

* Forsyth Barr target prices reflect valuation rolled forward at cost of equity less the next 12-months dividend

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