

Refining NZ

Cracking Under Pressure? FY19 Result Review

ANDREW HARVEY-GREEN

 andrew.harvey-green@forsythbarr.co.nz
 +64 4 495 8185

NEUTRAL 

Refining NZ's (NZR) FY19 result was weak as expected, with NPAT of \$4m, -\$26m lower than the pcp. In addition, ongoing weakness in refining markets means current gross refining margins (GRM) are still below the US\$3/barrel fee floor. A review of historic performance and concerns about future demand growth has led us to cut our long-term GRM assumption -US\$0.75/barrel to US\$6.25/barrel. That has resulted in a material reduction in our earnings forecasts and valuation, such that we have cut our target price -42cps to \$1.40. We retain our NEUTRAL rating.

What's changed:

- **Forecast changes:** FY20/FY21/FY22 NPAT reduced -\$31m/- \$45m/- \$20m to \$16m/\$8m/\$32m respectively
- **Target price and rating:** Target price cut -42cps to \$1.40 and NEUTRAL rating retained

NZX Code	NZR	Financials: Dec/	19A	20E	21E	22E	Valuation (x)	19A	20E	21E	22E
Share price	NZ\$1.28	NPAT* (NZ\$m)	4.2	11.8	7.7	31.7	EV/EBITDA	5.5	4.7	4.9	3.9
Target price	NZ\$1.40	EPS* (NZc)	1.3	3.8	2.5	10.1	EV/EBIT	35.7	22.7	28.3	11.8
Risk rating	High	EPS growth* (%)	-85.9	n/a	-34.6	n/a	PE	n/a	33.8	n/a	12.6
Issued shares	312.6m	DPS (NZc)	2.0	0.0	4.0	6.0	Price / NTA	0.5	0.5	0.5	0.5
Market cap	NZ\$400m	Imputation (%)	100	100	100	100	Cash div yld (%)	1.6	0.0	3.1	4.7
Avg daily turnover	189.9k (NZ\$378k)	*Based on normalised profits					Gross div yld (%)	2.2	0.0	4.3	6.5

Weak FY19 result confirmed

NZR confirmed what we expected, a weak FY19 result with NPAT of just \$4m, the lowest since FY13. A low GRM, particularly at the back end of 2019 was the main issue, but an +\$8m increase in electricity costs has not helped NZR's situation. With debt levels above the target range and current operating conditions very tough, NZR is not paying a final dividend, as expected.

Near-term outlook remains challenging, but 2H20 should see improvement

The near-term outlook remains challenging with coronavirus fears impacting on the demand outlook at a time when the industry is still dealing with unexpectedly low refining margins from IMO2020 low-sulphur shipping fuel regulations coming into effect. In addition, NZR has a maintenance outage planned for 1H20 which includes a short hydro-cracker outage (the hydro-cracker is critical to NZR's GRM). 1H20 is going to be a tough period. In response NZR is focussing hard on opex, is deferring maintenance and has rescheduled its capex programme to minimise cash-burn in FY20. However, we do expect conditions to normalise in 2H20, although there is downside risk if the coronavirus outbreak continues. Nevertheless, we have lowered our new-normal GRM assumption.

Cutting long-term assumptions

We have reviewed our long-term GRM assumption in light of the current challenging refining conditions and the uncertain demand outlook, lowering it -US\$0.75/barrel to US\$6.25/barrel. This equals the long-term average GRM. Another factor leading to our more cautious assumption is that whilst refining conditions are expected to improve in the coming years, our analysis indicates that this prediction has not come true in the past three years. The lower GRM base assumption and factoring in the planned outages result in significant cuts to our FY20 and FY21 forecasts in particular. FY20 NPAT is down -\$31m to \$16m and FY21 NPAT is down -\$45m to \$8m. We have also removed the dividend and assume NZR will take a more conservative approach over the coming 18 months, with the dividend not resuming until 2H21. In light of our lower forecasts, we have cut our target price -42cps to \$1.40.

Refining NZ (NZR)

Priced as at 27 Feb 2020 (NZ\$)						1.28						
12-month target price (NZ\$)*						1.40	Spot valuations (NZ\$)					
Expected share price return						9.4%	1. DCF					1.31
Net dividend yield						0.5%	2. Market multiples					1.36
Estimated 12-month return						9.9%	3. n/a					n/a
Key WACC assumptions						DCF valuation summary (NZ\$m)						
Risk free rate						2.00%	Total firm value					649
Equity beta						1.00	(Net debt)/cash					(262)
WACC						8.5%	Less: Capitalised operating leases					
Terminal growth						0.0%	Value of equity					388
Profit and Loss Account (NZ\$m)						Valuation Ratios						
Sales revenue	2018A	2019A	2020E	2021E	2022E	2018A	2019A	2020E	2021E	2022E		
Normalised EBITDA	362	348	362	357	395	EV/EBITDA (x)	4.0	5.5	4.7	4.9	3.9	
Depreciation and amortisation	153	118	136	130	166	EV/EBIT (x)	10.9	35.7	22.7	28.3	11.8	
Normalised EBIT	(97)	(100)	(107)	(107)	(112)	PE (x)	13.5	96.1	33.8	51.7	12.6	
Net interest	56	18	28	23	54	Price/NTA (x)	0.5	0.5	0.5	0.5	0.5	
Associate income	(14)	(13)	(12)	(12)	(10)	Free cash flow yield (%)	-14.4	9.9	1.3	-2.5	16.9	
Tax	0	0	0	0	0	Net dividend yield (%)	5.9	1.6	0.0	3.1	4.7	
Minority interests	(12)	(1)	(5)	(3)	(12)	Gross dividend yield (%)	8.1	2.2	0.0	4.3	6.5	
Normalised NPAT	0	0	0	0	0	Capital Structure						
Abnormals/other	30	4	12	8	32	Interest cover EBIT (x)	2018A	2019A	2020E	2021E	2022E	
Reported NPAT	0	0	0	0	0	Interest cover EBITDA (x)	4.0	1.4	2.4	1.9	5.3	
Normalised EPS (cps)	30	4	12	8	32	Net debt/ND+E (%)	11.1	8.8	11.4	10.9	16.2	
DPS (cps)	9.5	1.3	3.8	2.5	10.1	Net debt/EBITDA (x)	25.3	24.5	23.8	24.4	20.3	
	7.5	2.0	0	4.0	6.0		1.7	2.1	1.8	1.9	1.2	
Growth Rates						Key Ratios						
Revenue (%)	2018A	2019A	2020A	2021A	2022A	2018A	2019A	2020E	2021E	2022E		
EBITDA (%)	-12.6	-3.9	4.0	-1.5	10.6	Return on assets (%)	4.0	1.3	2.0	1.6	4.0	
EBIT (%)	-30.7	-22.5	14.8	-4.3	27.9	Return on equity (%)	3.9	0.6	1.5	1.0	4.0	
Normalised NPAT (%)	-55.3	-67.1	54.9	-20.1	>100	Return on funds employed (%)	4.6	2.1	2.7	2.2	4.5	
Normalised EPS (%)	-62.3	-85.9	>100	-34.6	>100	EBITDA margin (%)	42.1	33.9	37.5	36.4	42.1	
Ordinary DPS (%)	-58.3	-73.3	-100.0	n/a	50.0	EBIT margin (%)	15.3	5.3	7.8	6.3	13.7	
						Capex to sales (%)	44.8	22.3	27.1	33.3	19.0	
						Capex to depreciation (%)	167	78	92	111	67	
						Imputation (%)	100	100	100	100	100	
						Pay-out ratio (%)	79	150	0	162	59	
Cash Flow (NZ\$m)						Operating Performance						
EBITDA	2018A	2019A	2020E	2021E	2022E	Revenue Breakdown (NZ\$m)						
Working capital change	153	118	136	130	166	Processing fee revenue	2018A	2019A	2020E	2021E	2022E	
Interest & tax paid	(39)	23	(16)	(6)	(1)	Natural gas recovery	259	242	251	243	279	
Other	(25)	(19)	(17)	(15)	(23)	Other refining revenue	32	40	44	44	45	
Operating cash flow	16	(6)	0	0	0	Pipeline revenue	14	16	17	17	17	
Capital expenditure	105	117	104	109	143	Other revenue	44	36	38	39	40	
(Acquisitions)/divestments	(162)	(78)	(98)	(119)	(75)	Total revenue	14	14	13	13	14	
Other	0	0	0	0	0		362	348	362	357	395	
Funding available/(required)	(58)	39	5	(10)	68	Processing fee drivers						
Dividends paid	(47)	(20)	0	0	(19)	Refining margin (USD/barrel)	2018A	2019A	2020E	2021E	2022E	
Equity raised/(returned)	(0)	(0)	0	0	0	NZDUSD	6.2	5.3	5.6	5.6	6.3	
(Increase)/decrease in net debt	(105)	19	5	(10)	49	Throughput (mbls)	0.69	0.66	0.65	0.68	0.68	
						Refining margin (NZD/barrel)	40.4	42.7	41.5	41.5	43.0	
						Fee floor (estimated) (USD/barrel)	6.2	5.7	6.0	5.8	6.5	
						Operating cost breakdown (NZ\$m)						
						Process materials and utilities	2018A	2019A	2020E	2021E	2022E	
						Natural gas costs	49	59	56	53	52	
						Materials & contractor payments	32	40	44	44	45	
						Wages & salaries	29	31	32	32	32	
						Admin & other expenses	61	61	62	64	65	
						Total expenses	38	39	33	34	34	
							210	230	226	227	229	

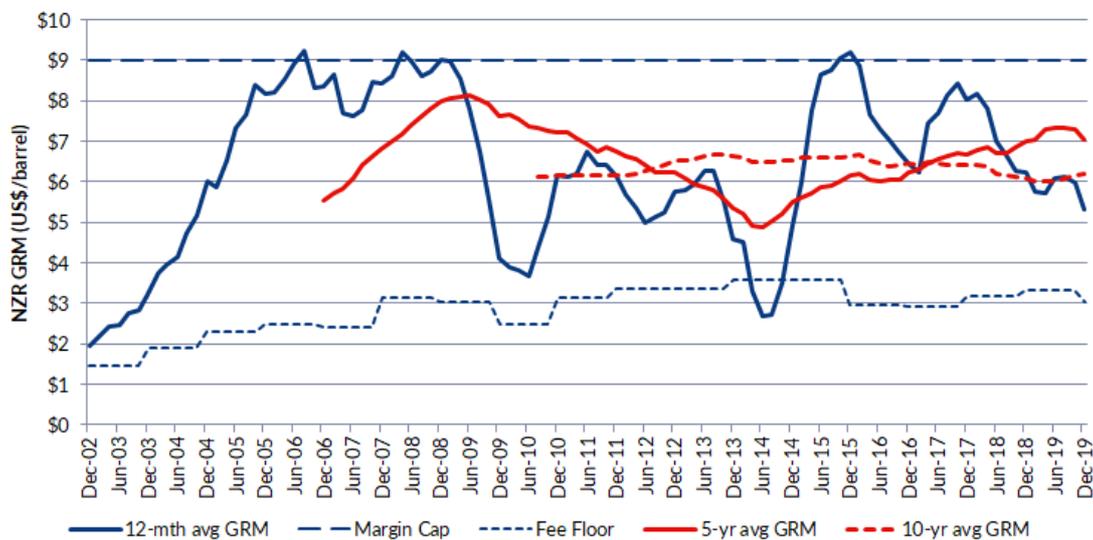
* Forsyth Barr target prices reflect valuation rolled forward at cost of equity less the next 12-months dividend

Downgrade to long-term gross refining margin assumption

We have cut our long-term GRM assumption to US\$6.25/barrel from US\$7.00/barrel. We had been running the US\$7.00/barrel assumption (or thereabouts) for much of the past six years following the Te Mahi Hou project. There are two key reasons for this downgrade:

- Whilst the GRM has at times been above US\$7.00/barrel, (the five-year rolling average is currently above US\$7/barrel) in reality the long-term average has been closer to US\$6.25/barrel. The 10-year rolling average has been within a narrow US\$6.00 to US\$6.50/barrel band for the past decade. The Te Mahi Hou project has had no discernable step change increase in the GRM since it was commissioned at the end of 2015 with macro refining issues offsetting the benefits.

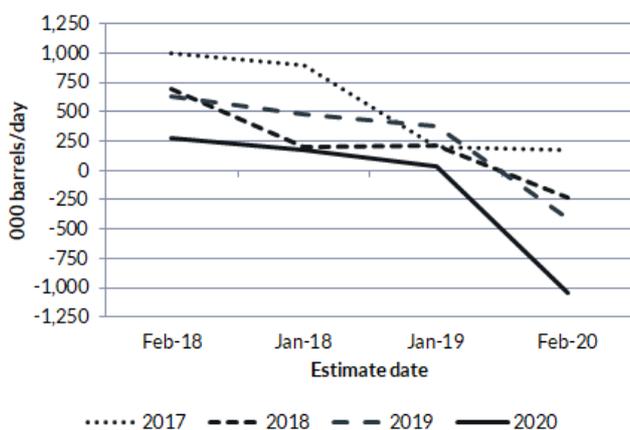
Figure 1. Historic GRM



Source: NZR, Forsyth Barr analysis

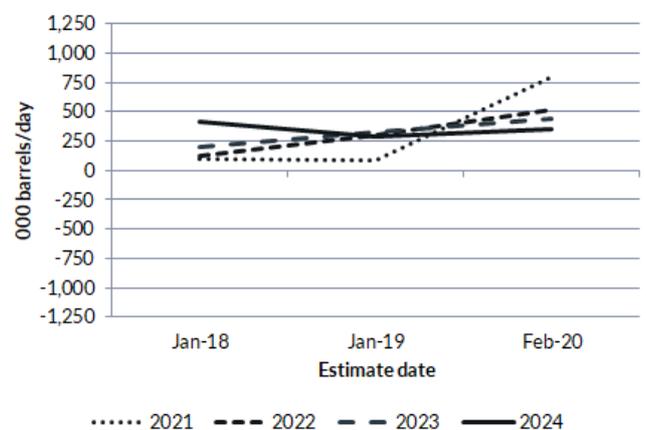
- The demand outlook for refined product is uncertain at best. We have eye-balled the FACTS Global Energy (FGE) incremental capacity vs. refined product demand charts that NZR has republished in the last four of its year end result presentations. The consistent message has been that refined product demand is going to grow faster than refinery capacity, ergo refining margins will increase. However, if we look at the changes in FGE's forecasts from period to period, it shows the actual outcomes have always been worse than anticipated, whilst the year two to year five outlook has remained positive. FGE is currently forecasting a fall in 2020 demand and a big increase capacity, before a very strong rebound in demand in 2021. We are of the view that it is too difficult to predict what will happen to surplus refining capacity to bank on an improvement in medium-term refining conditions leading to a GRM above the long-term historic average. Whilst we are a believer that low refining margins will result in capacity reductions, the refining margin cycle is relatively slow.

Figure 2. Incremental demand less capacity (historic & 2020)

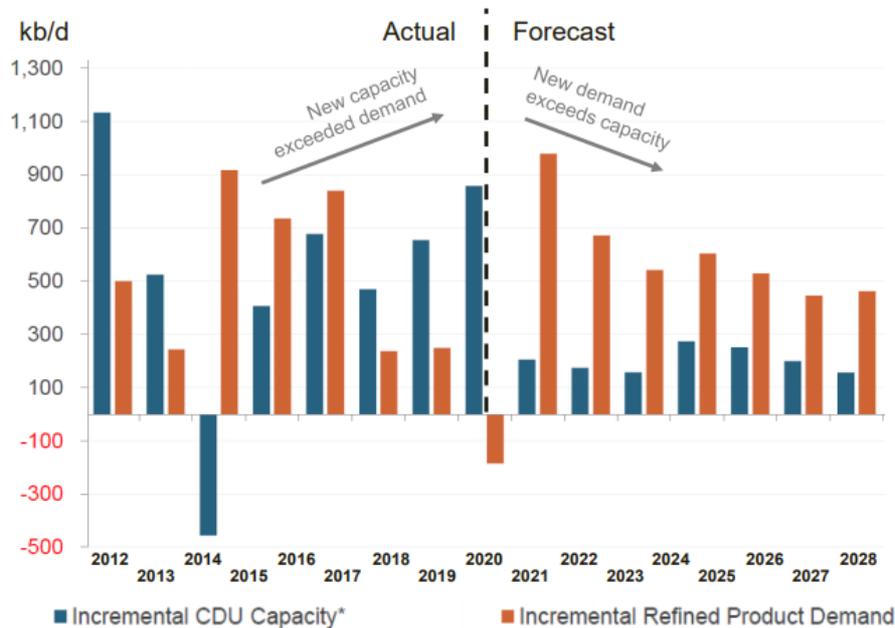


Source: FGE, Forsyth Barr analysis

Figure 3. Incremental demand less capacity (future)



Source: FGE, Forsyth Barr analysis

Figure 4. Latest FGE incremental refining capacity vs. demand


Source: FGE

GRM is a key value driver of the refinery

NZR is largely a fixed cost business, particularly given it runs at full capacity all of the time. Hence, processing fee revenue is the key value driver for NZR. Processing fee revenue is a function of the GRM, the NZDUSD fx rate. Lowering our GRM assumption from US \$7.00/barrel to US\$6.25/barrel has a material impact on our DCF valuation which is now \$1.24, -\$0.70 down from \$1.94 (we have had other modest changes that partially offset the reduction).

Figure 5. DCF sensitivity to GRM and NZDUSD

		Long-term gross refining margin (US\$/barrel)										
		\$5.25	\$5.50	\$5.75	\$6.00	\$6.25	\$6.50	\$6.75	\$7.00	\$7.25	\$7.50	\$7.75
Long-term	0.600	0.82	1.13	1.45	1.77	2.09	2.41	2.73	3.05	3.38	3.70	4.02
	0.625	0.56	0.87	1.17	1.48	1.78	2.09	2.40	2.71	3.02	3.33	3.64
NZDUSD	0.650	0.33	0.62	0.91	1.21	1.50	1.80	2.09	2.39	2.69	2.98	3.28
FX rate	0.675	0.12	0.39	0.67	0.96	1.24	1.52	1.81	2.09	2.38	2.67	2.96
	0.700	-0.07	0.19	0.45	0.72	1.00	1.27	1.55	1.82	2.10	2.37	2.65
	0.725	-0.25	0.00	0.25	0.51	0.77	1.04	1.30	1.57	1.83	2.10	2.37
	0.750	-0.40	-0.17	0.07	0.31	0.56	0.82	1.08	1.33	1.59	1.85	2.11

Source: Forsyth Barr analysis

The sensitivity table highlights the significant upside if the GRM starts an up cycle, but equally if the current downward trends continue, the downside risks to our revised valuation are significant. We note that there is a cap to the downside, as persistently low refining margins will result in NZR converting to an import terminal – albeit that will itself incur significant costs.

Forecast changes

There are three key changes to our forecasts:

1. Lowering our GRM assumption. Our 1H20 assumption is now US\$5.00/barrel (down from US\$6.00/barrel), before rebounding to our new long-term GRM assumption of US\$6.25/barrel in 2H20. 1H21 dips again to US\$5.00/barrel as NZR has indicated it is undertaking a significant hydrocracker outage.
2. Reshaping capex. We have shifted capex from FY20 to FY21, consistent with NZR's revised guidance. With NZR yet to push go on its solar project, we have also pushed that project back six months, assuming the project commences in 2H20. Our long-term average capex assumption is \$75m per annum, slightly above NZR's \$70m 10-year guidance.
3. We now assume no dividend for the next 18 months. With debt levels still well above NZR's target range (\$100m to \$200m), and debt levels rising in the short-term due to the difficult market conditions and upcoming maintenance period, we assume NZR will take a more conservative approach than it has in recent times. The lower GRM means that when dividends resume, we assume they will be lower.

Figure 6. Forecast changes

	FY20	FY20		FY21	FY21		FY22	FY22	
	Old	New		Old	New		Old	New	
	\$m	\$m	% Chg	\$m	\$m	% Chg	\$m	\$m	% Chg
Processing fees	295	251	-15%	310	243	-22%	310	279	-10%
Natural gas recovery	41	44	7%	41	44	7%	42	45	7%
Other income	64	68	5%	66	69	6%	67	71	6%
Total Revenue	400	362	-9%	417	357	-14%	419	395	-6%
Natural gas pass through costs	(41)	(44)	7%	(41)	(44)	7%	(42)	(45)	7%
Operating costs	(184)	(183)	-1%	(183)	(183)	0%	(186)	(183)	-1%
EBITDA	175	136	-22%	193	130	-33%	191	166	-13%
Depreciation / amortisation	(104)	(107)	4%	(108)	(107)	-1%	(110)	(112)	2%
EBIT	71	28	-60%	84	23	-73%	81	54	-33%
Net interest	(11)	(12)	5%	(10)	(12)	18%	(8)	(10)	24%
Pre-tax profit	60	16	-73%	74	11	-86%	73	44	-39%
Tax expense	(17)	(5)	-73%	(21)	(3)	-86%	(20)	(12)	-39%
REPORTED Profit	43	12	-73%	53	8	-86%	52	32	-39%
Earnings per share	13.8	3.8	-73%	17.1	2.5	-86%	16.7	10.1	-39%
Dividend per share	8.0	0.0	-100%	10.0	4.0	-60%	10.0	6.0	-40%
Barrels processed (000)	43,000	41,500	-3%	43,000	41,500	-3%	43,000	43,000	0%
Gross refining margin (US\$/barrel)	\$6.52	\$5.65	-13%	\$7.00	\$5.65	-19%	\$7.00	\$6.25	-11%
NZDUSD	0.665	0.653	-2%	0.680	0.675	-1%	0.680	0.675	-1%
Capital expenditure (\$m)	(137)	(98)	-28%	(94)	(119)	27%	(75)	(75)	0%

Source: Forsyth Barr analysis

FY19 result analysis

Figure 7. Summary FY19 result

	FY18	FY19	%	FB	Diff	
	\$m	\$m	Chg	\$m	\$m	Commentary
Processing fees	259	242	-7%	242	0	Weak GRM in Nov/Dec 2019 dragged down the final GRM
Pipeline revenue	44	36	-17%	37	(1)	PCP revenue high due to major refinery outage and greater use of terminal facilities
Other income	60	70	18%	68	2	Rise mainly due to pass through costs increasing
Total Revenue	362	348	-4%	347	1	
Natural gas pass through costs	(32)	(40)	24%	(40)	0	Increase in gas volumes and higher gas costs vs. pcpc
Operating costs	(178)	(191)	7%	(190)	(0)	Opex increase due mainly to electricity (\$7.5m) and maintenance (\$3.9m)
EBITDA	153	118	-23%	117	1	EBITDA in line with expectations
Depreciation / amortisation	(97)	(100)	3%	(104)	5	Lower than expected as 2H20 depreciation was -\$4m lower than 1H20
EBIT	56	18	-67%	13	6	
Net interest	(14)	(13)	-3%	(13)	(0)	
Pre-tax profit	42	5	-88%	(0)	5	
Tax expense	(12)	(1)	-94%	0	(1)	
Profit after tax	30	4	-86%	(0)	4	Higher depreciation is the only reason NZR beat our forecast
Earnings per share (cps)	9.5	1.3	-86%	(0.1)	1.4	
FY dividend per share (cps)	7.5	2.0	-73%	2.0	0.0	
Final div per share (cps)	4.5	2.0	-56%	0.0	2.0	Soft finish and difficult current operating conditions leads to dividend cut, as expected
Throughput (m barrels)	40.4	42.7	6%	42.7	0.0	No maintenance outage in FY19 vs. FY18
GRM(US\$/barrel)	\$6.22	\$5.34	-14%	\$5.34	0.0	GRM down -14% vs. pcpc despite there being no outage
NZDUSD fx rate	0.698	0.660	-6%	0.660	0.0	Lower currency helped offset the lower GRM
Cash Flow Summary						
Operating cash flow	105	117	12%	103	14	Increase in operating cash flow due to big working capital swing and lower tax paid
Capex	(162)	(78)	-52%	(80)	2	No maintenance outage meant lower capex in FY19
Free cash flow	(58)	39		24	16	
Dividend	(47)	(20)	-57%	(20)	0	Reduced dividend payments in FY19
Other	(0)	(0)		(0)		
Net cash flow	(105)	19		3	16	
Net debt	260	245				

Source: Forsyth Barr analysis

Investment Summary

Our rating is NEUTRAL. NZR's near-term outlook is challenging, with shipping fuel specification changes having a negative effect on the GRM. However, we believe these issues should be temporary and expect the GRM to return to more normal levels later in 2020.

Business quality

- **Important piece of NZ infrastructure:** NZR produces ~70% of New Zealand's refined fuel requirements and is a core part of the fuel supply infrastructure. In addition, the refinery to Wiri (Auckland) pipeline is a key strategic asset. Auckland is serviced solely from the refinery, which means NZR will always have a future supplying Auckland.
- **NZR margin uplift:** NZR typically receives +US\$3 to US\$4/barrel more than the Singapore complex margin with freight differentials (it is cheaper to import bulk crude than refined product) and product differentials being the primary drivers.

Earnings and cashflow outlook

- **Significant operating leverage:** NZR is a high fixed cost business meaning changes in the gross refining margin (GRM) and NZDUSD have a significant impact on processing fee revenue and therefore earnings. These two factors are NZR's main value drivers and both are notoriously volatile.
- **Shipping fuel oil changes:** Ships need to switch to low sulphur products from 2020 which could be either positive or negative for NZR, but to date have been negative.
- **Asia/Pacific refining capacity:** Surplus refining capacity is forecast to fall in the next few years, which should be supportive of refining margins, albeit this has been predicted in the past.

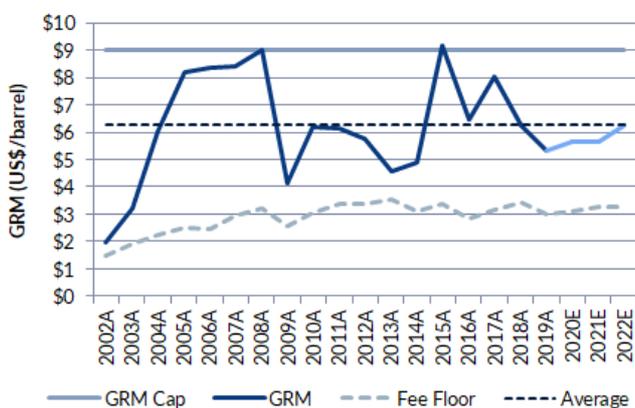
Financial structure

- **Moderate financial leverage:** NZR targets debt levels below \$200m, however, periods of low earnings and/or high capex can result in higher debt levels. Whilst NZR has some downside protection from a processing fee floor, it limits losses, as opposed to preventing them.

Risk factors

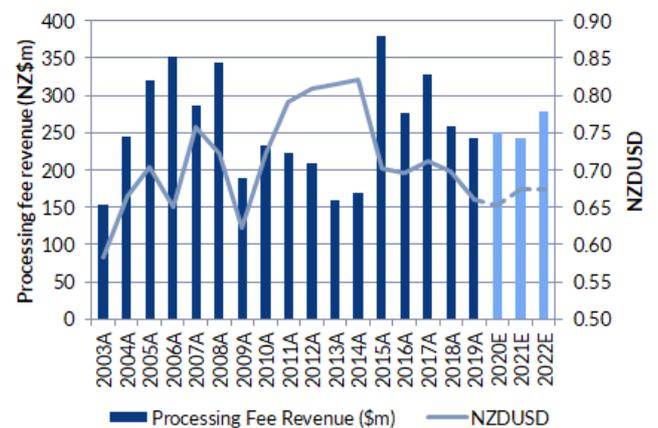
- **Capex outlook:** High operating leverage within NZR mean controlling opex and capex is very important. NZR's guided long-term capex of ~\$70m is lower than historic capex levels and if underlying opex/capex were to increase, that would have a material impact on NZR's value.
- **Falling fuel volumes:** A long-term threat to NZR is a fall in fuel demand. However, in our view the material impacts of lower volumes is beyond 2040.

Figure 8. Gross refining margin history



Source: NZR, Forsyth Barr analysis

Figure 9. Processing fee revenue



Source: NZR, Forsyth Barr analysis

Figure 10. Price performance


Source: Forsyth Barr analysis

Figure 11. Substantial shareholders

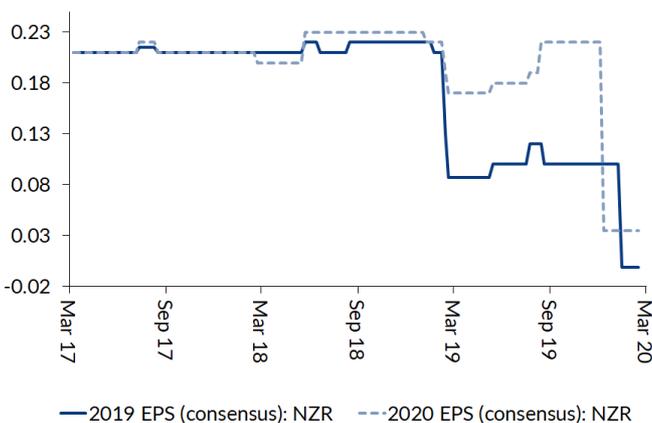
Shareholder	Latest Holding
Mobil Oil NZ Limited	17.2%
Z Energy Holdings Limited	15.4%
BP	10.1%
Wellington Management Company	9.3%
ACC	5.0%

Source: NZX, Forsyth Barr analysis, NOTE: based on SSH notices only

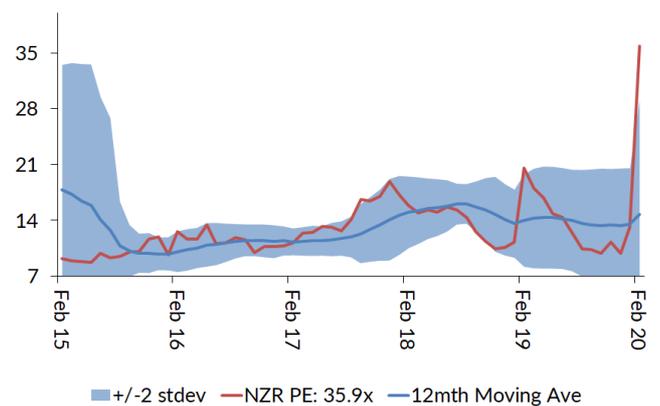
Figure 12. International valuation comparisons

Company	Code	Price	Mkt Cap (m)	PE 2020E	PE 2021E	EV/EBITDA 2020E	EV/EBITDA 2021E	EV/EBIT 2020E	EV/EBIT 2021E	Cash Yld 2021E	
Refining NZ	NZR NZ	NZ\$1.28	NZ\$400	33.8x	>50x	4.8x	5.0x	22.7x	28.5x	3.1%	
FORMOSA PETROCHEMICAL CORP	6505 TT	TWD87.00	TWD828,758	18.0x	n/a	11.0x	n/a	13.4x	n/a	n/a	
IDEMITSU KOSAN CO	5019 JP	¥2817.00	¥850,524	7.0x	6.2x	6.4x	6.0x	10.6x	n/a	5.9%	
SHOWA SHELL SEKIYU KK	5002 JP	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
SK INNOVATION CO	096770 KS	KRW120000.00	KRW11,095,868	12.3x	9.4x	5.8x	4.7x	9.9x	7.4x	4.4%	
S-OIL CORP	010950 KS	KRW70500.00	KRW7,937,087	11.9x	9.4x	8.3x	7.2x	12.2x	9.7x	4.6%	
				Compc Average:	12.3x	8.3x	7.9x	6.0x	11.5x	8.6x	5.0%
EV = Current Market Cap + Actual Net Debt				NZR Relative:	174%	n/a	-40%	-17%	97%	232%	-37%

Source: *Forsyth Barr analysis, Bloomberg Consensus, Compc metrics re-weighted to reflect headline (NZR) companies fiscal year end

Figure 13. Consensus EPS momentum (NZ\$)


Source: Forsyth Barr analysis

Figure 14. One year forward PE (x)


Source: Forsyth Barr analysis

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