

Refining NZ

Still in the Waiting Room — 1H20 Result Review

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NEUTRAL

Whilst investors interested in Refining NZ (NZR) need patience as we await the outcome of the Strategic Review, the share price is adequately factoring in both the upside and downside inherent in NZR at present such that we are upgrading our rating to NEUTRAL. We retain our view that conversion to an import terminal is more likely than not and that the possible value outcomes remain wide, ranging from material share price upside, to further downside, particularly if conversion costs are high.

NZX Code	NZR	Financials: Dec/	19A	20E	21E	22E	Valuation (x)	19A	20E	21E	22E
Share price	NZ\$0.67	NPAT* (NZ\$m)	4.2	-54.3	-34.4	25.4	EV/EBITDA	3.9	11.1	7.5	3.3
Target price	NZ\$0.80	EPS* (NZc)	1.3	-67.8	-11.0	8.1	EV/EBIT	25.2	n/a	n/a	10.4
Risk rating	High	EPS growth* (%)	-85.9	n/a	83.8	n/a	PE	50.3	n/a	n/a	8.2
Issued shares	312.6m	DPS (NZc)	2.0	0.0	0.0	0.0	Price / NTA	0.3	0.4	0.4	0.4
Market cap	NZ\$209m	Imputation (%)	100	100	100	100	Cash div yld (%)	3.0	0.0	0.0	0.0
Avg daily turnover	321.0k (NZ\$368k)	*Based on normalised profits					Gross div yld (%)	4.1	0.0	0.0	0.0

Outcomes of Strategic Review remain the key value driver

From an investor perspective, NZR is in a holding pattern until the outcome of the Strategic Review is known. The pieces of information critical to assess value will be revealed when NZR announces the result of its terminal conversion assessment — which, subject to customer negotiations, may not be until 2021. Key unknowns (which the Strategic Review will answer) are the costs of conversion and what the earnings of a terminal business may look like (and therefore the value of that business). Our high level analysis indicates there is a wide range of possible outcomes. Nevertheless, we believe the share price is adequately factoring in the risk of downside scenarios whilst offering good upside if conversion costs are closer to ~NZ\$100m than multiples of that and if infrastructure earnings are north of ~NZ\$75m (incl Wiri land leases). Following our high level assessment of possible outcomes, we have lowered our target price -15cps to 80cps. The phase of the Strategic Review focussing on "simplifying" refinery operations and ensuring NZR can operate on a cash neutral basis, when operating at the Processing Fee Revenue Floor of NZ\$140m, is on track to be completed by the end of this current quarter (September 2020). However, there is no indication of when the phase focussing on the terminal conversion option will be completed.

Significant asset impairment highlights the difficulty of NZR remaining as a refinery

NZR has written down the value of the refinery -NZ\$219m. Underlying value assumptions indicate that NZR is now assuming a long-term gross refining margin of ~US\$5.30/barrel. At those levels, NZR's customers are better off importing vs. using the refinery, highlighting that terminal conversion is a more likely scenario than the ongoing operation of the refinery.

1H20 result of limited relevance given the Strategic Review — but operating the business on a cash neutral basis is a positive

NZR's 1H20 Normalised NPAT (excluding the asset write-down) was -NZ\$29m, vs. -NZ\$4m in 1H19 and our -NZ\$27m forecast. Key take-outs were NZR's ability to adapt operations, such that cash burn in 1H20 was only -NZ\$8m. This provides a degree of confidence that NZR can operate on a cash neutral basis going forward, albeit the pipeline business is propping up the refinery. Pipeline fees increased +29% in 1H20 vs. 1H19 to ~NZ\$2.3/barrel due to an increase in the notional shipping cost. The outlook for 2H20 is more of the same. We expect NZR will continue to operate at the Processing Fee Floor (NZ\$140m per annum). We have trimmed our FY20 Normalised NPAT forecast -NZ\$9m to -NZ\$54m.

Refining NZ (NZR)

Priced as at 17 Aug 2020 (NZ\$)

0.67

12-month target price (NZ\$)*

0.80

Expected share price return	19.4%
Net dividend yield	0.0%
Estimated 12-month return	19.4%

Spot valuations (NZ\$)

1. Scenario valuation	0.81
2. n/a	n/a
3. n/a	n/a

Key WACC assumptions

Risk free rate	1.30%
Equity beta	1.09
WACC	7.1%
Terminal growth	0.0%

DCF valuation summary (NZ\$m)

Total firm value	676
(Net debt)/cash	(256)
Less: Capitalised operating leases	
Value of equity	420

Profit and Loss Account (NZ\$m)	2018A	2019A	2020E	2021E	2022E
Sales revenue	362	348	225	244	348
Normalised EBITDA	153	118	41	61	141
Depreciation and amortisation	(97)	(100)	(102)	(99)	(96)
Normalised EBIT	56	18	(61)	(37)	44
Net interest	(14)	(13)	(13)	(11)	(9)
Associate income	0	0	0	0	0
Tax	(12)	(1)	20	13	(10)
Minority interests	0	0	0	0	0
Normalised NPAT	30	4	(54)	(34)	25
Abnormals/other	0	0	(158)	0	0
Reported NPAT	30	4	(212)	(34)	25
Normalised EPS (cps)	9.5	1.3	(67.8)	(11.0)	8.1
DPS (cps)	7.5	2.0	0	0	0

Valuation Ratios	2018A	2019A	2020E	2021E	2022E
EV/EBITDA (x)	2.7	3.9	11.1	7.5	3.3
EV/EBIT (x)	7.5	25.2	n/a	n/a	10.4
PE (x)	7.1	50.3	n/a	n/a	8.2
Price/NTA (x)	0.3	0.3	0.4	0.4	0.4
Free cash flow yield (%)	-27.5	18.8	-3.5	1.8	21.7
Net dividend yield (%)	11.2	3.0	0.0	0.0	0.0
Gross dividend yield (%)	15.5	4.1	0.0	0.0	0.0

Capital Structure	2018A	2019A	2020E	2021E	2022E
Interest cover EBIT (x)	4.0	1.4	n/a	n/a	4.9
Interest cover EBITDA (x)	11.1	8.8	3.2	5.8	15.6
Net debt/ND+E (%)	25.3	24.1	31.7	32.9	27.6
Net debt/EBITDA (x)	1.7	2.0	6.1	4.0	1.4

Growth Rates	2018A	2019A	2020A	2021A	2022A
Revenue (%)	-12.6	-3.9	-35.3	8.2	42.8
EBITDA (%)	-30.7	-22.5	-65.4	50.1	>100
EBIT (%)	-55.3	-67.1	n/a	n/a	n/a
Normalised NPAT (%)	-62.3	-85.9	n/a	n/a	n/a
Normalised EPS (%)	-62.3	-85.9	n/a	n/a	n/a
Ordinary DPS (%)	-58.3	-73.3	-100.0	n/a	n/a

Key Ratios	2018A	2019A	2020E	2021E	2022E
Return on assets (%)	4.0	1.3	-5.6	-3.5	4.2
Return on equity (%)	3.9	0.5	-10.1	-6.9	4.8
Return on funds employed (%)	4.6	2.1	-4.8	-2.8	5.1
EBITDA margin (%)	42.1	33.9	18.2	25.2	40.3
EBIT margin (%)	15.3	5.3	-27.1	-15.3	12.7
Capex to sales (%)	44.8	22.3	16.3	26.6	21.6
Capex to depreciation (%)	167	78	36	66	78
Imputation (%)	100	100	100	100	100
Pay-out ratio (%)	79	150	0	0	0

Cash Flow (NZ\$m)	2018A	2019A	2020E	2021E	2022E
EBITDA	153	118	41	61	141
Working capital change	(39)	23	(15)	4	(1)
Interest & tax paid	(25)	(19)	1	3	(19)
Other	16	(6)	2	0	0
Operating cash flow	105	117	30	69	121
Capital expenditure	(162)	(78)	(37)	(65)	(75)
(Acquisitions)/divestments	0	0	0	0	0
Other	0	0	0	0	0
Funding available/(required)	(58)	39	(7)	4	45
Dividends paid	(47)	(20)	0	0	0
Equity raised/(returned)	(0)	(0)	0	0	0
(Increase)/decrease in net debt	(105)	19	(7)	4	45

Operating Performance

Revenue Breakdown (NZ\$m)

Processing fee revenue	259	242	140	145	230
Natural gas recovery	32	40	24	28	41
Other refining revenue	14	16	15	16	16
Pipeline revenue	44	36	31	42	48
Other revenue	14	14	15	13	13
Total revenue	362	348	225	244	348

Processing fee drivers

Refining margin (USD/barrel)	6.2	5.3	2.2	3.7	5.6
NZDUSD	0.69	0.66	0.25	0.50	0.68
Throughput (mbbls)	40.4	42.7	23.4	28.0	40.0
Refining margin (NZD/barrel)	6.2	5.7	2.6	3.8	5.8

Fee floor (estimated) (USD/barrel)

	3.3	3.0	2.2	3.6	3.5
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Operating cost breakdown (NZ\$m)

Process materials and utilities	49	59	45	48	55
Natural gas costs	32	40	24	28	41
Materials & contractor payments	29	31	19	18	22
Wages & salaries	61	61	62	56	57
Admin & other expenses	38	39	33	32	33
Total expenses	210	230	185	183	208

Balance Sheet (NZ\$m)	2018A	2019A	2020E	2021E	2022E
Working capital	19	(5)	10	6	7
Fixed assets	1,192	1,171	888	854	833
Intangibles	14	22	17	17	17
Right of use asset	0	0	0	0	0
Other assets	0	4	3	3	3
Total funds employed	1,226	1,193	918	880	860
Net debt/(cash)	260	242	249	245	200
Lease liability	0	0	0	0	0
Other liabilities	196	191	133	133	133
Shareholder's funds	769	760	535	500	525
Minority interests	0	0	0	1	1
Total funding sources	1,226	1,193	918	880	860

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

Thoughts on value - wide range of possible outcomes

Placing a value on refineries is difficult at the best of times given the inherent earnings volatility. With NZR undergoing a strategic review, there is an even wider range of possible value outcomes than normal.

We believe that the most likely outcome of the strategic review is NZR converting to an import terminal and pipeline. Under that scenario, there are several key questions which we have limited visibility on:

- What does it cost to convert NZR to an import terminal?
- What is the timing of conversion and what is NZR's earnings profile between now and then?
- What are the earnings and therefore the value of an import terminal and pipeline?
 - What is the asset value of the new business?
 - How will terminal and pipeline fees be calculated? Does the business get regulated or will NZR be able to charge close to the next best alternative (less a bit)?
 - How much debt could the new business reasonably carry?

There are a wide range of possible scenarios — some pointing to significant value upside vs. the current NZ\$0.67 share price and others, particularly where conversion costs are high, significant downside. In our view the current share price is a fair reflection of the uncertain value outlook for NZR and the upside scenarios are more likely than the downside. Our target price is NZ\$0.80 and we upgrade our rating to NEUTRAL from UNDERPERFORM.

Figure 1. High level estimate of NZR's value as a terminal

NZ\$m	Low	Med	High	Comment
Wiri land value	105	117	130	Using a cap rate of between 5.0% and 6.2% on the NZ\$6.5m per annum revenue
Pipeline value	460	590	720	Based on assessment of potential EBITDA and RAB multiple based approaches
less cost of conversion	(300)	(200)	(100)	Kurnell cost ~A\$700m to convert, however, we understand that is not a good comparison, with tank costs and rehabilitation costs likely to be materially lower at NZR
less net debt	(250)	(250)	(250)	Current net debt level
NZR equity value	15	257	500	
Value (NZ\$/share)	\$0.05	\$0.82	\$1.60	
Average (NZ\$/share)	\$0.81			

Source: Forsyth Barr analysis

What NZR's asset impairment test has told us

NZR has reduced the value of its asset base -NZ\$219m. The carrying value of NZR's fixed assets is now NZ\$925m and the company net asset value is NZ\$555m (NZ\$1.76/share). NZR has provided detailed information behind its asset impairment exercise — although there are some issues and ultimately investors should treat the outcome with caution.

- The valuer assumes a long-term gross refining margin of US\$5.30/barrel, down from US\$7.40/barrel. At US\$5.30/barrel, using the refinery is not an attractive proposition for its customers (hence the Strategic Review).
- The valuer assumes NZR operates at full capacity (as it always did until COVID-19 struck) until 2030. Whilst the Strategic Review is yet to be completed, at the very least it is likely to operate in a "simplified" mode from 4Q20 onwards, below the normal full capacity of NZR — i.e. the base operating assumption does not appear realistic.
- NZR has valued all of the assets as a single entity. In essence, whilst the value of the refinery has gone down, the value of the pipeline has increased, with the offsetting amount (-NZ\$219m) the asset impairment. We do not know how much each has moved.
- Given the Strategic Review that is underway, the usefulness of the asset test is limited. Whilst NZR's discount to NAV appears attractive, given a terminal conversion is likely to be sooner than 2035, we caution using NZR's assessed NAV as a basis of value.

Forecast changes

Given the value of NZR is likely to be as an infrastructure business, the earnings forecast has less meaning than usual. That said, we have lowered our FY20 Normalised NPAT forecast -NZ\$9m to -NZ\$54m.

We expect NZR will continue to operate in its "dialled-down" mode for the remainder of 2020. With processing volumes going to be very low, we expect fee floor earnings for the refining business for the remainder of FY20 and into FY21 as volumes are likely to be well below capacity. The key changes we have made are:

- Higher operating costs (+NZ\$15m higher to NZ\$160m), with 1H20 opex higher than expected.
- Higher pipeline revenue (up +NZ\$7m to NZ\$61m), with NZR disclosing a significant uplift in the pipeline fees, with increases expected in FY21 as well.
- Lower depreciation charge (down -NZ\$7m to NZ\$102m) due to the asset write-off, although there is a risk this increases if NZR accelerates depreciation on the refining asset materially.
- Reduction in capex (down -NZ\$6m to NZ\$37m) in line with company guidance.

Figure 2. Summary forecast changes

	FY20 Old NZ\$m	FY20 New NZ\$m	% Chg	FY21 Old NZ\$m	FY21 New NZ\$m	% Chg	FY22 Old NZ\$m	FY22 New NZ\$m	% Chg
Processing fees	140	140	0%	145	145	0%	241	230	-4%
Natural gas recovery	22	24	11%	27	28	5%	39	41	5%
Other income	54	61	14%	61	71	16%	68	77	13%
Total Revenue	216	225	5%	233	244	5%	348	348	0%
Natural gas pass through costs	(22)	(24)	11%	(27)	(28)	5%	(39)	(41)	5%
Operating costs	(135)	(160)	19%	(148)	(154)	4%	(185)	(167)	-10%
EBITDA	59	41	-31%	58	61	5%	124	141	13%
Depreciation / amortisation	(109)	(102)	-6%	(104)	(99)	-5%	(110)	(96)	-13%
EBIT	(50)	(61)	23%	(46)	(37)	-19%	14	44	217%
Net interest	(13)	(13)	1%	(14)	(11)	-24%	(14)	(9)	-37%
Pre-tax profit	(62)	(74)	18%	(60)	(48)	-20%	(0)	35	n/m
Tax expense	17	20	12%	17	13	-20%	0	(10)	n/m
Profit after tax	(45)	(54)	21%	(43)	(34)	-20%	(0)	25	n/m
Abnormal items	-	(158)		-	-		-	-	
REPORTED Profit	(45)	(212)	371%	(43)	(34)	-20%	(0)	25	n/m
Earnings per share	(14.4)	(17.4)	21%	(13.8)	(11.0)	-20%	(0.1)	8.1	n/m
Dividend per share	0.0	0.0		0.0	0.0		0.0	0.0	
Barrels Processed (000)	23,000	23,432	2%	28,000	28,000	0%	40,000	40,000	0%
Gross Refining Margin (US\$/barrel)	\$2.95	\$2.17	-26%	\$3.67	\$3.67	0%	\$5.80	\$5.55	-4%
NZDUSD	0.620	0.627	1%	0.650	0.650	0%	0.675	0.675	0%
Capital expenditure (NZ\$m)	(43)	(37)	-15%	(137)	(65)	-53%	(75)	(75)	0%

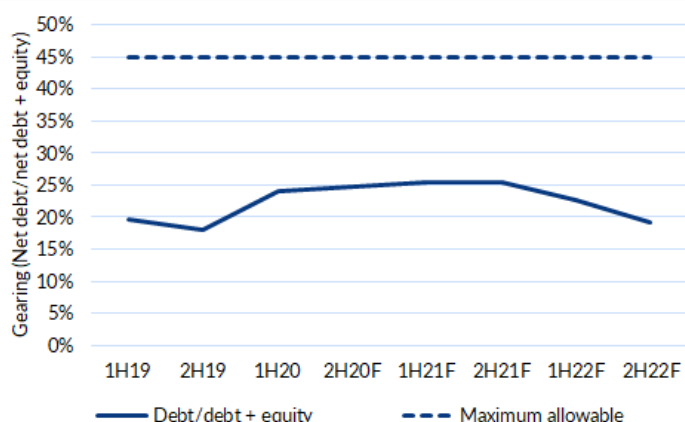
Source: Forsyth Barr analysis

Covenant considerations

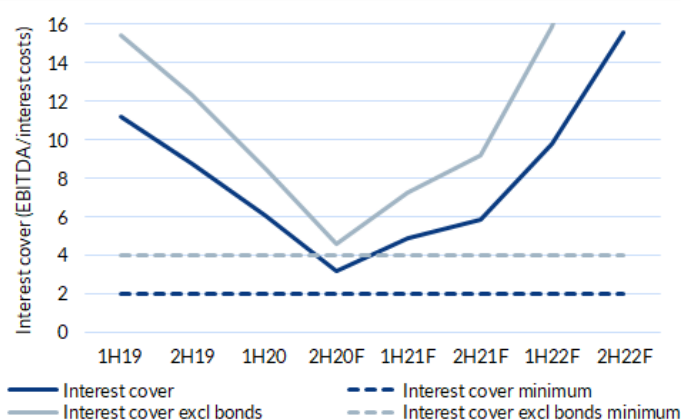
NZR has three key banking covenants (although two are very similar):

- Gearing – net debt/net debt + equity must remain below 45% – we calculate that it is currently 24%. Note: net debt excludes the subordinated bonds.
- Interest cover – EBITDA/interest costs (on a rolling 12-month basis) must be above 2.0x and excluding subordinated bond interest, must be above 4.0x – we calculate that these ratios are 6.1x and 8.6x respectively.

Looking ahead, we estimate that NZR will remain clear of its covenant requirements. There is an improvement in interest cover from FY21 onwards, with interest rate swaps rolling off at the end of 2020, lowering interest costs in 2021 and beyond. Whilst we estimate gearing levels will peak a little later, there is still significant headroom. NZR is confident that it can operate on a cash neutral basis, and its 1H20 performance suggests that is possible.

Figure 3. Forecast gearing


Source: NZR, Forsyth Barr analysis

Figure 4. Forecast interest cover


Source: NZR, Forsyth Barr analysis

1H20 result review

NZR reported its worst 1H result with normalised NPAT of -NZ\$29m impacted by low refining margins and low volumes. 1Q20 was dominated by weak refining margins as the market adjusted to the new low sulphur fuel regulations. Then COVID-19 hit, decimating fuel demand, in particular jet fuel and marine fuel demand and ensuring there was no chance of the refining margin increasing above the Fee Floor.

Figure 5. 1H20 result summary

	1H19	1H20	%	Forbar	Diff	
	\$m	\$m	Chg	\$m	\$m	Commentary
Processing fees	117	70	-40%	70	0	The company operated at Fee Floor in 1H20 due to weak GRM and low throughput
Pipeline revenue	22	20	-5%	16	4	Pipeline volumes down -27%, vs. revenue down -5%, with big increase in revenue/barrel
Other income	33	29	-12%	25	3	Reduction due to lower processing volumes – mainly related to lower pass through costs
Total Revenue	172	119	-31%	111	8	Top up payments from customers totalled NZ\$39m (56% of revenue)
Natural gas pass through costs	(20)	(16)	-18%	(14)	(2)	
Operating costs	(98)	(88)	-10%	(76)	(12)	Decline due to lower processing volumes, cost out less than expected
EBITDA	54	15	-72%	22	(6)	
Depreciation / amortisation	(52)	(47)	-9%	(52)	5	Lower than forecast depreciation
EBIT	2	(32)		(30)	(2)	
Net interest	(7)	(6)	-5%	(7)	0	
Other items	-	(219)		-	(219)	Asset write-off pre-announced (but not included in our published forecast)
Pre-tax profit	(5)	(257)	n/m	(37)	(220)	
Tax expense	1	71	n/m	10	61	
Reported NPAT	(4)	(186)	n/m	(27)	(160)	
Normalised NPAT	(4)	(29)	n/m	(27)	(2)	Adjusted for asset write-off
Earnings per share (cents)	(1.1)	(9.2)	n/m	(8.5)	(0.7)	
Dividend per share (cents)	2.0	-	-100%	-	0.0	
Capex	30	22		-17	(5)	
Free cash flow	18	(8)		-13	5	Good cash control has ensured debt levels haven't increased significantly from 13 Dec 2019
Net debt	256	250		258	(8)	
Throughput (m barrels)	21.2	15.4	-27%			Material decline in fuel demand due to COVID-19
GRM (US\$/barrel)	\$5.31	\$1.82	-66%			GRM of US\$4.1/barrel if customers Fee Floor payments taken in to consideration

Source: Forsyth Barr analysis

Investment Summary

Our rating is NEUTRAL. NZR's near-term outlook is challenging, with shipping fuel specification changes being compounded by a collapse in fuel volumes. This is having a negative effect on the GRM. NZR is undertaking a Strategic Review that could lead to NZR becoming an import terminal and hence NZR's value outcomes are currently more uncertain than normal.

Business quality

- **Important 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 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.
- **COVID-19:** Fuel demand and in particular jet fuel volumes have collapsed. NZR's processing fee arrangements have placed significant financial stress on its customers which has led to a Strategic Review, with initial findings expected to be reported in June 2020.
- **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.

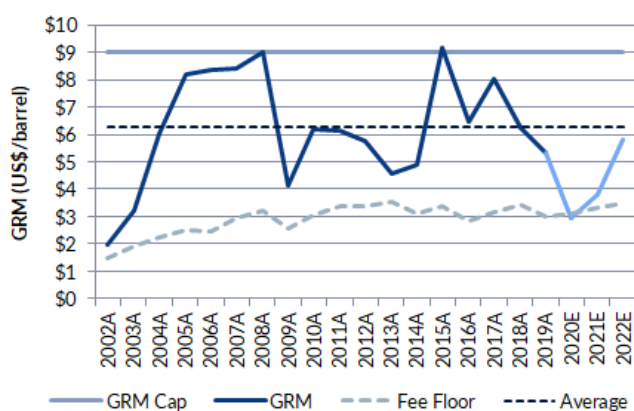
Financial structure

- **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

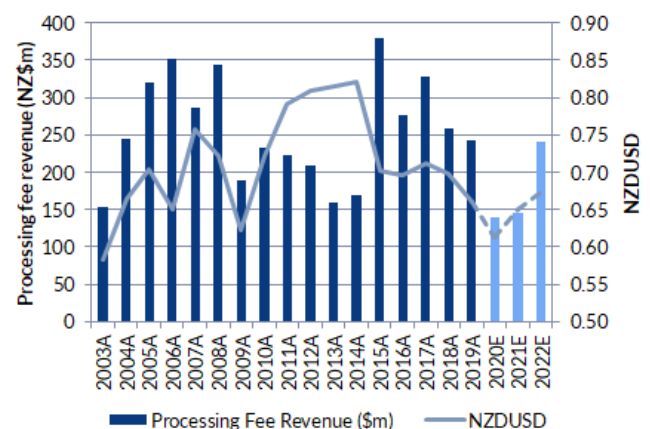
- **Capex outlook:** High operating leverage within NZR mean controlling opex and capex is very important. NZR's guided long-term capex of ~\$70m is lower than historic capex levels and if underlying opex/capex were to increase, that would have a material impact on NZR's value.
- **Falling fuel volumes:** 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 6. Annual gross refining margin

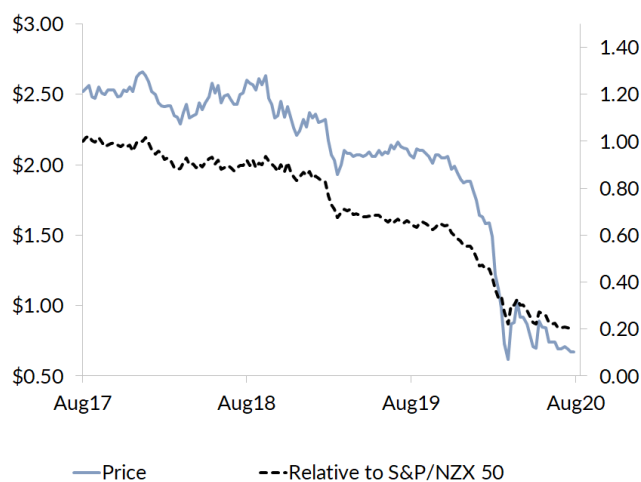


Source: NZR, Forsyth Barr analysis

Figure 7. Processing fee revenue and NZDUSD



Source: NZR, Forsyth Barr analysis

Figure 8. Price performance


Source: Forsyth Barr analysis

Figure 9. 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%

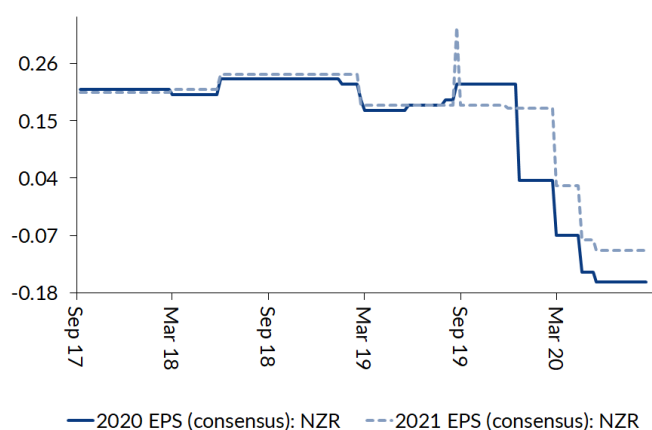
Source: NZX, Forsyth Barr analysis, NOTE: based on SPH notices only

Figure 10. International valuation comparisons

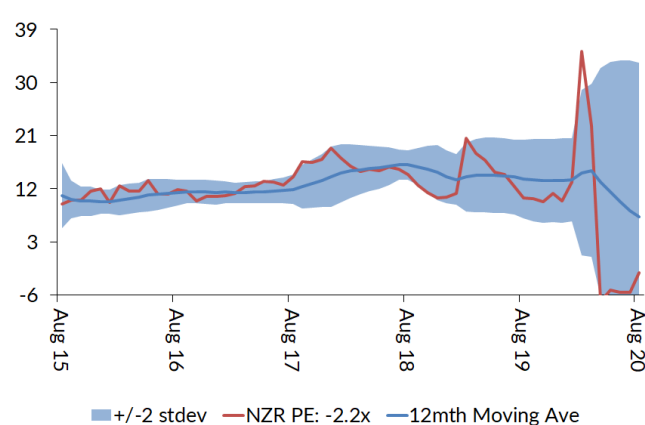
Company	Code	Price	Mkt Cap (m)	PE 2020E	PE 2021E	EV/EBITDA 2020E	EV/EBITDA 2021E	EV/EBIT 2020E	EV/EBIT 2021E	Cash Yld 2021E
(metrics re-weighted to reflect NZR's balance date - December)										
Refining NZ	NZR NZ	NZ\$0.67	NZ\$209	<0x	<0x	11.0x	7.3x	<0x	<0x	0.0%
FORMOSA PETROCHEMICAL CORP	6505 TT	TWD83.00	TWD790,655	>50x	20.7x	22.9x	12.6x	45.4x	16.7x	3.1%
IDEMITSU KOSAN CO	5019 JP	¥2371.00	¥706,402	8.9x	11.2x	12.3x	8.0x	<0x	n/a	5.4%
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	KRW172000.00	KRW15,904,077	<0x	28.1x	<0x	10.1x	<0x	23.3x	1.7%
S-OIL CORP	010950 KS	KRW63600.00	KRW7,160,266	<0x	11.3x	>75x	8.7x	<0x	13.3x	2.7%
Compco Average:				8.9x	17.8x	17.6x	9.9x	45.4x	17.8x	3.2%
NZR Relative:				n/a	n/a	-37%	-26%	n/a	n/a	-100%

EV = Current Market Cap + Actual Net Debt

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

Figure 11. Consensus EPS momentum (NZ\$)


Source: Forsyth Barr analysis

Figure 12. One year forward PE (x)


Source: Forsyth Barr analysis

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