FORSYTH BARR

Refining NZ

NEUTRAL

GRiM Uplift — Sept/Oct 2019

Refining NZ (NZR) is having a tough finish to FY19, with the September/October 2019 gross refining margin (GRM) below average at US$6.16/barrel and November conditions deteriorating. Thus far, the low sulphur shipping fuel requirements are having the expected negative impact on high sulphur fuel oil spreads, but limited effect on diesel spreads. We have cut our FY19 NPAT forecast -$39m to $6m, our dividend forecast -5cps to 4cps and our target price -15cps to $2.00.

What's changed?

- **Earnings:** FY19 NPAT -$39m lower to $6m, dividend -5cps lower to 4cps
- **Target Price:** Cut -15cps to $2.00
- **Rating:** NEUTRAL rating retained

Below average GRM and near record low uplift on Singapore

NZR's Sept/Oct 2019 GRM was US$6.16/barrel, ~-US$2/barrel lower than our estimate. The uplift over the Singapore benchmark margin was only +US$2.61/barrel, ~-US$2/barrel lower than the last 18 months' average and the lowest since Nov/Dec 2013 (excluding NZR maintenance outage periods). Impacting on NZR's margin has been a decline in high sulphur fuel oil margins and rising crude freight rates. In addition, NZR has been building residue stock (a low value product) that will be used during NZR's 2020 maintenance outage.

Near-term outlook not benefitting from IMO 2020 regulations

With only six weeks before low sulphur shipping fuel regulations (IMO 2020) come into force, the impact on refining margins have been negative. Whilst high sulphur fuel oil crack spreads have declined as expected, there has not (as yet) been a corresponding increase in diesel spreads. The Bloomberg Singapore benchmark margin has collapsed in recent weeks to new lows, averaging -US$0.80/barrel vs. a historic average of ~US$4.50/barrel.

In addition, a side effect of IMO 2020 has been increases in crude freight rates. NZR has indicated that crude freighter supply is down due to some ships being fitted with scrubbers (to meet IMO 2020 requirements) and some being used as storage for low sulphur fuel oil. NZR is indicating a ~-US$1/barrel impact on the Sept/Oct margin. The difference between crude oil and finished product freight rates is the driver of NZR's locational benefit (it's cheaper to import crude oil than finished product).

Solar farm gets go ahead

Late last month, NZR announced it is building a 26.7MW solar farm that will supply ~10% of NZR's electricity needs. The construction cost is $37m and the build is 73% project financed. We estimate an equity IRR of ~12.5%, although the wholesale electricity price assumption is a key assumption.

Forecast changes – lower near-term forecasts

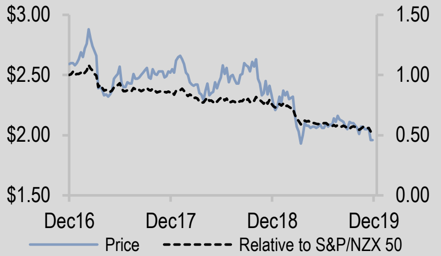
We have cut our FY19 NPAT forecast -$39m to $6m, highlighting the very high operating leverage in NZR. The processing fee revenue in Sept/Oct was lower than expected and November is looking lower. FY21 has a small uplift from the solar farm operation commencing.

Investment View

Our rating is NEUTRAL. NZR's near-term outlook is mixed with shipping fuel specification changes yet to see the expected benefits. In addition there are medium-term uncertainties, particularly demand risk as the global economy slows which may weigh on the GRM.

NZX Code	NZR
Share price	NZ$1.96
Target price	NZ$2.00
Risk rating	High
Issued shares	312.6m
Market cap	NZ$613m
Average daily turnover	195.3k (NZ$416k)

Share Price Performance



Financials: December	18A	19E	20E	21E
NPAT* (NZ$m)	29.6	5.9	59.8	53.8
EPS* (NZc)	9.5	1.9	19.1	17.2
EPS growth* (%)	-62.3	-80.2	n/a	-10.1
DPS (NZc)	7.5	4.0	12.0	12.0
Imputation (%)	100	100	100	100

Valuation (x)	18A	19E	20E	21E
EV/EBITDA	5.4	6.9	4.4	4.5
EV/EBIT	14.8	41.3	9.3	10.3
PE	20.7	n/a	10.2	11.4
Price / NTA	0.8	0.8	0.8	0.8
Cash dividend yield (%)	3.8	2.0	6.1	6.1
Gross dividend yield (%)	5.3	2.8	8.5	8.5

*Historic and forecast numbers based on underlying profits

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Refining NZ (NZR) | Priced as at 22 Nov 2019: NZ$1.96 | December year end

Forsyth Barr valuation			
Valuation methodology	Blend of spot valuations, weighted to multiples		
12-month target price (NZ$)*	**2.00**	**Spot valuations (NZ$)**	
Expected share price return	2.0%	1. DCF	1.99
Net dividend yield	5.8%	2. Market multiples	1.87
Estimated 12-month return	7.8%	3. n/a	n/a
Key WACC assumptions		**DCF valuation summary (NZ$m)**	
Risk free rate	2.00%	Total firm value	900
Equity beta	1.00	(Net debt)/cash	(281)
WACC	8.5%	Value of equity	619
Terminal growth	0.0%	Shares (m)	313

Profit and Loss Account (NZ$m)	**2017A**	**2018A**	**2019E**	**2020E**	**2021E**
Sales revenue	414.6	362.5	356.2	422.1	416.9
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)
Normalised EBIT	**124.2**	**55.6**	**21.1**	**93.7**	**84.5**
Net interest	(13.7)	(13.8)	(13.0)	(10.6)	(9.8)
Associate income	-	-	-	-	-
Tax	(31.9)	(12.2)	(2.3)	(23.3)	(20.9)
Minority interests	-	-	-	-	-
Normalised NPAT	**78.5**	**29.6**	**5.9**	**59.8**	**53.8**
Abnormals/other	-	-	-	-	-
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
DPS (cps)	18.0	7.5	4.0	12.0	12.0

Growth Rates	**2017A**	**2018A**	**2019E**	**2020E**	**2021E**
Revenue (%)	17.1	-12.6	-1.7	18.5	-1.2
EBITDA (%)	31.7	-30.7	-17.7	57.2	-2.4
EBIT (%)	55.2	-55.3	-62.0	>100	-9.9
Normalised NPAT (%)	66.5	-62.3	-80.2	>100	-10.1
Normalised EPS (%)	66.5	-62.3	-80.2	>100	-10.1
DPS (%)	100.0	-58.3	-46.7	>100	0.0

Cash Flow (NZ$m)	**2017A**	**2018A**	**2019E**	**2020E**	**2021E**
EBITDA	**220.3**	**152.6**	**125.6**	**197.4**	**192.6**
Working capital change	22.5	(38.8)	(4.5)	1.1	(6.3)
Interest & tax paid	(36.9)	(25.2)	(24.7)	(33.9)	(30.7)
Other	(8.0)	16.0	11.4	-	-
Operating cash flow	**198.0**	**104.6**	**107.8**	**164.6**	**155.6**
Capital expenditure	(94.6)	(162.3)	(79.6)	(137.3)	(93.8)
(Acquisitions)/divestments	-	-	-	-	-
Other	(0.4)	-	-	-	-
Funding available/(required)	**103.1**	**(57.7)**	**28.3**	**27.3**	**61.8**
Dividends paid	(37.5)	(46.9)	(20.3)	(18.8)	(37.5)
Equity raised/(returned)	(0.7)	(0.3)	(0.3)	-	-
Increase/(decrease) in net debt	**(64.8)**	**104.9**	**(7.7)**	**(8.5)**	**(24.3)**

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**

Valuation Ratios	**2017A**	**2018A**	**2019E**	**2020E**	**2021E**
EV/EBITDA (x)	3.6	5.4	6.9	4.4	4.5
EV/EBIT (x)	6.4	14.8	41.3	9.3	10.3
PE (x)	7.8	20.7	>100x	10.2	11.4
Price/NTA (x)	0.8	0.8	0.8	0.8	0.8
Free cash flow yield (%)	16.9	-9.4	4.6	4.5	10.1
Net dividend yield (%)	9.2	3.8	2.0	6.1	6.1
Gross dividend yield (%)	12.8	5.3	2.8	8.5	8.5
Imputation (%)	100	100	100	100	100
Pay-out ratio (%)	72	79	213	63	70

Capital Structure	**2017A**	**2018A**	**2019E**	**2020E**	**2021E**
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
Net debt/ND+E (%)	16.4	25.3	25.6	24.0	21.9
Net debt/EBITDA (x)	0.7	1.7	2.1	1.3	1.2

Key Ratios	**2017A**	**2018A**	**2019E**	**2020E**	**2021E**
Return on assets (%)	9.3	4.0	1.5	6.6	6.0
Return on equity (%)	9.9	3.9	0.8	7.6	6.7
Return on funds employed (%)	10.1	4.6	2.2	7.1	6.4
EBITDA margin (%)	53.1	42.1	35.3	46.8	46.2
EBIT margin (%)	30.0	15.3	5.9	22.2	20.3
Capex to sales (%)	22.8	44.8	22.3	32.5	22.5
Capex to depreciation (%)	98	167	76	132	87

Operating Performance	**2017A**	**2018A**	**2019E**	**2020E**	**2021E**
Revenue Breakdown (NZ$m)					
Processing fee revenue	327.4	258.9	250.8	317.1	309.9
Natural gas recovery	24.4	32.0	39.8	40.6	41.4
Other refining revenue	11.7	13.6	14.8	13.5	13.8
Pipeline revenue	37.8	44.1	37.0	38.1	38.8
Other revenue	13.3	13.9	13.9	12.9	13.0
Total revenue	**414.6**	**362.5**	**356.2**	**422.1**	**416.9**
Processing fee revenue growth (%)	18.4	-20.9	-3.1	26.4	-2.3
Total revenue growth (%)	17.1	-12.6	-1.7	18.5	-1.2
Processing fee drivers					
Refining margin (USD/barrel)	8.0	6.2	5.5	7.0	7.0
NZDUSD	0.71	0.69	0.66	0.66	0.68
Throughput (mbls)	41.7	40.4	43.2	43.0	43.0
Refining margin (NZD/barrel)	7.9	6.2	5.8	7.4	7.2
Margin cap (USD/barrel)	9.0	9.0	9.0	9.0	9.0
Fee floor (estimated) (USD/barrel)	3.2	3.3	3.0	3.1	3.2
Operating cost breakdown (NZ$m)					
Process materials and utilities	45.9	49.2	59.4	54.1	50.6
Natural gas costs	24.4	32.0	39.8	40.6	41.4
Materials & contractor payments	31.0	29.0	31.1	31.5	31.8
Wages & salaries	59.0	61.3	62.3	63.6	64.9
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**

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

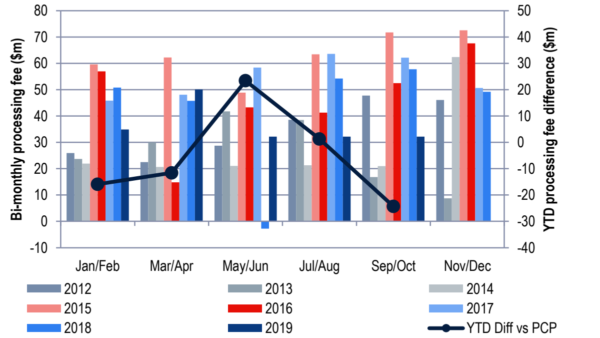
September/October 2019 Operating Statistics

Figure 1. Bi-monthly statistics

	Sep/Oct 2018	Jul/Aug 2019	Sep/Oct 2019	% Diff pcp	% Diff mom
Throughput (000 barrels)	7,640	7,419	7,245	-5%	-2%
Gross Refining Margin (US$/barrel)	$7.09	$7.10	$6.16	-13%	-13%
NZDUSD	0.656	0.656	0.634	-3%	-3%
NZD processing revenue ($m)	57.8	56.2	49.3	-15%	-12%

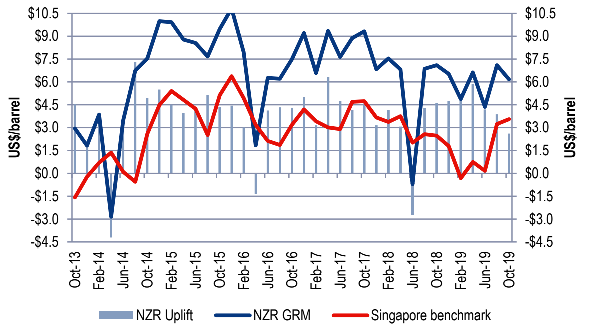
Source: NZR, Forsyth Barr analysis

Figure 2. Bi-monthly processing fee



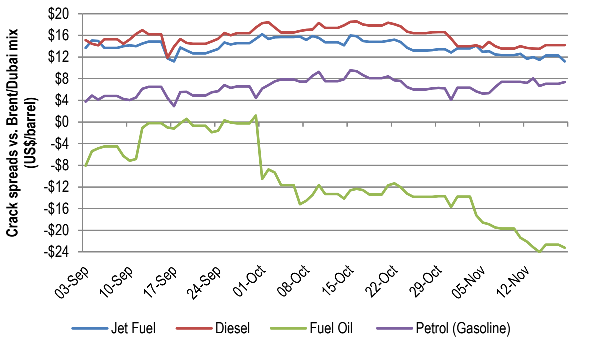
Source: NZR, Forsyth Barr analysis

Figure 3. NZR GRM vs. NZR reported Singapore benchmark margin



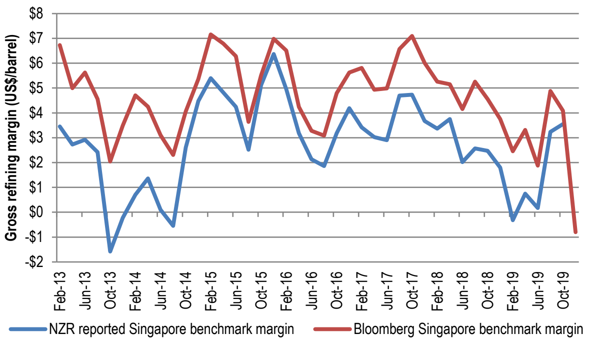
Source: NZR, Forsyth Barr analysis

Figure 4. Crack spreads – collapse of fuel oil spread



Source: Bloomberg, Forsyth Barr analysis

Figure 5. Singapore benchmark margin – November looking soft



Source: NZR, Bloomberg, Forsyth Barr analysis

Forecast changes

Figure 6. Forecast changes

	FY19 Old $m	FY19 New $m	% Chg	FY20 Old $m	FY20 New $m	% Chg	FY21 Old $m	FY21 New $m	% Chg
Processing fees	304	251	-17%	327	317	-3%	310	310	0%
Natural gas recovery	40	40	0%	41	41	0%	41	41	0%
Other income	66	66	0%	64	64	0%	66	66	0%
Total Revenue	**409**	**356**	**-13%**	**432**	**422**	**-2%**	**417**	**417**	**0%**
Natural gas pass through costs	(40)	(40)	0%	(41)	(41)	0%	(41)	(41)	0%
Operating costs	(191)	(191)	0%	(184)	(184)	0%	(187)	(183)	-2%
EBITDA	**179**	**126**	**-30%**	**207**	**197**	**-5%**	**189**	**193**	**2%**
Depreciation / amortisation	(104)	(104)	0%	(104)	(104)	0%	(107)	(108)	1%
EBIT	**74**	**21**	**-71%**	**103**	**94**	**-9%**	**82**	**84**	**3%**
Net interest	(12)	(13)	6%	(9)	(11)	16%	(8)	(10)	26%
Pre-tax profit	**62**	**8**	**-87%**	**94**	**83**	**-11%**	**74**	**75**	**1%**
Tax expense	(17)	(2)	-87%	(26)	(23)	-11%	(21)	(21)	1%
Profit after tax	**45**	**6**	**-87%**	**67**	**60**	**-11%**	**53**	**54**	**1%**
Earnings per share	14.2	1.9	-87%	21.6	19.1	-11%	17.0	17.2	1%
Dividend per share	9.0	4.0	-56%	12.0	12.0	0%	12.0	12.0	0%
Barrels Processed (000)	43,420	43,220	0%	43,000	43,000	0%	43,000	43,000	0%
GRM (US$/barrel)	$6.56	$5.45	-17%	$7.38	$7.00	-5%	$7.00	$7.00	0%
NZDUSD	0.659	0.659	0%	0.680	0.665	-2%	0.680	0.680	0%
Capital expenditure ($m)	(80)	(80)	0%	(100)	(137)	37%	(94)	(94)	0%

Source: Forsyth Barr analysis

Investment summary

Our rating is NEUTRAL. NZR's near-term outlook is mixed with shipping fuel specification changes yet to see the expected benefits. In addition there are medium-term uncertainties, particularly demand risk as the global economy slows which may weigh on the GRM.

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 cash flow 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, although market expectations are it is likely to be a small positive, kicking in from late 2019.
- **Asia/Pacific refining capacity:** Surplus refining capacity is forecast to fall in the next few years, which should be supportive of refining margins.

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.

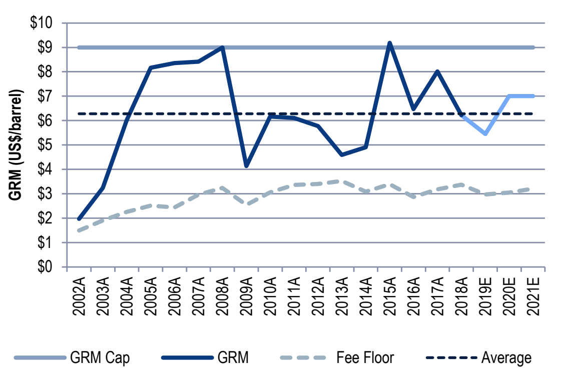
Risk factors

- **Capex outlook:** High operating leverage within NZR mean controlling opex and capex is very important. NZR's guided long-term capex of ~$64m is significantly 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.

Company description

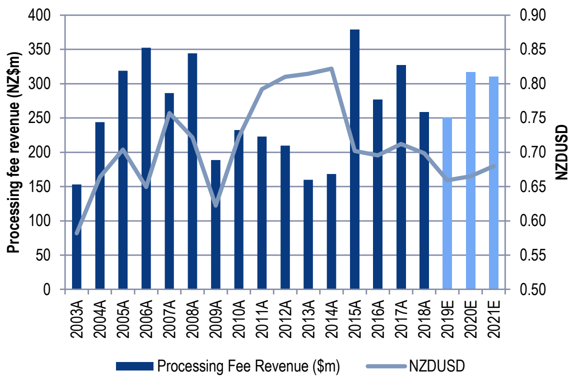
NZR refines crude oil for the NZ market at the Marsden Point Oil Refinery. It produces approximately 60% of NZ's petrol, 65% of diesel and 85% of jet fuel. NZR also owns and operates a pipeline to Wiri, in south Auckland, supplying all of Auckland's refined product. NZR is a tolling operation, receiving a processing fee for refining crude oil. It has a fixed cost base and therefore has high operating leverage to global refining margins and the NZDUSD. NZR's customers are the main three main fuel retailers, Z Energy, BP and Mobil.

Figure 7. Historic gross refining margin (GRM)



Source: Forsyth Barr analysis

Figure 8. Processing fee and NZDUSD



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%

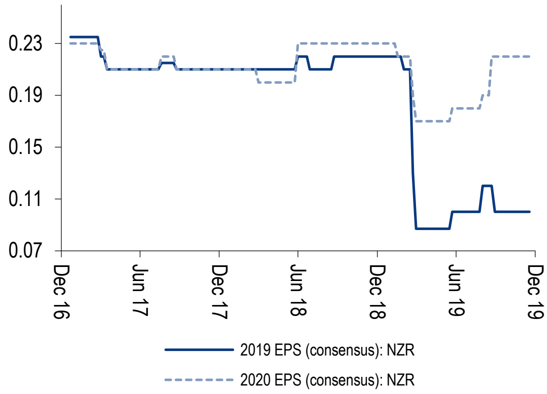
Source: NZX, Forsyth Barr analysis, NOTE: based on SSH notices only

Figure 10. International Compcos

Company	Code	Price	Mkt Cap	PE		EV/EBITDA		EV/EBIT		Cash D/Yld
(metrics re-weighted to reflect NZR's balance date - December)			(m)	2019E	2020E	2019E	2020E	2019E	2020E	2020E
Refining NZ	**NZR NZ**	**NZ$1.96**	**NZ$613**	**>50x**	**10.2x**	**7.0x**	**4.4x**	**41.3x**	**9.3x**	**6.1%**
Formosa Petrochemical Corp	6505 TT	TWD96.50	TWD919,255	21.0x	17.1x	14.2x	11.3x	18.7x	13.4x	4.2%
Idemitsu Kosan Co	5019 JP	¥2904.00	¥876,792	7.2x	6.3x	7.0x	6.0x	13.1x	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	KRW154500.00	KRW14,285,930	16.8x	8.8x	7.6x	5.8x	12.6x	8.3x	4.8%
S-Oil Corp	010950 KS	KRW94100.00	KRW10,594,041	33.7x	9.5x	12.8x	7.7x	22.7x	9.4x	4.3%
			Compco Average:	**19.7x**	**10.4x**	**10.4x**	**7.7x**	**16.8x**	**10.4x**	**4.8%**
EV = Current Market Cap + Actual Net Debt			**NZR Relative:**	**n/a**	**-2%**	**-33%**	**-43%**	**+146%**	**-10%**	**+28%**

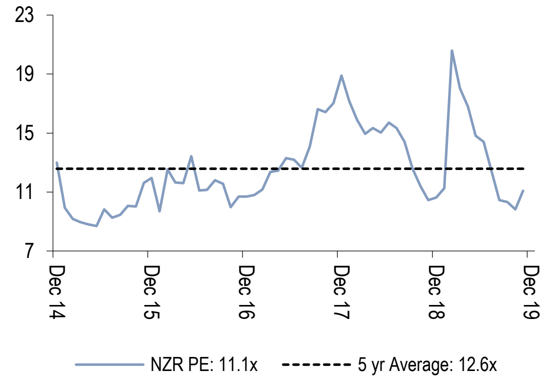
Source: *Forsyth Barr analysis, Bloomberg Consensus, Compco metrics re-weighted to reflect headline (NZR) companies fiscal year end

Figure 11. Consensus EPS Momentum



Source: Forsyth Barr analysis, Bloomberg

Figure 12. 12 Month Forward PE



Source: Forsyth Barr analysis