Thirty Eight Years of Independent Information and Unbiased Advice on the Australian and NZ Stockmarkets

# Market Analysis

Issue No. 569 www.stockmarket.co.nz November 11, 2019

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BUY Greenland Minerals	•	Renewable Energy - Part 1: Electric Vehicles (EVs) and Tranport as a Service (TaaS) 11, 12, 13
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## Summary and Recommended Investment Strategy.

We probably all understand why Energy (i.e. Coal and Oil) shares are out of favour and trade at low valuations . . . but why are *cleaner* Energy (i.e. Gas) shares and *renewable* Energy (i.e. cobalt, nickel, lithium, rare earth) shares also out of favour and undervalued? We see a number of attractive investment opportunities!

### Investment Outlook.

This newsletter has invested in some Mining and Resource shares, but has generally chosen to be underweighted in this sector (preferring instead companies like **ALS Ltd** which provides *services* to the sector). Mining is a capital intensive, depleting business.

It takes a lot of time and money to find and prove mineral reserves. Then it costs a lot of money to build a processing plant and develop a mine. The business uses expensive heavy equipment that depreciates rapidly. Then the business starts to *deplete*: Every ounce of Gold or tonne of Iron Ore extracted brings the mine nearer to exhausting its reserves and closing.

Mining is, of course, a viable industry . . . it may just <u>not</u> have the *most attractive business fundamentals*.

For example, every mineral sample processed by ALS Ltd does not deplete the business but makes it stronger. Every new user for a software business like Integrated Research or Prophecy International grows the business by providing recurring monthly revenues. Services and Software (and other Technology) companies generally have more attractive business fundamentals.

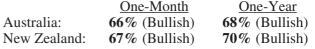
The current economic and stockmarket environment, however, may make Mining and Resources shares relatively more attractive.

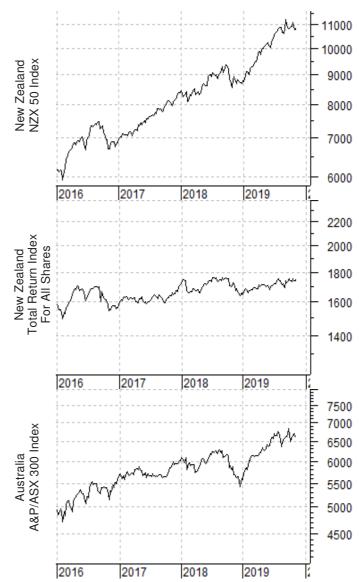
Valuations for many software and technology companies are high... at a time when economic growth rates are slowing (e.g. owing to demographics and the business cycle, over-indebted economies and uncertain Central Bank monetary experiments). At the same time valuations for many Energy and Resource shares are very low... and even if economic growth slows there is a relatively steady demand for energy. There will likely be a *growing demand* of minerals critical to renewable energy technologies.

Of course, as at any time, one needs to be selective. We would never invest in just *any* software or technology or resource company.

(Continued on Page 18)

#### **Stockmarket Forecasts**





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### Recommended Investments

<u>Colonial Motor Company</u>'s business would be completely obsolete under the *Transport as a Service* (TaaS) technology we discuss later this issue.

The conventional *business as usual* model suggests that car dealers like Colonial Motors would migrate from selling ICE vehicles to selling hybrid and EVs. The disruptive TaaS model suggests there will be little or no private vehicle ownership and no vehicle dealerships. Vehicle dealerships will cease to exist 2-3 years after TaaS sets up for business in your city.

So perhaps this 100 year old company is finally facing extinction? Probably, but not just yet.

TaaS requires "Level 5" autonomous driving. That is *fully* autonomous, driverless vehicles. Vehicle manufacturers promise this in 2-6 years . . . and in two years it will probably still be 2-6 years away. Some estimates are "late 2020's or early 2030's" but that "it is going to happen".

"Level 5" go anywhere, anytime autonomous driving is proving difficult to achieve. Snow is one reason. Snowflakes in the air block camera visibility and returning radar signals. Snow on the ground obscures road markings. Then there are similar but different problems with ice or heavy rain.

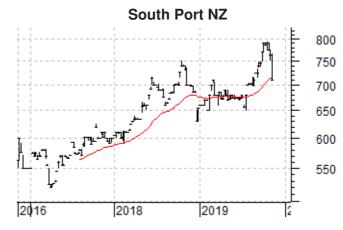
It may, therefore, be a little early to rush out and dump your Colonial Motor Company shares! The company may still have another 10-15 years. But as long term, strategic investors, (and we have owned Colonial Motor shares for 27 years) a motor vehicle dealership is probably not the best thing to be *buying* and *adding* to portfolios today.



<u>South Port NZ</u> was forecasting a 5% profit decline in the current financial year to June 2020 but has downgraded that to a 10% decline - but expects to "maintain the dividend at the current 26 cents".

Maintenance expenditure will remain high "over the next three years" but then return to more stable (and lower) levels.

Closure of **New Zealand Aluminium Smelter** would have a relatively small impact - \$2 million per annum - on net profits.



#### **Australian Shares**

(This section is in Australian currency, unless stated.)

Acrux Ltd has received its 2018/2019 R&D Tax Rebate of \$501,605 and a wholly owned subsidiary has received a further rebate of \$1,513,605 for the 2019 tax year.



**AJ Lucas Group** has renegotiated its debt facilities *and* is making a cash issue to raise capital.

The Senior Debt has been refinanced in Australian dollars (from US dollars) as a 3-year, senior ranked, Revolving Asset Based Loan of up to \$30 million and a 3½-year junior ranked Loan Note Facility of \$50 million (with \$26 million of repayments over the life of the loan and \$24 million repayable at maturity). Interest rates are still high - at least 11% - but lower than previously, saving about \$5 million in annual interest costs.

The company will also seek to raise capital from a 19 for 20 cash issue to shareholders at 6½ cents per share.

**Kerogen Investments** (which owns 53.32% of AJ Lucas) will take up its full entitlement via a *debt to equity swap*. That is, Kerogen will pay no new money, but \$24.7 million of interest bearing loans to AJ Lucas will be converted to shares to exercise its entitlement under the cash issue. *If* <u>no</u> other shareholders take up any shares, this would raise Kerogen's stake to 69.01%.

Other shareholders will be able to take up their entitlement and (subject to a shortfall from other shareholders) apply for additional shares up to 300% of their entitlement (i.e. up to four times the basic entitlement, equal to 19 new shares for 5 existing shares).

Even with this large over-subscription option the

company expects that public shareholders will subscribe for only 36-57% of the new shares.

Shareholders can expect to have any over-subscriptions (up to the 300% limit) accepted (although subject to scaling back over-subscriptions if necessary). The issue is <u>not</u> underwritten, but the company may place any shortfall shares (at 6½ cents or more) after the issue closes. Payment is due by 27 November.

We believe there is significant value in UK shale gas so are keen to retain our investment in this sector. Obviously there are regulatory and environmental approvals needed at every step. Development may be slow. Perhaps there will need to be a few cold winters - with gas shortages or gas imports disrupted - before approvals are finally given.

Natural gas is a relatively "clean" fuel. A new,

efficient natural gas power plant emits only 40-50% of the  $CO_2$  of a new, efficient coal power plant (and without other contaminants like sulphur dioxide, nitrogen oxides, mercury and lead). 38% of UK electricity is currently generated from gas.

Domestic UK gas is a lot cleaner than the 50% of gas imported (with imports expected to rise to 70% by 2035). Russian gas is particularly "dirty" where 5-7% of the methane is lost into the atmosphere (compared with only 0.3-0.9% in the UK). Methane is 30-times more potent as a greenhouse gas than CO<sub>2</sub>. So using *Russian* gas, the total greenhouse emissions (i.e. methane losses in Russia and CO<sub>2</sub> at the power station) can be 20-40% *higher* than from burning coal.

**Cuadrilla Resources** is flow testing its partially fracked PNR2 well. (*Continued on Page 4*)

	Portfolio	of	Rec	OW	nm.e	ona	led	I	nve	2511	nei	nts	
CURRENT	1 or you	$\circ_{j}$	1100	Om	Perform		Vola-	Price/	Price/	Gross	Recent	Cash	Total
ADVICE	Company		Initial Recomn		mance	Shares	tility	Sales	Earnings	Dividend	Share	Dividends	Return
	NZ Shares	Code	- Date -	Price	Forecas	t (mil.)	Ratio	Ratio	Ratio	Yield	Price	Rec'd	%
BUY	CDL Investments Ltd	CDI	12/01/99	25	С	278.1	1.1	2.68	7	5.9	82	39.8	+387%
HOLD+	Cavalier Corporation	CAV	05/12/95	156*	С	68.7	1.8	0.18	13	Nil	36	282.0	+104%
HOLD-	Colonial Motor Company	CMO	10/11/92	128*	Α	32.7	0.4	0.31	13	7.2	870	642.8	⊦1082%
HOLD	Smiths City Group	SCY	09/10/06	64	Е	52.7	2.1	0.06	NE	Nil	25	37.0	-4%
HOLD	South Port New Zealand	SPN	13/02/96	120	С	26.2	0.4	4.24	19	5.1	710		+766%
HOLD+	Steel & Tube Holdings	STU	08/08/00	139*	E	166.0	1.2	0.30	14	7.8	89	346.1	+213%
	Australian Shares (in Aust												
BUY	Acrux Limited	ACR	12/05/14	99	В	166.7	2.1	7.09	NE	Nil	23	14.0	-63%
HOLD+	AJ Lucas Group	AJL	13/05/03	107*	D	750.1	3.5	0.47	NE	Nil	9	36.4	-58%
HOLD+	ALS Limited	ALQ	12/10/99	72*	Α	482.4	0.5	2.39	22	2.7	822		⊦1508%
HOLD	ARQ Group	ARQ	10/02/04	53	Α	122.1	1.5	0.25	NE	17.6	46	226.0	+412%
HOLD	Atlas Pearls & Perfume	ATP	14/05/96	73	D	424.8	14.8	0.21	NE	Nil	1	17.5	-75%
HOLD+	Brickworks Ltd	BKW	12/11/12	1115	Α	149.9	0.3	3.02	12	3.1	1854	301.5	+93%
BUY	CardieX Ltd	CDX	11/11/13	15	D	695.5	6.7	5.16	NE	Nil	3	Nil	-81%
HOLD	CPT Global Ltd	CGO	10/03/08	88	В	37.8	2.5	0.25	7	4.1	19	19.5	-57%
HOLD	CSG Limited	CSV	11/10/10	166*	С	449.3	1.8	0.62	NE	Nil	31	60.5	-45%
HOLD+	Cynata Thera.	CYP	13/03/17	50	С	101.9	1.0	NA	NE	Nil	130	Nil	+160%
BUY BUY	Ellex Medical Lasers	ELX	14/03/06	49	D	143.6	1.5	1.03	NE	Nil	59	Nil	+19%
	FBR Limited	FBR	07/07/17	14	D	1403.6	4.5	NA	NE	Nil	6	Nil	-58%
HOLD-	Fiducian Group	FID	11/02/08	260	B B	31.4	0.5	3.60	17 22	4.0	560	116.8	+160%
HOLD BUY	Finbar Group Ltd	FRI GGG	12/04/10	106	_	272.1	1.0	1.51 NA	NE	7.0 Nil	86 11	74.5 Nil	+51%
HOLD	Greenlane Minerals	IGN	11/11/19 08/04/03	11 82*	D	1191.0 89.6	3.1 6.5	0.02	NE	Nil	3	70.5	-10%
BUY	Ignite Ltd Iluka Resources Ltd	ILU	12/10/04	o∠ 471	В	422.6	0.5	2.83	13	3.2	907	301.0	+156%
HOLD	Integrated Research	IRI	14/01/04	471	В	171.9	0.5	4.96	23	2.6	291	59.5	+776%
HOLD	McMillan Shakespeare G	MMS	07/11/16	1041	A	83.2	0.6	2.47	23 15	4.5	1641	173.0	+74%
BUY	Michael Hill Int'l Ltd	MHJ	11/06/91	4*	В	387.8	1.5	0.47	16	5.8	69		+74%
HOLD+	Mt Gibson Iron	MGX		44		1157.7	1.5	3.41	13	4.8	84	5.0	+102%
HOLD	Opthea Limited	OPT	10/11/14	188	В	250.3	0.9	NA	NE	Nil	305	65.0	+97%
HOLD	OZ Minerals	OZL	14/03/16	522	A	323.9	0.4	3.14	16	2.1	1085	63.0	+120%
BUY	Prophecy International	PRO	08/09/08	26	В	64.0	1.5	3.00	NE	Nil	50	24.0	+184%
BUY	Reckon Limited	RKN	08/08/16	141	A	113.3	1.0	1.30	13	3.4	87	8.0	-12%
HOLD	Silver Chef Ltd	SIV	13/11/17	740	C	39.3	1.2	0.11	NE	Nil	64	10.0	-90%
BUY	St Barbara	SBM	12/08/19	396	Ä	699.2	0.8	2.77	13	3.1	259	Nil	-35%
HOLD+	The Reject Shop Ltd	TRS	11/01/05	257	C	28.9	0.8	0.09	NE	3.9	257	520.5	+203%
HOLD+	Village Roadshow	VRL	10/08/09	71*	В	195.2	0.6	0.63	NE	1.6	318	284.3	+748%
BUY	Woodside Petroleum	WPL		3410	В	942.3	0.3	4.23	16	6.1	3363	Nil	-1%

The average Total Return (i.e. both Capital Gains/Losses plus Dividends received) of all current investments from initial recommendation is +282.7%. This is equal to an average annual rate of +23.3%, based upon the length of time each position has been held.

The average annual rate of gain of ALL recommendations (both the 36 current and 170 closed out) is +28.8%, compared with a market gain of +3.8% (by the SRC Total Return Index).

CURRENT ADVICE is either Buy, Hold+, Hold, Hold- or Sell. Hold+ indicates the most attractive shares not rated as Buy. Hold- indicates relatively less attractive issues.

<sup>\*</sup> Initial Recommendation Prices adjusted for Share Splits, Bonus and Cash Issues.

<sup>(1)</sup> Reckon Ltd's return includes 1/3 share of GetBusy plc (GETB) worth 46.5 pence (86.6 Aust cents).

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#### **Recommended Investments**

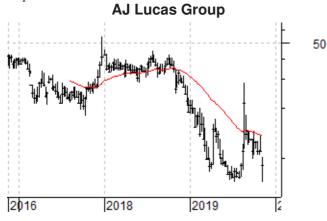
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"Early flow test data was very encouraging" with "gas samples even better than earlier well samples". The gas is "virtually free from impurities" and would only need water removed before flowing "directly into the UK's extensive onshore gas transportation network without requiring additional treatment or processing". The gas is 89% methane, 6% ethane and 2% propane.

The UK Government has announced a "moratorium" (i.e. a temporary ban) "on hydraulic fracturing" - just in time for the 12 December General Election - and Cuadrilla is working to supply data from PNR2 "to address concerns on seismicity so the moratorium can be lifted and an operational framework established for shale extraction".

Investors should note that the UK Government issued shale gas exploration licences to a number of companies and <u>requires</u> that they undertake a minimum exploration expenditure to maintain their interest in these licences. Obviously every step is subject to planning and other regulatory approval but the companies have an expectation that commercial development will be allowed under appropriate conditions.

If the UK Government unilaterally banned shale gas - not based on commercial reasons or scientific evidence - then the exploration companies could have a legal case to seek compensation and damages for the *exploration expenditure* that the UK Government *induced* and *required* them to undertake.



**ARQ Group** has received "a number of approaches" to acquire its *SMB Division* or the *Enterprise Division* and will "test the market for the sale of these businesses" but only sell "where a divestment achieves appropriate value for shareholders".

The Strategic Review has reviewed operating costs and "identified potential ongoing cost savings".



Atlas Pearls reports pearl seeding in the September quarter was 4.3% ahead of budget. There were no auctions in the quarter but a small volume of pearl sales.

Two pearl auctions will be held in the December quarter. The first, in October, achieved "targeted revenues" with "prices for quality goods remaining strong".

Atlas Pearls is "looking at strategic options to ensure profitable operations from increased pearl sizing" and "the board is confident that operational changes will provide future profitability".



**Brickworks Ltd** has purchased a third US brick manufacturer. The company has agreed to invest US\$48 million (i.e. US\$35 million upfront and up to US\$13 million in deferred payments, subject to certain conditions) to acquire the *assets* and *business* of **Redland Brick**.

The acquisition includes five production lines - two of which are currently mothballed - at four manufacturing sites. The total production capacity is 250 million bricks per year (or 170 million from the three operating lines) but the business is operating well below that capacity and has current sales of around 80 million bricks.

There are also "extensive raw material reserves, with the vast majority of clay sourced from quarries located at the manufacturing sites".

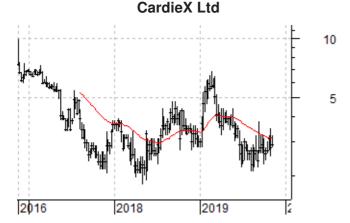
Completion of this acquisition is expected in February 2020 and will be funded from existing debt facilities.

Brickworks sees the North American brick industry as a "highly attractive long-term growth opportunity", with "significant value creation opportunities available through consolidation and rationalisation of underutilised facilities". Longer term there are opportunities from "optimisation of distribution channels, introducing new products and applying a market strategy focused on style and premium product positioning".



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<u>CardieX Ltd</u>'s *ATCOR* medical division has partnered with China based **Auden Technologies Ltd** as its new national distributor in China.



**<u>CSG Ltd</u>** is to be acquired by **Fuji Xerox Company** via a scheme of arrangement at 31 cents.

A shareholder vote will be held in February with implementation expected the same month.

The best option in this type of situation is to hold as an alternative (and higher) offer is always possble. Investors who need cash now could probably sell on-market at 30½ cents (and be paid three months earlier). A sell order at a limit of 30½ cents would probably take few days to reach the front of the queue and be executed.



<u>Cynata Therapeutics</u> and <u>Sumitomo Dainippon</u> <u>Pharma Company</u> have discontinued discussions regarding the acquisition of Cynata Therapeutics.

**Fujifilm** is expected to commence a Phase II clinical trial of GvHD during 2020 and Cynata Therapeutics will begin its Phase II clinical trial for Osteoarthritis (funded by the **National Health & Medical Research Council**) in the March 2020 quarter and its Phase II clinical trial for Critical Limb Ischaemia (CLI) "early in 2020".

GvHD is a potential US\$0.3 billion market (i.e. so worth US\$30 million in gross royalties annually to Cynata Therapeutics), CLI a US\$1.4 billion market and Osteoarthritis a US\$11.6 billion market!

**Innovation Connections** will make a \$50,000 grant (and Cynata Therapeutics will match this) to continue work on the treatment of coronary artery disease by

**UNSW Sydney**. The initial work commenced in 2018 and identified the optimal cell culture to prime MSCs to "secrete factors that stimulate growth of new blood vessels". The current work will profile these proangiogenic factors.

The **Canadian Intellectual Property Office** intends to issue a further patent covering the *Cymerus* technology licenced to Cynata Therapeutics. This will provide additional patent protection through to March 2031.



**FBR Ltd** was mentioned in an article, *Five Ways Construction Robotics is Disrupting the Industry.* So what competition does FBR face?

The article mentioned the *SAM100*, the "semi-autonomous mason" that we discussed in our original recommendation of FBR. SAM can only build in a straight line (i.e. cannot build around corners), requires a person to follow on to clean the mortar between bricks and must be manually lifted on scaffolding as the wall increases in height.

The article stated "construction robots can build walls" and mentioned the *Hadrian X* with links to a video of it building the brickwork for a house.

So what are the other four ways? What do the other "construction robots" construct? The simple answer is: Nothing. They do not *build* anything.

The article mentioned **Volvo**'s *HX2*, an autonomous electric dump truck, and that **Built Robotics** plans to develop autonomous bulldozers and excavators. Other robots can scan a construction for errors, "for example, the system might point out that a ventilation duct is installed incorrectly". Robots can "roam a construction site and capture critical information via multiple sensors" and flying drones can "create 3D site maps and models of project sites".

The only contribution to *construction* are the smartphone controlled painting drones. Those are controlled by humans, so have nothing to do with robotics!

So clearly FBR has nothing to worry about on the competition front . . . but no wonder construction companies have trouble taking "robotic construction" seriously and require extensive demonstrations!

(Continued on Page 6)

#### **Recommended Investments**

(Continued from Page 5)



**Finbar Group** has entered into a 50/50 joint venture with **Ventrade Australia** (a joint venture partner in multiple previous developments) who owns the 1,697m<sup>2</sup> prime development site at 240 Adelaide Terrace, just two blocks from the Perth CBD. Design work for a \$71 million end value development consisting of 115 apartments over 28 levels plus lower level commercial office space is underway. Planning approval is expected early in 2020 when marketing will begin.

The Western Australian government has just lowered stamp duty by 75% for off-the-plan apartment buyers.



<u>Iluka Resources</u> is under-taking a "formal review of the corporate and capital structure" of its two businesses, the minerals and the *Mining Area C* (MAC) royalty which is becoming a significant asset now that **BHP** is developing the *South Flank* and will significantly increase production.

This may involve a "structural separation of MAC by way of a demerger" which is a "high quality, long life asset". South Flank mining will begin in 2021 and reach full capacity in 2023 and last "more than 25 years" plus "the long term strategy for Mining Area C is to continue operations to 2073".

September 2019 quarter Mineral Sands production was 299.7 thousand tonnes, down 4% on the September 2018 quarter but up 19% on the June 2019 quarter.

Mineral Sands sales were 167.1 thousand tonnes, down 32% on the September 2018 quarter and down 25% on the June 2019 quarter.

Mineral Sands revenues were \$252.9 million for the quarter, down 20% on September 2019 and down 14% on June.

The nine-month year to date cash production surplus

is 31% lower at \$408.3 million.

Iluka Resources is the world's largest producer of (high value) Zircon at 28%. Next is **Tronox/Cristal** at 19% and **Rio Tinto** at 16% and **TiZir** at 5%. As the largest producer - and with the top four producers controlling two-thirds of supply - Iluka Resources has some ability to control supply and influence pricing. It does <u>not</u> control the price - and the market is competitive - but it is not a simple price-taking producer. The company seeks to offer its customers "transparency" in pricing, reliable and stable supply in return for more stable prices that reflect the long term costs of operating this business. 50% of Zircon is used in Ceramics - tiles, sanitary ware and table ware.

Iluka Resources produces only 6% of Titanium Dioxide, behind China (31%), Rio Tinto (17%), Tronix/ Cristal (12%) and Kenmare (7%). 90% is used as a pigment in paint, plastics, inks and specialty coatings.



McMillan Shakespeare has completed its share buy-back tender, repurchasing 5,823,613 shares (or 7% of the issued capital) at \$13.74 per share (or \$80.0 million in total). This buy-back was <u>not</u> attractive to NZ shareholders owing to tax reasons, but with potential tax advantages for Australian investors.

NZ shareholders could have realised about \$16 - 16% more and as non-taxable capital - selling on-market if they wished to reduce their investment.

The company accepted the first 365 shares tendered by each shareholder, then 40.89% of the balance of shares tendered. Where that left a shareholder with 145 shares or fewer, the company also repurchased those shares.



Michael Hill International has expanded store numbers in Canada over the last ten years, driving growth in

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revenues and profits, but margins have been "a long way below Australia and New Zealand". The company is therefore seeking to improve productivity with "a plan to increase sales per square metre and sales per hour" to "deliver improved results" in the current financial year.

The company delivered annual cost savings of \$5 million per year last year and this year is targeting a further \$5 million in annual savings. Branded sales were 32.5% of total revenues last year, but rose to 37.9% in the September quarter . . . with the aim to raise this to 50% "over the coming years".

Miichael Hill International



Mt Gibson Iron held cash of \$407 million (35.2 cents per share) as at 30 September.

The net operating cash surplus was \$25 million, being \$24 million from the *Koolan Island* mine, \$4 million from the sale of previously uneconomic lower grade ore from the *Mid-West Operations*, \$2 million refund of historical rail access charges (plus \$2 million received after the quarter), \$2 million in interest income less corporate costs of \$3 million and iron ore hedging losses of \$4 million.

Koolan Island loaded nine Panamax shipments (each worth \$8-9 million) totalling 664,000 tonnes during the quarter. The company aims to lift this slightly to 3-4 shipments per month, perhaps 10-11 shipments per quarter.

The shiploading conveyor belt suffered an extensive longitudinal tear in early October - delaying shiploading in October - but sales volumes are expected to recover within the quarter.



<u>Opthea Ltd</u> has published its recent clinical trial results in *Ophthalmology Retina*, a journal of the **American Academy of Ophthalmology**.



**OZ Minerals** reports a cash balance of \$195 million (60 cents per share) on 30 September, after spending a further \$150 million on the *Carrapateena* mine.

The first saleable concentrate from *Carrapateena* will be made in November, sourced from 180,000 tonnes of ore stockpiled during development. The minerals processing plant is completed and is being commissioned.

The company is undertaking an expansion study for the *Prominent Hill* underground mine. Exploration drilling is successfully converting mineral resources to mining reserves with mine life being extended from 2030 to 2040. The completed *Malu Underground Material Handling* study considered mining rates up to 8Mtpa (i.e. more than double current production) and recommends a 1,000m vertical shaft and skip hoisting system to lift ore to the surface. This could later be expanded to a depth of 1,500m. The expansion study also considered "automation and equipment powered by diesel alternatives". A final decision on underground expansion is expected in 2020.

Metallurgical models based on gold ore processing trials earlier this year suggest an improvement from 71% to 77% in gold recoveries. The processing of the gold ore stockpile will therefore be brought forward - to start in early 2020 - ahead of processing of low grade copper stockpiles

OZ Minerals has entered a testwork co-operation agreement with listed **Cobalt Blue**, which has developed a mineral processing technology to separate pyrite ore and then extract copper, gold, cobalt and sulphur. OZ Minerals will provide a 10-15 kg sample of pyrite concentrate from *Carrapateena* to allow Cobalt Blue to assess the technical viability of its technology. If that is successful, further test work will be necessary to optimise metal recoveries.



#### **Recommended Investments**

(Continued from Page 7)

Prophecy International Holdings reports that "eMite has been certified as an Amazon Connect Technology Partner", allowing it to provide real time and historical reports and analytics for customers of the Amazon Connect cloud-based contact centre solution.



St Barbara has downgraded its Gold production forecast for the *Gwalia* mine for the June 2020 financial year from 200-210,000 ounces to 175-190,000 ounces, while "all-in sustaining costs" will rise from A\$1230-1290 per ounce to \$1390-1450 per ounce. The company "has prioritised development over production" in the current financial year to complete the *Gwalia Expansion Project* (GEP) in the March 2020 quarter. The current ventilation constraints limit parallel work activities underground until the GEP is completed.

The *Simberi* production forecast is steady at 110-125,000 ounces at an unchanged \$1285-1450.

*Atlantic Gold* is forecast to produce 95-105,000 ounces at \$900-955.



The Reject Shop will take "a more aggressive approach to occupancy costs", with rental increases 2-3 times the rate of inflation being "not sustainable". This may "see more store closures" or "relocation to more affordable opportunities".

First quarter sales are showing a small positive increase, an improvement on the falling sales late last year.

The December quarter - including the Christmas sales period - is the most important for this business.



<u>Village Roadshow</u> completed the development of **Lionsgate Entertainment World** at Novotown on Hengqin Island, China (i.e. land reclaimed south of Macau) in July and now operates the park and receives ongoing management fees.

Australian Theme Park admissions in the September quarter were "up" an unspecified amount "on the prior corresponding period".

Capital expenditure is forecast to be approximately in line with depreciation and amortisation (i.e. \$70-75 million).



<u>Woodside Petroleum</u> reports September quarter production of 24.9 MMboe, up 43.9% on the depressed June quarter and up 7.8% on the September 2018 quarter.

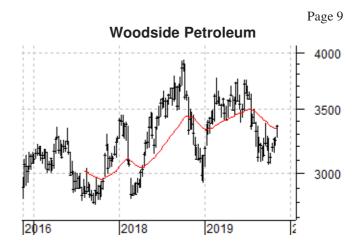
Sales revenues of US\$1,164 million were up 57.7% on the previous quarter and 0.6% up on September 2018. Prices (which are mainly linked to oil) were down but offset by higher volumes.

LNG is mainly sold on long term supply contracts (with pricing linked to the oil price) and Woodside Petroleum has signed a 13 year supply contract with **Uniper Global Commodities**. The contract will begin in 2021, supplying 0.5 Mtpa increasing to 1.0 Mtpa from 2025. Supply from 2025 is subject to completing the *Scarborough* development.

The company signed other agreements to supply 3.5 million tonnes to other customers from 2020 to 2026.

Woodside Petroleum has upgraded the *Greater Scarborough* gas contingent resource (2C) by 41% to 13.0 trillion cubic feet (Tcf) after completion of integrated subsurface studies with full waveform inversion 3D

November 11, 2019. seismic reprocessing. Woodside Petroleum owns 75% of the main field and 50% of some smaller fields, so its share of gas increases 45% to 9.3 Tcf (i.e. about 72% of the total gas). The final investment decision to develop the *Scarborough* gas resource will be made in the first half of 2020 (and just became even more likely), with gas transported via a 430km pipeline to the new LNG train Woodside Petroleum will build at *Pluto LNG* to



# Share Recommendation: Buy Greenland Minerals

#### BUY Greenland Minerals (code GGG).

begin production in 2024.

We reviewed Greenland Minerals in October 2016 (*Market Analysis* Issue No. 532) at around 4.7 cents. The shares have since *doubled* in value (and been volatile) while the company has made excellent progress towards developing its major Rare Earths project in Greenland.

Improved metallurgy has simplified processing, lowering the capital cost of development by 40%, increasing the expected Rare Earth recoveries and lowering ongoing operating costs. An economically attractive project has become even more economically attractive!

#### **Company History**

This company, previously named **The Gold Company**, listed on the Australian stockmarket in 2006 after an Initial Public Offering at 20 cents per share.

In May 2007 it bought into the Kvanefjeld Uranium and Rare Earths project in Greenland. The acquisition was in stages, at a total cost of \$65 million plus 75.0 million shares.

#### **Current Business**

Greenland Minerals owns 100% of the world's largest undeveloped deposit of rare earth elements and uranium. It could also become the <u>lowest cost</u> producer of Rare Earths, enabling the company to earn very high profit margins.

This deposit is rich in the less common and more valuable rare earth elements (Nd, Pr, Eu, Dy, Tb, Y). Two more common rare earth elements (Lanthanum and Cerium), Uranium, Zinc and Fluorspar will be valuable by-products.

The Danish Government has sponsored exploration and research and development of this project since 1960.

A Feasibility Study published in May 2015 put the capital cost of development at US\$1,361 million, the initial mine life at 37 years (based on about 10% of the resource) with a net present value of the project at

US\$1,400 million with an internal rate of return of 21.8%.

An updated Feasibility Study - that we reported in our October 2016 review - put the capital cost at US\$832 million, the net present value at US\$1,593 million with an internal rate of return of 43.4%. Since then the company has made significant progress to further improve the attractive economics of this project:

In December 2017 the company reported "major improvements" to metallurgical performance. A Chinese technical institute improved the concentrator circuit, lifting the rare earth content of the concentrate from 14% to 23.1% rare earth elements with 78% recovery. This offers the potential to ship the concentrate for processing in China, allowing a "phased development" (i.e. avoiding the initial capital cost of building this processing plant in Greenland).

In January 2018, the company announced a significant simplification in the leach process, replacing a three stage process (i.e. a 24 hour leach in sulphuric acid, caustic conversion and releaching in hydrochloric acid) to a "remarkably elegant and simple" one stage, low temperature hydrochloric acid leach circuit. This removes the need for sulphuric acid production on site and the hydrochloric acid can be imported (in the ships that take away the concentrate?), removing the need for the on-site hydrochloric acid plant. The refinery is therefore significantly reduced - with a similar reduction in upfront capital investment - and ongoing reagent costs will be lower.

In April 2018 a second Chinese technical institute, **Baotou Rong Fine Materials** (BTMR), using a different method, confirmed the December 2017 results, producing a 21.9% concentrate with 77% recoveries.

These two concentration methods were tested and optimised in Perth, Australia, with BTMR retained to continue development. A pilot plant was operated this year, optimising the process and improving recoveries to 94%.

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Page 10 Market Analysis

#### **BUY Greenland Minerals**

(Continued from Page 9)

In October 2018 a *Civil Engineering Optimisation* study began and in March 2019 reported a 44% reduction in civil engineering costs to US\$175 million.

In May 2019, the company released some details from an *Optimised Feasibility Study*. Compared with the October 2016 updated Feasibility Study, Rare Earth recoveries improved from 86% to 94%, yielding an extra US\$31 million in annual revenues. Annual operating costs will fall by 40%. This would produce 32,000 tonnes per annum of rare earth oxide, at a mining rate of 3Mtpa.

In July 2019 the *Optimised Feasibility Study* calculated a 40% reduction in capital costs for this project at US\$505 million. This project would generate pre-tax operating margins of US\$450 million annually over a 37 year mine life (from just 10% of the total resource, so mine life can likely be extended for hundreds of years).

The application for a formal Mining Licence was lodged in July. Greenland's **Environmental Agency for Mineral Resource Activities** have made requests for additional information on the *Environmental Impact Assessment* to "finalise outstanding issues" (mainly relating to the tailing storage) and there is some further public consultation needed.

Since June, the International Council on Mining, the United Nations Environment Programme and the UN supported Principles for Responsible Investment have "co-convened a global tailing review to establish global best practices on tailings storage facilities", with the review expected to be completed by the end of 2019. Greenland Minerals will review its tailing storage plans "to ensure compliance with updated standards".

So Greenland Minerals is approaching the final step, financing the US\$505 million capital cost.

#### **Investment Criteria**

Greenland Minerals owns 100% of the Kvanefjeld project - which *could* be a valuable asset - but has little cash and no revenues.

The company made a placement of 108,000,000 shares at 9 cents in November 2017 to raise \$10.25 million and in July 2019 placed 58,333,333 shares at 12 cents to raise \$7.0 million.

The major shareholder is China based **Shengh Resources Holding Co Ltd**, with 125.0 million shares (about 11% of the company). Shengh Resources is also the technical partner and a leader in Rare Earth element processing. The companies also have a *Memorandum of Understanding* for financing the mine and processing plant - although these financing plans have not been disclosed. Much of the capital cost to develop this project could probably be borrowed . . . and paid back (with interest) after the two year construction phase from operating cashflows in about 18 months!

The company will probably make a cash issue to shareholders to raise equity capital to at least partially finance the project, but the shares will likely rise strongly on the issue of the Mining Licence and the announcement that this project is proceeding.

This project has an initial mine life of 37 years, but

that is using only 10% of the resource, so this is a very long life mining project!

Rare Earth elements are a small, but critically essential part of many products, especially renewable energy (e.g. EVs, offshore wind turbines), electronics (e.g. smartphones, computer disk drives, headphones) and appliances (e.g. electric motors in cordless tools, bicycle dynamos). Security of supply, rather than price, will be important to most customers.

The issued capital is 1,190,982,530 ordinary shares. There are also 6,000,000 unlisted options, exercisable at 15 cents until March 2021. At 11 cents the market capitalisation is \$131 million.

Greenland Minerals is still *neglected* by brokers and institutional investors. No brokers follow the company.

The directors have significant shareholdings in the company. The Chairman, A Ho, owns 3,525,610 shares and the Managing Director, J Mair, 8,364,062 shares. The Non-Executive Director S Cato has 6,389,594 shares. The fourth director owns no shares but is a representative of Shengh Resources.

There was one *insider* trade over the last year, when S Cato bought 200,000 ordinary shares at 9.2 cents.

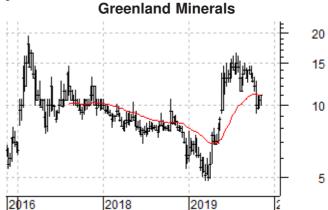
The shares have been *very volatile* during 2019, hitting a low of 4.9 cents in May and a high of 16.6 cents in July - but falling in value following the July placement at 12 cents. Nevertheless, the shares are probably in an uptrend. The Relative Strength rating is +7.5%, ranked 22 (on a scale of 0-99).

#### **Summary & Recommendation**

Greenland Minerals shares appear to offer *huge* value. The company has a total market capitalisation of A\$131 million but its Rare Earth mining project would yield pre-tax margins of US\$450 million annually for just about forever. The only remaining uncertainties are (1) the formal issue of a Mining Licence and (2) the US\$505 million financing for the project. Investors shouldn't count their chickens until they hatch . . . but you may be hearing something tapping on the inside of the shell.

Three years ago we said "A small investment in Greenland Minerals shares may be attractive for higher risk investors with a well diversified investment portfolio". Since then the shares have slightly better than *doubled*, but the attractive project economics have become significantly more attractive!

There are still development risks, but Greenland Minerals is much closer to becoming the <u>lowest cost</u> producer of critical Rare Earth elements.



November 11, 2019. Page 11

# Renewable Energy - Part 1: Electric Vehicles (EVs) and Transport as a Service (TaaS)

We are planning to review the impact of renewable energy. Investors need to understand the potential (and limitations) of renewable energy technologies to make intelligent investment decisions in a changing environment.

We will briefly look at which countries will be the biggest winners or losers and how countries can potentially benefit most from the transition to renewable energy. We want to examine the technologies and economic factors involved in solar energy, wind power, nuclear energy and hydrogen. Understanding these technologies and business models will help us seek out attractive niche investment opportunities and avoid investment traps. In many ways the "renewable energy boom" may be similar to the "computer boom" and the "telecom boom" - it may change the world and there will be growing markets but probably falling selling prices (and falling capital asset values) with low and declining profit margins. Is is great for consumers . . . but not for investors!

Those *easier* topics we shall leave for future months. This month we shall "dive in the deep end" with a look at *Electric Vehicles* (EVs). This is probably the main technology that Governments around the world hope will cut  $CO_2$  emissions . . . but EV technology alone will fail to achieve any significant reduction in  $CO_2$  emissions.

Fortunately, another technology, Transport as a Service (TaaS) could ride in to "save the world"

#### Electric Vehicles (EVs) and Transport as a Service (TaaS)

First some background information on internal combustion engine (ICE) vehicles and electric vehicles (EVs).

The full CO<sub>2</sub> emissions from building a medium sized ICE vehicle (i.e. digging the ore out of the ground, smelting the metal, fabrication, transportation, etc) is around 17 tonnes of CO<sub>2</sub>. Over its useful economic life an ICE vehicle will travel about 150,000 km and emit about 24 tonnes of CO<sub>2</sub> from burning petrol or diesel. That is about 41 tonnes of emissions in total.

The  $\mathrm{CO}_2$  emissions from building an EV are much higher, mainly owing to the batteries. Various reports put  $\mathrm{CO}_2$  emissions to build an EV between 16-100% higher than an ICE vehicle. The sizing of the battery will determine the range the vehicle can travel between recharging. With a reasonable battery capacity, the "carbon footprint" for an EV will likely be 50-65% higher than an ICE vehicle. So perhaps 26-28 tonnes of  $\mathrm{CO}_2$  to build a medium sized EV.

If you only use clean, renewable energy to charge an EV then this is a CO<sub>2</sub> saving of about 17-29% over the life of the vehicle. That is an improvement, but it probably won't be enough to reduce atmospheric levels of CO<sub>2</sub>!

In most countries, around 50-65% of electricity is still generated by burning fuels. Charging an EV will therefore result in about 12-16 tonnes of CO<sub>2</sub> emissions (at fossil fuel power stations) over its life, taking the total CO<sub>2</sub> emissions to 38-44 tonnes.

That makes the environmental impact of EVs about the same (plus or minus about 7%) as an ICE car! Plus there is environmental damage in many parts of the world from producing the Cobalt, Nickel and Lithium for the rechargeable batteries.

#### **Governments want EVs**

While EVs may fail to significantly reduce CO<sub>2</sub> emissions they remain Governments main "solution" to, well, reducing CO<sub>2</sub> emissions!

The UK government wants to ban all petrol and diesel new cars sales by 2040 (and by 2032 in Scotland) with the objective to have close to a 100% EV fleet by 2050.

Denmark, Iceland, Ireland, Netherlands and Sweden will ban new ICE vehicles sales from 2030. Israel will ban gasoline and diesel vehicle sales from 2030, allowing only EVs and natural gas powered vehicles. France will ban new gasoline and diesel vehicle sales from 2030 (and ban diesel vehicles from Paris by 2025).

Germany has announced no fixed date, but may follow the UK and France and ban ICE vehicles. Norway wants to "phase out" (but not ban) conventional vehicles by 2025 in favour of EVs and hybrids.

India's government would like all vehicles sold in India to be EVs by 2030 - but only if EV prices "fall far enough to make it economical". Presumably they would also need to upgrade the power grid?

Taiwan will ban non-electric motorcycle sales from 2035 and non-electric four wheel vehicles from 2040. China wants to "phase out" ICE vehicles but gives no fixed dates. The expectation is that ICE vehicles will be phased out sometime after 2030. In the US and Canada there is no federal policy, but several individual states aim for "zero emission vehicles as fast as possible, and no later than 2050".

A number of cities also have local bans, including Auckland which will require electric buses by 2025 and EVs after 2030.

These may all be worthwhile targets, but none of these governments (nor their environmental agencies nor industry) have *plans* for how to achieve these goals. There are direct cash subsidies for buying an EV, tax breaks, subsidised parking, tolls and charging plus indirect subsidies (i.e. EVs do not pay the fuel taxes on petrol and diesel) but even with these subsidies EVs are more expensive than ICE vehicles. Only the rich can afford to buy EVs - subsidised by the poorer members of society. Is this a sustainable policy?

(Continued on Page 12)

#### **Electric Vehicles and Transport as a Service**

(Continued from Page 11)

More importantly, there are no plans to significantly increase the production of the strategic minerals - Cobalt, Nickel and Lithium - that would be required to make this EV "virtue signalling" into a reality.

#### We need more - a lot more -Cobalt, Lithium, Rare Earths and Copper

In the UK the **Natural History Museum** calculated some numbers necessary for the UK to achieve its 2040 EV target: There are currently 31.5 million cars in the UK and assuming that number does not grow over the next 20 years, then to replace these with 31.5 million EVs would require: 207,900 tonnes of Cobalt (almost two years total global production), 264,600 tonnes of Lithium Carbonate (nine months global production), 7,200 tonnes of Neodymium and Dysprosium (one years global production of Neodymium, a rare earth element) and 2,362,500 tonnes of Copper (six months global production).

That *may* be possible if only the UK wanted to convert its fleet to EVs over the next two decades, but the rest of the world also wants to convert to EVs. There are currently about one billion cars worldwide and without a disruptive change to transportation - that number would likely rise to about two billion by 2050 (i.e. over the next 31 years).

That many EVs will require 120 years production of Cobalt (at current production rates), 50 years production of Lithium, 60 years production of Neodymium and 32 years total production of Copper - all in the next 30 years! Smartphones, computers and billions of other *Internet of Things* devices will also need rechargeable batteries.

Most of these metals are needed in other applications (especially renewable energy applications). Copper, for example, is also needed in the solar panels, wind turbines, transformers, inverters and wiring and grid infrastructure needed to create and transport the electricity to power those EVs.

Powering EVs in the UK would increase electricity consumption by 20% (and in the US by about 18%). 51% of UK electricity is still produced from burning carbon emitting fuels (and 64% in the US, with 28% from coal). If the objective of this exercise is to reduce CO<sub>2</sub> emissions then this will require more offshore wind farms (needing neodymium and copper) and more solar farms (needing "critical" and "near critical" raw materials - high purity silicon, indium, tellurium and gallum). These critical and near critical raw materials are scarce and/or by-products of other commodities, so increasing production volumes is difficult. We will also need more steel (iron ore and metallurgical coal), aluminium, cement and glass - industrial products that each have a large "carbon footprint".

The electricity grid is currently designed to handle *peak demand* so if EVs are recharged outside of peak periods there would be no need to upgrade the power grid. There is the need for more renewable electricity to meet this 20% increase in electricity demand.

#### **Transport as a Service (TaaS)**

Government plans to change from an ICE vehicle fleet to an EV fleet will not reduce CO<sub>2</sub> emissions without a

significant expansion in renewable energy to meet the 20% higher demand for electricity. Even then, the reduction would not be large. Only about 17-29%. Furthermore, replacing the vehicle fleet with EVs is probably impossible as the demand for the critical battery metals would far exceed production.

The most likely technology solution to reducing vehicle CO<sub>2</sub> emissions is Transport as a Service (TaaS). This business model is dependent upon *fully autonomous* (i.e. "Level 5" driverless) vehicle technology, not EV technology, but will *enable* the practical introduction of a 100% EV vehicle fleet. TaaS will be rapidly adopted owing to transportation savings of around 80% and will likely decimate (i.e. literally reduce to a tenth) the global vehicle fleet within a decade.

Independent think tank **RethinkX** forecasts that TaaS will cost US\$0.07-0.25 per mile (NZ\$0.05-0.20 per kilometre) - around 60-90% less than the full cost of vehicle ownership and operation.

TaaS is basically similar to the service currently offered by companies like *Uber* and *Lyft*, but with a driverless vehicle. These vehicles will be utilised about 40% of the time, compared with about 4% for individually owned cars of today. Within a decade, TaaS vehicles are expected to make up 60% of the vehicle fleet but provide 95% of transportation miles (the remaining 40% will be legacy, individually owned vehicles).

The system could evolve in many ways. There may be one platform (where customers can call vehicles from multiple operators) or each operator may have its own platform (e.g. like the current *Uber* app and the *Lyft* app, to call a vehicle from either operator). Each operator will also require sophisticated software, an Operating System, to manage its fleet of vehicles.

One or two operators will likely dominate individual markets (i.e. a city or town) but probably not a whole country or globally. With low barriers to entry, competition (and *potential* competition) will prevent monopoly profits and keep prices low. Most of the benefits of this technology will accrue as savings to consumers. Economists call this a "consumer surplus" and is money that individuals will save and can spend on other goods and services. That cost per mile transportation cost will fall about 80% compared with the current model where people buy their own cars, pay financing, insurance, maintenance, depreciation, vehicle licensing fees and running costs.

Many existing motor vehicle businesses will cease to exist, but the average family will save an estimated average of US\$5,600 per year in transportation costs!

#### Environmental Impact from a Smaller Global Vehicle Fleet

The environmental impact comes from better utilisation of a smaller vehicle fleet. As a TaaS vehicle will be utilised 40% of the time, compared to 4% for vehicles today, the total vehicle fleet need be only 10% of the size. That is a 90% reduction in the CO<sub>2</sub> emissions involved in the upfront construction of the fleet - and a 90% reduction in required battery metals (making the rollout of EV technology achievable).

Furthermore, a much higher vehicle utilisation should increase the *economics* of operating vehicles.

Under the current model of individual vehicle

ownership, by 2050 the world may need a global fleet of two billion vehicles, each travelling about 15,000 km per year or a total of 150,000 km over an economic vehicle life of ten years. The global fleet would be 2000 million vehicles with annual new EV production (to replace the fleet each ten years) of 200 million vehicles.

With a 10-fold increase in vehicle utilisation (i.e. from 4% to 40%) a TaaS model would require a global fleet of just 200 million vehicles, with each travelling 150,000 km per year. *If* that was the end of their economic life, the fleet would need replacing annually, so annual EV production would be a similar 200 million vehicles... but at this higher utilisation rate an EV could probably travel a total of 500,000 km (i.e. 150,000 km per year for over three years) or, with some design improvements, even 1,000,000 km (i.e. 150,000 km per year for 6½ years). The global fleet would be 200 million vehicles, with annual production of just 30-60 million vehicles (i.e. replacing the fleet every 3-6½ years). This would be great news for the environment but not the motor vehicle industry!

That is a 90% total reduction in the required vehicle fleet - and a 70-85% reduction in annual vehicle replacements - with <u>significant reductions in upfront fabrication CO<sub>2</sub> emissions</u> (and demand for battery metals).

With enough renewable energy, recharging emissions could also be reduced by 100%.

Peak transport times are the morning and afternoon/evening when people travel to and from work or school. Parts of the TaaS fleet could therefore be taken off the roads for recharging between 10:00 am and 2:00 pm when solar generation is at its peak and electricity prices are near their lows. The current individual ownership model would see most EVs recharged over-night when solar generation is zero.

Note also that the adoption of this TaaS technology requires no government subsidises or vehicle bans. It will be driven purely by the 80% reduction in costs to consumers.

TaaS will also free up valuable real estate: home garaging, parking buildings and large parking lots.

#### **Investment Implication of TaaS**

Like many disruptive technologies, TaaS will completely replace many existing industries and businesses. There will be new businesses - the TaaS operators and Software opportunities (i.e. the Platform and the Operating System) but with competition (and potential competition) there will be no monopoly profits.

Most of the benefits will go to consumers in 80% lower transportation costs. Consumers will be able to spend that money on other goods and services (i.e. creating new industries and businesses in other sectors of the economy).

As TaaS will be around 80% cheaper than the current system of individual car ownership, new car sales will rapidly fall off. New vehicle dealerships will go out of business 3-4 years after TaaS is launched in any location. As dealerships close, maintenance and parts will become harder to obtain and more expensive.

Second hand car prices will also rapidly fall to zero as (1) potential selling increases from people seeking to avoid the high fixed costs of ownership and switch to the

TaaS model while (2) demand for used cars will disappear. Used car buyers tend to be younger people, poorer people and those seeking a second or third vehicle. These groups will benefit most from the lower cost TaaS model.

The Vehicle Finance and Rental Car businesses will cease to exist.

Retail vehicle brands (i.e. Honda, BMW, Tesla) will have no value when there is no longer any retail vehicle market. The total demand for new vehicles will fall 70-85%, with sales at lower wholesale 4-5% margins to TaaS operators (rather than higher 8-10% margins to individual owners at present). The motor vehicle manufacturing industry will be much smaller and even more competitive.

The Motor Vehicle insurance industry will probably not exist in the future. Around 1.25 million people currently die each year on the roads and another 50 million are injured. 95% of these accidents are caused by "driver error". Autonomous vehicles will be safer (and this will improve further over time). Insurance costs will be lower for autonomous vehicles. In fact, the large TaaS operators will likely "self insure".

Energy efficiency will improve. 95% of the energy consumed by an ICE or EV is used to move around the heavy steel body (and batteries) with only 5% used to transport people and goods. As autonomous EVs become safer, passengers will need less protection from crashes and steel can be replaced with lighter materials. That would reduce the CO<sub>2</sub> emissions in construction (i.e. most of which is in the mining of iron ore and coal and the smelting process to make steel) and reduce the energy usage operating the vehicles to provide a transport service.

Oil demand will fall 30% by converting the vehicle fleet from ICE vehicles to EVs. That will depress oil to a lower equilibrium price. Expensive to extract oil reserves will be "stranded" (i.e. uneconomic to extract) and never taken out of the ground. This will impact the financial situation of all oil companies. Offshore oilfields (i.e. in the UK, Norway) and heavy oils (i.e. Canadian tar sand and Venezuelan heavy crude) would be abandoned.

Lower oil volumes would impact some pipelines and reduce the global tanker fleet (although with a 20 year life and long re-order lead times, the oil tanker industry may manage this decline better than other energy sectors).

Oil Refineries will also be significantly impacted. Oil refineries have very expensive capital equipment that is (1) specifically designed for a particular oil feedstock and (2) specifically designed to produce certain products. Depending on the feedstock, the typical output of a refinery is Gasoline (46%), Diesel (26%), Aviation fuel (9%) and other products. When gasoline and diesel are no longer needed for ICE vehicles, reconfiguring a refinery to produce more aviation fuel could cost billions of dollars! The industry will have excess capacity, but the wrong kind of capacity.

TaaS will also eliminate public transport, with a cheaper and better alternative. TaaS *pool* vehicles, with perhaps 8-24 seats, could pick up strangers going to similar locations, replacing current bus services (but with no fixed schedules, no fixed routes, but requiring sophisticated software).

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## Computer Selections of NZ Shares based upon our Comprehensive Share Selection Criteria

For an explanation of this table see the *Share Selection Methods* report available from our website. These shares are not formal "buy" and "sell" recommendations, but the "Under-Valued", "Best Performing" and "Income" shares should be considered for purchase, while the "Over-Valued" and "Worst Performing" shares can generally be sold to release money for re-investment in more attractive shares.

STRENGTH RATING Set Set Price Return Vola- Price Divi- Price  Company Share Cur- 4-Wk Rank 20 to on til- Earn. dend Sales Market  Price rent Chg. 0-99 TA Equity ity Ratio Yield Ratio Cap'n	STRENGTH RATING Tompany  Share  Cur- 4-Wk Rank  Solution  Cur- 4-Wk Rank  Solution  Cur- 4-Wk Rank  Solution  NTA Equity ity Ratio Yield Ratio Cap'n
UNDER-VALUED SHARES: Lowest Price/Sales, Yld > 0, Rel Strength > 0	OVER-VALUED SHARES: Highest Price/Sales Ratios, Relative Strength < 0
AWF Madison Grp 198 +3.7 +1.4 38 2-0 - 1.9 6 0.8 33 11.4 0.25 66	MetLifeCare 500 -1.9 +3.5 60 7-0 5 0.7 3 0.5 27 2.2 8.58 1.067
TIL Logistics 115 +11.8 +0.6 10 0-0 - 3.0 12 1.7 25 6.0 0.28 99	Allied Farmers 74 -4.3 +0.4 72 0-0 - 29.4 28 0.9 105 0.4 6.22 132
Col Motor Co 870 +1.6 -1.3 46 2-0 - 1.3 10 0.4 13 7.2 0.31 284	Gentech Group 530 -2.4 -0.6 63 0-0 4 2.4 6 0.4 38 3.5 5.00 522
Warehouse Group 288 +10.6 +3.5 13 0-0 4 2.1 5 0.7 43 7.7 0.33 994	Vista Group Ltd 383 -13.9 -7.8 89 4-3 5 4.3 8 0.5 52 1.2 4.85 634
Air New Zealand 286 +1.5 +0.9 47 3-3 7 1.5 13 0.8 12 10.7 0.56 3,211	Vector Ltd 357 -1.4 -1.7 58 1-1 5 1.5 4 0.4 43 6.4 2.71 3.570
Ebos Group Ltd 2484 +5.3 -0.9 27 1-3 6 3.2 11 0.5 29 4.1 0.58 4,017	Synlait Milk 919 -2.9 -0.2 65 0-0 7 5.2 13 0.3 39 Nil 2.46 1,345
	Chorus Ltd 519 -3.8 -0.2 68 5-2 5 2.3 5 0.4 43 6.2 2.35 2,280
BEST PERFORMING SHARES: Strongest Shares, P/E < 20, P/S < 1.0	
Good Spirits 13 +9.8 +3.1 15 0-0 - 0.4 4 3.7 11 Nil 0.22 6	WORST PERFORMING SHARES: Weakest Shares, P/S Ratio > 0.25, Yield < Twice Average
Col Motor Co 870 +1.6 -1.3 46 2-0 - 1.3 10 0.3 13 7.2 0.31 284	Vital Health PT 260 -58.3 +0.0 98 0-2 4 1.5 9 0.3 16 3.4 N/A 1,498
Air New Zealand 286 +1.5 +0.9 47 3-3 7 1.5 13 0.6 12 10.7 0.56 3,211	Finzsoft Sol'ns 100 -18.5 +0.6 94 0-0 0.6 131 Nil 0.71 9
	Geo Ltd 11 -14.6 +3.2 91 0-0 - 3.7 - 1.6 NE Nil 1.79 9
INCOME SHARES: Highest Yields, Capitalisation > NZ\$100 million	PaySauce Ltd 48 -14.3 +2.4 90 0-0 1.5 NE Nil 1.74 1,605
Sky Network TV 91 -14.9 -1.6 92 0-0 7 1.0 28 0.8 4 11.4 0.45 354	Vista Group Ltd 383 -13.9 -7.8 89 4-3 5 4.3 8 0.5 52 1.2 4.85 634
Z Energy Ltd 528 -5.5 -3.9 77 0-0 5 2.3 20 0.6 11 11.3 0.39 2,112	Comvita 300 -13.1 +3.1 88 8-0 3 0.9 - 0.5 NE Nil 0.90 155
Tourism Hold. 343 -6.0 -1.3 79 2-0 4 1.6 11 0.5 15 10.9 1.07 453	Pac Edge Bio. 19 -12.2 -1.5 87 3-0 1 6.8 - 1.3 NE Nil N/A 95
Air New Zealand 286 +1.5 +0.9 47 3-3 7 1.5 13 0.5 12 10.7 0.56 3,211	Moa Group Ltd 30 -10.7 -0.0 85 0-0 - 2.5 - 1.0 NE Nil 1.27 20
Hallenstein G. 625 +10.6 +1.0 13 0-14 - 5.4 40 0.5 14 9.8 1.33 370	AMP Limited 210 -10.6 +3.5 84 0-0 10 0.9 0 0.5 208 7.0 0.94 6,124
Turners Auto. 255 -6.0 +4.5 78 3-1 - 1.0 10 0.6 10 9.3 0.66 221	WN Drive Tech. 16 -10.4 -1.9 83 0-0 - 6.8 - 1.5 NE Nil 0.74 43
Green Cross H. 112 -4.9 -1.4 74 1-0 - 1.3 13 0.8 10 8.7 0.28 160	QEX Logistics 71 -8.5 -2.3 83 0-0 - 3.4 18 0.9 19 Nil 0.63 37
PGG Wrightsons 247 -32.1 -7.2 97 5-0 1 0.5 1 0.7 47 8.4 0.23 186	New Talisman 1 -8.0 +3.9 81 0-0 - 1.2 - 5.3 NE Nil N/A 19
Marlin Global 96 +3.5 -0.1 38 0-1 - 1.0 6 0.7 17 8.2 N/A 141	Rakon Ltd 26 -6.4 -2.0 80 1-0 - 0.7 4 0.9 18 Nil 0.52 60
Barramundi Ltd 66 +1.8 +0.2 46 0-0 - 1.0 6 0.8 15 8.2 N/A 114	Fonterra S/H Fd 418 -6.0 +4.0 80 0-0 4 2.8 - 0.3 NE 2.4 0.33 6,738
	A2 Milk Company 1239 -5.6 -6.9 77 0-6 8 66.3 23 0.4 290 Nil N/A 8,822
INSIDER BUYING: Most Insider Buying, Relative Strength > 0	Mercer Group 23 -5.4 +2.3 76 0-0 - 3.3 - 1.2 NE Nil 0.50 15
Oceania Health. 105 +0.2 +0.5 52 11-1 0.9 14 4.5 3.38 641	Millennium & C. 251 -5.0 -0.0 75 0-0 - 0.6 10 0.3 6 1.9 1.81 397
Heartland Group 167 +2.7 -0.9 42 3-0 - 1.6 10 0.4 16 6.2 5.84 785	SeaDragon Ltd 0 -5.0 +1.3 74 0-0 - 1.1 - 11.8 NE Nil 1.98 10
Blis Technology 4 +14.8 -10.7 4 2-0 - 11.9 - 3.2 NE Nil 8.42 47	TruScreen Ltd 11 -4.4 -0.6 73 0-0 - 2.2 - 1.7 NE Nil N/A 24
Col Motor Co 870 +1.6 -1.3 46 2-0 - 1.3 10 0.3 13 7.2 0.31 284	Allied Farmers 74 -4.3 +0.4 72 0-0 - 29.4 28 0.8 105 0.4 6.22 132
NZ King Salmon 230 +2.7 +4.3 41 2-0 4 1.9 7 0.6 28 3.0 1.85 319	
F & P Health. 2049 +9.3 +3.5 17 2-0 7 52.9 86 0.2 61 1.6 N/A 11,696	INSIDER SELLING: Most Insider Selling, Relative Strength < 0
IkeGPS Limited 81 +11.3 +8.0 12 2-0 - 7.8 - 0.9 NE Nil 9.16 73	A2 Milk Company 1239 -5.6 -6.9 77 0-6 8 66.3 23 0.4 290 Nil N/A 8,822
Summerset Group 686 +5.1 +3.4 29 2-0 4 1.6 22 0.5 7 1.9 N/A 1,521	Vital Health PT 260 -58.3 +0.0 98 0-2 4 1.5 9 0.3 16 3.4 N/A 1,498
AWF Madison Grp 198 +3.7 +1.4 38 2-0 - 1.9 6 0.5 33 11.4 0.25 66	Sol. Dynamics 158 -3.2 -1.0 66 1-2 - 7.5 34 0.4 22 4.6 1.37 22
Cannasouth Ltd 68 +38.4 +15.1 0 1-0 1.0 NE Nil N/A N/A	

# Computer Selections of Australian Shares based upon our Comprehensive Share Selection Criteria

For an explanation of this table see the *Share Selection Methods* report available from our website. These shares are not formal "buy" and "sell" recommendations, but the "Under-Valued", "Best Performing" and "Income" shares should be considered for purchase, while the "Over-Valued" and "Worst Performing" shares can generally be sold to release money for re-investment in more attractive shares.

Company	Share Price	STREM Cur- rent	4-Wk Chg.	ATING Rank 0-99	Insider Buy-Sell	Brokers Following	Short	Price to NTA	ROE	Volatility	P/E Ratio	Div Yield	P/S Ratio	Market Cap'n	Company	Share Price	STREM Cur- rent	4-Wk Chg.	ATING Rank 0-99		Brokers Following	Short	Price to NTA	ROE	Volatility	P/E Ratio	Div Yield	P/S Ratio	Market Cap'n
UNDER-VALUED	SHARE	S: Lov	west P	rice/S	ales,	Yld :	> 0, F	Rel Str	eng	th >	0				Michael Hill	69	+1.5	+8.6	37	2-0	3	0.2	-	-	1.3	16	5.8	0.47	268
Azure Minerals	14	+22.0	+6.5	10	3-0	-	-	-	-	2.3	19	6170	.00.10	279	Mastermyne Grp	105	+7.5	-2.6	22	1-0	1	-	2.7	26	1.0	10	1.9	0.47	107
Ashley Services	33	+14.8	-3.6	14	0-0	-	-	2.8	31	1.7	9	8.2	0.17	48	Bisalloy Steel	112	+3.7	+2.4	30	0-0	-	-	2.3	17	8.0	14	3.6	0.51	50
Sigma Health.	68	+4.8	-1.8	27	1-1	6	0.4	1.7	9	1.1	19	6.6	0.18	720	Aust Vintage	51	+2.0	+2.0	36	2-0	2	-	0.7	4	1.2	18	3.9	0.53	143
ERM Power Ltd		+19.1	+4.2	11	2-2	4	0.1	1.2		0.7	5	0.,	0.18	603	Coles Group	1525	+8.1	+0.1	21	9-0	-	0.9	-			19			20,342
Autosports Grp		+18.8		11	1-0	-	0.0	-		0.8			0.21	361	RXP Services	51	+7.3		22	0-0	1	-						0.56	81
Metcash Ltd	297	+2.1	-0.3	35		10	8.7	5.9		0.5			0.21	2,700	TransMetro Corp	121	+1.9	-0.5	36	0-0	-	-	1.4		8.0			0.57	16
K&S Corporation	160	+2.1	-2.5	35	1-0	-	-	1.0	1	0.7	88	1.3	0.22	204	A.P. Eagers		+24.3	-2.3	8	9-0	7	0.3	5.4		0.4	24	2.9	0.58	3,194
CPT Global Ltd	19	+8.7	-0.5	20	0-0	-	-	18.5	-	2.1	7	4.1	0.25	7	Qantas Airways	671	+6.7	+2.0	23	3-0	9	0.9	4.2	36	0.4	12	3.7	0.59	10,538
Lindsay Aust	36	+0.3	+1.9	41	0-0	1	-	1.4	12	1.5	12	5.8	0.28	107	JB Hi-Fi Ltd	3659	+18.6	+1.8	11	2-2	14	11.7	-	-	0.2	18	3.6	0.61	4,204
Pental Limited	32	+1.0	-0.1	39	4-0	-	-	1.0	4	1.5	23	6.3	0.28	44	Korvest Ltd	340	+10.2	-3.3	18	0-0	1	-	1.3	10	0.5	13	4.7	0.63	38
Swick Min Serv	19	+2.0	-5.4	36	2-0	-	-	0.5	1	2.0	41	3.2	0.30	51	Nufarm Limited	639	+7.9	+6.4	21	2-0	12	7.8	2.6	-	0.4	NE	1.7	0.64	2,426
Decmil Group	91	+1.3	-0.5	38	0-1	2	0.0	1.0	7	1.0	15	1.1	0.33	218	LendLease Group	1927	+15.1	+4.0	14	1-0	8	3.1	2.4	10	0.3	23	2.2	0.66	10,877
Data 3 Ltd	312	+29.6	+2.5	6	4-1	2	0.1	18.4	69	0.5	27	3.4	0.34	480	Shaver Shop Grp	66	+22.7	+6.1	9	1-0	2	-	-	-	1.1	12	6.9	0.70	82
Sth Cross Elect	56	+0.7	+1.1	40	0-0	1	-	4.0	39	1.3	10	5.4	0.34	131	Super Retail Gr	971	+7.7	-0.8	22	1-0	11	8.0	28.6	-	0.5	14	5.1	0.71	1,918
Milton Corp.	480	+1.8	-0.3	36	5-0	-	0.0	1.1	5	0.4	23	2.8	0.34	3,217	Dicker Data Ltd	677	+27.2	-9.4	7	10-0	-	0.3	-	-	0.4	34	2.7	0.73	1,094
BSA Ltd	39	+23.8	+0.8	9	0-0	-	-	7.8	50	1.5	16	1.3	0.36	167	Eclipx Group	174	+4.6	+3.0	27	0-0	5	2.7	4.4	49	0.9	9	9.2	0.73	556
Downer EDI Ltd	799	+4.9	+1.8	26	3-0	6	1.6	6.7	37	0.4	18	3.5	0.37	4,752	Prime Financial	8	+0.7	+4.7	40	0-0	-	-	4.0	34	3.2	12	5.0	0.75	15
Shriro Holdings	71	+4.6	+3.3	27	1-0	1	-	1.5	17	1.1	9	4.2	0.37	68	Enero Group Ltd	213	+27.6	+1.4	7	2-0	1	0.0	8.9	28	0.7	32	2.6	0.79	183
Joyce Corp.	151	+2.3	+0.8	34	0-0	-	-	4.3	69	0.7	6	7.7	0.42	42	AV Jennings	60	+1.0	-0.3	39	0-0	1	-	0.6	4	1.1	15	6.7	0.82	244

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Company	Share Cur. 4-Mk Rank Pickers No. 10 Pickers Research Pickers Pickers Research Pickers Research Pickers Research Pickers Research Pickers Research Pickers Research Pickers Pickers Research Pickers Research Pickers Research Pickers Research Pickers Research Pickers Pick	STRENGTH RATING Lines Specific Lines
	Price rent Chg. 0-99	Price rent Chg. 0-99 = A A C Cap'n
Austal Limited	445 +24.2 -8.6 9 1-1 4 0.2 0.5 26 1.3 0.85 1,5	87 Bank of Q'land 875 -0.9 -0.3 49 2-0 15 12.9 1.2 12 0.3 10 8.7 1.68 3,551
Adairs Limited		94 Sth Cross Media 90 -7.7 -8.2 68 1-0 4 0.5 0.5 10 8.6 1.05 692
Perenti Global Shine Corporate	205 +15.4 -1.6 13 0-0 5 0.2 1.0 13 0.8 8 3.4 0.86 1,4 88 +9.3 +1.1 19 0-0 2 - 1.0 9 1.1 11 4.3 0.86 1	07 Adairs Limited 177 +2.7 +5.0 33 6-0 6 4.0 0.5 10 8.2 0.85 294 52 Redcope Hotel 107 -0.4 -0.7 47 0-0 - 0.3 0.7 NE 8.2 2.07 590
Schaffer Corp		97 Zimplats Hold. 1080 +17.2 +4.6 12 0-0 0.9 16 0.4 6 8.1 1.29 1,162
Woolworths Grp	3768 +8.7 -0.6 20 0-0 10 0.9 16.3 53 0.3 31 2.5 0.87 47,5	·
Q.B.E. Insur.	1291 +2.9 +0.7 32 0-0 11 0.5 2.0 6 0.4 31 3.9 0.8816,5	
Waterco Ltd Asaleo Care Ltd	217 +6.6 +4.3 23 0-1 1.3 4 0.6 35 2.3 0.89 98 +2.2 -1.2 35 0-0 5 0.5 5.2 55 1.1 9 10.2 0.91 5	80   Ive Group   201 -2.5 -1.4 54 0-0 3 0.1 0.4 12 7.7 0.43 298 32   AMCIL Limited   93 +1.2 +0.3 38 1-0 1.0 4 0.6 22 7.5 N/A 255
Aust Finance Gr		86 Elanor Investor 218 +10.5 +1.2 18 1-0 2 0.6 18 7.4 2.54 297
Generation Dev.		89
Mortgage Choice C.S.R. Ltd	135 +9.7 +6.1 19 1-0 - 0.7 1.7 14 0.9 12 4.5 0.94 1 464 +5.7 -0.5 25 4-0 11 5.1 2.3 18 0.4 13 5.6 0.95 2.2	68 INSIDER BUYING: Most Insider Buying, Relative Strength > 0 80 L1 Long Short 166 +2.9 +2.7 32 46-0 0.6 NE Nil N/A 1.104
People Infra.	•	80 L1 Long Short 166 +2.9 +2.7 32 46-0 0.6 NE NII N/A 1,104 36 Thomey Tech. 27 +6.2 +1.2 24 20-0 1.2 38 1.1 3 NII N/A 69
Engenco Ltd		69 Academies Aust. 65 +27.7 +7.8 7 16-0 64.5 - 0.5 17 5.7 1.25 82
DECT DEDECOM	INO CHARTO Other work Observe D/F 000 D/O 440	WAM Global 214 +2.5 +0.1 33 10-0 0.6 26 0.9 N/A 453
Aust Finance Gr	ING SHARES: Strongest Shares, P/E < 20, P/S < 1.0 273 +32.5 +0.0 6 1-0 3 - 5.5 31 0.5 18 3.9 0.91 5	Dicker Data Ltd 677 +27.2 -9.4 7 10-0 - 0.3 0.3 34 2.7 0.73 1,094  86 Advance NanoTek 598 +12.7 +1.2 16 13-3 - 0.1 0.3 37 Nil N/A 352
Medusa Mining		48 Devex Resources 12 +36.8 +12.1 5 9-0 1.2 NE Nil N/A 13
Motorcycle Hold		47 Coles Group 1525 +8.1 +0.1 21 9-0 - 0.9 0.4 19 1.6 0.5320,342
BSA Ltd		67 Myer Holdings 56 +2.2 +1.1 35 9-0 9 7.0 2.0 11 0.7 19 Nil 0.15 456
Shaver Shop Grp Azure Minerals		82 Family Insights 7 +11.4 +7.8 17 9-0 7.2 - 2.5 NE Nil N/A 180 79 Senex Energy 34 +3.8 +0.7 30 9-0 9 4.5 1.1 2 0.9 69 Nil 5.25 495
ERM Power Ltd		03 A.P. Eagers 1243 +24.3 -2.3 8 9-0 7 0.3 5.4 23 0.3 24 2.9 0.58 3,194
JB Hi-Fi Ltd	3659 +18.6 +1.8 11 2-2 14 11.7 0.1 18 3.6 0.61 4,2	
Perenti Global Ashley Services	205 +15.4 -1.6 13 0-0 5 0.2 1.0 13 0.6 8 3.4 0.86 1,4 33 +14.8 -3.6 14 0-0 2.8 31 1.3 9 8.2 0.17	07 Ausgold Ltd 1 +1.8 -0.5 36 8-0 3.9 NE Nil N/A 9 48 MFF Capital Inv 341 +6.4 +0.9 24 8-0 1.8 21 0.3 8 1.0 N/A 1,849
Tap Oil	13 +12.4 +1.8 16 0-0 - 0.9 29 1.9 3 Nil 0.88	55 Blackstone Min. 11 +21.5 -3.6 10 8-0 1.7 NE Nil N/A 13
TPC Cons.	90 +12.2 -1.1 16 0-0 45.0 - 0.7 5 Nil 0.12	10 Aust Leaders Fd 98 +1.6 +0.5 37 8-0 0.8 - 0.4 NE 4.1 N/A 235
Valmec Limited	27 +11.5 -4.7 17 5-3 1.4 15 1.5 9 Nil 0.30	33 APN Property 53 +7.7 -1.3 22 8-0 1.5 13 0.6 11 5.2 6.22 166
Korvest Ltd Mortgage Choice	340 +10.2 -3.3 18 0-0 1 - 1.3 10 0.4 13 4.7 0.63 135 +9.7 +6.1 19 1-0 - 0.7 1.7 14 0.7 12 4.5 0.94 1	38 FYI Resources 6 +1.1 +7.5 38 9-1 1.8 NE NII N/A 13 68 Fat Prophets GI 99 +4.7 +0.9 27 7-0 0.6 NE NII N/A 43
Shine Corporate		52 Countplus Ltd 101 +25.3 -3.2 8 7-0 0.5 70 2.0 1.67 115
CPT Global Ltd	19 +8.7 -0.5 20 0-0 - 18.5 - 1.5 7 4.1 0.25	7 Atlas Arteria 775 +4.8 -2.0 27 7-0 - 3.1 2.7 3 0.2 88 3.1 N/A 5,296
Coles Group Super Retail Gr	1525 +8.1 +0.1 21 9-0 - 0.9 0.5 19 1.6 0.5320,3 971 +7.7 -0.8 22 1-0 11 8.0 28.6 - 0.4 14 5.1 0.71 1,9	
Engenco Ltd		69 Int Research 291 +3.9 +0.2 29 7-0 2 1.1 17.1 75 0.3 23 2.6 4.96 500
Mastermyne Grp		07 Suncorp Group 1334 +0.1 -0.2 42 7-0 11 0.4 0.2 20 1.9 1.1916,822
RXP Services Weststar Indust	51 +7.3 +0.6 22 0-0 1 - 5.1 49 0.9 10 6.9 0.56 3 +6.9 -11.5 23 0-0 4.4 16 Nil 0.54	81 Adcorp Aust. 1 +2.9 +3.3 32 7-0 4.5 NE Nil 0.47 5 15 Praemium Ltd 60 +1.9 +5.4 36 7-0 7 0.7 20.0 21 0.9 95 Nil 5.50 245
MCS Services	2 +6.9 -9.3 23 0-0 1.6 14 5.4 12 Nil 0.13	3 SDI Limited 88 +0.9 +1.8 39 6-0 2.4 17 0.4 14 3.1 1.31 105
Qantas Airways	671 +6.7 +2.0 23 3-0 9 0.9 4.2 36 0.3 12 3.7 0.59 10,5	•
C.S.R. Ltd Downer EDI Ltd	464 +5.7 -0.5 25 4-0 11 5.1 2.3 18 0.3 13 5.6 0.95 2,2 799 +4.9 +1.8 26 3-0 6 1.6 6.7 37 0.3 18 3.5 0.37 4,7	0,
Sigma Health.	•	20 Adairs Limited 177 +2.7 +5.0 33 6-0 6 4.0 0.5 10 8.2 0.85 294
Shriro Holdings	71 +4.6 +3.3 27 1-0 1 - 1.5 17 0.8 9 4.2 0.37	68 Bingo Indust. 249 +4.2 -3.4 28 6-0 6 10.2 0.5 74 1.5 4.10 1,628
Eclipx Group Generation Dev.	174 +4.6 +3.0 27 0-0 5 2.7 4.4 49 0.7 9 9.2 0.73 5 71 +4.1 +8.3 28 3-0 7.1 42 0.9 17 2.8 0.94	56 Aurora Prop B-W 266 +14.5 +8.5 15 6-0 0.6 - 0.3 NE 5.3 N/A 5 89 Azure Health. 8 +1.8 +0.2 37 6-0 1.5 5 1.6 28 Nil 0.57 18
Fleetwood Corp		13 Empire Energy 47 +22.1+15.7 10 6-0 1.1 NE Nil 5.37 109
Bisalloy Steel	112 +3.7 +2.4 30 0-0 2.3 17 0.6 14 3.6 0.51	50 Flagship Invest 186 +3.3 +0.3 31 6-0 1.0 4 0.3 28 2.3 N/A 47
Simonds Group Adairs Limited		61 Thomey Opp. 67 +1.4 -2.1 38 7-1 0.9 8 0.5 11 2.7 6.41 135 94 Pacific Smiles 177 +15.3 +7.0 14 9-3 3 - 8.0 26 0.4 31 3.3 2.20 269
Joyce Corp.		42 Netlinkz Ltd 16 +18.5 -34.5 11 5-0 15.5 - 1.4 NE Nil N/A 265
Myer Holdings		56 Servcorp Ltd 435 +16.0 -1.1 13 5-0 2 0.1 1.7 2 0.3 78 5.3 1.26 421
Asaleo Care Ltd Metcash Ltd	98 +2.2 -1.2 35 0-0 5 0.5 5.2 55 0.9 9 10.2 0.91 5 297 +2.1 -0.3 35 1-0 10 8.7 5.9 42 0.4 14 4.5 0.21 2,7	32 Cazaly Res Ltd 5 +48.0+15.8 3 5-0 2.0 NE Nil N/A 13 00 PPK Group Ltd 652 +83.8+25.8 1 5-0 36.2 - 0.2 NE Nil N/A 538
Aust Vintage		43 Kina Securities 140 +7.5 -2.6 22 5-0 1 0.2 3.9 36 0.5 11 6.4 5.29 230
TransMetro Corp		16 LawFinance Ltd 8 +3.4 +4.6 31 5-0 1.4 NE Nil N/A 39
Michael Hill		68 Milton Corp. 480 +1.8 -0.3 36 5-0 - 0.0 1.1 5 0.3 23 2.8 0.34 3,217
Decmil Group AV Jennings		18 Santos Ltd 811 +7.1 +2.9 22 5-0 14 0.7 0.4 19 1.7 3.2516,894 44 Lion Selection 44 +9.1 -2.6 20 5-0 1.2 41 0.8 3 Nil N/A 66
Schaffer Corp		97 Zinc of Ireland 8 +0.3 -3.1 41 5-0 1.5 NE Nil N/A 7
Sth Cross Elect		31 Telstra 351 +0.3 -3.4 41 6-1 12 0.2 8.4 43 0.2 19 2.8 1.6541,745
Prime Financial Lindsay Aust		15 Viva Leisure 260 +57.6+23.3 2 4-0 - 0.0 0.7 48 Nil 4.40 137 07 Kazia Thera. 40 +3.3 +2.6 31 4-0 20.0 - 0.7 NE Nil N/A 25
zaroday zidot		Equity Trustees 3125 +6.9 -1.5 23 4-0 2 - 18.1 63 0.3 29 2.9 6.93 641
	S: Highest Yields, Capitalisation > A\$250 million 14 +22.0 +6.5 10 3-0 1.3 1%170.00.10 2	Global Value Fd 107 +1.6 +0.6 37 4-0 1.0 6 0.5 18 5.9 N/A 157
Azure Minerals HT&E Limited		79 Flexicorp Ltd 216 +14.2 +1.1 15 4-0 5 1.6 3.4 25 0.4 14 3.6 1.80 852 73 Estia Health 282 +0.7 +1.4 39 4-0 5 3.4 0.4 18 5.6 1.25 736
Jupiter Mines		90 Bardoc Gold 10 +34.4 -8.2 5 4-0 1.5 NE Nil N/A 121
US Masters Res.		76 Bendigo Bank 1079 +0.9 -1.4 39 4-0 8 3.7 1.4 10 0.2 14 6.5 1.82 5,317
Alumina Ltd Yancoal Aust.	242 -1.8 +1.1 52 1-0 10 3.8 2.8 36 0.5 8 13.3 N/A 6,5 303 -7.2 -1.4 67 0-0 4.2 90 0.3 5 12.8 0.82 4,0	
WPP AUNZ Ltd		30 C.S.R. Ltd 464 +5.7 -0.5 25 4-0 11 5.1 2.3 18 0.3 13 5.6 0.95 2,280
Asaleo Care Ltd		32 Redflex Holding 52 +1.3 +6.2 38 4-0 1 0.2 1.2 - 0.6 NE Nil 0.67 79
Centuria Cap'l OM Holdings		21 Smart Parking 21 +34.4+12.1 5 4-0 2 - 3.5 - 1.0 NE Nil 2.77 75 69 Hills Limited 21 +13.7 -0.2 15 4-0 1.1 - 1.1 NE Nil 0.18 49
Stanmore Coal		84 WAM Leaders 118 +2.3 -0.2 34 4-0 1.0 7 0.5 14 4.8 N/A 925
Antipodes Gbl	98 -3.4 -0.3 58 1-0 0.8 1 0.7 70 9.7 N/A 5	41 Cirrus Networks 4 +1.3 -2.9 38 4-0 - 0.1 1.4 3 2.2 48 Nil 0.42 37
Pact Group Hold Eclipx Group		60 Minotaur Exp. 5 +16.2 +0.6 13 4-0 2.0 NE Nil N/A 17 56 Tabcorp Holding 479 +2.5 +1.5 33 4-0 11 1.9 0.2336 4.4 2.52 9,701
Navigator GI In		31 Pyrolyx AG 85 +7.2 -8.1 22 4-0 1.0 NE NII N/A 23

# Australian Warrant / Option Analysis

1 1000	Yr/Mtl	n Black- Option Share Option	Options Break-	Yr/Mith Black- Option Share Option Options Break-
Company	Share Exercise to	Option Scholes Over/ Vola- Lever-	to Buy Even	Company Share Exercise to Option Scholes Over/ Vola- Lever- to Buy Even
	Price Price Expiry	Price Valuation Under- tility age Valued	1 Share Rate	Price Price Expiry Price Valuation Under-tility age 1 Share Rate Valued
4.44.4 D	00 05 00		10 151	
1414 Degrees 3D Resources	20 35 0-9 0.1 0.7 0-1	3.2 0.3 +999 0.44 6.69 0.1 0.0 +999 2.08 9.99	1.0 +154 1.0 +999	Havilah Resources 10 40 0-0 0.1 3.1 -97 0.44 2.62 1.0 +999 Helios Energy 22 2.0 2-1 19.0 19.5 -3 0.44 1.10 1.0 -1
8Common Ltd	9.0 3.5 0-2		1.0 +34	Hipo Resources 1.7 2.0 0-7 0.2 0.4 -44 0.89 2.58 1.0 +56
AVZ Minerals	4.3 3.0 0-6		1.0 +42	lcandy Interactive 3.1 21 0-2 0.3 0.0 +999 0.75 9.99 1.0 +999
Adalta Ltd	12 25 1-7	4.5 2.0 +126 0.76 2.35	1.0 +76	Immuron Ltd 14 55 0-0 0.1 0.0 +999 0.69 9.99 1.0 +999
Admedus Ltd	6.5 8.0 2-1	2.5 3.6 -31 1.17 1.37	1.0 +26	Impact Minerals 1.0 4.0 0-7 0.1 0.0 +999 0.68 7.22 1.0 +999
Adveritas Ltd	18 10 1-11	8.7 11.0 -21 0.86 1.42	1.0 +2	Impression Healthcare 6.3 4.0 0-10 2.3 2.9 -21 0.80 1.83 1.0 +0
Algae.Tec Ltd	0.9 5.0 0-8 0.3 2.1 0-1	0.2 0.0 +999 0.41 3.22 0.1 0.0 +999 1.58 7.97	1.0 +999 1.0 +999	Imugene Ltd 2.6 2.6 1-0 1.3 0.6 +118 0.57 2.70 1.0 +50 Imugene Ltd 2.6 4.0 2-0 1.2 0.5 +147 0.57 2.46 1.0 +41
Alligator Energy Altura Mining	6.6 20 2-3		1.0 +69	Inca Minerals 0.2 1.2 0-8 0.1 0.0 +971 1.29 2.77 1.0 +999
Andromeda Metals	3.6 1.2 1-0		1.0 +6	Investigator Res. 1.8 3.5 1-1 0.4 0.4 +13 0.95 2.21 1.0 +104
Animoca Brands	18 7.0 0-9		1.0 -7	Jacka Resources 0.3 0.6 1-7 0.2 0.0 +999 0.00 9.99 1.0 +86
Anteo Diagnostics	1.3 2.0 1-0		1.0 +90	K-Tig Ltd 27 23 1-5 15.0 16.2 -7 1.35 1.34 1.0 +29
Antisense Thera.	11 8.0 0-1	2.7 2.6 +5 0.81 3.80	1.0 +38	K2Fly Ltd 17 20 0-7 3.5 2.4 +46 0.68 3.37 1.0 +80
Argent Minerals	1.8 5.0 1-11 1.8 2.5 0-11	0.4 0.7 -39 1.16 1.58 0.4 0.6 -33 1.16 1.83	1.0 +77 1.0 +68	Kazia Therapeutics 40 400 0-6 4.8 0.0 +999 0.54 9.99 1.0 +999 King Island Scheelite 6.5 10 1-8 1.1 1.3 -14 0.65 2.39 1.0 +38
Argent Minerals Argosy Minerals	8.4 20 2-4		1.0 +53	King River Resources 3.3 12 0-8 0.3 0.0 +999 0.71 5.47 1.0 +619
Arrow Minerals	0.8 10 0-1	0.1 0.0 +999 0.75 9.99	1.0 +999	Kogi Iron 4.8 10 2-1 1.4 0.6 +143 0.57 2.71 1.0 +51
Aspire Mining	1.2 1.8 0-0	0.1 0.0 +999 0.67 9.99	1.0 +999	Koppar Resources 13 29 1-2 2.6 0.6 +320 0.59 3.80 1.0 +115
Atrum Coal	33 20 1-4		1.0 -6	Krakatoa Resources 4.1 5.0 1-8 1.4 1.5 -9 0.87 1.75 1.0 +31
Auris Minerals	1.3 8.0 1-0		1.0 +531	Lake Resources 3.7 10 1-7 1.4 0.7 +110 0.91 2.13 1.0 +107
Aurora Labs Aust Potash	29 100 0-5 8.8 12 1-8		1.0 +999 1.0 +34	Latam Autos 4.3 10 1-9 0.5 0.6 -16 0.72 2.46 1.0 +69 Lepidico Ltd 1.7 5.0 2-6 0.9 0.3 +182 0.75 2.06 1.0 +64
Aust Rural Capital	32 50 0-9		1.0 +34	Lepidico Ltd 1.7 3.0 2-6 0.9 0.3 +162 0.73 2.00 1.0 +64 Lepidico Ltd 1.7 4.5 0-10 0.3 0.1 +358 0.75 3.73 1.0 +247
Austar Gold	0.3 1.0 0-10		1.0 +375	Lion Selection 44 50 0-4 2.0 1.7 +19 0.35 8.20 1.0 +58
Auth Inv Fund	2.6 5.0 1-7	0.6 1.4 -56 1.47 1.38	1.0 +64	Lionhub Group 0.3 22 1-0 1.2 0.0 +999 1.20 3.97 1.0 +999
BMG Resources	0.3 2.0 0-1	0.1 0.0 +999 1.34 9.99	1.0 +999	Lithium Australia 3.7 12 1-7 0.6 0.0 +999 0.37 7.09 1.0 +116
Bass Metals	0.8 5.0 1-1	0.1 0.0 +999 0.78 4.06	1.0 +453	MRG Metals 0.7 15 0-9 0.1 0.0 +999 1.17 4.09 1.0 +999
Bass Oil Ltd Battery Minerals	0.2 0.4 1-8 0.8 10 3-8		1.0 +73 1.0 +101	MRG Metals 0.7 1.0 1-1 0.4 0.3 +60 1.17 1.74 1.0 +93 MSM Corporation 1.3 10 -1-11 0.3 0.3 +20 0.59 1.74 1.0 -100
Beacon Minerals	3.7 2.5 2-9		1.0 +101	Magmatic Resources 14 10 1-9 4.4 9.5 -54 1.32 1.26 1.0 +2
Benjamin Hornigold	71 100 0-5		1.0 +153	Magmatic Resources 14 30 0-6 0.4 1.9 -79 1.32 2.54 1.0 +443
Big River Gold	1.5 2.0 2-7	0.9 0.8 +13 1.02 1.40	1.0 +29	Magnetite Mines 0.4 5.0 1-6 0.1 0.0 +104 1.34 1.94 1.0 +446
Biotron Ltd	7.0 5.0 0-0		1.0 +208	Magnum Mining 5.0 5.0 2-10 1.5 2.3 -36 0.72 1.58 1.0 +10
Blackham Resources			1.0 +210	Mako Gold 8.4 30 1-5 1.3 0.1 +999 0.51 5.21 1.0 +160
Blaze Int'l Boart Longyear	2.2 5.0 2-4 165 2.1 4-10		1.0 +49 1.0 -59	Mali Lithiun 71 15 1-11 0.3 56.4 -99 0.52 1.25 1.0 -56 Marquee Resources 8.3 20 0-10 1.8 2.3 -21 1.44 1.81 1.0 +219
Broken Hill Prospecting		0.3 163.6 -100 0.86 1.01	1.0 -100	Matador Mining 23 20 0-9 5.0 7.0 -29 0.78 2.25 1.0 +15
Brookside Energy	0.9 3.0 1-1	0.2 0.0 +999 0.63 4.38	1.0 +222	Medibio Ltd 1.0 3.0 2-0 0.3 0.6 -46 1.54 1.30 1.0 +82
Bryah Resources	5.4 25 0-4		1.0 +999	Merlin Diamonds 0.6 1.3 1-4 0.3 0.0 +999 0.00 9.99 1.0 +111
Caeneus Minerals	0.1 0.3 1-1	0.1 0.1 +94 1.98 1.34	1.0 +260	Metals Australia 0.1 1.0 0-6 0.1 0.0 +306 2.69 1.62 1.0 +999
Candy Club CardieX	6.5 10 3-6 2.9 5.0 2-0		1.0 +23 1.0 +46	Metals Australia 0.1 0.3 0-0 0.1 0.0 +306 2.69 1.62 1.0 +999 Metminco Ltd 9.5 1.1 0-6 0.6 8.7 -93 2.74 1.07 1.0 -97
Carnavale Resources			1.0 +508	Moho Resources 6.3 25 3-7 0.9 1.7 -48 0.82 1.70 1.0 +48
Catalyst Metals	245 245 2-6		1.0 +12	Monash Abs Inv Coy 99 105 0-6 1.0 3.6 -72 0.22 9.99 1.0 +16
Celamin Holdings	7.9 5.0 0-6		1.0 -10	Myanmar Metals 4.9 3.0 0-1 1.7 1.9 -11 0.43 2.58 1.0 -39
Centaurus Metals	1.6 1.2 1-6		1.0 +4	Nanollose Ltd 7.2 30 1-1 0.5 0.4 +15 0.94 2.81 1.0 +279
Cobalt Blue Holdings Cohiba Minerals	15 25 0-5 1.2 1.8 0-5		1.0 +325 1.0 +330	New Energy Minerals 1.6 35 0-2 0.1 0.0 +999 0.82 9.99 1.0 +999
Conico Ltd	0.8 4.8 1-7			New Energy Minerals 1.6 20 0-12 0.1 0.0 +999 0.82 5.03 1.0 +999
Constellation Res	20 20 1-8			New Talisman Gold 0.6 5.5 2-10 0.5 0.0 +999 0.68 2.83 1.0 +125
Corazon Mining	0.2 0.7 2-7	0.1 0.1 -16 1.46 1.25	1.0 +70	Noas Em. Opps. 106 102 1-7 8.6 16.5 -48 0.26 4.04 1.0 +3
Covata Ltd	1.5 5.5 2-6		1.0 +72	Norwood Systems 0.3 0.8 0-11 0.1 0.0 +129 1.08 2.32 1.0 +231
Creso Pharma DXN Ltd	21 80 0-9 5.7 10 0-6		1.0 +646 1.0 +336	Nova Minerals 3.9 3.3 0-9 1.4 1.3 +7 0.77 2.19 1.0 +26 Nthn Cobalt 6.5 10 2-7 1.3 3.8 -66 1.17 1.32 1.0 +24
Davenport Resources			1.0 +530	Nthn Cobalt 6.5 10 2-7 1.3 3.8 -66 1.17 1.32 1.0 +24 Nusantara Res. 31 30 0-8 5.6 6.7 -16 0.62 2.93 1.0 +23
Deep Yellow Ltd	30 50 2-6		1.0 +28	Oakdale Resources 1.1 4.0 2-1 0.3 0.2 +45 0.90 1.98 1.0 +92
Diatreme Resources	1.1 3.0 0-1	0.1 0.0 +999 0.61 9.99	1.0 +999	Okajee Corporation 5.2 8.0 2-7 1.2 1.1 +13 0.53 2.35 1.0 +25
Eden Innovations	4.7 8.0 1-3		1.0 +79	Opendna Ltd 3.4 5.0 1-11 1.6 0.9 +72 0.72 2.02 1.0 +41
Elixir Petroleum	4.7 6.8 1-1	2.0 0.8 +164 0.68 2.73	1.0 +78	Orinoco Gold 0.3 11 0-2 0.2 0.0 +999 1.21 9.99 1.0 +999
Elsight Ltd Emerge Gaming	40 100 1-7 1.5 2.0 1-5		1.0 +89 1.0 +49	Pacifico Minerals 0.9 1.5 0-12 0.2 0.2 -6 1.01 2.10 1.0 +92 Parkd Ltd 6.0 30 0-1 0.2 0.0 +999 0.92 9.99 1.0 +999
Emperor Energy	4.5 0.5 0-4			Peak Resources 3.9 6.0 0-7 1.3 0.3 +298 0.75 3.69 1.0 +218
Engage:BDR	2.6 25 1-1	0.5 0.3 +64 1.49 2.02		Peako Ltd 1.5 2.5 0-5 0.5 0.1 +250 0.98 3.30 1.0 +428
Eon NRG	0.5 2.0 0-0	0.1 0.3 -67 1.01 2.02	1.0 +999	Pearl Global 11 30 1-2 1.8 0.0 +999 0.43 6.81 1.0 +162
Eon NRG Ltd	0.5 1.5 1-3		1.0 +155	Peninsula Mines 0.2 1.0 0-5 0.1 0.0 +968 1.55 2.88 1.0 +999
Estrella Resources Family Insights Group	1.1 5.0 1-7 7.2 1.0 1-7			Podium Minerals 4.2 20 0-9 0.2 0.1 +213 0.91 3.87 1.0 +712 Predictive Discovery 1.0 6.0 0-0 0.1 0.1 +56 1.19 3.87 1.0 +999
Family Insignts Group Fin Resources	o 7.2 1.0 1-7 1.3 2.5 2-1	0.1 6.3 -98 1.11 1.12 0.3 0.3 +14 0.69 2.19	1.0 -69 1.0 +45	Predictive Discovery 1.0 6.0 0-0 0.1 0.1 +56 1.19 3.87 1.0 +999 Prescient Therapeutics 4.6 6.3 3-4 2.5 1.2 +113 0.48 2.17 1.0 +21
First Au	1.3 6.0 1-1	0.2 0.1 +130 1.03 2.66	1.0 +348	Pure Alumina 2.0 7.5 0-8 0.3 0.1 +180 1.11 2.99 1.0 +670
First Graphene	16 15 1-8			Pure Minerals 1.9 3.0 0-1 0.1 0.0 +999 0.54 9.99 1.0 +999
Flexiroam	2.5 12 2-11			Pursuit Minerals 0.9 10 1-11 0.1 0.1 -7 1.14 1.98 1.0 +253
Fremont Petroleum	0.8 2.0 0-4			Quantify Technology 0.5 1.0 1-9 0.2 0.1 +75 0.83 2.05 1.0 +67
Great Western Expl. Gt Sthn Mining	0.4 1.0 1-7 6.4 5.0 2-9		1.0 +89 1.0 +6	RPM Automotive 15 25 1-9 3.5 14.3 -75 3.12 1.03 1.0 +44 Rafaella Resources 12 30 1-11 1.0 3.7 -73 1.02 1.71 1.0 +64
Hammer Metals	2.2 3.0 0-10			ReadCloud 35 30 1-0 9.0 8.8 +3 0.45 2.88 1.0 +11
Hardey Resources	0.3 2.0 0-5		1.0 +999	Real Energy Corp 3.3 14 0-10 0.3 0.1 +428 0.84 3.90 1.0 +481
Hastings Technology	18 25 2-4	4.4 3.1 +41 0.48 2.62	1.0 +25	(Continued on Page 18)

Performance Forecasts' are computer generated predictions of the relative future price performance of a company's shares over the next three to six months. Performance Forecasts are calculated for every listed NZ share (except Investment Trusts) on a rating scale using the letters "A" (Highest potential for capital appreciation over the next 3-6 months), "B" (Above Average), "C" (Average), "D" (Below Average) and "E" (Lowest). These predictions are NOT buy or sell recommendations, but can be useful to help time planned purchases or sales, or to identify shares worthy of further study and analysis.

Performance	Price	e/Sales P/E	Gross		Performano	e	Price/Sales	P/E	Gross	Perform	ance	Price/Sales		Gross
	239 N	atio Rati	Nil	Gentech Group	Forecast	530	5.00	Ratio 38	Yield 3.5	Promisia Integ. E	ost Price	2.62	Ratio NE	Yield Nil
	287 0. 210 0.	I/A NE .92 NE .94 NE	Nil 7.0	Geo Ltd Good Spirits Goodman Prop.	Сввс	11 13 210	1.79 0.22 N/A	NE 11 9	Nil Nil 3.2 8.7	Property F Ind. D Pushpay Hold. C QEX Logistics E Rakon Ltd E	234 355 71	N/A 6.76 0.63	11 35 19	3.2 Nil Nil
Abano Health. A Air New Zealand A	458 0. 286 0.	.25 33 .43 16 .56 12	7.3 2 10.7	Green Cross H. Hallenstein G. Heartland Group IkeGPS Limited	A C B	112 625 167	0.28 1.33 5.84	10 14 16	9.8 6.2	Restaurant Brds D Rubicon Limited E	26 1184 19	0.52 1.86 1.89	18 41 NE	Nil Nil Nil
Akd Int Airport A Allied Farmers E Aorere Res. N/R	74 6.	I/A 17 .22 NE .02 NE	0.4	IkeGPS Limited Infratil NZ Investore Prop.	B B B	81 492 187	9.16 N/A N/A	NE 15 11	Nil 4.9 4.0	Ryman Health. C Sanford Limited D Scales Corp Ltd D	1359 724 527	N/A 1.32 1.83	21 16 26	1.7 4.4 4.9
Argosy Property C Arvida Group B Asset Plus C	142 N 153 4	I/A 8 .15 11 .82 27	4.4 4.2	Just Life Group Kathmandu Ltd Kingfish Ltd	B A B	51 302 150	2.67 1.37 N/A	21 13 6	5.4 6.9 7.8	Scott Tech. Ltd D SeaDragon Ltd E Seeka Kiwifruit D	249 0.2 482	1.04 1.98 0.69	18 NE 19	5.6 Nil 3.5
Augusta Capital C Barramundi Ltd C	147 5. 66 N	.33 19 I/A 15	4.1 8.2	Kiwi Property Mainfreight Grp	C	157 4000	7.83 1.36	16 29	4.4 1.9	Serko Limited D Skellerup Hold. D	480 231	N/A 1.83	NE 15	Nil 7.8
Blis Technology C Briscoe Group B	4.3 8. 370 1.	.40 NE .42 NE .30 13	Nil	Marlborough WE Marlin Global Marsden Mar.	C	21 96 628	N/A N/A N/A	NE 17 28	Nil 8.2 3.5	Sky City Ltd D Sky Network TV D Smartpay NZ Ltd D	390 91 21	3.27 0.45 1.67	NE	7.1 11.4 Nil
Burger Fuel D CBL Corporation C CDL Investments C	317 1.	.36 23 .91 25 .68 7	Nil 5 2.2 7 5.9	Mercer Group Mercury NZ Meridian Energy	D B B B	23 492 465	0.50 3.82 3.41	NE 29 35	Nil 4.3 4.9	Smiths City E Snakk Media Ltd E Sol. Dynamics E South Port NZ Spark NZ Ltd C Steel & Tube E Sthin Charter F. Stride Property D	25 5.5 158	0.06 0.09 1.37	NE NE 22	Nil Nil 4.6
CSM Group Ltd C Cannasouth Ltd B Cavalier Corp C	68 N	I/A NE I/A NE .18 13	Nil	MetLifeCare Metro Per Glass Mid-Cap Index	B C B	500 35 584	8.58 0.24 N/A	27	2.2 15.1 2.3	South Port NZ C Spark NZ Ltd C Steel & Tube E	710 445 89	4.24 2.31 0.30	19 20 14	5.1 7.8 7.8
Chatham Rock C Chorus Ltd C	21 N 519 2	I/A NE .35 43 .31 13	Nil	Millennium & C. Moa Group Ltd NZ Exchange Ltd	СВССВ	251 30 129	1.81 1.27 5.19	6 NE 30	1.9 Nil 6.6	Sthn Charter F. E Stride Property D Summerset Group C	0.1 225 686	3.24 N/A N/A	NE 9 7	Nil 5.7 1.9
Contact Energy B	300 0. 725 2.	.90 NE	Nil 6.1	NZ King Salmon NZ Oil & Gas	C N/R	230 65	1.85 2.52	28 NE	3.0 Nil	Synlait Milk E T&G Global E	919 262	2.46 0.27	39 90	Nil 6.4
EROAD Ltd C	150 4. 315 3.	.69 NE .18 25 .51 NE	2.1 Nil	NZ Refining Co NZ Windfarms NZF Group	000	205 14 1.0	1.78 3.40 N/A	NE	5.1 20.8 Nil	Tilt Renewables D Tourism Hold. D	115 305 343	0.28 7.41 1.07		6.0 Nil 10.9
Enprise Group B Evolve Educat. C	92 1. 18 N	.58 29 .31 NE I/A NE	1.1 Nil	NZME Limited NZSX 50 Port. NZSX 10 Fund	D B C	42 302 186	0.21 N/A N/A	7 14 11	6.6 3.6 3.6	Tower Limited E Training Sol. E TruScreen Ltd E Trust Power Ltd C	70 0.2 11	0.73 N/A N/A	NE NE NE	Nil Nil Nil
F & P Health. A 2 Finzsoft Sol'ns C Fletcher Build. B	100 0.	I/A 61 .71 NE .52 18	Nil	NZX Aust MidCa New Talisman Oceania Health.	N/R C	740 0.8 105	N/A N/A 3.38	8 NE 14	2.7 Nil 4.5	Trust Power Ltd C Turners Auto. D Vector Ltd D	752 255 357	2.50 0.66 2.71	25 10 43	6.1 9.3 6.4
Foley Wines Ltd C Fonterra S/H Fd C Freightways Ltd B	177 2. 418 0.	.43 23 .33 NE .29 13	2.4 2.4	Ozzy (Tortis) PGG Wrightsons Pac Edge Bio.		407 247 19	N/A 0.23 N/A	15 47 NE	8.0 8.4 Nil	Vista Group Ltd E Vital Health PT D Vital Ltd D	383 260 85	4.85 N/A 1.01	52 16 9	1.2 3.4 4.9
Future Mobility C Geneva Finance C	2.7 0. 55 1.	.09 NE .80 10	Nil 8.8	PaySauce Ltd Plexure Group Port Tauranga	ם ם	48 84 650	1.74 N/A N/A	NE NE 44	Nil Nil 2.8	WN Drive Tech. E Warehouse Group C Z Energy Ltd D	16 288 528	0.74 0.33 0.39	NE 43	Nil 7.7 11.3
General Capital B	7.9 5.	.77 NE	Nil 2.9	Precinct Prop. Crown Resorts	D B	180 1248	N/A N/A 2.89	9	3.2 4.8	Ave of 134 Cos C OZ Minerals Ltd A	326 1085	0.67 3.14	22 16	3.6
AGL Energy Ltd B 1 ALS Limited A	992 1. 822 2.	.02 8 .39 22 .36 NE	5.9 2.7	Cybg plc Dexus Dicker Data Ltd	A B A	275 1149 677	1.34 N/A 0.73	5 10 34	2.0 4.4 2.7	Oil Search Ltd A Orica Ltd A Origin Energy A	738 2418 823	5.16 1.71 1.03	23 NE 12	2.0 2.1 2.9
ANZ Bank A 2 APA Group A 1	2625 2. 114 5.	.12 12 .41 46	6.1 6.5	Div. United Inv Domain Holdings Domino's Pizza	В	480 312 4890	N/A 5.45 5.26	12 42 34	3.2 1.9 2.2	Orora Limited A Pendal Group A Perenti Global A	317 784 205	0.80 4.34 0.86	24 13 8	4.1 6.6 3.4
ASX Limited A 8 AVEO Group A	3040 N 215 4.	I/A 35 .53 NE .21 9	2.7 2.1	Downer EDI Ltd Event Hospital.	B B B	799 1314	0.37 2.19	18 20 31	3.5 4.0 2.4	Perpetual Ltd A Platinum Asset A	3880 439	3.53 8.65	16 16	0.1 6.2 Nil
Adelaide Bright A Afterpay Touch B 2	337 1. 2697 N	.35 12 I/A NE	5.9 Nil	Evolution Min. Flight Centre Fortescue Metal	B B	393 3971 958	4.42 1.37 3.21	0 25	4.2 2.4	Premier Invest A Pro Medicus Ltd A	218 1952 2468	N/A 2.59 N/A	NE 37 NE	3.2 0.3
Altium Limited A 3 Alumina Ltd A	3253 N 242 N	I/A 37 I/A 57 I/A 8	' 0.9 3 13.3	Freedom Foods G8 Education GPT Group	A B B	530 258 588	3.04 1.37 N/A	NE 16 7	0.6 4.8 4.3	Q.B.E. Insur. B Qantas Airways B Qube Holdings B	1291 671 321	0.88 0.59 3.09	31 12 26	3.9 3.7 2.1
Aneka Tambang B	450 3. 100 9. 2805 1.	.00 66 .65 NE .75 19	Nil	Genworth Mort. Goodman Group Graincorp	A A B	416 1418 752	3.95 N/A 0.40	24 27 24	4.1 2.1 2.1	REA Group Ltd A Ramsay Health B Reece Limited B	10285 7165 1050	N/A 1.25 1.08	NE 27 29	1.1 2.1 1.9
Appen Limited A 2 Argo Investment A	2070 6. 850 N	.06 53 I/A 16 .69 37	3.9	Growthpoint Pro Harvey Norman Healius Ltd	A B B	424 419 313	N/A 2.27 1.08	8 13 35	5.4 7.9 2.3	Regis Resources B Reliance W/wide B Resolute Mining B	450 426 112	3.49 3.05 1.91	14 25 11	3.6 2.1 1.8
Atlas Arteria B	775 N 572 3.	I/A 88 .66 23 .67 27	3.1 3 4.7	Hutchison Tel. I-SignThis Ltd IDP Education	D C B	12 107 1790	N/A N/A 7.61	NE NE 68	Nil Nil 1.1	Rio Tinto Ltd A S/Tracks ASX200 B Sandfire Res. B	9523 6224 629	0.61 N/A 1.69	10 9	4.6 1.5 3.7
Aust Foundation B Austal Limited B	670 N 445 0.	J/A 20 .85 26	4.8 1.3	IOOF Holdings IPH LImited IRESS Limited	A B	795 800	2.62 7.11	97 39	4.7 2.8	Santos Ltd B Saracen Mineral C	811 341	3.25 5.04	19 30 9	1.7 Nil
Avita Medical B	277 N 69 N	I/A 12 I/A NE I/A NE	Nil Nil	Iluka Resources Incitec Pivot	B B	1296 907 363	4.77 2.83 1.53	35 13 28	3.5 3.2 2.9	Scentre Group B Seek Ltd A Service Stream B	387 2248 250	7.79 5.08 1.18	44 20	5.7 2.0 3.6
BWP Trust A	164 N 414 N	.99 16 I/A 16 I/A 16	4.5 4.4	Independ. Group Ingenia Com Grp Inghams Group	A B B	658 424 323	4.95 4.43 0.48	51 35 10	1.5 2.6 3.3	Seven Group B Shopping Centre B Sims Metal Mgmt B	1936 268 1010	1.61 9.19 0.31	30 23 13	2.2 5.5 4.2 3.7
Bapcor Limited A	728 1.	.68 10 .59 21 .63 9	2.3	Insurance Aust. Invocare Ltd JB Hi-Fi Ltd	B B A	787 1333 3659	1.15 3.02 0.61	16 35 18	4.1 2.8 3.6	Smartgroup Corp A Sonic Health B Soul Pattinson B	1115 2915 2309	5.91 2.25 3.42	24 25 22	3.7 2.9 2.5
Bellamy's Aust. B 1 Bendigo Bank A 1	079 1.	.51 68 .82 14 .10 74	6.5	James Hardie Janus Hendersor Jumbo Interact.	A B A	2766 3531 2005	3.42 0.94 N/A	38 4 47	1.9 5.8 1.8	South32 Limited B Spark Infrastru B St Barbara Ltd A	274 201 259	1.32 N/A 2.77	25 12 13	4.1 8.0 3.1
Blackmores Ltd B 8 Bluescope Steel A 1	359 2. 412 0.	.38 27 .58 7	2.6 1.0	L1 Long Short LendLease Group Link Admin.	С	166 1927 583	N/A 0.66 2.58	NE 23 22	Nil 2.2 3.5	Star Entertain. A Steadfast Group A Stockland B	479 357 487	2.04 4.89 4.26	22 23 12	4.3 2.4 5.4
Brambles Ltd B 1 Bravura Sol. B	203 2. 436 4.	.92 9 .22 35	2.4 2.1	Lovisa Holdings Lvnas Corp Ltd	A	1316 246	5.55 4.52	38 21	1.1 Nil	Suncorp Group B Super Retail Gr A	1334 971	1.19 0.71	20 14	1.9 5.1
Brickworks Ltd A 1 C.S.R. Ltd B	854 3. 464 0.	.75 31 .02 12 .95 13	5.6	MCP Master Inc. MFF Capital Inv Macquarie Group	B B A 1	204 341 3774	N/A N/A 3.68	29 8 16	6.1 1.0 4.2	Sydney Airport B TPG Telecom Ltd B Tabcorp Holding B	880 660 479	N/A 2.45 2.52	54 15 NE	4.3 0.6 4.4
CSL Limited A 26 Caltex Austrlia B 2	8134 9. 2796 N	.76 14 .74 43 I/A NE	1.0 4.2	Magellan Fin Gp Magellan Glb Tr Magellan Global	B B B	4933 183 382	N/A N/A N/A	41 7 6	4.2 2.7 3.3 2.9	Technology One B Telstra B Transurban Grp B	754 351 1472	8.00 1.65 N/A	47 19 69	1.2 2.8 3.8
Carsales.com A 1 Centuria Metro. B Centuria Indust A	308 N	.22 45 I/A 21 I/A 11	5.7	McMillan Shake. Medibank Priv. Megaport Ltd	A B C	1641 321 760	2.47 1.37 N/A	15 20 NE	4.5 4.1 Nil	Treasury Wine B Unibail-Rod. C United Overseas B	1777 1142 82	4.52 N/A 2.54	30 NE 7	2.1 Nil 3.0
Challenger Ltd B	807 2. 535 2.	.06 16 .02 2 .56 36	4.4 5.0	Metcash Ltd Milton Corp. Mineral Res.	B B B	297 480 1485	0.21 0.34 1.84	14 23 17	4.5 2.8 3.0	Vicinity Centre B Virgin Aust D Viva EnergyREIT B	261 16 273	7.65 0.22 N/A	28 NE 13	6.1 Nil 5.1
Charter Hall GR B 1 Charter Social B	064 N 356 N	J/A 20 J/A 16	3.0 4.5	Mirvac Group Monadelphous G	B r B	319 1586	5.73 1.01	12 30	3.6 3.0	Viva Energy Grp B Vocus Group Ltd A	210 336	0.25 1.10	7 61	2.3 Nil
Clinuvel Pharm. B 3 CocaCola Amatil B 1	3060 N 049 1.	.63 30 I/A 83 .60 18	0.1 4.5	Nanosonics Ltd Nat'l Aust Bank National Stor.	B A A	677 2847 189	N/A 4.26 8.00	NE 13 9	Nil 7.0 5.1	WAM Capital Ltd A Webjet NL A Wesfarmers Ltd A	223 1139 4081	N/A 4.22 1.66	NE 26 24	7.0 1.9 4.4
Codan Ltd A Coles Group B 1	632 4.	.65 45 .18 25 .53 19 .27 29	1.4 1.6	Nearmap Ltd Netwealth Group New Hope Corp.	C A B A	246 948 224	N/A N/A 1.73 4.32	NE 63 12	Nil 1.3 6.3	Westpac Banking A Whitehaven Coal B Wisetech Global A Woodside Petrol B	2742 342 2750	2.47 1.41 N/A	12 0 NE	6.9 3.8 0.1
Com'wealth Bank A 7 Computershare A 1	7917 5. 1664 2.	.75 16 .70 15	5.4 2.6	Newcrest Mining Nextdc Limited Nib Holdings	C A	2998 660 679	N/A 1.30	29 NE 21	1.0 Nil 3.4	Woolworths Grp A Worsley Ltd B	3363 3768 1430	4.23 0.87 1.07	16 31 45	6.1 2.5 1.9
Corp Travel M. B 1 Credit Corp A 3	3180 5.	.79 25 .39 25 I/A 21	2.3	Nine Entertain. Nthn Star Res. Nufarm Limited	B A B	184 900 639	1.59 4.11 0.64	13 37 NE	5.4 1.2 1.7	Yancoal Aust. C Zimplats Hold. A Zip Co Ltd C	303 1080 392	0.82 1.29 N/A	5 6 NE	12.8 8.1 Nil
				opyright © Seco						Ave of 1982 Cos C	232	0.29	5	1.3

			I I/IVIUI		DIGGIN	Option	Oriale	Option	Options	Dicar
Company	Share	Exercise	e to	Option	Scholes	Over/	Vola-	Lever-	to Buy	Even
	Price	Price	Expiry	Price	Valuation	Under-	tility	age	1 Share	Rate
						Valued				

#### Warrant/Option Analysis

				((	Continue	d fr	om I	Page	<i>16)</i>
Red Mountain Mining	0.6	1.5	-1-12	0.1	0.1 +76	0.82	3.90	1.0	-100
Red Mountain Mining	0.6	1.8	0-1	0.1	0.0 +999	0.82	9.99	1.0	+999
Redstone Resources	0.9	3.5	1-5	0.1	0.1 +45	0.85	2.66	1.0	+166
Reedy Lagoon Corp.	0.4	8.0	1-4	0.1	0.0 +999	1.09	2.90	1.0	+828
Reward Minerals	10	24	1-7	2.0	0.4 +408	0.51	3.89	1.0	+83
Rimfire Pacific	0.2	1.0	0-5	0.1	0.0 +999	1.38	3.36	1.0	+999
Rimfire Pacific Mining	0.2	2.2	0-5	0.1	0.0 +999	1.38	4.22	1.0	+999
Roots Sustainable	4.7	12	2-8	2.0	1.3 +53	0.83	1.79	1.0	+51
Ryder Capital	150	150	2-0	15.0	12.1 +24	0.12	7.20	1.0	+5
Sacgasco Ltd	3.7	4.0	2-1	1.2	1.6 -24	0.81	1.65	1.0	+18
Sayona Mining	1.0	7.8	0-5	0.2	0.0 +999	0.77	9.99	1.0	+999
Seafarms Group	8.2	10	1-8	3.0	1.0 +207		3.69	1.0	+33
Silver Mines	9.1	6.0	1-9	5.0	-	0.87	_	1.0	+11
Six Sigma Metals	0.4	1.5	1-7	0.1	0.1 +42	1.02	2.02	1.0	+140
Skin Elements	1.4	10	1-1	0.1	0.3 -64		1.79	1.0	+520
Spectur Ltd	10	20	1-1	2.2	1.2 +76		2.70	1.0	+109
St George Mining	15	20	0-10	7.0	1.9 +276		3.18	1.0	+111
Stellar Resources	1.2	5.0	0-6	0.1	0.0 +999		5.76	1.0	+999
Suda Pharma.	0.2	1.5	1-7	0.1	0.0 +170		1.82	1.0	+272
Suda Pharma.	0.2	1.5	0-8	0.1	0.0 +999		3.00	1.0	+999
Sun Resources	0.2	1.0	0-11	0.1		1.41		1.0	+583
Surefire Res.	0.7	1.8	0-0	0.1	0.0 +254		2.08	1.0	+999
Symbol Mining	0.7	4.5	0-7	0.3	0.0 +999		5.89	1.0	+999
Synertec Corp	5.1	5.3	0-8	0.2	1.1 -82		2.79	1.0	+12
TV2U Int'l	0.9	2.0	1-4	0.4	0.3 +32	1.23	-	1.0	+109
Tanga Resources	0.2	1.0	0-11	0.1	0.0 +184	1.50		1.0	+565
Tao Commodities	13	20	0-9	2.2	1.7 +32	0.77	2.98	1.0	+104

Company	Share Price	Exercis Price	e to Expiry		Scholes Valuation		Vola- tility	Lever- age	to Buy 1 Share	Even Rate
						Valued				
Tasman Resources	4.5	6.0	0-9	1.2	0.7	+62	0.76	_	1.0	+87
Technology Metals	14	40	0-6	1.7	0.0	+999		9.50	1.0	+856
The Hydroponics Co	37	40	0-1	1.0	1.0	+4		9.99	1.0	+303
Theta Gold Mines	16	30	0-11	1.2	0.9	+28	0.61	3.82	1.0	+107
Titomic Ltd	137	250	1-7	12.0	20.4	-41		2.58	1.0	+50
Todd River Res.	3.2	25	0-4	0.1		+999		9.99	1.0	+999
Trigg Mining	9.5	20	1-11	0.7	-	+382		5.67	1.0	+50
Triton Minerals	3.8	10	0-10	0.9		+999	0.55		1.0	+254
Tyranna Resources	0.5	4.0	1-10	0.1		+189		2.38	1.0	+212
Valor Resources	0.4	4.5	0-0	0.1		+999	1.31	9.99	1.0	+999
Valor Resources	0.4	1.5	2-1	0.2	0.2	+20	1.31	1.45	1.0	+100
Vanadium Resources		5.4	0-0	0.1		+999	0.61	9.99	1.0	+999
Vanadium Resources		12	1-6	0.6	-	+171	0.61	3.39	1.0	+102
Vango Mining	17	27	0-7	3.0		+741		6.44	1.0	+154
Variscan Mines	0.2	8.0	1-6	0.1	0.1	-33	2.41	1.14	1.0	+173
Velpic Ltd	0.4	2.0	0-0	0.1	0.1	-33		1.14	1.0	+999
Venture Minerals	1.9	3.5	0-7	0.4		+378			1.0	+263
Venus Metals Corp	17	20	0-0	0.2	-	+139	0.74		1.0	+999
Victory Mines	0.1	2.0	1-1	0.1		+497		1.72	1.0	+999
Vonex Ltd	13	20	0-6	2.2		+143		3.85	1.0	+204
Walkabout Res.	31	15	0-1	15.0	16.0	-6		1.93	1.0	-33
White Cliff Minerals	0.6	4.5	0-10	0.1		+480	_	2.98	1.0	+999
White Cliff Ninerals	0.6	1.5	4-3	0.3	0.4	-24		1.22	1.0	+29
Whitebark Energy	0.9	1.0	0-9	0.3	0.3	+20		2.19	1.0	+63
Wide Open Agriculture		30	1-7	1.0	2.6	-61		2.34	1.0	+58
Woomera Mining	1.6	8.0	1-10	0.4	-	+137		2.28	1.0	+151
YPB Group	0.6	2.5	0-5	0.1		+737	1.21	3.78	1.0	+999
Zinc of Ireland	8.0	1.5	1-8	0.3	6.5	-95	0.63	1.21	1.0	-60
Ziptel Ltd	1.5	5.0	0-7	0.1	0.0	+999	0.71	5.73	1.0	+669

#### **Investment Outlook**

(Continued from Page 1)

In the Resource sector, more attractive business fundamentals would include;

- 1. a <u>large resource and long mine life</u> rather than a small resource and short mine life (i.e. a larger payoff from the initial exploration expenditure and mine development costs),
- 2. a <u>high grade, low cost mine</u> rather than a low grade, high cost mine,
- 3. a <u>large</u>, <u>global producer with some pricing power</u> would be attractive although this is rare in this sector and
- 4. the best business fundamentals in any industry is to be the provider of a relatively small value but essential part of a much larger product. These can be higher margin niche businesses where the industrial customers will likely be more interested in security of supply rather than fluctuations in price. For example, renewable energy minerals (e.g. lithium in a lithium battery) typically each account for just a low single digit percentage of the final product cost.

We see good value in many sectors . . . but some renewable energy resource companies appear to offer excellent value and attractive growth potential. Remain fully invested in the recommended shares.

### Dividend\$

	Cents per	Ex-	Pay- Tax
Company	Share	Date	able Credit
South Port NZ	18.50	31-10	12-11 Full
Au	stralian Shar	es	
Brickworks	38.00	06-11	27-11
CPT Global	0.50	12-09	18-11
Integrated Research	3.75	02-09	15-10

Total Ret	urn Index f	for All List	ted Shares
Oct 14	1750.03	Oct 21	1753.12
Oct 15	1750.84	Oct 22	1760.43
Oct 16	1759.20	Oct 23	1751.76
Oct 17	1754.00	Oct 24	1739.28
Oct 18	1757.40	Oct 25	1744.39
Oct 28	Holiday	Nov 4	1740.83
Oct 29	1749.66	Nov 5	1747.77
Oct 30	1739.59	Nov 6	1744.90
Oct 31	1741.37	Nov 7	1752.98
Nov 1	1743.13	Nov 8	1757.60

#### Next Issue:

The next issue of *Market Analysis* will be emailed in four weeks time on <u>Monday December 9, 2019</u>.

The print version will be delivered later that week, depending upon printing and postal delivery times.

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