

# Market Analysis

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## Inside Market Analysis

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Founder: James R Cornell (B.Com.)

## Summary and Recommended Investment Strategy.

CSG Ltd is being taken over and Village Roadshow has received a non-binding offer. Ellex Medical and SIV Capital plan to distribute cash from the sale of businesses. We will re-invest this in under-valued “cleaner” energy and depressed renewable energy mineral companies.

## Investment Outlook.

This newsletter continues to hold a “non-consensus” view of the stockmarket. That means - depending on whether we are “right” or “wrong” - that our future performance may vary significantly from the “consensus” or “market” view (i.e. the stock market indices).

In the United States the S&P500 has hit new all time highs . . . but economic statistics from the US (and China) continue to weaken. What could possibly go wrong?

**Tesla** is worth more than **General Motors** and **Ford Motor Company** combined . . . yet sells less than 1% the number of vehicles. This makes sense only in a bubble where Tesla is expected to soon gain a 100% market share from GM and Ford. In reality, EVs will take 20-30 years to completely replace ICE vehicles, both GM and Ford will soon become major EV competitors and Tesla would need to raise and invest *tens of billions* of dollars of capital to expand its manufacturing capacity +100-fold.

Tesla's Elon Musk is dancing on stage in China and tweeting about farting . . . so this must be the *blow off top* for the market bubble!

[Editor's Note: *Investopedia* defines a “blow off top” as “a steep and rapid increase in a security's price followed by a steep and rapid drop in price”.]

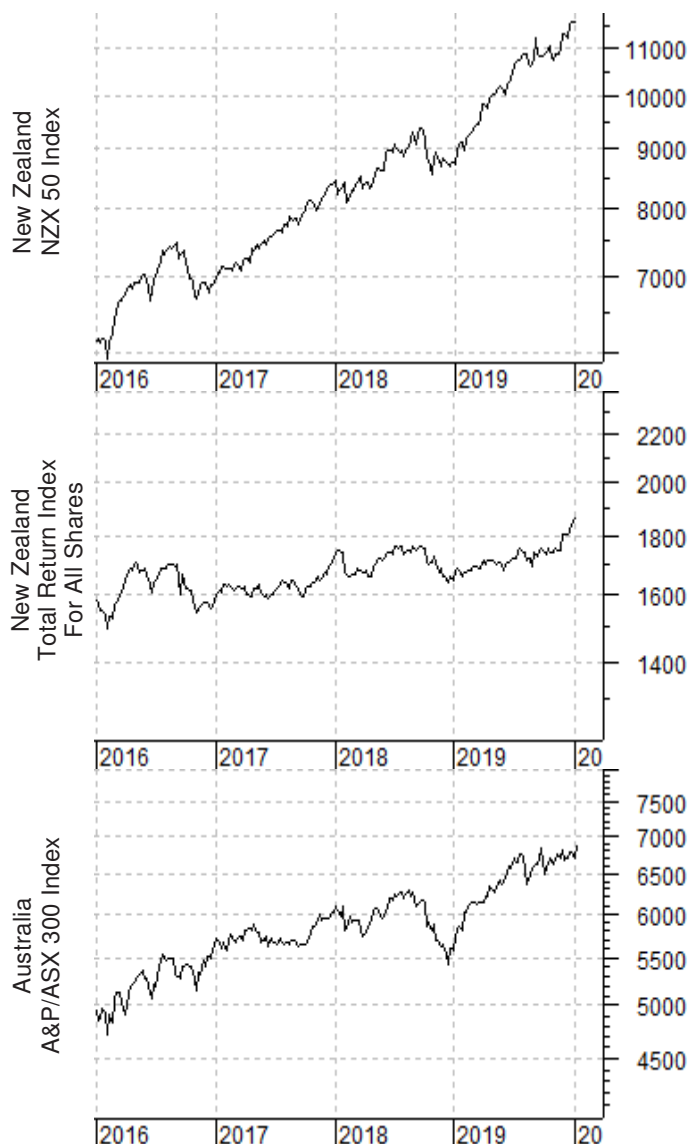
This newsletter sees that many shares - especially *growth* and *technology* shares - are expensive while commodities and commodity shares are cheap. That suggests there is better future potential investing in commodity shares and avoiding expensive growth shares (where prices already *anticipate* many years of further rapid growth).

If EVs and other renewable energy technologies are to expand as expected, then the world will need a lot more Copper, Lithium, Rare Earths, Nickel, Cobalt, etc so these should be attractive commodities for investment.

Cuts in Chinese EV subsidies have resulted in the first ever *decline* in global EV production and sales . . . with lower demand for renewable energy minerals. That has resulted in over-supply and falling prices . . . a “bust” in the expected boom/bust growth cycle . . . and probably a good opportunity to buy renewable energy mineral producers/explorers at very attractive valuations.

### Stockmarket Forecasts

	One-Month	One-Year
Australia:	81% (Bullish)	74% (Bullish)
New Zealand:	65% (Bullish)	75% (Bullish)



# Recommended Investments

## 2019 Annual Returns

Our *Recommended Portfolio* was up +15.6% in 2019 (i.e. from January 11, 2019 to January 10, 2020).

That under-performed the ASX300 index which was up +20.3% and the NZX50 Index up +28.9% (but including dividends and *imputation credits*). The TR Index was up +10.9%.

**Opthea** was up +371.9%, **CSG Ltd** up +104.7%, **Prophecy International** +77.8% and **Mt Gibson Iron** rose +77.4% but we wrote off **Onterran** (-100.0%), **SIV Capital** was down -69.4%, **AJ Lucas Group** -60.5% and **Ignite** -51.0%.

**CDL Investments** reports that 44 lots (out of 45) from the Stage I development in Dominion Road, Papakura, Auckland are already “under contract”. Stage II will be ready this quarter. In total this development will produce over 90 sections of 400-493m<sup>2</sup> and priced from \$372,000.

Sections at its Kewa Road, Albany Heights, North Shore development will also be marketed from this quarter. This is a 92 lot development with sites from 500-1000m<sup>2</sup> and priced from \$650,000.

### CDL Investments



**Smiths City Group** reports revenues down 15.6% and “same store” sales down 14.6%:

Six Months to 31/10/2019

	Latest	Previous	Change
Revenues	\$94.3m	\$112.0m	-15.8%
Net Profit	<\$2.2m>	<\$0.100m>	-
Net Cash Surplus	\$7.4m	<\$3.1m>	-
Earnings per share	-	-	-
Dividends per share	-	-	-

This result shows “weaker trading, particularly in Canterbury” plus “\$1.5 million of losses” from “rationalisation of the store footprint in Auckland”. The Wairau Park, North Shore, store was closed and half of the Mt Wellington store subleased.

This headline drop in revenues and a larger loss fails to reflect “significant operating improvements” and the strong “operating cashflow” from reduced costs and a reduction in “the capital employed in the business”.

\$7.1 million of the \$10.5 million in the net operating

cash surplus relates to accounting changes for the treatment of lease liabilities where \$7.1 million of lease payments is now a “financing” (previously an “operating”) expense.

The company reports “since the start of the new financial year our trading has improved and is exceeding expectations” but, of course, the recent Christmas trading period is the most important for the company.

### Smiths City Group



### Australian Shares

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

**AJ Lucas Group** reports that retail investors subscribed for only 22.6 million new shares and 14.5 million additional new shares under its cash issue, raising \$2.4 million. Institutional investors (and **Kerogen Investments**) earlier subscribed \$26.2 million.

The company reports that the Australian Drilling Division “continues to outperform expectations driven by demand from key customers”. The December 2019 half year will be “well ahead” of the previous year.

The division is also “exploring other opportunities” which is expected to provide further growth in the current half year.

### AJ Lucas Group



**ALS Ltd** has acquired Spanish based **Aquimisa Group**, which also has laboratories in Portugal and Brazil. The group performs “chemical and microbiological food analysis, quality control and food safety consultancy services”. The consideration is not disclosed but will be funded from existing debt facilities.

## ALS Ltd



**CardieX Ltd** has raised \$1.5 million from the placement of 54.5 million shares at 2.75 cents (plus one option for every four new shares), mainly to **C2 Ventures Pty**, a company owned by Chairman N Cairns and CEO C Cooper.

The **ATCOR** division will provide clinical trial services to **Bayer AG** worth US\$1,275,000 over 15 months, starting in April 2020. This will use **ATCOR XCEL** and **OSCAR 2** devices at around 50 sites in Europe and the United States.

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## Portfolio of Recommended Investments

CURRENT ADVICE	Company	Code	Initial Recommendation - Date -	Price	Performance Forecast	Issued Shares (mil.)	Volatility Ratio	Price/Sales Ratio	Price/Earnings Ratio	Gross Dividend Yield	Recent Share Price	Cash Dividends Rec'd	Total Return %
<b>NZ Shares</b>													
BUY	CDL Investments Ltd	CDI	12/01/99	25.0	C	278.1	1.1	3.08	8	5.2	94	39.8	+435%
HOLD	Cavalier Corporation	CAV	05/12/95	156*	C	68.7	2.0	0.15	11	Nil	30	282.0	+100%
HOLD-	Colonial Motor Company	CMO	10/11/92	128*	B	32.7	0.4	0.32	13	7.2	874	657.8	+1097%
HOLD	Smiths City Group	SCY	09/10/06	64.0	E	52.7	2.1	0.07	NE	Nil	26	37.0	-2%
HOLD	South Port New Zealand	SPN	13/02/96	120	D	26.2	0.4	4.27	19	5.1	715	329.3	+770%
HOLD+	Steel & Tube Holdings	STU	08/08/00	139*	E	166.0	1.3	0.27	13	8.7	80	351.1	+210%
<b>Australian Shares (in Aust cents)</b>													
BUY	Acrux Limited	ACR	12/05/14	99.0	B	166.7	2.4	5.83	NE	Nil	19	14.0	-67%
BUY	Ardea Resources	ARL	13/01/20	54.5	B	117.3	2.2	NA	NE	Nil	55	Nil	+0%
HOLD+	AJ Lucas Group	AJL	13/05/03	107*	E	1462.7	3.8	0.48	NE	Nil	8	36.4	-59%
HOLD+	ALS Limited	ALQ	12/10/99	72.3*	A	482.4	0.5	2.74	25	2.4	944	358.4	+1701%
HOLD	ARQ Group	ARQ	10/02/04	53.0	A	122.1	1.7	0.20	NE	21.9	37	226.0	+395%
HOLD	Atlas Pearls & Perfume	ATP	14/05/96	73.0	D	424.8	15.1	0.21	NE	Nil	1	17.5	-75%
HOLD	Brickworks Ltd	BKW	12/11/12	1115	A	149.9	0.3	3.06	12	3.0	1877	320.5	+97%
BUY	CardieX Ltd	CDX	11/11/13	15.0	D	695.5	6.8	5.16	NE	Nil	3	Nil	-81%
HOLD	CPT Global Ltd	CGO	10/03/08	88.0	B	37.8	2.5	0.26	7	3.8	20	20.0	-55%
HOLD-	CSG Limited	CSV	11/10/10	166*	C	449.3	1.8	0.63	NE	Nil	31	60.5	-45%
BUY	Cynata Thera.	CYP	13/03/17	50.0	E	101.9	1.1	NA	NE	Nil	119	Nil	+137%
BUY	Elixir Energy	EXR	07/12/19	4.2	E	500.9	6.6	NA	NE	Nil	3	Nil	-21%
BUY	Ellex Medical Lasers	ELX	14/03/06	49.0	C	143.6	1.3	1.42	NE	Nil	81	Nil	+64%
BUY	FBR Limited	FBR	07/07/17	13.5	D	1694.7	5.2	NA	NE	Nil	5	Nil	-66%
HOLD-	Fiducian Group	FID	11/02/08	260	B	31.4	0.5	3.60	17	4.0	560	128.1	+165%
HOLD	Finbar Group Ltd	FRI	12/04/10	106	B	272.1	1.0	1.52	23	6.9	87	77.5	+55%
BUY	Greenland Minerals	GGG	11/11/19	11.0	C	1191.0	2.9	NA	NE	Nil	13	Nil	+14%
HOLD	Ignite Ltd	IGN	08/04/03	82.2*	D	89.6	7.4	0.01	NE	Nil	3	70.5	-11%
HOLD+	Iluka Resources Ltd	ILU	12/10/04	471	A	422.6	0.5	2.91	13	3.1	932	306.0	+163%
HOLD	Integrated Research	IRI	14/01/08	40.0	B	171.9	0.5	5.47	25	2.3	321	63.3	+861%
HOLD	McMillan Shakespeare G	MMS	07/11/16	1041	B	77.4	0.5	1.98	12	5.6	1317	213.0	+47%
BUY	Michael Hill Int'l Ltd	MHJ	11/06/91	4.4*	A	387.8	1.5	0.50	17	5.4	74	72.3	+3192%
HOLD+	Mt Gibson Iron	MGX	10/11/14	44.0	A	1157.7	1.5	3.97	16	4.1	98	9.0	+143%
HOLD	Opthea Limited	OPT	10/02/04	188	B	269.2	0.9	NA	NE	Nil	302	65.0	+95%
HOLD	OZ Minerals	OZL	14/03/16	522	A	323.9	0.4	3.11	16	2.1	1076	71.0	+120%
BUY	Prophecy International	PRO	08/09/08	26.0	B	64.0	1.5	2.88	NE	Nil	48	24.0	+177%
BUY	Reckon Limited	RKN	08/08/16	141	A	113.3	1.1	1.13	11	4.0	76	11.0	-15%
HOLD-	Silver Chef Ltd	SIV	13/11/17	740	C	39.3	1.2	0.11	NE	Nil	66	10.0	-90%
BUY	St Barbara	SBM	12/08/19	396	A	699.2	0.8	2.90	13	3.0	271	4.0	-31%
HOLD+	The Reject Shop Ltd	TRS	11/01/05	257	B	28.9	0.7	0.14	NE	2.6	387	520.5	+253%
HOLD+	Village Roadshow	VRL	10/08/09	71.1*	B	195.2	0.5	0.75	NE	1.3	381	289.3	+843%
BUY	Woodside Petroleum	WPL	08/04/19	3410	A	942.3	0.3	4.51	17	5.7	3586	53.2	+7%

The average Total Return (i.e. both Capital Gains/Losses plus Dividends received) of all current investments from initial recommendation is +283.8%. This is equal to an average annual rate of +24.4%, based upon the length of time each position has been held.

The average annual rate of gain of ALL recommendations (both the 38 current and 170 closed out) is +29.2%, compared with a market gain of +3.9% (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.

\* Initial Recommendation Prices adjusted for Share Splits, Bonus and Cash Issues.

(1) Reckon Ltd's return includes 1/3 share of GetBusy plc (GETB) worth 52.5 pence (99.4 Aust cents).

## Recommended Investments

(Continued from Page 3)

### CardieX Ltd



**Cynata Therapeutics** has received a \$1,891,795 Research & Development Tax Incentive Refund relating to the year to June 2019. This lifts cash on hand to around \$11 million (about 10 cents per share).

### Cynata Therapeutics



**Ellex Medical Lasers** has agreed - subject to approval by shareholders - to sell its Laser & Ultrasound business to France based **Lumibird Group SA** for approximately \$97 million (67 cents per share). This will leave the company with its *iTrack* business and *2RT* business.

The “majority” of the cash received (after tax) “will be returned to shareholders”, perhaps through a “special dividend, capital return, share buy-back or some combination thereof”. The company will also change its name after selling the *Ellex* business.

This is a reasonable sale price for the slow-growth Laser & Ultrasound business, but the remaining high growth *iTrack* business could be worth 60-160 cents per share! So *iTrack* plus 67 cents cash could value this company at 127-227 cents. “Buy” and “Hold” for the cash distribution and the remaining growth business.

Shareholders will be required to approve this sale at an Extraordinary General Meeting in late March, followed by settlement and receipt of the cash.

### Ellex Medical Lasers

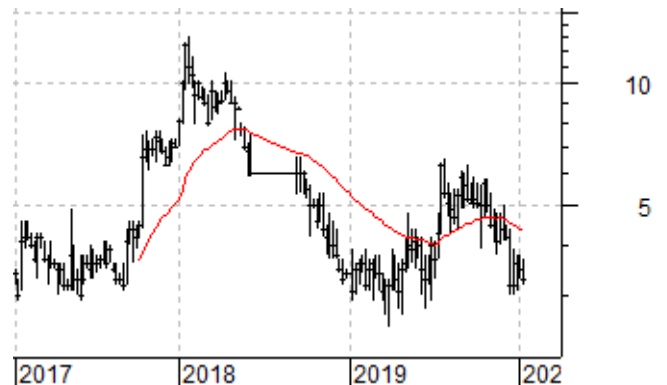


**Elixir Energy** reports its *Ugtaal-1* core hole was drilled to a total depth of 752 metres. That intersected 470 metres of thicker than expected Permian section (but failed to reach its basement), including 43 metres of coal. Gas recovered “appears to be predominately methane”, with final gas results to be reported in due course. “Coal cores are being desorbed” in the laboratory and data will be used in producing the resource estimates in coming months.

Chip hole *BO-CH-2* intersected 6 metres of coal. As previously reported, *BO-CH-1* found 7 metres of coal.

One or two further wells are planned in other areas.

### Elixir Energy



**FBR Ltd** issued 66,489,304 new shares at 4.5 cents in its *Share Purchase Plan*, raising an additional \$3.0 million. As previously reported, in November it raised \$5.5 million from a placement to institutions.

### FBR Ltd



**Greenland Minerals** and its major shareholder/strategic partner, **Shenghe Resources Holding**, have conducted further meetings with the Greenland and Danish governments. Shenghe also addressed the **Confederation of Danish Industry's Greenland Conference** again re-stating “Shenghe and Greenland Minerals joint objective of integrating and collaborating with European industry”.

**Greenland Minerals** has the “lowest capital intensity” and the “lowest operating cost” of “emerging Rare Earth projects”. This is a “highly competitive” and very long life project.

Additional supporting *Environment Impact* studies will be completed late in the current (i.e. March 2020) quarter.



**Greenland Minerals**



**Iluka Resources** will make a US\$290 million impairment charge relating to *Sierra Rutile*, write off US\$115 million in *Sierra Rutile's* deferred tax assets and an A\$60 million adjustment to rehabilitation provisions for Australian operations. These are all non-cash charges.

The US\$290 million impairment relates to the *Sembehun* deposit, “one of the largest and highest quality known rutile deposits in the world”. *Sierra Rutile* “operational performance has been less” than originally expected, resulting in the asset impairment. The company is, however, “assessing the potential of alternate mining methods” which has “yielded encouraging results with field trials planned for the first half of 2020”.

Tax losses of US\$115 million were received with the acquisition of *Sierra Rutile* but it is not likely that these will be utilised in the near term, so they are being written off.

The A\$60 million increase in the Australian provision reflects the fall in interest rates. Future rehabilitation costs, discounted at a lower interest rate give a higher net current liability.

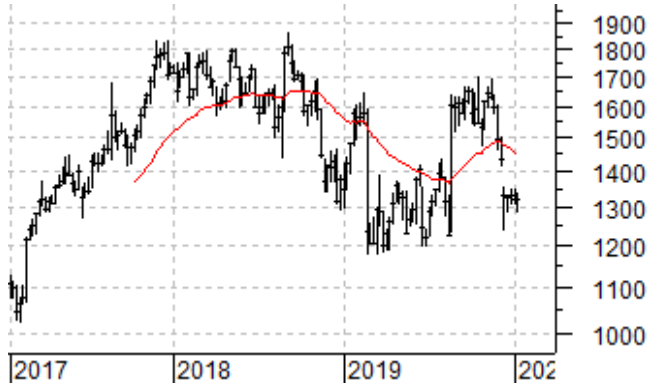
**Iluka Resources**



**McMillan Shakespeare** is “experiencing more challenging conditions than expected”. Novated vehicle sales are “ahead of last year”, but “below expectations”.

The net profit to June 2020 is now forecast at \$83-87 million. That is 2-6% below 2019, but after repurchasing 7% of its issued capital, earnings per share would be 1-5% higher.

**McMillan Shakespeare**



**Opthea Ltd** has completed the enrolment of 108 patients for its Phase 2a clinical study of Diabetic Macular Edema.

**Opthea Ltd**



**OZ Minerals** has produced its first saleable concentrate from *Carrapateena*. Over 280,000 tonnes of development ore is stockpiled on the surface and underground mining production will ramp-up to 4.25 Mtpa by the end of 2020. This should contribute 20-25,000 tonnes of Copper and 35-40,000 ounces of Gold during 2020.

The company is already assessing “options to expand capacity above 4.25 Mtpa”.

The *West Musgrave Project* joint venture (OZ Minerals 70%, Cassini Resources 30%) which is close to completing a Pre-Feasibility Study on the *Babel, Nebo* and *Succoth* deposits, has acquired significant further tenements in the *West Musgrave* from **Traka Resources** for a cash payment of \$250,000 plus a 2% net smelter royalty on any metals eventually produced.

*West Musgrave* is the largest nickel/copper project in Australia and this increases the joint venture's tenements to over 9500km<sup>2</sup>.

**OZ Minerals**



(Continued on Page 6)

## Recommended Investments

(Continued from Page 5)

**Village Roadshow** has received a “conditional, non-binding and indicative proposal” from **Pacific Equity Partners** at 390 cents in cash or cash and shares in a new acquisition entity, via a scheme of arrangement.

The largest shareholder, **Village Roadshow Corporation** (which owns 40.32% of Village Roadshow), appears to support this proposal and has given Pacific Equity Partners a call option over 19% of the company. Pacific Equity Partners is currently undertaking due diligence.

### Village Roadshow



**Woodside Petroleum** reports that the Senegal government has approved the *Rufisque Offshore, Sangomar Offshore and Sangomar Deep Offshore* (RSSD) joint venture plan and authorised the *Sangomar Development*. This is a floating production and offshore (FPSO) facility with 23 subsea wells and subsea infrastructure. Production of 100,000 barrels per day is expected from early 2023. Future expansion could include gas export to shore and further subsea tie-backs. Woodside Petroleum has a 35% interest in this joint venture.

## Woodside Petroleum



**GetBusy plc** has undertaken a share reorganisation that effectively buys back small shareholdings of less than 5000 shares at 45 pence. This will buyout many of the Australian and New Zealand shareholders who received shares when the company was spun off by **Reckon Ltd**.

The reorganisation will convert every 5000 shares into 1 new share - with the remaining 1-4999 shares repurchased at 45 pence - and then every new share will be split back into 5000 shares.

This effectively rounds all shareholdings down to a multiple of 5000 shares, with shares in excess of these multiples repurchased by the company at 45 pence (and already re-sold under a conditional placement to institutional investors).

Presumably the cheque is in the mail and (if you held more than 5000 shares) a new share certificate.

# Buy Ardea Resources

## BUY Ardea Resources (code ARL).

Ardea Resources owns the *Goongarrie Nickel Cobalt Project* (GNCP) which is a small part of its *Kalgoorlie Nickel Project* (KNP), which is the largest nickel project in Australia and one of the top ten nickel projects worldwide.

Development options include a staged development (i.e. minimising the initial capital investment but with significant potential for expansion), the lowest capital intensity (relative to projected nickel/cobalt production) and the highest pre-tax internal rate of return (i.e. very profitable at 29%, and better than other nickel/cobalt projects at around 20%).

### Company History

**Heron Resources** floated Ardea Resources in February 2017, offering 30,000,000 new shares at 20 cents to raise \$6.0 million. Heron owned 41,500,938 Ardea Resources shares which it then distributed to its shareholders in a spin-off.

A placement of 7,647,850 shares at 72.5 cents in September 2017 raised a further \$5.54 million and a *Share Purchase Plan* at the same price raised \$4.4 million.

In December 2019, Ardea Resources spun-off its east coast Gold exploration interest in **Godolphin Resources**, with shareholders receiving one Godolphin share for every 3.91 Ardea Resources shares held (i.e. worth about 5.1 cents per Ardea share).

### Recent Results

Ardea Resources has no meaningful revenues as it is an exploration company. It currently holds about \$10.7 million in cash which should be sufficient to finance activities for at least a year, but the company will periodically need to raise additional capital to finance its exploration activities.

Current activities are focused upon developing the *Goongarrie Nickel Cobalt Project*.

### Goongarrie Nickel Cobalt Project

A Pre-Feasibility Study in March 2018 examined the development of a 1.0 Mtpa and 1.5 Mtpa mining and processing plant to produce Nickel Sulphate and Cobalt Sulphate. A July 2018 study examined an expansion to 2.5 Mtpa. The economics of these different volumes are similar, so it would make most sense to develop the 1.0 Mtpa operation to minimise the initial capital cost and then use operating cashflow to help finance staged

expansion. Expanded to 2.5 Mtpa, the GNCP would support a 100 year mine life!

The 1.0Mtpa mining and processing operation would require an initial capital investment of A\$599 million (US\$470 million) to produce 41,500 tpa of Nickel Sulphate (generating about 75% of revenues) and 5,500 tpa of Cobalt Sulphate (about 25% of revenues).

The pre-tax internal rate of return is 29%, with a development payback of just 5¼ years. The after-tax Net Present Value (at a discount rate of 8%) is A\$1040 million (US\$820 million).

Over the last two years, Ardea Resources has worked on improving this attractive development project even further:

- Further drilling is identifying the highest grade nickel/cobalt deposits which can be mined first to boost initial cashflow and payback of the initial development capital faster.

- Hard magnesia saprock (with 0.4-0.8% nickel) has been identified at the base of the soft nickel-cobalt ore “so the base of the ore will be readily distinguished” and this saprock can be used to neutralise the Pressure Acid Leach (PAL). This saves the cost of buying in limestone plus the contained nickel/cobalt increases recoveries.

- Significant Scandium mineralisation is present in the nickel-cobalt zones providing the opportunity for additional revenues from a valuable by-product.

- Gold ore has recently been identified below the full 15 km length of the GNCP. This has previously been ignored, drilling did not extend into the bedrock and few gold assays were completed by previous explorers. So further, deeper drilling is required to determine the extent of the gold, although preliminary grades are high. The “development of nickel-cobalt-scandium open pits effectively pre-strips material for the subsequent mining of the gold beneath” so gold mining costs should be very low. This would, of course, require a separate gold processing plant, but could provide additional revenue streams and improved economics for the project.

A *Pilot Plant* began operation in June 2018, providing samples for potential customers (in October 2018) and process design and engineering data towards the *Definitive Feasibility Study*.

### **Investment Criteria**

Ardea Resources has no revenues or profits as it is an exploration company. It has enough cash to fund about a year’s operations, but will need to raise additional capital. To fund the \$599 million capital cost of the first stage of its *Goongarrie Nickel Cobalt Project* it would need to bring in an equity partner and raise debt funding.

This, however, is a very attractive project - offering a high 29% return on capital and a very high Net Present Value of \$1040 million (885 cents per share!). Even with some dilution from bringing in an equity partner this could generate significant wealth for shareholders.

Re-investing cashflow from that initial stage in further expansion could further multiply shareholder wealth!

The issued capital consists of 117,300,435 shares which at 54½ cents gives a total market capitalisation of just \$64 million. That is a low valuation for a company with one of the ten largest nickel projects in the world. While seeking an equity partner for the GNCP development, Ardea Resources *could* find it becomes

the target of a full takeover offer from a large mining group.

The shares are *neglected*, with no brokers following the company.

The Executive Chairwoman owns 1,008,046 shares and Non-Executive Director I Buchhorn holds 12,511,440 shares, while the other Non-Executive Director has no shares.

There have been no *insider* buys or sells over the last year.

The Relative Strength Rating is +9.4%, ranked 17 (on a scale of 0-99) indicating a long term uptrend.

Significant value could be created for shareholders in several ways:

Firstly, an “offtake” agreement with a strategic customer(s) interested in helping to finance the development would be very important. Or equity project financing from a larger mining company. Or a full takeover offer from the larger mining company.

Secondly, a recovery and increase in Nickel and Cobalt prices would further improve the economics of its development project and that should be reflected in a recovery in the share price.

Thirdly, exploration success and process improvement could result in an improved *Definitive Feasibility Study*. Higher grade ores would boost cashflow, project payback, internal rate of return and Net Present Value. Mining magnesia saprock on-site as neutraliser will lower reagent costs *and* improve nickel-cobalt yields. Including Scandium recovery adds to revenues. The potential for low cost gold mining adds new revenues, diversifies revenue sources and adds further economic value.

### **Summary and Recommendation**

Ardea Resources is still an *exploration* company that involves high risks. Periodically it will need to raise additional equity capital to fund operations.

On the other hand, an investment in Ardea Resources offers very asymmetric returns. Risks are limited to 100% of the amount we invest but there is no limit to potential returns.

Those potential returns could be very high. This is a very small company owning one of the largest nickel projects in the world. There is a low capital intensity to develop a very profitable mining operation, with a high expected rate of return. Staged development requires a relatively small initial capital investment to finance development . . . with potential for further staged development (funded from operating cashflows) to build a large Nickel Cobalt (Gold?) mining business.

### **Ardea Resources**





# Australian Nickel/Cobalt Projects

In addition to **Ardea Resources** - which we are formally recommending for investment - there are three other small Australian companies with attractive nickel/cobalt projects:

## Cobalt Companies

There are several companies listed on the Australian stockmarket with development-ready Cobalt (or mainly nickel/cobalt) projects. In general these are long-life mines, with low-cost production and high potential profit margins - so potentially very profitable operations - but require significant project development financing. The current low price of Cobalt means this should be a good time to be buying into these companies . . . but the low Cobalt price also means it is a bad time to be raising project financing. So these projects remain "development-ready" but may not advance to actual mining and production in the near future owing to an inability to raise project financing.

Nevertheless, these companies could still be good investments over the short to medium term, with share price appreciation driven by multiple factors:

1. A recovery/increase in the price of Cobalt (and Nickel) should see share prices appreciate (as the resource becomes more valuable and the likelihood of obtaining development financing will increase),
2. Further exploration, either increasing the total resource (i.e. lengthen the life of the projects) or identifying higher grade ore (i.e. which can be mined first, boosting cashflow and shortening the development payback period).
3. Improved metallurgical technology (i.e. lowering the initial capital cost, processing costs and/or mineral recoveries).
4. Progress towards project development, such as signing "offtake agreements" (with customers), finding equity partners or other project financing, including being taken-over by a large mining company to acquire the projects.

## Four Long Life, Low Cost Cobalt Mining Projects

**Ardea Resources** is a \$64 million capitalisation company with plans for a nickel/cobalt operation producing a minimum of 41,500 tonnes per annum of Nickel Sulphate and 5,500 tpa of Cobalt Sulphate (plus Scandium as a by-product), with a very long mine life and with extensive nickel/cobalt tenements.

**Australian Mines** is a \$52 million capitalisation company with plans to produce 46,800 tpa of Nickel Sulphate, 7,000 tonnes of Cobalt Sulphate and some Scandium (for use in aluminium alloys) from a long

term mining operation.

**CleanTeq** is a \$194 million capitalisation company whose main business involves ion-exchange technology (i.e. used in water purification) but plans to develop an 89,000 tpa Nickel Sulphate, 4,400 tpa Cobalt Sulphate and 130 tpa Scandium long term mine to demonstrate its technology in mineral extraction. CleanTeq has already acquired some equipment for this development and has \$75 million of cash in the bank - so is in a financially stronger position than the other companies discussed here.

**Cobalt Blue** is a very small \$20 million capitalisation company with plans for a 13,000 tpa Cobalt Sulphate and Sulphur project (over a short 10 year mine life) using its proprietary technology for treating pyrite ores. It is also involved in several partnerships with other mining companies to test treating their pyrite ores with a view to extracting Cobalt and other metals.

## Ardea Resources (code ARL)

Ardea Resources is probably the most attractive, offering the highest rate of return on its nickel/cobalt project, very large resources and the potential for significant production growth from scaling up operations after starting with a very low initial cost - US\$470 million or A\$599 million - staged development project. See our recommendation on Pages 6-7).

The three other companies could also be attractive, especially if they obtain development financing for high return projects:

## Australian Mines (code AUZ)

Australian Mines' main interest is its *Sconi Project* where it plans to produce 46,800 tpa of Nickel Sulphate (about 75% of revenues) and 7,000 tpa of Cobalt Sulphate (about 25% of revenues), with a mine life of over 30 years. This will be "one of the most cost competitive" nickel/cobalt "operations in the world" (although the upfront capital cost per tonne of annual production are 40-75% higher than Ardea Resources and CleanTeq's projects).

Close by is the *Bell Creek* deposit (with 738,000 tonnes of Nickel and 71,500 tonnes of Cobalt) which could further extend the life of this proposed operation to over 80 years!

It also holds a large nickel/cobalt deposit at *Flemington* (adjacent to CleanTeq's *Sunrise* project, discussed below) and an early stage Cobalt project at *Thackaringa* (close to Cobalt Blue's deposit, see below).

The capital cost of developing the *Sconi* project to process 2.0 Mtpa is US\$974 million, with a pre-tax

## Battery Chemicals: Nickel Sulphate and Cobalt Sulphate

Rechargeable batteries generally use Nickel and Cobalt metals in the form of sulphate salts. Producers can therefore earn better returns by supplying Nickel Sulphate and Cobalt Sulphate, rather than the actual metals.

Nickel Sulphate hexahydrate (i.e. with six molecules of water) is 22.3% Nickel, while Cobalt Sulphate heptahydrate (i.e. with seven molecules of water) is 21.0% Cobalt. 100 tonnes of Nickel Sulphate therefore contains around 22.3 tonnes of Nickel, while 100 tonnes of Cobalt Sulphate contains about 21.0 tonnes of Cobalt. We quote the Sulphate production quantities in this article, but some company reports quote the contained Nickel and Cobalt weights.



internal rate of return of 20%, repaying the initial cost in 5¼ years with a Net Present Value of US\$817 million.

The *Sconi* project is “development-ready” and just requires offtake agreements (i.e. customers) and project financing. The company had a preliminary offtake and financing agreement with **SK Innovation** but that was terminated in November 2019.

The company has just \$5.7 million in cash.

### Australian Mines



### CleanTeq (code CLO)

This is an ion-exchange technology company earning some revenue from water purification plants, but its largest economic asset/business is the development of the *Sunrise Battery Materials Complex* project “one of the largest, lowest-cost and development-ready nickel/cobalt projects in the world”.

CleanTeq originally bought this as the *Syerston Scandium* project in late 2014 with the intention of mining the high grade Scandium (30,000 tpa for over 100 years) plus Nickel and Cobalt by-products, but as Scandium demand is currently low the project has morphed into mining the high grade nickel/cobalt deposits with a smaller amount of Scandium by-product.

The 2018 Definitive Feasibility Study estimates a US\$1490 million capital cost to develop a 2.5 Mtpa mine and processing plant producing around 89,000 tpa of Nickel Sulphate (about 60% of project revenues), 21,000 tpa of Cobalt Sulphate (about 35% of revenues), 130 tpa of Scandium Hydroxide of which only 10 tpa will be converted to Scandium Oxide and sold (3% of revenues) - the estimated current market demand - and the balance stockpiled plus 82,000 tpa of Ammonium Sulphate (a by-product from the use of sulphuric acid and ammonia in the extraction process, contributing just over 1% of revenues).

The CleanTeq operation will have some ability to vary the relative quantities of Nickel or Cobalt produced (i.e. to take advantages of higher prices for either commodity) by targeting higher grade Nickel or higher grade Cobalt ores during mining.

The mine life (for nickel/cobalt) would be at least 40 years, the pre-tax internal rate of return about 27% with a project payback of 4½ years. The Net Present Value would be about US\$1390 million.

This is the most advanced nickel/cobalt project of the four companies we are discussing here. CleanTeq has already purchased two large autoclaves and holds \$75 million in cash, so can finance about 10% of the project development with existing equity. A final investment decision was expected “by the end of 2019” but this requires an equity partner (perhaps a “strategic customer or an operating miner” for up to 50% of the project equity) and completion of debt funding (for 50% of the project cost). **Macquarie Capital** was appointed in June 2019 to find an equity partner for this project. **Fluor Australia Pty** has been appointed Project Management Contractor.

**Beijing Easpring** will purchase 20% of the Nickel Sulphate and Cobalt Sulphate produced over the first five years under a binding offtake agreement. CleanTeq has a *Heads of Agreement* with **Metallurgical Corporation of China** for a fixed price EPC contract to build the project. Good progress has been made with front-end engineering and design, plus tendering on long lead items.

### CleanTeq



### Cobalt Blue (code COB)

This company has a proprietary technology for recovering metals from difficult to process sulphide ores.

Cobalt Blue owns 100% of the *Thackaringa Cobalt Project* (adjacent to Australian Mines’ *Flemington* deposits, in NSW, near Broken Hill) plus additional exploration tenements acquired in August 2019.

The July 2019 Pre-Feasibility Study plans to mine and process 5.25 Mtpa of ore to produce 13,000 tpa of Cobalt Sulphate (generating 86% of revenues) and 290,000 tpa of Sulphur (14% of revenues).

[Note: This is the only company discussed here that will not generate significant revenues from Nickel].

(Continued on Page 10)

## Aluminium Scandium Alloys

Very small amounts of Scandium (just 0.01-0.7%) included in Aluminium alloys can increase strength by 30-1500%. A 4% reduction in the weight of an A380 aircraft, using an Aluminium Scandium alloy, would result in annual fuel savings of US\$4.5 million. No one specifically mines Scandium. It is only produced as a by-product, so production is limited and prices are high . . . with both factors limiting the commercialisation of Aluminium Scandium alloys.

CleanTeq is involved in a strategic development project with **Airbus**, a joint venture with **Chinalco Materials Application Research Institute** plus a 5 tpa offtake agreement to supply Scandium Oxide to **Panasonic** for Aluminium Scandium alloys. Australian Mines has a Research and Development project with UK based **Metalysis**.

## Australian Nickel/cobalt Projects

(Continued from Page 9)

The capital development cost will be A\$550 million (US\$410 million), with an initial mine life of about 10 years. The pre-tax internal rate of return is 27%, the project payback 4 years and the Net Present Value is A\$544 million (US\$405 million).

The initial capital cost (per unit of production) is 175-225% higher than for the Ardea Resources and CleanTeq projects, but operating costs are lower.

Cobalt Blue has little cash, so would require an equity partner for this project but the company reports “potential commercial partners indicate a desire to see further large scale, continuous processing as proof of metallurgical concept”. The company will therefore commission a modular Pilot Plant in the June 2020 quarter which will be expanded to Demonstration Plant size (1:1000 to commercial scale) by the March 2021 quarter with the objective of finding an equity partner and leading to a Final Investment Decision (FID) for the *Thackaringa Cobalt Project* by the March 2022 quarter.

Experience suggests multiplying mining company development timelines by a factor of three . . . which would put the FID in about 2026!

This Pilot/Demonstration plant will also be used to progress the company's second development strategy to “commercialise our processing technology” at third



party sites. From 2020 this plant will test third party ore samples in house “from initial testwork to bulk, continuous operations”. Partners who have provided Cobalt Blue with ore samples include Havilah Resources, CuDeco, Global Energy Metals and OZ Minerals.

### Summary and Recommendation

All four of these exploration/development companies potentially offer good value (i.e. could develop valuable businesses) but they all involve very high risks.

Except for CleanTeq, these companies have little cash and will need to periodically raise additional capital (through placements, cash issues or *Share Purchase Plans*) to fund ongoing operations. All will need to bring in equity partners and raise debt to fund development of their projects.

Relative to potential nickel/cobalt production, Ardea Resources has the lowest capital cost (i.e. the lowest capital intensity). At 1.0 Mtpa it also has the lowest absolute capital cost at US\$472 million. Ardea Resources has the largest nickel/cobalt deposits, so the greatest potential for staged development to scale up production. Ardea Resources offers the highest rate of return plus the highest Net Present Value (relative to development costs).

CleanTeq also has low capital costs *relative* to its much larger projected production. This is the most advanced project, with some processing equipment already purchased and the company has \$75 million in cash, although will still require equity funding from an outside partner. CleanTeq also has a global water purification business, although revenues and profits are not great at this stage.

Australian Mines’ *Sconi Project* capital costs are higher, but operating costs are lower.

Cobalt Blue has very high capital costs (for a relatively small project), but with low operating costs and also a second business model (i.e. selling its processing technology to other miners).

Shares of all four companies should be attractive to gain an exposure to the depressed nickel/cobalt battery metals markets.

# Renewable Energy - Part 3: Strategic Minerals

Some renewable energy technologies - especially EVs - are driven more by government regulation than by economic forces. Government policies include EV subsidies, taxes on ICE vehicles and/or subsidies/taxes based on vehicle emission standards. As there is no international co-ordination - and subsidies/taxes can start or stop at certain dates - this increases the likelihood of multiple boom/bust growth cycles.

For example, Chinese subsidies boosted EV sales but are now being cut . . . resulting in a *drop* in global EV sales for the first time. California’s *Zero Emission Vehicle* standards (being followed in ten other states, but opposed by President Trump) should fuel a *future* boom in EVs, perhaps from late 2020 or 2021. At present, global EV sales are down, reducing the demand and prices for renewable energy minerals.

This current “bust” in the growth cycle could be an attractive opportunity to invest in some of these companies.

### Boom/Bust Growth Cycle

The demand for battery metals is expected to grow 20-30% per annum - so in most cases producers have geared up production and are bringing new sources of supply online to meet this expected demand.

In a boom/bust growth cycle, the “boom” obviously

results from growing demand, with shortages and higher prices. The “bust” results from either (1) a temporary dip in demand (as at present) or (2) demand growing *slower* than new supply is brought into production. This temporary over-supply will result in falling commodity prices (and falling asset values for

producers). Given the uncertainty in both forecasting demand and discovering/developing new supply this boom/bust cycle is likely to repeat and should be an expected characteristic of renewable energy mineral businesses.

And let's not forget technology change. The successful development and commercialisation of, say, solid state batteries (or other electricity storage technology) could significantly reduce the demand for the battery metals we are discussing here.

Battery demand is driven by the growth in EVs (although small batteries are needed in smartphones, computers and most other devices) and most EV growth over recent years has been in China. EV growth may start to expand in the United States and Europe over the next few years.

China's interest in EVs has nothing to do with reducing CO<sub>2</sub> emissions . . . it is about *energy security* and *foreign currency reserves* - replacing imported oil (for transport fuels) with domestic coal fired power stations (to provide electricity for EVs). EV subsidies were introduced in 2009.

In June 2019, China eliminated all subsidies on EVs with a range under 250km and cut other subsidies by 45-60%. Subsidies were as high as 50,000 yuan (US\$7,100) per vehicle. Chinese EV sales have dipped for the first time ever and remain depressed. Chinese EV sales *fell 16%* in August 2019 compared with a year earlier (i.e. August 2018), *fell 34%* in September and were *down 46%* in October. Chinese EV manufacturers are reporting profits down 50-100% and their survival is in question. China has announced it will remove all remaining EV subsidies by 2021.

The fall in China EV sales has resulted in a decline in demand for Lithium, Nickel, Cobalt and other battery metals . . . while global producers are bringing new supplies on stream to meet an expected 20-30% per annum long term growth in demand. This increased potential supply and *lower* demand has resulted in falling prices and falling sales for battery mineral producers. Financial problems have seen some producers fail. Virtually all are now focused on *lowering costs*, not increasing output, and deferring capital expenditure on expansion projects.

So the battery metals boom has turned to a battery metals bust. A few years ago lithium company shares traded at high prices, now Lithium shares trade at low prices, but revenues and profits are depressed and some have financial problems. Nickel and cobalt prices also fell and developers are having difficulty finding finance for new projects. Probably demand (and prices) will recover in 6-12 months, but if the current bust continues then more companies may fail.

When demand recovers Lithium companies will enjoy better financial returns - but production will again start to grow rapidly to meet the expected demand growth.

The next 6-12 months could be a good time to buy into battery metal producers, but while we may be able to buy into companies at attractive valuations, potential partners for new development projects will also be seeking to buy in at low valuations (i.e. a depressed market is not a good time to be seeking development partners or project equity financing). While these are potential *high growth* businesses there are competitive commodity businesses with the potential for further

boom/bust cycles in the future.

The largest and most profitable international Lithium companies, Chilean based **Sociedad Quimica y Minera** (SQM) and US based **Albemark** have both recently bought into Australian Lithium projects (with **Kidman Resources** and **Mineral Resources**). In a "bust", the largest, financially strongest companies can usually acquire the best projects from smaller, financially weaker competitors.

Smaller exploration companies, with large mineral deposits but little cash in the bank, *may* have great potential but could find it difficult to obtain equity and debt financing to develop their projects.

### **Overview of Renewable Energy Minerals**

The total amount of raw materials (i.e. plastic and aluminium casings, battery metals, Copper and other chemicals) make up only about 10% of the final cost of a rechargeable battery. Battery metals are an essential, but small percentage of the total cost of manufacturing a rechargeable battery, so have little impact on final battery prices. If all material costs increased 100% then the final cost of a renewable battery would increase only about 10%.

The other side of this coin is that while, in theory, rechargeable batteries can be recycled it currently costs about \$3 to salvage \$1 worth of these raw materials. Most old batteries from EVs are currently re-purposed for solar energy systems (where the reduced energy density is not important).

If long term demand grows as expected, then *significantly* higher annual production rates are needed for Cobalt, Lithium, Rare Earths and Copper which will likely require higher prices to make it economic to develop new sources of supply. Nickel, Graphite, Manganese, Silicon, Aluminium, Lead, Titanium and Iron are also required.

Uranium is also important for nuclear energy, but even if nuclear energy production grows strongly, Uranium mining could be a dying business.

### **Cobalt**

Cobalt is the most scarce metal needed for EVs (and most rechargeable batteries). Of course, that would change if new battery technology could reduce or replace the use of Lithium Cobalt Oxide as the battery cathode in lithium-ion batteries and the use of Cobalt in nickel-cadmium and nickel metal hydride batteries.

Most of the world's Cobalt is in the copper belt in the Democratic Republic of Congo (DRC) and, although not a large producer, Zambia. 60% of the world's production of Cobalt comes from the DRC, much of that produced by **Glencore**. Cobalt is a by-product of Copper and Nickel mining so supply is relatively fixed (i.e. it would be difficult to increase annual production).

Cobalt and diamonds financed the First and Second Congo Wars and personally enriched the Tutsi and Hutu fighters on both sides. 10-25% of the DRC supply comes from artisanal mining, involving 100,000 miners - some "unfree labour" (i.e. modern slaves - receiving only subsistence wages or debt slaves), some children as young as six years old who can squeeze into small spaces - using hand tools to dig hundreds of feet underground "with little planning and fewer safety measures". This mining also pollutes the local environment with toxic metals.

(Continued on Page 12)



## Renewable Energy Minerals

(Continued from Page 11)

Needless to say, most people have ethical concerns about this “conflict mineral” produced with child labour in the DRC!

The world’s largest Cobalt mine, *Multanda Mine* in the DRC (26,000 tpa owned by **Glencore**), was placed on “care and maintenance” at the end of 2019, after operational problems and low copper/cobalt prices, but other mines in the DRC will likely increase production, maintaining a current over-supply of Cobalt.

Russia, Australia and Canada are the next biggest producers of Cobalt (each with about 4-5% of global production). South Africa, Mauritius and the United States also produce small quantities.

The DRC holds 50% of known Cobalt reserves, followed by Australia (17%) and non-producers Cuba (7%) and Philippines (4%). There should be the potential for Australia to expand production and become an important source of ethical Cobalt for the EV market.

There are large Cobalt *resources* - equal to perhaps thousands of years of current production - on the deep seabed. This is not currently economical to extract and, with current technologies, would create massive environmental damage (i.e. large quantities of silt that would settle back over a very large area of the seabed), so not feasible any time in the foreseeable future.

Given the significant demand there should also be the potential for higher Cobalt prices, especially for ethical (i.e. non-DRC) Cobalt.

### Lithium

Lithium is not scarce and there are very large known resources, mainly in Chile, China, Australia and Argentina. Australia and Chile are the largest producers. It would be relatively easy and cheap to significantly scale up Lithium production, although it may take 3-5 years to bring new supply online.

There are two main sources of Lithium: from brine (mainly in Chile, Argentina and Bolivia) and hard rock (found around the world, with major production in Australia). From brine, evaporation and precipitation produces 99.5% pure “battery grade” Lithium Carbonate (which on-site or off-site can be increased to 99.9% pure “battery quality”). Lithium Carbonate is 18.8% Lithium. Hard rock Lithium miners produce a 6% Lithium concentrate which is exported, mainly to China, for further processing.

Lithium demand was forecast to rise about 20-30% per annum over the next decade, but has actually dropped over the last year with a significant drop in prices.

Lithium shares rose significantly in value over recent years making it easy to raise money for expansion projects to meet the expected growth in demand. Slower demand growth and falling prices has since depressed this industry.

Some Lithium miners/producers have failed. Virtually all have mothballed production, cut back production and slowed the development of new projects. If demand (and prices) recover in the future, then new production will be brought on line. In the meantime, Lithium producers are depressed in value. Highly indebted companies may fail or be acquired or may need to sell off projects to better capitalised/better diversified competitors.

This sector is experiencing a “bust”, so share prices

are low and there could be some attractive buying opportunities . . . but there is plenty of Lithium out there and lots of projects to potentially increase production, so this remains a competitive business.

### Rare Earths

Rare Earth Elements are not particularly rare (i.e. they are about as common as Lead or Copper) but widely dispersed with few high grade, mineable deposits. Rare Earths are also very difficult to extract and separate. China produces 80% of Rare Earths and dominates processing. Rare Earths are used to make strong, permanent magnets for use in most electric motors (i.e. EVs to power tools) and in *offshore* (but usually not onshore) wind turbines. Every EV requires about 0.25kg of Rare Earth metals while an average 3.6 MW offshore wind turbine (that will power around 3,300 households) requires about 720kg of Rare Earth oxide.

There should be a steady and increasing demand for Rare Earths in a renewable energy economy.

The only significant producer outside of China is Australian listed **Lynas Corporation**.

Australian listed **Greenland Minerals & Energy** owns the world’s largest undeveloped deposit of rare earth elements and uranium. It could also become the lowest cost producer and its 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. This would remain our preferred investment in this sector.

### Nickel

Nickel is relatively common and sourced from many countries. There is major production from Indonesia, the Philippines, Russia, New Caledonia, Australia and Canada.

70% of Nickel production is used to make stainless steel, often from “nickel pig iron” but this is unsuitable for use in batteries (i.e. a cheap source of nickel for making stainless steel, but expensive to extract the nickel for batteries).

4% of Nickel production - often supplied as Nickel Sulphate - goes into rechargeable batteries. Canada and Australia are the major producers of this Nickel.

High grade Cobalt deposits are usually found with Nickel - and there are a number of attractive nickel-cobalt developments in Australia - giving investors an exposure to both metals.

### Copper

60% of Copper is used in electrical wiring, much of it in transformers in the power grid but also in every electrical and electronic appliance.

Developing countries (e.g. India, China) will need more Copper in their grid infrastructure (i.e. transformers) while developed countries (e.g. the US, Europe) will need more Copper for EVs and renewable energy (i.e. solar, wind).

Copper intensity will increase even further as countries connect their power grid to neighbouring countries to share peaks in production and demand. These could eventually develop into regional (or global) macro-grids (e.g. transporting solar energy from the Sahara desert to Europe or the Gobi desert to China) but requiring around 100 tonnes of Copper cabling per kilometre!

Virtually all Copper ever mined is recycled and still

in use. Copper intensity (i.e. kilograms per capita) will only continue to increase. While we would expect increased demand to lift the real price of Copper over the medium to long term, the Copper price has traditionally been very weak (i.e. falling about 50%) during economic recessions.

We own some **OZ Mineral** shares which is an attractive investment in this sector.

### **Uranium**

Uranium is unlike other renewable energy metals or other commodities. Nuclear reactors are very expensive pieces of capital equipment while the Uranium fuel is a very small (i.e. about 2%) part of the total cost.

With a supply shortage in 2007 the spot price rose to US\$137 per pound as energy companies panic bought. Most nuclear power companies will typically (1) hold about two years supply of Uranium on-site and (2) buy Uranium under very long term supply contracts. The spot price is around US\$25 per pound and a recent long term supply contract is believed to have been signed at around US\$45 per pound.

Worldwide there are 450 nuclear plants and 50 under construction, so will Uranium demand recover? Maybe - and these new stations may sign decades long supply contracts - but even with a significant increase in nuclear energy, Uranium mining could become obsolete in the not too distant future.

To explain why we need to first briefly discuss Generation IV nuclear reactors which should be available before 2030. These will be very safe, small scale, modular designs, produced in a factory and available to power your neighbourhood or small city (or buy several modules for a bigger city).

Generation II (from 1965) and Generation III (from 1996) nuclear power stations use *enriched Uranium* (i.e. where the <sup>235</sup>U isotope is increased from 0.71% to about 3.5-5.0%) in a “once through nuclear fuel cycle”. This *spent Uranium* can be reprocessed, but in 1977 President Carter banned reprocessing in the United States so most is stockpiled.

Generation IV reactors will use a superior “closed fuel cycle” where all of the Uranium (and produced Plutonium and other fissionable Actinides) will eventually be consumed as fuel. Periodically the fuel would need reprocessing, to remove the short half-life fission waste products while all of the remaining Uranium, Plutonium and other Actinides will return as fuel. As all of the Uranium (not just 5%) is used as fuel and as there are large stockpiles of the <sup>238</sup>U isotope (i.e. *depleted Uranium*) removed in previous Uranium enrichment that can be used as fuel, we may not need to mine any more Uranium for a few thousand years (or longer if nuclear weapons are dismantled).

The former largest Uranium producer, Canada based **Cameco Ltd** (with mines mainly in Canada and the United States) has already closed all of its mines. The company is supplying power companies under very long term contracts with purchases (at lower prices) on the spot market and from its stockpiles of Uranium held in warehouses.

The current largest producer is **KazAtomProm**, a Kazakhstan based company (listed on the London Stock Exchange). KazAtomProm’s production capacity equals about 30% of global demand, but it has cut production below this level to help support prices. This company is

a very low cost producer so is profitable at current low Uranium prices and offers a Dividend Yield of about 6%.

So if Gen IV reactors are delayed, is there still a chance that the Uranium price may recover over the next decade or so? This is where we need to tell you about Canadian based **NexGen Energy**, a *potential* very large, very low cost producer. This C\$585 million capitalisation company has a *very large, very high grade* undeveloped Uranium deposit. It would cost C\$3700 million to develop the mine, capable of producing 20% of global Uranium demand at an all up cost of about US\$10 pound. This would be extremely profitable - repaying the initial capital investment in less than 18 months making NexGen Energy a “top 10 global mining company” in terms of “free cash flow”.

With current low cost producers like KazAtomProm, potential low cost producers like NexGen Energy and the development of Gen IV reactors (i.e. removing the need for new mining) we believe the potential for a recovery in Uranium prices is limited.

The current annual production of Uranium is about 125 million pounds. Greenland Minerals will produce Uranium as a by-product, but only about 0.8% of global production.

### **Summary and Recommendations**

The current “bust” in the boom/bust cycle of renewable energy materials could offer an attractive opportunity to make investments in companies in this sector.

Nevertheless, we believe investors have previously been *too optimistic* about Lithium companies and have historically over-priced these shares. Lithium producers could be attractive investments, with potential to grow their business - but this is just another “commodity” business - so *costs of production, mine life, cash flows and sound financing, not inflated growth expectations, will be important factors in success or failure.*

We believe that Rare Earths could be a more attractive sector. Battery metals *could* be replaced by new battery technologies, but rare earths are important for high powered permanent magnets, needed in electric motors (especially for EVs) and generators (especially offshore wind turbines) and other uses. Greenland Minerals is a potential very low cost, very long term producer so *could* be a particularly attractive investment in this sector.

Cobalt is the most scarce battery metal, and with ethical concerns over production from the DRC, there should be potential to increase production from Australia at premium prices. While it is relatively easy to increase Lithium production, it will probably be more difficult to increase Cobalt production to meet future demand growth. That should result in less of a boom/bust market and potentially rising prices. Purchasers will be more interested in security of supply, possibly entering long term, market price linked contracts to buy fixed quantities of Cobalt production. **Ardea Resources, Australian Mines and CleanTeq** are all seeking to develop low cost, long life nickel-cobalt mines and (depending upon securing financing at appropriate terms) could all be attractive investments in this sector.

We would avoid all junior Australian Uranium explorers, but investors seeking an investment in this sector (for the next decade) could look at UK listed **KazAtomProm** and/or Canada/US listed **NexGen Energy**.

# 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													STRENGTH RATING																												
Company	Share Price	Cur- rent	4-Wk Chg.	Rank 0-99	Insider Buy-Sell	Brokers Following	Short Interest	Price to NTA	ROE	Volatility	P/E Ratio	Div Yield	P/S Ratio	Market Cap'n	Company	Share Price	Cur- rent	4-Wk Chg.	Rank 0-99	Insider Buy-Sell	Brokers Following	Short Interest	Price to NTA	ROE	Volatility	P/E Ratio	Div Yield	P/S Ratio	Market Cap'n												
<b>UNDER-VALUED SHARES:</b> Lowest Price/Sales, Yld > 0, Rel Strength > 0													<b>OVER-VALUED SHARES:</b> Highest Price/Sales Ratios, Relative Strength < 0																												
AWF Madison Grp	187	+4.2	-0.6	37	1-0	-	1.8	6	0.9	31	12.0	0.23	63	Evolve Educat.	18	+20.2	+10.4	4	2-0	-	-	-	1.4	NE	Nil	N/A	33	Blis Technology	7	+26.3	+15.0	2	2-0	-	19.4	-	2.7	NE	Nil	N/A	77
TIL Logistics	111	+2.2	-3.0	45	0-0	-	2.9	12	1.8	24	6.3	0.27	96	Sanford Limited	810	+7.0	+2.6	24	2-0	3	1.3	7	0.3	18	3.9	1.47	758	Cannasouth Ltd	58	+22.8	-15.3	4	1-0	-	-	-	1.1	NE	Nil	N/A	N/A
T&G Global	290	+2.9	+3.5	43	0-0	-	0.9	1	0.7	99	5.7	0.30	355	<b>WORST PERFORMING SHARES:</b> Weakest Shares, P/S Ratio > 0.25, Yield < Twice Average																											
Green Cross H.	119	+1.9	+3.7	48	0-0	-	1.4	13	1.2	11	8.2	0.30	170	Vital Health PT	281	-58.3	+0.0	98	0-2	4	1.6	9	0.3	17	3.1	N/A	1,619	Vital Health PT	281	-58.3	+0.0	98	0-2	4	1.6	9	0.3	17	3.1	N/A	1,619
Col Motor Co	874	+0.4	-0.3	58	1-0	-	1.3	10	0.4	13	7.2	0.32	286	Pac Edge Bio.	13	-22.5	-3.7	96	4-1	-	4.6	-	1.5	NE	Nil	N/A	64	Pac Edge Bio.	13	-22.5	-3.7	96	4-1	-	4.6	-	1.5	NE	Nil	N/A	64
Fonterra S/H Fd	405	+3.0	+2.3	41	0-0	4	2.7	-	0.6	NE	2.5	0.32	6,529	Finzsoft Sol'ns	94	-14.3	+2.2	93	0-0	-	-	-	0.7	124	Nil	0.66	8	Finzsoft Sol'ns	94	-14.3	+2.2	93	0-0	-	-	-	0.7	124	Nil	0.66	8
Warehouse Group	282	+14.9	+0.1	10	0-0	4	2.0	5	0.7	43	7.9	0.32	973	GenTech Group	385	-14.1	-4.9	92	0-0	4	1.8	6	0.4	27	4.9	3.63	379	GenTech Group	385	-14.1	-4.9	92	0-0	4	1.8	6	0.4	27	4.9	3.63	379
Abano Health.	525	+7.7	+1.8	21	0-0	2	0.9	5	0.7	18	6.3	0.49	137	Vista Group Ltd	350	-12.8	+1.9	90	4-2	4	4.0	8	0.6	47	1.3	4.43	579	Vista Group Ltd	350	-12.8	+1.9	90	4-2	4	4.0	8	0.6	47	1.3	4.43	579
Fletcher Build.	510	+1.4	+1.3	49	2-0	12	1.0	6	0.9	18	6.3	0.52	4,339	South Port NZ	715	-0.3	-3.4	65	0-0	-	4.4	23	0.2	19	5.1	4.27	188	South Port NZ	715	-0.3	-3.4	65	0-0	-	4.4	23	0.2	19	5.1	4.27	188
Ebos Group Ltd	2410	+1.3	-1.4	51	2-3	6	3.1	11	0.5	28	4.2	0.56	3,897	GenTech Group	385	-14.1	-4.9	92	0-0	4	1.8	6	0.4	27	4.9	3.63	379	GenTech Group	385	-14.1	-4.9	92	0-0	4	1.8	6	0.4	27	4.9	3.63	379
Air New Zealand	300	+3.0	+1.7	41	3-3	6	1.6	13	0.8	12	10.2	0.58	3,369	Contact Energy	721	-4.4	-4.3	77	5-5	6	1.9	5	0.4	39	6.2	2.39	5,164	Contact Energy	721	-4.4	-4.3	77	5-5	6	1.9	5	0.4	39	6.2	2.39	5,164
Turners Auto.	288	+0.7	+2.0	55	2-1	-	1.1	10	0.8	11	8.2	0.74	249	Synlait Milk	892	-2.3	+0.1	71	0-0	6	5.1	13	0.3	38	Nil	2.39	1,305	Synlait Milk	892	-2.3	+0.1	71	0-0	6	5.1	13	0.3	38	Nil	2.39	1,305
<b>BEST PERFORMING SHARES:</b> Strongest Shares, P/E < 20, P/S < 1.0													<b>INSIDER BUYING:</b> Most Insider Buying, Relative Strength > 0																												
Good Spirits	14	+9.0	+0.1	18	0-0	-	0.5	4	3.7	11	Nil	0.24	6	Oceania Health.	131	+7.2	+5.3	22	11-1	-	-	0.9	18	3.6	4.22	799	Oceania Health.	131	+7.2	+5.3	22	11-1	-	-	0.9	18	3.6	4.22	799		
Abano Health.	525	+7.7	+1.8	21	0-0	2	0.9	5	0.6	18	6.3	0.49	137	MetLifeCare	687	+16.6	+9.8	6	6-0	4	1.0	3	0.5	37	1.6	N/A	1,465	MetLifeCare	687	+16.6	+9.8	6	6-0	4	1.0	3	0.5	37	1.6	N/A	1,465
Air New Zealand	300	+3.0	+1.7	41	3-3	6	1.6	13	0.6	12	10.2	0.58	3,369	F & P Health.	2150	+18.8	+3.6	5	3-0	7	55.5	86	0.2	65	1.5	N/A	12,272	F & P Health.	2150	+18.8	+3.6	5	3-0	7	55.5	86	0.2	65	1.5	N/A	12,272
Green Cross H.	119	+1.9	+3.7	48	0-0	-	1.4	13	0.9	11	8.2	0.30	170	Hearland Group	183	+6.2	+2.7	26	3-0	-	1.8	10	0.4	18	5.7	6.40	860	Hearland Group	183	+6.2	+2.7	26	3-0	-	1.8	10	0.4	18	5.7	6.40	860
Fletcher Build.	510	+1.4	+1.3	49	2-0	12	1.0	6	0.8	18	6.3	0.52	4,339	Chorus Ltd	634	+5.4	+5.0	29	5-2	5	2.8	5	0.5	53	5.0	2.87	2,785	Chorus Ltd	634	+5.4	+5.0	29	5-2	5	2.8	5	0.5	53	5.0	2.87	2,785
Turners Auto.	288	+0.7	+2.0	55	2-1	-	1.1	10	0.7	11	8.2	0.74	249	Fletcher Build.	510	+1.4	+1.3	49	2-0	12	1.0	6	0.7	18	6.3	0.52	4,339	Fletcher Build.	510	+1.4	+1.3	49	2-0	12	1.0	6	0.7	18	6.3	0.52	4,339
Col Motor Co	874	+0.4	-0.3	58	1-0	-	1.3	10	0.3	13	7.2	0.32	286	<b>INSIDER SELLING:</b> Most Insider Selling, Relative Strength < 0																											
<b>INCOME SHARES:</b> Highest Yields, Capitalisation > NZ\$100 million													<b>INSIDER SELLING:</b> Most Insider Selling, Relative Strength < 0																												
Sky Network TV	71	-20.7	-2.6	94	0-0	6	0.8	28	0.8	3	14.7	0.35	276	Vital Health PT	281	-58.3	+0.0	98	0-2	4	1.6	9	0.3	17	3.1	N/A	1,619	Vital Health PT	281	-58.3	+0.0	98	0-2	4	1.6	9	0.3	17	3.1	N/A	1,619
Z Energy Ltd	469	-12.2	-2.0	89	3-0	5	2.0	20	0.6	10	12.7	0.34	1,876	Allied Farmers	67	-2.0	+1.0	69	0-1	-	26.6	28	0.8	95	0.4	5.63	120	Allied Farmers	67	-2.0	+1.0	69	0-1	-	26.6	28	0.8	95	0.4	5.63	120
Tourism Hold.	335	-11.5	-2.5	88	3-0	4	1.6	11	0.5	15	11.2	1.05	442	Kiwi Property	154	-1.0	-2.0	66	1-2	6	1.1	7	0.4	16	4.5	7.71	2,207	Kiwi Property	154	-1.0	-2.0	66	1-2	6	1.1	7	0.4	16	4.5	7.71	2,207
Air New Zealand	300	+3.0	+1.7	41	3-3	6	1.6	13	0.5	12	10.2	0.58	3,369	Sol. Dynamics	160	-2.0	+1.3	69	1-2	-	7.5	34	0.4	22	4.6	1.39	22	Sol. Dynamics	160	-2.0	+1.3	69	1-2	-	7.5	34	0.4	22	4.6	1.39	22
Hallenstein G.	605	+8.8	-2.2	19	0-14	-	5.2	40	0.5	13	10.1	1.29	358	<b>INSIDER SELLING:</b> Most Insider Selling, Relative Strength < 0																											
PGG Wrightsons	236	-23.4	+3.8	97	5-0	1	0.4	1	0.7	45	8.8	0.22	178	Vital Health PT	281	-58.3	+0.0	98	0-2	4	1.6	9	0.3	17	3.1	N/A	1,619	Vital Health PT	281	-58.3	+0.0	98	0-2	4	1.6	9	0.3	17	3.1	N/A	1,619
Steel & Tube	80	-9.0	+1.0	85	2-0	4	0.5	4	0.9	13	8.7	0.27	133	Allied Farmers	67	-2.0	+1.0	69	0-1	-	26.6	28	0.8	95	0.4	5.63	120	Allied Farmers	67	-2.0	+1.0	69	0-1	-	26.6	28	0.8	95	0.4	5.63	120
Turners Auto.	288	+0.7	+2.0	55	2-1	-	1.1	10	0.6	11	8.2	0.74	249	Kiwi Property	154	-1.0	-2.0	66	1-2	6	1.1	7	0.4	16	4.5	7.71	2,207	Kiwi Property	154	-1.0	-2.0	66	1-2	6	1.1	7	0.4	16	4.5	7.71	2,207
Green Cross H.	119	+1.9	+3.7	48	0-0	-	1.4	13	0.8	11	8.2	0.30	170	Sol. Dynamics	160	-2.0	+1.3	69	1-2	-	7.5	34	0.4	22	4.6	1.39	22	Sol. Dynamics	160	-2.0	+1.3	69	1-2	-	7.5	34	0.4	22	4.6	1.39	22
Warehouse Group	282	+14.9	+0.1	10	0-0	4	2.0	5	0.4	43	7.9	0.32	973	<b>INSIDER SELLING:</b> Most Insider Selling, Relative Strength < 0																											
<b>INSIDER BUYING:</b> Most Insider Buying, Relative Strength > 0													<b>INSIDER SELLING:</b> Most Insider Selling, Relative Strength < 0																												
Oceania Health.	131	+7.2	+5.3	22	11-1	-	-	0.9	18	3.6	4.22	799	Vital Health PT	281	-58.3	+0.0	98	0-2	4	1.6	9	0.3	17	3.1	N/A	1,619	Vital Health PT	281	-58.3	+0.0	98	0-2	4	1.6	9	0.3	17	3.1	N/A	1,619	
MetLifeCare	687	+16.6	+9.8	6	6-0	4	1.0	3	0.5	37	1.6	N/A	1,465	Allied Farmers	67	-2.0	+1.0	69	0-1	-	26.6	28	0.8	95	0.4	5.63	120	Allied Farmers	67	-2.0	+1.0	69	0-1	-	26.6	28	0.8	95	0.4	5.63	120
F & P Health.	2150	+18.8	+3.6	5	3-0	7	55.5	86	0.2	65	1.5	N/A	12,272	Kiwi Property	154	-1.0	-2.0	66	1-2	6	1.1	7	0.4	16	4.5	7.71	2,207	Kiwi Property	154	-1.0	-2.0	66	1-2	6	1.1	7	0.4	16	4.5	7.71	2,207
Hearland Group	183	+6.2	+2.7	26	3-0	-	1.8	10	0.4	18	5.7	6.40	860	Sol. Dynamics	160	-2.0	+1.3	69	1-2	-	7.5	34	0.4	22	4.6	1.39	22	Sol. Dynamics	160	-2.0	+1.3	69	1-2	-	7.5	34	0.4	22	4.6	1.39	22
Chorus Ltd	634	+5.4	+5.0	29	5-2	5	2.8	5	0.5	53	5.0	2.87	2,785																												



Company	Share Price	STRENGTH RATING				Insider Buy/Sell	Brokers Following	Short Interest	P/E to N/A	ROE	Volatility	P/E Ratio	Div Yield	P/S Ratio	Market Cap'n
		Cur-rent	4-Wk Chg.	Rank 0-99											
Excelsior Cap.	147	+5.7	+4.7	23	2-0	-	-	1.3	12	0.8	10	4.1	0.72	43	
Dicker Data Ltd	675	+7.6	-8.6	19	10-0	-	0.2	-	-	0.4	33	2.7	0.73	1,091	
Super Retail Gr	1007	+6.1	-0.5	22	1-0	10	8.3	29.6	-	0.5	14	5.0	0.73	1,989	
Village Road.	381	+11.4	+7.2	14	0-0	5	0.0	-	-	0.5	NE	1.3	0.75	744	
Austral Limited	400	+9.1	-6.0	17	0-0	5	0.4	-	-	0.5	23	1.5	0.76	1,426	
Orora Limited	331	+3.4	+2.8	29	2-2	9	0.3	3.6	15	0.5	25	3.9	0.84	3,994	
AV Jennings	62	+4.3	+1.9	27	1-0	1	-	0.6	4	1.1	15	6.5	0.84	250	
Woolworths Grp	3782	+5.8	-1.9	23	0-0	11	0.6	16.4	53	0.3	31	2.5	0.87	47,699	
Acrow Formwork	35	+2.8	+7.2	30	3-0	2	0.0	-	-	1.4	12	5.7	0.87	72	
Mortgage Choice	125	+11.2	-1.3	14	1-0	-	0.8	1.6	14	1.0	11	4.8	0.88	156	
Waterco Ltd	215	+7.4	-0.9	20	0-1	-	-	1.3	4	0.6	35	2.3	0.88	80	
Q.B.E. Insur.	1319	+3.0	+0.6	30	0-0	11	0.6	2.0	6	0.4	32	3.8	0.90	17,278	
Schaffer Corp	1518	+1.6	+1.3	34	2-0	-	-	2.9	32	0.3	9	3.0	0.92	210	
Shine Corporate	95	+11.1	+0.7	15	0-0	2	-	-	-	1.1	9	1.1	0.93	164	
Janus Henderson	3569	+8.4	+1.4	18	0-0	10	1.6	-	-	0.4	4	5.7	0.95	1,368	
Aust Finance Gr	286	+24.1	-1.6	6	0-2	3	0.0	5.7	31	0.6	19	3.7	0.96	617	
People Infra.	330	+4.7	-1.1	25	1-1	4	0.0	-	-	0.7	42	1.2	0.97	242	
Asaleo Care Ltd	105	+5.2	+2.4	24	0-0	4	0.5	5.5	55	1.1	10	9.5	0.97	570	
Generation Dev.	74	+10.1	-3.1	16	3-0	-	-	7.4	42	1.1	18	2.7	0.98	93	
C.S.R. Ltd	485	+10.6	+1.2	15	2-0	9	4.7	2.4	18	0.4	14	5.4	0.99	2,384	
Mayfield Child.	101	+2.5	+0.6	31	2-0	-	-	-	-	0.9	7	8.9	0.99	31	
Beacon Lighting	117	+4.2	-0.5	27	0-0	3	0.6	4.7	29	0.8	16	4.2	1.04	258	
AGL Energy Ltd	2047	+0.9	+2.3	37	5-1	11	1.8	3.1	37	0.3	8	5.7	1.05	13,111	
Engenco Ltd	59	+6.6	-0.8	21	4-0	-	-	-	-	1.2	13	2.5	1.06	185	
XRF Scientific	23	+8.2	-5.2	18	0-0	1	-	2.1	15	2.1	14	4.3	1.06	31	
Academies Aust.	56	+9.2	-10.6	17	14-0	-	-	56.0	-	1.1	15	6.6	1.08	71	
Origin Energy	873	+7.0	+0.9	20	0-2	11	0.7	2.5	19	0.5	13	2.7	1.09	15,375	
Adairs Limited	233	+11.7	+3.6	14	5-0	6	1.9	-	-	0.7	13	6.2	1.12	394	
Reckon Limited	76	+8.3	-0.6	18	1-0	2	0.0	-	-	0.9	11	4.0	1.13	86	
Alliance Aviat.	250	+0.5	+2.5	38	1-1	4	0.6	2.1	15	0.5	14	6.2	1.13	319	
Kelly Partners	100	+2.4	+0.3	31	1-0	-	-	-	-	1.0	10	4.4	1.14	45	
PTB Group Ltd	80	+6.8	+0.2	21	0-1	-	-	1.2	8	1.0	15	8.8	1.16	60	
Reece Limited	1160	+2.2	+1.3	32	0-0	4	0.1	1.3	4	0.4	32	1.7	1.19	6,506	

**BEST PERFORMING SHARES:** Strongest Shares, P/E < 20, P/S < 1.0

Aust Finance Gr	286	+24.1	-1.6	6	0-2	3	0.0	5.7	31	0.6	19	3.7	0.96	617
Shaver Shop Grp	66	+20.5	-5.1	8	1-0	2	0.0	-	-	0.8	12	6.8	0.70	83
Quantum Health	4	+17.0	+20.5	10	0-0	-	-	-	-	3.3	14	Nil	0.70	41
Salmat Ltd	83	+15.7	+12.9	11	0-0	-	-	5.9	-	0.7	2	1.2	0.66	166
MacMahon Hold	28	+15.1	+9.6	11	1-0	2	0.1	1.9	15	1.2	13	1.8	0.53	603
CPT Global Ltd	20	+13.4	+0.9	12	0-0	-	-	19.5	-	1.5	7	3.8	0.26	7
Ashley Services	40	+12.2	+1.1	13	0-0	-	-	3.3	31	1.2	10	6.8	0.20	57
Motorcycle Hold	198	+12.2	-5.6	13	2-0	2	-	5.1	35	0.7	15	Nil	0.39	122
Tap Oil	13	+12.2	-5.3	13	0-0	-	-	0.8	29	1.9	3	Nil	0.85	53
Michael Hill	74	+11.6	+1.3	14	2-0	3	0.2	-	-	1.0	17	5.4	0.50	285
Mortgage Choice	125	+11.2	-1.3	14	1-0	-	0.8	1.6	14	0.8	11	4.8	0.88	156
Shine Corporate	95	+11.1	+0.7	15	0-0	2	-	1.1	9	0.9	12	4.0	0.93	164
Qantas Airways	700	+11.0	+1.0	15	3-0	10	0.8	4.4	36	0.3	12	3.6	0.61	10,436
C.S.R. Ltd	485	+10.6	+1.2	15	2-0	9	4.7	2.4	18	0.3	14	5.4	0.99	2,384
Bluescope Steel	1549	+10.1	+5.6	16	1-1	10	0.7	2.6	32	0.4	8	0.9	0.64	7,831
Generation Dev.	74	+10.1	-3.1	16	3-0	-	-	7.4	42	0.9	18	2.7	0.98	93
Korvest Ltd	362	+8.6	+1.1	18	0-0	1	-	1.4	10	0.4	14	4.4	0.67	41
Autosports Grp	149	+8.6	-6.9	18	1-0	-	0.0	-	-	0.6	19	3.4	0.18	299
Janus Henderson	3569	+8.4	+1.4	18	0-0	10	1.6	-	-	0.3	4	5.7	0.95	1,368
Medusa Mining	85	+8.3	-4.2	18	0-0	-	-	0.7	17	1.1	4	Nil	0.96	177
BSA Ltd	38	+7.6	-7.8	19	0-0	-	-	7.6	50	1.2	15	1.3	0.35	163
Simonds Group	42	+7.4	+2.3	20	0-1	-	-	-	-	1.2	5	Nil	0.09	60
Coles Group	1566	+7.0	-1.8	20	5-0	-	0.8	-	-	0.5	19	1.5	0.55	20,889
Fleetwood Corp	208	+6.7	-0.1	21	0-0	3	-	0.9	7	0.6	14	Nil	0.62	197
Super Retail Gr	1007	+6.1	-0.5	22	1-0	10	8.3	29.6	-	0.4	14	5.0	0.73	1,989
Excelsior Cap.	147	+5.7	+4.7	23	2-0	-	-	1.3	12	0.6	10	4.1	0.72	43
Downer EDI Ltd	863	+5.5	+0.2	23	2-0	6	1.4	7.3	37	0.3	20	3.2	0.40	5,132
Maca Limited	100	+5.5	+1.1	24	1-0	3	0.3	0.9	7	0.9	12	6.5	0.48	268
Asaleo Care Ltd	105	+5.2	+2.4	24	0-0	4	0.5	5.5	55	0.9	10	9.5	0.97	570
Bisalloy Steel	114	+5.0	+0.9	24	0-0	-	-	2.3	17	0.6	14	3.5	0.52	51
TPC Cons.	90	+4.9	-1.7	25	0-0	-	-	45.0	-	0.7	5	Nil	0.12	10
AV Jennings	62	+4.3	+1.9	27	1-0	1	-	0.6	4	0.8	15	6.5	0.84	250
Ive Group	251	+3.9	+4.7	27	0-0	3	0.1	-	-	0.4	14	6.2	0.53	372
Valmec Limited	29	+3.7	-4.9	28	5-3	-	-	1.5	15	1.5	10	Nil	0.33	36
Sigma Health.	59	+3.6	-1.7	28	2-1	5	0.4	1.4	9	0.8	17	7.6	0.16	625
Horizon Oil Ltd	13	+3.3	-4.5	29	0-0	-	0.0	1.2	36	2.0	3	Nil	0.97	169
Rio Tinto Ltd	10243	+3.3	+3.0	29	1-0	14	4.2	3.7	-	0.2	2	4.3	0.66	38,024
Aust Vintage	52	+3.2	+0.3	29	0-0	2	-	0.7	4	0.8	18	3.9	0.54	145
Acrow Formwork	35	+2.8	+7.2	30	3-0	2	0.0	-	-	1.0	12	5.7	0.87	72
RXP Services	52	+2.6	-0.4	31	0-0	-	-	5.2	49	0.9	11	6.7	0.58	84
Mayfield Child.	101	+2.5	+0.6	31	2-0	-	-	-	-	0.7	7	8.9	0.99	31
Prime Financial	8	+2.0	-1.4	33	0-0	-	-	3.9	34	2.3	11	5.2	0.72	15
Shriro Holdings	68	+1.8	-1.3	33	0-0	-	-	1.4	17	0.9	8	4.4	0.36	65
TransMetro Corp	126	+1.8	+0.3	34	0-0	-	-	1.4	18	0.6	8	7.9	0.59	17
Schaffer Corp	1518	+1.6	+1.3	34	2-0	-	-	2.9	32	0.3	9	3.0	0.92	210
Sth Cross Elect	59	+1.4	+0.4	35	0-0	1	-	4.2	39	1.0	11	5.1	0.35	137
Perent Global	161	+0.5	-9.8	30	0-0	7	0.2	0.8	13	0.7	6	4.4	0.67	1,102
Sims Metal Mgmt	1148	+0.3	+2.5	39	2-0	10	5.9	1.3	8	0.4	15	3.7	0.35	2,330
Embelton Ltd	1100	+0.0	+0.8	40	0-0	-	-	1.6	8	0.2	19	3.6	0.41	24
Pact Group Hold	268	+0.0	+4.4	41	11-0	6	4.7	-	-	0.4	17	8.6	0.50	922

**INCOME SHARES:** Highest Yields, Capitalisation > A\$250 million

Azure Minerals	14	-5.1	-10.9	61	1-0	-	-	-	-	1.3	1%	170.00	10	279
HT&E Limited	170	-5.3	-1.4	62	2-0	5	4.7	-	-	0.6	11	46.5	1.79	476
Jupiter Mines	31	-12.7	-3.7	79	0-0	-	-	1.7	-	1.2	4	24.6	3.17	597
Alumina Ltd	231	-0.1	-0.0	43	0-0	10	3.9	2.7	36	0.5	7	13.9	N/A	6,652
Yancoal Aust.	286	-5.7	+0.4	63	0-0	-	-	4.0	90	0.3	4	13.6	0.78	3,776

Company	Share Price	STRENGTH RATING				Insider Buy/Sell	Brokers Following	Short Interest	P/E to N/A	ROE	Volatility	P/E Ratio	Div Yield	P/S Ratio	Market Cap'n
		Cur-rent	4-Wk Chg.	Rank 0-99											
Eclipx Group	143	-0.2	-4.8	45	0-0	4	3.3	3.6	49	0.7	7	11.2	0.60	455	
US Masters Res.	90	-4.6	+7.4	60	0-0	-	-	0.5	-	0.5	NE	11.2	8.44	330	
WPP AUNZ Ltd	57	-4.1	+2.2	58	0-0	-	0.2	-	-	0.8	10	11.2	0.46	481	
Bank of Qland	735	-9.5	-4.7	72	6-0	14	6.3	1.0	12	0.3	9	10.3	1.41	3,249	
OM Holdings	50	-21.7	+4.9	91	5-1	-	0.0	2.1	-	0.9	2	10.1	0.24	366	
Stanmore Coal	110	-11.1	-2.0	76	0-0	-	0.0	-	-	0.7	3	10.0	0.70	282	
Asaleo Care Ltd	105	+5.2	+2.4	24	0-0	4	0.5	5.5	55	0.8	10	9.5	0.97	570	
Centuria Cap'l	229	+10.3	-2.2	16	2-0	-	0.1	2.9	17	0.3	17	9.2	0.57	1,028	
Antipodes Gbl	105	+2.1	+2.8	33	1-0	-	-	0.9	1	0.7	75	9.0	N/A	579	
Sth Cross Media	89	-16.2	-3.5	84	3-0	4	0.9	-	-	0.5	10	8.8	1.03	681	
Navigator Gl In	279	-13.2													

## “Insider” Trades in NZ Shares

The table below shows the number of Purchases and Sales of a company's shares by its Directors over the last twelve months (excluding “Neutral” situations where the number of Buyers and Sellers were equal). Shares where many “insiders” have been buying can outperform the market for up to two years, while shares where many “insiders” have sold can under-perform for a similar period.

### “Insider” Indicators

Last 5 wks: 75.0% Buyers  
Last 13 wks: 58.8% Buyers

Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers
A2 Milk Company	0-7	Ebos Group Ltd	2-3	Kiwi Property	1-2	Plexure Group	0-1	Spark NZ Ltd	1-3
AWF Madison Grp	1-0	Evolve Educat.	2-0	Mainfreight Grp	4-5	Precinct Prop.	0-1	Steel & Tube	2-0
Akd Int Airport	0-4	F & P Health.	3-0	Marlin Global	0-1	Pushpay Hold.	1-0	Tilt Renewables	1-0
Allied Farmers	0-1	Fletcher Build.	2-0	Marsden Mar.	1-0	Ryman Health.	2-4	Tourism Hold.	3-0
Arvida Group	0-1	Genesis Energy	2-1	Meridian Energy	1-0	Sanford Limited	2-0	TruScreen Ltd	2-0
Blis Technology	2-0	Goodman Prop.	1-6	MetLifeCare	6-0	Scales Corp Ltd	0-6	Turners Auto.	2-1
Briscoe Group	0-1	Hallenstein G.	0-14	NZ Exchange Ltd	1-0	Seeka Kiwifruit	3-1	Vector Ltd	0-2
Cannasouth Ltd	1-0	Heartland Group	3-0	NZ Oil & Gas	0-1	Serko Limited	1-0	Vista Group Ltd	4-2
Chorus Ltd	5-2	Infracol NZ	1-0	NZ Windfarms	0-1	Skellerup Hold.	1-0	Vital Health PT	0-2
Col Motor Co	1-0	Just Life Group	1-0	Oceania Health.	11-1	Sky City Ltd	1-0	Vital Ltd	1-0
Comvita	9-0	Kingfish Ltd	0-1	PGG Wrightsons	5-0	Sol. Dynamics	1-2	Z Energy Ltd	3-0
				Pac Edge Bio.	4-1				

## “Insider” Trades in Australian Shares

The table below shows the number of Purchases and Sales of a company's shares by its Directors over the last twelve months (excluding “Neutral” situations where the number of Buyers and Sellers were equal). Shares where many “insiders” have been buying can outperform the market for up to two years, while shares where many “insiders” have sold can under-perform for a similar period.

### “Insider” Indicators

Last 5 wks: 86.6% Buyers  
Last 13 wks: 86.7% Buyers

Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers
1ST Group Ltd	2-0	Acrow Formwork	3-0	Ambition Group	4-0	Aurizon Hold.	2-0	BHP Group Ltd	0-1
360 Capital TR	1-0	Acrux Ltd	3-0	Ancor Ltd	0-1	Aurora Labs	4-0	BKI Invest Coy	3-0
360 Cap Digital	6-0	Adacel Tech.	1-0	Anatara Life.	2-0	Aurora Prop B-W	6-0	BNK Banking	3-0
3P Learning	3-0	Adairs Limited	5-0	Angel Seaford	1-0	Auroch Minerals	1-0	BTC Health	2-0
A.P. Eagers	2-0	Adelaide Bright	3-0	Anglo Australia	0-1	AusCann Group	2-0	BUBS Australia	0-1
A2B Australia	3-0	Adslot Ltd	4-0	Ansell Ltd	0-3	AusNet Services	0-2	BWX Limited	2-0
AD1 Holdings	1-0	Advance NanoTek	11-3	Anson Resources	1-0	Ausgold Ltd	6-0	Bailador Tech.	2-0
ADX Energy Ltd	1-0	Adveritas Ltd	1-0	Antisense T.	1-0	Aust Foundation	2-0	Bank of Q'land	6-0
AGL Energy Ltd	5-1	Aeon Metals	2-0	Antipodes Gbl	1-0	Aust Finance Gr	0-2	Bannerman Res.	1-0
AIC Mines Ltd	1-0	Aeormetrex Ltd	1-0	Apollo Tourism	4-0	Aust Leaders Fd	8-0	Bapcor Limited	0-1
AL Legal Group	1-0	Aeris Tech Ltd	0-1	Appen Limited	0-1	Aust Rural Cap.	1-0	Bardoc Gold	3-0
ALS Limited	2-1	African Gold	1-0	Arafura Res.	1-0	Aust Vanadium	2-1	Base Resources	0-1
AMA Group Ltd	4-1	Afterpay Ltd	0-2	Ardent Leisure	10-0	Aust Pharm. Ind	4-0	Beach Energy	2-1
AMCIL Limited	2-0	Agency Grp Aust	5-0	Ardiden Limited	1-0	Aust Pri. Hemp	1-0	Beam Commun.	2-1
AMP Ltd	5-0	Aims Property	1-0	Argent Minerals	1-0	Australis O & G	6-0	Bega Cheese Ltd	3-0
APA Group	3-0	Alacer Gold	0-2	Argo Global LI	1-0	Aust United In	1-0	Bell Financial	1-0
APN Property	8-0	Alara Resources	1-0	Artimis Res.	2-0	Austin Eng.	1-0	Bendigo Bank	3-0
ARB Corporation	0-1	Alcidian Group	3-1	Aspen Group Ltd	1-2	Aust Ethical In	1-2	Bid Energy Ltd	5-0
ARQ Group	6-1	Alita Resources	0-1	Astivita Ltd	0-1	Aust Dairy Nut.	0-1	Big River Gold	3-0
ASX Limited	1-0	Alkane Explor.	2-0	Atlas Arteria	10-0	Auth Invest Fd	1-0	Bigtincan Hold.	2-1
AUB Group	5-1	Allegiance Coal	2-0	Atomos Limited	1-0	Autosports Grp	1-0	Bingo Indust.	8-0
AV Jennings	1-0	Alliance Res.	2-0	Atrum Coal Ltd	1-2	Aventus Retail	0-2	Bioxyne Ltd	2-0
AVA Risk Group	5-1	Alpha HPA Ltd	0-1	AuMake Int.	2-0	Axiom Property	1-0	Blackwall Ltd	1-0
Abacus Property	6-0	Alterra Ltd	3-0	Auctus Alt Inv	1-0	Azure Minerals	1-0	Black Dragon Gd	6-0
Absolute Equity	4-0	Althea Group	6-0	Audio Pixels	1-0	Azure Health.	5-0	Black Rock Min.	1-0
Academies Aust.	14-0	Altium Limited	1-0	Audinate Group	2-0	BARD1 Life Sci.	1-0	Blackmores Ltd	2-1
Accent Group	1-9	Amani Gold	1-0	Aurelia Metals	3-0	BBX Minerals	0-1	Blackstone Min.	7-0
Acom Capital	1-0	Ambertech Ltd	1-0	Auris Minerals	1-0	BCI Minerals	1-0	Blackwall Prop.	25-0

Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers
Blue Sky Alter.	1-0	Coles Group	5-0	Equatorial Res.	1-0	Grand Gulf En.	1-0	Jindalee Res.	1-0
Boadicea Res.	1-0	Collins Foods	0-1	Equity Trustees	1-0	Greenland Min.	2-0	Johns Lyng Grp	1-0
Boart Longyear	2-0	Collection Hse	4-0	Estia Health	5-0	Greenvale En.	1-0	Joyce Corp.	1-0
Bod Australia	2-0	Com'wealth Bank	3-0	Etherstack plc	1-0	Gt Southern Min	2-0	Jumbo Interact.	5-4
Botanix Pharma.	0-1	Comet Ridge Ltd	2-0	Eureka Group	0-2	Gt Western Exp.	1-0	K-TIG Limited	0-1
Bowen Coking C.	0-1	Commschoice	3-0	Euro Limited	2-0	Gulf Manganese	2-1	K2 Asset Mgmt	0-1
Bravura Sol.	0-3	Computershare	4-3	Euro Lithium	4-0	Gullewa Ltd	5-1	K2fly Ltd	2-0
Breaker Res NL	1-0	Connexion Tele.	2-3	Evans Dixon Ltd	2-0	HGL Limited	1-0	KGL Resources	2-0
Breville Group	8-0	Connected IO	2-0	Event Hospital.	1-0	HHY Fund	2-0	KYCKR Limited	2-1
Brisbane Bronco	1-0	Cons Zinc Ltd	5-1	Evolution Min.	0-2	HRL Holdings	4-0	Kalium Lakes	0-1
Brockman Mining	4-1	Contrarian Val.	1-0	Excelsior Cap.	2-0	HT&E Limited	2-0	Kangaroo Island	1-0
Brookside En.	1-0	Contango Asset	4-0	Experience Co	4-0	HUB24 Limited	3-2	Karoon Energy	2-1
Broo Limited	0-2	Corp Travel M.	3-0	F.F.I. Holdings	1-0	Hammer Metals	3-0	Kazia Thera.	2-0
Buddy Tech.	0-1	Costa Group	7-1	FE Investments	1-0	Hankstone Min.	1-0	Kelly Partners	1-0
Buxton Res.	1-0	Countplus Ltd	5-0	FSA Group Ltd	1-0	Hansen Tech.	1-0	Kin Mining NL	6-0
C.S.R. Ltd	2-0	Coventry Group	3-0	FYI Resources	6-1	Harvey Norman	1-0	Kina Securities	5-0
CCP Technology	1-0	Credit Corp	2-12	Family Insights	9-0	Havilah Res.	1-0	Kingwest Res.	4-0
CFoam Limited	3-0	Credit Int.	3-0	Fat Prophets Gl	9-0	Healius Ltd	2-0	King Island Sc.	1-0
CIMIC Group	2-0	Croplogix Ltd	3-0	Fatfish B'chain	0-1	Healthia Ltd	2-0	Kingston Res.	2-0
CML Group	2-1	Crown Media	2-0	Field Solutions	2-0	Helix Resources	1-0	Kingrose Mining	2-0
CSG Ltd	1-0	Cullen Resource	2-0	Fiji Kava Ltd	4-0	Helloworld Trav	8-0	Kogan.com Ltd	2-3
CSL Limited	0-1	Cyclopharm Ltd	3-0	Finbar Group	4-1	Hills Limited	4-0	Kogi Iron Ltd	1-0
Cadence Capital	31-0	Cyprium Metals	3-0	Firstwave Cloud	0-1	Holista Coll.	1-0	L1 Long Short	53-0
Calidus Res.	1-0	Datadot Tech.	1-0	First Graphene	1-0	Hutchison Tel.	5-0	LBT Innovations	3-0
Caltex Austria	1-0	Data 3 Ltd	3-2	Fitzroy River	1-0	IDP Education	1-3	Lake Resources	0-1
Candy Club Hold	1-0	De Grey Mining	1-0	Flagship Invest	4-0	IMF Bentham Ltd	1-0	Laneway Res.	0-2
Cannpal Animal	5-0	Decmil Group	2-1	Flexicorp Ltd	4-0	IODM Limited	2-1	Laramide Res.	3-0
Canyon Res.	0-1	Desane Group	6-0	Flexiroam Ltd	1-0	IOOF Holdings	1-0	Laserbond Ltd	0-1
Cape Lambert R.	1-0	Devex Resources	4-0	Flight Centre	3-0	IPH Limited	0-1	Latitude Cons.	1-0
Capital Health	1-0	Dexus	2-1	Fluence Corp.	1-0	Identitii Ltd	4-0	LawFinance Ltd	5-0
Caprice Res.	1-0	Diatreme Res.	0-1	Force Comm.	1-0	Iluka Resources	3-0	Lepidico Ltd	0-1
Capricorn Metal	3-0	Dicker Data Ltd	10-0	Founders First	2-0	Image Resources	3-0	Lifespot Health	1-0
Carawine Res.	2-0	Digital CC Ltd	1-0	Freedom Foods	1-0	Imdex Limited	1-4	Link Admin.	5-0
Carlton Invest	0-2	Div. United Inv	1-0	Freelancer Ltd	2-0	Immuron Ltd	5-0	Liontown Res.	1-0
Carnarvon Pet.	4-0	Djerriwarrah	1-0	Freehill Mining	2-0	Imperial Pac.	1-0	Lion Selection	3-0
Carnegie Clean	2-0	Dongfang Modern	1-0	Frontier Res.	0-1	Impedimed Ltd	4-0	Lion Energy Ltd	1-0
Carsales.com	3-0	Downer EDI Ltd	2-0	Future Gen Inv	4-0	Imugene Ltd	0-1	Liq Natural Gas	0-1
Cash Converters	1-0	Dreadnought Res	0-1	Future Gen Glb	3-0	Incitec Pivot	1-0	Locality Plan.	2-1
Castillo Copper	3-0	Duketon Mining	1-0	G.U.D. Holdings	4-0	Independ. Group	0-1	Logicamms Ltd	2-0
Catapult Group	0-1	Duxton Water	2-0	G8 Education	4-0	Indiana Res.	1-0	Longtable Group	1-0
Catalyst Metals	0-3	ECS Botanics	1-0	GDI Property	0-1	Indoor Skydive	1-0	Lucapa Diamond	4-0
Cazaly Res Ltd	4-0	EVZ Ltd	1-0	GPT Group	1-0	Inf. Lithium	1-0	Lycopodium Ltd	0-2
Cedar Woods Prp	0-1	Eagle Health	0-1	GTN Limited	2-0	Infomedia Ltd	1-0	Lynas Corp Ltd	1-0
Centrepont All	3-0	Easton Invest.	2-0	GWA Group Ltd	1-0	Ingenia Com Grp	4-0	MFF Capital Inv	4-0
Central Petrol.	2-0	Eildon Capital	1-0	Galaxy Res.	4-0	Inghams Group	5-0	MMJ Group	2-0
Centuria Metro.	2-0	Elders Limited	3-0	Galan Lithium	5-0	Insurance Aust.	0-2	MNF Group	0-1
Centuria Cap'l	2-0	Electro Optic	1-0	Galena Mining	1-0	Int Research	7-0	MSL Solutions	3-0
Champion Iron	4-1	Elementos Ltd	1-0	Gale Pacific	2-0	IntelliHR Ltd	1-0	MXG Pharm.	3-0
Chant West Hold	2-0	Elixir Energy	2-0	Galilee Energy	5-0	Integral Diag.	0-3	MacMahon Hold	1-0
Chase Mining	5-0	Ellerston Asia	1-0	Garda Div Prop	1-0	Investigator R.	1-0	Macarthur Min.	1-0
Cirralto Ltd	0-3	Ellex Medical	1-0	Genetic Sign.	0-1	Investsmart Grp	7-0	Maca Limited	1-0
Cirrus Networks	3-0	Ellerton Global	3-0	Generation Dev.	3-0	Invision Limited	0-1	Macquarie Group	3-0
Citadel Group	11-0	Elsight Limited	1-0	Genetic Tech.	0-1	Invitrocue Ltd	1-0	Magellan Fin Gp	1-0
Citigold Corp	1-0	Empired Ltd	3-0	Genworth Mort.	2-0	Invictus Energy	1-0	Magnetic Res.	0-1
Class Limited	3-0	Empire Sec.	6-0	Geopacific Res.	2-0	Invocare Ltd	3-2	Magnis Energy T	10-1
Cleanaway Waste	4-0	Empire Energy	6-0	Glennon Sm Coys	1-0	Iooneer Limited	2-0	Mainstream Grp	2-1
Clean Teq Hold.	0-1	Envision Med.	1-0	Global Value Fd	5-0	Iron Road Ltd	1-0	Mako Gold Ltd	1-0
Clime Capital	2-0	Energy Action	2-0	Global Energy V	1-0	Ironbark Cap'l	11-1	Mali Lithium	1-0
Clime Inv Mgmt	1-0	Enerco Refresh	0-9	Globe Metals	2-0	Ironbark Zinc	11-0	Mandrake Res.	2-0
Clinuvel Pharm.	3-0	Energy World	1-0	Globe Int'l Ltd	1-0	Iselect Limited	2-0	Marmota Ltd	6-0
Clover Corp.	2-1	Enero Group Ltd	4-0	Golden Deeps	2-0	Isentia Group	3-0	Mastermyne Grp	1-0
Coassets Ltd	0-2	Engenco Ltd	4-0	Gold Road Res.	1-3	Jadar Resources	1-0	Matador Mining	2-0
Cobalt Blue	1-0	Ensurance Ltd	9-0	Goodman Group	1-3	James Hardie	2-0	Matsa Resources	2-0
Codan Ltd	0-3	Environm't Grp	1-0	Grange Resource	0-1	Japara Health.	2-0	Maxi TRANS	5-0
Cogstate Ltd	1-0	Envirosuite Ltd	2-0			Jayride Group	2-1	Mayfield Child.	2-0



Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers	Company	Insider Buyers-Sellers
McMillan Shake.	3-1	OZ Minerals Ltd	3-0	Qube Holdings	0-1	Sigma Health.	2-1	Titan Minerals	3-0
McPherson's Ltd	2-1	Oakajee Corp.	1-0	Quickstep Hold.	3-0	Silex Systems	2-0	Tlou Energy Ltd	2-0
Medical Dev Int	1-0	Objective Corp.	1-2	RBR Group	4-0	Silver Lake Res	0-2	Traffic Tech.	1-0
Mediland Pharm	2-0	Oil Search Ltd	1-0	REA Group Ltd	0-2	Simonds Group	0-1	Treasury Wine	2-3
Medibank Priv.	2-0	Oliver's Real F	0-1	RMA Global	4-0	Sims Metal Mgmt	2-0	Triangle Energy	1-0
Medlab Clinical	0-2	Oncosil Medical	4-0	RPM Automotive	2-0	Sky Metals Ltd	1-0	Tribeca G Nat R	33-0
Megaport Ltd	1-2	Onewue Holdings	3-0	Race Oncology	1-0	Skyfii Limited	0-1	Troy Resources	0-2
Megnetite Mines	2-0	Ooh!Media	6-0	Rafaella Res.	2-0	Smartgroup Corp	3-2	Truscott Mining	1-0
Memphasys Ltd	1-0	OpenLearning	1-0	Raiz Invest.	2-0	Smart Parking	4-0	UCW Limited	2-0
Mercantile Inv.	1-0	Opthea Limited	0-1	Ramelius Res.	0-1	Soul Pattinson	2-0	Uniti Group	1-0
Mesoblast Ltd	1-0	Ora Gold Ltd	1-0	Ramsay Health	0-2	Southern Gold	3-0	Universal Coal	2-0
Metallica Min.	4-0	Orica Ltd	2-0	ReadyTech Hold.	1-0	South32 Limited	4-1	Urbanise.com	2-1
Metals X Ltd	2-0	Origin Energy	0-2	Real Energy	4-0	Sovereign Metal	1-0	VGI P. Global	16-0
Metalstech Ltd	1-0	Orminex Ltd	1-0	Reckon Limited	1-0	Spark Infrastru	1-0	VIP Gloves Ltd	0-1
Metcash Ltd	1-0	Orocobre Ltd	2-0	Rectifier Tech.	0-2	Spec. Metals	1-0	Valmec Limited	5-3
Metgasco Ltd	2-0	Osprey Medical	1-0	Red Hill Iron	1-0	Spectur Ltd	2-0	Velocity Prop.	1-0
Metro Mining	1-0	Othrocell Ltd	0-1	Red River Res.	1-0	Speedcast Int'l	4-0	Venturex Res.	5-0
Michael Hill	2-0	Ottoman Energy	2-0	Redbubble Ltd	0-1	Spherra Em Cos	2-0	Venus Metals	1-0
Midway Limited	4-3	Ovata Ltd	3-1	Redflex Holding	4-0	Spirit Telecom	2-1	Veris Ltd	3-0
Millennium Serv	2-1	Oventus Medical	3-0	Redstone Res.	2-0	Splitit Payment	0-1	Vicinity Centre	3-0
Milton Corp.	4-0	P2P Transport	2-0	Regional Exp.	0-1	St Barbara Ltd	5-0	Victor Group	1-0
Mincor Resource	1-0	PM Capital Glob	3-0	Regis Health.	2-0	Star Entertain.	5-2	Vietnam Indust.	1-0
Mineral Res.	1-0	PPK Group Ltd	2-0	Regis Resources	2-0	State Gas Ltd	1-0	Virgin Aust	2-0
Minotaur Exp.	2-0	PSC Insurance	7-0	Reliance W/wide	0-1	Stavely Mineral	0-2	Virtus Health	2-0
Mirrabooka Inv.	1-0	PTB Group Ltd	0-1	Rent.com.au Ltd	2-0	Steadfast Group	2-3	Vital Metals	5-0
Mirvac Group	1-2	PWR Holdings	2-4	Resolute Mining	2-1	Sth Cross Media	3-0	Viva Energy Grp	6-0
Mitchell Serv.	2-0	Pacific Current	4-0	Resonance Hlth	1-0	Strategic Min.	1-0	Viva Leisure	7-0
Moelis Aust.	0-1	Pacific Smiles	7-4	Respri Limited	1-0	Strata-X Energy	1-0	Vmoto Ltd	2-0
Moho Resources	1-0	Pact Group Hold	11-0	Retail Food Grp	1-0	Strandline Res.	2-0	Vocus Group Ltd	6-0
Monash IVF Grp	3-1	PainChek Ltd	0-1	Reverse Corp	0-2	Strike Energy	2-0	Volpara Health	0-4
Mortgage Choice	1-0	Paladin Energy	1-0	Reward Minerals	7-0	Strike Res.	1-0	Volt Resources	1-0
Motorcycle Hold	2-0	PanTerra Gold	1-0	Rhipe Limited	2-1	Structural Mon.	1-4	Vortiv Ltd	0-1
Mt Gibson Iron	8-1	Paradigm Bio.	5-0	Rightcrowd Ltd	1-0	Suda Pharm.	2-0	Vulcan Energy	2-0
Musgrave Min.	1-0	Parkd Limited	5-0	Rio Tinto Ltd	1-0	Suncorp Group	6-0	Vysam Limited	1-0
Mustera Prop.	1-0	Partners Glb In	1-0	Riversgold Ltd	1-0	Sunland Group	2-0	WAM Leaders	4-0
Myanmar Metals	1-0	Paygroup Ltd	2-0	Rox Resources	4-0	Sunstone Metals	1-0	WAM Global	13-0
Myer Holdings	9-0	Peakol Limited	2-0	Rumble Resource	1-0	Superloop Ltd	0-1	WT Financial Gp	1-0
Myfiziq Limited	1-0	Pearl Global	1-0	Rural Funds Grp	8-0	Super Retail Gr	1-0	Wameja Ltd	2-0
Mystate Ltd	2-0	Peel Mining Ltd	1-0	Ryder Capital	2-0	Superior Lakes	2-0	Waterco Ltd	0-1
NAOS Small Cap	1-0	Pendal Group	6-0	S2 Resources	3-0	Supply Network	1-0	Webjet NL	4-0
NAOS Ex-50 Opps	3-0	Pengana Capital	4-0	SDI Limited	5-0	Swick Min Serv	4-0	Wesfarmers Ltd	1-0
NGE Capital	1-0	Pengana Int'l	1-0	SECOS Group	1-0	Swift Media	1-0	West Wits Min.	1-0
Namoi Cotton	1-0	Pensana Metals	2-0	SG Fleet Group	1-0	Synertec Corp.	1-0	West African R.	0-1
Nanoveu Limited	3-0	Pental Limited	5-0	SRG Global	1-2	Syrah Resources	3-0	Westpac Banking	2-0
Naos Emerging	4-5	Perpetual Ltd	1-0	Saferoads Hold.	2-0	TNG Limited	0-1	Western Areas	1-0
Nat Veterinary	1-0	Perseus Mining	0-1	Sandon Capital	1-0	TNT Mines	1-0	Whitefield Ltd	3-0
Nat'l Aust Bank	3-0	Petratherm Ltd	1-0	Santos Ltd	5-0	TV2U Int'l	4-1	Whitehaven Coal	2-0
National Tyre	1-0	Pharmaust Ltd	1-0	Santa Fe Min.	1-0	Tabcorp Holding	4-0	Wingara AG Ltd	2-0
Nearmap Ltd	0-5	Phoslock Env.	0-9	Saracen Mineral	3-2	Talga Resources	2-0	Wisetech Global	0-2
Neometals Ltd	3-1	Pinchme.com Inc	1-0	Saturn Metals	1-0	Talisman Mining	1-0	Wiseway Group	2-1
Netlinkz Ltd	5-0	Pinnacle Invest	0-1	Scandi Vanadium	1-0	Talon Petroleum	1-0	Worsley Ltd	1-0
Netwealth Group	0-2	Po Valley Ener.	2-0	Scentre Group	2-0	Tamawood Ltd	5-1	XTD Limited	2-0
New World Res.	0-1	Pointsbet Hold.	2-0	Schaffer Corp	2-0	Tambia Ltd	7-0	Xanadu Mines	1-0
New Hope Corp.	2-0	Polynovo Ltd	1-0	Scout Security	2-1	Tassal Group	5-0	Xplore Wealth	8-0
New Energy Sol.	5-0	Powerhouse Ven.	1-0	Seek Ltd	2-0	Teaminvest Pri.	1-0	Xtek Ltd	1-0
New Century Res	3-0	Praemium Ltd	7-0	Selfwealth Ltd	2-0	Technology One	2-4	Yandal Res.	2-0
Newcrest Mining	0-3	Premier Invest	1-0	SenSen Networks	2-0	Telstra	6-1	Yojee Limited	2-0
Newfield Res	1-0	Pro-Pac Pack.	2-0	Senetas Corp	1-0	Tempus Res.	2-0	Yowie Group Ltd	1-0
Nine Entertain.	2-1	Prospa Group	10-0	Senex Energy	9-0	Terragen Hold.	3-0	Zelira Thera.	0-1
Noxopharm Ltd	2-0	Pure Minerals	1-0	Sensera Limited	2-0	The Reject Shop	9-0	Zenith Minerals	1-0
Nthn Minerals	0-2	Pyrolyx AG	4-0	Servcorp Ltd	3-0	Think Childcare	1-0	Zenith Energy	2-0
Nthn Star Res.	1-4	QEM Limited	2-0	Seven West Med.	2-0	Thorn Group Ltd	2-0	Zinc of Ireland	5-0
Nufarm Limited	2-0	QMS Media	2-0	Shaver Shop Grp	1-0	Thorney Tech.	19-0	Zip Co Ltd	0-1
Nusantara Res.	4-0	QV Equities Ltd	10-0	Shopping Centre	4-2	Thorney Opp.	5-1	Zoono Group	1-0
OM Holdings	5-1	Qantas Airways	3-0	Sietel Ltd	3-0	Tigers Realm	1-0		

# Performance Forecasts

"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 Forecast					Performance Forecast					Performance Forecast							
Forecast	Price	Price/Sales Ratio	P/E Ratio	Gross Yield	Forecast	Price	Price/Sales Ratio	P/E Ratio	Gross Yield	Forecast	Price	Price/Sales Ratio	P/E Ratio	Gross Yield			
A2 Milk Company	B	1490	N/A	NE	Nil	Gentech Group	C	385	3.63	27	4.9	Promisia Integ.	D	0.2	5.23	NE	Nil
AFC Group Hold.	A	0.1	N/A	NE	Nil	Geo Ltd	C	9.1	1.48	NE	Nil	Property F Ind.	D	244	N/A	11	3.1
AFT Pharma.	A	385	1.23	NE	Nil	Good Spirits	C	14	0.24	11	Nil	Pushpay Hold.	D	428	8.15	43	Nil
AMP Limited	B	194	0.87	NE	7.6	Goodman Prop.	C	227	N/A	9	2.9	QEX Logistics	E	82	0.72	22	Nil
AWF Madison Grp	A	187	0.23	31	12.0	Green Cross H.	C	119	0.30	11	8.2	Rakon Ltd	E	28	0.55	19	Nil
Abano Health.	A	525	0.49	18	6.3	Hallenstein G.	A	605	1.29	13	10.1	Restaurant Brds	E	1390	2.18	49	Nil
Air New Zealand	A	300	0.58	12	10.2	Heartland Group	B	183	6.40	18	5.7	Rubicon Limited	E	19	1.89	NE	Nil
Akd Int Airport	A	890	N/A	16	3.4	IkeGPS Limited	B	88	9.96	NE	Nil	Ryman Health.	C	1630	N/A	25	1.4
Allied Farmers	E	67	5.63	95	0.4	Infratil NZ	B	527	N/A	16	4.5	Sanford Limited	D	810	1.47	18	3.9
Aorere Res.	N/R	0.1	5.02	NE	Nil	Investore Prop.	C	179	9.92	10	4.2	Scales Corp Ltd	D	514	1.79	25	5.0
Argosy Property	C	139	N/A	8	4.5	Just Life Group	B	48	2.48	20	5.8	Scott Tech. Ltd	D	224	0.94	16	6.2
Arvida Group	B	184	5.00	13	3.5	Kathmandu Ltd	B	335	1.52	15	6.2	SeaDragon Ltd	E	0.2	1.98	NE	Nil
Asset Plus	C	64	7.76	27	5.6	Kingfish Ltd	B	159	N/A	7	7.4	Seeka Kiwifruit	E	463	0.67	18	3.6
Augusta Capital	C	160	5.81	20	3.8	Kiwi Property	A	154	7.71	16	4.5	Serko Limited	D	498	N/A	NE	Nil
Barramundi Ltd	C	71	N/A	16	7.6	Mainfreight Grp	C	4300	1.47	31	1.8	Skellerup Hold.	D	247	1.96	17	7.3
Blackwall Gbl.	B	0.8	2.81	NE	Nil	Marlborough WE	C	20	N/A	NE	Nil	Sky City Ltd	D	409	3.43	19	6.8
Blis Technology	B	7.0	N/A	NE	Nil	Marlin Global	A	101	N/A	18	7.8	Sky Network TV	D	71	0.35	3	14.7
Briscoe Group	B	403	1.41	14	6.9	Marsden Mar.	A	693	N/A	30	3.2	Smartpay NZ Ltd	B	53	4.31	NE	Nil
Burger Fuel	D	52	1.34	23	Nil	Mercer Group	A	26	0.57	NE	Nil	Smiths City	E	26	0.07	NE	Nil
CBL Corporation	C	317	1.91	25	2.2	Mercury NZ	C	520	4.04	31	4.0	Snakk Media Ltd	E	5.5	0.09	NE	Nil
CDL Investments	C	94	3.08	8	5.2	Meridian Energy	A	503	3.69	38	4.5	Sol. Dynamics	E	160	1.39	22	4.6
CSM Group Ltd	A	2.3	N/A	NE	Nil	MetLifeCare	A	687	N/A	37	1.6	South Port NZ	D	715	4.27	19	5.1
Cannasouth Ltd	B	58	N/A	NE	Nil	Metro Per Glass	C	28	0.19	10	19.2	Spark NZ Ltd	D	452	2.35	20	7.7
Cavalier Corp	C	30	0.15	11	Nil	Mid-Cap Index	C	611	N/A	9	2.2	Steel & Tube	E	80	0.27	13	8.7
Chatham Rock	C	19	N/A	NE	Nil	Millennium & C.	C	280	2.02	7	1.7	Sthn Charter F.	E	0.1	3.24	NE	Nil
Chorus Ltd	B	634	2.87	53	5.0	Moa Group Ltd	D	29	1.24	NE	Nil	Stride Property	C	229	N/A	9	5.6
Col Motor Co	B	874	0.32	13	7.2	NZ Exchange Ltd	D	137	5.52	32	6.2	Summerset Group	C	867	N/A	9	1.5
Comvita	D	721	0.96	NE	Nil	NZ King Salmon	D	210	1.69	26	3.3	Synlait Milk	E	892	2.39	38	Nil
Contact Energy	C	21	2.39	39	6.2	NZ Oil & Gas	N/R	68	2.63	NE	Nil	T&G Global	C	290	0.30	99	5.7
Cooks Global Fd	C	6.5	5.36	NE	Nil	NZ Refining Co	C	181	1.57	19	5.8	TIL Logistics	D	111	0.27	24	6.3
Delegat Group	B	172	4.26	25	2.0	NZ Windfarms	C	15	3.43	67	20.7	Tilt Renewables	D	332	8.06	NE	Nil
EROAD Ltd	C	319	3.55	NE	Nil	NZF Group	D	1.0	N/A	NE	Nil	Tourism Hold.	D	335	1.05	15	11.2
Ebos Group Ltd	C	2410	0.56	28	4.2	NZME Limited	C	40	0.20	7	7.0	Tower Limited	D	71	0.74	NE	Nil
Enprise Group	C	77	1.09	NE	1.3	NZSX 50 Port.	A	315	N/A	15	3.4	Training Sol.	E	0.2	N/A	NE	Nil
Evolve Educat.	C	18	N/A	NE	Nil	NZSX 10 Fund	B	197	N/A	12	3.4	TruScreen Ltd	E	9.6	N/A	NE	Nil
F & P Health.	C	2150	N/A	65	1.5	NZX Aust MidCap	N/R	740	N/A	8	2.7	Trust Power Ltd	D	726	2.42	24	6.3
Finsoft Sol'ns	C	94	0.66	NE	Nil	New Talisman	N/R	0.7	N/A	NE	Nil	Turners Auto.	D	288	0.74	11	8.2
Fletcher Build.	B	510	0.52	18	6.3	Oceania Health.	D	131	4.22	18	3.6	Vector Ltd	D	369	2.80	45	6.2
Foley Wines Ltd	B	188	2.58	24	2.2	Ozy (Tortis)	B	398	N/A	15	8.2	Vista Group Ltd	D	350	N/A	47	3.1
Fonterra S/H Fd	C	405	0.32	NE	2.5	P&G Wrightsons	D	236	0.22	45	8.8	Vital Health PT	D	281	N/A	17	3.1
Freightways Ltd	B	838	1.37	13	5.1	Pac Edge Bio.	E	13	N/A	NE	Nil	Vital Ltd	E	78	0.93	8	5.3
Future Mobility	C	2.7	0.09	NE	Nil	PaySauce Ltd	D	92	3.34	NE	Nil	WN Drive Tech.	E	16	0.74	NE	Nil
Geneva Finance	C	52	1.79	9	9.3	Plexure Group	D	79	N/A	NE	Nil	Warehouse Group	C	282	0.32	43	7.9
Genesis Energy	C	313	1.19	54	7.6	Port Tauranga	C	780	N/A	53	2.4	Z Energy Ltd	C	469	0.34	10	12.7
General Capital	C	8.0	5.84	NE	Nil	Precinct Prop.	D	184	N/A	9	3.2	<b>Ave of 134 Cos</b>	<b>C</b>	<b>343</b>	<b>0.66</b>	<b>23</b>	<b>3.6</b>
A.P. Eagers	A	1021	0.47	20	3.6	Domain Holdings	A	387	6.76	52	1.6	Orica Ltd	A	2271	1.60	NE	2.3
AGL Energy Ltd	B	2047	1.05	8	5.7	Domino's Pizza	A	5673	6.10	40	1.9	Origin Energy	A	873	1.09	13	2.7
ALS Limited	A	944	2.74	25	2.4	Downer EDI Ltd	B	863	0.40	20	3.2	Orora Limited	A	331	0.84	25	3.9
AMP Ltd	B	188	0.35	NE	7.4	EML Payments	B	483	N/A	NE	Nil	Pendal Group	A	904	5.01	15	5.8
ANZ Bank	B	2512	2.03	11	6.4	Event Hospital.	B	1371	2.28	21	3.8	Perenti Global	A	161	0.67	6	4.4
APA Group	A	1139	5.53	47	6.4	Evolution Min.	B	358	4.02	28	2.7	Perpetual Ltd	A	4295	3.91	17	0.1
ARB Corporation	A	1945	3.64	30	1.9	Flight Centre	B	4428	1.53	0	3.8	Perseus Mining	A	106	2.43	NE	Nil
ASX Limited	A	8217	N/A	36	2.6	Fortescue Metal	B	1070	3.58	28	2.1	Platinum Asset	A	474	9.34	17	5.7
Abacus Property	A	368	6.91	9	4.9	Freedom Foods	B	495	2.84	NE	0.7	Polynovo Ltd	B	201	N/A	NE	Nil
Adelaide Bright	A	366	1.46	13	5.5	GPT Group	B	580	N/A	7	4.4	Premier Invest	A	1999	2.65	38	3.1
Afterpay Ltd	B	3113	N/A	NE	Nil	Genworth Mort.	A	370	3.52	21	4.6	Pro Medicus Ltd	A	2360	N/A	NE	0.3
Ale Property	A	567	N/A	39	3.7	Gold Road Res.	C	135	N/A	NE	Nil	Q.B.E. Insur.	B	1319	0.90	32	3.8
Altium Limited	A	3576	N/A	62	0.8	Goodman Group	A	1403	N/A	27	2.1	Qantas Airways	B	700	0.61	12	3.6
Alumina Ltd	A	231	N/A	7	13.9	Graincorp	A	809	0.43	26	2.0	Qube Holdings	B	356	3.43	29	1.9
Amcor Ltd	A	1519	3.14	69	5.4	Growthpoint Pro	A	425	N/A	8	5.4	REA Group Ltd	B	10846	N/A	NE	1.1
Aneka Tambang	B	100	9.65	NE	Nil	Harvey Norman	A	442	2.40	13	7.5	Ramsay Health	A	7480	1.31	28	2.0
Ansell Ltd	A	3049	1.90	20	2.2	Healius Ltd	B	289	1.00	32	2.5	Reece Limited	B	1160	1.19	32	1.7
Appen Limited	A	2324	6.80	59	0.3	Hutchison Tel.	D	15	N/A	NE	Nil	Regis Resources	B	417	2.23	13	3.8
Argo Investment	A	894	N/A	17	3.7	I-Sign This Ltd	A	107	N/A	NE	Nil	Reliance W/wide	B	430	3.08	26	2.1
Aristocrat Leis	A	3533	6.36	42	1.3	IDP Education	A	1837	7.81	70	1.1	Rio Tinto Ltd	A	10243	0.66	2	4.3
Atlas Arteria	B	810	N/A	92	3.0	IOOF Holdings	A	820	2.70	NE	4.6	S/Tracks ASX200	B	6410	N/A	10	1.4
Aurizon Hold.	B	551	3.52	22	4.9	IPH Limited	B	870	7.74	42	2.6	Santos Ltd	B	888	3.56	21	1.6
AusNet Services	B	174	3.45	25	5.6	IRESS Limited	A	1369	5.04	37	3.4	Saracen Mineral	C	360	5.32	32	Nil
Aust Foundation	B	723	N/A	21	4.4	Iluka Resources	A	932	2.91	13	3.1	Scentre Group	B	398	8.01	9	5.6
Austal Limited	B	400	0.76	23	1.5	Incitec Pivot	B	325	1.37	25	3.3	Seek Ltd	A	2298	5.19	45	2.0
Aust United In	B	1007	N/A	12	3.6	Interpend. Group	B	684	5.15	53	1.5	Seven Group	A	2050	1.70	32	2.0
Aventus Retail	B	281	N/A	NE	Nil	Ingenia Com Grp	A	463	4.84	38	2.4	Shopping Centre	B	275	9.43	23	5.3
Avita Medical	C	68	N/A	NE	Nil	Inghams Group	B	351	0.52	10	3.0	Silver Lake Res	B	132	3.57	NE	Nil
BHP Group Ltd	A	3990	3.20	17	4.7	Insurance Aust.	B	765	1.12	15	4.2	Sims Metal Mgmt	B	1148	0.35	15	3.7
BKI Invest Coy	B	171	N/A	17	4.3	Invocare Ltd	B	1378	3.12	36	2.7	Sonic Health	B	3035	2.35	26	2.8
BWP Trust	A	397	N/A	15	4.6	JB Hi-Fi Ltd	A	4094	0.69	20	3.2	Soul Pattinson	B	2204	3.27	21	2.6
Bank of Q'land	B	735	1.41	9	10.3	James Hardie	A	2956	3.66	40	1.7	South32 Limited	B	280	1.35	25	4.0
Bapcor Limited	A	650	1.42	19	2.6	Janus Henderson	A	3569	0.95	4	5.7	Spark Infrastru	B	212	N/A	13	7.5
Beach Energy	B	267	2.93	11	0.7	LendLease Group	B	1832	0.63	22	2.3	St Barbara Ltd	A	271	2.90	13	3.0
Bendigo Bank	B	1007	1.69	13	7.0	Link Admin.	B	620	2.74	23	3.3	Star Entertain.	A	462	1.96	21	4.4
Bingo Indust.	A	300	4.94	89	1.2	Lovisa Holdings	B	1185	5.00	34	1.3	Steadfast Group	A	377	5.17	25	2.3
Blackmores Ltd	A	8825	2.51	29	2.5	Lynas Corp Ltd	C	239	4.39	20	Nil	Stockland	B	485	4.24	11	5.5
Bluescope Steel	A	1549	0.64	8	0.9	MCP Master Inc.	B	206	N/A	29	6.0	Suncorp Group	B	1327	1.19	20	2.0
Boral Limited	B	485	0.98	26	5.5	MFF Capital Inv	B	364	N/A	9	1.0	Super Retail Gr	B	1007	0.73	14	5.0

# Dividend\$

Company	Cents per Share	Ex-Date	Pay-able	Tax Credit
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none Australian Shares

## Total Return Index for All Listed Shares

Dec 9	1806.47		
Dec 10	1809.54		
Dec 11	1809.13		
Dec 12	1808.37		
Dec 13	1805.06		
Dec 16	1804.15	Dec 23	1829.66
Dec 17	1807.32	Dec 24	1834.35
Dec 18	1812.89	Dec 25	Holiday
Dec 19	1814.43	Dec 26	Foliday
Dec 20	1813.67	Dec 27	1840.03
Dec 30	1847.69	Jan 6	1859.28
Dec 31	1848.59	Jan 7	1860.42
Jan 1	Holiday	Jan 8	1850.93
Jan 2	Holiday	Jan 9	1859.42
Jan 2	1866.01	Jan 10	1857.03

## Next Issue:

The next issue of *Market Analysis* will be emailed in four weeks time on Monday February 10, 2020.

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

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