PITT STREET RESEARCH

Lithium Power International

Environmental approvals clear the path for project financing

Share Price: A$0.23

ASX: LPI
Sector: Metals & Mining
24 Jun 2020

Lithium Power International (ASX: LPI) owns 51% of the Maricunga Lithium Project in Chile, a lithium brine play where the Definitive Feasibility Study (DFS) has been completed. LPI also owns a range of other lithium projects, which are in early stages of development. In August 2019, LPI signed a Memorandum of Understanding with Codelco, Chile's state-owned copper mining company, for the joint development of Maricunga, and in February 2020 the Environmental Impact Assessment for the project was approved.

Investment case

Maricunga's 2019 DFS envisaged production of 20,000 tpa of lithium carbonate equivalent (LCE) over a 20-year mine life at a production cost of US$3,772/t LCE without potassium chloride credits. Total capex of US$563m led to a pre-tax NPV of US$1.3bn at an 8% discount rate. Following on from the Codelco MoU, LPI aims to close financing and initiate project construction this year. Maricunga's mine life is arguably longer than 20 years and the expected production cost places the project in the top quartile of the industry. LPI, in response to the Covid-19 crisis, has decided to exclusively focus on the Maricunga project and has suspended activities at all other projects. Further, the company has executed a reduction of at least 30% in salaries and director fees from April 2020.

Valuation range of A$0.72–0.83 per share

We value LPI at A$0.72–0.83 per share using a DCF-based approach based on the assumptions of the DFS data and long-term lithium price levels. We also assume that LPI self-funds its share of Maricunga using equity. We see LPI being re-rated once project financing is in place and lithium prices, which were under pressure in 2018 and 2019, recover.

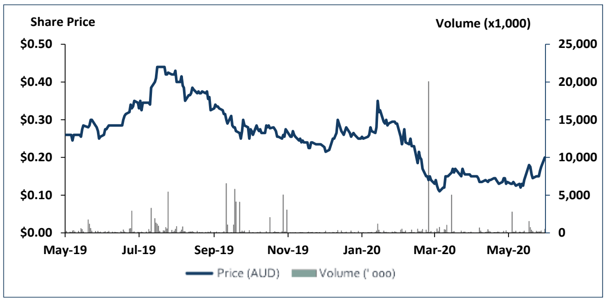
Year to June (AUD)	2019A	2020F	2021F	2022F	2023F
Sales (mn)	0.0	0.0	0.0	0.0	14.7
EBITDA (mn)	-10.0	-5.4	-17.9	-23.0	10.3
Net Profit (mn)	-10.2	-5.4	-18.0	-23.0	7.5
EBITDA Margin (%)	nm	nm	nm	nm	69.9%
RoA (%)	nm	nm	nm	nm	5.6%
EV/Sales	nm	nm	nm	nm	11.2x
EV/EBITDA	nm	nm	nm	nm	16.0x
P/E	nm	nm	nm	nm	22.9x

Source: Company, Pitt Street Research

Market Cap. (A$ m)	60.4
# shares outstanding (m)	263.0
# shares fully diluted	293.4
Market Cap Ful. Dil. (A$ m)	67.5
Free Float	52.7%
52-week high/low (A$)	0.45 / 0.11
Avg. 12M daily volume ('1000)	463.3
Website	lithiumpowerinternational.com

Source: Company, Pitt Street Research

Share price (A$) and avg. daily volume (k, r.h.s.)



Source: Refinitiv, Pitt Street Research

Valuation metrics	
DCF fair valuation range (A$)	0.72–0.83
WACC	11.0%
Assumed terminal growth rate	None

Source: Pitt Street Research

Analyst: Stuart Roberts

Tel: +61 (0)447 247 909

Stuart.Roberts@pittstreetresearch.com

STOCKS DOWN UNDER

Table of Contents

Introducing Lithium Power International

Lithium Power International (ASX: LPI) is a Sydney-based lithium mine developer. The company's flagship project is the 51%-owned Maricunga Lithium Project in Chile, a lithium brine play where Definitive Feasibility Study (DFS) has been completed and financing options for the project are being considered. The company also owns 70% of another brine project, the Centenario Lithium Project in northwestern Argentina, as well as lithium hard rock projects in Western Australia – three in the Pilbara region of that state, another at Greenbushes, in the southwest (Figure 1).

Maricunga is LPI's flagship lithium mining project

In August 2019 LPI announced that Codelco, Chile's state-owned copper miner and the world's no. 1 copper-producing enterprise, had signed a non-binding Memorandum of Understanding (MoU) for the joint development of Maricunga. The expected production costs will place the project within the first quartile of the industry in terms of lithium carbonate equivalent (LCE) cost-per-tonne and overall LCE extraction efficiency.

Figure 1: LPI's mining interests

Source: Company

Maricunga is a 'shovel ready' lithium brine project. Maricunga, 51% owned by LPI[1], is a lithium brine project located in the Chilean sector of the Chile-Bolivia-Argentina Lithium Triangle, where much of the world's new lithium supply is expected to come from. Specifically, the project covers 45 sq km of the Maricunga salar in the Atacama Region of northern Chile, around 170 km northeast of the regional capital of Copiapó and 250 km from the Chilean coastline. The district has the relevant infrastructure, including Chile Highway 31, which runs close to the project area[2], as does a 23 kV power line. After completion of a DFS in 2019, LPI envisages start-up of construction subject to completion of project financing for a US$563m project. The first lithium carbonate production from a pilot plant was made in February 2018. An Environmental Impact Assessment (EIA) was submitted to the Chilean

[1] The other 49% is held by a privately held Chilean company called Minera Salar Blanco (MSB) with 31% (associated with the Chilean businessman Martin Borda), and a Canadian company called Bearing Lithium (Vancouver, BC, TSX-V: BRZ, bearingresources.ca) with 18%. LPI bought a 1.35% interest from MSB for A$2m in June 2018.

[2] Chile Highway 31 starts at Copiapó at Chile Route 5 (part of the Pan-American Highway) and ends at San Francisco on the Chile-Argentina border. The road continues as RN 60 in Argentina.

Environmental Review Agency in September 2018 and a January 2019 DFS proposed production of 20,000 tpa of LCE over a 20-year mine life. The DFS valued the project at US$1.3bn pre-tax. The project's EIA was approved in February 2020.

Why is the Codelco relationship important for Maricunga's development? Codelco is not only a large and established mining company with US$12.5bn in 2019 revenue but, more importantly, it is, in effect, an arm of the Chilean state with the potential to make investments in projects that are strategically important for Chile's economic future. Its willingness to work on the development of Maricunga therefore represents a vote of confidence in the project by high-level decision-makers in Chile, as well as brings significant prestige to the project.

What is Lithium Power International doing with its other lithium projects? LPI has chosen to prioritise Maricunga at this stage because of the potential to unlock shareholder value through a start-up of that mine. The company has considered selling the Centenario Lithium Project but remains optimistic on the Western Australian projects given the favourable geology. We believe that the market will start to attribute more value to these projects once they yield valuable drill results.

Environmental approval provides greater visibility

The Maricunga project is structured as a joint venture with Minera Salar Blanco S.A. (MSB). In August 2019, MSB entered into a non-binding MoU with Codelco. The public–private alliance model will support scalability of the project by easing the process of acquisition of necessary permits and fast-tracking the development of Maricunga mines. Legal due diligence has been completed and technical due diligence has commenced.

Management is focussing on securing project financing after receiving environmental clearance

On 4 February 2020, the project achieved a significant milestone when the EIA was approved by the Chilean government after an extensive 15-month review process. This is one of the few EIAs approved in Chile in recent years, which will assist MSB in becoming the third significant lithium operation in the country. The EIA approval represents the final regulatory milestone in advancing the project and clears the way for critical next steps, including Engineering, Procurement and Construction (EPC) bidding process, and project financing. In terms of the EPC bidding process, LPI has selected two international engineering firms, Worley Parsons and Bechtel, to provide a comprehensive construction proposal.

The management is undertaking a number of first-round discussions with reputed players relating to product offtake agreements and project financing. Australia-based Treadstone Resource Partners has been appointed to work alongside the LPI and MSB teams for this purpose. Previously, the management was targeting construction to commence by the end of Q3 2020 but this timeline might possibly shift to Q4 2020 or Q1 2021 owing to uncertainty caused by the Covid-19 crisis.

Improved financials

LPI reported a y/y improvement in its net loss level during H1 FY20 (half year ending 31 December 2019) which declined from A$7.8m to A$6.3m. This improvement was largely driven by a significant decline in share of losses in joint ventures (~70% drop over the previous period) and reduction in employee benefits expense (~50% drop over the previous period). However, these improvements were partially offset by A$2.5m in forex loss. Overall, diluted EPS at -2.35 cents during H1 FY20 was an improvement over -3.00 cents reported during H1 FY19.

LPI has a comfortable liquidity position as its cash balance stood at A$9.6m at 31 March 2020 which is sufficient to cover its main expenses for at least a year. The absence of leverage on LPI's balance sheet is another positive feature during these times of financial strain.

Key actions in response to Covid-19 crisis

The Covid-19 crisis has not only impacted the company's Chilean operations but also its Australian operations. LPI has decided to currently focus its resources only on the Maricunga project to reduce the overall financial burden on the company. Consequently, all operations in Western Australia have been suspended, workforce has been reduced and the Perth office has been surrendered. Further, salaries and director fees have been reduced by at least 30% from April 2020 and expenses on nonessential services have been curtailed.

In addition, work in the Centenario Project in Argentina has been suspended. While MSB's budget has also been tweaked, it is not expected to have a material impact on the overall progress of the Maricunga project. According to the Q3 update as of 31 March 2020, MSB had A$840,000 in cash, which should help in covering some of the initial project expenses until financing is secured.

Sizeable opportunity for lithium producers

Lithium has far-ranging applications across diverse end markets

Lithium has increasingly become important for the global economy. Today, it is used in almost every electronic device, from laptops and mobile phone batteries to electric vehicles (EVs). It also has wide-ranging applications in the industrial space, particularly in the production of glass and glass ceramic products, due to its strong heat absorption capability and zero thermal expansion quality.

Energy storage applications will continue to drive lithium demand

While the applications of lithium are diverse, its usage as a battery mineral is expected to be the dominant demand driver. The use of lithium for energy storage devices is anticipated to reach 86% by 2025 with over 50% demand being attributable to EVs and other mobility services.

EVs will remain the primary catalyst within energy storage applications

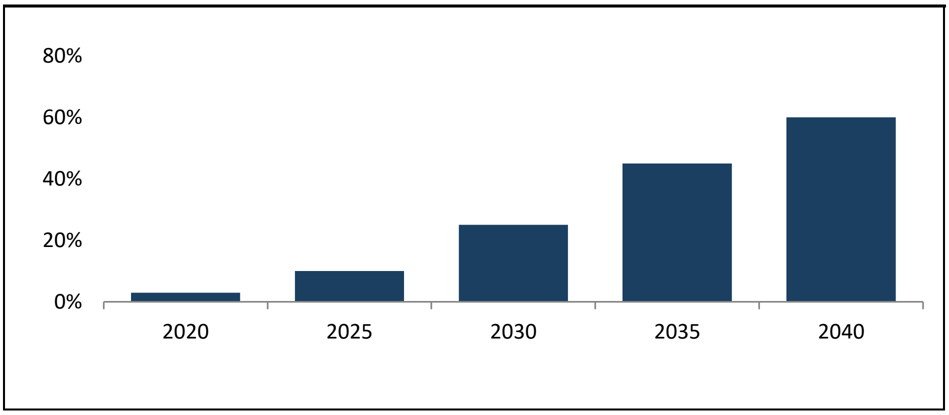
Long-term outlook for EVs remains promising

The Covid-19 pandemic is set to disrupt global automotive sales in 2020, and is raising tough questions about manufacturers' priorities as the overall market is likely to be rough for the next 1–2 years. Moreover, EV sales are likely to drop for the first time in the recent past.

Still, the long-term trend of growing EV adoption is unlikely to be disrupted although there will be a widespread difference in the adoption rate across countries. The share of EVs in global passenger vehicle sales is forecasted to be relatively flat in 2020 at ~3%, but will then continue rising and hit ~7% in 2023 (Figure 2). Some automakers will delay EV launches in North America but the timelines in China and Europe will remain largely unchanged.

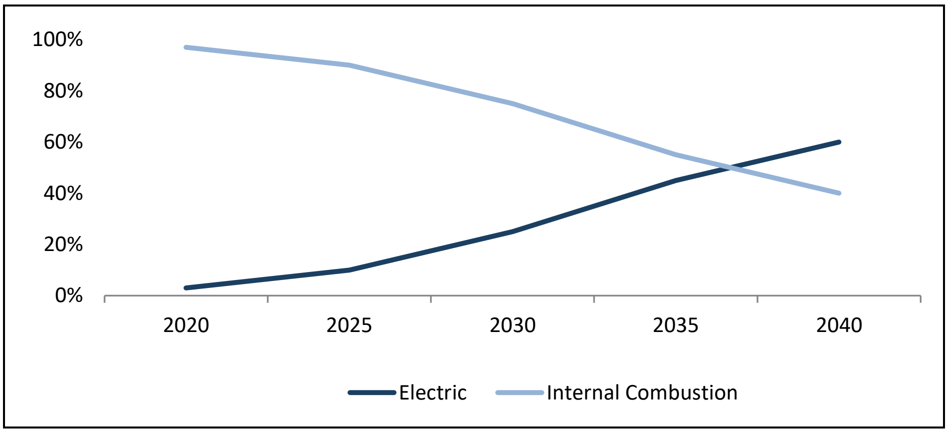
In essence, the long-term outlook for EVs remains bright, as fundamental cost and technology improvements will outweigh the short-term impact of the pandemic. Consequently, the long-term demand for EV batteries will remain intact and as can be observed in Figure 3, electric drivetrains[3] will gradually gain share and surpass internal combustion drivetrains after 2035.

Figure 2: EV share of new passenger vehicle sales (global)



Source: BNEF

Figure 3: Share of passenger vehicle sales by drivetrain (electric vs. internal combustion)



Source: BNEF

[3] The drivetrain of a vehicle is the group of components that deliver power to the driving wheels. The main function of the drivetrain is to convey power from the vehicle's engine, through the transmission to the drive wheels in order to control the amount of torque or twisting force.

Long-term outlook for lithium prices remains strong

Concerns of lithium oversupply raised during 2018–2019 appear to be waning

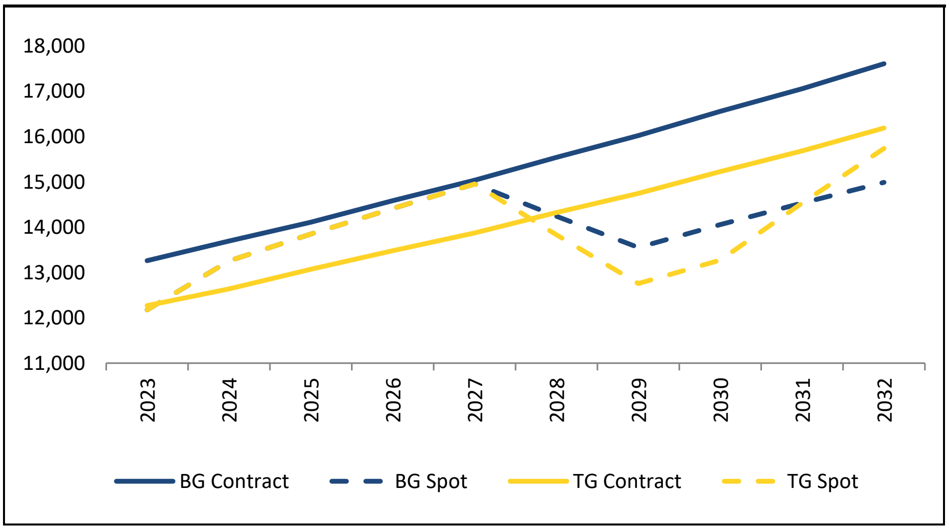
Supply deficit due to the rapid increase in demand for lithium will likely support prices in the long term

The lithium boom began in 2014, with prices rising from less than US$6,000/t to over US$16,000 by 2018. Demand soared, and billions were invested in new mines, with salt brine deposits in Chile and China receiving the most attention. However, the trend changed in Q1 2018, with prices falling due to aggressive supply anticipated from the expansion of brine operations in China, prediction of lithium oversupply by major investment banks and commissioning of lithium mineral operations in Australia.

However, the additional supply that was anticipated from the expansion of brine operations in China did not turn out to be a significant risk as the producers were unable to add the expected capacity owing to technical challenges. Similarly, the oversupply of lithium predicted by major banks did not turn out be completely accurate. The estimates failed to take into account the long conversion time, project delays and technical hurdles that lithium miners faced to reach full capacity.

The dynamic of the industry is also fast changing, and producers are returning to being ‘demand responsive’ as compared with the ‘demand anticipation’ state of play. Australian upstream lithium players have also pulled back on concentrate shipments and/or production schedules. Aspiring developers’ access to capital could also be impacted as suppressed prices will drive down feasibility study economics. The current trend is expected to support lithium prices in the medium–long term, especially post 2020, when the annual consumption of lithium is expected to rise rapidly and demand growth will again stretch capacity. According to Roskill, a leading commodity research and consulting company, average annual prices of lithium carbonate are expected to remain above US$10,000/t in the long term on both nominal and real (inflation adjusted) basis, and rise to US$20,000–22,000/t (US$16,000–18,000/t adjusting for inflation) by 2032 (Figure 4).

Figure 4: Average annual real (inflation-adj.) price forecast for LCE (US$/t CIF)



Note: BG: Battery grade; TG: Technical grade
Source: Roskill

Valuation

We reiterate the valuation of LPI at A$0.72 per share base case, and A$0.83 per share optimistic (bull) case using a DCF-based approach. We have largely retained our original assumptions relating to the project DFS, capex requirements, project capital structure and long-term pricing levels for lithium and potash.

Our valuations have been summarised below (Figure 5) and the midpoint of the valuation range is A$0.78 per share.

Figure 5: DCF valuation for LPI

LPI Valuation (AUD million)	Base	Bull
Net Asset Value of MSB	553.4	634.3
Net cash (debt) (m)	15.3	15.3
NPV of corporate overhead	-29.7	-29.7
Equity value (m)	**539.0**	**619.9**
Share outstanding (Diluted, 2022F)	747.6	747.6
Implied price (AUD cents)	**72.1**	**82.9**
Current price (AUD cents)	23.0	23.0
Upside (%)	213%	261%

Source: Pitt Street Research

Sensitivity analysis – Our analysis suggests that each US$2,000/t change in lithium price will change the DCF value of LPI by ~A$107m (Figure 6).

Figure 6 : Sensitivity analysis for LPI

Lithium Price/t	NAV (A$m)	NAV/share (A$)
10,000	(27.8)	(0.04)
12,000	79.3	0.11
14,000	186.4	0.25
16,000	293.5	0.39
18,000	400.6	0.54
20,000	507.6	0.68
22,000	614.7	0.82
24,000	721.8	0.97

Source: Pitt Street Research

Re-rating LPI

LPI's stock is currently trading below our base case valuation. The primary factors that will help re-rate the stock into our valuation range are as follows:

– Sustained increase in lithium price driven by the widening demand-supply gap for this metal will result in significant upside potential for LPI.
– Significant capital is required to fund the development activities of the Maricunga project and if LPI or its partner is able to complete the project financing, it will be a major positive milestone.
– Encouraging results from further feasibility studies of the Maricunga Lithium project.
– Binding offtake agreements signed in future will provide much needed capital and revenue visibility.
– Exploration results in the Pilbara Lithium and Greenfields Lithium projects although we have not factored these in our current valuation.

Risks

We see four main risks related to LPI's investment thesis.

1) **Funding risk**: LPI is expected to fund its pro-rata share of development costs for MSB. As a pre-cash flow company, it may have to rely heavily on equity financing, which could lead to dilution for shareholders.
2) **Geological risk**: The reserves and resources figures for the Maricunga mine are estimates, and it is possible that their characteristics may differ. There could be a downside risk if a portion of reserves is re-categorised as resources at a later stage.
3) **Commodity risk**: LPI is exposed to commodity price risk, which will depend on macroeconomic factors, and demand and supply dynamics of lithium. Significant volatility in lithium prices will impact the predictability of cash flows for the project as well as LPI.
4) **Sovereign risk**: There is the risk that the current unrest in Chile escalates further and leads to a swing to the left in the 2021 general elections. The Chilean government has been proactively addressing the sources of social unrest which occurred in late 2019. A plebiscite to approve changes to the constitution, originally scheduled for April 2020, has been delayed until October 2020 due to the Covid-19 outbreak.

Please see https://www.pittstreetresearch.com/ for our initial coverage report on LPI.

Appendix I - Analyst Qualifications

Stuart Roberts, lead analyst on this report, has been an equities analyst since 2002.

- Stuart obtained a Master of Applied Finance and Investment from the Securities Institute of Australia in 2002. Previously, from the Securities Institute of Australia, he obtained a Certificate of Financial Markets (1994) and a Graduate Diploma in Finance and Investment (1999).
- Stuart joined Southern Cross Equities as an equities analyst in April 2001. From February 2002 to July 2013, his research specialty at Southern Cross Equities and its acquirer, Bell Potter Securities, was Healthcare and Biotechnology. During this time, he covered a variety of established healthcare companies such as CSL, Cochlear and Resmed, as well as numerous emerging companies. Stuart was a Healthcare and Biotechnology analyst at Baillieu Holst from October 2013 to January 2015.
- After 15 months in 2015 and 2016 doing Investor Relations for two ASX-listed cancer drug developers, Stuart founded NDF Research in May 2016 to provide issuer-sponsored equity research on ASX-listed Life Science companies.
- In July 2016, with Marc Kennis, Stuart co-founded Pitt Street Research Pty Ltd, which provides issuer-sponsored research on ASX-listed companies across the entire market, including Life Science companies.
- Since 2018 Stuart has led Pitt Street Research’s Resources Sector franchise, spearheading research on both mining and energy companies.

General Advice Warning, Disclaimer & Disclosures

Terms & Conditions

The information contained herein ("Content") has been prepared and issued by Pitt Street Research Pty Ltd ACN 626365615 ("Pitt Street Research"), an Authorised Representative (no: 1265112) of BR Securities Australia Pty Ltd. ABN 92 168 734 530, AFSL 456663. All intellectual property relating to the Content vests with Pitt Street Research unless otherwise noted.

Disclaimer

Pitt Street Research provides this financial advice as an honest and reasonable opinion held at a point in time about an investment's risk profile and merit and the information is provided by the Pitt Street Research in good faith. The views of the adviser(s) do not necessarily reflect the views of the AFS Licensee. Pitt Street Research has no obligation to update the opinion unless Pitt Street Research is currently contracted to provide such an updated opinion. Pitt Street Research does not warrant the accuracy of any information it sources from others. All statements as to future matters are not guaranteed to be accurate and any statements as to past performance do not represent future performance.

Assessment of risk can be subjective. Portfolios of equity investments need to be well diversified and the risk appropriate for the investor. Equity investments in a listed or unlisted company yet to achieve a profit or with an equity value less than $50 million should collectively be a small component of an individual investor's equity portfolio, with smaller individual investment sizes than otherwise. Investors are responsible for their own investment decisions, unless a contract stipulates otherwise.

Pitt Street Research does not stand behind the capital value or performance of any investment. Subject to any terms implied by law and which cannot be excluded, Pitt Street Research shall not be liable for any errors, omissions, defects or misrepresentations in the information (including by reasons of negligence, negligent misstatement or otherwise) or for any loss or damage (whether direct or indirect) suffered by persons who use or rely on the information. If any law prohibits the exclusion of such liability, Pitt Street Research limits its liability to the re-supply of the Information, provided that such limitation is permitted by law and is fair and reasonable.

General Advice Warning

The Content has been prepared for general information purposes only and is not (and cannot be construed or relied upon as) personal advice nor as an offer to buy/sell/subscribe to any of the financial products mentioned herein. No investment objectives, financial circumstances or needs of any individual have been taken into consideration in the preparation of the Content.

Financial products are complex, entail risk of loss, may rise and fall, and are impacted by a range of market and economic factors, and you should always obtain professional advice to ensure trading or investing in such products is suitable for your circumstances; ensure you obtain, read and understand any applicable offer document.

Disclosures

Pitt Street Research has been commissioned to prepare the Content. From time to time, Pitt Street Research representatives or associates may hold interests, transact or hold directorships in, or perform paid services for, companies mentioned herein. Pitt Street Research and its associates, officers, directors and employees, may, from time to time hold securities in the companies referred to herein and may trade in those securities as principal, and in a manner which may be contrary to recommendations mentioned in this document.

Pitt Street Research receives fees from the company referred to in this document, for research services and other financial services or advice we may provide to that company. The analyst has received assistance from the company in preparing this document. The company has provided the analyst with communication with senior management and information on the company and industry. As part of due diligence, the analyst has independently and critically reviewed the assistance and information provided by the company to form the opinions expressed in the report. Diligent care has been taken by the analyst to maintain an honest and fair objectivity in writing this report and making the recommendation. Where Pitt Street Research has been commissioned to prepare Content and receives fees for its preparation, please note that NO part of the fee, compensation or employee remuneration paid will either directly or indirectly impact the Content provided.