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Overweight
Price Target:
AU$2.26

Pyx Resources: Delivered Strong Top-line Growth, Productivity Improvement and Tight Operational Cost Control; Reiterating Overweight and Price Targets

PYX Resources Limited ("PYX") is a fast-growing leading premium zircon producer with tremendous potential to grow output and enhance profitability. For the latest fiscal year ended 30 June 2020 ("FY2020"), PYX recorded strong high-grade zircon production and sales volume growth about 34% and 39% respectively. Its revenue reached US$7.82 million for the same fiscal year, surging 169%. Post-IPO and less related transaction costs, PYX had a strong balance sheet with net cash of US$4.21 million as at 30 June 2020. We believe that PYX will continue to increase its premium-quality mineral sands resources and benefit from a stronger zircon market, as the global economy has been recovering progressively from the economic fallout of the COVID-19 pandemic.

Recommendation Summary

- We continue our coverage of and **reiterate an Overweight rating** on PYX (NSX: PYX) as well as maintaining our **12- to 18-month price target of AU$2.26,** representing a potential upside of around 225% over the closing price of AU$0.695 as of 15 September 2020.

- PYX is a leader in premium-zircon production worldwide, and its resource base has the **highest weighted average heavy mineral ("HM") assemblage value in the industry.** According to our analysis, HM assemblage value is **highly correlated with market valuation** of a mineral sands producer; therefore, we expect PYX to trade at the high end of the valuation range on a per tonne of HM resource basis within its peer group at least in the short run.

- We keep our target prices as PYX's **strong financial results, significant improvement in efficiency and productivity**, and **proven ability to rein in expenses** have lived up to our expectations. Moreover, customer demand continues to be robust, and we are confident in management's proficiency.

PYX RESOURCES

12- to 18-month Target Price: **AU$2.26**
24-month Target Price: **AU$4.17**

Market Cap: AU$186.1M
Total Shares: 267.8M
Dividend and Yield: N/A

Financial Data (FY2020):
Revenue: US$7.82M
Revenue Growth (yoy): 169%
Gross Margin: 17%
EPS: N/A
Trailing P/E: N/A

- **PYX's latest operational highlights:**
  - Impressive premium-zircon production and sales volume growth of 34% and 39% respectively achieved in the 12-month period ended 30 June 2020 compared with the previous fiscal year;
  - Significant improvement in overall operational efficiency and staff productivity, as sales volume increased while full-time-equivalent personnel fell 2.1%;
  - Effective and quick COVID-19 response made based on the fact that PYX not only was able to run its production levels to meet clients' demand but also recorded none lost-time injury and diagnosed zero new coronavirus case;
  - Entered into a binding Offtake Agreement with China's Qingyuan Jinsheng ZR&TI Resources Co. Ltd. for a total of 6,000 tonnes of premium-grade zircon for a period of two years and;
  - Continuing diversification of PYX's customer base, with a 33% increase in the number of active customers amid sales volume to the top-3 clients declining from 78.6% of the total to 70.2%.

Other noteworthy facts are as follows:

- **PYX's notable top-line growth and tight operational cost control pave the way to profitability**. Record revenue of US$7.82 million registered in the latest fiscal year ended 30 June 2020 was up 169% on the heels of double-digit-percentage growth in both production and sales volume of zircon. PYX recorded a net loss after tax of US$10.89 million owing to listing expenses, transaction loss associated with the reverse takeover along with share-based incentives for the company's management. Importantly, some of these expenses are non-recurring. Excluding the non-recurring items, PYX incurred negative underlying EBITDA of US$0.86 million during the same fiscal year, which was mainly attributed to higher management cost. Considering the expanded corporate structure to cope with listing the company on the National Stock Exchange of Australia (NSX), we think this is an excellent achievement as a result of keeping a tight grip on general and administrative expenses.

- **Strong balance sheet to fund business growth and general corporate purposes.** PYX is debt free, with net cash of US$4.21 million as at 30 June 2020, primarily due to the IPO funding, versus US$0.21 million in net cash as at 30 June 2019. Cash available will allow the company to elevate production capacity and possibly explore new resources to sustain growth, among others.

- **Zircon pricing remains relatively stable in 1H 2020 in spite of the headwinds caused by the COVID-19 pandemic speaks to its resilience**. The COVID-19 crisis has disrupted the operations of many industries, including the key end user markets for zircon producers such as ceramics and foundry. However, the average premium and standard zircon price realized by PYX in its last fiscal year was only lower slightly to US$1,371 per tonne.

- **With the re-openings of many economies around the globe**, **the business outlook for PYX is promising**. The revival of economic activities in China, which consumes more than 40% of global zircon output, following the outbreak of the COVID-19 pandemic is particularly encouraging. For example, a string of recent economic data indicating that China's manufacturing and service sectors have rebounded to expansionary mode in the midst of auto sales growth for the fourth consecutive month in July. We believe the company's longer-term prospects remain flourishing. Our optimism is based on the expectations of **ever-growing demand for zircon and titanium dioxide**, the principal products from mineral sands mining, fueled by an array of existing applications and those in development across multiple industries, **increasing urbanization** especially in the populous China and India, **global economy returning to growth**, alongside the expected upward price pressure for zircon arising from **a likely shortfall in its supply** in the future.

- **We believe our valuation on PYX is reasonable**. It is strictly based on the company's existing JORC-compliant resources of 6.0 million tonnes of contained zircon and 7.59 million tonnes of valuable HM. Given the strong financial performance and significant improvement in overall efficiency and productivity delivered together with our expectations for more defined resource additions following deeper and wider exploration drillings, we maintain our **12- to 18-month price target of AU$2.26** and **24-month target price of AU$4.17**.

I. COMPANY OPERATION UPDATE

PYX has just published its financial results and operation data for the fiscal year 2020 ended 30 June 2020. We are impressed by the progress it has made since the new management took control of the company.

Significantly Increased Output and Sales

Despite economic contraction as a result of the COVID-19 pandemic, in its latest financial year ended 30 June 2020, PYX's zircon production volume jumped by 34% compared with the previous year (1 July 2018 to 30 June 2019). During the same period, sales volume lifted by 39%.

Besides those accomplishments, PYX recently announced the award of an initial contract for the acquisition of a Mine Field Unit to boost production capacity by one third at its tenement in Central Kalimantan, Indonesia to 24,000 tonnes annually to capitalize on expected favorable zircon market dynamics.

We are convinced that PYX is on the right track to achieve this medium-term production capacity target, and its business outlook is still flourishing.

Signed Offtake Agreement with Leading Zircon Trading Firm

In FY2020, PYX entered into a binding Offtake Agreement with leading global zircon trading group Qingyuan Jinsheng ZR&TI Resources Co. Ltd. ("Jinsheng") for supplying 250 tonnes per month of premium-grade zircon over a two-year period. Jinsheng is a well-respected and one of the biggest zircon specialists in China, which represents 47% of the global zircon demand.

We are confident the Offtake Agreement will enable PYX to further increase its market share in the crucial China market.

More Diversified Customer Base

PYX has been broadening its customer base within Europe and Asia. During FY2020, the number of PYX's active customers rose 33%, while mitigating its reliance on a few major customers such that the company's top-3 customers contributed 70.2% of the year's total sales volume, down from 78.6%.

With approximately 95% of PYX's revenue denominated in U.S. dollar, **we are positive that its diversifying customer base would minimize concentration risks and present minimal currency risk associated with the volatility of Indonesian Rupiah**.

Exhibit 1: PYX's Diverse Customer Base

Source: Company's annual report

Zero COVID-19 Case Reported So Far and Solid Corporate Governance

Despite implementing comprehensive preventive measures against the new coronavirus, PYX has been able to keep pace with customers' demand with uninterrupted production. Since January 2020, there has been no COVID-19 case identified or lost-time injury recorded.

On the other hand, to maintain and even strengthen its corporate governance standards, PYX has adopted a new financial reporting system to upgrade its financial reporting quality. Attaining solid financial positions ensure that the company is able to impose all necessary measures and react swiftly to any market or industry changes as the COVID-19 pandemic continues to evolve or deal with other catastrophic events, while executing a growth plan aimed at raising its production capacity over time.

In aggregate, **we believe the above accomplishments and actions taken will further alleviate investment risks pertaining to PYX**.

II. MINERAL SANDS MARKET CONDITIONS

Zircon

Key zircon markets, including China, were adversely impacted by the COVID-19 outbreak during 1H 2020, with overall zircon sales lower than the corresponding period in the previous year. Activity of the ceramic industry (the largest end user market for zircon) in China was impaired during the regional lockdowns in the country in early 2020, and only started recovering from April with flattish performance throughout 2Q. Chinese tile makers and property developers, who are among other major zircon consumers, were affected such that their operating rates were lowered by almost 50%. Moreover, reduction of industrial activity worldwide in response to the pandemic has had unfavorable impacts on the global ceramic industry as well, affecting participants in the U.S., Europe, India and other geographies.

Since 2Q, many countries started loosening up lockdowns, leading to a progressive resumption in business activities globally. China appears to have moved past the trough of the new coronavirus outbreak, with a year-on-year GDP expansion of 3.2% in 2Q, a reversal from the 6.8% contraction in 1Q, after major business and manufacturing activities essentially back to normal. In the U.S., some states have begun to reopen, with several European countries on the same path from early May onwards. It seems that the global economy as a whole is in the process of bottoming out. In the medium-term, we are still confident about the zircon market, as supply tightness is expected to stay.

Regarding zircon price, it remained relatively stable for the past one year, with a slight drop in 1H 2020. According to Iluka Resources (ASX: ILU), the largest zircon producer globally, premium and standard zircon price for 1H 2020 was US$1,354 per tonne, decreasing 5.8% from 4Q 2019 level of US$1,438 per tonne.

Titanium Dioxide (TiO2)

In 2019, the U.S. pigment market held up well, and rutile demand in India was also at elevated levels. China also helped support demand and price for the global pigment market. Nonetheless, Some European pigment producers faced challenges owing to intensified competition from imported sulfate pigment. However, capacity utilization rates amongst chloride pigment plants maintained at greater than 90%.

In 1H 2020, high-grade titanium feedstocks' end user markets, such as pigment, welding and sponge, were hit by the COVID-19 pandemic and experienced a slowdown in demand. Players in those markets thereby have cut capacity utilization rates and brought forward their maintenance schedules with the goal of reducing inventory. Since 2Q of this year, a rebound in demand has occurred among end users of pigment, while demand from the welding and sponge markets still clouded by the COVID-19 induced lockdowns, especially in the aerospace industry, with aircraft orders falling off the cliff.

Looking forward, as an increasing number of economies reopen and more workers returning to their jobs, industrial production levels should improve further. Data from China suggests its manufacturing, infrastructure and construction activities have picked up relatively faster than other sectors. The country's recent economic indicators also demonstrated supply-side disruptions have eased quickly, as production levels have experienced largely a V-shaped recovery. In contrast, the manufacturing sector in the U.S. and Europe could be on a slower recovery path after reopens. In the medium-term, market conditions in general continue to be positive for high-grade titanium feedstocks because their supply is expected to be tight.

III. FINANCIALS

Financial Highlights for FY2020 *(from 1 July 2019 to 30 June 2020)*

- Revenue of US$7.82 million
- Underlying EBITDA of negative US$0.86 million
- Net profit/loss after tax of negative US$10.89 million
- Net debt free, with a closing cash position of US$4.21 million

Historical Financials and Forecasts

Exhibit 2: Profitability

	2019 (Jun) A[2]	2020 (Jun) A	2020 (Dec) F	2021 (Dec) F
Zircon Sold (tonne or "t")	4,110	5,702	10,200	24,000
Average Realized Price (US$/t)	1,400[1]	1,371	1,344	1,375
Gross Profit Margin (GP/Sales)	24%	17%	31%	46%
EBITDA Margin (EBITDA/Sales)	12%	N/A	19%	42%
Operating Margin (EBIT/Sales)	11%	N/A	15%	39%
Net Profit Margin (NI/Sales)	8%	N/A	11%	29%

Source: Company reports and Cedrus' estimates

Exhibit 3: Income Statement

		2019 (Jun) A[2]	2020 (Jun) A	2020 (Dec) F	2021 (Dec) F
Zircon Sold	t	4,110	5,702	10,200	24,000
Average Realized Price	US$/t	1,400[1]	1,371	1,344	1,375
Revenue	US$'000	2,903.2	7,816.4	13,713.6	41,407.1
Revenue Growth (yoy)	%	N/A	169%	75%	202%
Gross Profit	US$'000	694.2	1,304.2	4,241.9	19,015.8
EBITDA	US$'000	349.9	-860.9[3]	2,663.1	17,287.0
EBIT	US$'000	317.8	-10,968.5	2,101.2	15,964.8
Net Income	US$'000	233.7	-10,885.9	1,567.7	11,965.4

Source: Company reports and Cedrus' estimates

Exhibit 4: Cash Flow Statement

		2019 (Jun) A	2020 (Jun) A	2020 (Dec) F	2021 (Dec) F
From Operations (CFO)	US$'000	268.3	-1,872.3	2,140.5	12,048.5
Free Cash flow (FCF)	US$'000	230.6	-16,318.4	700.5	7,221.0

Source: Company reports and Cedrus' estimates

[1] Cedrus' estimates
[2] Zircon sales volume covered the period from 1 July 2018 to 30 June 2019; while zircon revenue and profit data were for the timeframe from 24 January 2019, when accounting consolidation commenced, to 30 June 2019
[3] Underlying EBITDA excluded non-recurring items, which are expenses that do not fall within the normal course of business or are not costs that occur every year

Exhibit 5: Revenue and Profitability Forecast

		2019 (Jun) A	2020 (Jun) A	2020 (Dec) F	2021 (Dec) F	2022 (Dec) F	2023 (Dec) F	2024 (Dec) F
Zircon Net Revenue	US$'000	2,903.2	7,816.4	13,713.6	33,006.0	50,191.5	50,328.0	67,104.0
Total Net Revenue	US$'000	2,903.2	7,816.4	13,713.6	41,407.1	63,126.5	63,263.0	84,416.0
EBITDA	US$'000	349.9	-860.9[3]	2,663.1	17,287.0	29,269.2	29,405.7	40,135.2
EBITDA margin	%	12%	N/A	19%	42%	46%	46%	48%
Free Cash flow	US$'000	230.6	-16,318.4	700.5	7,221.0	14,006.6	20,184.0	23,990.2
Cash Cost Per tonne of Zircon	US$	1,056[4]	1,164	929	845	803	803	796

Source: Company reports and Cedrus' estimates

IV. VALUATION METHODOLOGIES

We give PYX an Overweight rating, as the stock is trading much lower than our estimated net present value ("NPV") and two other valuation yardsticks.

PYX offers investors exposure to valuable mineral sands resources through its flagship Mandiri asset located in Central Kalimantan, which is a prolific geological location highly recognized for hosting premium-quality mineral sands including zircon, rutile and ilmenite among others.

Given the nature of PYX's business and the current status of its operations, we have adopted **Comparable Company Analysis ("CCA")** and **Discounted Cash Flow ("DCF")** valuation methodologies to value the company.

By identifying and analyzing Australian Securities Exchange (ASX)-listed mineral sands companies with similar business nature as PYX, we used the CCA method to calculate their median **EV/Resource multiple**, which was applied to PYX's JORC-compliant resources to come up with our estimated value of PYX. Our analysis suggested PYX should be traded at a valuation of approximately US$40 per tonne of its defined HM resources of 9.4 million tonnes, or approximately US$375 million (or AU$626 million) higher than its 15 September 2020 market capitalization of AU$186.1 million by 236%, which should be particularly appealing to long-term investors.

In addition, we have also performed **EV/EBITDA multiple** analysis on the publicly-traded, established mineral sands producers. Our findings show that the only industry peer that is more closely comparable to PYX is Iluka Resources, which is the leader of the heavy minerals industry, with an average EV/EBITDA multiple of 10.5x in the past decade. Consequently, based on the conservative EBITDA projection of US$40 million for PYX in the year 2024 (assuming to run at long-term production capacity levels), we valued PYX's Mandiri asset at US$420 million.

Meanwhile, our DCF model is constructed based on the scenario that PYX's mineral resources as defined in the JORC report will be extracted and produced at the long-term production capacity levels. A risk-adjusted

[4] Cedrus' estimates

(real) discount rate of 9% was applied to derive the company's valuation. Accordingly, the **NPV** of the Mandiri asset using the DCF method is US$393 million.

Exhibit 6: Valuation Summary

Valuation Method	DCF	CCA (Using EV/Resources)	CCA (Using EV/EBITDA)	
Key Parameter				
Multiple (Median)	9% (Discount Rate)	40	10.5	
Valuation (US$ M)				
Value of PYX	393	375	420	396* (Average Value)

Notes: CCA = Comparable Company Analysis; EV = Enterprise Value; *Average value from the outcomes of the three valuation methods

Source: Company reports and Cedrus' estimates

We view that the valuation from all the above three methods should be treated equally. Our final valuation for PYX is US$396 million. After adjusting for cash balance, minority interest, and management share dividend incentives, PYX's implied equity value is US$378 million (AU$631 million based on the exchange rate of US$1 = AU$1.67), which is our near-term (12- to 18-month) valuation target, corresponding to a share price of AU$2.26 and representing an approximately 225% potential increase over PYX's closing price of AU$0.695 as of 15 September 2020.

More importantly, we are convinced that PYX will be able to capitalize on exploration targets projected to yield another 3 million tonnes of zircon alongside the likelihood of growing its gold resources, potentially providing a notable upside to our valuation and doubling it from current estimates to above US$700 million in the medium term. Thus, we have reiterated a **medium-term (24-month) price target of AU$4.17** for PYX.

V. CONCLUSION AND RECOMMENDATION

- Despite the existence of the COVID-19 pandemic, PYX delivered strong results for the 2020 financial year on top of significantly improving its productivity and efficiency along with considerable operating cash flow enhancement. All these achievements demonstrate that PYX has the capability of expanding its production capacity and boost its financial position further in upcoming quarters.

- PYX has been broadening its customer base in Europe and Asia with success, making progress in terms of minimizing its concentration risks. For example, the company's top-3 customers accounted for 70.2% of the sales volume for FY2020, a decline of more than 8 percentage points from 78.6% previously. Moreover, the company grew the number of active customer by 33% during the same period.

- To safeguard employee's health besides pursuing its financial objectives, PYX has been implementing extensive preventive measures against the new coronavirus. Due to prudent management, the company has been able to satisfy customer demand without putting employee's lives at risk.

- Currently, PYX is focused on premium-quality zircon production, but it is also in the process of exploring new sources of revenue through the sales of by products, with the ultimate goal of sustaining rapid growth.

- Other than raising production, PYX has other means to deliver upside such as the development of in-mine and near-mine targets to enlarge its resource base and extend the overall mine life. Prospective acquisitions of other mineral sands projects within the same prolific region in Central Kalimantan of Indonesia are other options.

- In our view, the COVID-19 pandemic should have limited implications on global zircon and titanium dioxide demand going forward. With major global economies gradually reopening and China's economy is recovering at a relatively faster pace, demand for zircon and titanium oxide products will pick up. Hence, in longer run, we believe their demand will remain resilient, while the outlook for the mineral sands industry as a whole is projected to be highly positive due to the expected supply constraints as discussed above.

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- Neither Dr. Thomas Kenny nor any member of the research team or their households is an owner of Pyx Resources Limited common shares.

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