

**Overweight**  
Price Target:  
AU\$2.50

**Pyx Resources: Delivered Strong Top-line Growth and Productivity Improvement; Expanded Mineral Resources with the Tisma Acquisition**

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 31 December 2020 (FY2020), PYX recorded strong premium zircon production and sales volume growth of about 32% and 37% respectively. Its revenue reached US\$8.96 million for the same fiscal year, surging almost 31%, with a strong balance sheet as net cash totaling US\$3.51 million as of 31 December 2020. Moreover, on 15 February 2021, PYX completed the acquisition of the Tisma mineral sands deposit (“Tisma”), and now the company oversees the world’s 2<sup>nd</sup>-largest zircon resource base already in production. We believe that PYX will be able to further explore its potential and continue increasing extraction and production of premium zircon, fulfilling rapidly-growing global demand for zircon during post-COVID-19 economic recovery period.

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\$2.50**, which represents a potential upside of around 154% over the closing price of AU\$0.985 as of 22 March 2021.
- PYX is a leading premium-zircon producer globally, and its resource base has the **highest weighted average heavy mineral (“HM”) assemblage value in the industry**. Recent acquisition of Tisma boosts PYX’s contained zircon resources by 75%, resulting in PYX being the producing mining company with the world’s second-largest JORC-compliant zircon resources. 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 price, as PYX’s **strong financial performance, significant improvement in efficiency and productivity, and successful completion of the Tisma acquisition** have lived up to our expectations. Moreover, its well-diversified customer base has maintained robust zircon demand. Finally, we have increased confident in PYX management’s proficiency.
- PYX’s latest operational achievements are remarkable:
  - **The company’s notable top-line growth and tight operational cost control pave the way to profitability.** Revenue of US\$8.96 million registered in the latest fiscal year ended 31 December 2020 (FY2020) was around 31% higher than the previous fiscal year, with impressive premium-zircon production and sales volume growth of 32% and 37% respectively. PYX’s capacity in its Mineral Separation Plant increased by 50% from 12,000 tonnes to 18,000 tonnes per annum;



Share Price (as of 22 March 2021):  
AU\$0.985  
12- to 18-month Target Price: **AU\$2.50**

Market Cap (as of 22 March 2021):  
AU\$408.8M  
Total Shares: 415M  
Dividend and Yield: N/A

**Financial Data (FY2020):**  
Revenue: US\$8.96M  
Revenue Growth (yoy): ~31%  
Gross Margin: 15.6%  
EPS: N/A  
Trailing P/E: N/A



- PYX completed the acquisition of Tisma mineral sands deposit, which boosts PYX's contained zircon resources by 75% to 10.5 million tonnes in a highly accretive deal for the company's existing shareholders, as the consideration pertaining to the transaction resulted in a merely 55% increase in the number of outstanding shares. The acquisition is not only an excellent **strategic addition to PYX's resource base**, transforming PYX into the **world's second-largest zircon producing company in terms of resource base**, but also a **significant improvement to PYX's financial prospects through higher output and profitability**;
- Entered into a **new binding offtake agreement** with India-incorporated Microtech Zircon for supplying a committed quantity of **3,600 tonnes of zircon over a two-year period**. The execution of this third offtake agreement stemming from PYX's commitment to rapidly growing its production capacity and global sales volume;
- **Number of customers more than doubled** mainly by enlarging the client pool and increasing sales in China. As a result, the combined share of PYX's top-3 customers in terms of sales volume fell from 83.6% to 47.9% during FY2020. Through customer diversification, PYX is protected from concentration risks, mitigating adverse impacts arising from future potential crisis related to specific geographies and/or industries; and
- **PYX's COVID-19 response is highly effective** evidenced by the fact that the company was able to run its production at levels meeting clients' demand, recorded none lost-time injury, and reported zero COVID-19 incidents.

Other noteworthy facts regarding PYX are as follows:

- Reported a net loss after tax of US\$13.82 million for FY2020 mainly owing to non-recurring listing expenses and non-cash acquisition losses. Excluding the non-recurring items, PYX incurred underlying negative EBITDA of US\$1.21 million, compared to an underlying negative EBITDA of US\$861,000 for the 12 months ending 30 June 2020, which in our view is an excellent achievement as a result of a **tight control on general and administrative expenses** while building up a solid growth base.
- **PYX successfully built a strong balance sheet to fund its business growth and general corporate purposes**. PYX was debt free, with net cash of US\$3.51 million as at 31 December 2020, primarily due to proceeds from its IPO, versus US\$0.21 million in net cash at year-end 2019. Enough cash available will allow the company to raise production capacity and possibly explore new resources to sustain long-term growth, among other business opportunities.
- **Zircon prices, which had a moderate drop during the COVID-19 pandemic, are expected to rise strongly over the next few months** amid a major commodity price upcycle during the expected global economic recovery phase post the COVID-19 crisis. It is estimated that a substantial supply gap with respect to premium zircon will emerge after restrictions on travel and business activities worldwide are lifted, lending strong support to a robust price environment for the mineral in the near future.
- While the **pace of the recovery of the global economy appears to have slowed somewhat partially due to the discovery of variants of the novel coronavirus**, we believe the outlook for the mineral sands industry in general and **zircon in particular remains robust** and the **business outlook for PYX is promising**, as remedial action are being taken. As the largest end user market for zircon, China appears to have largely recovered from the COVID-19 outbreak. Meanwhile, the majority of tile plants in Europe, Middle East and India have been recovering strongly since 2H 2020. Moreover, increasing availability of



COVID-19 vaccines and rolling out of government stimulus packages (the US\$1.9 trillion stimulus bill passed by the U.S. Congress in early March 2021 is the latest example) will speed up the global economic recovery, boding well for zircon demand and prices. Overall mineral sands market negatively affected by initial lockdowns around the world has gradually revived buoyed by pent-up demand.

- **We believe PYX's longer-term prospects remain thriving.** Our optimism is based on expectations of ever-growing demand for zircon and titanium dioxide, increasing urbanization especially in the populous China and India, alongside the expected upward price trajectory of zircon arising from its scarce and concentrated supply.
- **We reiterate our 12- to 18-month price target of AU\$2.50.** Our valuation is strictly based on the company's current JORC-compliant resources of 10.5 million tonnes of contained zircon and 14.9 million tonnes of valuable HM, which are boosted by about 75% and 59% respectively from the acquisition of Tisma. Given the strong financial performance and notable improvement in overall efficiency and productivity delivered together with expanded defined resources from the Tisma deal, we maintain our above-mentioned target price. All in all, we recommend long-term investors to create or add to a position on PYX in view of the significant upside potential.

Note: Unless otherwise stated, AU\$1 = US\$0.75 throughout this report.

## I. COMPANY OPERATION UPDATE

PYX has just published its annual financial results and operation data for the fiscal year 2020 ended 31 December 2020. We are impressed by the progress made since the new management has taken control of the company and its resilient performance during the COVID-19 pandemic.

### Significantly Increased Output and Sales

Despite economic contraction in many parts of the world as a result of the COVID-19 pandemic, PYX's FY2020 zircon production volume jumped 32% year on year ("yoy"), while sales volume lifted by 37% during the same period.

**We are convinced that PYX has made significant progress in implementing its growth strategy and improving its business fundamentals. Hence, the company's business outlook is still viewed as flourishing.**

### Completed the Acquisition of the Tisma Mineral Sands Deposit

In February 2021, PYX completed its acquisition of Tisma Development (HK) Limited, which owned a mineral sands deposit in Kalimantan, Indonesia with about 137 million tonnes of JORC-compliant inferred mineral resources, including 4% heavy minerals that contain approximately 4.5 million tonnes of zircon. The acquisition has not only spiked the scale of PYX's activities but also turning the company into a producing mining company with the world's second-largest JORC-compliant zircon resources. After acquiring the Indonesian mineral sands deposit, PYX now controls around 263 million tonnes of JORC-compliant mineral resources, with 10.5 million tonnes of contained zircon.

**We believe the acquisition will boost PYX's production capacity and potential to meet higher market demand as well as capturing more market share globally.**

### Signed Offtake Agreement with Microtech Zircon in India

In March 2021, PYX entered into a binding offtake agreement with India-incorporated Microtech Zircon to supply 3,600 tonnes premium-grade zircon over a two-year period. Microtech Zircon is a member of Delta Tiles, a group of companies that falls under the brand name Geo Gres. Delta Tiles operates five different production units of ceramic tiles, porcelain tiles and sanitary ware. This represents the third offtake agreement for PYX.

**We are confident that the above-mentioned newly signed offtake agreement will further allow PYX in a better position to cope with short-term fluctuations in market demand and sustain its growth.**

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

Even with comprehensive preventive measures against the new coronavirus in place, PYX has managed 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.

**Overall, we believe the financial results reported and other notable achievements made for FY2020 will further alleviate investment risks associated with PYX.**

## II. MINERAL SANDS MARKET CONDITIONS

### Zircon Market

COVID-19 pandemic has brought unprecedented challenges to the global economy. In 2020, global zircon demand subdued, leading to a fall in overall zircon sales yoy as well as zircon price decline in 1H 2020. However, the global economic outlook has brightened since 2021 because of increasing COVID-19 vaccination rates in many countries around the world and the US\$1.9 trillion fiscal relief package recently launched in the U.S. In addition, being the largest end user market for zircon, China's economy seemed to have moved past the trough caused by the novel coronavirus outbreak, with a year-on-year GDP expansion of 2.3% in 2020 along with a surge in the country's economic activities in the first two months of 2021, underscoring the strength of its V-shaped recovery. We are convinced by the strong rebound in industrial production in China and other major economies that sentiment among players in the zircon market has been improved.

Outlook for zircon market remains robust in the long term on expectations that there will be an absence of meaningful supply increases in the foreseeable future, resulting in projected demand for zircon exceeding its supply. With the COVID-19 pandemic being brought under control, global business activities will resume gradually, triggering substantial demand for zircon. Meanwhile, zircon prices, which remained relatively stable during the COVID-19 crisis, are expected to spike over the next few months in conjunction with the emergence of a major upswing in commodity prices during the post-COVID-19 recovery phase.

According to Iluka Resources (ASX: ILU), the largest zircon producer globally, the weighted average price of zircon sand (premium and standard) for 2020 was US\$1,319 per tonne, representing a moderate drop from 2019; however, zircon prices are expected to jump in 2021 for reasons mentioned above. It is evidenced by the fact that Iluka Resources has advised its zircon customers about a US\$70 per tonne price increase effective 1 April 2021. In the medium-term, we are still positive about the zircon market as a whole on the backdrop that its supply tightness is expected to stay.

### Titanium Dioxide (TiO<sub>2</sub>) Market

In 1H 2020, high-grade titanium feedstock's 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 cut their capacity utilization rates and brought forward their maintenance schedules with the goal of reducing inventory. Economic shutdowns also put downward pressure on prices in 2020. Nonetheless, since 2H 2020, we have seen a slight rebound in both price and volume as specialty-chemical companies started resuming their operations. Historical growth patterns for titanium dioxide demand could be restored in the near future, driven by robust pigment production and elevated industrial activities.

We predict that a global recovery in the titanium dioxide market is underway in 2021 especially for the China market in terms of both prices and volume. Titanium dioxide prices in China are expected by market participants to move higher in the short term because of firmer demand from international consumers, following output cuts imposed by producers outside China during the persistent COVID-19 pandemic.

In the long run, titanium dioxide prices are expected to rise further amid occurrence of its supply deficit.

### III. FINANCIALS

#### Financial Highlights for FY2020 (as at 31 December 2020)

- Revenue of US\$8.96 million
- Underlying negative EBITDA of US\$1.21 million
- Net loss after tax of US\$13.82 million
- Net debt zero, with a net cash balance of US\$3.51 million

#### Historical Financials and Forecasts

##### Exhibit 1: Profitability

	2019 A	2020 A	2021 F	2022 F
Zircon Sold (tonne or "t")	4,936	6,737	12,000	24,000
Average Realized Price (US\$/t)	1,389	1,329	1,353	1,387
Gross Profit Margin (GP/Sales)	19.0%	15.6%	9.9%	63.7%
EBITDA Margin (EBITDA/Sales)	1.3%	N/A	5.0%	65.0%
Operating Margin (EBIT/Sales)	0.1%	N/A	2.0%	60.1%
Net Profit Margin (NI/Sales)	N/A	N/A	0.2%	54.3%

Source: Company reports and Cedrus' estimates

##### Exhibit 2: Income Statement

		2019 A	2020 A	2021 F	2022 F
Revenue	US\$'000	6,858	8,957	20,254	40,139
Revenue Growth (yoy)	%	N/A	30.6%	126.1%	98.2%
Gross Profit	US\$'000	1,262	1,327	2,003	25,578
EBITDA	US\$'000	86	-1,213 <sup>1</sup>	1,012	26,096
EBIT	US\$'000	10	-1,084	54	24,131
Net Income	US\$'000	-58	-13,821	32	18,090

Source: Company reports and Cedrus' estimates

##### Exhibit 3: Cash Flow Statement

		2019 A	2020 A	2021 F	2022 F
From Operations (CFO)	US\$'000	-110	-2,087	991	18,524
Free Cash flow (FCF)	US\$'000	-258	-2,924	-863	11,385

Source: Company reports and Cedrus' estimates

<sup>1</sup> 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 4: Revenue and Profitability Forecast**

		2019 A	2020 A	2021 F	2022 F	2023 F	2024F	2025F
<b>Zircon Revenue</b>	US\$'000	6,858	8,957	16,230	33,290	75,114	83,376	100,152
<b>Total Revenue</b>	US\$'000	6,858	8,957	20,254	40,139	89,489	98,231	119,580
<b>EBITDA</b>	US\$'000	86	-1,213	1,012	26,096	60,716	66,561	82,714
<b>EBITDA margin</b>	%	1.3%	N/A	5.0%	65.0%	67.8%	67.8%	69.2%
<b>Free Cash flow</b>	US\$'000	-258	-2,924	-863	11,385	28,152	47,005	50,197
<b>Cash Cost Per tonne of Zircon</b>	US\$	1,119	1,153	1,416	478	463	463	448

Source: Company reports and Cedrus' estimates

## IV. CONCLUSION AND RECOMMENDATION

- Despite the unprecedented challenges stemming from the COVID-19 pandemic, PYX delivered strong financial results for its fiscal year 2020 on top of significantly enhanced productivity and efficiency and considerable operating cash flow improvement.
- Moreover, the completion of the acquisition of Tisma has transformed PYX to become the producing mining company with the 2<sup>nd</sup>-largest zircon resources globally. All these achievements demonstrate that PYX has made great strides in executing its growth strategy and strengthening its business fundamentals. In addition, PYX is on the right track of expanding its production capacity to support higher sales and is expected to boost its financial position further in upcoming quarters.
- PYX has entered into a binding offtake agreement with India-incorporated Microtech Zircon for supplying a committed quantity of 3,600 tonnes of zircon over a term of two years. The execution of this offtake agreement will further help PYX better cope with any volatility in zircon demand in the short term and support the continued growth of its production capacity and global sales.
- PYX has been broadening its customer base with success, making progress in terms of minimizing its concentration risks. For example, the company's top-3 customers accounted for only 47.9% of its total sales volume for FY2020, down from 83.6% in the previous year. Moreover, the company almost doubled the number of its active customers during the same period.
- Since the outbreak of the COVID-19, PYX has been implementing extensive preventive measures against the novel coronavirus so that there has been no COVID-19 case identified or lost-time injury recorded. Importantly, the company has been able to satisfy customer demand without putting employees' lives at risk.
- Company's management has been effective in executing PYX's long-term strategy. Currently, PYX is focused on premium-quality zircon production, but it is also in the process of actively exploring new sources of revenue through the sales of by-products with the ultimate goal of sustaining rapid growth.
- With major economies around the globe gradually recovering from the COVID-19 induced economic fallout and China's economy is growing at a relatively faster pace, demand for zircon and titanium oxide



products will pick up. Zircon prices are already recovering from the modest decline seen in 2020 amid the COVID-19 crisis at that time. In our view, demand for zircon will remain resilient in the long run driven by growing urbanization particularly in China and India, the widespread adoption of new applications resulted from continued research and development efforts along with rising standard of living globally. Besides heightened demand, zircon prices are forecast to be on the rise over time owing to the expected existence of a supply deficit.

- Based on the above-mentioned rationales, **we maintain our overweight rating and 12- to 18-month price target for PYX of AU\$2.50**, which represents a **potential return of about 154%** over the 22 March 2021 closing price of AU\$0.985. Hence, we recommend long-term investors to create or add to a position on PYX in view of the significant upside potential.



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