

Overweight

Price Target:
AU\$3.81/GBp196

PYX Resources: Reiterate Target Price; Strong FY'23 Financials and Operational Results with Robust Near-term Outlook

Introduction

PYX Resources Limited (“PYX” or “Company”) is the world’s third-largest publicly-listed zircon producer by zircon resources¹. It represents a leading and fast-growing emerging force in premium zircon production with enormous potential to grow output and enhance profitability. Its shares are dual-listed on the London Stock Exchange (LSE: PYX) and National Stock Exchange of Australia (NSX: PYX).

On 15 March 2024, PYX announced its audited financial results for the financial year ended 31 December 2023 (“FY 2023”).

This report provides highlights regarding PYX’s FY 2023 financial results and some of its latest operational updates together with our current assessment of the Company’s valuation. Our analysis was made based on the operational milestones achieved by PYX and our view of the market conditions.

Some of the key achievements and milestones made are as follows:

- a) During FY 2023, PYX produced 14.8 thousand tonnes (“kt”) of minerals sands (zircon, rutile and ilmenite) of which 11.8 kt were premium zircon, representing a 31% year-on-year (“YoY”) increase (FY 2022: 9.1 kt). On the other hand, sales of premium zircon grew by 24% YoY to 11.4 kt (FY 2022: 9.1 kt);
- b) For FY 2023, the Company generated revenue of US\$22.7 million. PYX also achieved a positive underlying EBITDA of US\$676,301, up about 61% YoY, which was particularly phenomenal given the tepid global economy. In addition, net cash at year-end FY 2023 increased by 8.4% YoY to approximately US\$7.83 million, and PYX remained debt free; and
- c) On 12 March 2024, received the revised license from the Investment and One-Integrated Services Department (Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu/DPMPTSP). Thus, PYX can now begin to export ilmenite, deliver on orders placed prior to the modification of the license, monetize this by-product, and augment its revenue stream.



P Y X
RESOURCES

Share Price (as of 20 March 2024): AU\$0.29/GBp14.725
12- to 18-month Target Price:
AU\$3.81/GBp196

Market Cap (as of 20 March 2024): AU\$133.1M/GBP67.6M
Total Shares: 458.8 M
Dividend and Yield: N/A

Recommendation Summary

- a) We continue our coverage of PYX with an **Overweight** rating and **reiterate the 12- to 18-month price target of AU\$3.81/GBp196**, which represents a potential upside of about 1,230% over its closing price of GBp14.725 (AU\$0.29*) as of 20 March 2024 (*at the exchange rate of GBP:AU\$ = 1:1.95);
- b) PYX is a globally leading premium zircon producer. Within its total of 263 million tonnes of JORC-compliant mineral resources, there are a combined 10.5 million tonnes of contained zircon in its two

¹ Based on publicly available information as at 30 June 2023

mineral sands assets in Indonesia. The Mandiri asset alone has 6 million tonnes of contained zircon, the largest discovery worldwide since 2012;

- c) The Company's mineral resources are not only abundant but also have one of the highest weighted average heavy mineral ("HM") assemblage values in the industry of US\$1,890 per tonne. Combining easy extraction and low processing cost with notable further exploration potential, PYX enjoys tremendous financial benefits from its premier deposits. Consequently, in our view, PYX's shares should be traded at the very high end of the valuation range on a per tonne of HM resource basis among its peers at least in the short term;
- d) Importantly, we believe PYX is better positioned to capture further growth in the premium zircon market supplemented by sales of by-products like ilmenite and rutile, gain continued support from investors, and ride the favorable market momentum as a result of its competent management, which has been **delivering outstanding operational milestones and financial performance** as well as **meeting market and shareholder expectations**;
- e) **Outlook for premium zircon remains robust.** The positive prospects are based on heightened long-term demand and other factors: i) sustained global economic growth; 2) increasing urbanization from other developing countries especially those in Asia and Africa in addition to China and India; 3) innovative applications resulted from technological advancements such as zircon's derivative being potentially used as the raw material in solid-state electrolytes in lithium-based battery technologies; and 4) anticipated supply shortages due to existing operations reaching the end of their mine life alongside economic uncertainty in the past few years that has restrained the development of new projects. Strong demand for zircon is evident by the resilience of its prices during the turbulent times in the last 2-3 years. As a leader of zircon supply, PYX should be a prime beneficiary of the above-mentioned trends; and
- f) For PYX specifically, **securing an export license** for rutile and ilmenite ores pertaining to the Mandiri asset along with the **extension of an exploration and mining license** for a maximum term of 10 years with respect to the highly-prospective Tisma asset are among the positives. The extension brings stability and certainty to the Company's operations and possibly serves as a catalyst for future growth.

To conclude, these new developments should further diversify PYX revenue sources, add growth engines, and enrich the Company's margins as well as leading to strengthening its production capability and enhancing its shareholder value eventually.

Note: Unless otherwise stated, the US\$:AU\$ exchange rate of 1:1.52 is used in all calculations.



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I. COMPANY'S ACHIEVEMENTS AND OPERATIONAL UPDATES

Rising Production and Sales

Based on PYX's operational update for the 12 months ended 31 December 2023 ("FY 2023") ahead the publication of its financial results for the same period, PYX continued to set industry standards and accomplished notable operating performance amid a challenging global economic backdrop due to elevated interest rates and widespread geopolitical tensions.

In FY 2023, PYX produced 11.8 kt of premium zircon with sales of 11.4 kt, representing a respective increase of 31% and a 24% in comparison to the corresponding period in the immediately preceding year. Production productivity is even more impressive after considering that total headcount of the Company in FY 2023 was 22% lower than that in FY 2022.

Other remarkable operational improvements include its premium zircon finished goods inventory remained at a low level of 17.1 days (FY 2022: 17.5 days) even though inventory rose 22% to 533 tonnes as at 31 December 2023.

FY 2023 represents the first year in which PYX both produced and sold over 10 kt of premium zircon, accompanied by other extraordinary milestone achievements under the management of the current adept executive team. The Company's management has been responsive to the change in trade dynamics by actively expanding its customer base with a focus in Asia, mainly China and India, in FY 2023.

Exhibit I-1: Summary of Key Operational Parameters of PYX for FY 2022 and FY 2023

	Year Ended	Year Ended	Y/Y Change	Y/Y Change
	31 December 2023	31 December 2022	Y/Y Change	Y/Y Change
	Kt ('000 tonnes)	Kt ('000 tonnes)	Kt ('000 tonnes)	%
Zircon Produced	11.8	9.1	+2.7	+31
Zircon Sold	11.4	9.1	+2.3	+24
TiO ₂ Minerals Produced	2.9	7.5	-4.6	-61
TiO ₂ Minerals Sold	-	0.3	-0.3	N.M
Yearly Average Zircon Price	US\$1,998/t	US\$2,457/t	-US\$459/t	-19
Total Produced	14.8	16.6	-1.8	-11
Total Sold	11.4	9.5	+1.9	+20

Note: N.M. – Not meaningful

Source: PYX and Cedrus

Potential Zircon Demand

Despite registering double-digit-percentage YoY growth in premium zircon sales, FY 2023 was a challenging year for PYX because its realized yearly average zircon price dropped by 19% YoY from US\$2,457/t to US\$1,998/t, stemming from the unfavorable macroeconomic and political environment such as elevated interest rates and geopolitical tensions. However, this phenomenon is likely transient, as technological advancements through continued research and development investment have created new applications to sustain robust demand for zircon, giving support to pricing.

For example, a cutting-edge technology and one of the most discussed areas of potential application of a zircon's derivative is solid-state battery. According to various research by the Institute of Physics Chinese Academy of Sciences, Jinduan Research Institute and Soochow Securities, zircon is a suitable raw material for potential use in solid-state electrolytes in lithium-based battery technologies, providing the gateway for zircon to tap the billion-dollar solid-state battery market. It was estimated that the size of the 2023 solid-state battery market, comprising primarily of consumer electronics, electric vehicles, and energy harvesting applications, exceeded US\$826 million. That market is projected to grow at an amazing compound annual growth rate ("CAGR") of above 38.2% over the next eight years².

Novel applications could continue fuel strong demand for zircon (especially premium zircon) and result in exceptional financial performance for PYX particularly on expectations of imbalanced supply and demand dynamics going forward.

Post-FY 2023, PYX made two more noteworthy accomplishments as consequences of its persistent efforts made throughout the reported financial year.

- **Renewal of Mandiri's license for another two years.** On 18 January 2024, PYX received a two-year license spanning from 2024 to 2025 to extract, process and export up to 94 kt annually of minerals (a mix of premium zircon, ilmenite and rutile) from its flagship Mandiri project. The license renewal was granted after the 2024 & 2025 Mandiri RKAB Work Plan and Budget (*Rencana Kerja dan Anggaran Biaya (WP&B/RKAB)*) were approved by the Indonesian Energy and Mineral Resources Department (ESDM), covering all crucial aspects of Mandiri's operations such as mining operations, processing and refining, marketing and shipping, environment, mining safety, training as well as community development and empowerment.
- **Award of revised export license, permitting the start of shipping Ilmenite.** On 12 March 2024, PYX announced that it had obtained the modified license from the Investment and One-Integrated Services Department (Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu/DPMPSTP). It means that with immediate effect, PYX can start exporting ilmenite and deliver on orders placed before the receipt of revised license. PYX has been producing and stockpiling rutile and ilmenite since January 2022 and June 2022 respectively, and by year-end 2023, the Company had accumulated 10 kt of titanium dioxide material (pre-audit). Commencement of exporting ilmenite will represent a significant milestone for PYX and significantly strengthen its financial position. Further updates in this regard will be provided in due course as appropriate.

II. FINANCIAL RESULTS FOR FY 2023 REMAIN RESILIENT AND SUSTAINABLE

PYX has announced its financial results for FY 2023, which showed continued improvement in its operations with increased production and sales of premium zircon YoY. Moreover, PYX maintained a positive and achieved a 61% jump in underlying EBITDA in FY 2023 versus FY 2022. These accomplishments were attained just under two years since its listing in London and three years since its listing in Australia.

² "Solid State Battery Market Size Forecast (2024–2032)" *Global Market Insights*, March 2023



The following are the financial highlights of PYX in FY 2023:

- Total sales volume of premium zircon increased 24% YoY to 11,350 tonnes;
- Revenue totaled approximately US\$22.7 million, essentially flat YoY;
- Underlying EBITDA soared 61% YoY to US\$676,301;
- Net cash position rose about 8.4% YoY to around US\$7.83 million;
- Premium zircon inventory was up 22% YoY, but still at a low level of 17.1 days;
- Headcount decreased 22% YoY to 95;
- Female and indigenous (Dayak) employment grew to 28% and 47% respectively, up a respective 5 percentage points and 2 percentage points YoY;
- Total recordable injury frequency rate of zero; and
- Signed the United Nations Global Compact Annual Communication on Progress in March 2023. United Nations Global Compact is the world's largest voluntary corporate citizenship initiative.

In line with its strategy, premium zircon production and sales further improved in FY 2023, resulting in a 31% YoY increase in premium zircon output from 9.1 kt to 11.8 kt and a 24% YoY increase in sales of premium zircon from 9.1 kt to 11.4 kt.

For titanium dioxide minerals, there was a reduction in YoY output in FY 2023 and a postponement in shipments due to the export license update by the Indonesian government (revised license has been issued and ilmenite is ready to be exported). Besides that, realized average zircon price pulled back YoY in the reported period. Nonetheless, PYX continued to maintain its strong yearly sales volume growth of premium zircon, leading to a stable revenue generation versus FY 2022.

Negative EBITDA and net loss for FY 2023 were the consequence of two extraordinary items – the non-cash loss on fair value change of a financial instrument in the amount of US\$1.7 million and the cancellation of 20,332,494 performance rights convertible into a maximum of 23,532,494 shares.

In accordance with the Australian Accounting Standards Board 2, share-based payments should be settled or cancelled as an acceleration of vesting. None of the above-mentioned two items had any impact on the Company's cash position. PYX's cash and cash equivalent on its balance sheet as at 31 December 2023 amounted to about US\$7.83 million, roughly 8.4% higher YoY. The rise in PYX's cash position was due to an increase of operating working capital of US\$1.9 million needed to increase output, US\$2.5 million investment in capital expenditure and a positive US\$5.1 million of financial activities, which primarily demonstrated the strong support from PYX's shareholders and their confidence in the Company's prospects.

Exhibit II-1: Summary of Key Operational and Financial Metrics of PYX for FY 2022 and FY 2023

	Year Ended 31 Dec 2023	Year Ended 31 Dec 2022	Variance	Variance
	US\$	US\$	US\$	%
Sales Revenue	22,671,641	22,703,190	-31,549	0
Cash Cost of Production	-19,601,174	-17,293,633	-2,307,541	+13
Cash Cost of Production per Tonne	US\$1,324/t	US\$1,042/t	+283/t	+29
EBITDA*	-10,039,681	-9,254,205	-785,476	+8
EBIT*	-10,400,680	-9,496,707	-903,973	+10
Net Loss Before Tax*	-10,456,195	-9,524,646	-931,549	+10
Net Loss After Tax* ("NLAT")	-10,456,356	-9,433,600	-1,022,756	+11
Underlying EBITDA	676,301	419,289	+257,012	+61
Cash	7,828,906	7,221,085	+607,821	+8
Total Assets	93,100,662	89,124,565	+3,976,097	+4
Total Liabilities	8,977,573	5,570,118	+3,407,455	+61
Short or Long-Term Debt	0	0	0	N.M.

Note: *Owing to non-cash loss on fair value change of a financial instrument of US\$1.7 million and the cancellation of 20,332,494 performance rights convertible into a maximum of 23,532,494 shares

Source: PYX

Based on our analysis, we believe that both operational readiness and market conditions are tailwinds in the next three years, so PYX is poised to ramp up its production and boost its sales. Details about our forecasts on PYX's sales volume for both zircon and titanium dioxide minerals, revenue, EBITDA and EBITDA margin are tabulated below.

Exhibit II-2: PYX Operational and Financial Forecasts (2024-2027)

	2024	2025	2026	2027
Sales of Zircon (kt)	18.0	24.0	36.0	48.0
<i>YoY Change</i>		+33%	+50%	+33%
Sales of Ilmenite and Rutile (kt)	15.1 [^]	6.8	10.1	13.5
<i>YoY Change</i>		-55%	+49%	+34%
Revenue (US\$ million)	43.1	56.1	88.3	123.6
<i>YoY Change</i>		+30%	+57%	+40%
EBITDA (US\$ million)	9.9	22.3	46.1	78.6
<i>YoY Change</i>		+125%	+107%	+70%
EBITDA Margin	23%	40%	52%	64%

Note: [^] including 10 kt of stockpile produced in previous years but not sold due to export license update

Source: Cedrus



III. CONCLUSION

We have witnessed consistent improvements in both operational and financial performance at PYX as revealed by its FY 2023 results. Particularly impressive were the sizable and constant YoY growth in premium zircon production and sales of 31% and 24% respectively in tonnage, as well as the 61% surge in underlying EBITDA to US\$676,301, when compared to FY 2022. The Company ended FY 2023 with a cash position of around US\$7.83 million, growing about 8.4% versus a year ago.

Moreover, in our view, even better financial results can be expected going forward with the commencement of export sales of ilmenite ores after obtaining the updated export license from the Indonesian authorities. Actually, PYX has been producing rutile and ilmenite since January 2022 and June 2022 correspondingly; therefore, the Company is ready to ship stockpiled ilmenite immediately.

As the world's third-largest publicly-listed zircon producer by zircon resources, we believe PYX remains well positioned for sustainable growth in particular following the renewal of the exploration and mining license for the promising Tisma asset for 10 more years because that project will serve as another potential growth engine by capturing more forthcoming business opportunities.

The Fed and the European Central Bank are likely to cut interest rates this year at the earliest, which would give global economic growth a lift and bode well for zircon demand and its pricing.

PYX is poised to create tremendous long-term value to its shareholders especially in our view that PYX's shares are overwhelmingly undervalued. Hence, we **reiterate an Overweight rating and the 12- to 18-month target price of AU\$3.81/GBP196**, representing an upside potential of about 1,230% over its closing price of GBP14.725 (AU\$0.29*) as of 20 March 2024 (*at the exchange rate of GBP:AU\$ = 1:1.95).

IMPORTANT DISCLOSURES

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- Neither Charlie Yang, Hilda Gao nor any member of the research team or their households is an owner of PYX Resources Limited common shares.

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