PLATINUM PERSPECTIVES



The nature and size of platinum above ground stocks now locked up in China combined with the 2023 forecast deficit could materially impact price discovery

Excess platinum imports into China leave limited above ground stocks for the rest of the world to meet supply/demand deficits. Evidence suggests that significantly higher platinum prices will likely be needed before inventories in China become available, even to the domestic market.

According to high-level customs data, China has been importing platinum well in excess of identified demand for a number of years. Although the precision of customs data should be treated with an element of caution, the scale of excess imports since March 2020 strongly suggests a change in behaviour. We note that the timing of purchases has been price opportunistic (chart below right), which suggests that there is a quasispeculative component to them. However, there has also been a stepchange in total volumes since early 2021, indicating that there may also have been an increase in real demand; i.e. that Chinese end users in the automotive, jewellery and industrial (including hydrogen) sectors have been using more platinum than identified in published demand data or have been adding to buffer inventories in anticipation of a supply shortage. Whilst total indentified demand for platinum in China has shrunk by about 1 Moz since 2013 (fig. 5 page 2), this reflects reduced demand from the jewellery industry, whilst demand from the automotive and industrial segments has grown consistently. So who are the buyers of this excess platinum in China?

Edward Sterck Director of Research +44 203 696 8786

esterck@platinuminvestment.com

Brendan Clifford

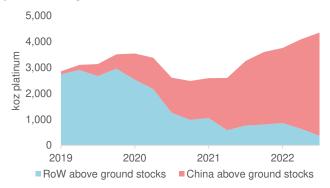
Head of Institutional Distribution +44 203 696 8778 bclifford@platinuminvestment.com

World Platinum Investment Council www.platinuminvestment.com 166 Piccadilly,

London, W1J 9EF

14 December 2022

Imports in excess of demand has resulted in above ground stocks becoming concentrated in China in recent years leaving limited material for the rest of the world.



Source: Metals Focus, Bloomberg, WPIC Research

Price opportunistic purchases suggest that release of inventories to the Chinese domestic market, will likely require significantly higher platinum prices.



Source: Bloomberg, WPIC Research

Excess China imports comprise both direct imports by industrial manufacturers for own uses, such as glass makers, and platinum traded through the Shanghai Gold Exchange (SGE) by traders or fabricators who need to reclaim VAT. The latter are likely to be automakers, as the jewelery market remains lacklustre, and suggests higher automotive demand than identified. Where direct imports are quasi-speculative or buffer stocks, this inventory build-up is not available to re-enter Western markets to address the deficit in 2023 due to domestic export controls. A similar situation with palladium occurred in the 2010's and the quasi-speculative inventories in China were only released after a significant increase — more than a doubling — in the price of palladium. The significant excess platinum imports since 2019 have resulted in a flow of metal out of Western vaults and into China (*chart above left*) and in 2020 and 2021 match or exceed the platinum market surpluses estimated for 2021 and forecast in 2022 (*fig. 4 page 2*).

The concentration of above ground stocks in China leaves limited excess inventory in the rest of the world to meet anv market imbalances, such as the 303 koz deficit forecast for 2023. This, in combination with higher prices likely being needed to release Chinese inventories to the domestic market, could have a significant bearing on platinum market price discovery.

Platinum's attraction as an investment asset arises from:

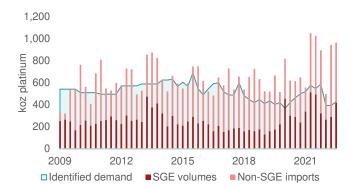
- Supply remains challenged, despite some new investment in mining capacity
- Automotive platinum demand growth should continue due principally to substitution in gasoline vehicles
- The platinum price remains historically undervalued and significantly below both gold and palladium
- Significant excess imports into China is resulting in significant physical tightness and high lease rates
- WPIC research indicates platinum market entering sustained, growing deficits from 2023

Figure 1: Although customs data should be treated with a modicum of caution, platinum imports into China have exceeded identified demand for a number of years.



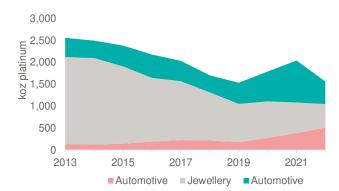
Source: Bloomberg, WPIC Research

Figure 3: VAT considerations link SGE volumes to the automotive and jewellery industries and non-SGE imports are likely industrial end users.



Source: Metas Focus 2019-present, SFA (Oxford) 2013-2018, Johnson Matthey pre-2013, Rhomberg WPIC Research

Figure 5: China identified demand for platinum: automotive and industrial applications have been growing significantly in recent years, whilst jewellery demand has been consistently shrinking.



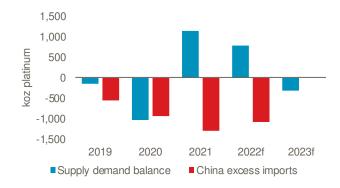
Source: Metas Focus 2019-2022f, SFA (Oxford) 2013-2018, Bloomberg, WPIC Research

Figure 2: Price opportunistic buying points to quasispeculative buying strategies, but a step-up in purchases from early 2021 suggest that real demand could be higher than identified (possibly 45% higher).



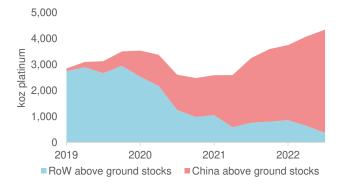
Source: Bloomberg, WPIC Research

Figure 4: China excess imports in 2021 and 2022 exceed 2.4 Moz, absorbed both surpluses, are not mobile and are not captured in published demand data



Source: Metals Focus, WPIC Research, Bloomberg

Figure 6: Excess imports into China have effectively resulted in a flow of platinum from Western vaults into China, leaving limited above ground stocks in the rest of the world to meet any supply shortages such as the 303 koz deficit forecast for 2023.



Source: Metals Focus, Bloomberg, WPIC Research

IMPORTANT NOTICE AND DISCLAIMER: This publication is general and solely for educational purposes. The publisher, The World Platinum Investment Council, has been formed by the world's leading platinum producers to develop the market for platinum investment demand. Its mission is to stimulate investor demand for physical platinum through both actionable insights and targeted development: providing investors with the information to support informed decisions regarding platinum; working with financial institutions and market participants to develop products and channels that investors need.

This publication is not, and should not be construed to be, an offer to sell or a solicitation of an offer to buy any security. With this publication, the publisher does not intend to transmit any order for, arrange for, advise on, act as agent in relation to, or otherwise facilitate any transaction involving securities or commodities regardless of whether such are otherwise referenced in it. This publication is not intended to provide tax, legal, or investment advice and nothing in it should be construed as a recommendation to buy, sell, or hold any investment or security or to engage in any investment strategy or transaction. The publisher is not, and does not purport to be, a broker-dealer, a registered investment advisor, or otherwise registered under the laws of the United States or the United Kingdom, including under the Financial Services and Markets Act 2000 or Senior Managers and Certifications Regime or by the Financial Conduct Authority.

This publication is not, and should not be construed to be, personalized investment advice directed to or appropriate for any particular investor. Any investment should be made only after consulting a professional investment advisor. You are solely responsible for determining whether any investment, investment strategy, security or related transaction is appropriate for you based on your investment objectives, financial circumstances and risk tolerance. You should consult your business, legal, tax or accounting advisors regarding your specific business, legal or tax situation or circumstances.

The information on which this publication is based is believed to be reliable. Nevertheless, the publisher cannot guarantee the accuracy or completeness of the information. This publication contains forward-looking statements, including statements regarding expected continual growth of the industry. The publisher notes that statements contained in the publication that look forward in time, which include everything other than historical information, involve risks and uncertainties that may affect actual results. The logos, services marks and trademarks of the World Platinum Investment Council are owned exclusively by it. All other trademarks used in this publication are the property of their respective trademark holders. The publisher is not affiliated, connected, or associated with, and is not sponsored, approved, or originated by, the trademark holders unless otherwise stated. No claim is made by the publisher to any rights in any third-party trademarks

WPIC Research MiFID II Status

The World Platinum Investment Council -WPIC- has undertaken an internal and external review of its content and services for MiFID II. As a result, WPIC highlights the following to the recipients of its research services, and their Compliance/Legal departments:

WPIC research content falls clearly within the Minor Non-Monetary Benefit Category and can continue to be consumed by all asset managers free of charge. WPIC research can be freely shared across investment organisations.

- 1. WPIC does not conduct any financial instrument execution business. WPIC does not have any market making, sales trading, trading or share dealing activity. (No possible inducement).
- 2. WPIC content is disseminated widely and made available to all interested parties through a range of different channels, therefore qualifying as a "Minor Non-Monetary Benefit" under MiFID II (ESMA/FCA/AMF). WPIC research is made freely available through the WPIC website. WPIC does not have any permissioning requirements on research aggregation platforms.
- 3. WPIC does not, and will not seek, any payment from consumers of our research services. WPIC makes it clear to institutional investors that it does not seek payment from them for our freely available content.

More detailed information is available on the WPIC website: http://www.platinuminvestment.com/investment-research/mifid-ii