

PLATINUM QUARTERLY PRESENTATION Q2 2023

London

6th September 2023

COPYRIGHT AND DISCLAIMER

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 and working with financial institutions and market participants to develop products and channels that investors need.

The research for the period since 2019 attributed to Metals Focus in the publication is © Metals Focus Copyright reserved. All copyright and other intellectual property rights in the data and commentary contained in this report and attributed to Metals Focus, remain the property of Metals Focus, one of our third-party content providers, and no person other than Metals Focus shall be entitled to register any intellectual property rights in that information, or data herein. The analysis, data and other information attributed to Metals Focus reflect Metals Focus' judgment as of the date of the document and are subject to change without notice. No part of the Metals Focus data or commentary shall be used for the specific purpose of accessing capital markets (fundraising) without the written permission of Metals Focus.

The research for the period prior to 2019 attributed to SFA in the publication is © SFA Copyright reserved.

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, neither the publisher nor its content providers 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. Neither the publisher nor its content providers are, or purports 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, neither the publisher nor its content providers can 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 and Metals Focus note 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 and neither the publisher nor its content providers accept any liability whatsoever for any loss or damage suffered by any person in reliance on the information in the publication.

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.

© 2023 World Platinum Investment Council Limited. All rights reserved. The World Platinum Investment Council name and logo and WPIC are registered trademarks of World Platinum Investment Council Limited. No part of this report may be reproduced or distributed in any manner without attribution to the publisher, The World Platinum Investment Council, and the authors.

AGENDA: PLATINUM QUARTERLY: Q2 2023 AND UPDATED 2023 FORECAST

1. Introduction

Trevor Raymond, CEO

2. Platinum Quarterly, fundamentals review

Edward Sterck

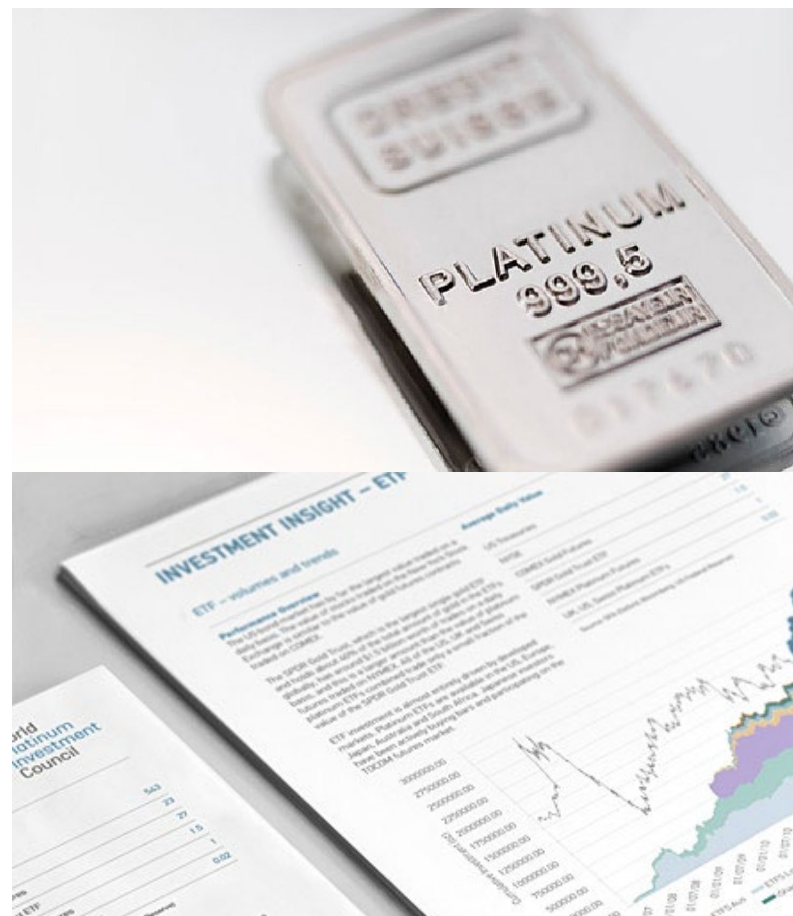
3. Current themes

Edward Sterck

4. Questions

Trevor Raymond

Edward Sterck



AGENDA: PLATINUM QUARTERLY: Q2 2023 AND UPDATED 2023 FORECAST

1. Introduction

Trevor Raymond

2. Platinum Quarterly, fundamentals review

- Supply, demand and balance: Q2'23, and 2023 forecast

Edward Sterck, Director of Research

3. Current thematics

Edward Sterck

4. Questions

Trevor Raymond

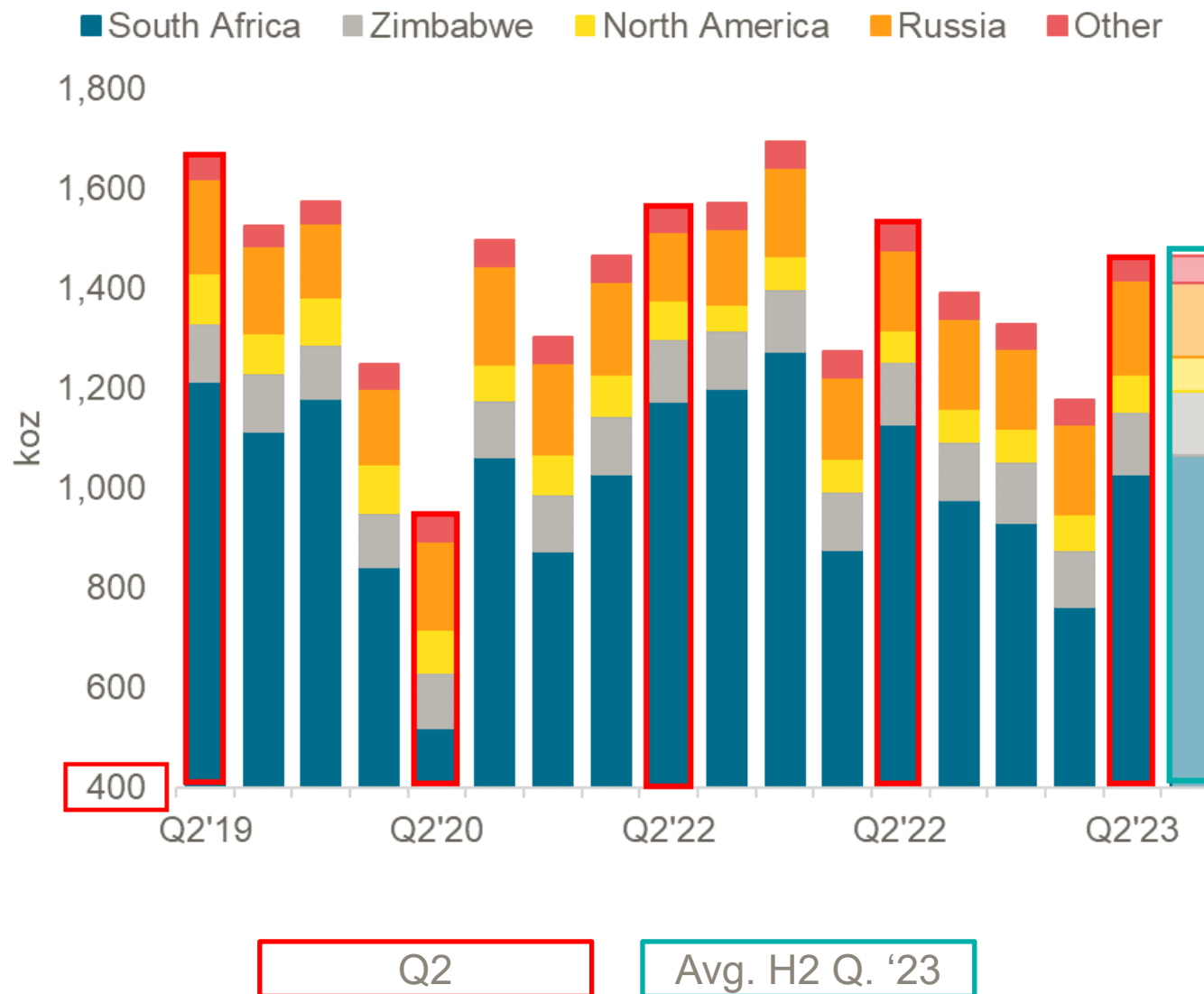
Edward Sterck



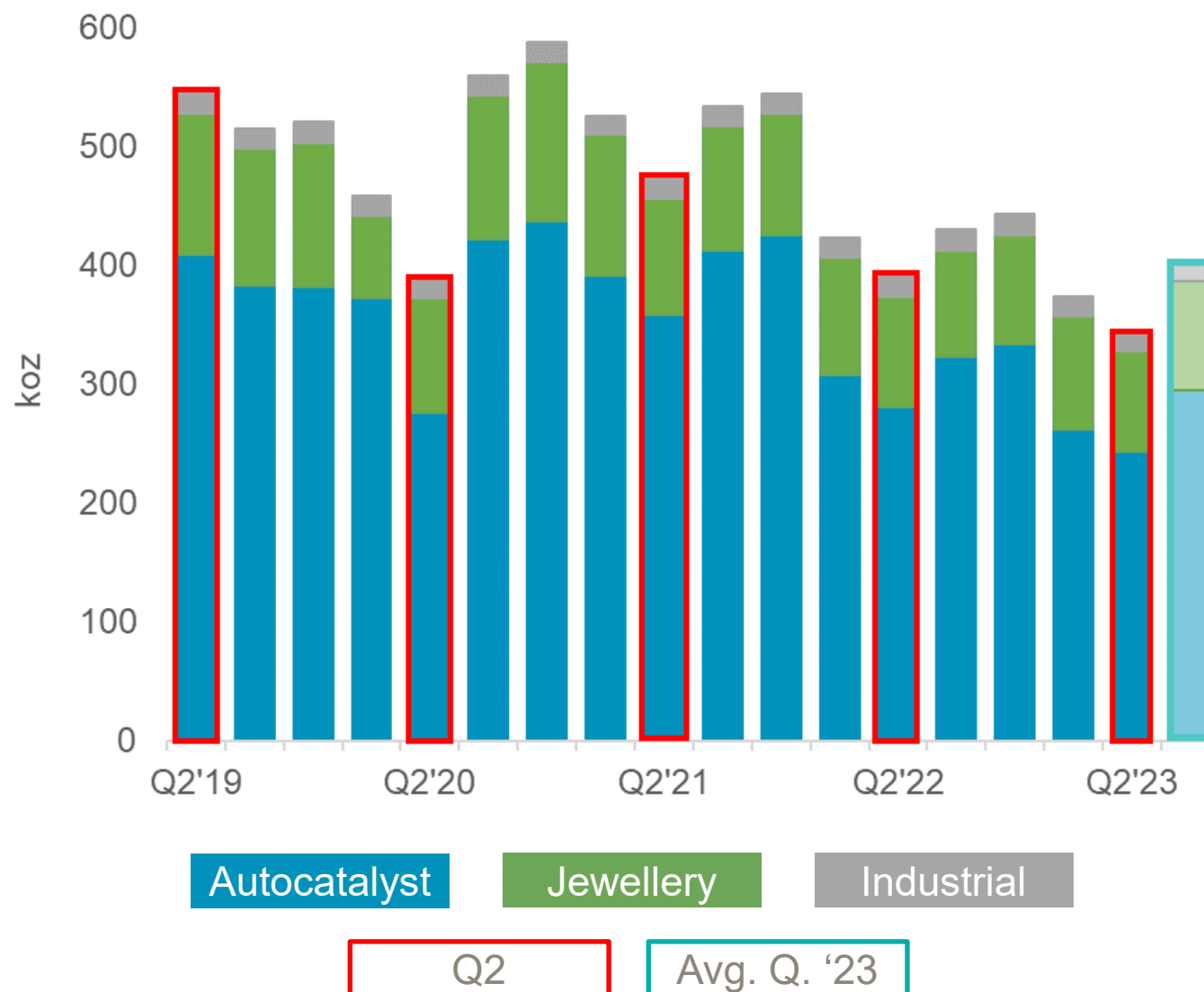
Q2 2023 SUPPLY: TOTAL SUPPLY DOWN 5% YOY ON MINE SUPPLY AND RECYCLING CHALLENGES

SUPPLY		Q2 2022 // Q1 2023		Q2 2023	YoY	QoQ
Refined Production		1,530	1,177	1,464	-4%	24%
	South Africa	1,129	763	1,028	-9%	35%
	Zimbabwe	124	116	126	2%	9%
	North America	64	71	74	14%	4%
	Russia	161	180	190	18%	6%
	Other	52	48	47	-9%	-3%
Inc(-)/Dec(+) in Producer Inventory		-2	+24	+14	n/a	-42%
Total Mining Supply		1,528	1,201	1,478	-3%	23%
Recycling		391	374	345	-12%	-8%
	Autocatalyst	281	262	244	-13%	-7%
	Jewellery	92	95	84	-9%	-12%
	Industrial	17	17	17	2%	1%
Total Supply		1,918	1,575	1,823	-5%	16%

Q2 2023 REFINED MINE SUPPLY: BIG IMPROVEMENT ON Q1'23 BUT STILL DOWN 3% YOY



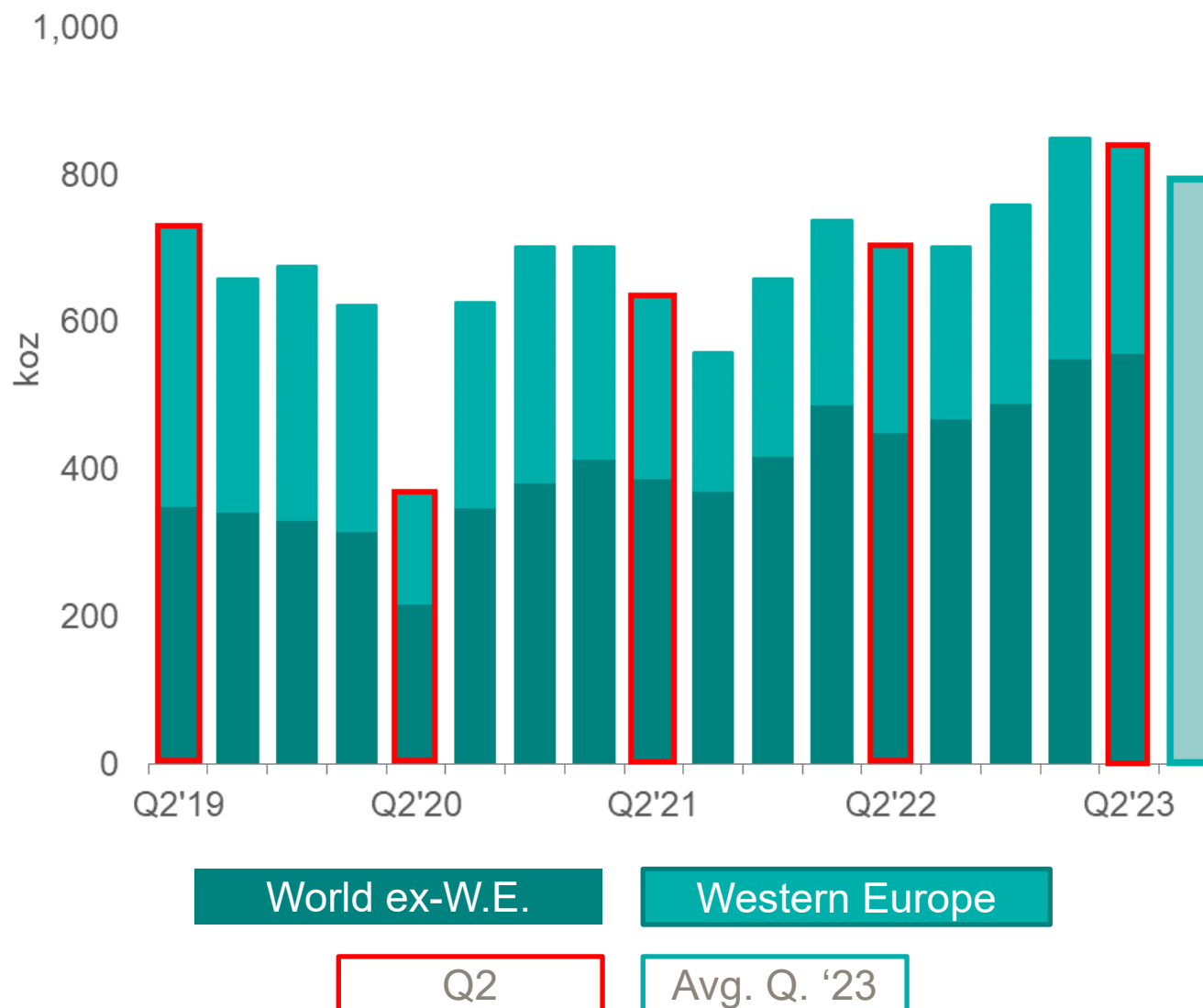
Q2 2023 RECYCLING: DOWN 12% YOY AND 8% QOQ ON SCRAP AUTOCATALYST SUPPLY CHAIN CHALLENGES



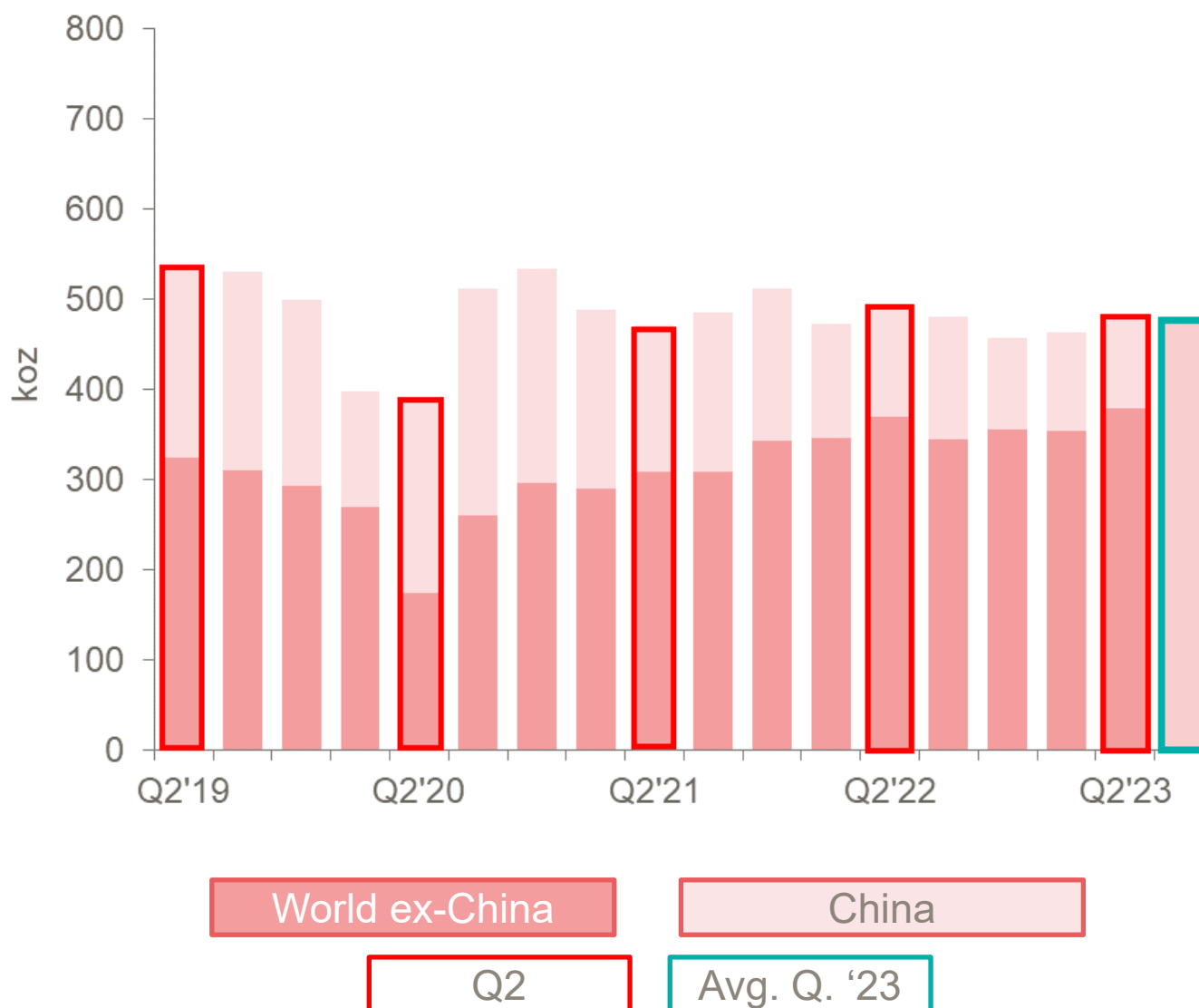
Q2 2023 DEMAND: UP 31% YOY ON STRENGTH IN AUTO AND INDUSTRIAL SECTORS

DEMAND	Q2 2022	Q1 2023	Q2 2023	YoY	QoQ
Automotive	703	850	840	19%	-1%
Autocatalyst	703	850	840	19%	-1%
Non-road	†	†	†	n/a	n/a
Jewellery	489	462	480	-2%	4%
Industrial	621	622	697	12%	12%
Chemical	126	251	235	87%	-6%
Petroleum	48	42	42	-12%	0%
Electrical	27	23	24	-10%	8%
Glass	202	89	170	-16%	91%
Medical & Biomedical	69	71	71	4%	1%
Other	149	147	154	3%	5%
Investment	-162	169	154	n/a	-9%
Change in Bars, Coins	72	100	26	-64%	-74%
Change in ETF Holdings	-112	40	155	n/a	285%
Change in Stocks Held by Exchanges	-123	29	-27	-78%	n/a
Total Demand	1,652	2,103	2,171	31%	3%
Balance	267	-528	-348	n/a	-34%

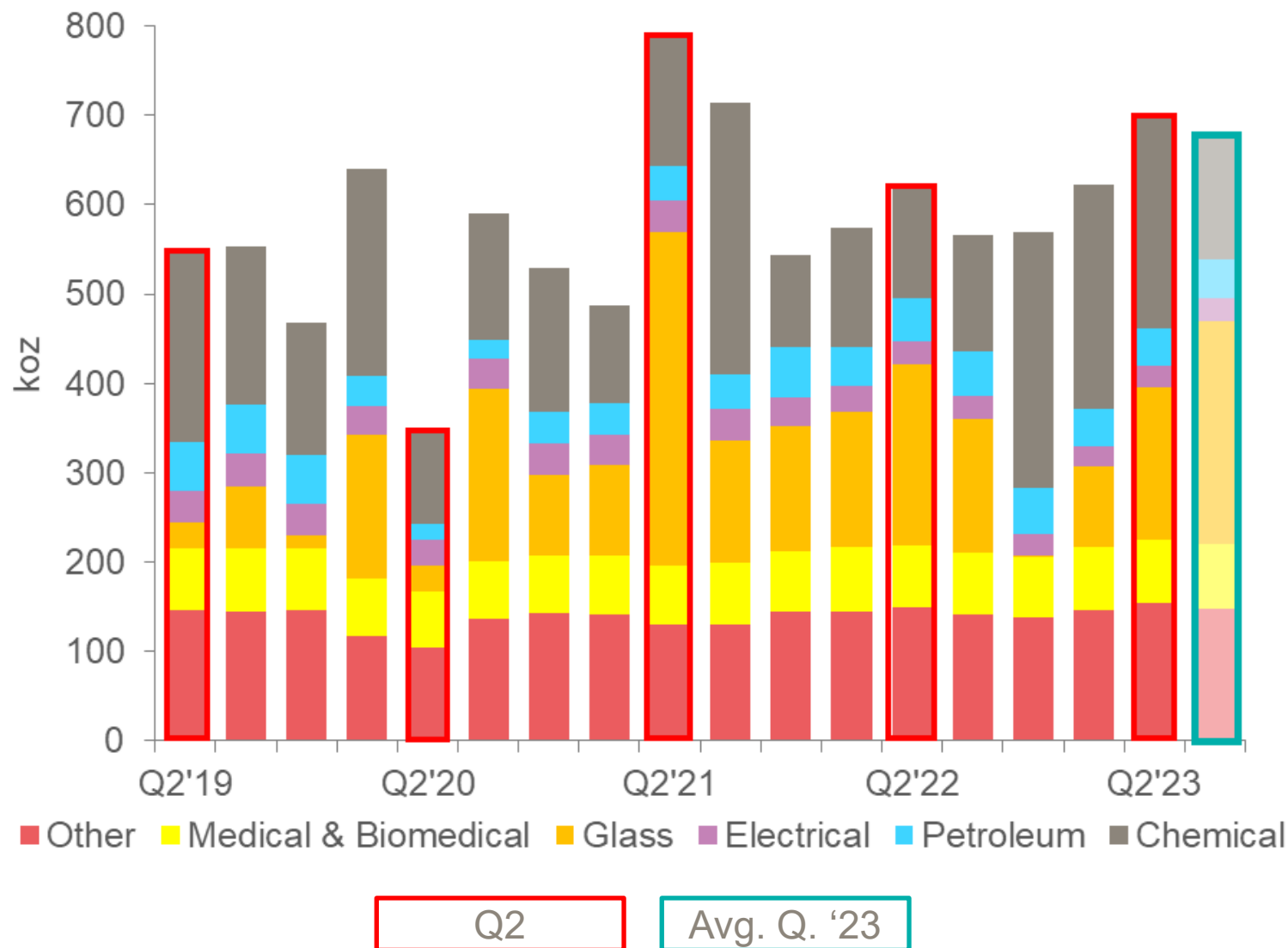
Q2 2023 AUTOMOTIVE: UP 19% ON THE CONTINUED RECOVERY IN PRODUCTION AND SUBSTITUTION



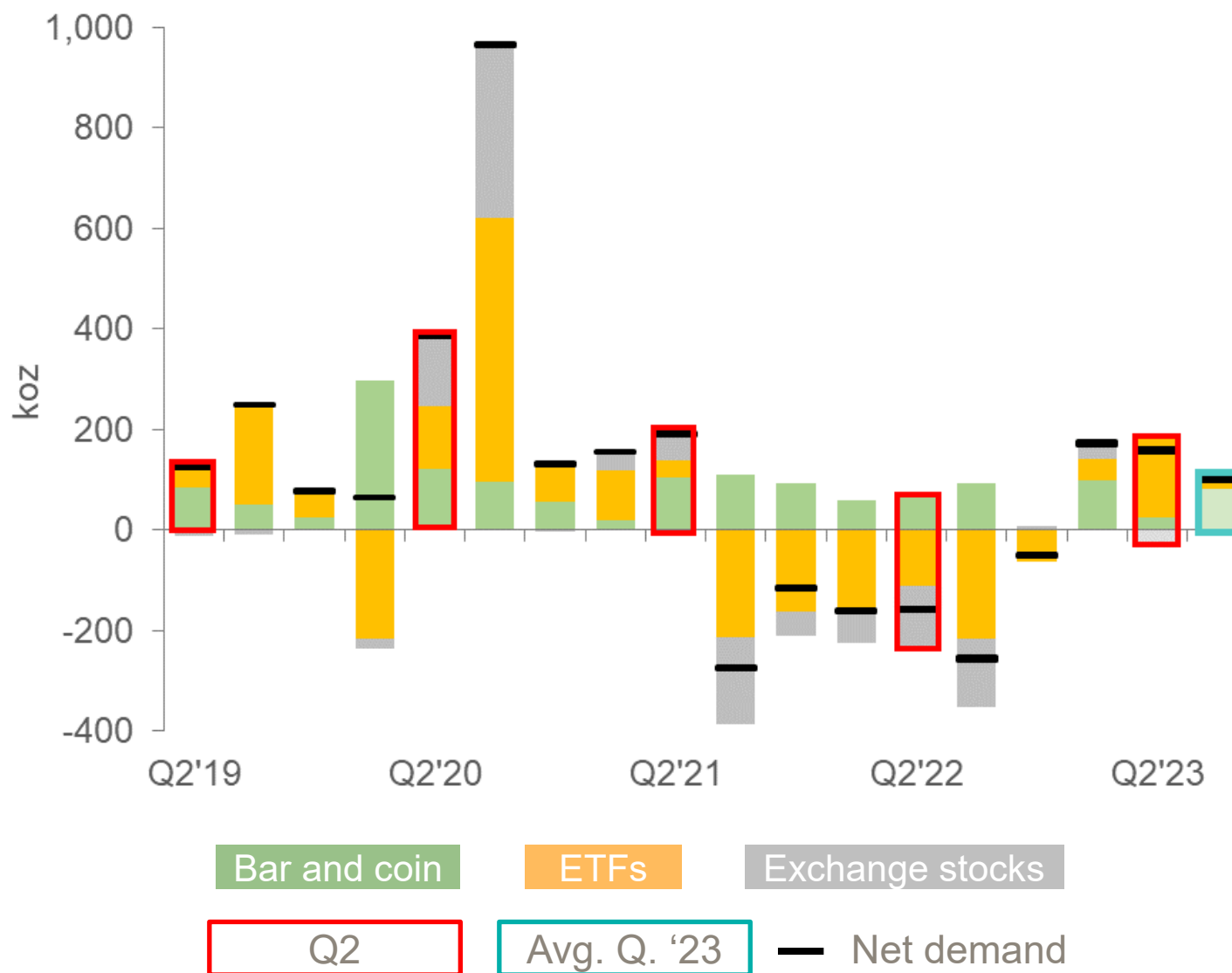
Q2 2023 JEWELLERY: DOWN 2% YOY AS CHINA'S REOPENING BROUGHT LITTLE RELIEF



Q2 2023 INDUSTRIAL DEMAND: UP 12% YOY ON CHEMICAL CAPACITY ADDITIONS



Q2 2023 INVESTMENT DEMAND: IMPROVED BY >300 KOZ YOY BUT DOWN 9% QOQ

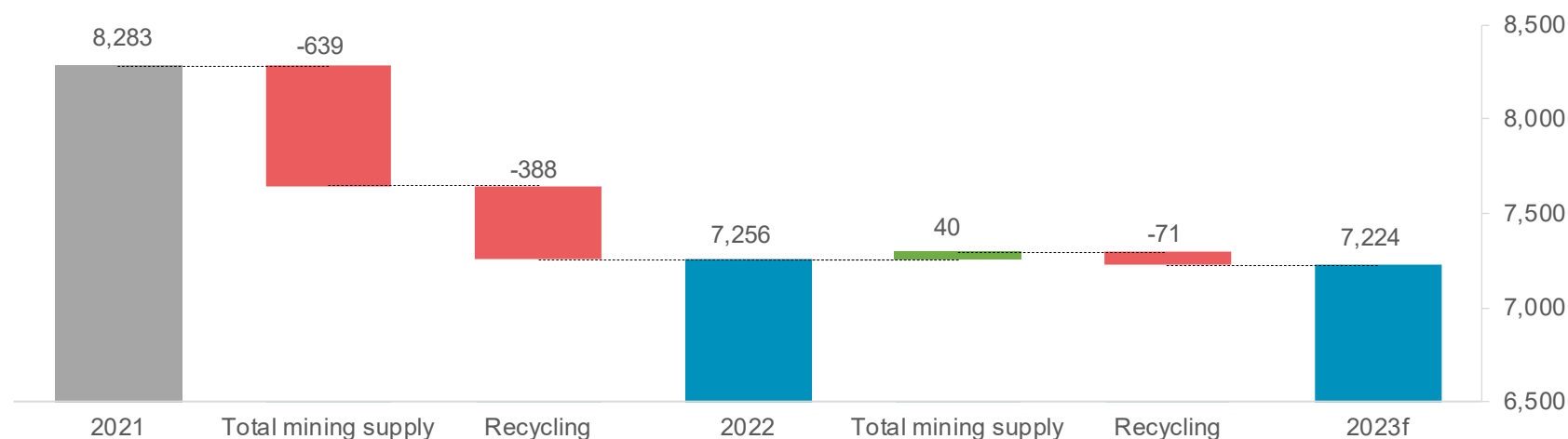


2022 - 2023F FULL YEAR: INCREASED 2023 DEFICIT ON MIX OF HIGHER DEMAND AND STABLE SUPPLY

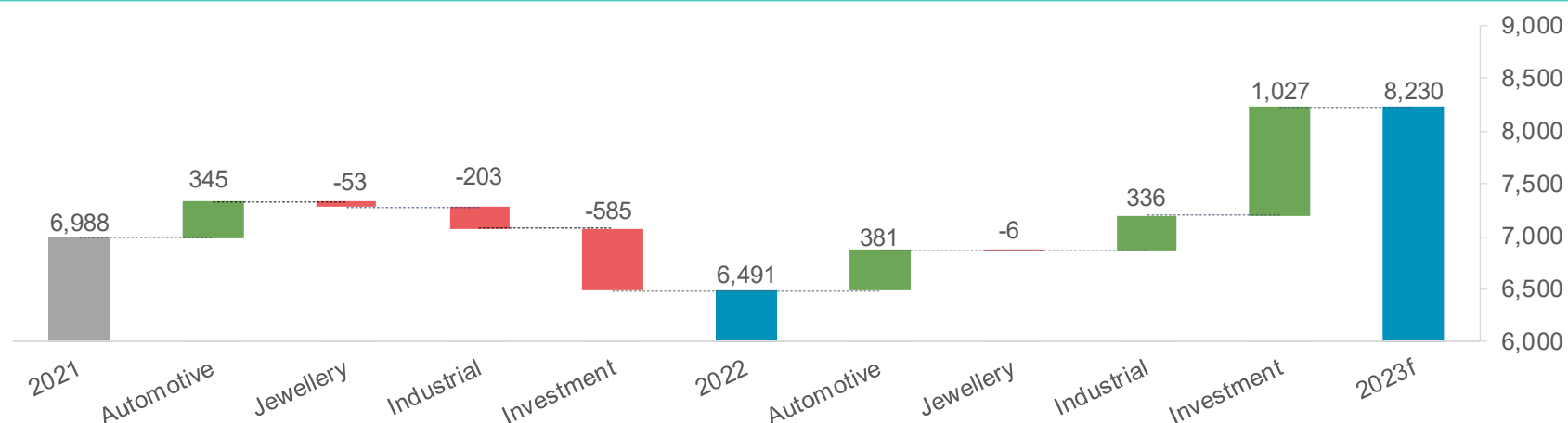
SUPPLY		2022	2023f	YoY, oz	YoY, %
Refined Production		5,522	5,575	52	1%
	South Africa	3,915	3,919	4	0%
	Zimbabwe	480	502	22	5%
	North America	263	281	19	7%
	Russia	663	667	4	1%
	Other	201	205	4	2%
	Inc (-)/Dec (+) in Producer Inventory	+43	+30	-13	-30%
Total Mining Supply		5,565	5,605	40	1%
Recycling		1,691	1,620	-71	-4%
	Autocatalyst	1,250	1,180	-70	-6%
	Jewellery	372	370	-2	0%
	Industrial	68	69	1	2%
Total Supply		7,256	7,224	-31	0%
DEMAND					
	Automotive	2,902	3,283	381	13%
	Jewellery	1,899	1,893	-6	0%
	Industrial	2,331	2,667	336	14%
	Investment	-640	386	1,027	N/A
Total Demand		6,491	8,230	1,738	27%
Balance		764	-1,005	-1,770	N/A
Above Ground Stocks		4,608	3,603	-1,005	-22%

2023 OUTLOOK: DEPRESSED SUPPLY AND 27% YOY GROWTH IN DEMAND LEADING TO >1.7 MOZ SWING

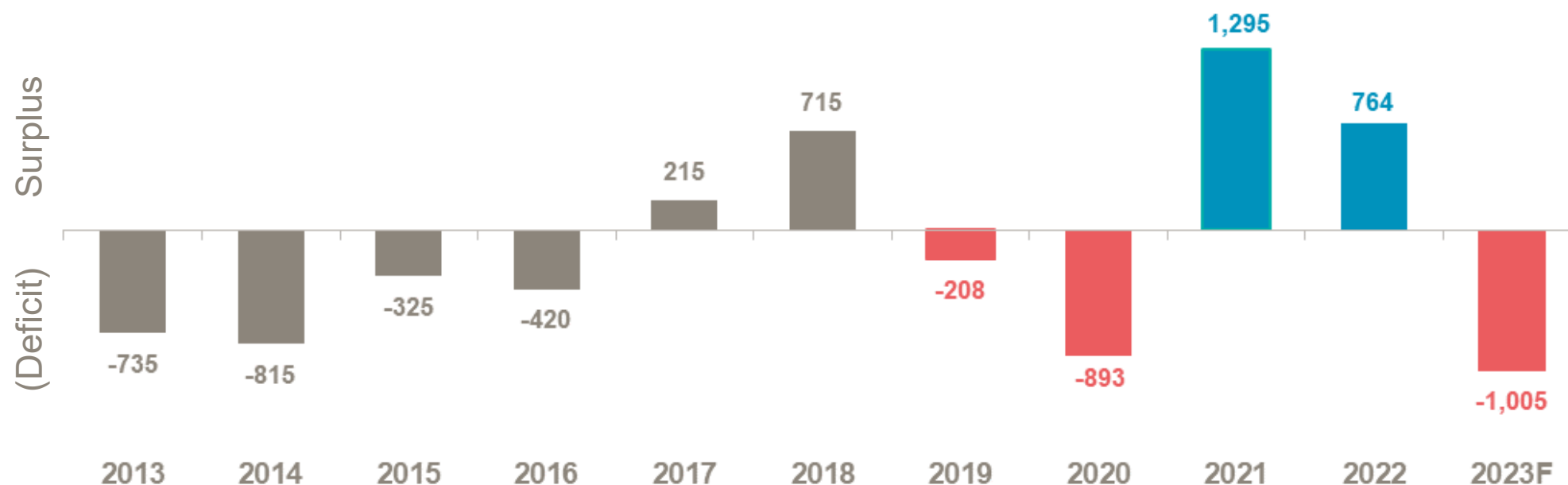
Annual total supply and changes 2021 to 2023F (koz)



Annual total demand and changes 2021 to 2023F (koz)



MARKET BALANCE: A >1.0 MOZ DEFICIT IN 2023 AFTER TWO YEARS OF SURPLUSES, A MOVE OF OVER 1.7 MOZ



AGENDA: PLATINUM QUARTERLY: Q2 2023, AND UPDATED 2023 FORECAST

1. Introduction

Trevor Raymond

2. Platinum Quarterly, fundamentals review

Edward Sterck

3. Current thematic

- Maturing drivetrain trends
- Interpreting price performance and potential price catalysts
- Hydrogen FCEV update

Edward Sterck, Director of Research

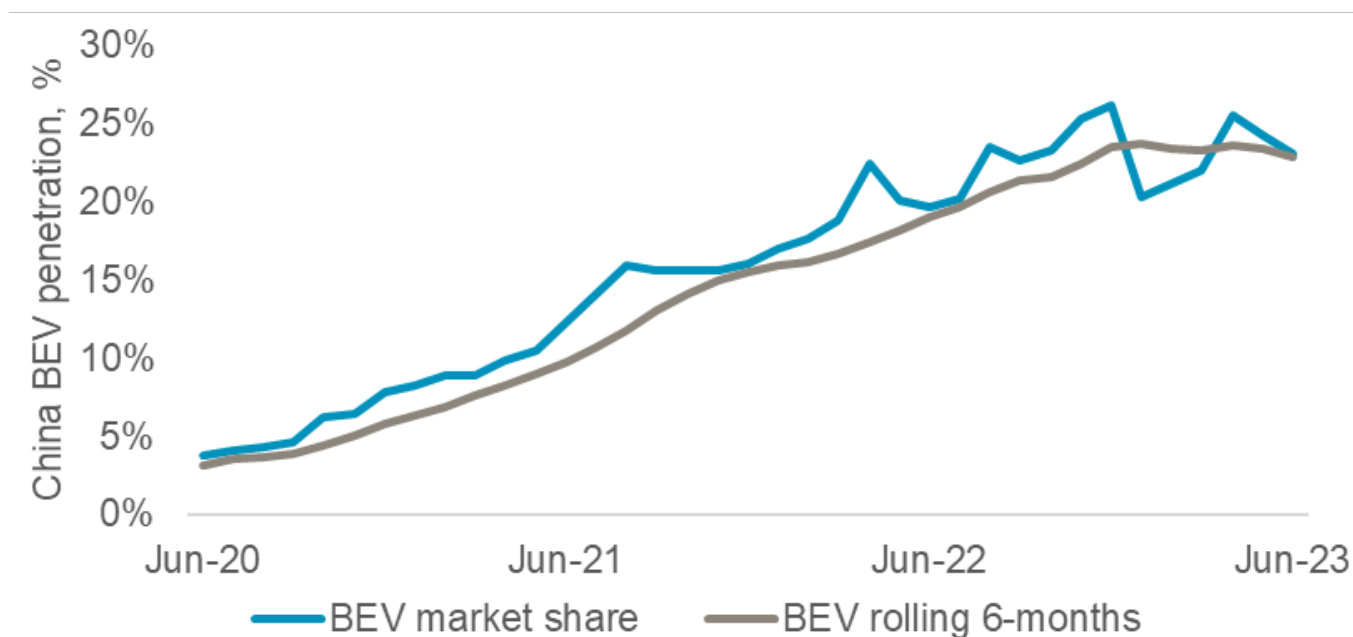
4. Questions

Trevor Raymond

Edward Sterck



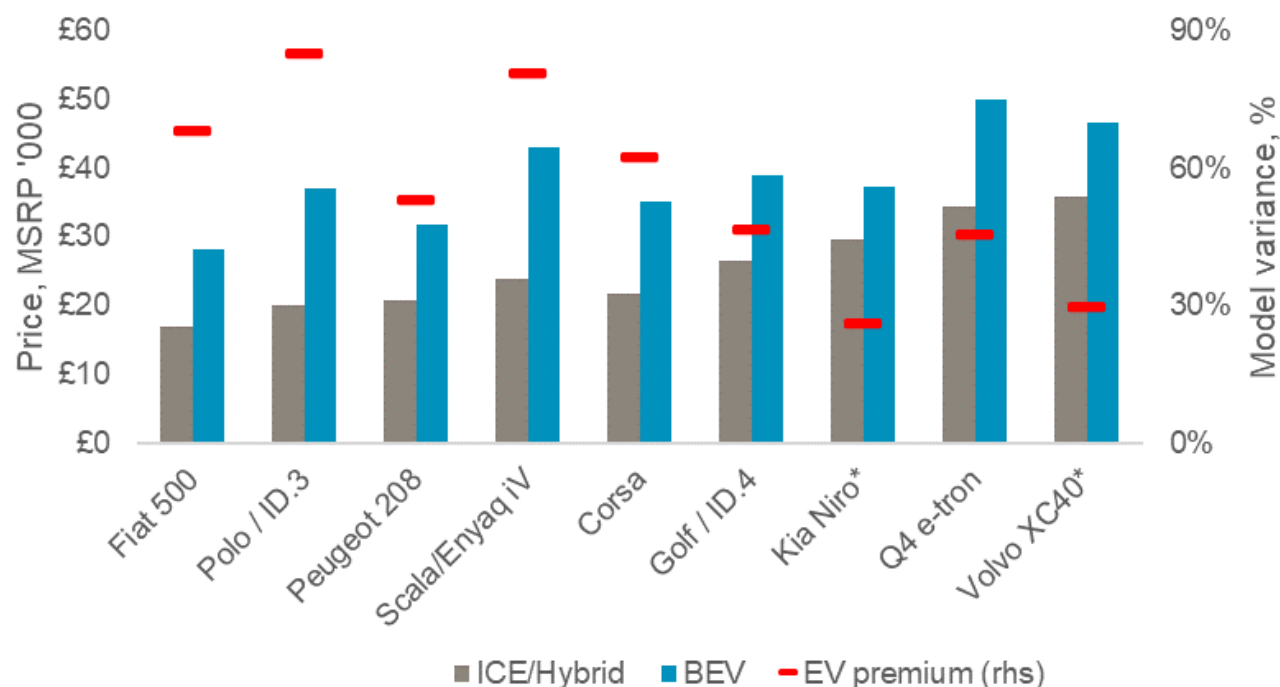
AUTOMOTIVE: BEV DEMAND GROWTH SLOWING



Drivetrain trends are maturing with China a leading indicator

- China's rolling 6-month BEV penetration has been stable since Nov-22

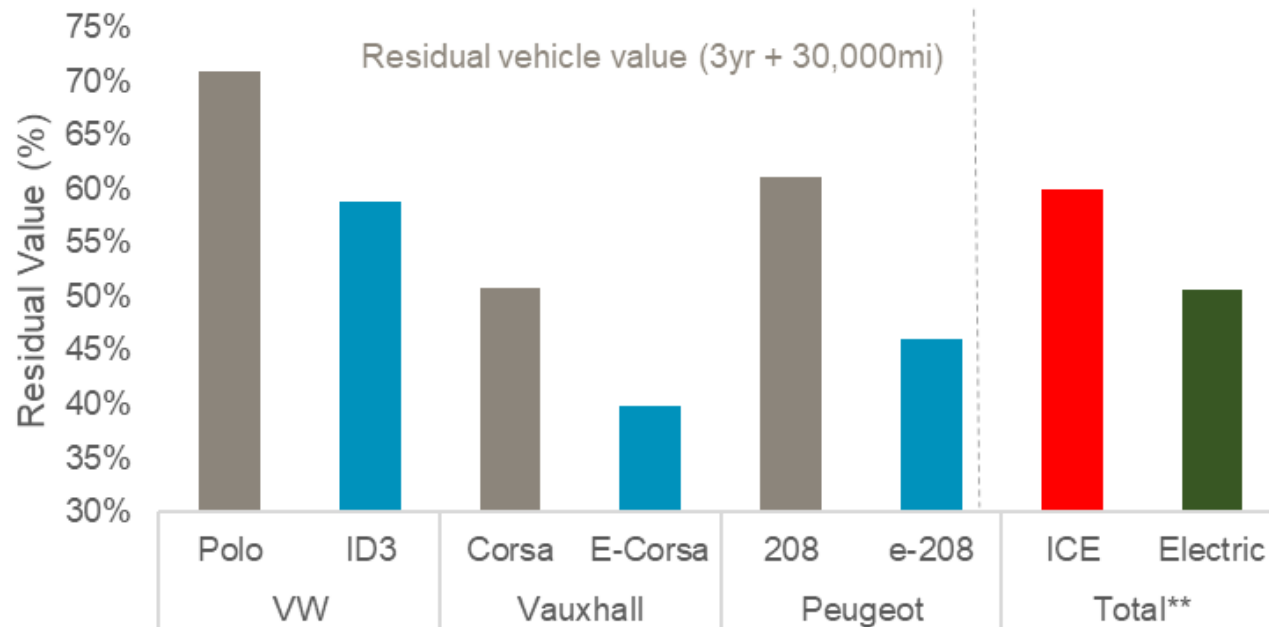
AUTOMOTIVE: BEV PREMIUMS DIFFICULT TO ABSORB DURING COST OF LIVING CRISIS



Europe could witness similar tail-off to China in BEV penetration after early adopters

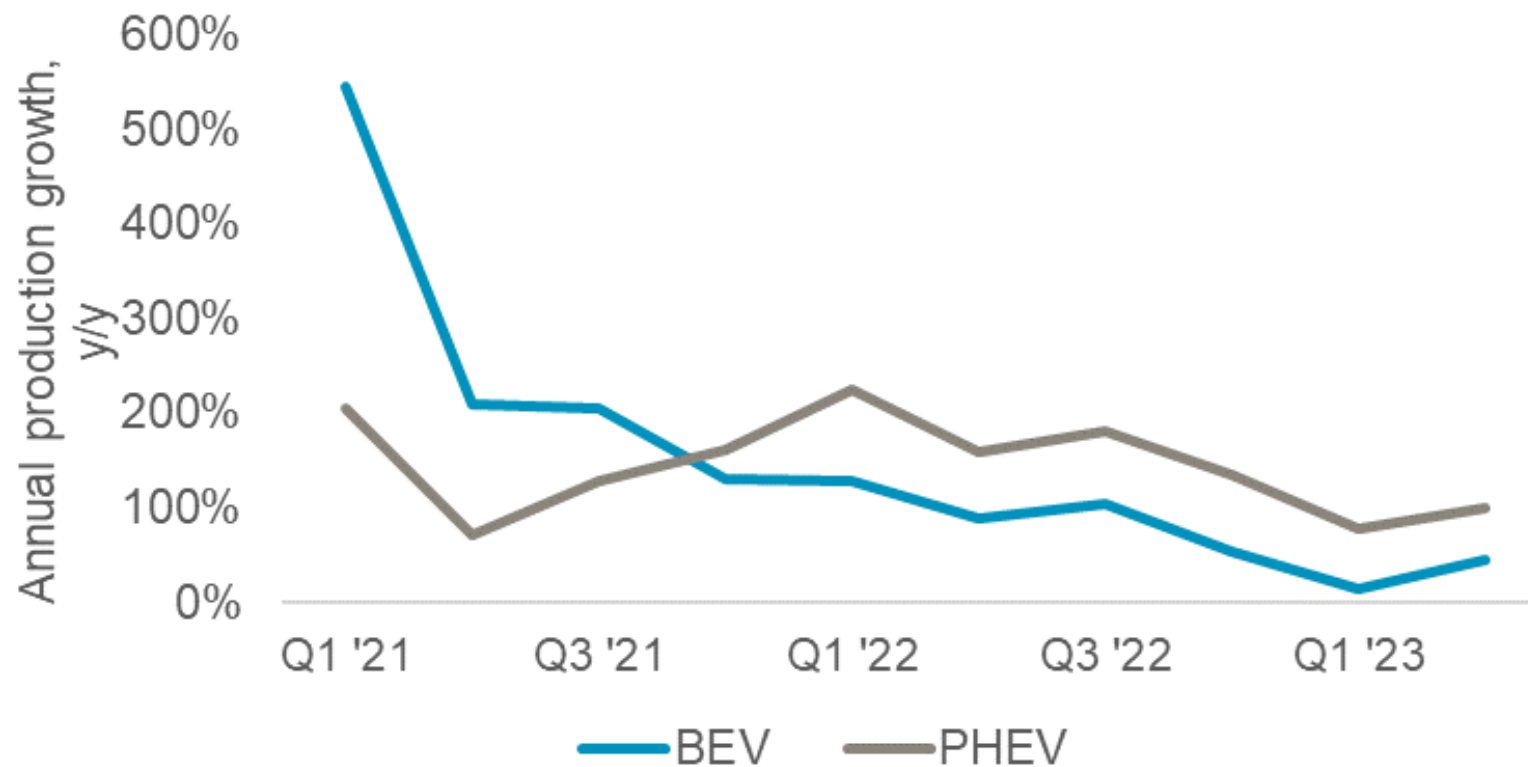
- Like-for-like BEV premium approx. £12k

AUTOMOTIVE: BEV DEPRECIATION 10% FASTER THAN ICE



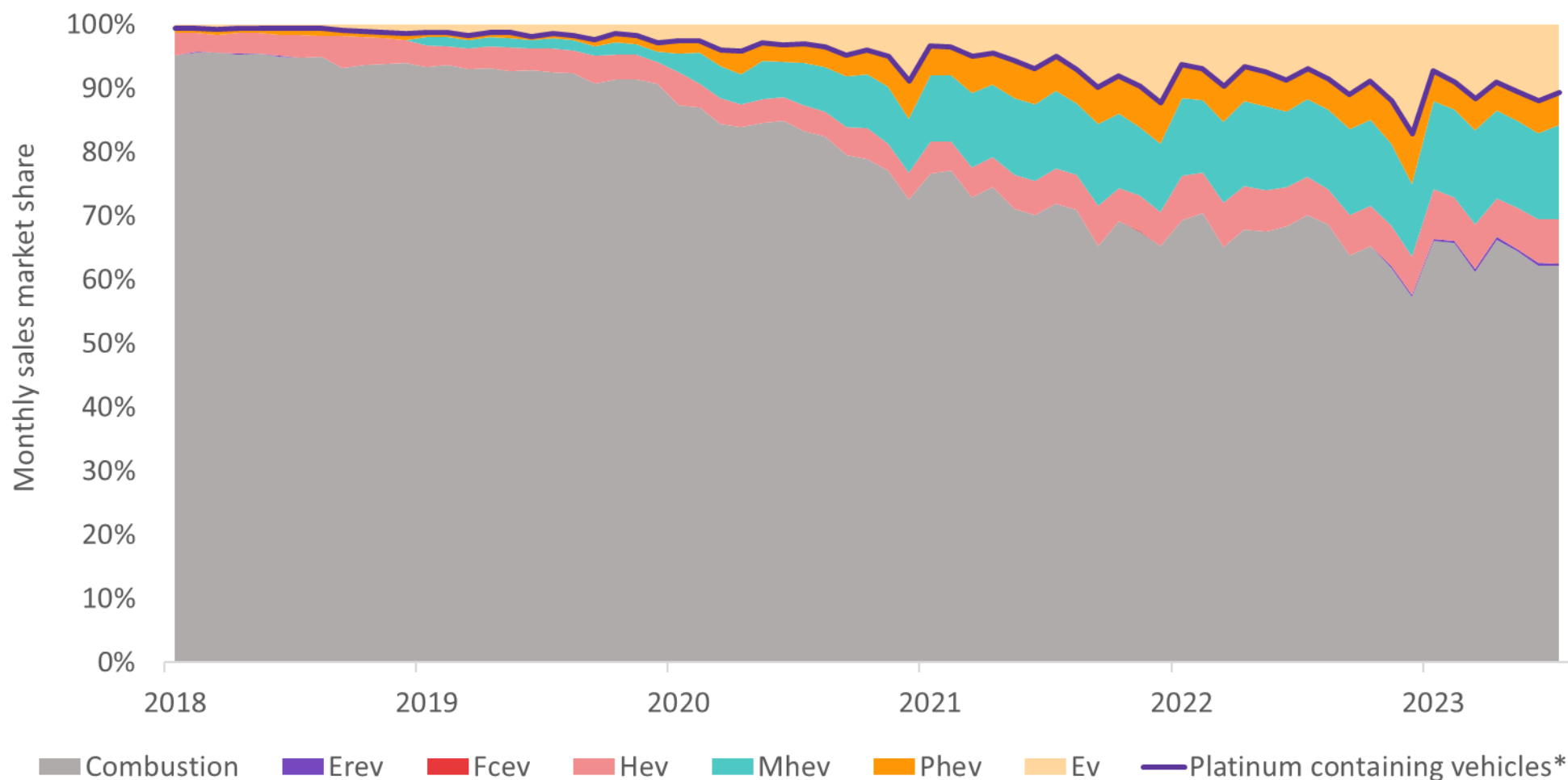
- BEV depreciates*** by 10% more than ICE after three years
- Lagging infrastructure rollout, 67% of UK BEV motorists report charging anxiety

AUTOMOTIVE: CHINA PHEV PRODUCTION RUNNING AHEAD OF BEV FOR SEVEN CONSECUTIVE QUARTERS



- PHEV growth reinforces hybrid's transitional role

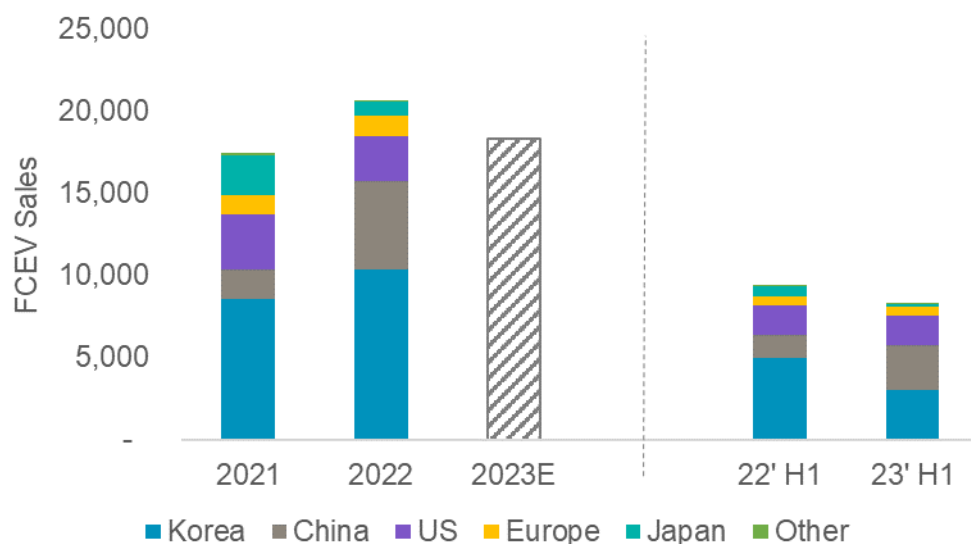
AUTOMOTIVE: ~90% OF ALL VEHICLES SOLD IN EUROPE CONTAIN PT IN THEIR EXHAUST TREATMENT SYSTEM



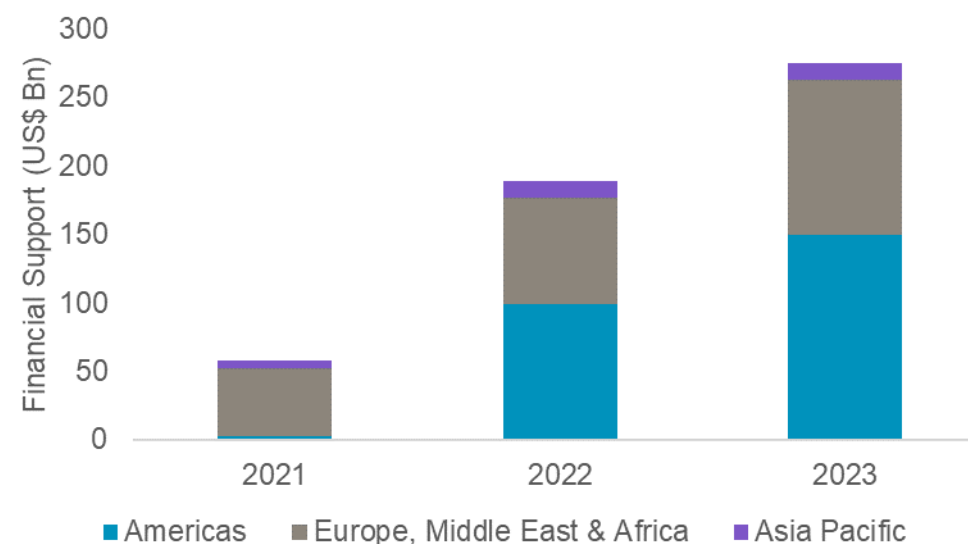
*N.B. BEVs contain platinum in battery management sensors

GREEN HYDROGEN: FCEV CHALLENGES IN 2023 MASK CONTINUED GROWTH IN AVAILABLE MODELS

China FCEV 95% Growth YoY



Growing H2 Subsidies Highlight Support*

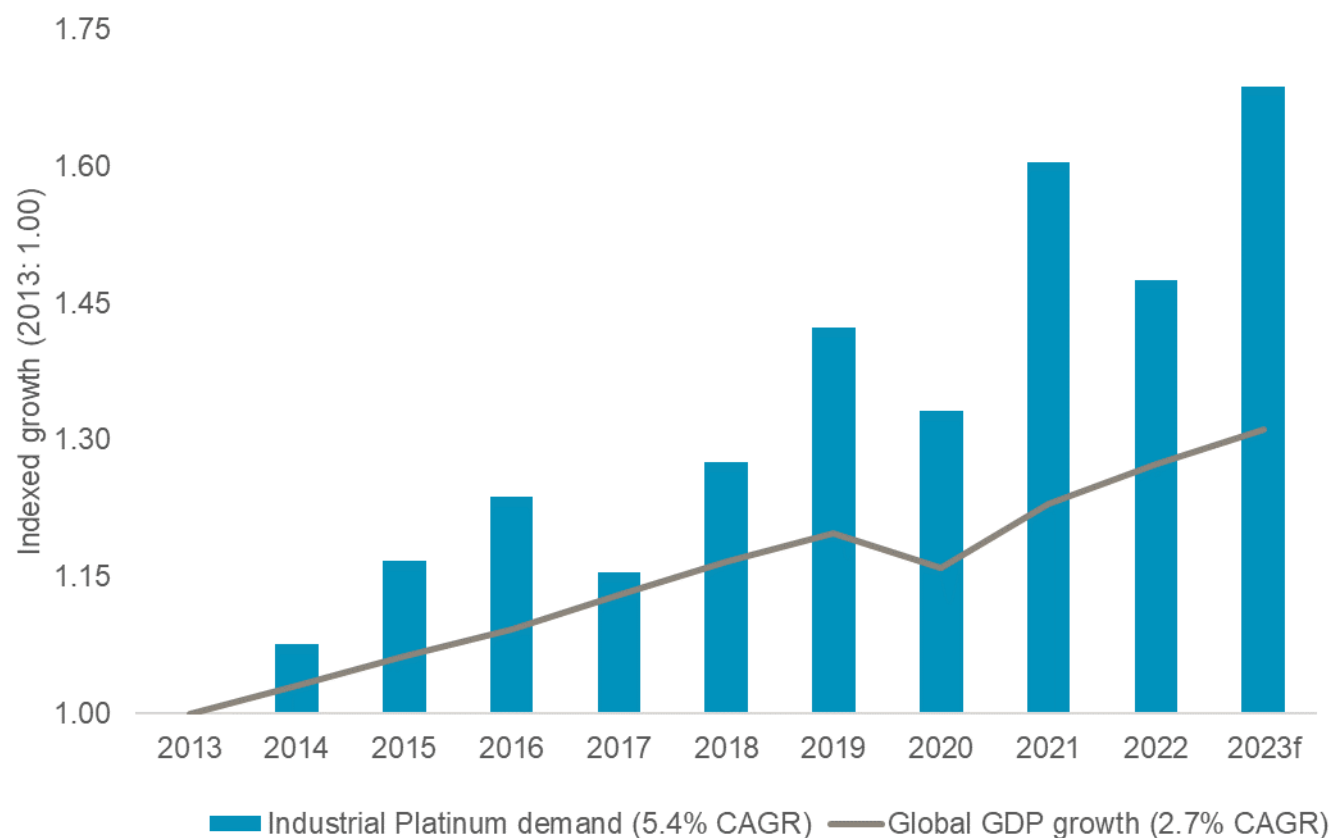


Half-year growth in China FCEV's offsets decline in South Korea

- 2030 Roadmap: Hyundai announces \$1bn, 100,000 FC production expansion
- Increasing number of models in pipeline (Toyota Crown, BMW iX5, Toyota Yaris H2...)

RECORD INDUSTRIAL PLATINUM DEMAND

Industrial platinum growth double global GDP growth over past decade



Attractive catalytic properties

- Higher yield
- Lower energy

Attractive physical properties

- Heat & corrosion resistance

Substitution opportunities

- Pt for Rh in glass manufacture most recent example

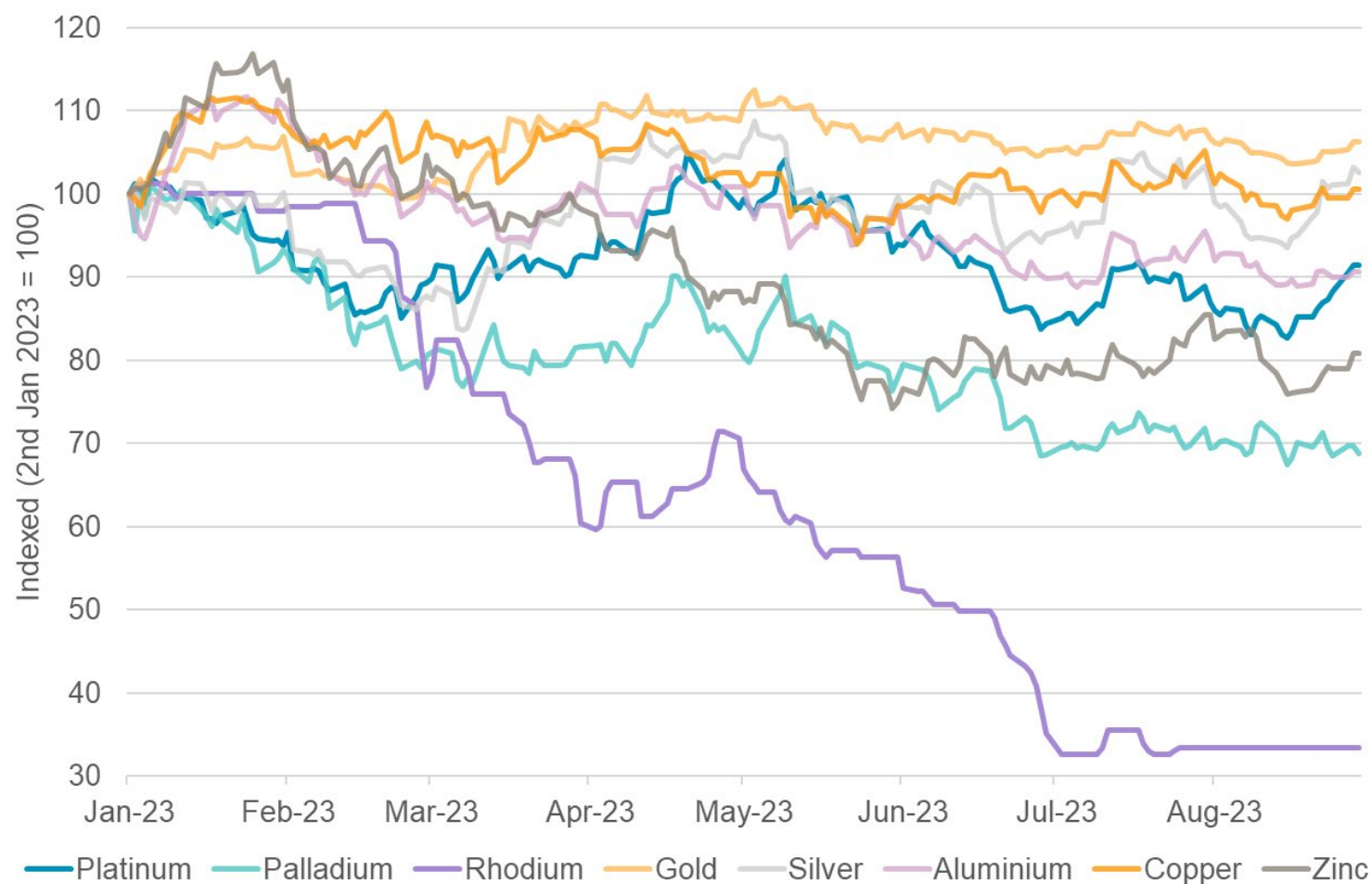
New applications

- Hydrogen economy - Pt used in electrolyzers and FCEVs

PRICING: PLATINUM HAS BEEN RANGEBOUND FOR MUCH OF THE PAST TWO YEARS (~US\$900-1,100/OZ)



PRICING: PLATINUM HAS AVERAGED IN THE THIRD QUARTILE AMONGST A BASKET OF COMMODITIES



	Platinum	Rank	Quartile
Spot	968		
YTD	-10%	8/11	3rd
3-month	-4%	7/11	3rd
12-month	15%	3/11	2nd
3-year	7%	5/11	2nd

DRIVERS THAT COULD BREAK PLATINUM OUT OF RANGEBOUND BEHAVIOR

-VE: Faltering China economy

-VE: Sustained inflation erodes consumer purchasing power

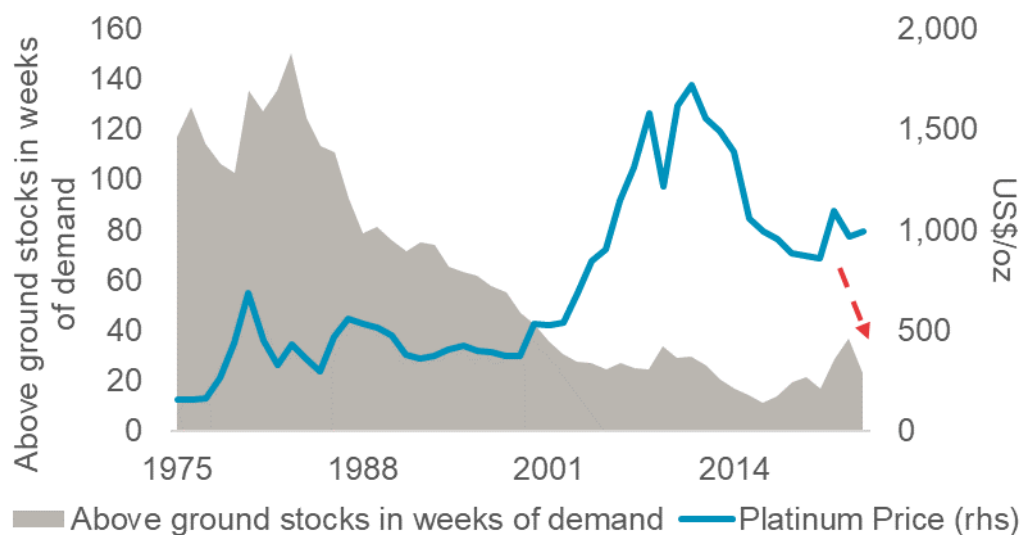
+VE: Supply challenges worsen

+VE: Normalisation of automotive purchasing vs. demand

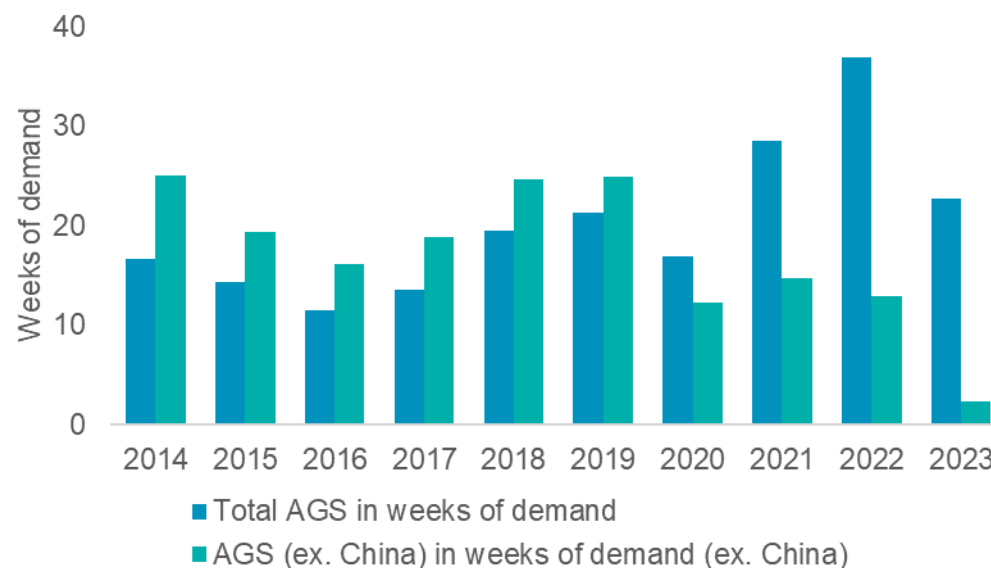
+VE: Depletion of above ground stocks

POTENTIAL PRICING CATALYSTS: ABOVE GROUND STOCK DEPLETION

Above ground stocks draw down



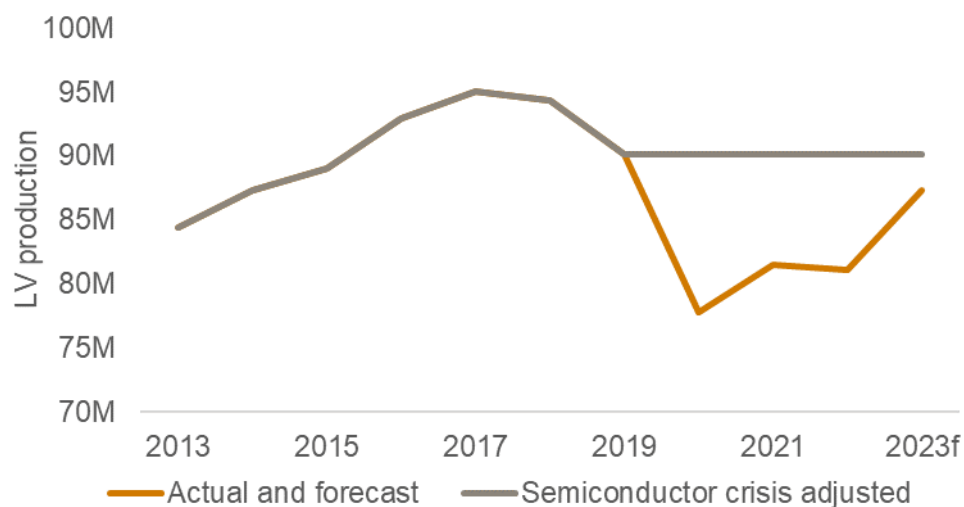
The situation is more acute ex-China



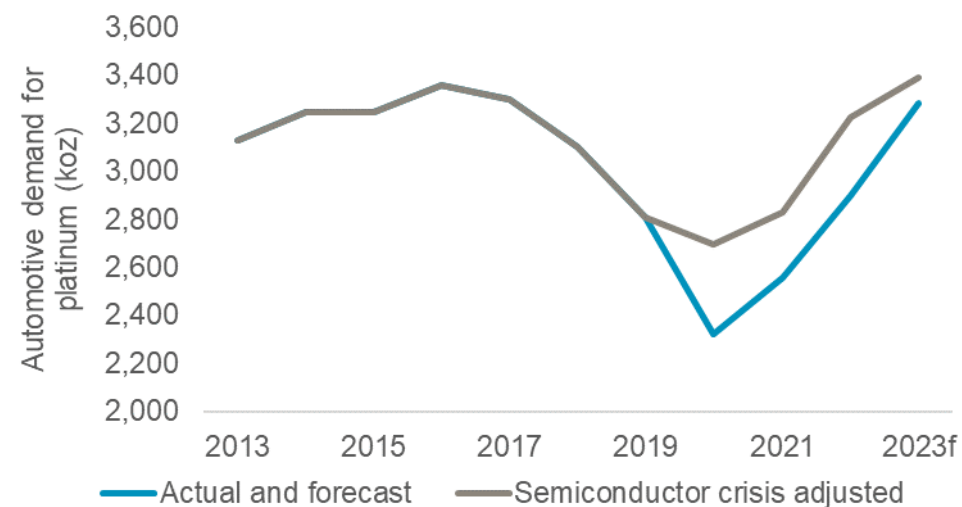
- Above ground stocks fall to only 5 months of demand by end 2023
- World ex-China stocks fall to only 3 weeks of demand by end 2023

POTENTIAL PRICING CATALYSTS: AUTOMOTIVE PURCHASING CATCHING UP WITH DEMAND (1)

‘Planned’ LV production vs. actual

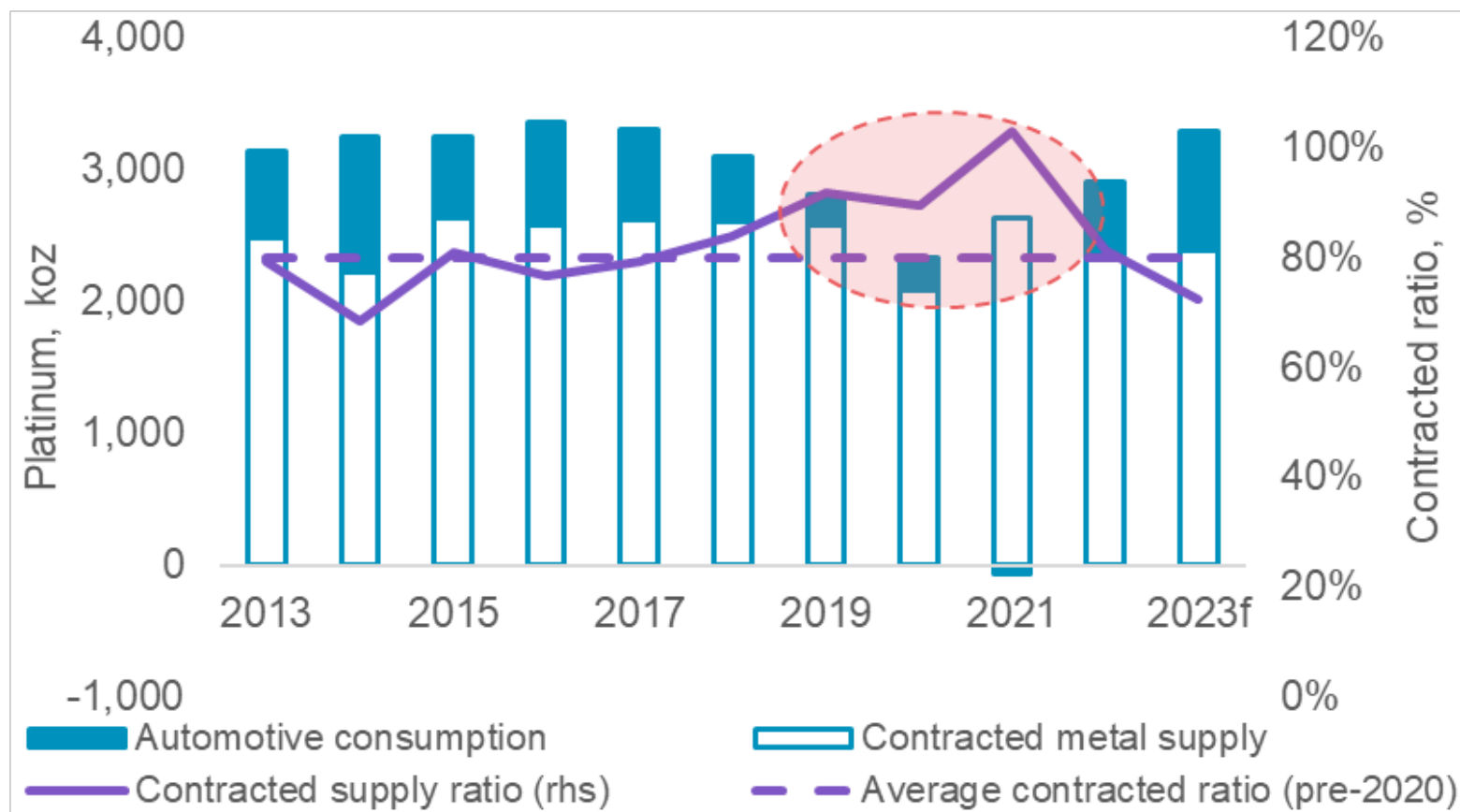


‘Planned’ Pt demand vs. actual



- COVID and the semiconductor shortage significantly depressed auto production vs. pre-COVID expectations
 - A minimum of 33 M fewer vehicles were produced than might have been planned
 - Reducing automotive demand for platinum by >1 Moz

POTENTIAL PRICING CATALYSTS: AUTOMOTIVE PURCHASING CATCHING UP WITH DEMAND (2)

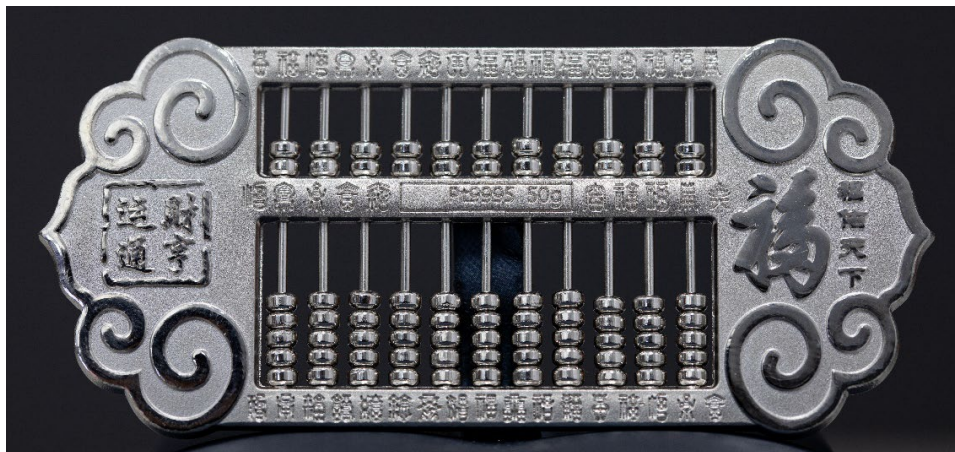


- Contracted supply ran ahead of demand during semiconductor shortage
 - OEMs likely reduced purchasing to run-down excess inventories

WHY INVEST IN PLATINUM? SUPPLY RISKS, DEMAND GROWTH, DEFICITS, H2 & STRONG INVESTMENT CASE



- Third consecutive increase to projected 2023 deficit (deepest on record)
- Underlying demand also increased for third quarter in succession
- Persistent risks to supply for both mining output and recycling
- Deficits depleting above ground inventories
- FCEV output softer in H1'23 but government support has increased for hydrogen in general and FCEVs specifically



WPIC initiatives:

- Shanghai Platinum Week 2024 scheduled for July 8 to July 12 next year
- Product partner salesforce education series
- Increased bespoke promotion efforts
- Opened a liaison office in Shenzhen
- Signed product partnership agreement with China Zhao Jin Group and launched Pt investment bars

WPIC Research:

- Palladium supply/demand outlook coming soon

AGENDA: PLATINUM QUARTERLY: Q2 2023 AND UPDATED 2023 FORECAST

1. Introduction

Trevor Raymond

2. Platinum Quarterly, fundamentals review

Edward Sterck

3. Current thematics

Edward Sterck

4. Questions

Trevor Raymond, CEO

Edward Sterck, Director of Research

