

PLATINUM QUARTERLY PRESENTATION Q3 2022

London

22nd November 2022

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AGENDA: PLATINUM QUARTERLY: Q3 2022, FULL YEAR 2022 AND INITIAL 2023 FORECASTS

1. Introduction

Trevor Raymond, CEO

2. Platinum Quarterly, fundamentals review

Edward Sterck

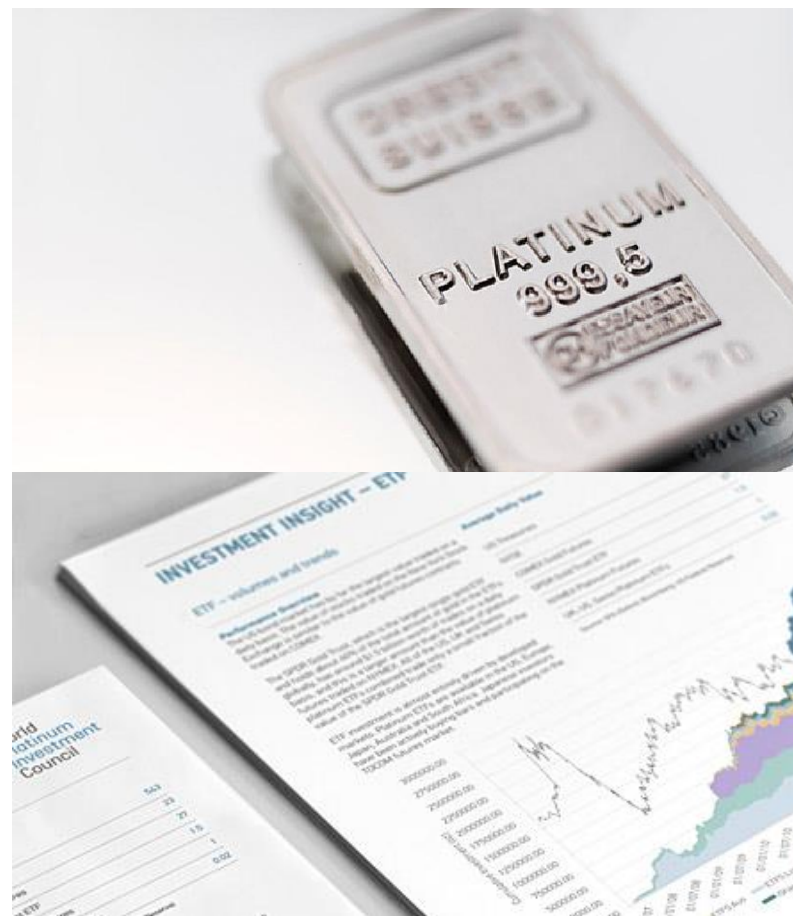
3. Current thematics

Edward Sterck

4. Questions

Trevor Raymond

Edward Sterck



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- Supply, demand and balance: Q3'22, 2022f and 2023f forecasts

Edward Sterck, Director of Research

3. Current thematics

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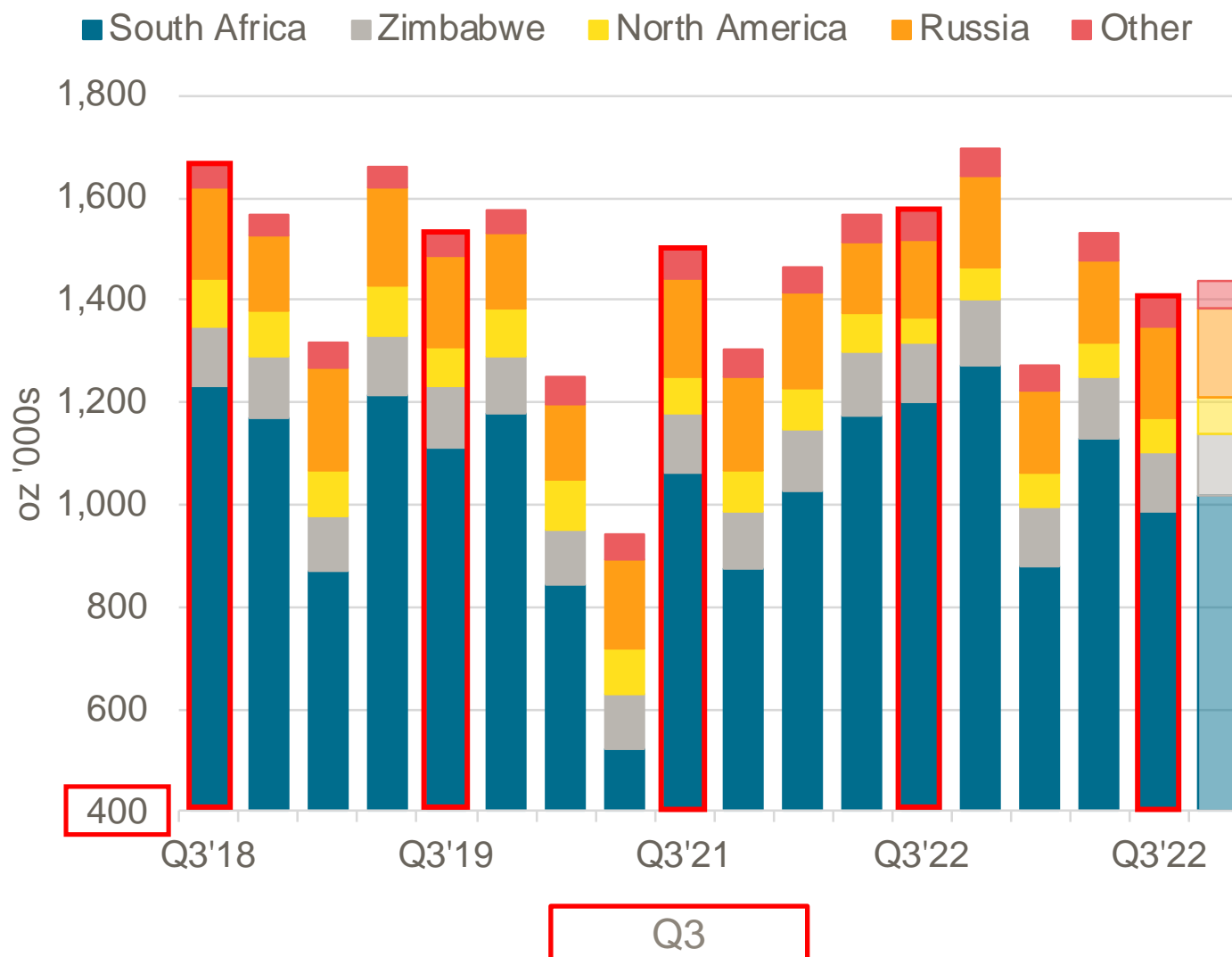
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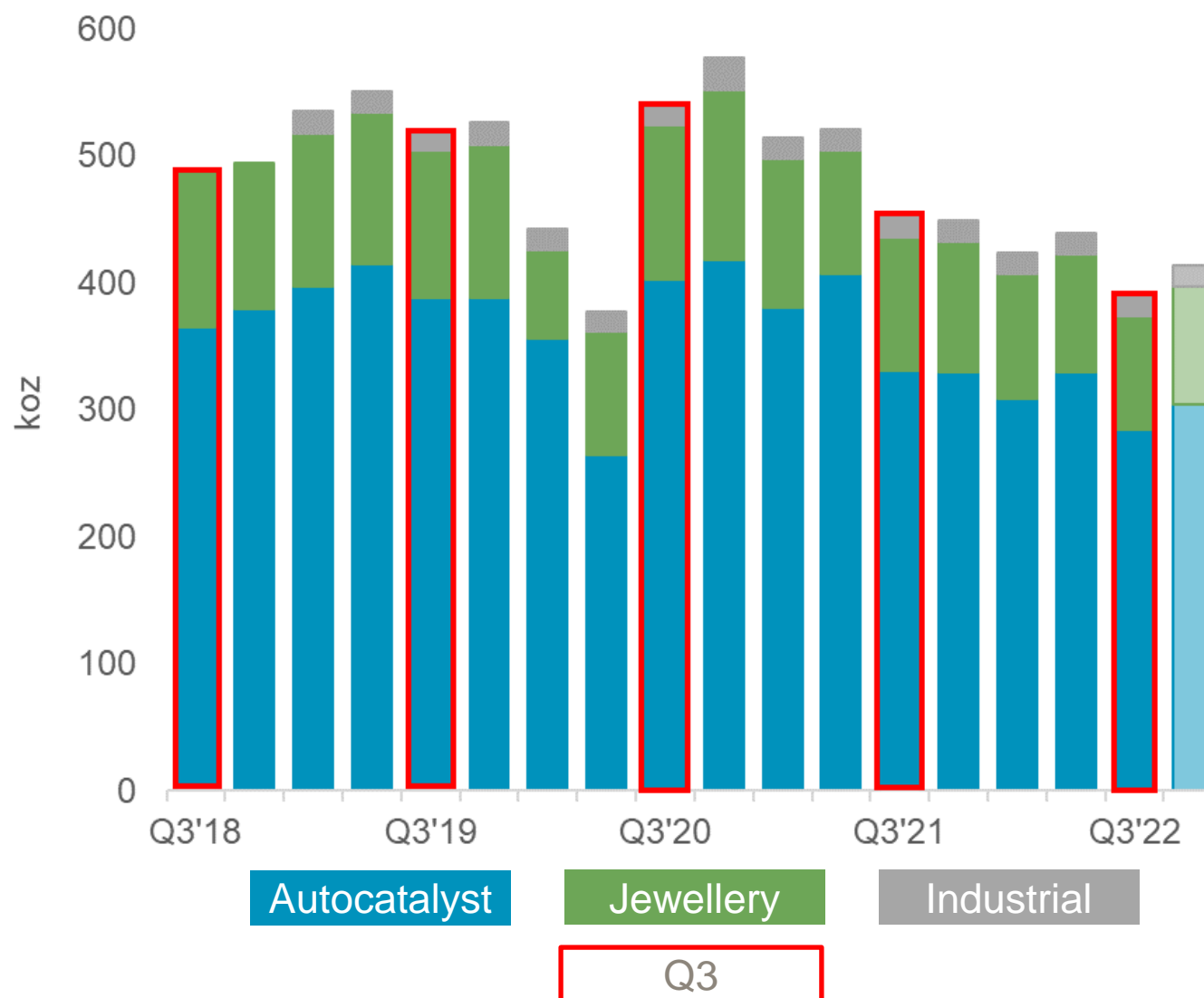
Q3 2022 SUPPLY: TOTAL SUPPLY DOWN 12% YOY ON MINE CHALLENGES & REDUCED VEHICLE SCRAPPAGE

SUPPLY		Q3 2021	// Q2 2022	Q3 2022	YoY	QoQ
Refined Production		1,571	1,530	1,401	-11%	-8%
	South Africa	1,201	1,128	986	-18%	-13%
	Zimbabwe	116	124	118	2%	-5%
	North America	51	65	66	31%	2%
	Russia	153	161	179	17%	11%
	Other	51	52	52	1%	0%
Inc(-)/Dec(+) in Producer Inventory		-43	-2	-43	n/a	n/a
Total Mining Supply		1,529	1,528	1,357	-11%	-11%
Recycling		452	439	391	-13%	-11%
	Autocatalyst	331	330	285	-14%	-14%
	Jewellery	104	92	90	-14%	-3%
	Industrial	17	17	17	1%	1%
Total Supply		1,981	1,967	1,748	-12%	-11%

Q3 2022 REFINED MINE SUPPLY: DOWN 11% YOY ON PRODUCTION CHALLENGES



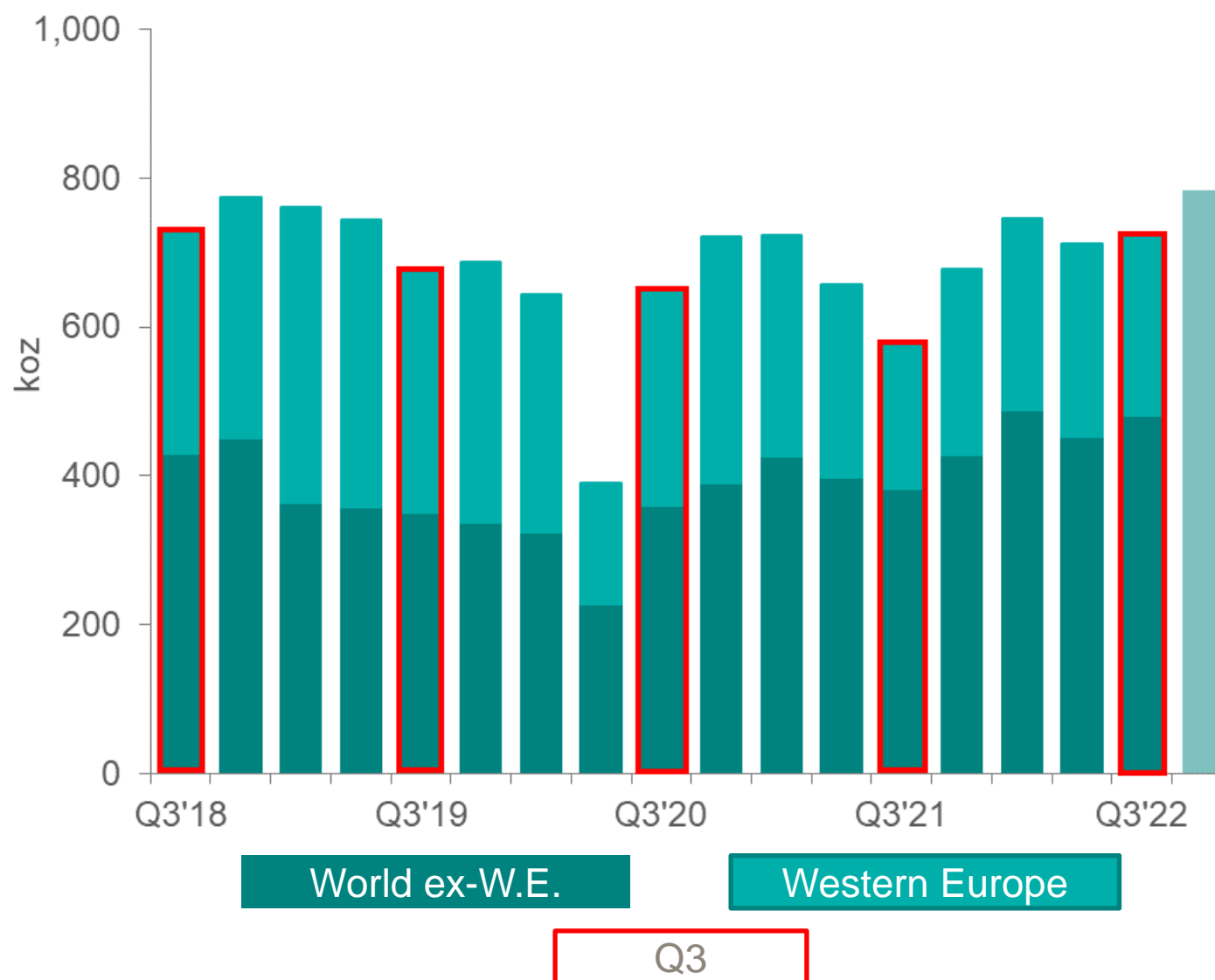
Q3 2022 RECYCLING: DOWN 13% YOY ON REDUCED VEHICLE SCRAPPAGE AND JEWELLERY TRADE-INS



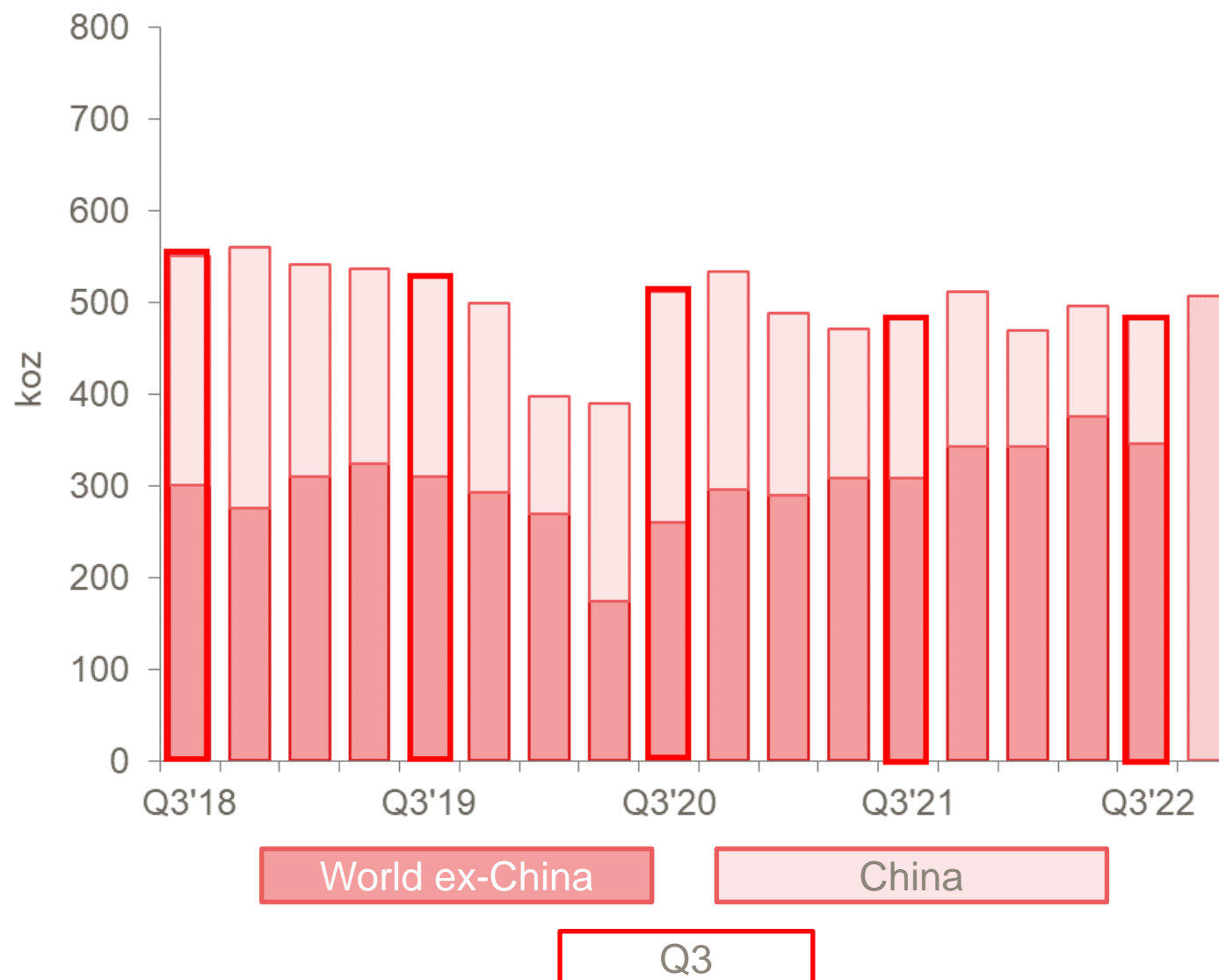
Q3 2022 DEMAND: UP 12% YOY ON STRONG AUTO AND INDUSTRIAL DESPITE IMPROVED -VE INVESTMENT

DEMAND		Q3 2021 // Q2 2022	Q3 2022	YoY	QoQ	
Automotive		580	712	723	25%	2%
	Autocatalyst	580	712	723	25%	2%
	Non-road	†	†	†	n/a	n/a
Jewellery		485	496	482	-1%	-3%
Industrial		543	565	553	2%	-2%
	Chemical	161	167	174	8%	4%
	Petroleum	39	50	51	29%	1%
	Electrical	35	27	26	-26%	-4%
	Glass	112	101	92	-18%	-9%
	Medical & Biomedical	66	70	69	4%	-1%
	Other	130	150	141	9%	-6%
Investment		-282	-137	-272	-4%	98%
	Change in Bars, Coins	110	75	97	-12%	29%
	Change in ETF Holdings	-219	-89	-235	7%	164%
	Change in Stocks Held by Exchanges	-173	-123	-134	-22%	9%
Total Demand		1,325	1,636	1,485	12%	-9%
Balance		656	331	263	-60%	-21%

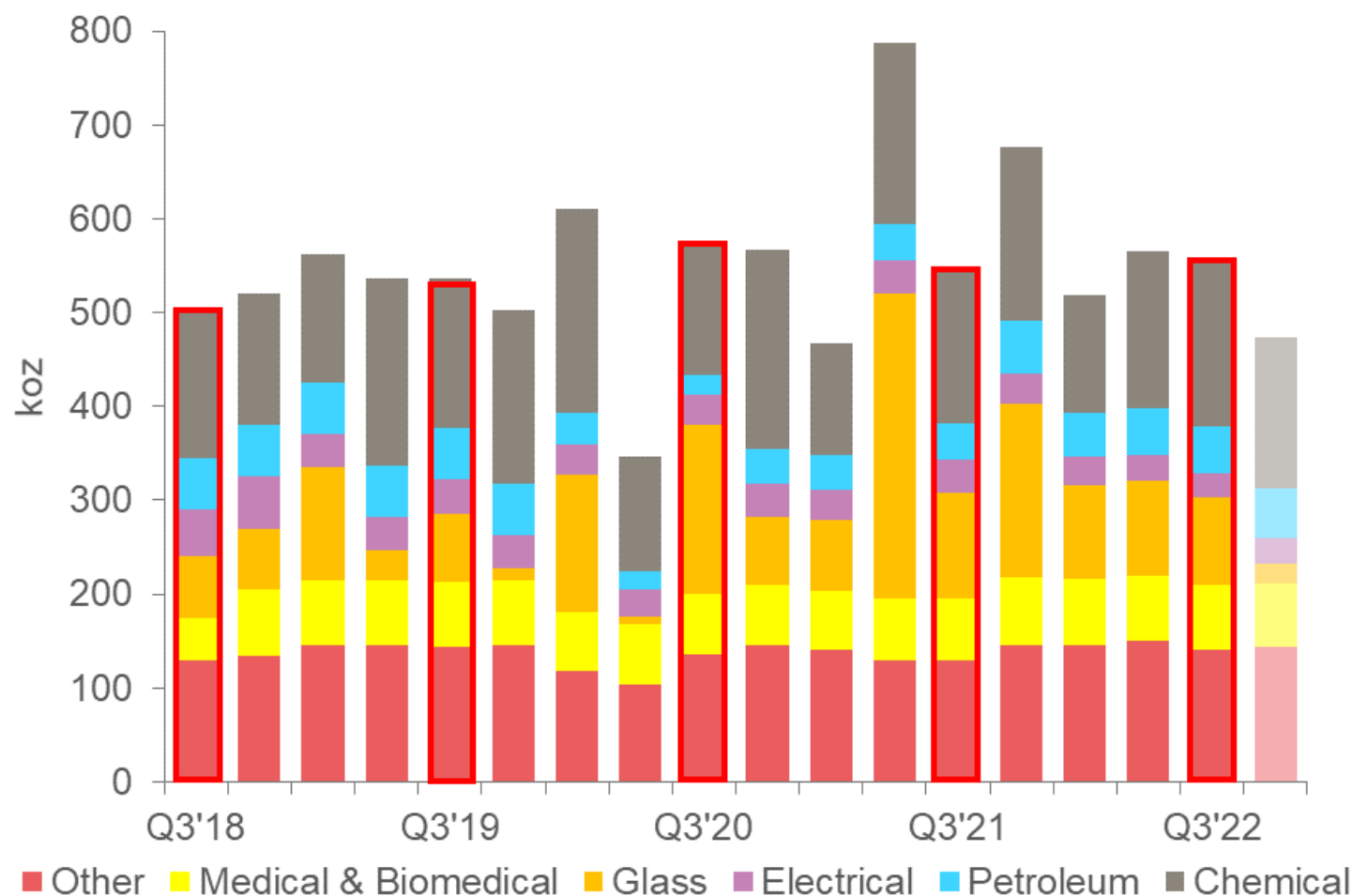
Q3 2022 AUTOMOTIVE: UP 25% SUPPORTED BY HIGHER LOADINGS, SUBSTITUTION AND PRODUCTION



Q3 2022 JEWELLERY: FLAT YOY WITH CHINA WEAKNESS OFFSET BY STRONG R.O.W. DEMAND

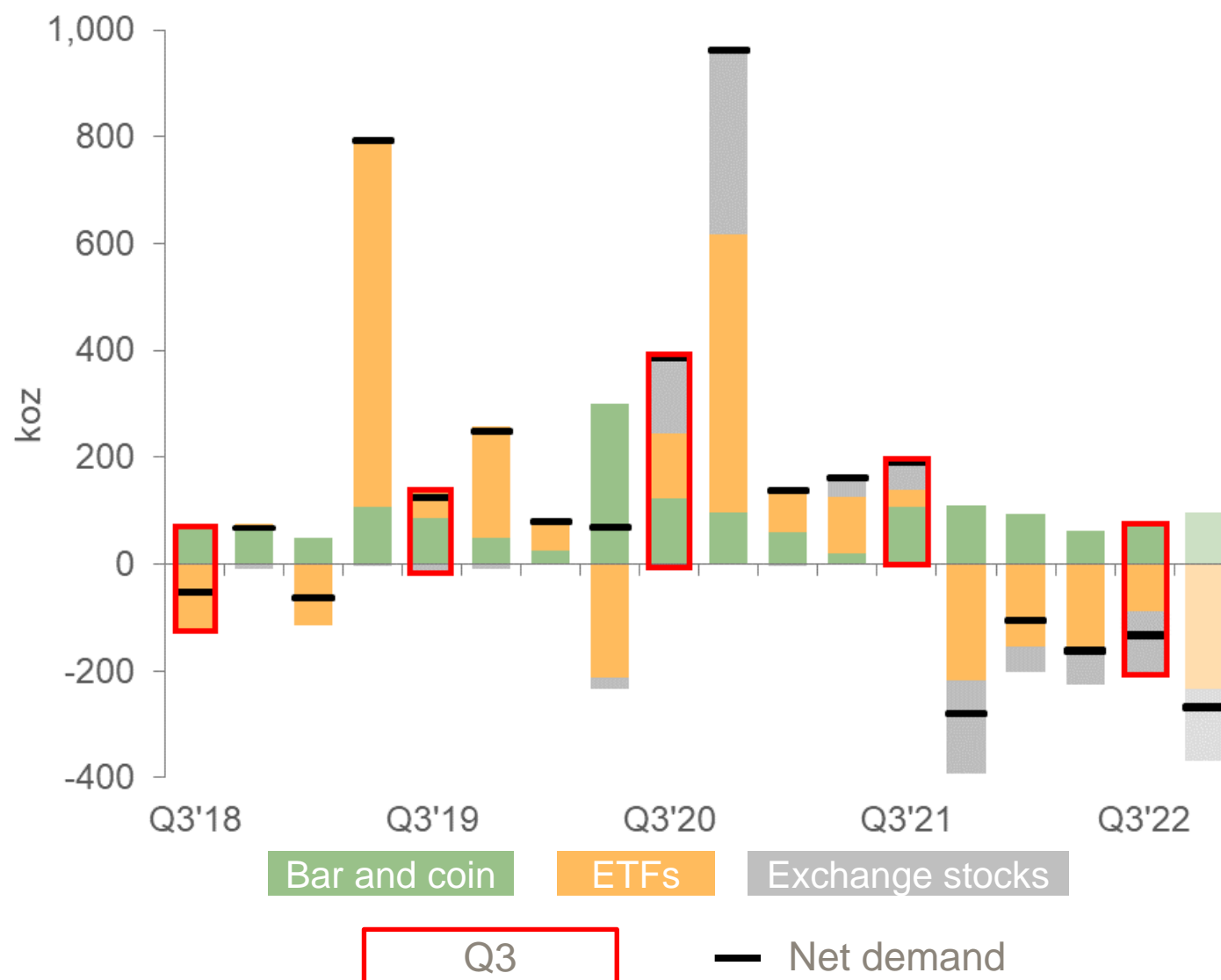


Q3 2022 INDUSTRIAL DEMAND: UP 2% YOY DESPITE RECORD 2021 CAPACITY ADDITIONS



Q3

Q3 2022 INVESTMENT DEMAND: ROBUST BAR & COIN, CONTINUED ETF AND EXCHANGE STOCK OUTFLOWS

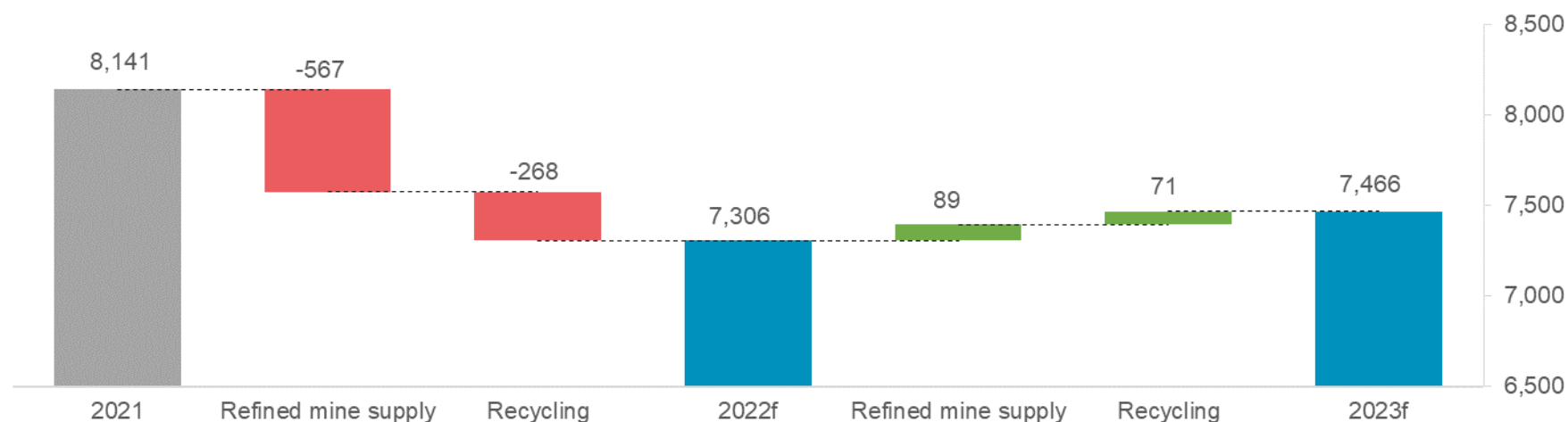


2021 - 2023 FULL YEAR: REDUCED 2022 SURPLUS, 2023 IN DEFICIT, CONSTRAINED SUPPLY & DEMAND GROWTH

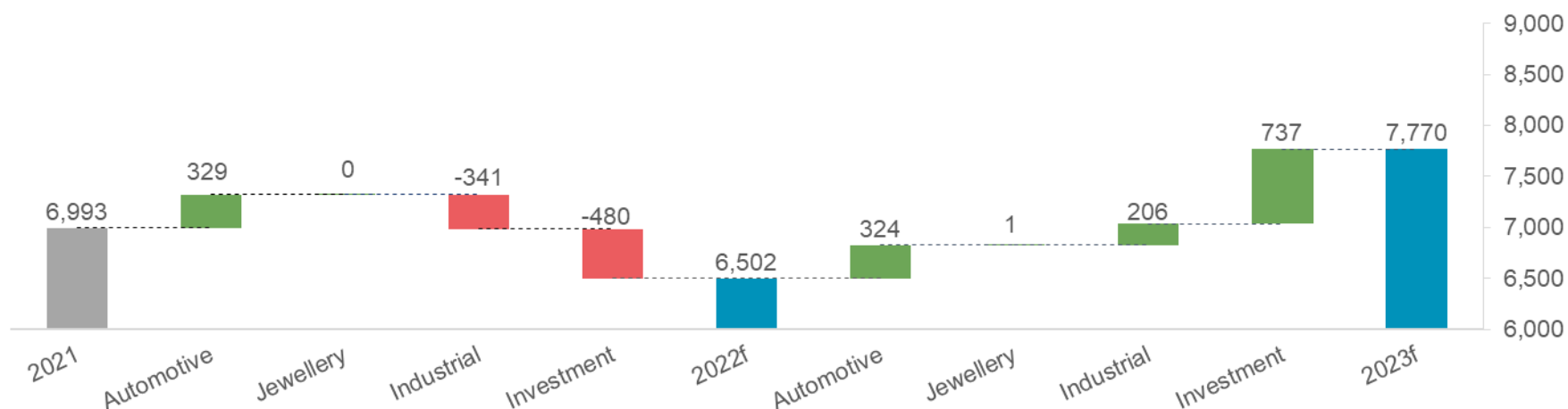
SUPPLY	2021	2022f	YoY, oz	YoY, %	2023f	YoY, oz	YoY, %
Refined Production	6,297	5,643	-654	-10%	5,726	84	1%
South Africa	4,678	4,012	-666	-14%	4,047	35	1%
Zimbabwe	485	478	-7	-1%	502	24	5%
North America	273	269	-4	-2%	319	50	19%
Russia	652	678	26	4%	654	-24	-4%
Other	208	205	-3	-1%	205	0	0%
Inc (-)/Dec (+) in Producer Inventory	-93	-5	87	N/A	+0	5	N/A
Total Mining Supply	6,204	5,637	-567	-9%	5,726	89	2%
Recycling	1,937	1,669	-268	-14%	1,740	71	4%
Autocatalyst	1,448	1,228	-220	-15%	1,289	61	5%
Jewellery	422	372	-50	-12%	382	10	3%
Industrial	67	68	2	3%	69	1	2%
Total Supply	8,141	7,306	-835	-10%	7,466	161	2%
DEMAND							
Automotive	2,635	2,964	329	12%	3,288	324	11%
Jewellery	1,953	1,953	0	0%	1,954	1	0%
Industrial	2,450	2,110	-341	-14%	2,316	206	10%
Investment	-45	-525	-480	N/A	212	737	N/A
Total Demand	6,993	6,502	-491	-7%	7,770	1,268	19%
Balance	1,147	804	-343	-30%	-303	-1,107	N/A
Above Ground Stocks	3,623	4,426	804	22%	4,123	-303	-7%

2023 OUTLOOK: MUTED SUPPLY UP 2% AND STRONG POSITIVE SWING IN DEMAND UP 19%

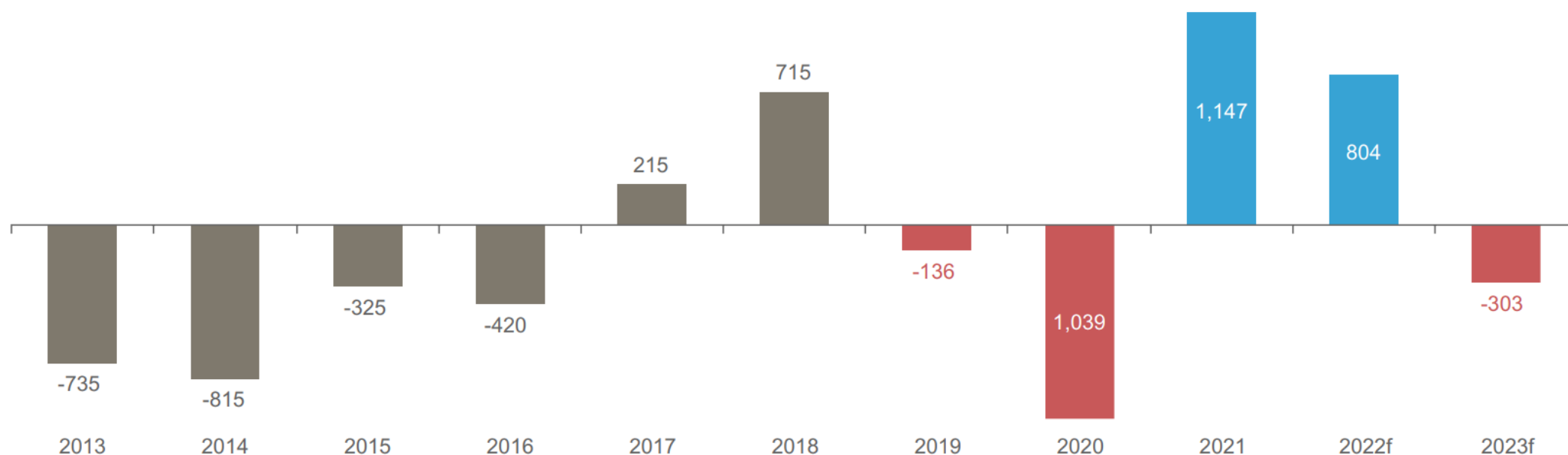
Annual total supply and changes 2021 to 2023F (koz)



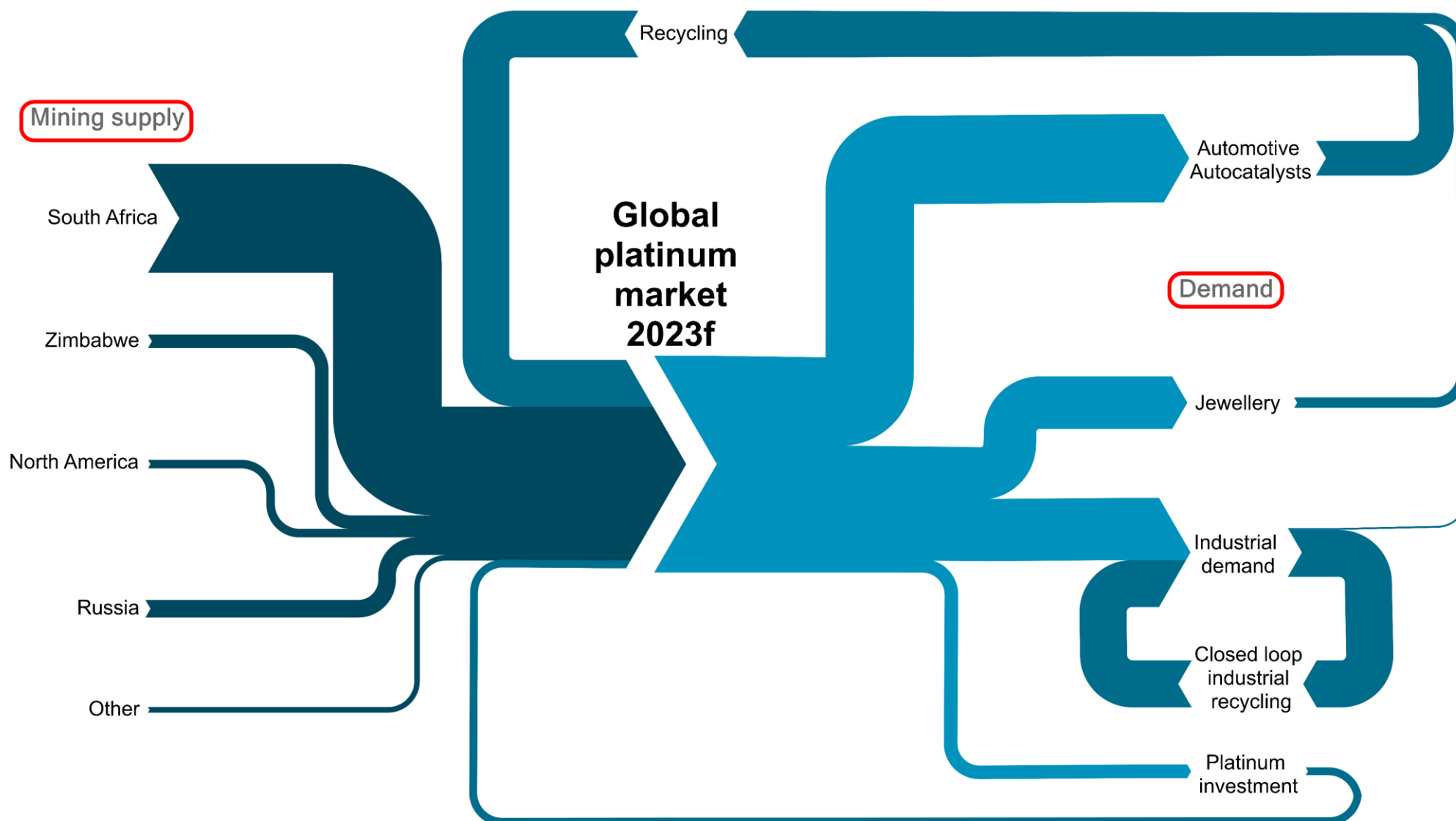
Annual total demand and changes 2021 to 2023F (koz)



MARKET BALANCE: MOVING TO DEFICIT IN 2023 AFTER TWO YEARS OF SURPLUSES, A MOVE OF OVER 1.1 MOZ



EXPECTED PLATINUM FLOWS FROM MINERS TO DEMAND SEGMENTS AND RECYCLING RETURNS: ANNUAL 2023F



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3. Current thematics

- Unpacking investment flows
- Ongoing imports into China
- Continued physical market tightness
- Risking the outlook in a recessionary environment

Edward Sterck, Director of Research

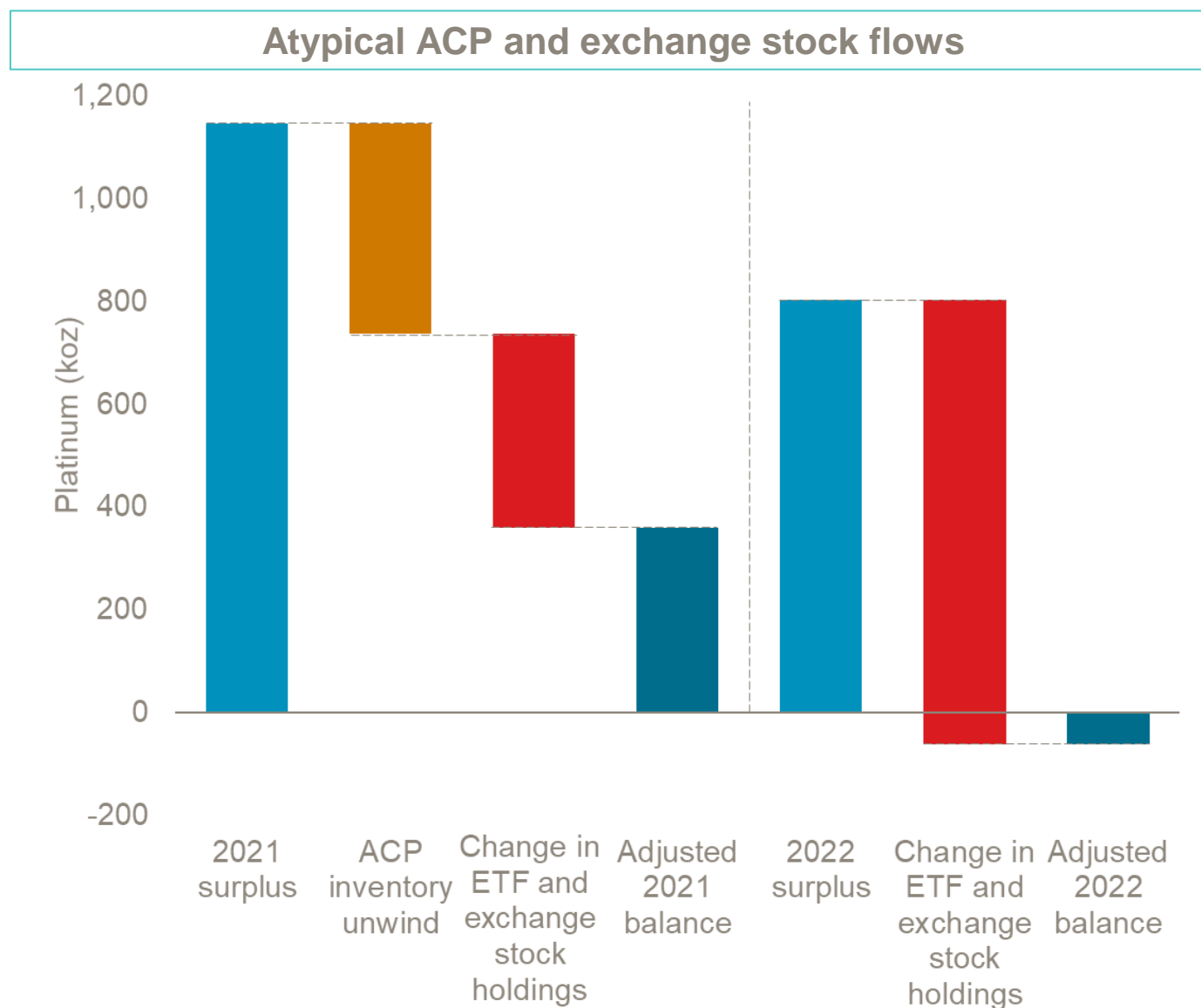
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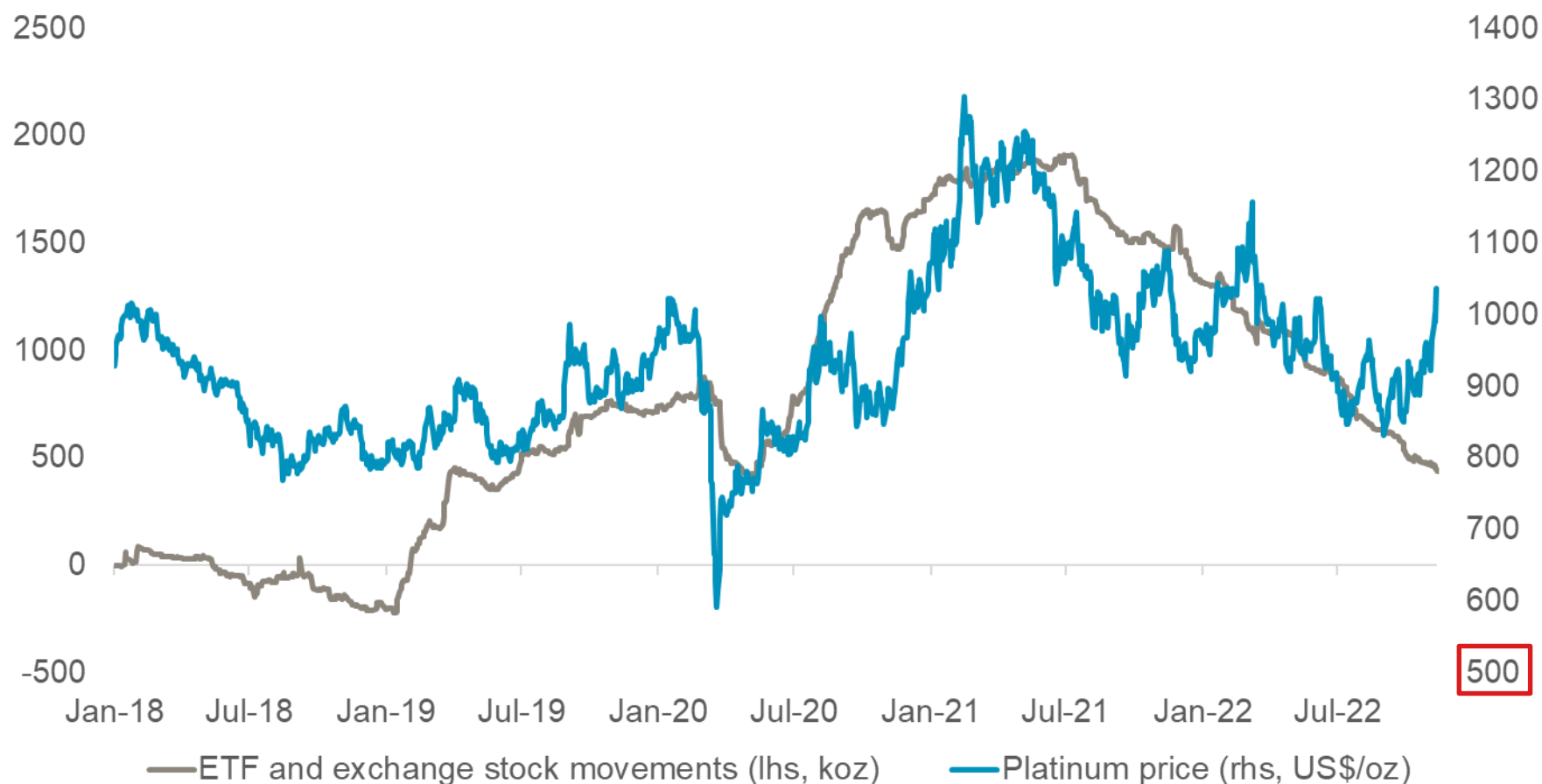
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FACTORS BEHIND THE SURPLUSES IN 2021 AND 2022: ACP UNWIND AND INVESTMENT FLOWS

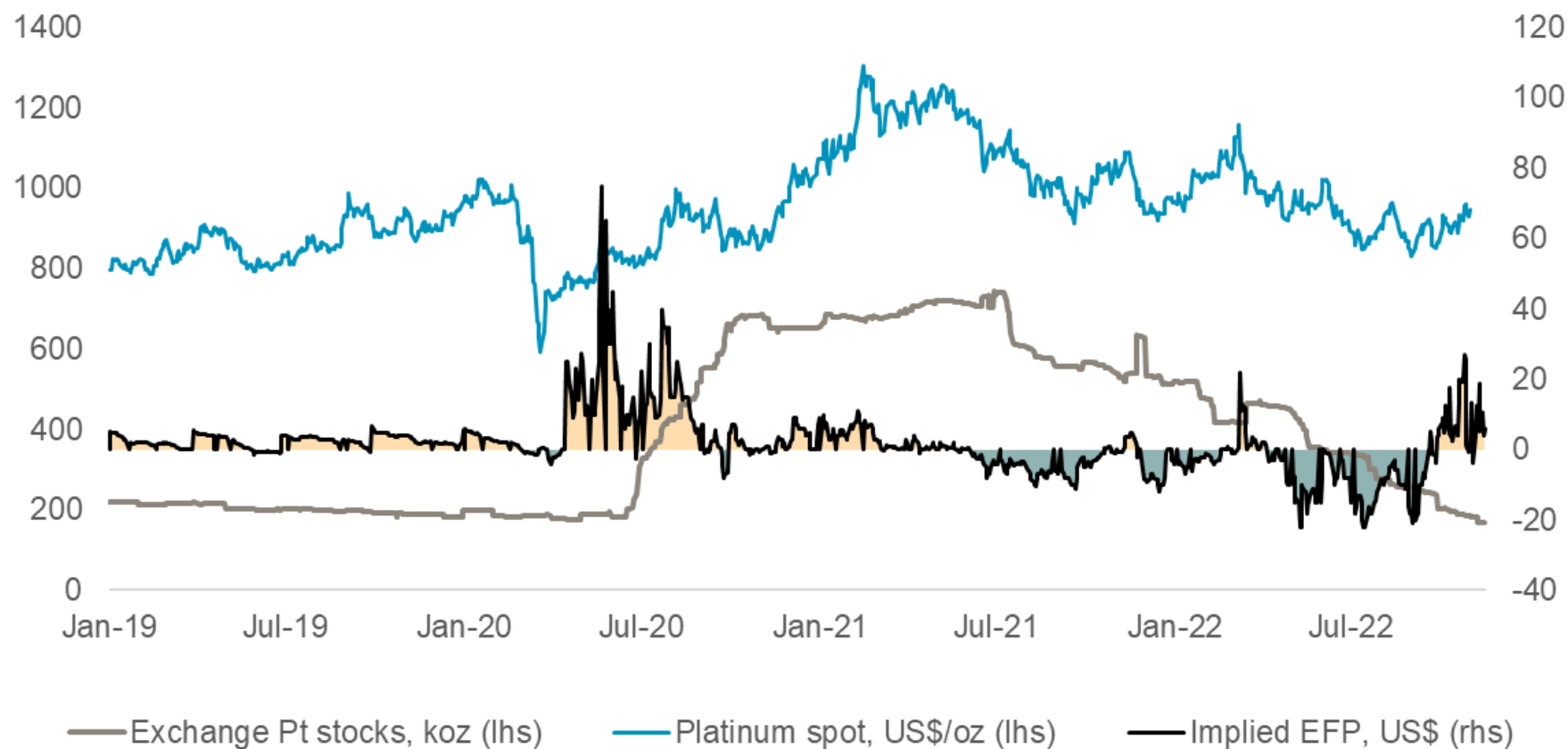


INVESTMENT FLOWS HAVE BEEN A SIGNIFICANT FACTOR BEHIND PLATINUM PRICE MOVEMENTS



- Significant investment demand built up ETF holdings and exchange stocks from 2019
- These positions have been unwound since mid-2021

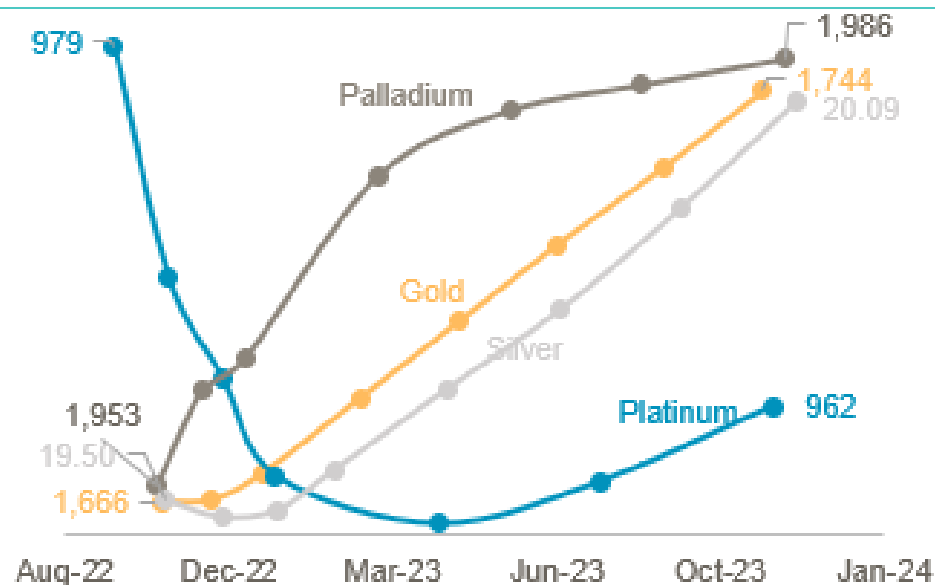
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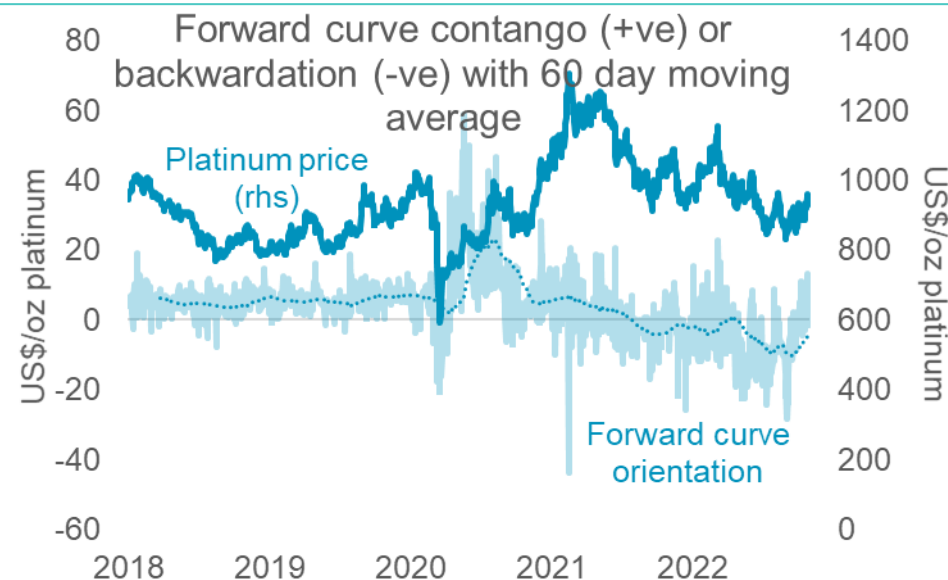
- Significant investment demand built up ETF holdings and exchange stocks from 2019
- These positions have been unwound since mid-2021, with EFPs incentivising exchange flows

THE PLATINUM MARKET HAS ON AVERAGE BEEN IN BACKWARDATION SINCE MID-2021

Precious metal forward curves



Platinum market backwardation



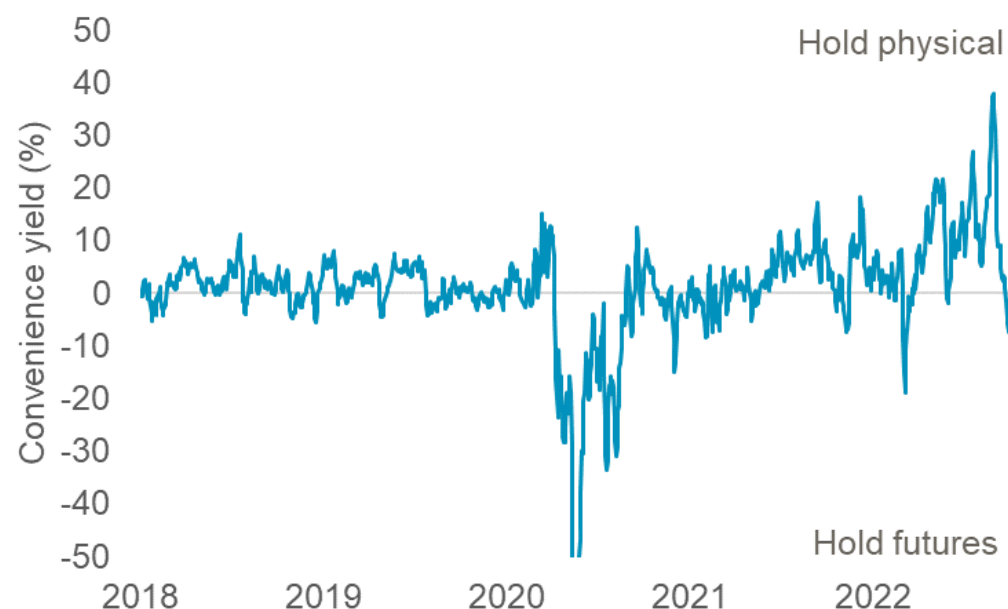
- In contrast to palladium, gold and silver, the platinum market is currently in backwardation
- A situation which has prevailed since around the middle of 2021
- This means an investor is being paid to hold a platinum futures position

AN ASSET CLASS AGNOSTIC INVESTOR MAY PREFER TO OWN PHYSICAL PLATINUM OVER AN ETF OR FUTURES

Platinum future's holding cost has been negative

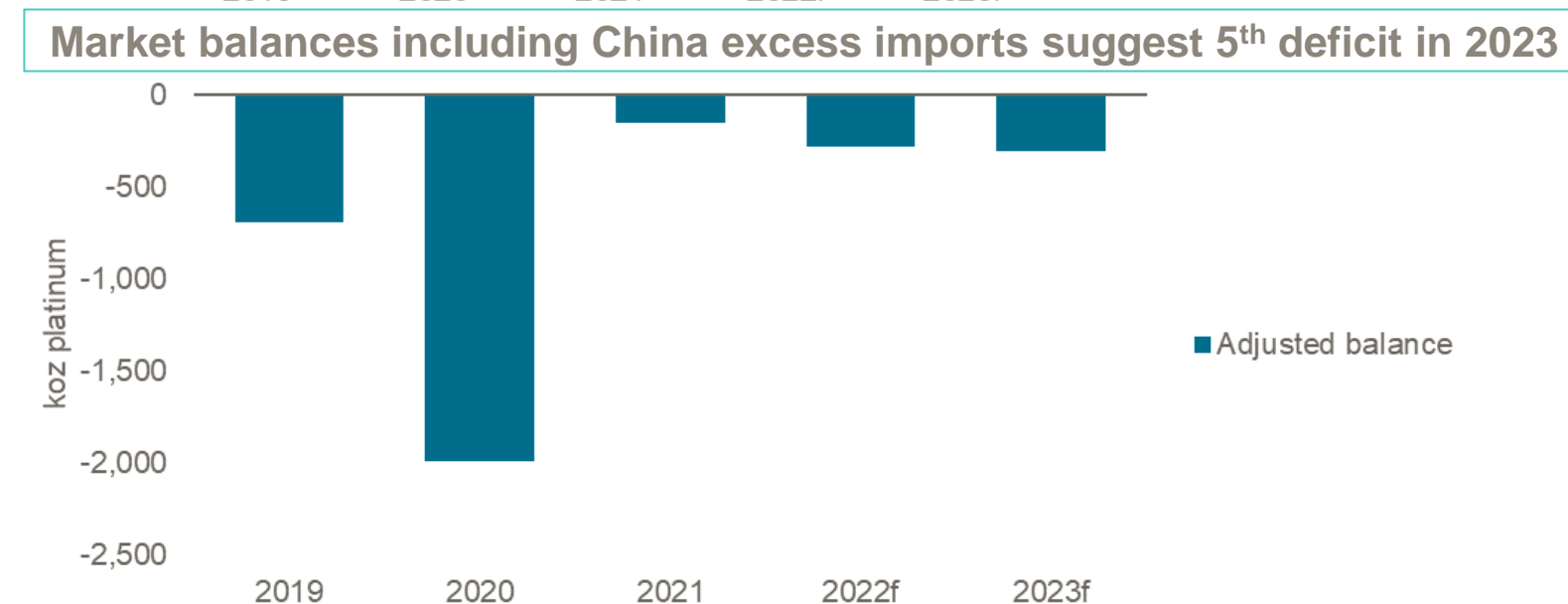
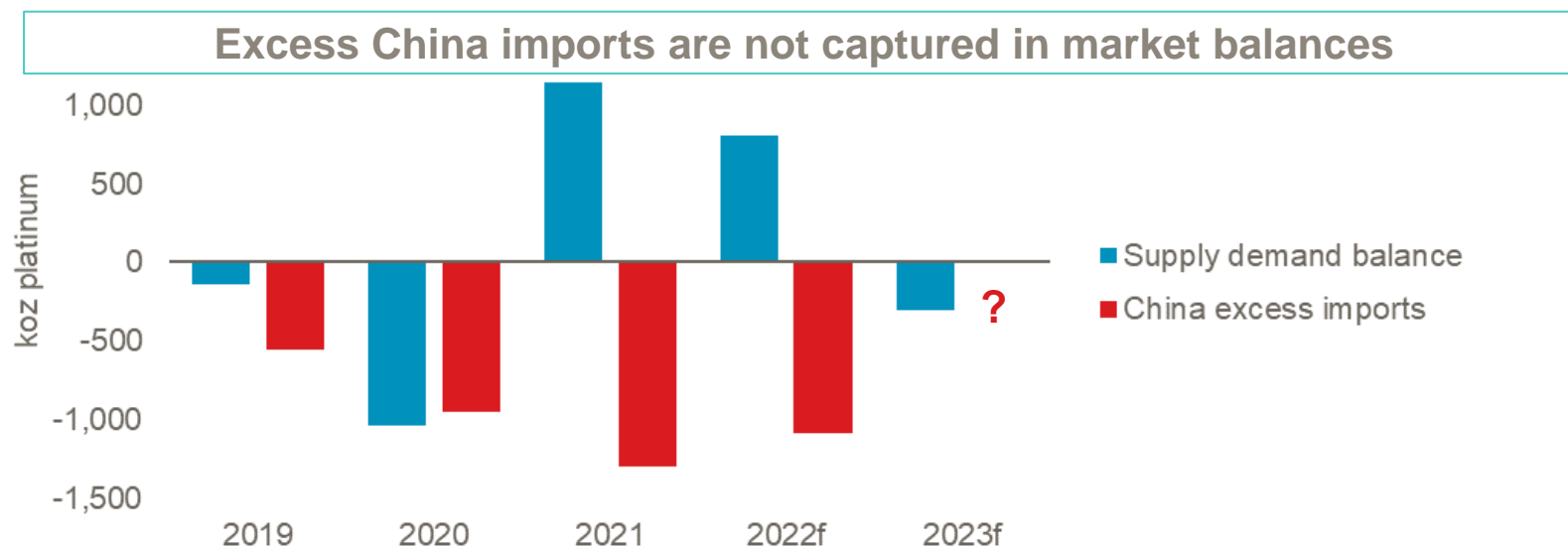


End users may prefer physical over futures

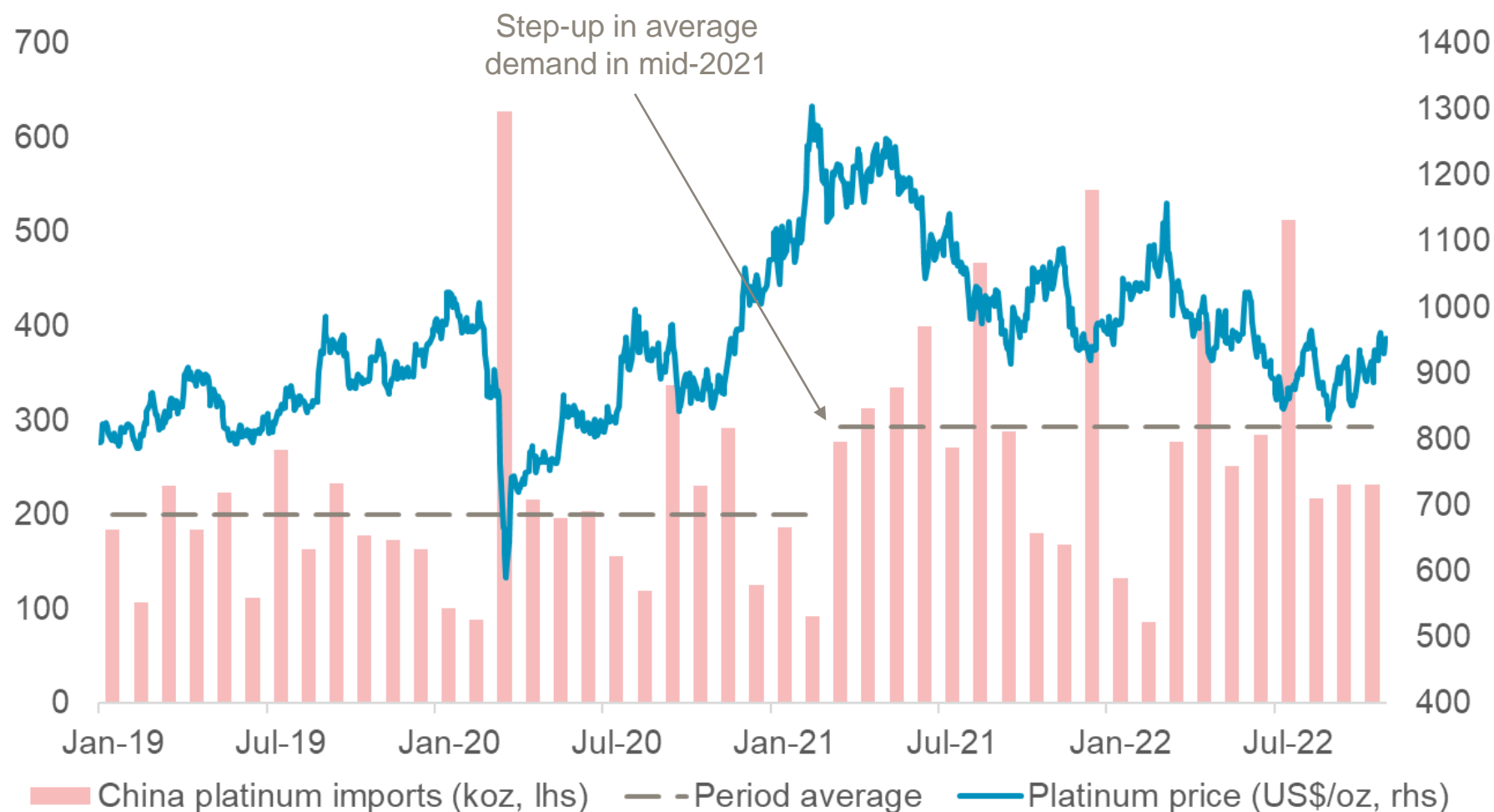


- Cheaper to hold futures than ETFs since mid-2021
- Holding physical adds leasing revenue, advantageous for end users of platinum
- This may explain some ETF disinvestment

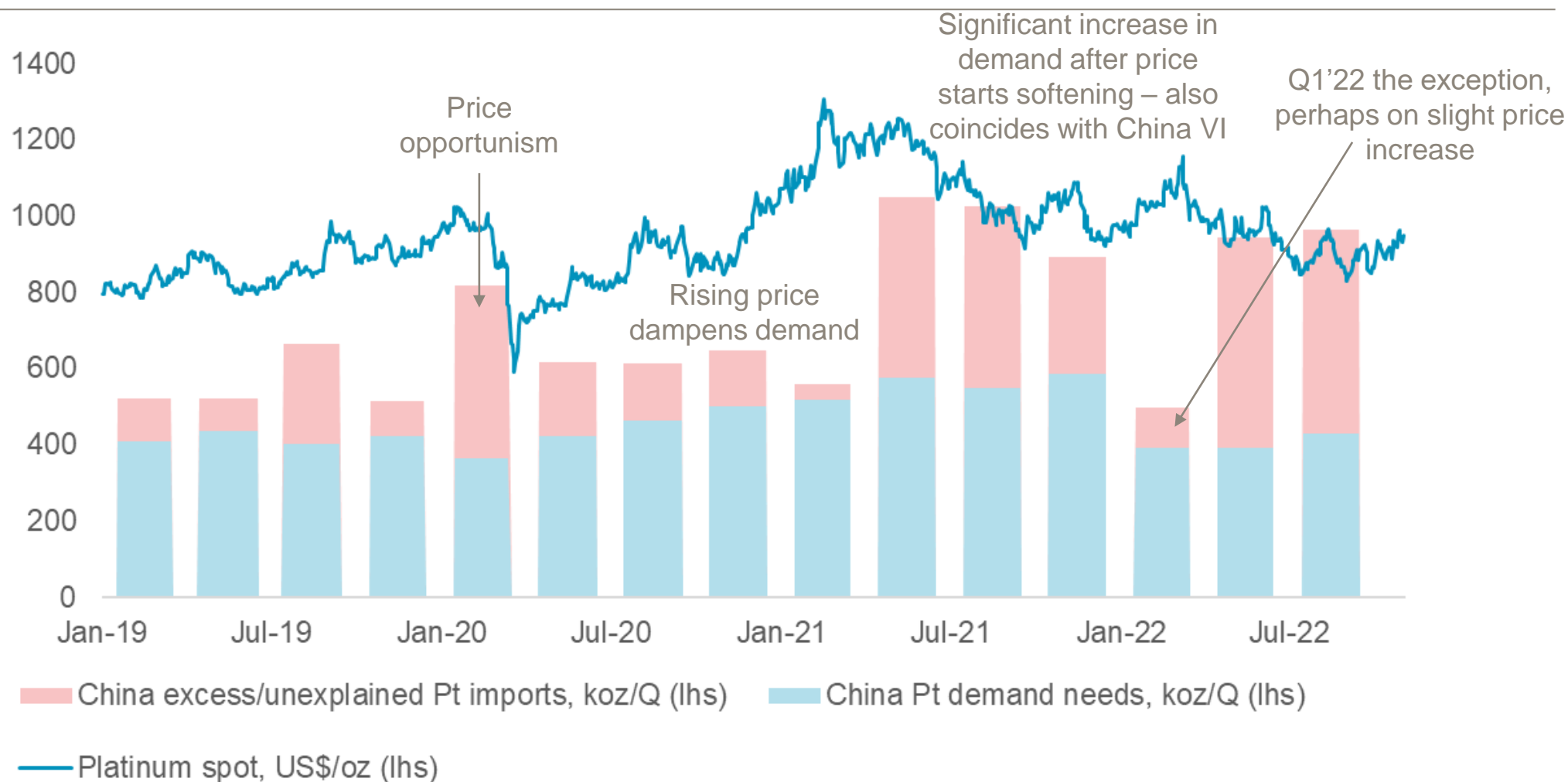
CHINA IMPORTS IN 2021 AND 2022 EXCEED 2.4 MOZ ABSORBED BOTH SURPLUSES AND NOT MOBILE



ACCUMULATION OF PLATINUM INTO CHINA HAS BEEN PRICE OPPORTUNISTIC



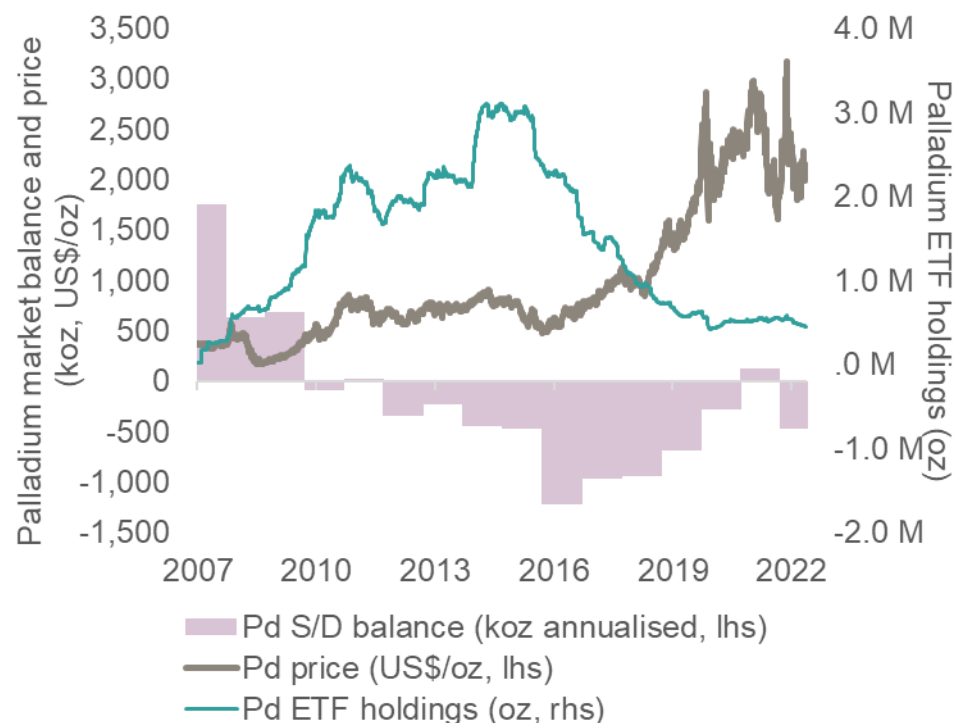
ACCUMULATION OF PLATINUM INTO CHINA HAS BEEN PRICE OPPORTUNISTIC AND CONSUMPTION LED



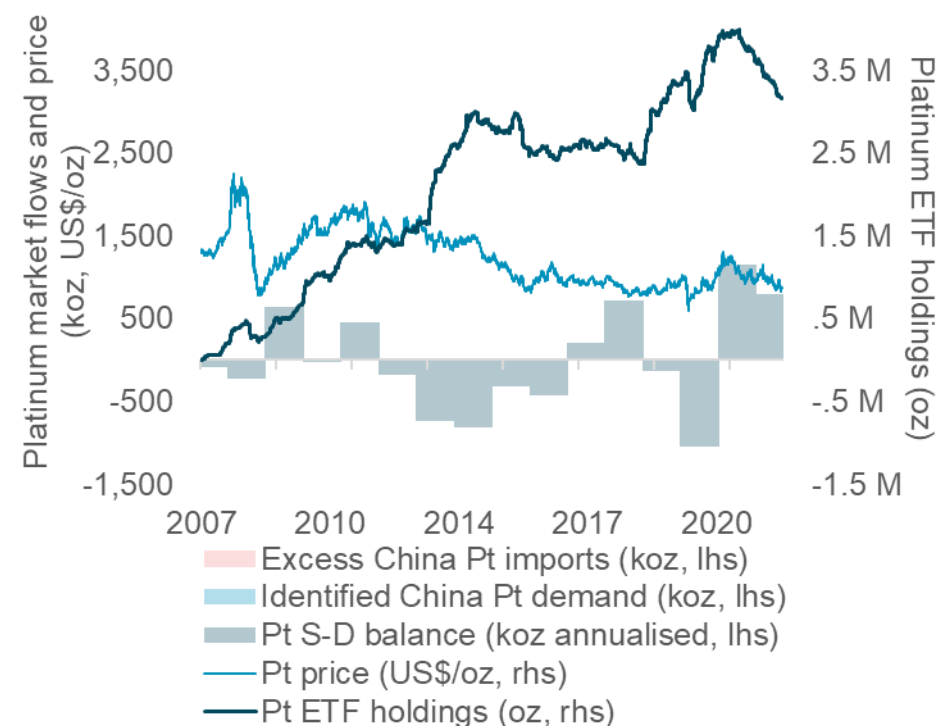
- We expect any release of the quasi-speculative portion of the excess imports into the domestic market to also be price-based - and only at prices significantly higher than current

CHINA EXCESS INVENTORIES: ARE THERE PARALLELS WITH PALLADIUM IN THE 2010'S?

The palladium market was slow to react to deficits



Platinum has different fundamentals today



- Palladium's slow price response due to significant Russian stocks. ETF disinvestment slowed as the price eventually began to react
- Platinum today has no equivalent of the Russian above ground stocks. Whilst ETF disinvestment is expected to slow in response to any potential price appreciation

RISK ASSESSING THE PROJECTED 2023 DEFICIT IN A RECESSIONARY ENVIRONMENT

Platinum risk +/-ve	Supply/demand category	Risks
+ve	Mine supply	Inflationary risks may lead to modified mine plans and delays to sanctioning projects
-ve	Recycling supply	Tied to the outlook for automotive production, higher automotive production = higher platinum demand but increased scrap recycling supply
+ve	Automotive demand	Forecast automotive production is already below both recessionary consumer demand and pent up demand after several years of production shortfalls
-ve	Jewellery demand	The most vulnerable demand area to recessionary erosion of consumer spending
+ve	Industrial demand	Industrial demand largely a function of capacity additions, which have been largely committed to financially for 2023. Potentially greater risks to 2024 if recession deep and sustained
+ve	Investment demand	Significant disinvestment and exchange stock outflows already factored into 2023 outlook. Bar and coin demand tends to remain strong during periods of economic uncertainty. Exchange stocks at historic low levels

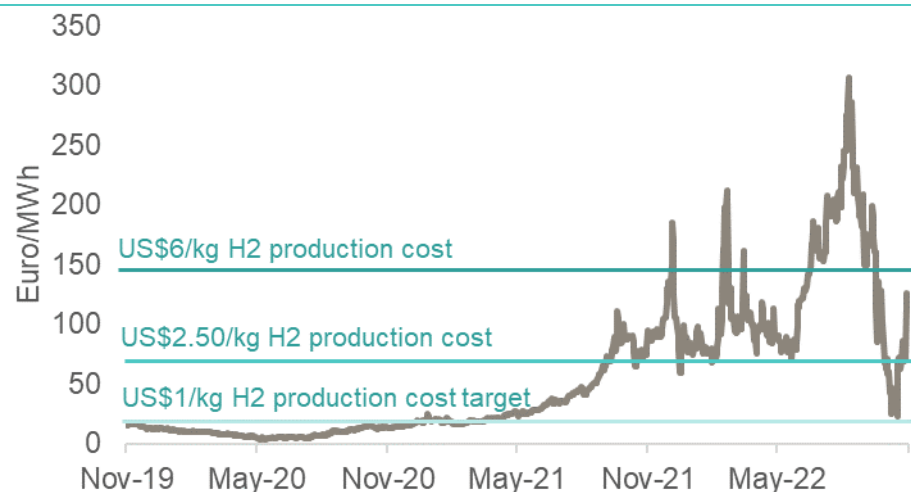
WHAT DOES EURO 7/VII MEAN FOR PLATINUM AUTOMOTIVE DEMAND?

- WPIC busy assessing Euro 7/VII emissions proposals. Initial thoughts are:

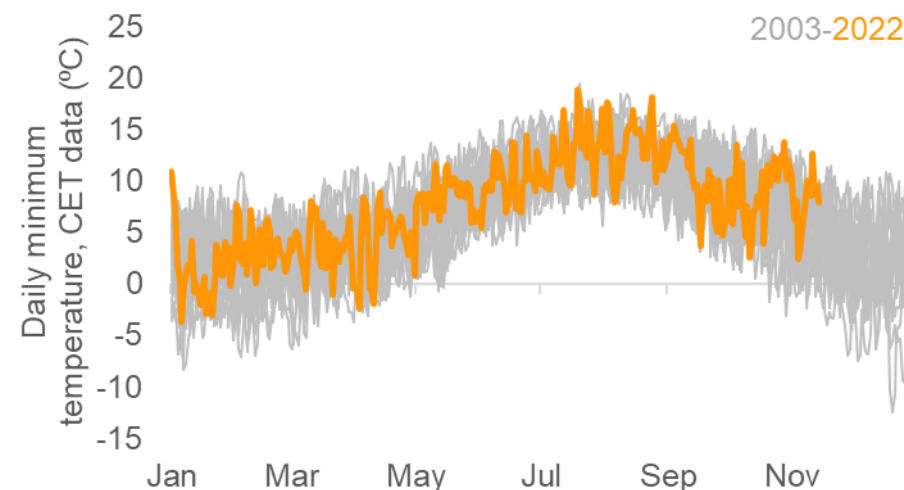
- Proposed regulations are not as stringent as they might have been – unlikely to accelerate the transition from ICE to EV ahead of 2035
- Emissions regulations to be harmonized across vehicle categories – likely to result in higher PGM demand per vehicle, from HD in particular
- Emissions control durability requirements are extended (years and km) which may need slightly more PGMs for automakers to be confident of meeting targets
- Ammonia emissions included - ammonia slip catalysts containing platinum now likely
- Euro regulations have historically been used as a benchmark for policies in other regions

ENERGY PRICE PULL BACK MAKES GREEN H2 LESS ECONOMIC – BUT LIKELY ONLY TEMPORARY

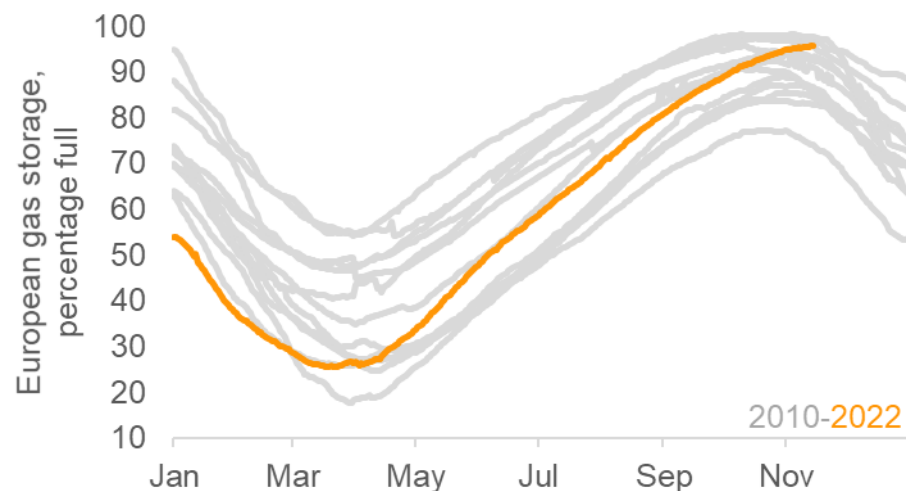
G-H2 looks less attractive at lower energy prices



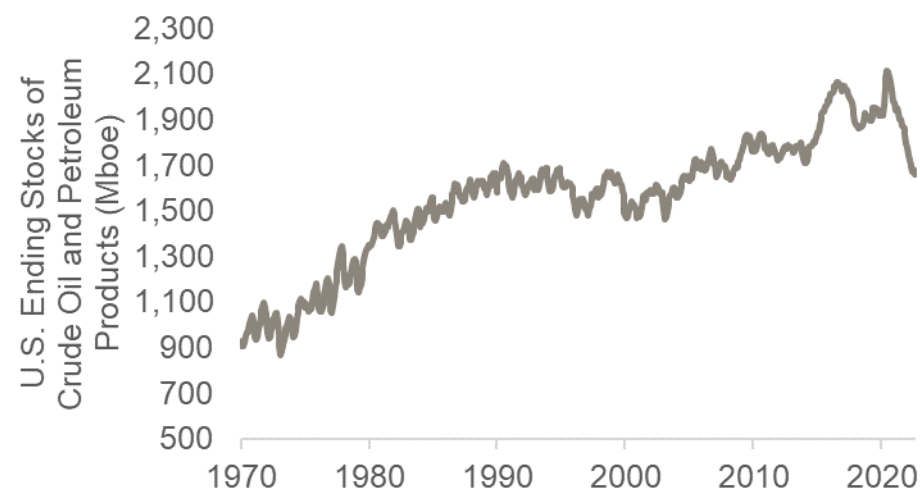
Energy prices have fallen due to warm weather



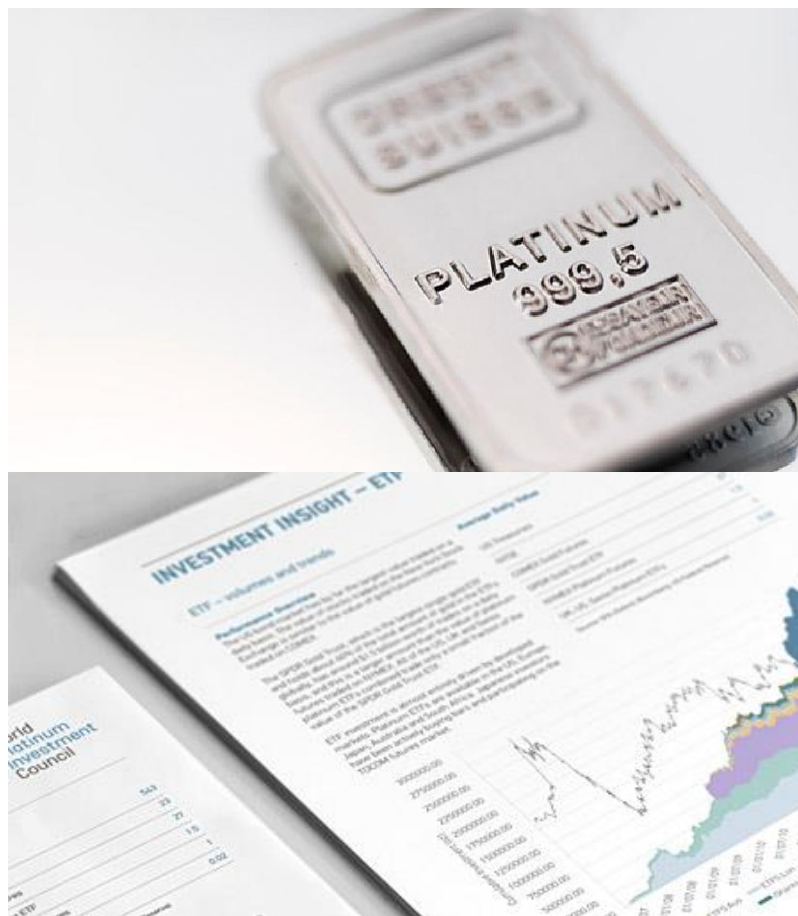
And a faster than expected refilling of reserves



As well as US reserve oil sales



WHY INVEST IN PLATINUM? REACTIONS TO SUPPLY RISKS, GREEN HYDROGEN & SPECULATIVE INVESTMENT



- Risks to sustaining supply from operational challenges, inflationary headwinds and sanctions against Russia
- Platinum market moving into a deficit in 2023, adding to already tight market conditions
- Recent flows of platinum from West into China has absorbed more than recent surpluses and stocks are effectively unavailable outside of China
- A new, and fast growing, end source of demand from the hydrogen economy

POTENTIAL POSITIVE AND NEGATIVE CATALYSTS FOR PLATINUM SUPPLY/DEMAND BALANCE AND PRICE

+/-ve	Potential catalysts	Possible timeframe
+ve	Russian primary mine supply challenges	2023
+ve	Identification of automotive or industrial uses of excess imports into China	2023
+ve	Continued excess imports into China	Ongoing
+ve	Confirmation of substitution levels in gasoline vehicles	2023
-ve	Deeper or longer recessionary impacts on industrial demand	2024

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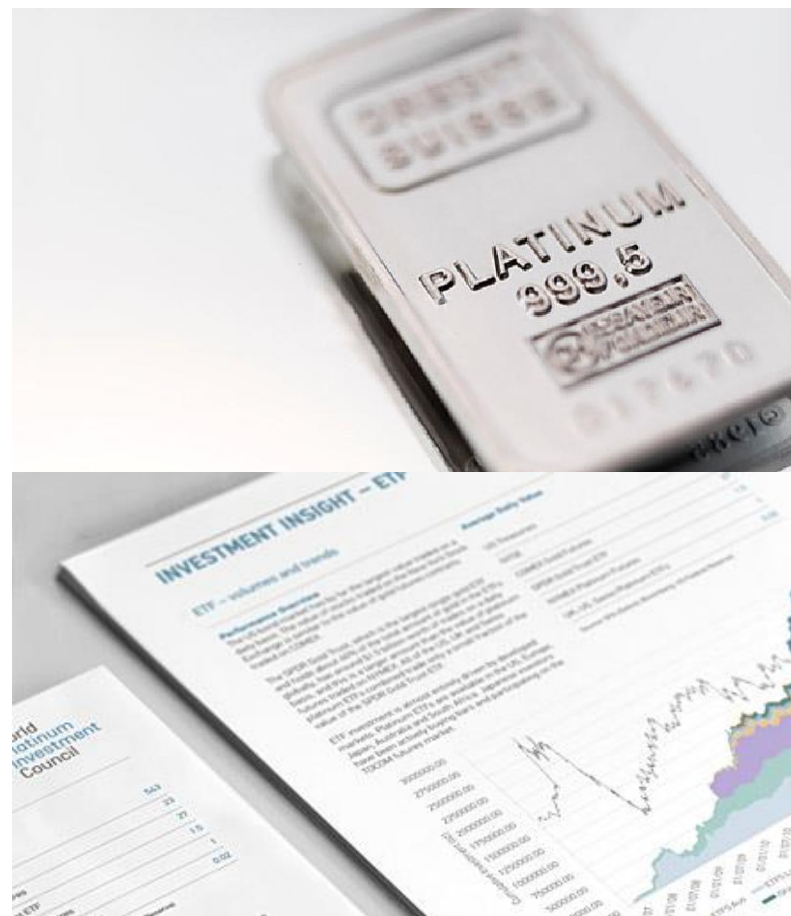
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WPIC initiatives:

- Shanghai Platinum Week 2023 dates confirmed: 25-30 June
- Partnering with JPX (Osaka Exchange) to distribute research through their platform in both Japanese and English
- North America partners: new branded platinum bars and coin issues
- China partners: increased retail bar sales, progress on PGM project in Lin Gang area

WPIC Research:

- Continued expansion of WPIC's research activities to provide more, high level, insights into other PGMs and hydrogen

