

# PLATINUM QUARTERLY PRESENTATION Q2 2021

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London

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# AGENDA: PLATINUM QUARTERLY – Q2 2021 AND 2021 FORECAST

## 1. Introduction

*Paul Wilson, CEO*

## 2. Platinum Quarterly, fundamentals review

*Trevor Raymond*

## 3. Focus on fundamental drivers

*Trevor Raymond*

## 4. Questions

*Paul Wilson*

*Trevor Raymond*



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## 1. Introduction

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## 2. Platinum Quarterly, fundamentals review

- Supply, demand and balance: Q2'21 and 2021 forecast

*Trevor Raymond, Director of Research*

## 3. Focus on fundamental drivers

*Trevor Raymond*

## 4. Questions

*Paul Wilson*

*Trevor Raymond*





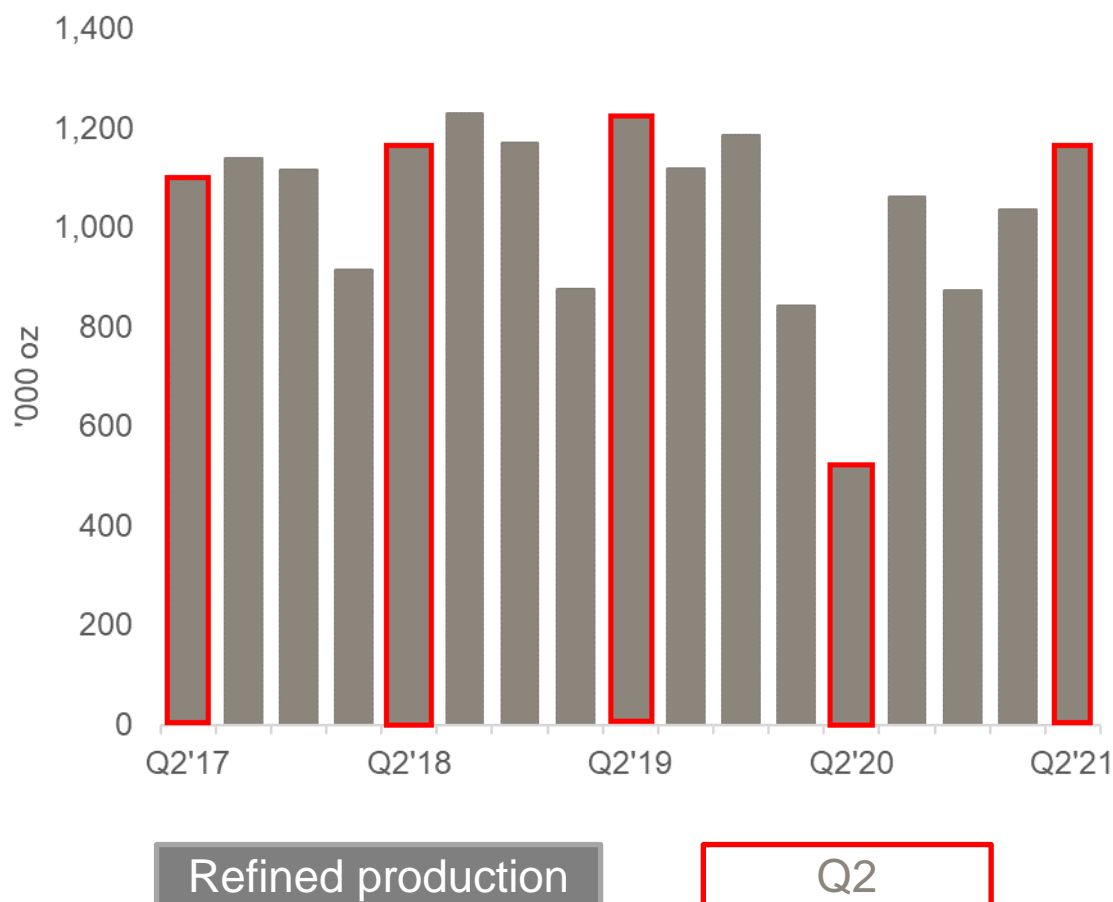
# Q2 2021 SUPPLY: TOTAL SUPPLY UP 55% ON FASTER ACP PROCESSING AND NO COVID SHUTDOWNS

SUPPLY	Q2 2020	Q1 2021	Q2 2021
<b>Refined Production</b>	<b>942</b>	<b>1,468</b>	<b>1,557</b>
South Africa	521	1,036	1,165
Zimbabwe	110	114	128
North America	87	83	75
Russia	175	184	136
Other	49	51	52
Inc(-)/Dec(+) in Producer Inventory	+25	-26	+34
<b>Total Mining Supply</b>	<b>967</b>	<b>1,442</b>	<b>1,591</b>
<b>Recycling</b>	<b>368</b>	<b>493</b>	<b>477</b>
Autocatalyst	257	361	365
Jewellery	97	118	98
Industrial	13	14	14
<b>Total Supply</b>	<b>1,335</b>	<b>1,935</b>	<b>2,068</b>

- South Africa mine supply up 124% (+644 koz) YoY
- Russia mine supply down 22% (-39 koz) on mine flood, concentrator building collapse
- Recycling supply up 30% (+109 koz)
- Total Q2 supply up 55% (+733 koz)

# Q2 2021 SOUTH AFRICAN MINE SUPPLY UP 124% YOY ON ACP PERFORMANCE AND LOW COVID IMPACT

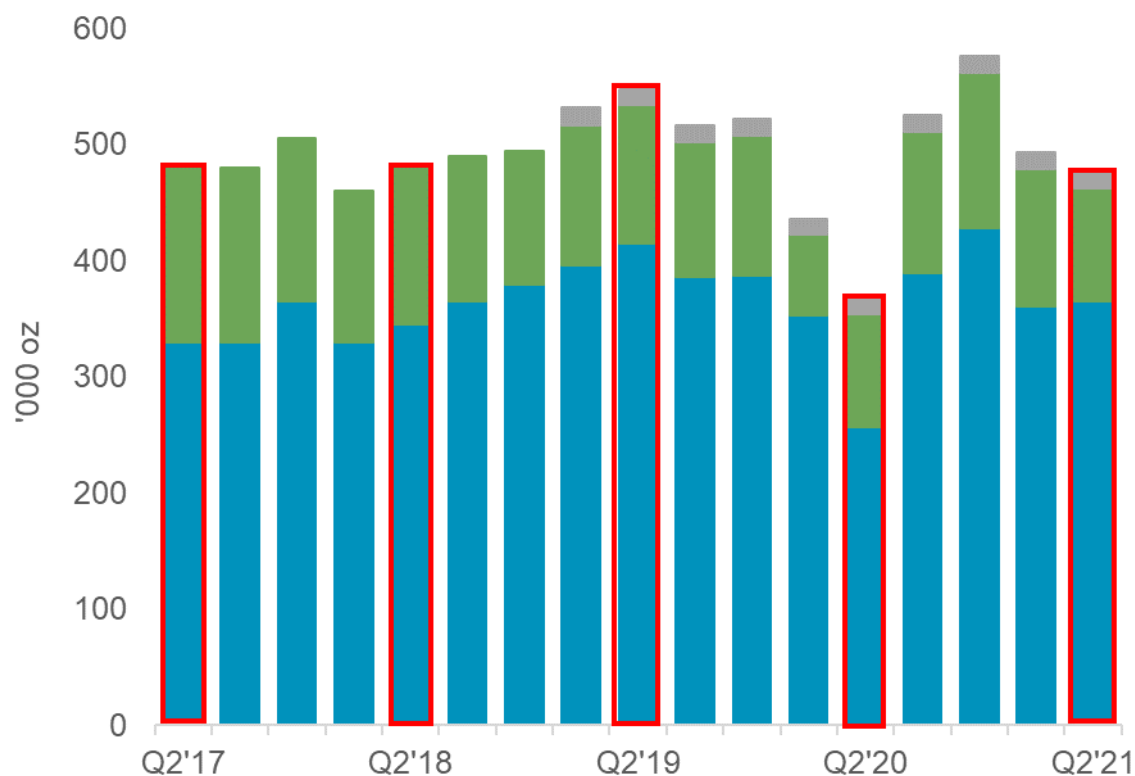
South African refined mine production (koz)



- South African Q2 production up 124% YoY and up 13% QoQ
  - Mines at 97% capacity - success in mitigating effects of COVID
  - Faster processing of semi-finished stock through ACP Phase A
  - Includes part of revised 300 koz of backlog being processed in 2021
  - Includes 34 koz draw from refined inventory to meet strong demand

# Q2 2021 RECYCLING UP 30% ON AUTOMOTIVE RECOVERY, JEWELLERY FLAT ON WEAK PRICE

Recycling (koz)



Autocatalyst

Jewellery

Industrial

Q2

- Recycling supply up 30% (+109 koz), autocatalyst +108 koz, jewellery +1 koz
- Autocatalyst recycling up versus COVID constrained Q2'20 on auto market recovery with higher scrappage rates
- Jewellery recycling flat year-on-year, on low price

# Q2 2021 DEMAND: AUTO, JEWELLERY & INDUSTRIAL UP WITH INVESTMENT DOWN – Q2 SURPLUS

DEMAND	Q2 2020 // Q1 2021		Q2 2021
Automotive	379	715	664
Autocatalyst	379	715	664
Non-road	†	†	†
Jewellery	388	477	461
Industrial	403	679	591
Chemical	112	119	204
Petroleum	18	35	40
Electrical	29	33	35
Glass	80	286	112
Medical & Biomedical	60	62	59
Other	104	143	141
Investment	385	157	191
Change in Bars, Coins	123	18	111
Change in ETF Holdings	123	106	31
Change in Stocks Held by Exchanges	138	33	49
Total Demand	1,555	2,028	1,907
Balance	-221	-93	161

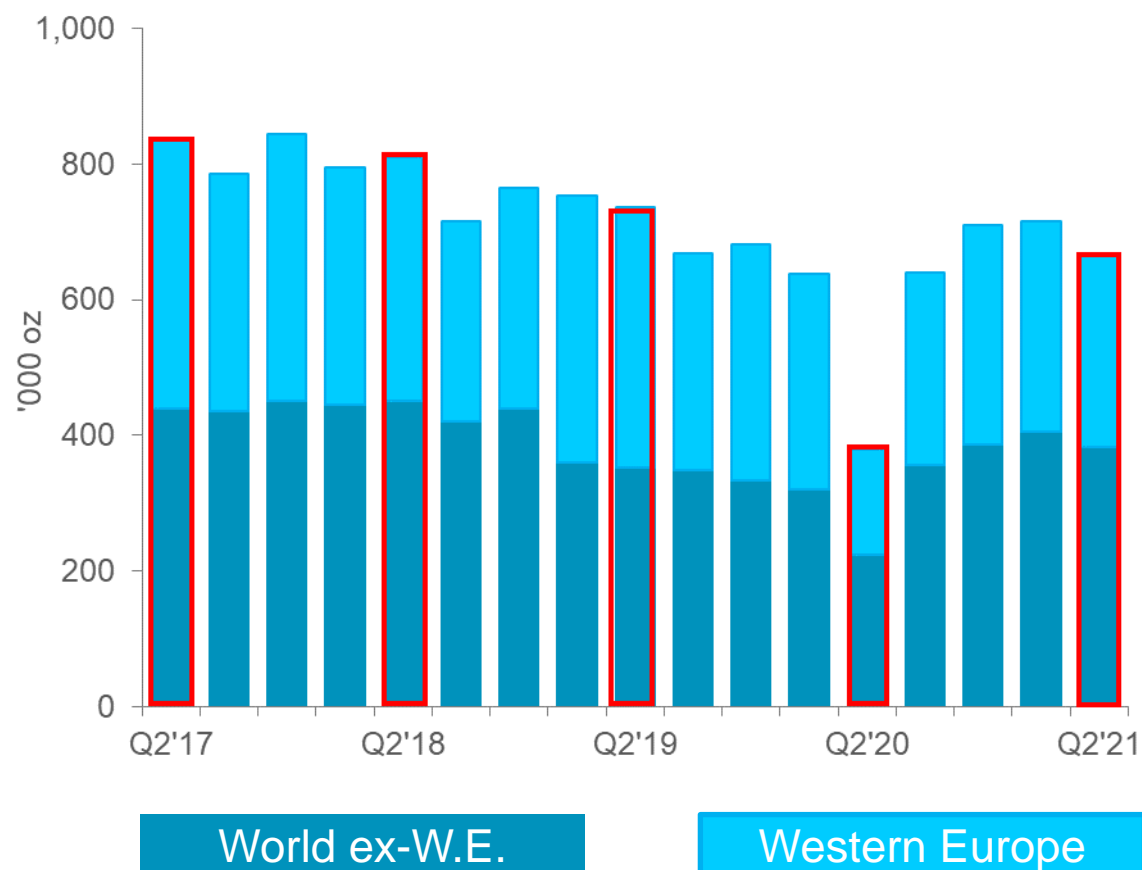
Q2 demand change YoY:

- Automotive up 75% (+285 koz)
- Jewellery up 19% (+73 koz)
- Industrial up 46% (+188 koz)
- Investment down 50% (-194 koz)
  - Bar and coin down 10% (-12 koz)
  - ETF down 75% (-92 koz)
  - Exchange stocks down 65% (-89 koz)
- Market surplus of +161 koz



# Q2 2021 AUTOMOTIVE: UP 75% YOY – COVID REBOUND AND LOADINGS SURGE OFFSET CHIP SHORTAGE

## Automotive demand (koz)

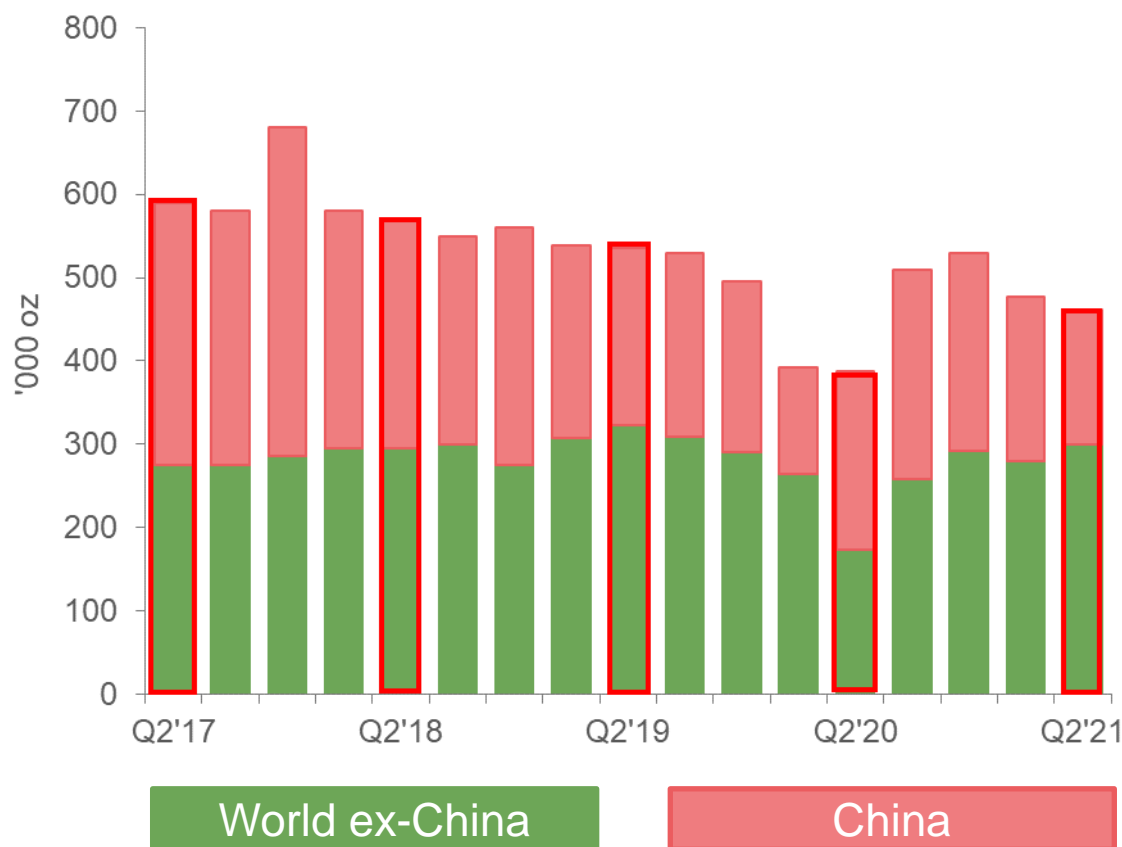


- Automotive demand up 75% (+285 koz)
- EU diesel car sales up 10%, commercial vehicles up 63% with higher loadings - platinum demand up 82% (+127 koz)
- Non-EU growth up 71% (+158 koz) on strong Chinese heavy-duty vehicle market and much higher loadings

Q2

# Q2 2021 JEWELLERY: UP 19% YOY – STRONG NORTH AMERICA AND EUROPE COUNTER WEAK CHINA

Jewellery demand (koz)

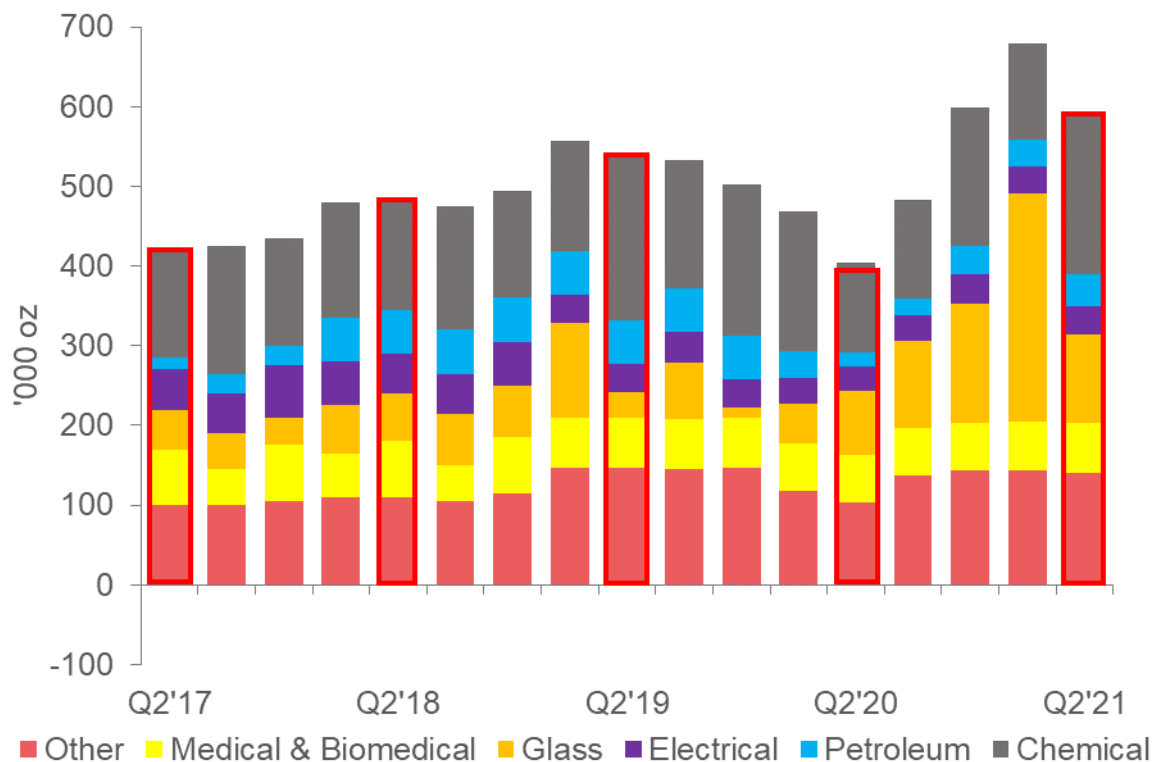


Q2

- Jewellery up 19% (+73 koz) to 461 koz YoY
- Strong rebounds on easing of COVID lockdowns and attractive pricing
  - N. America up 141% (+65 koz)
  - Europe up 125% (+36 koz)
- China demand down 25% (-54 koz) on COVID disruption & strong gold

# Q2 2021 INDUSTRIAL DEMAND: UP 46% YOY ON CHINA CAPACITY ADDITIONS

Industrial demand by category (koz)

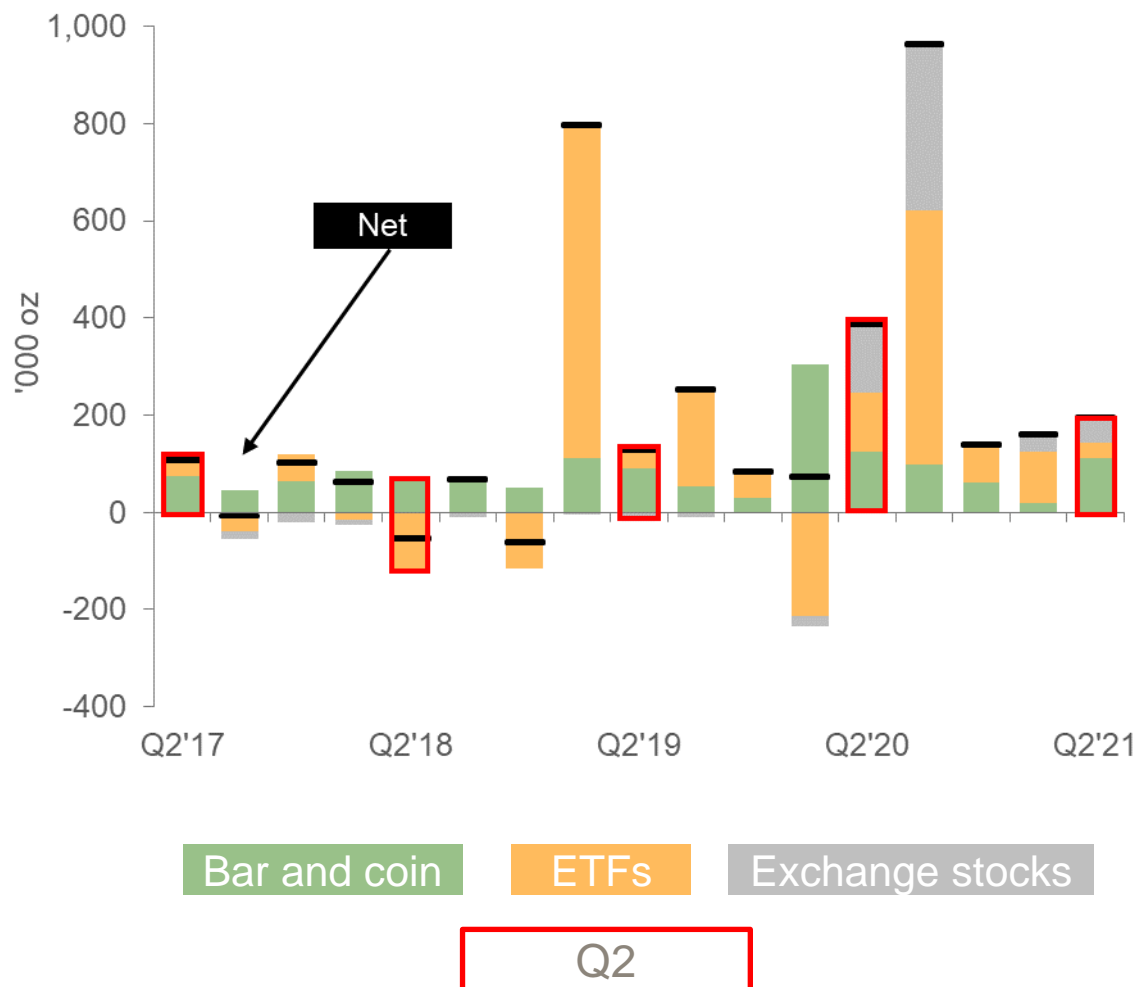


- Industrial up 46% (+188 koz) YoY
- Petroleum up 121% (+22 koz) on more gas-to-liquid (GTL) capacity
- Chemical up 83% (+93 koz) on silicone & more nitric acid & paraxylene capacity
- Glass up 39 koz (+31 koz) on continued China capacity additions

Q2

# Q2 2021 INVESTMENT DEMAND: DOWN 50% YOY BUT STRONG BAR & COIN AND JAPAN ETF

Investment demand by category (koz)



- Investment demand down 50% (-194 koz) YoY
- Bar & coin down 10% (-12 koz) but US demand remains strong
- ETFs down 75% (-92 koz) net sales in Japan and South Africa
- Exchange stocks (mainly NYMEX) down 65% as expected but some growth by market makers

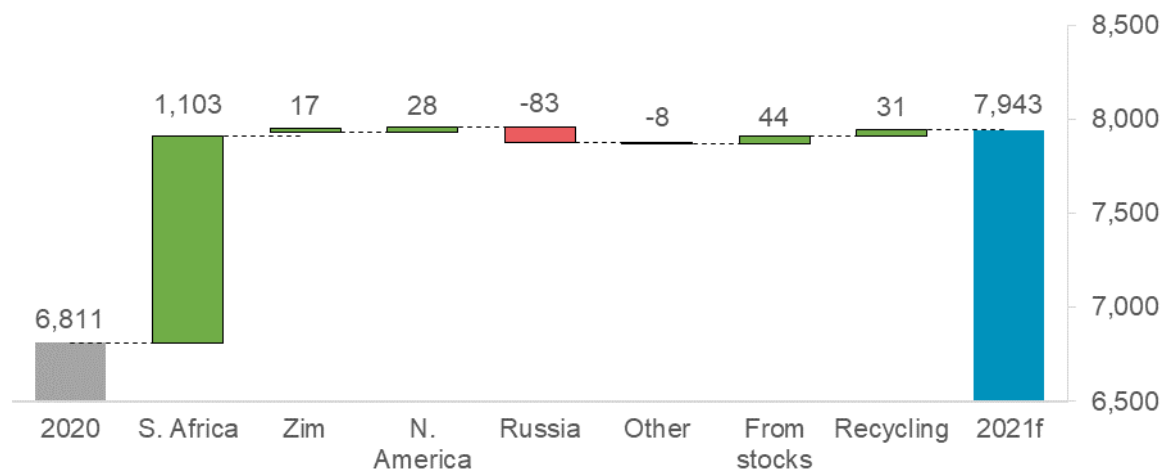
# 2021 FULL YEAR: SUPPLY BOOST FROM BACKLOG BUT STILL BELOW 2019 – MODEST SURPLUS OF 190 KOZ

SUPPLY	2020	2021f	YoY, oz	YoY, %
<b>Refined Production</b>	<b>4,989</b>	<b>6,047</b>	<b>1,058</b>	<b>21%</b>
South Africa	3,298	4,402	1,103	33%
Zimbabwe	448	465	17	4%
North America	337	365	28	8%
Russia	704	621	-83	-12%
Other	202	194	-8	-4%
Inc (-)/Dec (+) in Producer Inventory	-84	-40	44	N/A
<b>Total Mining Supply</b>	<b>4,906</b>	<b>6,007</b>	<b>1,101</b>	<b>22%</b>
<b>Recycling</b>	<b>1,905</b>	<b>1,936</b>	<b>31</b>	<b>2%</b>
Autocatalyst	1,427	1,454	26	2%
Jewellery	422	424	2	1%
Industrial	56	58	2	3%
<b>Total Supply</b>	<b>6,811</b>	<b>7,943</b>	<b>1,132</b>	<b>17%</b>
<b>DEMAND</b>				
Automotive	2,366	2,895	529	22%
Jewellery	1,820	1,889	69	4%
Industrial	1,955	2,448	493	25%
Investment	1,554	521	-1,033	-66%
<b>Total Demand</b>	<b>7,694</b>	<b>7,753</b>	<b>59</b>	<b>1%</b>
<b>Balance</b>	<b>-883</b>	<b>190</b>	<b>-</b>	<b>N/A</b>
<b>Above Ground Stocks</b>	<b>2,667</b>	<b>2,857</b>	<b>190</b>	<b>7%</b>

- Refined production recovers by 21% (+1,058 koz), but still below pre-COVID levels
- Recycling up 2% (+31 koz)
- Automotive demand up 22% (+529 koz)
- Industrial demand up 25% (+493 koz)
- Investment demand down 66% but still above pre-COVID 7-year average
- Market surplus in 2021 of +190 koz

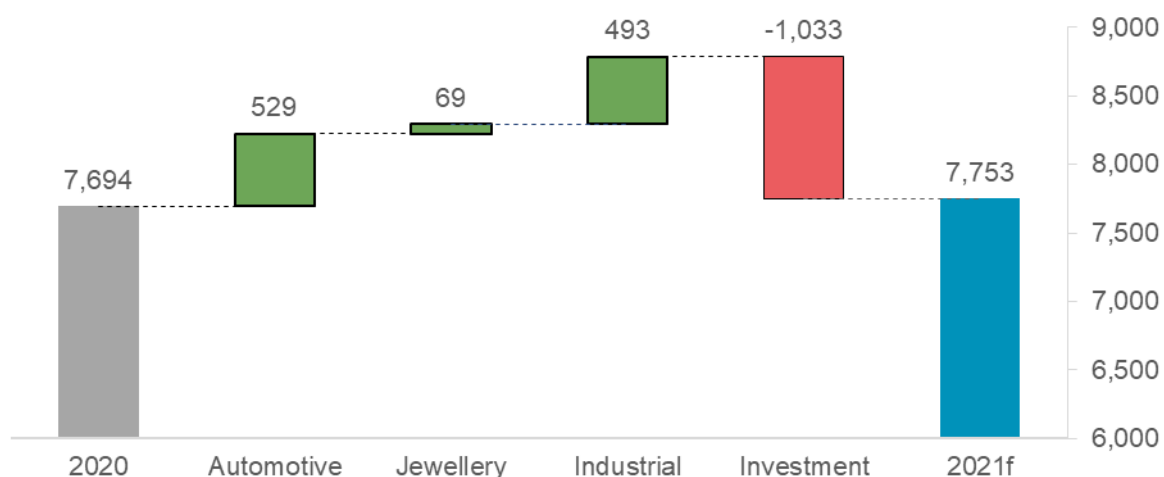
# 2021 FULL YEAR: TOTAL SUPPLY UP 17% (+1,132 KOZ), TOTAL DEMAND UP 1% (+91 KOZ)

## Annual total supply and changes 2020 to 2021f (koz)



- South African mine supply up 33% (+1,103 koz), with no COVID disruptions and ACP performing above expectations
- Recycling supply up 2% (+31 koz)

## Annual total demand and changes 2020 to 2021f (koz)



- Auto demand recovery 22%: LV & HD up, higher loadings and Pt-Pd substitution
- Jewellery recovery 4% and strong industrial up 25%
- Investment down 66% from 2020 record high, but remains solid at 521 koz



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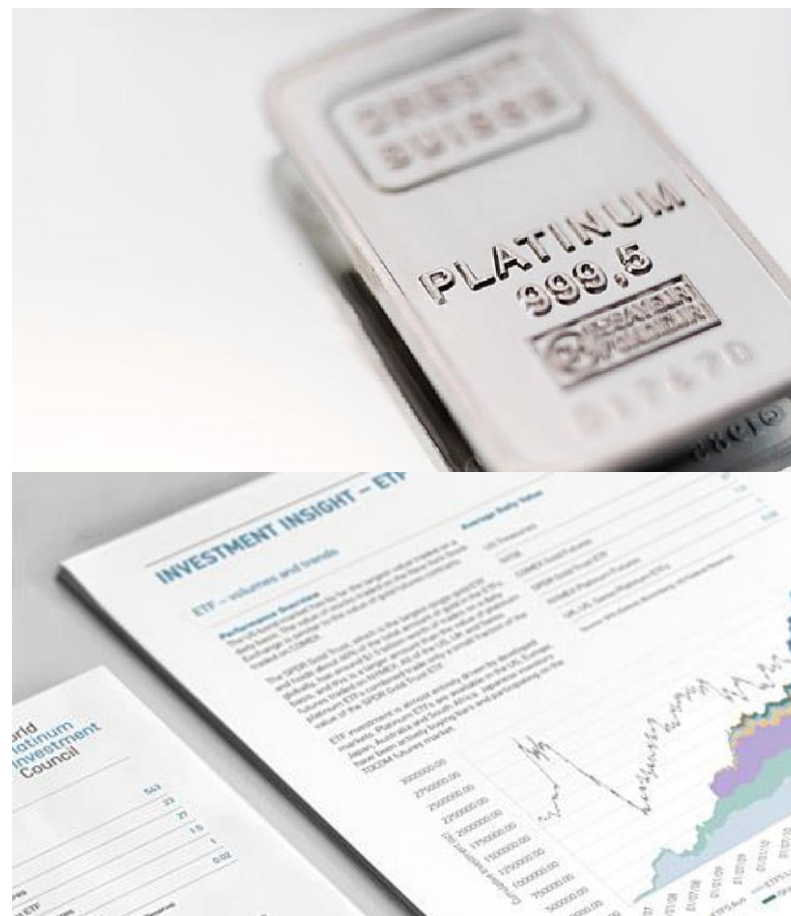
- Market surplus dynamics
- Investor interest and price
- Demand growth drivers

*Trevor Raymond, Director of Research*

## 4. Questions

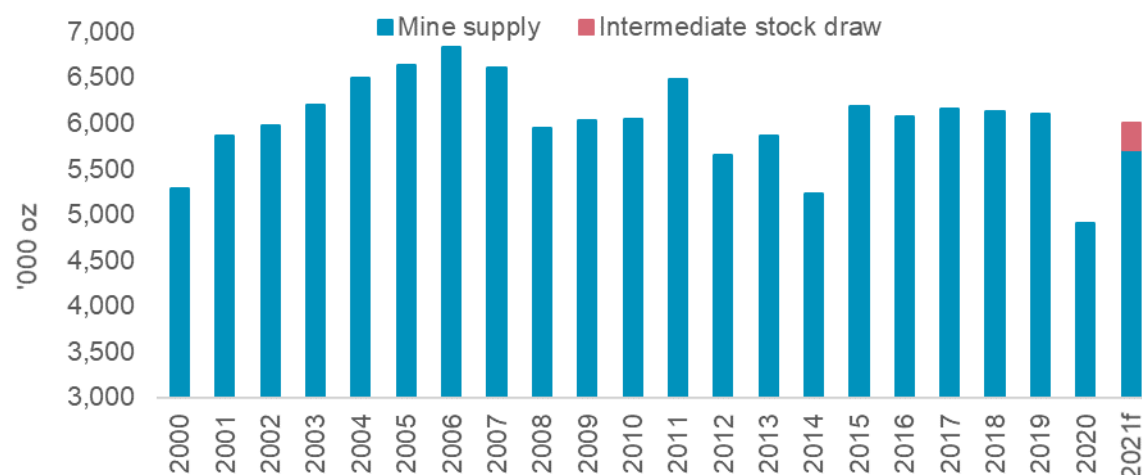
*Paul Wilson*

*Trevor Raymond*



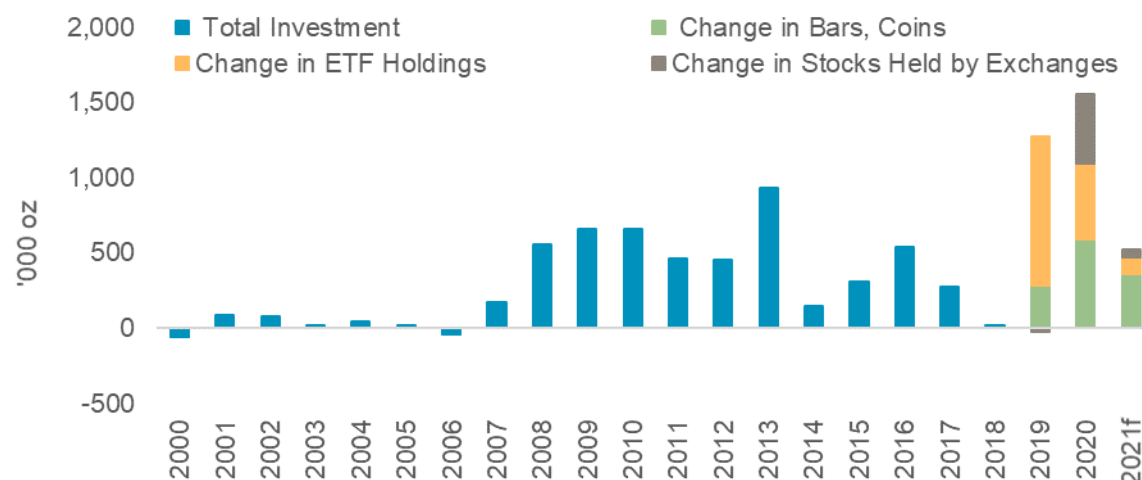
# PLATINUM BALANCE - SUPPLY SURGE TRANSITORY, INVESTMENT DOWN BUT STILL STRONG

## 2021 Mine supply, up but still below pre-pandemic levels



- 2021 supply surge from faster processing of semi-finished backlog
- Mining supply remains below pre-pandemic levels, outlook constrained

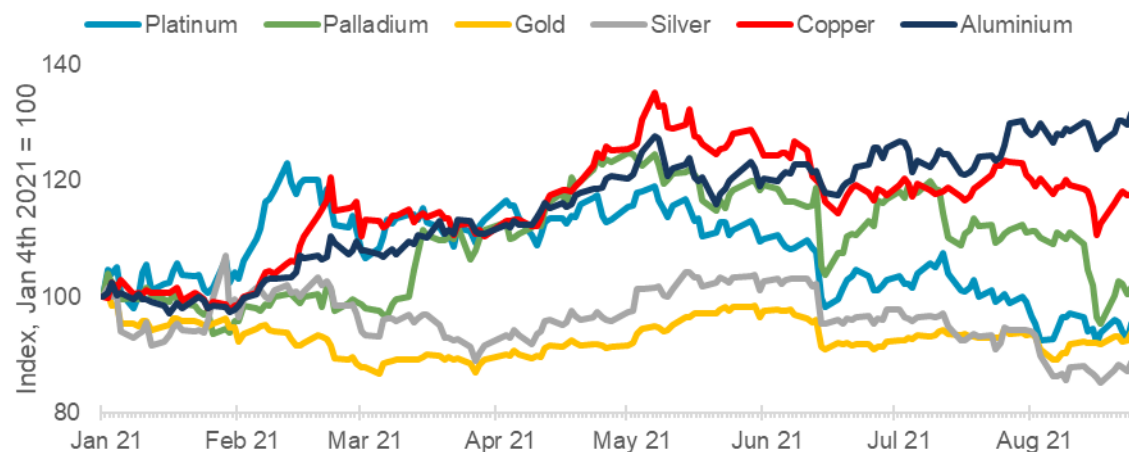
## 2021 Investment demand – lower but still robust



- Lower investment demand – SA rotation to equities on sustained basket price and slow capital expenditure
- 2020 NYMEX inventory growth not repeated accentuating fall in investment demand

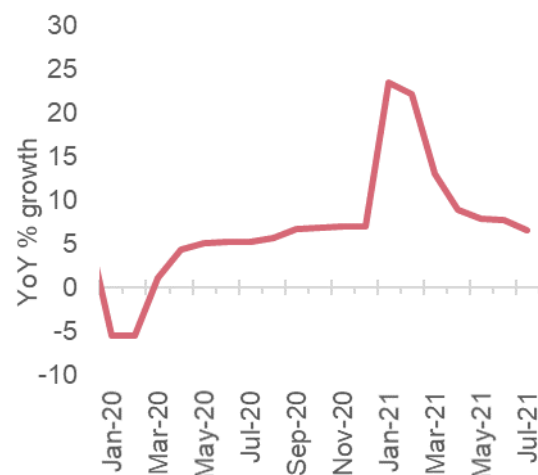
# GROWING MACRO CONCERNS SAW SHARP FALLS IN MOST INDUSTRIAL METALS' PRICES IN AUGUST

## Expected headwinds impacted commodities in July

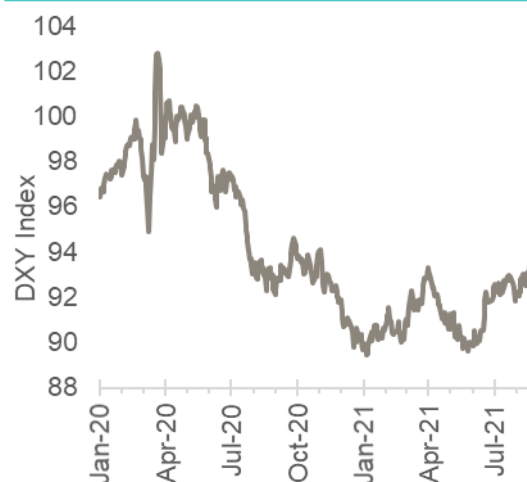


- Macro concerns impacted all metals in August:
  - slower China growth
  - US tapering sooner rather than later
  - stronger USD
- Between 12<sup>th</sup> & 19<sup>th</sup> August, commodities impacted by sharp sell-off:
  - palladium fell 12%,
  - copper down 8%
  - platinum fall limited to 5%

## China GDP - 6.5% in July



## USD stronger from July

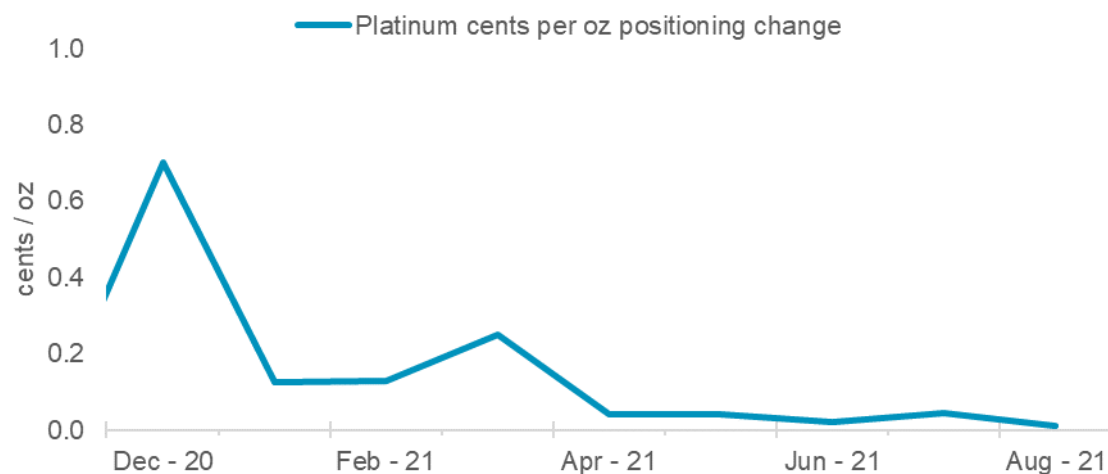


# NYMEX POSITIONING – PLATINUM SHORTEST SINCE 2019, BUT SHORTS HAVING LESS PRICE INFLUENCE

## Money manager Pt positioning, shortest since July-19



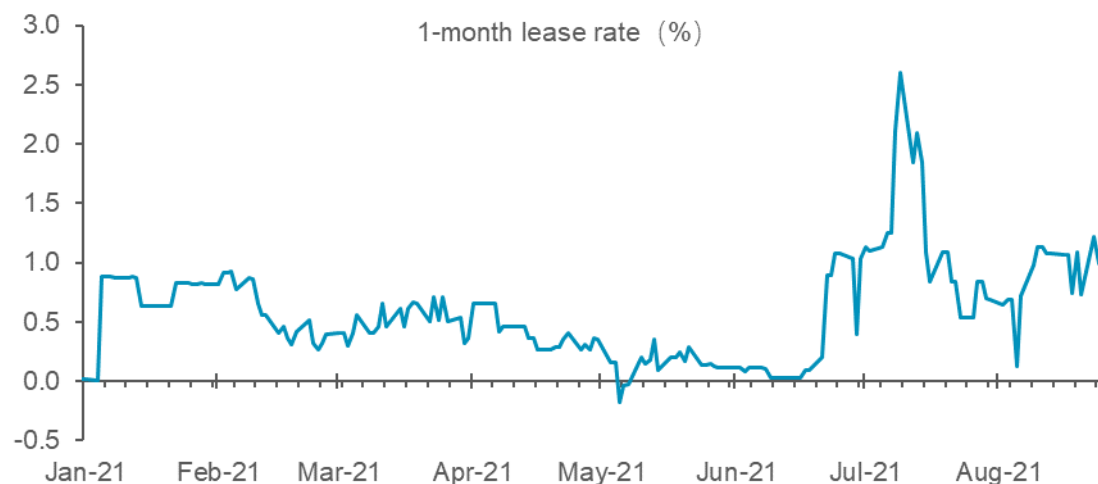
## Change in price per oz change of positioning



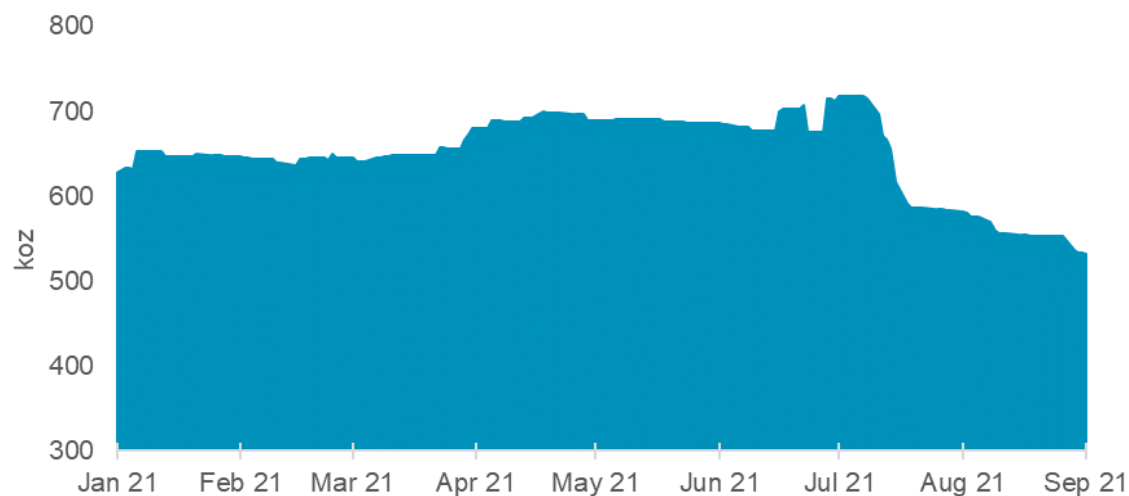
- NYMEX money manager (speculative) positioning net short -444 koz in mid-August, deepest since July 2019
- Much lower price response to changes in money manager positioning:
  - 2019 - 0.8 c/oz
  - Q1'21 - 0.17c/oz
  - Q3'21 (to-date) - 0.03 c/oz
- Lower price response in part explained by higher Chinese buying

# PLATINUM LESS AVAILABLE THAN WIDELY THOUGHT - PT LEASE RATES UP AND NYMEX INVENTORY DRAWS

## Platinum lease rates have surged in 2021



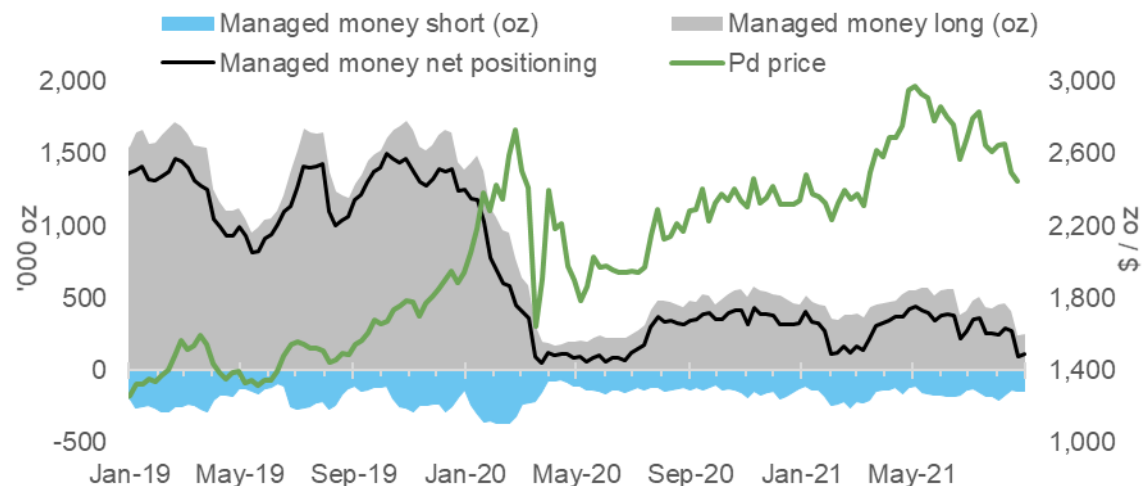
## NYMEX inventory has drawn by 180k since early July



- Platinum 1-month lease rates over 2.5% in mid-July, and are currently at 1.3%
- Levels are significantly above pre-COVID 3-year average of 0.1%
- Significant NYMEX inventory builds in 2020 increased in 2021 on market maker risk
- NYMEX stocks unusually used as source of supply in 2021, >180 koz since early July

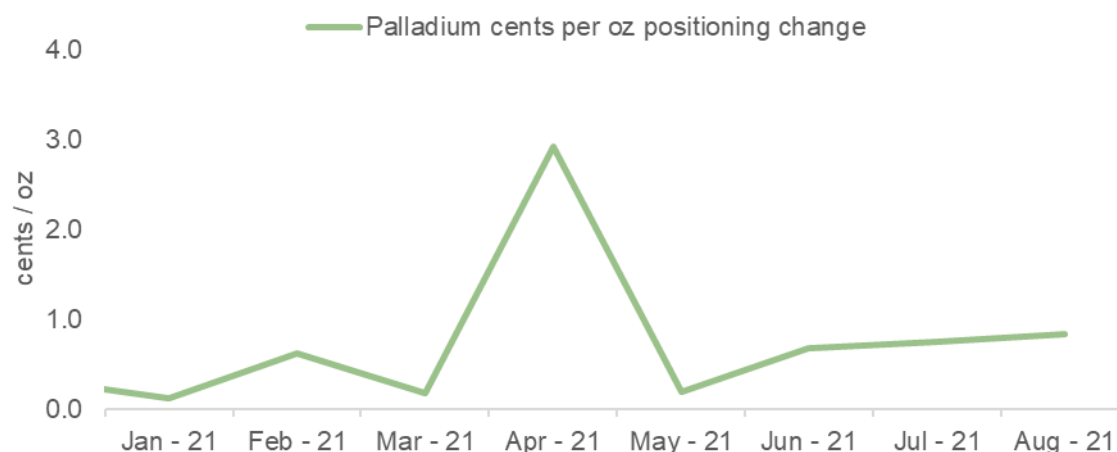
# NYMEX PALLADIUM POSITIONING – INCREASING INFLUENCE ON PRICE IN 2021

## Palladium positioning, still long



- Unlike platinum, money manager positioning has remained long for palladium
- Price responsiveness to money manager positioning growing:
  - Aug'19 - 0.05 c/oz
  - Aug'20 - 0.43 c/oz
  - Aug'21 - 0.84 c/oz

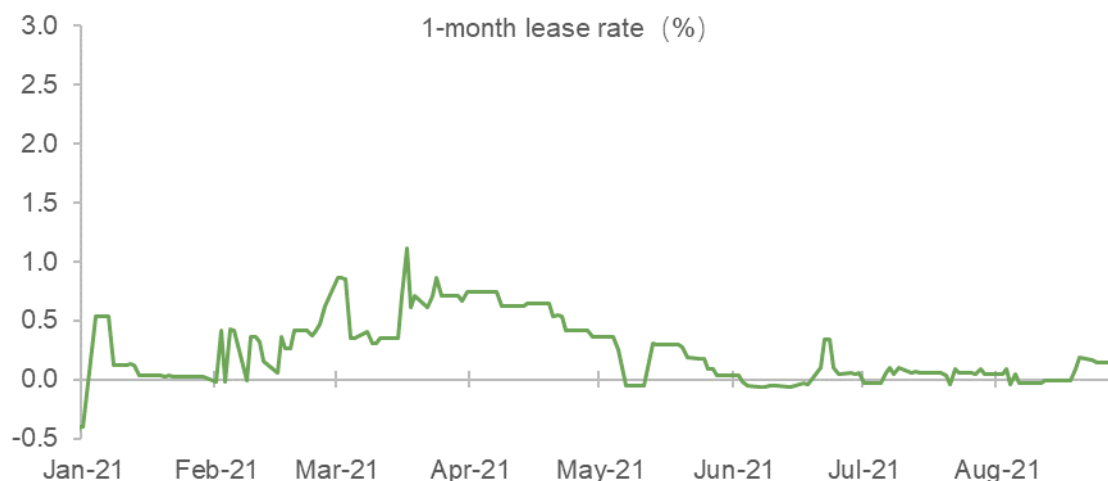
## Change in price per oz change of positioning



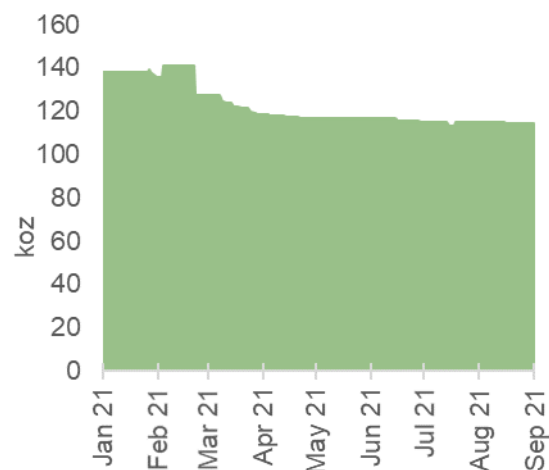


# PALLADIUM LEASE RATES LOW, NYMEX INVENTORY FLAT, LITTLE SIGN OF SHORTAGE

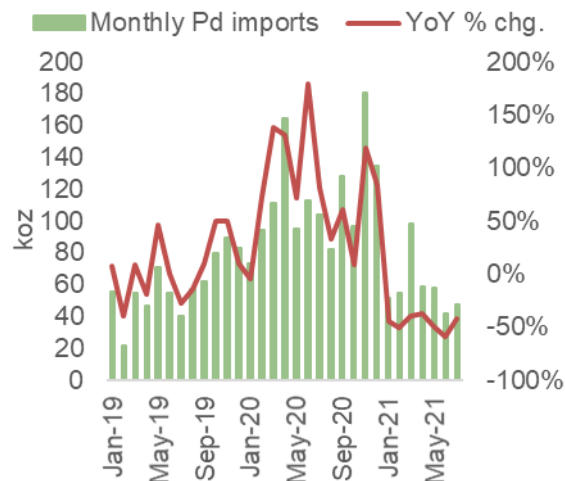
## Pd lease rates remained low in 2021



## NYMEX Pd inventory - flat



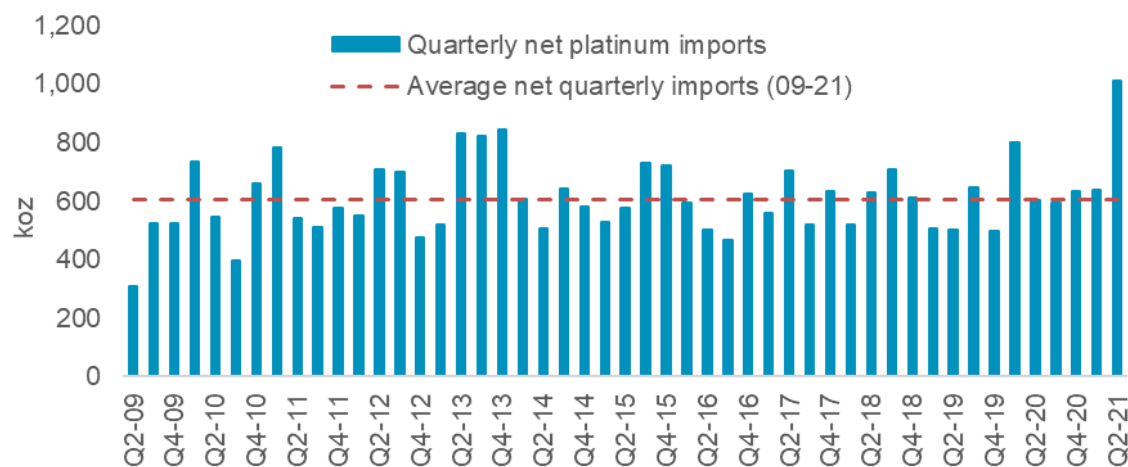
## China imports: - 46% YTD



- Palladium 1-month lease rates are currently 0.14%, significantly below pre-COVID 3-year average of 5.70%
- NYMEX palladium inventory has remained largely flat at c.115 koz since April
- Chinese palladium imports, after surging by 120% in 2020 to 1.4 moz, have fallen by 46% YTD to 410 koz

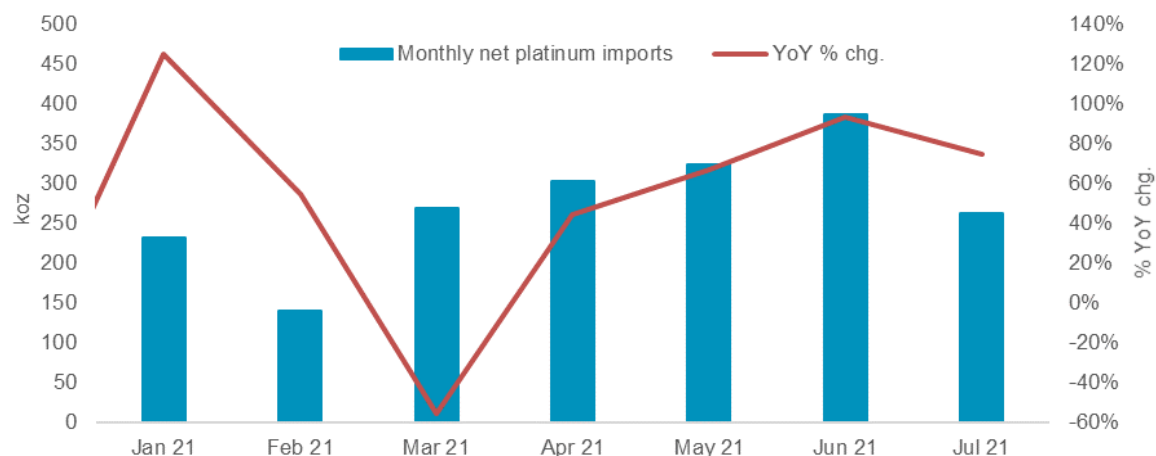
# SURGING CHINESE IMPORTS – NOT INCLUDED IN SUPPLY /DEMAND YET, IS REDUCING METAL AVAILABILITY

## Q2 Chinese net imports a record high of c.1 moz



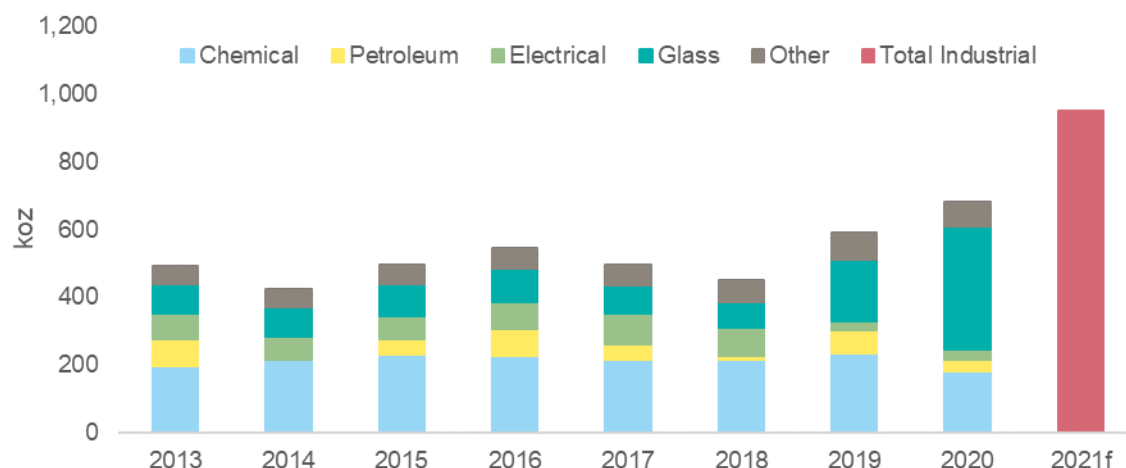
- Chinese platinum net platinum imports up 23% YTD to 1.915 moz
  - Q2'21 highest net import volumes on record at 1.013 moz
- Chinese import demand driven by:
  - strong industrial demand
  - rapid automotive demand growth from rising loadings and substitution

## Jan-July 2021 imports at 1.9 moz, up 23% YoY



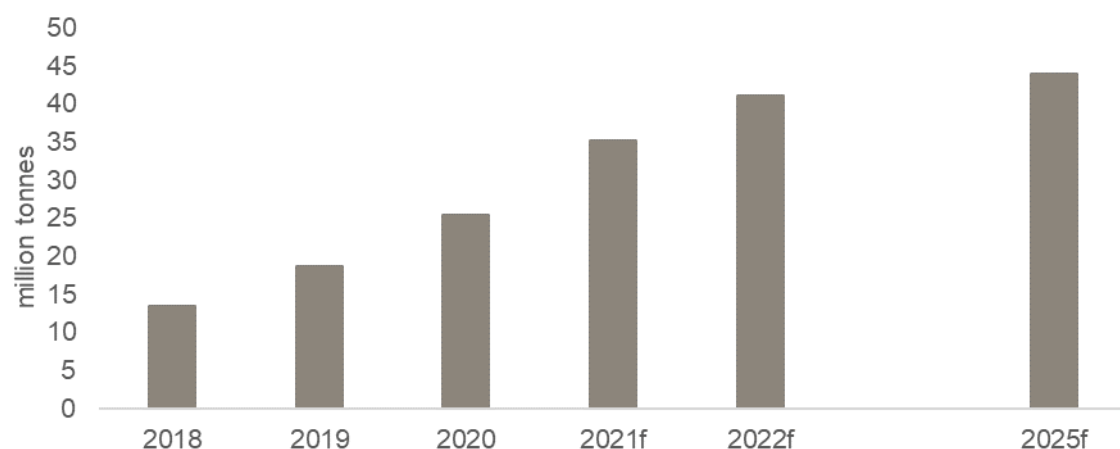
# CHINA INDUSTRIAL CAPACITY GROWTH HAS DRIVEN PLATINUM INDUSTRIAL DEMAND GROWTH

## China industrial platinum demand



- China's platinum industrial demand growth grew by c.50% between 2018 and 2020
- Key driver - capacity additions in:
  - Glass
  - Petroleum refining
  - Chemical manufacturing

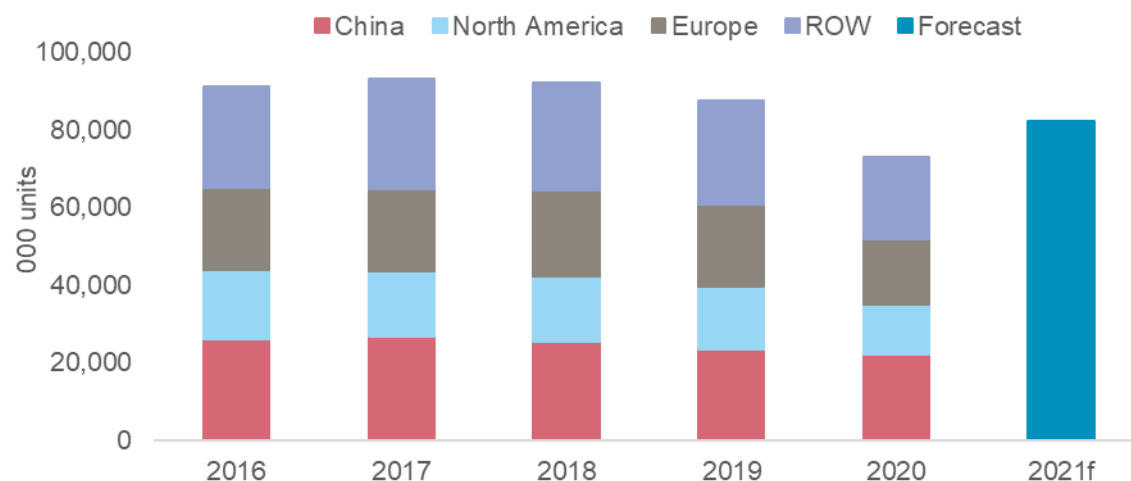
## China paraxylene capacity growth



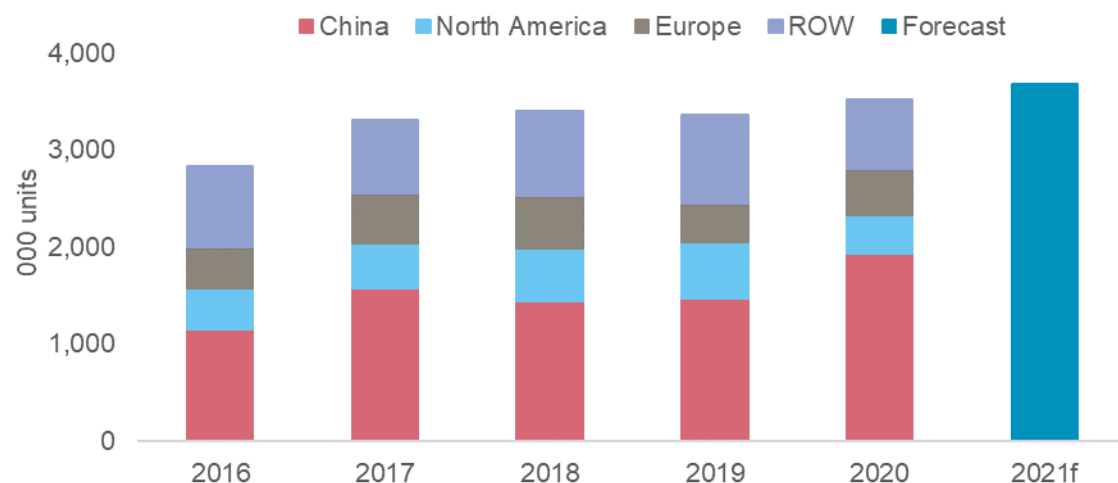
- More capacity additions in these 3 sectors are expected in 2021 and beyond
- China Petroleum & Chemical Industry Federation (CPCIF) forecast Paraxylene capacity will rise to 44 Mt in 2025, up from 13.8 Mt in 2018

# CHIP SHORTAGE - LV PRODUCTION DOWNGRADED BY 3-5 MILLION UNITS; HD LESS IMPACTED

## Light vehicle production expectations



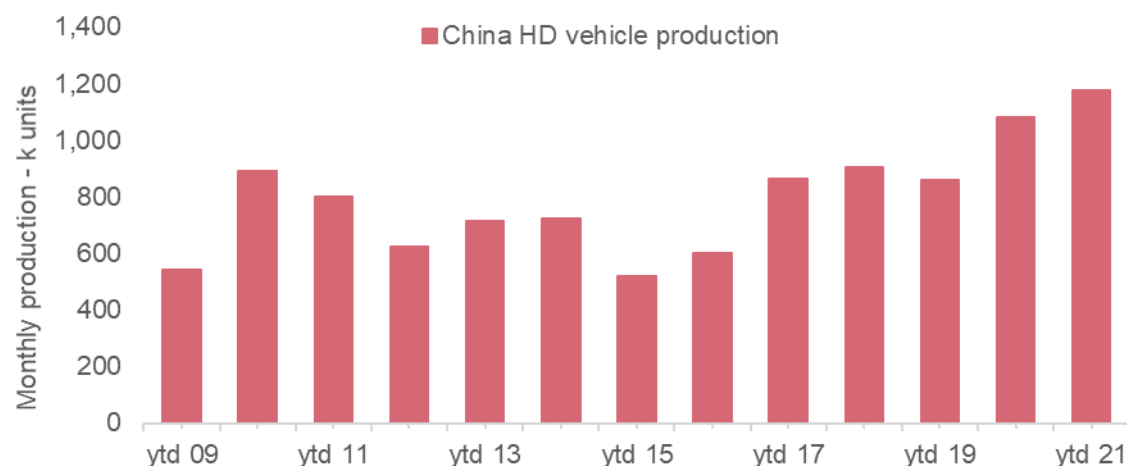
## Heavy duty vehicle production 2021 – continued growth



- Chip impact on auto production – Pt demand concerns overestimated
- Diesel LV and HD production less impacted than gasoline
- HD vehicle production an important driver of Pt automotive demand, but often overlooked
- Rising loadings and Pt for Pd substitution, lift automotive Pt demand above pre-pandemic levels
- HD vehicles loadings c.2-6 times higher than LV loadings
- Consensus points to c.5% HD production growth in 2021

# CHINA HEAVY DUTY VEHICLE PRODUCTION SURGED IN 2020, AND AGAIN IN H1 2021, DRIVING PT DEMAND

## China HD production at record highs in 2021 YTD



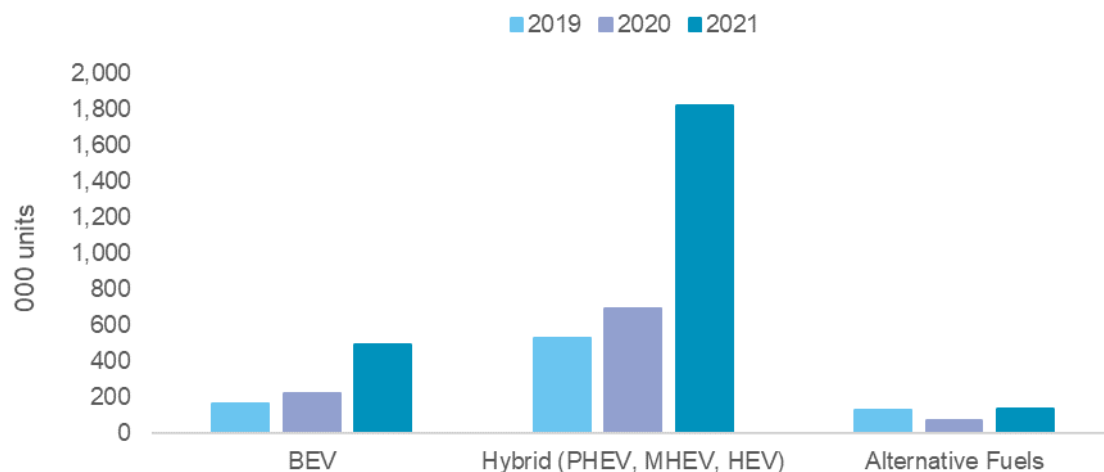
## China VI drives a tripling in HD Pt loadings



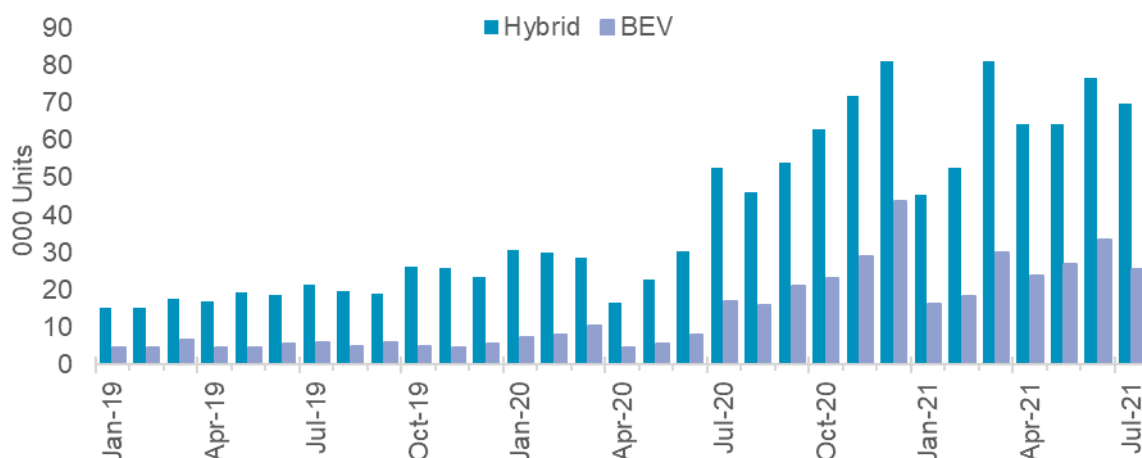
- Jan – Jul 2021, China produced 1.175 million heavy-duty vehicles
- Full year forecasts 1.45 – 1.7 million
- Chinese HD vehicle production strongly correlated with construction/infrastructure spending
- China VI HD nationally applicable from July 2021
- Johnson Matthey expect China VI will triple HD Pt loadings in China in 2021:
  - JM data suggests China VI Pt loadings of c.13g/vehicle, low compared to 25g/vehicle in the US

# HYBRID VEHICLES' IMPORTANCE TO AUTOMAKER FLEET CO2 REDUCTION STRATEGIES GROWING

## EU hybrid sales extended lead over BEVs in H1 2021



## Hybrid sales dominate sales of EVs in Germany



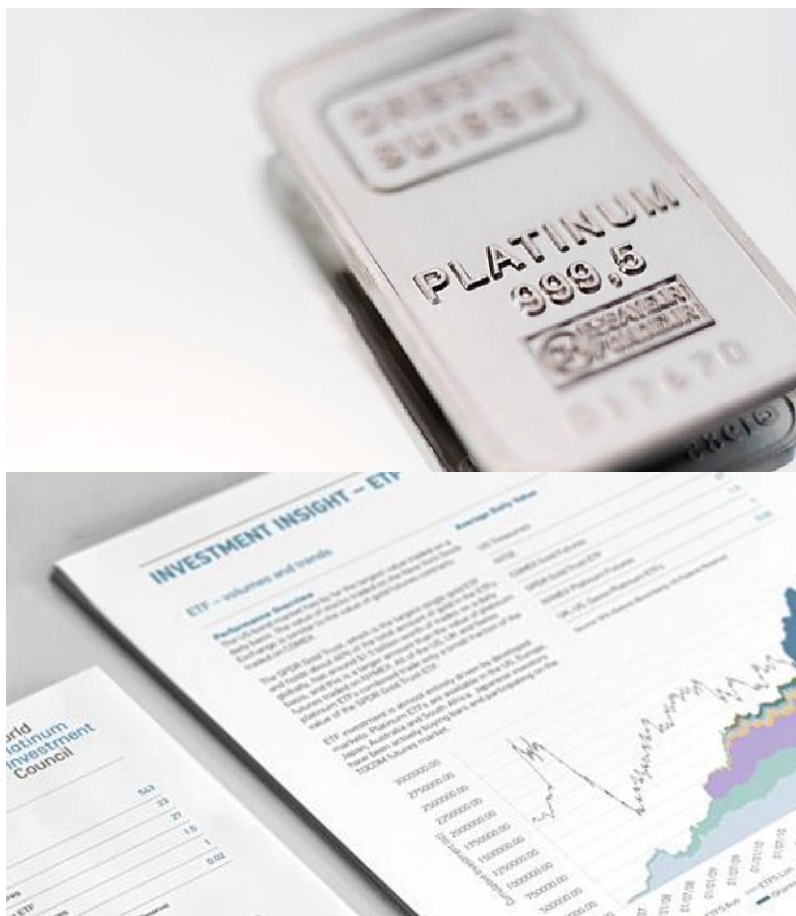
- H1'21 ratio of hybrid to battery electric sales accelerated to 4:1 from 3:1 in H1'20
- BEV uptake rate limited despite large purchase subsidies due to:
  - slow investment in clean electricity generation
  - lack of investment in slow and fast charging infrastructure
- Hybrids crucial to achieving lower OEM fleet CO<sub>2</sub> emissions
- Growing hybrid market share will support growth in automotive PGM demand, including platinum



# HYDROGEN POLICY PROLIFERATION IN 2020/2021 IS DRIVING LONG-TERM PLATINUM DEMAND CERTAINTY

<b>Europe Hydrogen policy and 2030 targets</b>	<ul style="list-style-type: none"><li>• 40GW electrolyzers, 750 hydrogen refueling stations (HRS), 3.7 millions FCEVs</li><li>• July'21 Renewable Directive (REDIII) increased renewable energy share to 40%</li></ul>
<b>USA Hydrogen policy and 2030 targets</b>	<ul style="list-style-type: none"><li>• Hydrogen Plan announced by the Department of Energy (DOE) in November 2020</li><li>• California targeting 200 HRS, 1 million FCEVs by 2025, 1,000 HRS by 2030</li><li>• 11 USA states and 2 Canadian provinces form “Western Green Hydrogen project initiative” to develop green hydrogen projects</li><li>• DOE targets 80% cut in hydrogen costs by 2030</li></ul>
<b>China Hydrogen policy and 2030 targets</b>	<ul style="list-style-type: none"><li>• National Chinese plan updated in 2021, target 1 million FCEVs by 2030, 100 HRS by 2025 and 1,000 HRS by 2030</li><li>• Hydrogen was included in the April 2020 Energy Act</li><li>• As of August 2021, fuel cell related patent applications in China have reached 59,362</li></ul>

# WHY INVEST IN PLATINUM? – CONSTRAINED SUPPLY, HIGHER: LOADINGS, SUBSTITUTION AND INVESTMENT



- 2021 supply surge transitory on semi-finished backlog processing, supply outlook remains constrained
- Platinum price volatility in 2021 on macro-economic concerns, overdone chip shortage concerns but with underpin from increased automotive/industrial spot buying in China
- Significant near-term annual demand growth from higher HD/LV loadings and substitution for palladium
- Growing hydrogen economy policy certainty and investor awareness of platinum's strategic role – driving investment demand

# AGENDA: PLATINUM QUARTERLY – Q2 2021 AND 2021 FORECAST

## 1. Introduction

*Paul Wilson*

## 2. Platinum Quarterly, fundamentals review

*Trevor Raymond*

## 3. Focus on fundamental drivers

*Trevor Raymond*

## 4. Questions

*Paul Wilson, CEO*

*Trevor Raymond, Director of Research*

