



NORNICKEL



Investor Presentation
April, 2020

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Response to Coronavirus: Safeguarding Employees – Top Priority



- An emergency response team (ERT) has been established** chaired by the First Vice-President, Corporate Security, and comprised of the other senior management
- The ERT main task is to coordinate pre-emptive actions and support the sustainability of operations and logistics



- All employees not immediately involved in production processes are working from home.**
All operations are carried out as business as usual

- All employees working remotely maintain 100% of their salaries
- Employees, who have to work on sites/in the office are being paid extra
- Free corporate service taxi rides provided to the head office employees who have to come to the office



Employees' health monitored on a regular basis

- Hand sanitizers and thermal scanners to measure employees' temperature remotely have been installed at all corporate premises
- Express medical examination of employees have been launched



Introduction of personal health safeguards

- Mandatory isolation/self-quarantine of employees who arrive from countries with widespread coronavirus
- Ban on all international business trips and business travel within Russia
- All public or group events have been cancelled or rescheduled to a remote communication format where possible



A 24/7 hot line for employees has been launched to answer the questions related to Covid-19

- A special section on the corporate internet portal has been launched with regular updates on coronavirus, new initiatives as well as information on hotlines and various instructions

Response to Coronavirus: Supporting Local Communities

Norilsk Nickel has pledged RUB 10.5 billion (circa \$140 m) to combat coronavirus (COVID-19) and help maintaining social stability in the regions of its operations:

- ✓ In April 2020, RUB 3 billion already budgeted towards purchases of medical equipment, personal protective gear and upgrade of local healthcare infrastructure
- **Purchasing medical supplies, including ventilators and both express and laboratory testing equipment**, to meet the needs of the local healthcare facilities
 - ✓ Two stationary laboratories and five mobile laboratories to test for the coronavirus infection are scheduled for a rollout in the Norilsk industrial region and on the Kola Peninsula
- **Supporting an increase of local hospitals' capacity:**
 - ✓ In Norilsk, the number of beds in the city's hospital infectious disease ward has more than doubled from 45 to 100, with a contingency plan developed for the worst case scenario to quickly increase this number to 1,000
 - ✓ On the Kola Peninsula, 120 beds have been set aside at the Company's corporate clinic for observation
 - ✓ In Monchegorsk, 40 additional adult and 20 children's hospital beds have been set up for treating the infection, with another 30 additional hospital beds and 20 beds for observation prepared in the Pechenga district
- **Supporting small and medium enterprises: rent holidays have been granted to more than 100 small businesses** that are tenants of the Company's properties in Norilsk, with similar benefits offered to the Company's local SME partners on the Kola Peninsula
- **Volunteer teams have been formed in all of the Company's cities of operation** to help deliver food, medicines, and other essential supplies to those who are in need

Coronavirus: Business Impact Assessment – Operations

Impact on Operations:

- Business continuity plans developed, emergency response team monitors situation daily
- So far, practically no impact on the operations, sales or procurement
 - ✓ No material disruption to sales with the exemption of minor cancelation/postponement of deliveries (Ni, Pd)
 - ✓ No disruptions in supplies and logistics (almost 90% of materials and supplies are sourced locally)
 - ✓ No material issues with sourcing critical equipment parts from imports for the repairment and maintenance
- High level of upstream and downstream integration: the largest operating division, Polar Division, is fully self-sufficient in gas, power generation, sea and river transportation
 - ✓ Almost all of the production personnel resides permanently in the regions of operations
- Production targets for 2020 are reiterated at pre-epidemic levels
 - ✓ Nickel: 225-235 kt
 - ✓ Copper: excluding Chita, 420-440 kt + Chita 55-65 kt
 - ✓ Palladium: 2,648 – 2,777 koz
 - ✓ Platinum: 611 – 675 koz
- Potential downside risk to 2020 sales volumes: risk of increase of working capital inventories
 - ✓ So far, the downside risk to sales is seen as minimal subject to global commodity markets following a “V-shape” recovery path
 - ✓ Major uncertainty in global commodity markets to occur if the “V-shape” recovery expectations do not prove right

Coronavirus: Impact Assessment – Investments and Finance

Impact on Investments:

- Downside risk to capex guidance for 2020 of USD2.2-2.5bn due to the following:
 - ✓ RUB depreciation
 - ✓ Potential delays in equipment deliveries due to the extension of lead times in the equipment production
 - ✓ Potential delays in the mobilization of construction personnel due to the nationwide travel/quarantine restrictions

Impact on Finance:

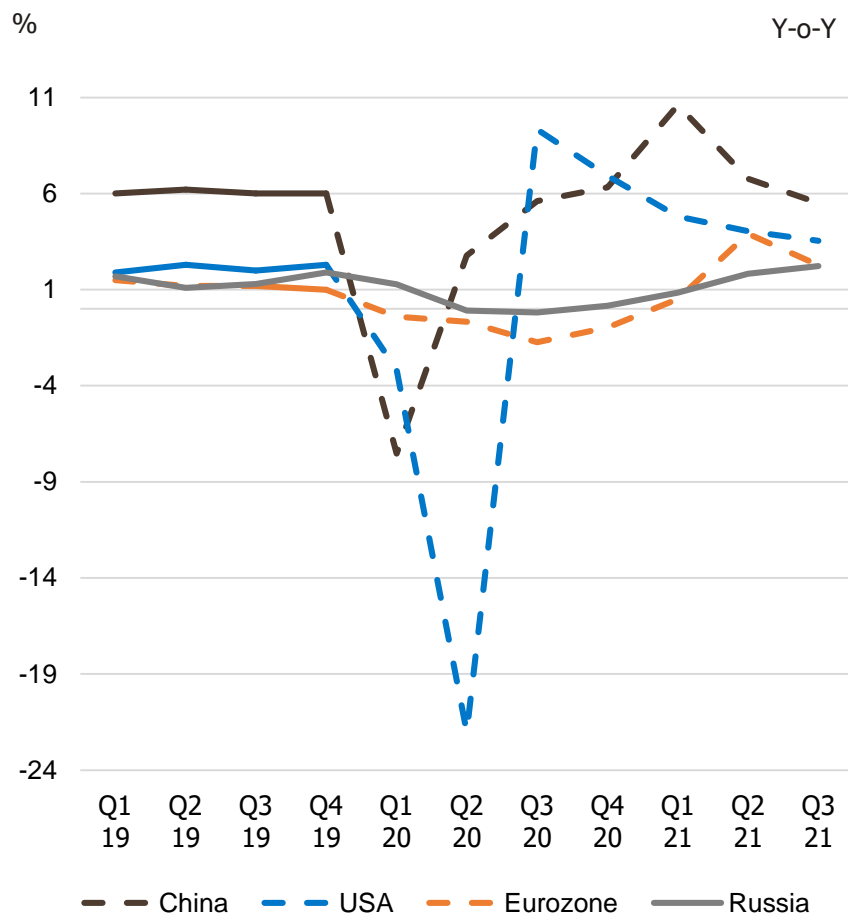
- **FX sensitivity:** circa 85-90% of cash operating costs and capex are in RUB
- **Strong liquidity position:** enough to cover debt and other obligations for 2020-2021 assuming spot commodity prices and FX
- **Strong standing with debt providers reconfirmed recently:** USD1.6bn of new money successfully tapped from the consortium of international banks and another USD2.5bn refinanced
- **One-off operating cost⁽¹⁾ charges expected to comprise the following:**
 - ✓ Employees' additional compensation for not working remotely/from home (on top of salaries)
 - ✓ Charity expenses towards social support and support of regional healthcare
 - ✓ Negative carry interest cost due to the drawdown of committed credit facilities
- **Risks of working capital increase by YE2020 due to the following:**
 - ✓ Potential build up inventory subject to weaker-than-expected recovery of commodity markets
 - ✓ Reduction of liabilities factoring and cash advances from customers due to the potential deterioration of credit quality of some of the counterparts

Note: 1. Operating costs include cash costs (change in stock excluded), cost of non-metal sales and SG&A, normalized by cost of refined metals for resale

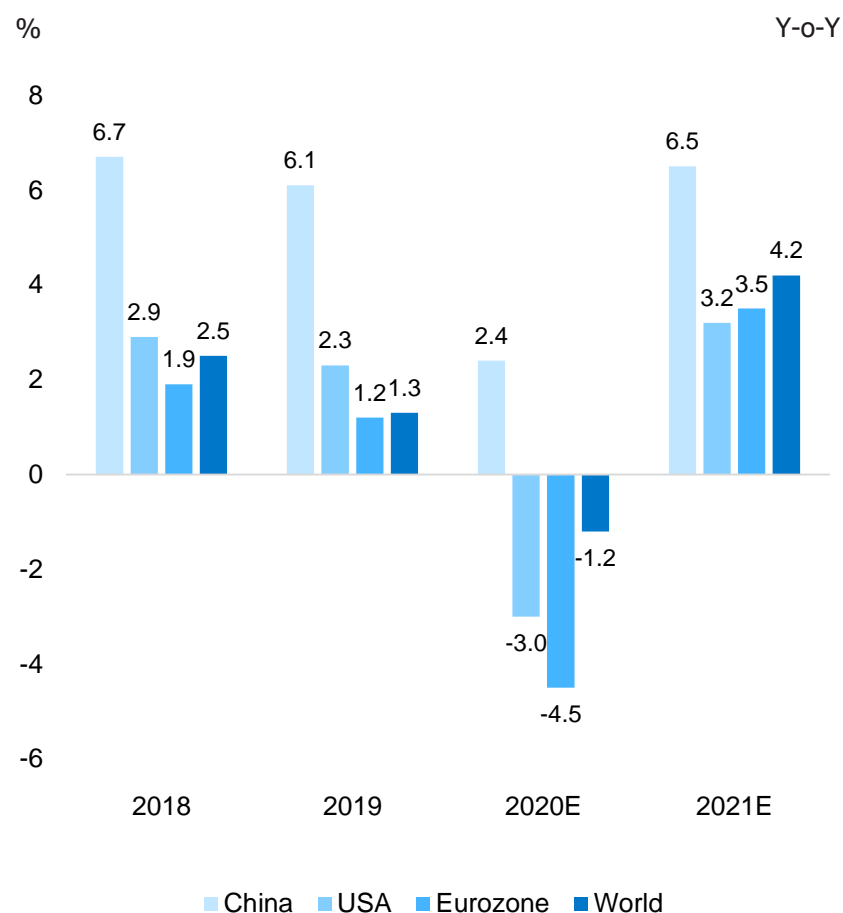
Markets Update

Global GDP Outlook: Consensus Forecasts a “V-shape” Recovery

Quarterly GDP Growth ⁽¹⁾: Most Severe Impact on China – 1Q, US and Europe – 2Q, Recovery – 2H



Annual GDP Growth Outlook ⁽²⁾: Strong Rebound Expected in 2021 to Above Pre-virus Growth Rates

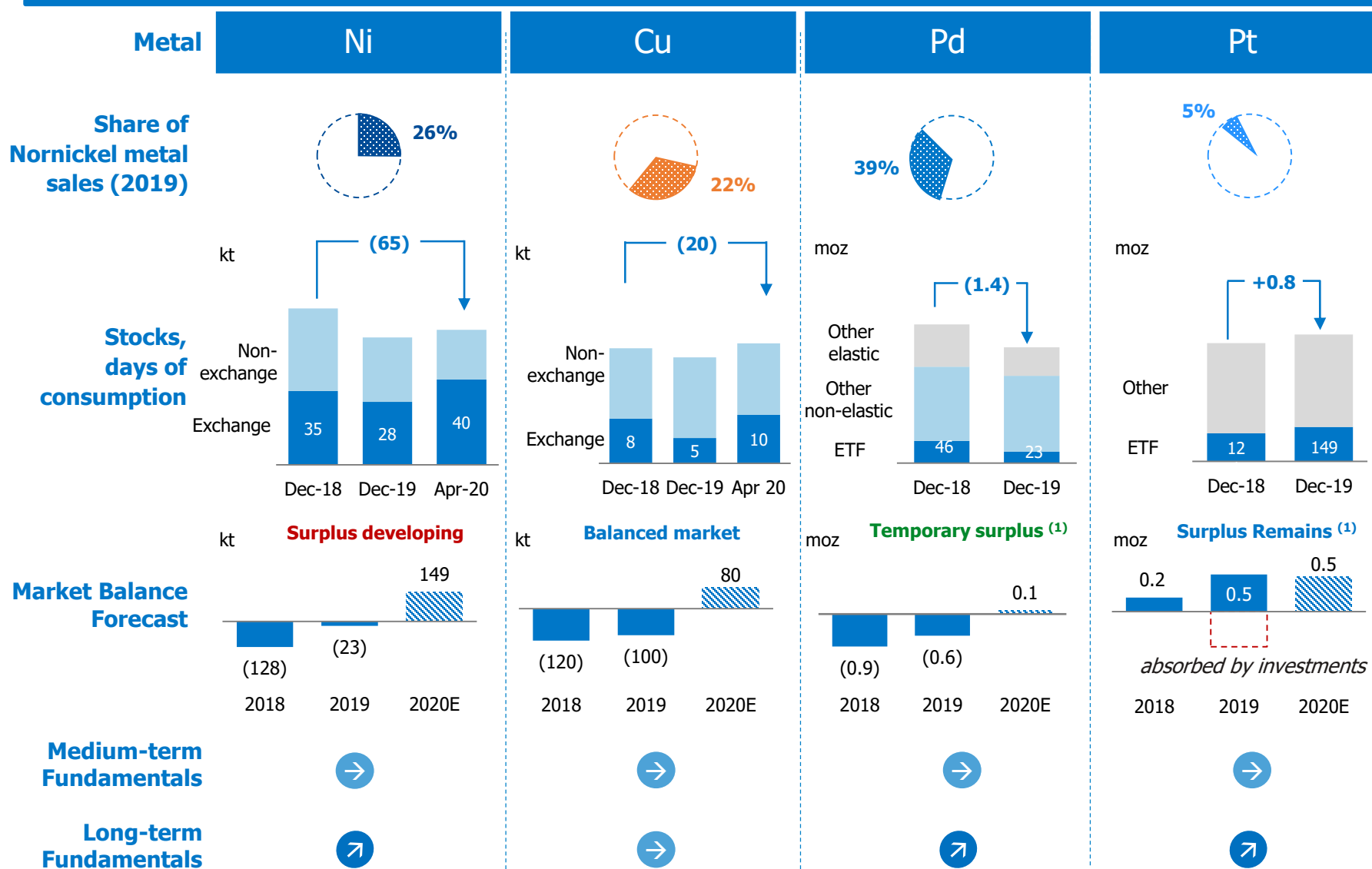


Source: Bloomberg, Reuters

Note: 1. Based on latest Bloomberg consensus forecast

2. Based on latest Reuters consensus forecast

Markets Outlook for 2020E: Major Uncertainty Emerged on the Supply and Demand Side as the World Responds to Coronavirus



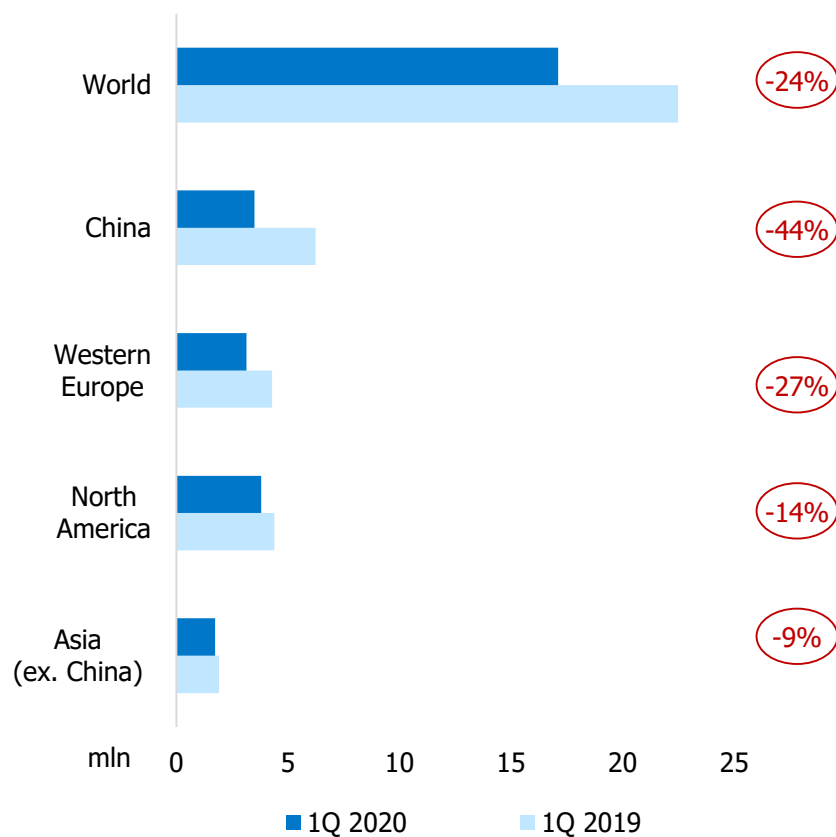
Source: Company estimates

Notes: 1. Excluding ETF and investment demand in 2020

Global Auto Sales: Sharp Decline in 1Q, Recovery in 2H and 2021

Global Automotive Sales ⁽¹⁾ Decreased by 24% in 1Q

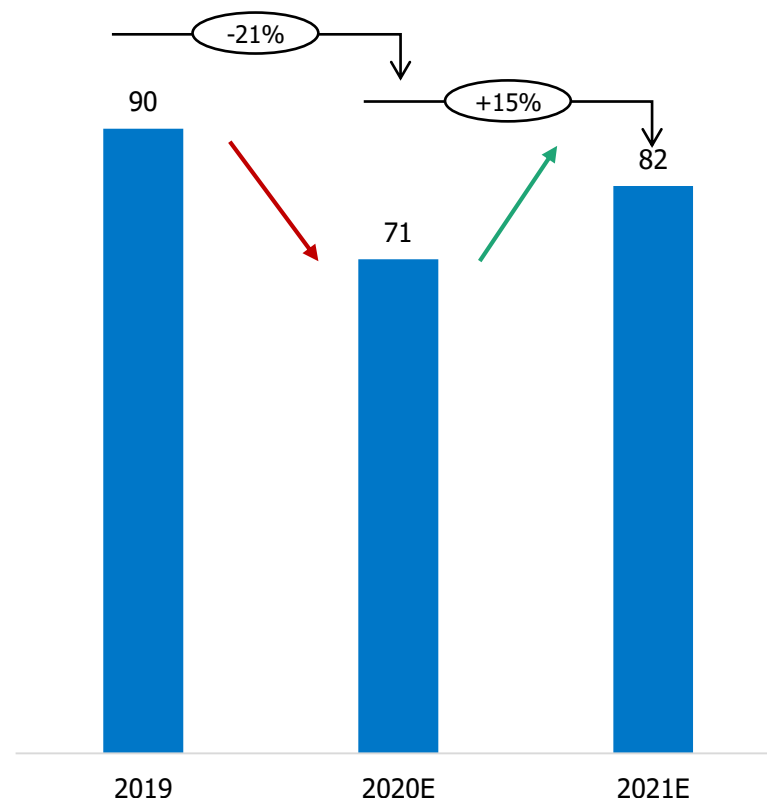
Y-o-Y, %



Base Case Scenario: Global Light Vehicle Sales to Rebound Strongly in 2H2020 and 2021

mln units

LMCA base case scenario



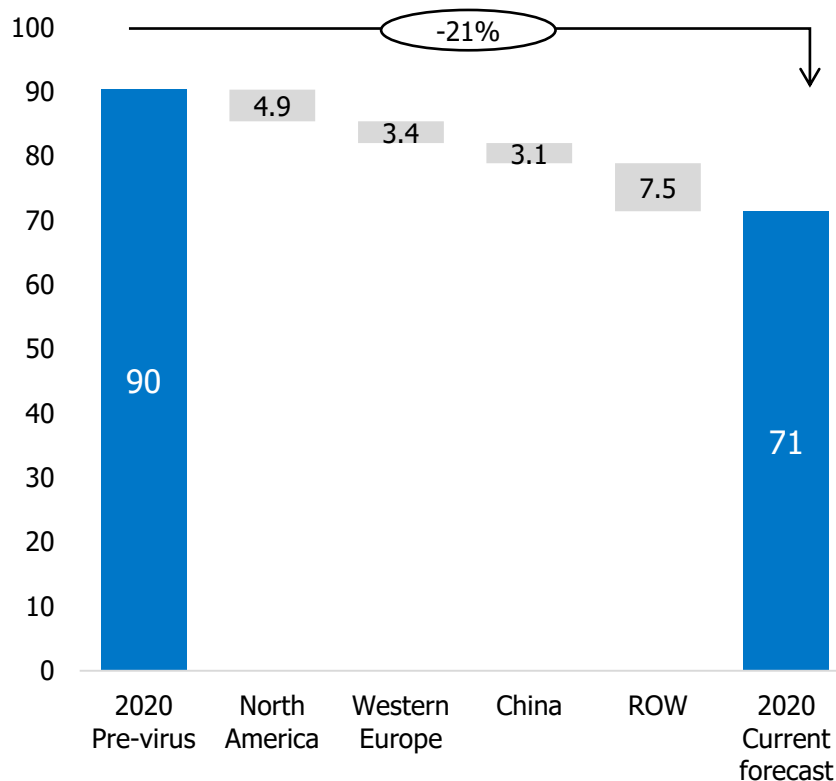
Source: LMCA, IHS, Marklines

Note: 1. Light-duty vehicles (up to 6 tonnes), North America – USA and Canada, Asia including Japan and Korea

Revision of Global Light Vehicles Forecast: 21% Cut, Still Some Positive Offset on Demand from Higher Loadings

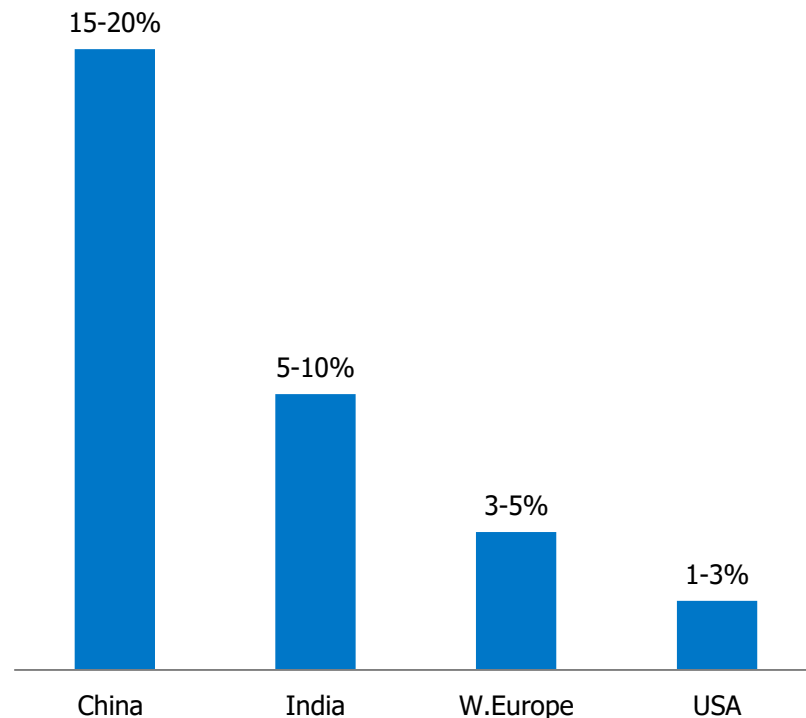
2020E Global Light Vehicles Sales: Base Case Scenario -21% Reduction vs Pre-virus Forecast

mln units



Pd Loadings Continue Rising due to Stricter Emission Regulations and Introduction of RDE

Average PGM loadings per vehicle, change in 2019

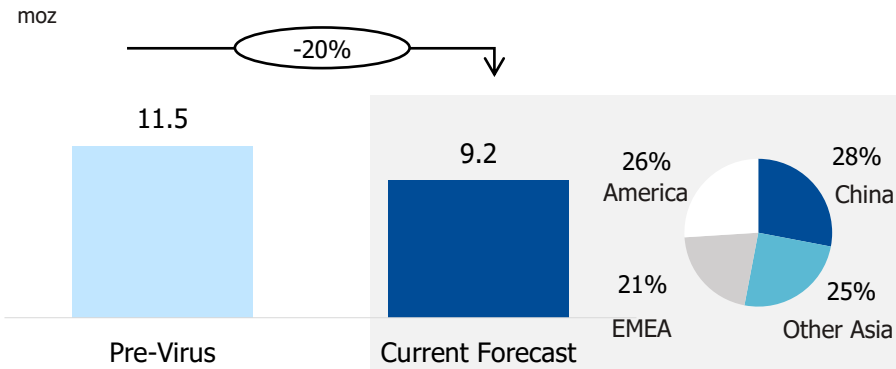


Downside risk to 2020 outlook:

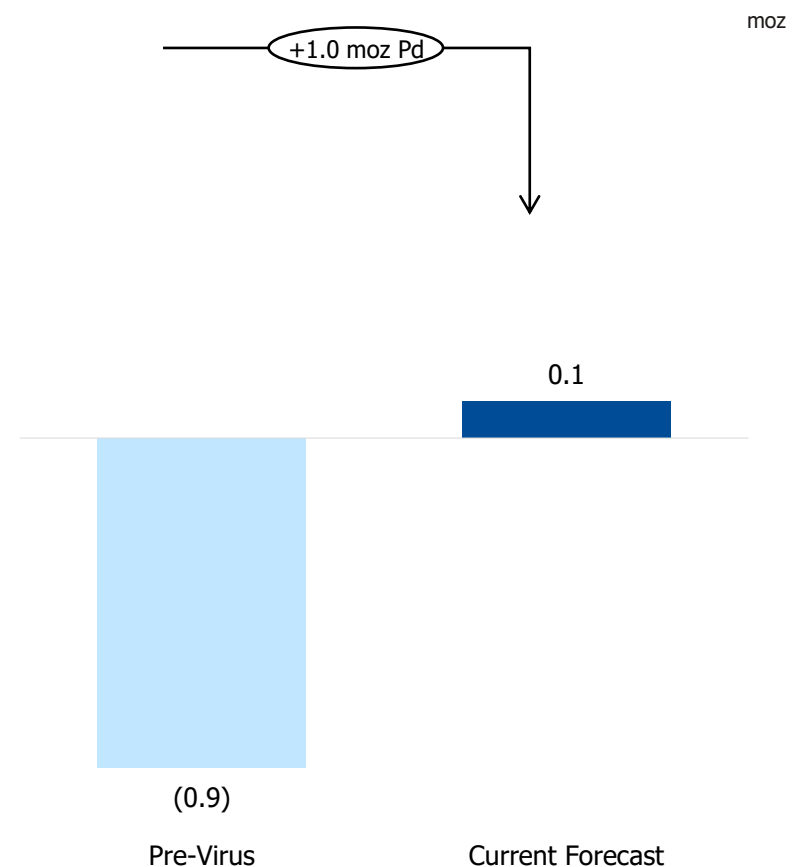
- Extended Covid-2019 impact scenario: a 34% reduction of light vehicle sales to 60m units (vs pre-virus estimates)

Palladium Market: Reduction of Demand to Be Partially Offset by Supply Disruptions in South Africa

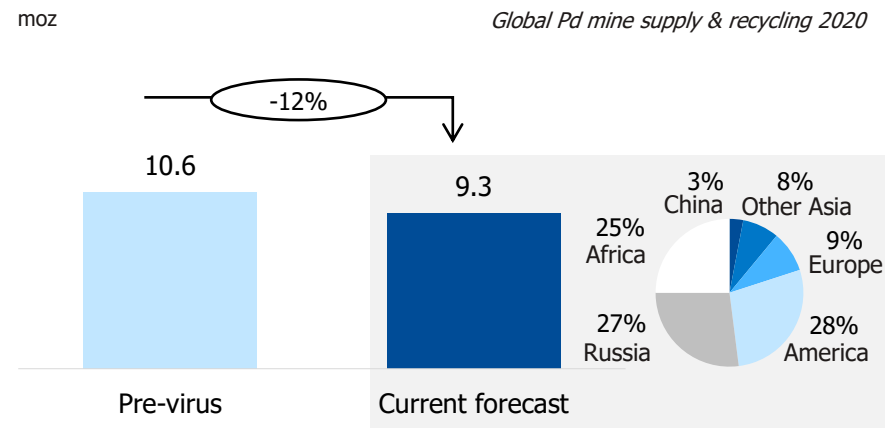
Reducing 2020E Palladium Consumption Forecast on Weaker Global Car Sales: -20% vs. +1% Pre-Virus



Market Balance ⁽¹⁾ 2020E Forecast: Small Surplus is Temporary



Reducing 2020E Refined Supply Forecast on Amplats' Force Majeure, Nationwide Lockdown in South Africa and Electricity Problems at ESKOM



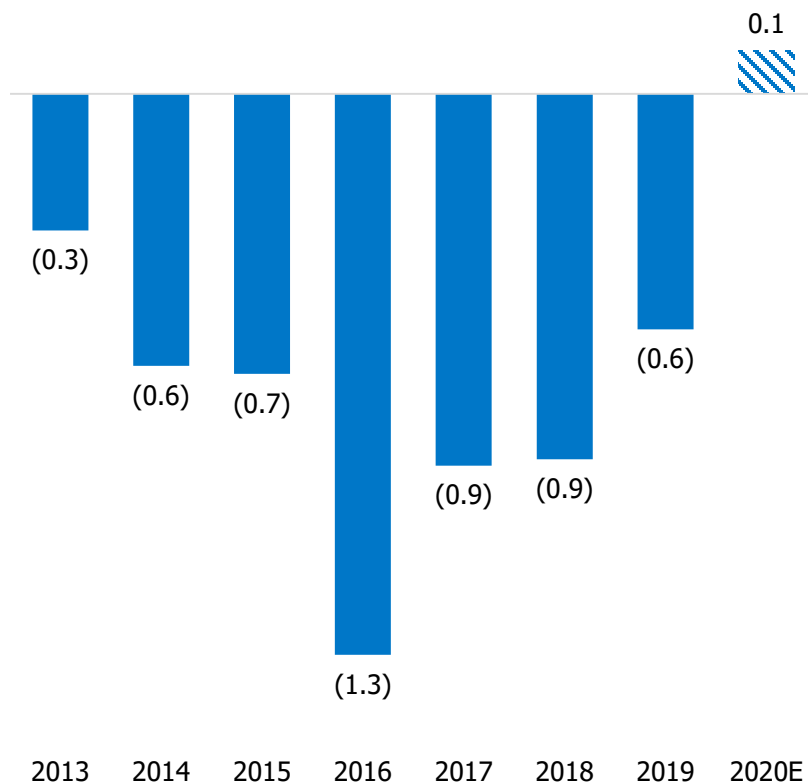
Source: Company's estimates

Note: 1. Excluding ETF and investment demand in 2020

Palladium Market – Surplus is Temporary, Deficits to Return Once Demand Starts Recovering

Global Palladium Market Balance: Structural Deficit Has Evaporated on Sharp Contraction of Demand ⁽¹⁾

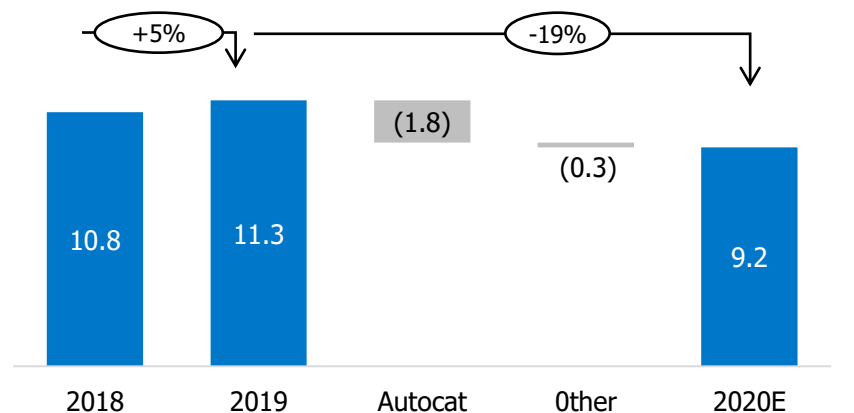
moz



2020E Demand Outlook: 19% Reduction on Weak Autocatalyst Demand

moz

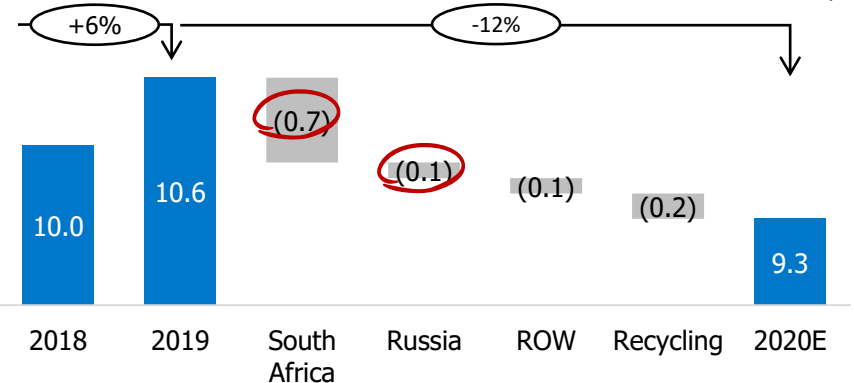
Y-o-Y, %



Supply Outlook: Lower South African Production due to Nationwide Lockdowns

moz

Y-o-Y, %

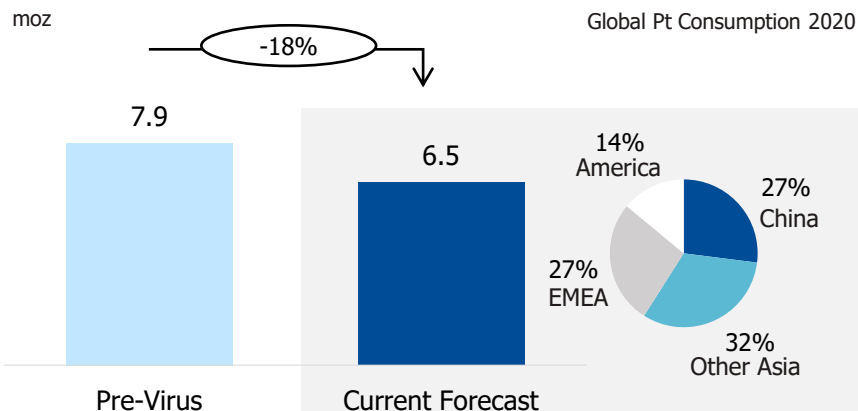


Source: Company data

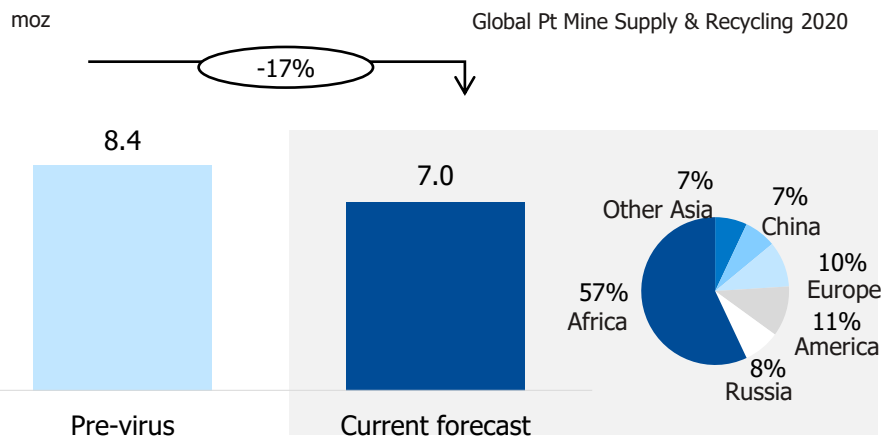
Note: 1. Excluding ETF and investment demand in 2020

Platinum Market: Apparent Surplus Expanding

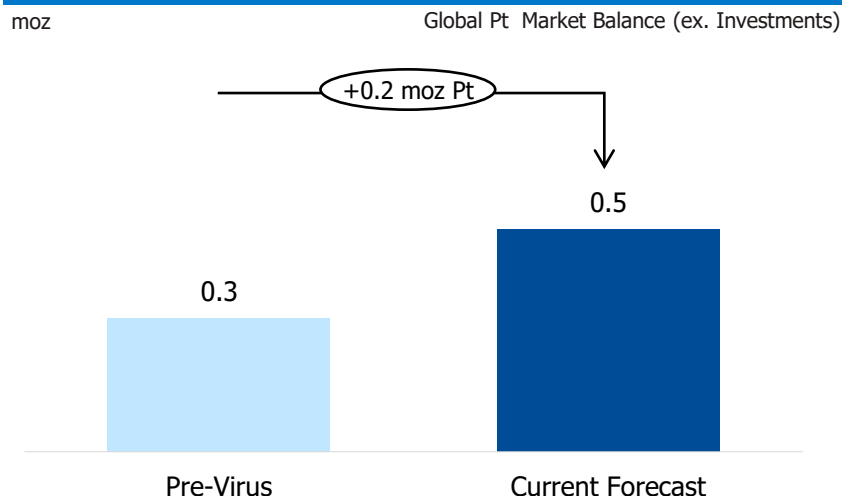
Reducing 2020E Platinum Consumption Forecast on Weaker Global Car Sales and Chinese Jewelry



Reducing 2020E Refined Supply Forecast on Amplats' Force Majeure, SA Lockdown and Electricity Problems at ESKOM



Market Balance: Market Remains in Surplus

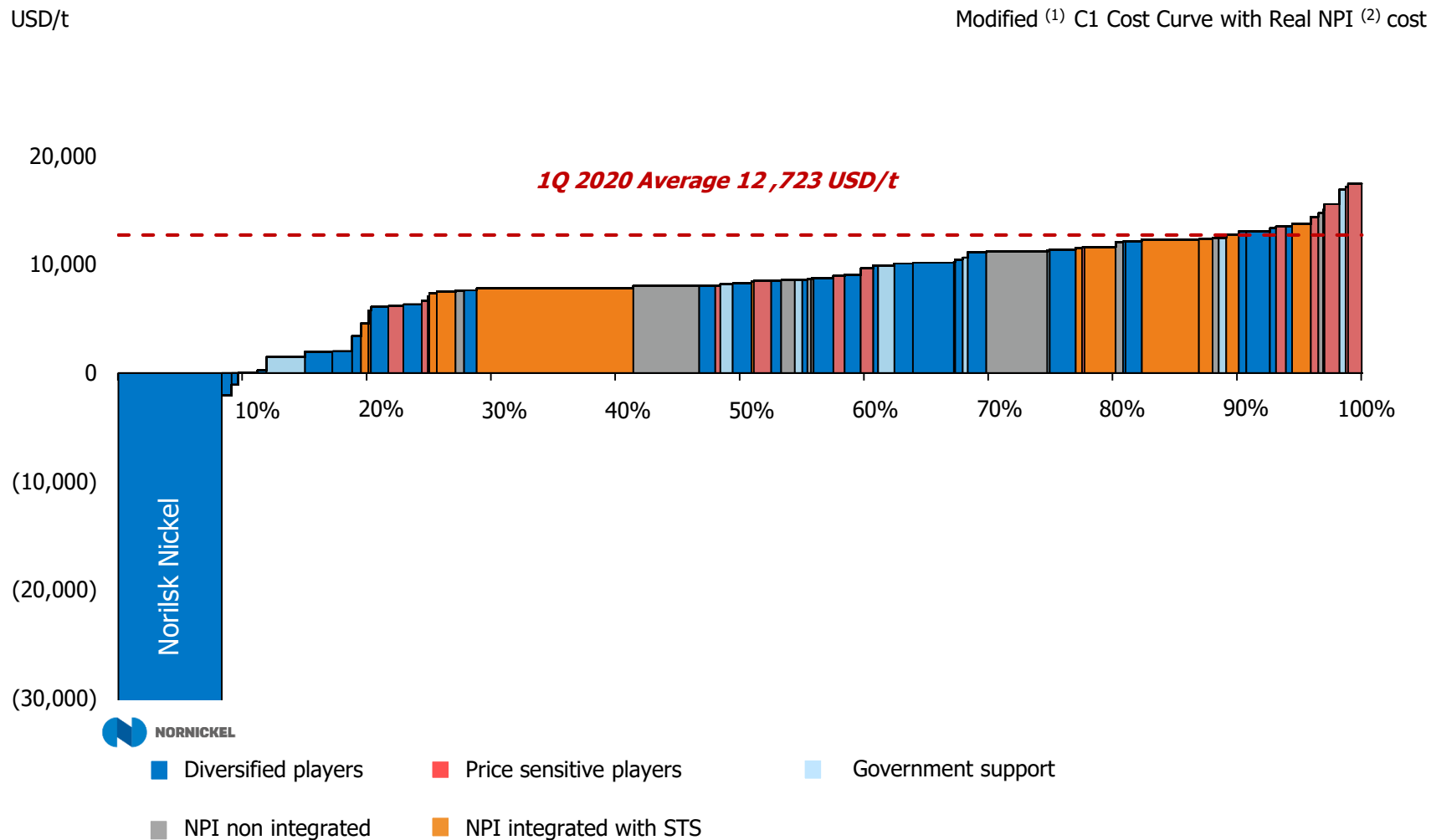


Selected assumptions for 2020:

- **Diesel share continues to slide:**
~30% on average, in Europe
- **A 30% reduction in Pt Jewelry**
- **No supply response** due to lower Pt prices as revenues from Rh & Pd even at lower spot prices after factoring in ZAR devaluation to keep 4E basket in South Africa well above the cash cost

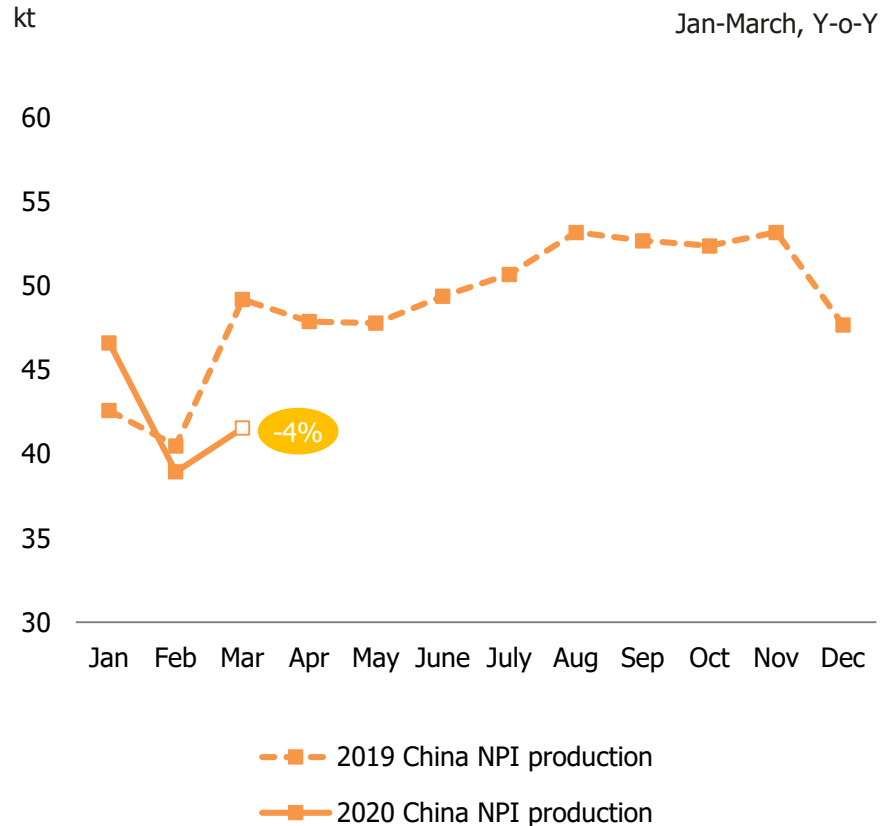
Source: Company's estimates

Ni Industry Cost Curve: Little Incentive to Cut Production

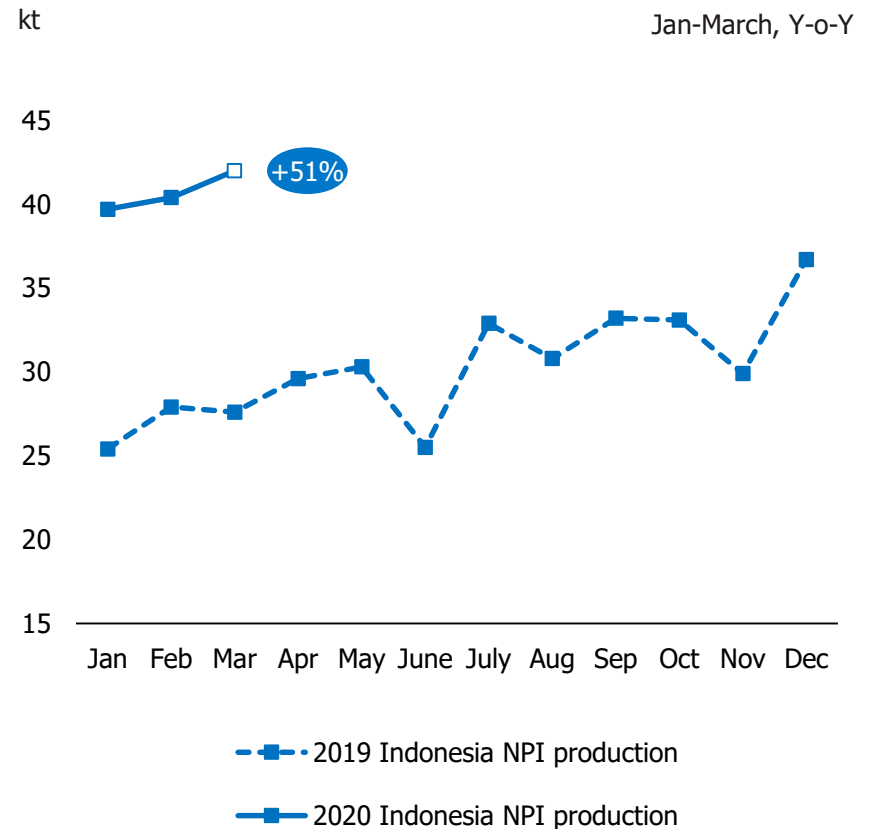


Nickel Supply in 1Q: NPI Losses in China Offset by the Ramp Up of NPI Capacities in Indonesia

China NPI Production Decreased 4% in 1Q



Indonesia Remains the Main Driver of NPI Growth with a New Capacities Launching in Jan 2020



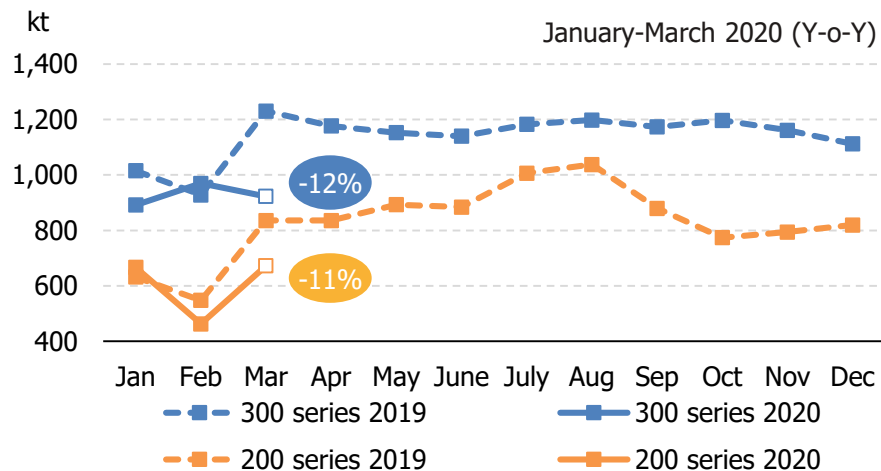
Downside risks to NPI production volumes in 2020:

- Delay in the ramp-up of new NPI in Indonesia due to quarantines in Indonesia
- Reduction of the ore supply to China due to quarantines in Philippines, the only remaining source of feed for NPI

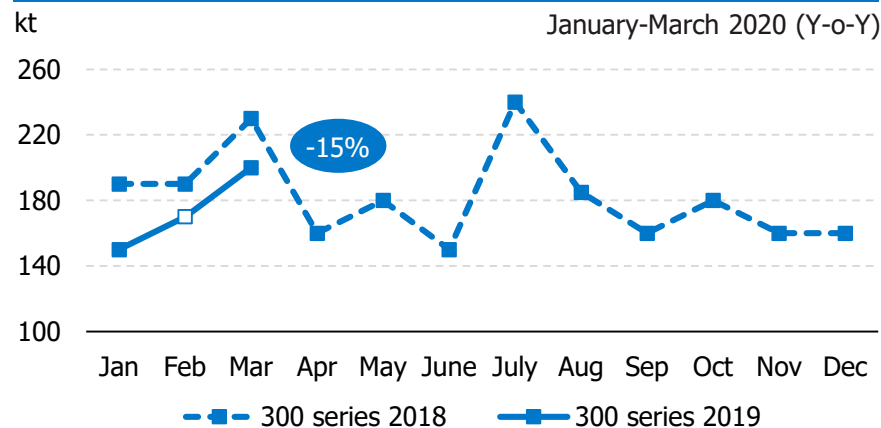
Sources: Company Data, Nieba, SMM

Nickel Demand in Stainless: Weak Demand on Falling Stainless Production and Rising Inventories

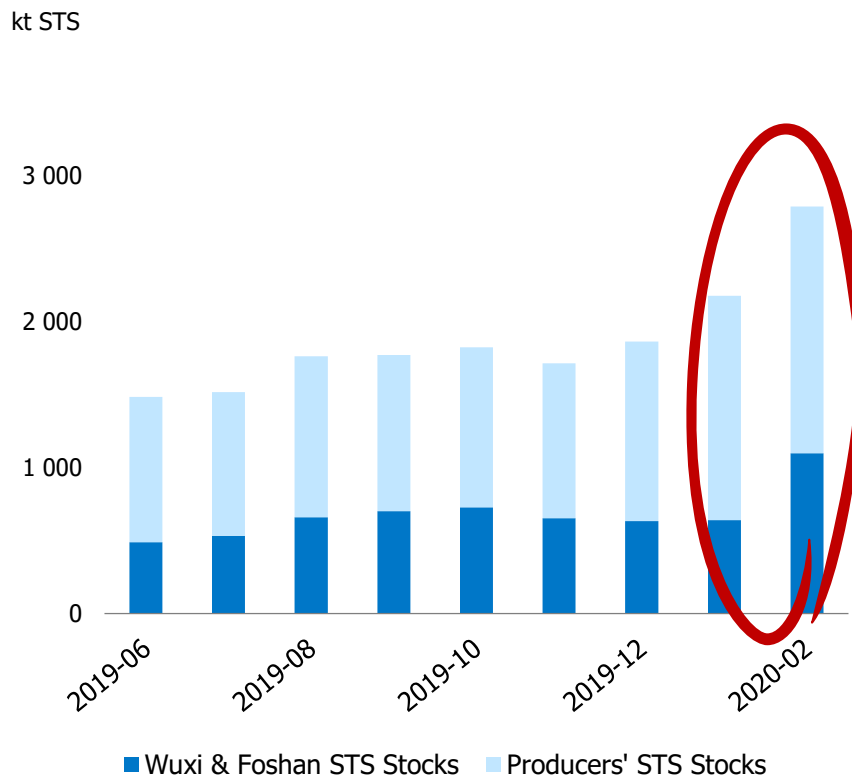
China: Significant Decrease of Stainless Production due to Quarantines in 1Q 2020



Indonesia: Decrease in Production due to Lower Demand Despite Launching New Delong Mill in Feb

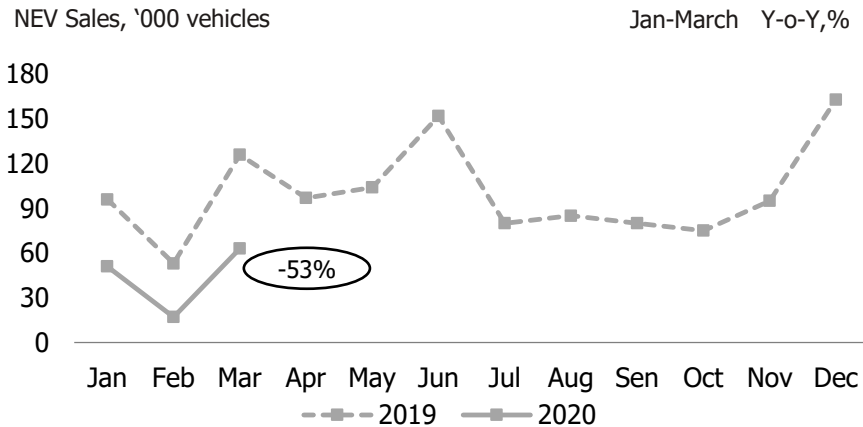


Stainless Inventories in China Were Up 50% in Jan-Feb 2020 Absorbing Unsold Output

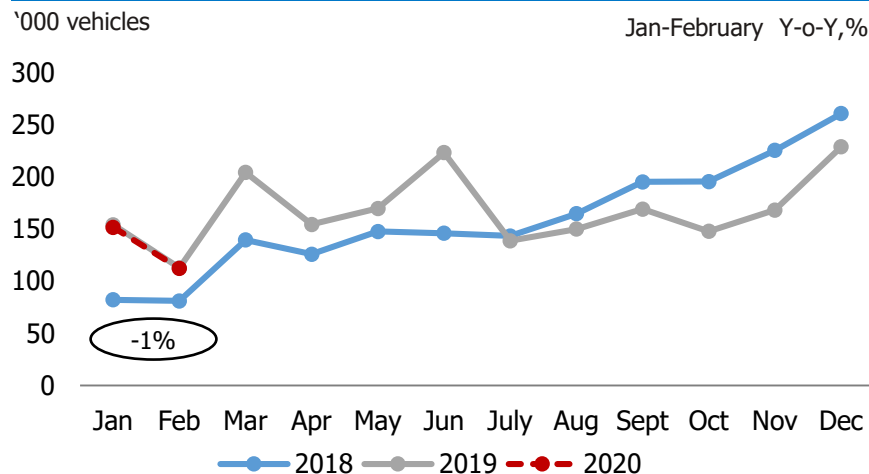


Nickel Demand in Batteries: EV Sales in China Crashed in 1Q 2020 Due to Quarantine

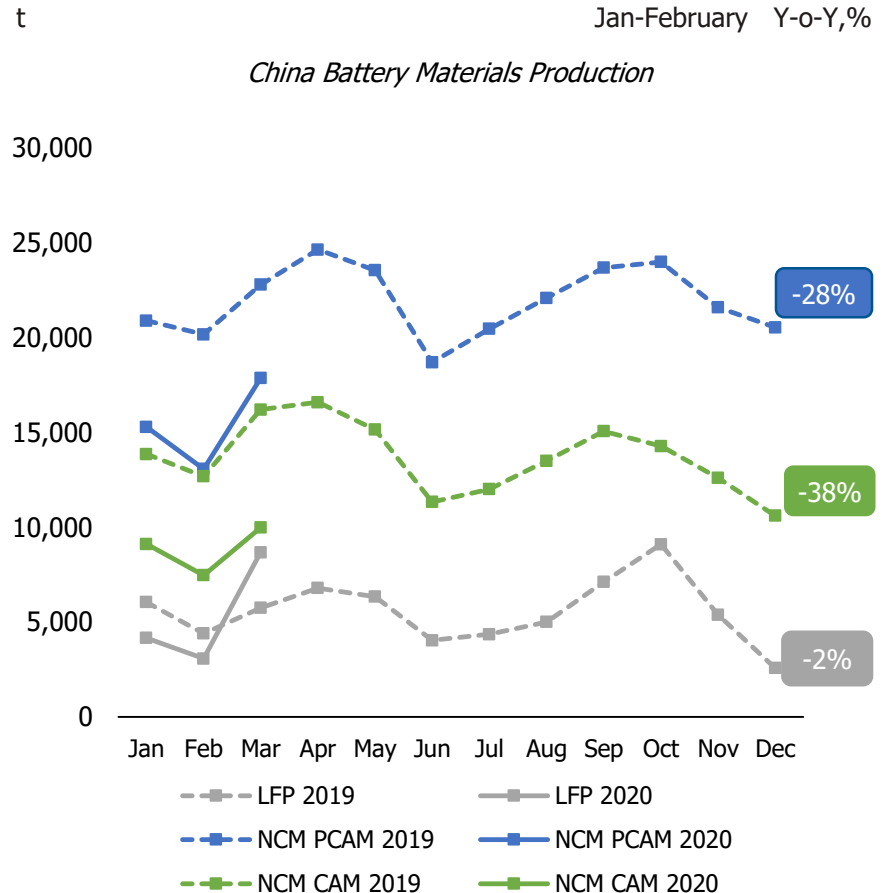
NEV Sales in China Plunged -53% in 1Q, with Some Recovery in March



Global NEV Sales Decreased 1% in Jan-Feb, as Epidemic Did Not Affect USA and Europe Yet



Battery Production Declined Significantly in 1Q Due to Weak NEV Sales

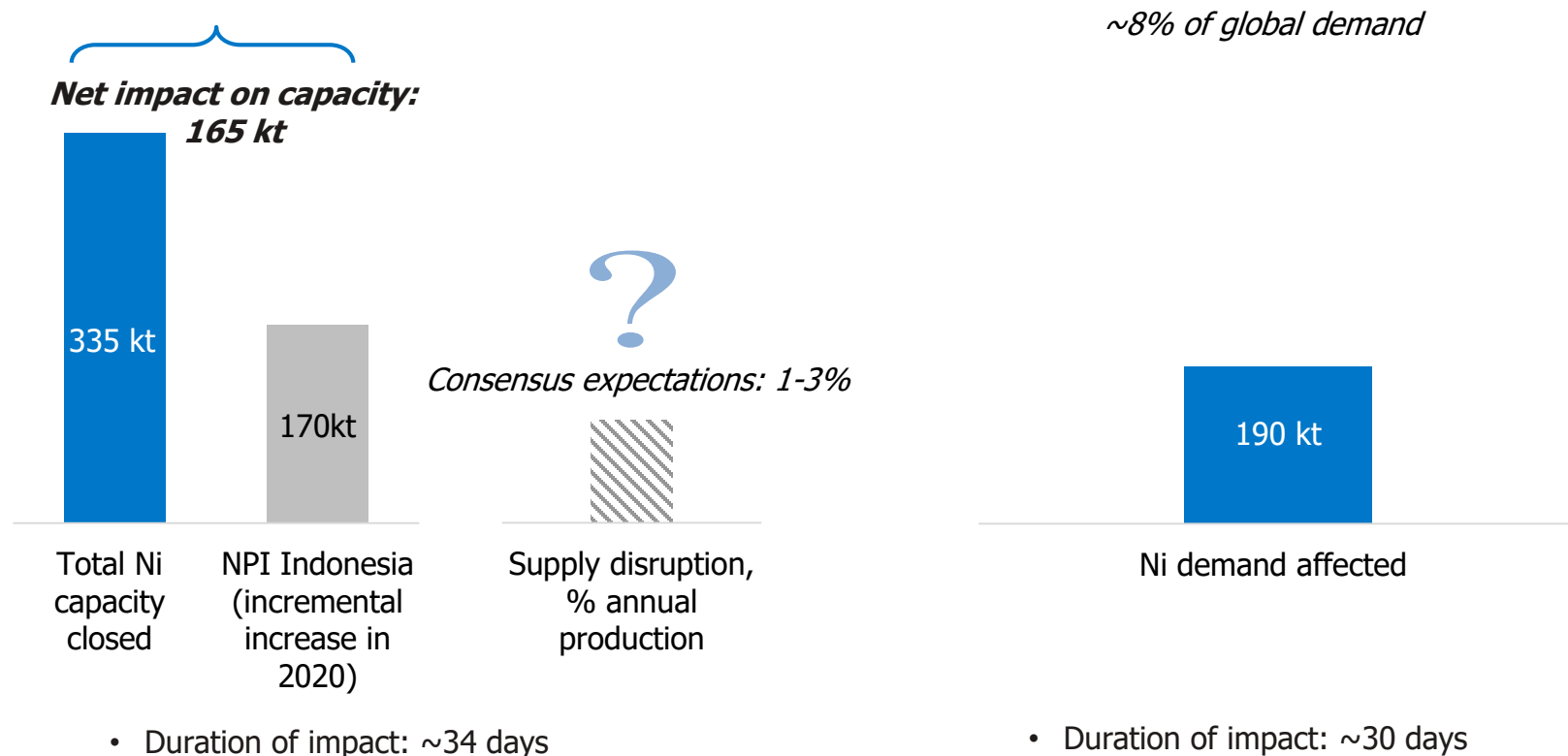


Nickel Disruption Tracker: Major Uncertainty Over Supply

Disruption due to Too Many Moving Parts: Projects and Duration

Supply: ~14% of Global Ni Supply is Currently Offline

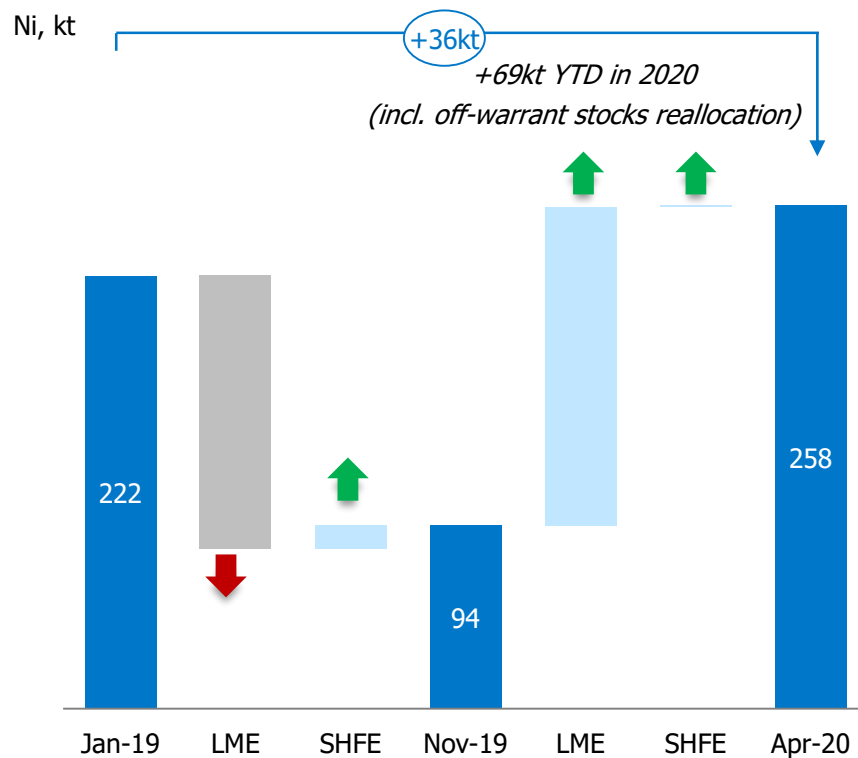
Demand: ~8% of Global Demand is Currently Disrupted



Source: Company's estimates
Note: 1. As of April 21, 2020

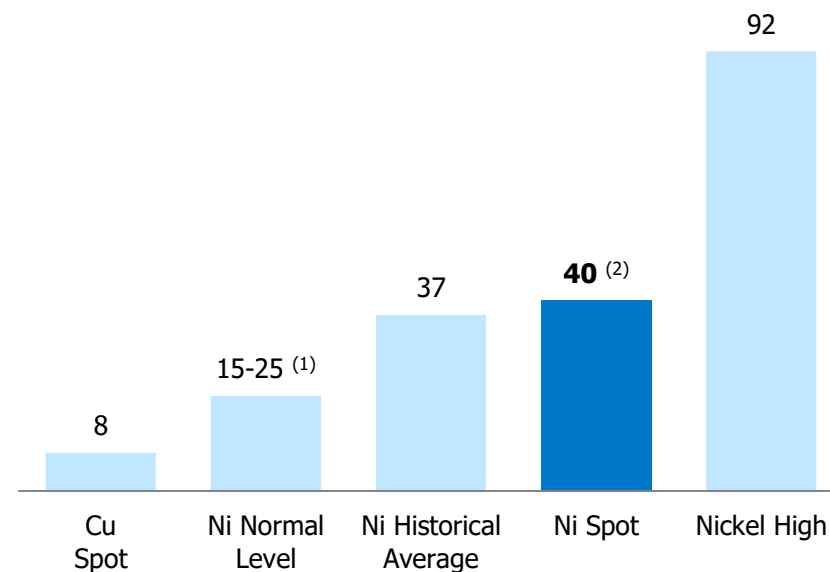
Nickel Exchange Stocks Rebounded to 2018 Levels on Stock Relocation and Market Surplus

Exchange Inventories Restored After Reaching Lows in November 2019



Inventories Declined by Over 50% from Peak Levels in 2015 But Still Above Normal

Days of consumption



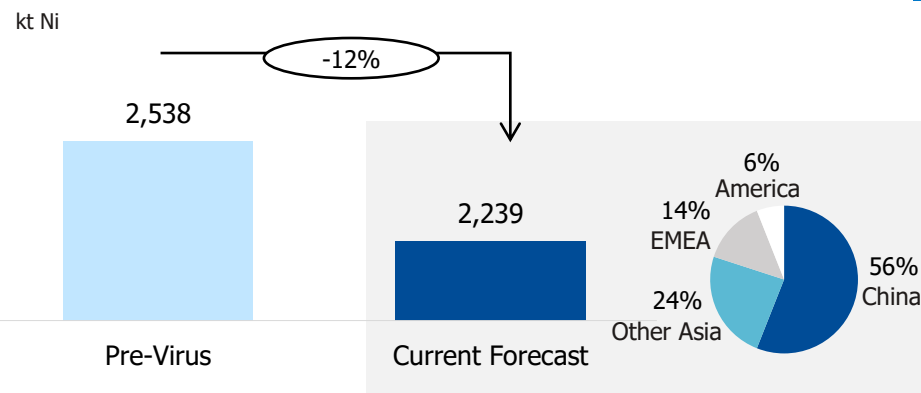
Sources: Company estimates, LME, SHFE, SMM

Notes: 1. According to markets participants, customers

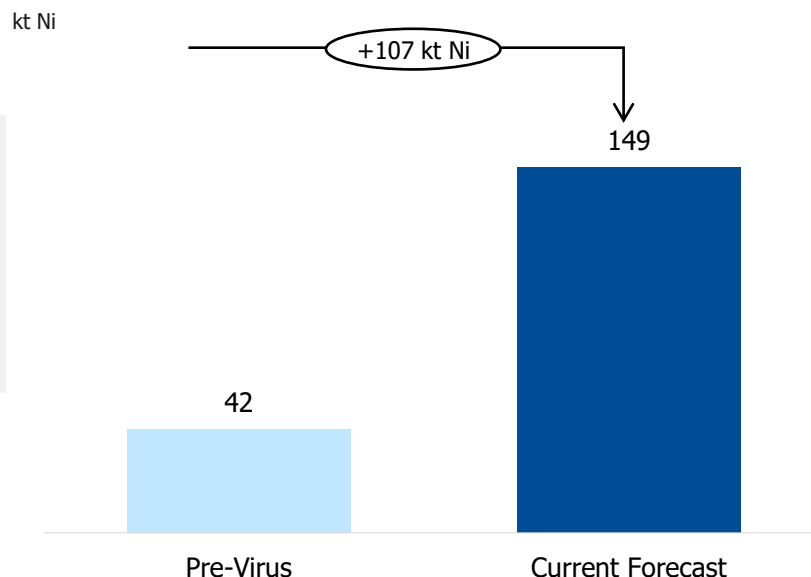
2. As of 9 April 2020

Nickel Market: Rising Surplus on Weakening Demand

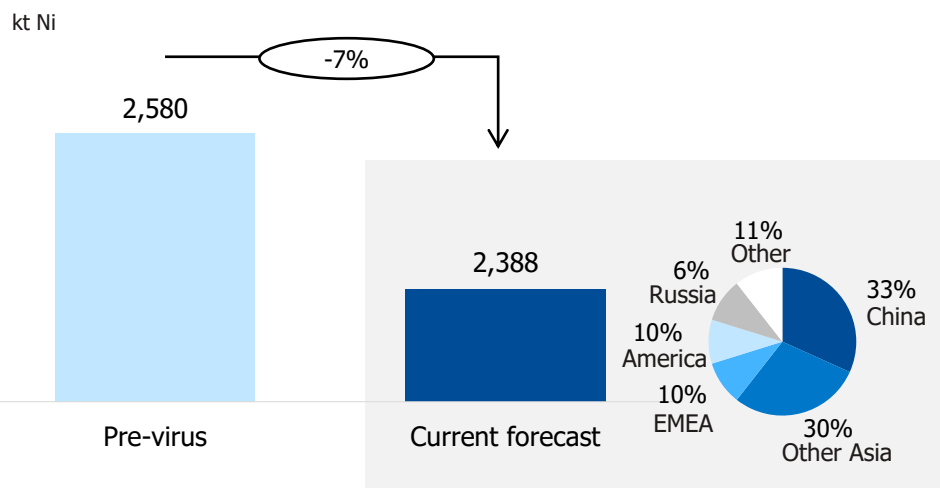
Reducing 2020E Consumption Forecast on Weaker Global Macro: -12% vs. +3% Pre-Virus



Market Balance in 2020E: Raising Surplus Forecast to 149kt



Primary Nickel Production Expected to Decrease 7% in 2020E



Selected assumptions for 2020:

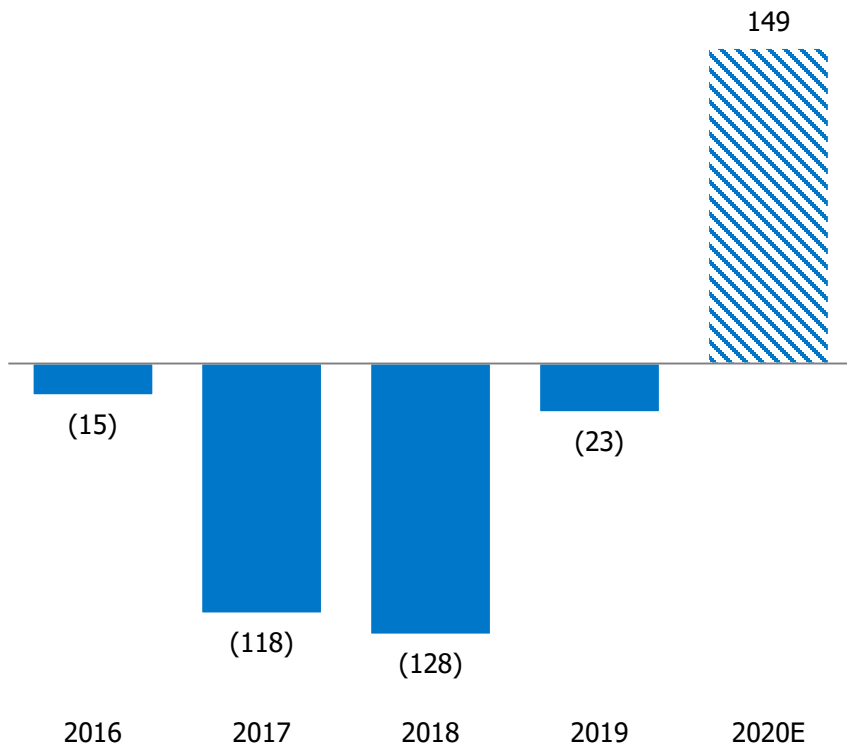
Impact of low oil price

- Demand: reduction of Ni demand in alloys & stainless steel related to oil and gas field development
- Demand: slowing substitution of ICE with NEVs
- Supply: lowering of global cost curve in USD terms with an additional boost from depreciating mining currencies

Nickel Market: Material Surplus in 2020 to Support Built up of Inventories

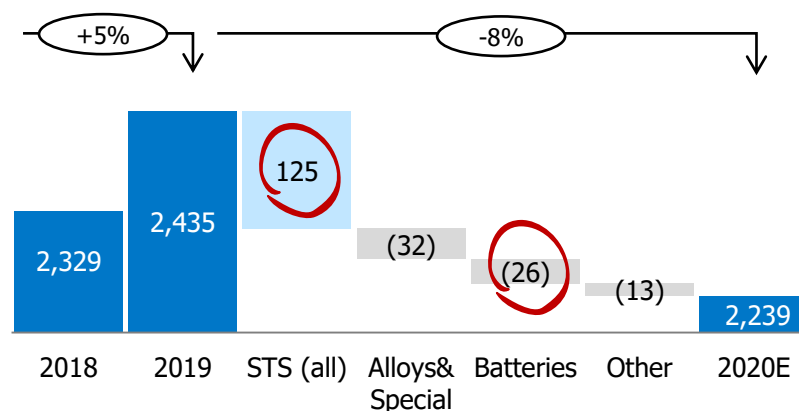
Market Balance:
Surplus Forecast Raised to 149kt in 2020E

kt



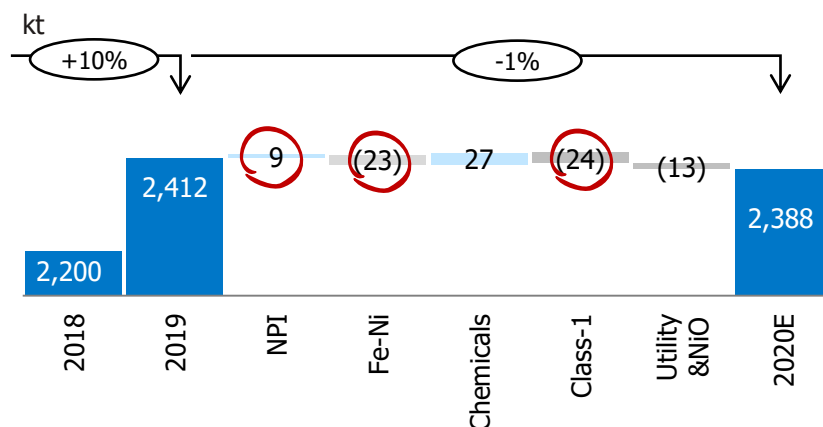
Global Demand: Decrease in Stainless Steel and Battery Segment due to Reduced Industrial Activity

kt



Global Supply: Further Increase in NPI Production and Replacement of Class-1 in Stainless Steel

kt

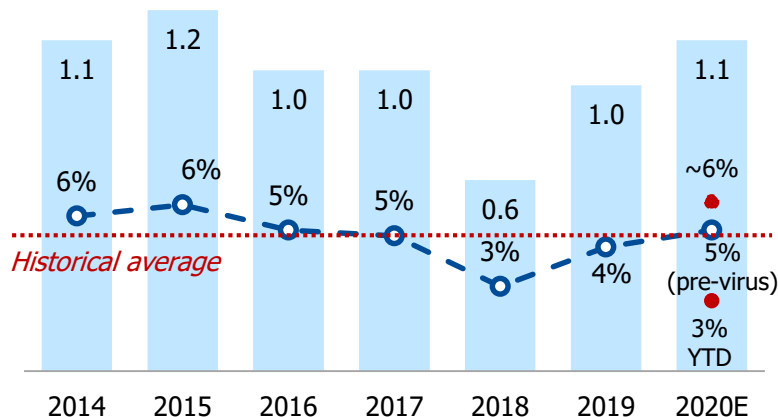


Source: Company's estimates, Wood Mackenzie, SMM, UBS Research

Copper: Demand and Supply Disruptions – Which One is Faster?

Supply Disruptions: Mine Lockdowns >20% of Global Capacity, But Expected Supply Disruption So Far Running at 6% - Marginally Above Average

mt Y-o-Y

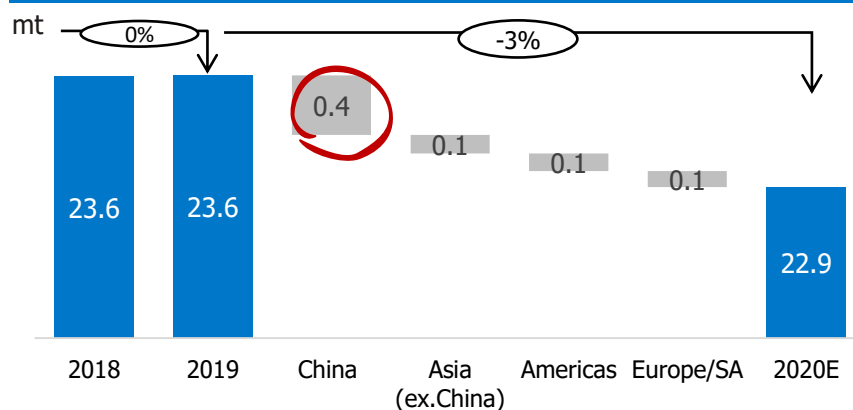


— Copper mine disruptions (ex.cost related closures), mt

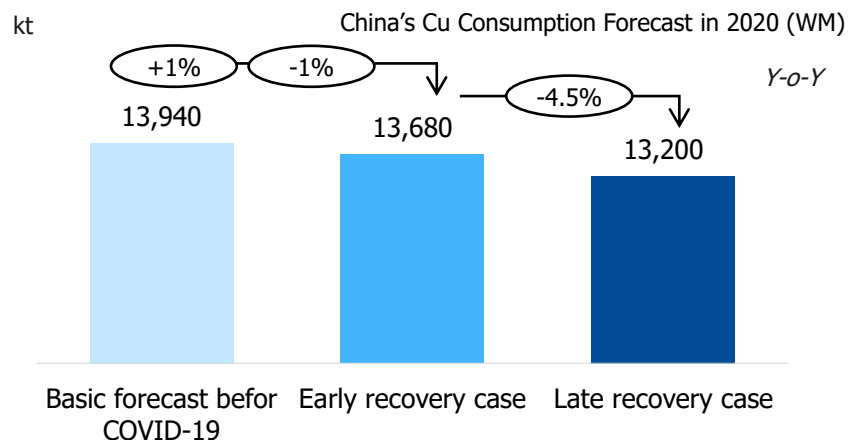
— % of original production target

- **Major uncertainty over the supply** in the world ex China as supply cuts are unveiling (Peru, Canada extended lockdowns) – a downside risk to current production forecasts.

Demand: Reduced Industrial Activity to Drive Down Cu Consumption Only Moderately in 2020 According to Consensus



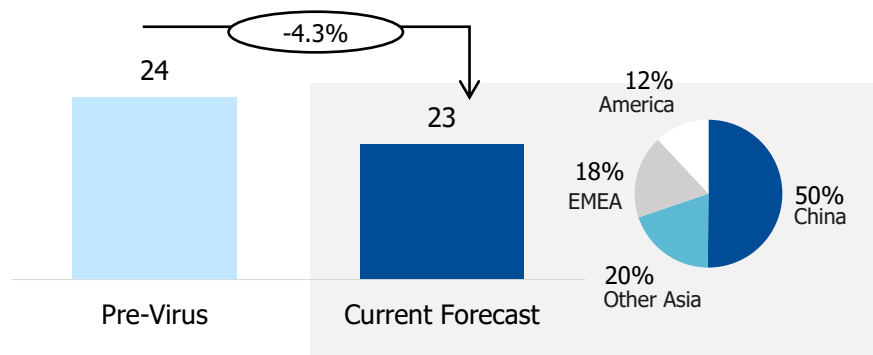
China 2020 Cu Consumption Outlook: Reduction by 1- 4.5% Depending on the Pace of Recovery



2020 Copper Market Balance Outlook: By and Large Neutral Impact

2020 Global Consumption Outlook: 4% Lower due to Weakness in the World ex China Especially Europe

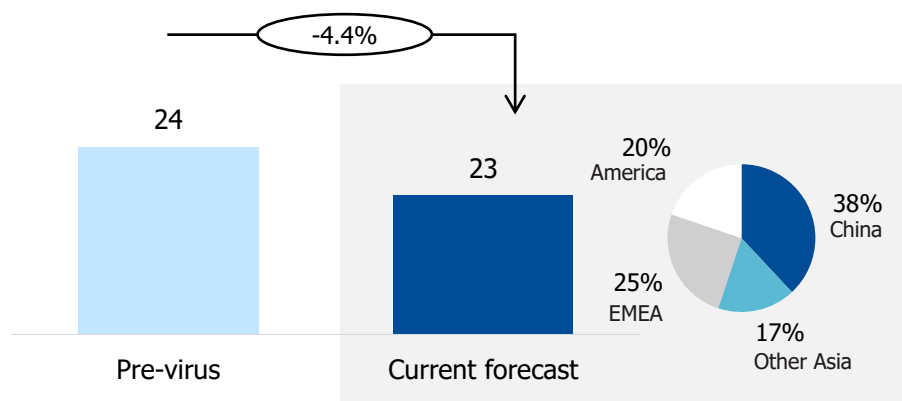
mt



2020 Global Refined Production Forecast Down 4% on Logistical Issues and Supply Response

mt

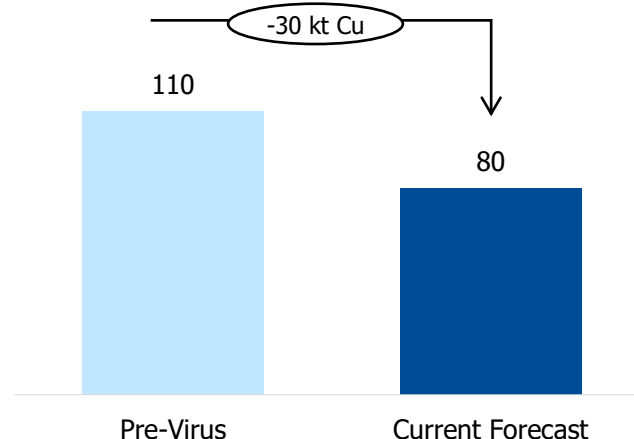
Global Cu Production 2020



2020 Market Balance Forecast: the Market to Remain in Balance

kt

Global Cu market balance

















Selected current developments in 2020:

- Exchange stocks rising (+311kt YTD), but remain still relatively tight (circa 10 days of global consumption)
- Demand: uncertainty over the size and coverage of Chinese stimulus – potential upside risk
- **While China economy is started to rebound in March**, Europe and the US are reducing/putting on hold industrial activity – potentially a major downside risk

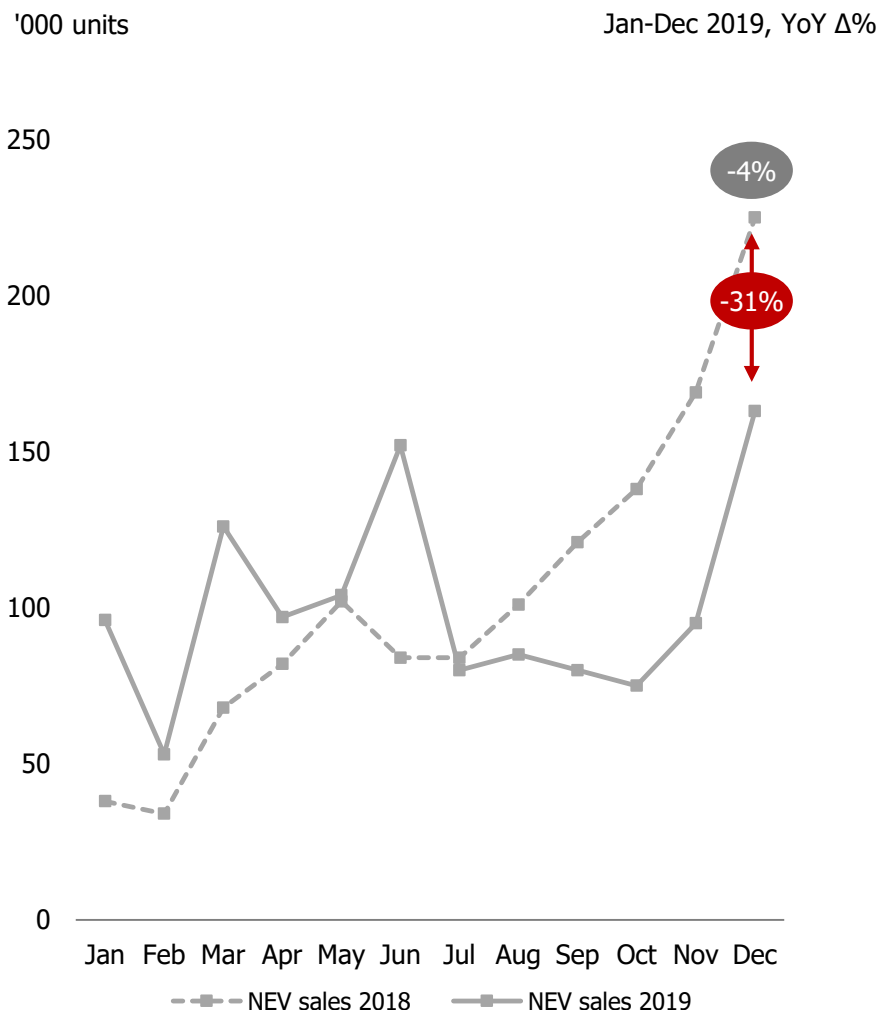
Commodity Long Term Trends

Key Auto Trends Impacting Metals Demand

		Demand Implications			
		Ni	Pd	PGMs	Pt
Sustainable global automotive production growth					
Substitution of diesel for gasoline vehicles					
Growth of hybrid market share					
Growth of SUV market share and engine downsizing termination					
Strengthening emissions legislation					
Electric vehicles/batteries					

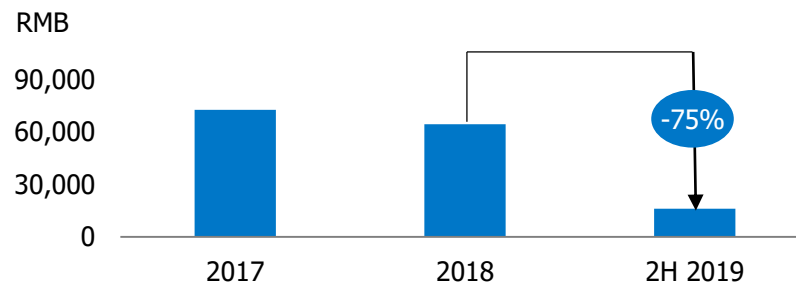
EV Sales Are Very Sensitive to Subsidy Policy: the Case of China

Sales of NEV Decreased in 2H 2019 Due to Tightening of Subsidy Policies



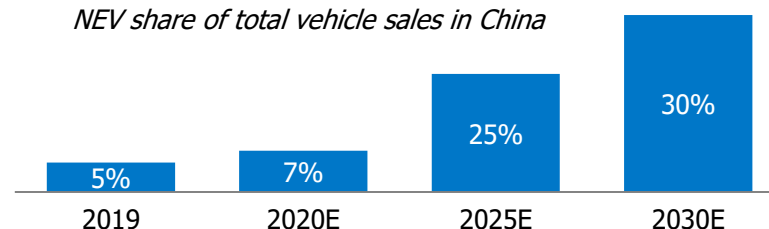
Chinese Government Reducing Subsidies on BEVs and Shifting to Dual Credit System

Subsidy per BEV ⁽¹⁾



New Government Targets for Sales

NEV share of total vehicle sales in China



The Government Incentivizes OEMs to Produce BEVs with Longer Driving Range

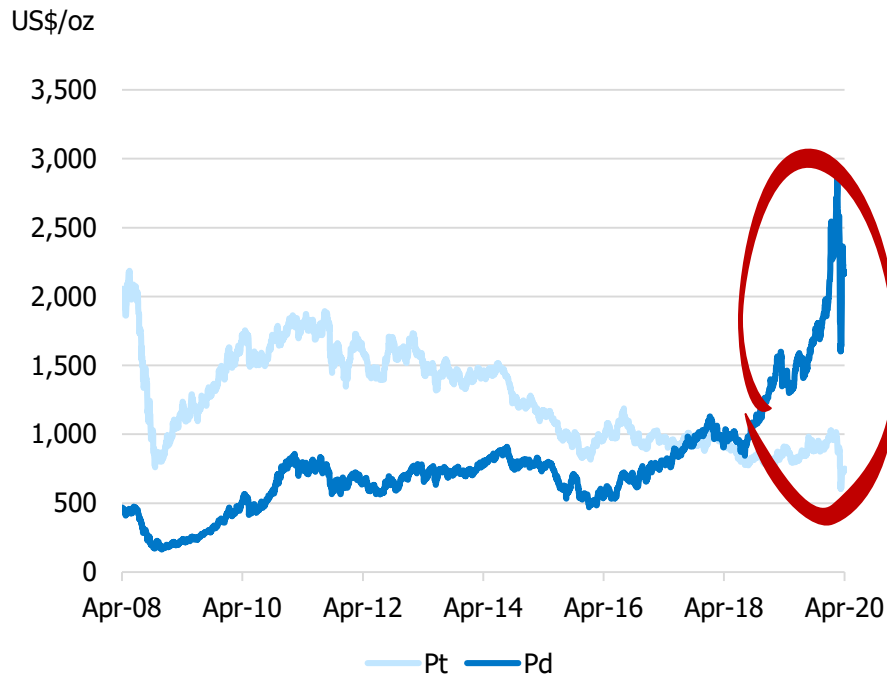
Vehicle type	Max points earned
BEV with long drive range ⁽²⁾	6
PHEV > 80 km	2
50 km < PHEV < 80 km	1

Notes: 1. For a vehicle with 300 km range, 140 Wh/kg, +25% energy efficiency bonus and including maximum provincial incentive

2. Points earned for 1 BEV = $(0.012 \times \text{Driving range (km)} + 0.8) \times \text{Correction factor for energy efficiency}$

Premium of Palladium to Platinum is Sustainable in the Mid-Term

Palladium Premium to Platinum Owes to Stronger Fundamentals...



... as Pd Loadings in Gasoline Vehicles are Supported by Higher Fair Value-in-Use

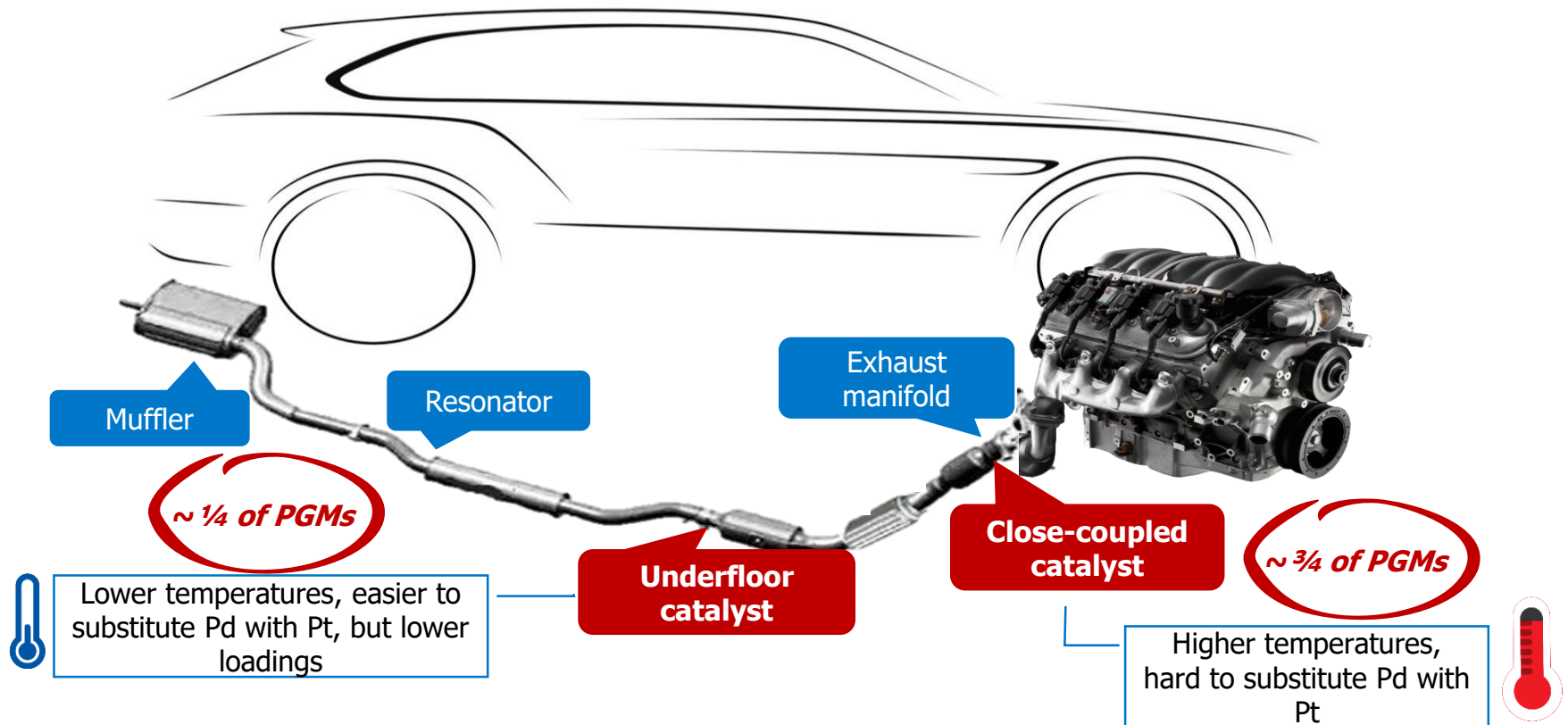
	Palladium	Platinum
Thermal durability	Higher	Lower
HC and CO oxidation at low temperatures	Higher	Lower
NOx reduction	Higher	Lower

- Palladium performs better than platinum in gasoline vehicles
- Introduction of Real Driving Emission tests incentivises «over engineering» and higher palladium loadings
- Long-term stability/reliability of supply is supportive of palladium demand
- Progress in the development of prospective mining projects should mitigate structural deficit in the medium-term

Source: Company data






Technical Challenges in Substituting Palladium

Catalyst Installation in a Vehicle



- Timeline for substitution 18-24 months
- Technical challenges in testing new catalysts in RDE world
- Still small cost incentive to substitution (~ USD 200 per car)
- Consumer confidence in sourcing metal

Nornickel's Metal Basket Content by Light Vehicle Type

	 Gasoline	 Diesel	 Hybrid incl. PHEV ⁽¹⁾	 BEV ⁽²⁾	 FCEV ⁽³⁾
CAGR ⁽³⁾	(1%)	(1%)	+24%	+26%	+30%
Market Share ⁽⁴⁾	59%	14%	17%	8%	<1%
Ni	Stainless Steel & Parts 2-4 kg		+Batteries 5-15 kg		2-3 kg
Cu	Wires & Parts 20-25 kg		+Electric Motor, Generator Winding 45-50 kg		70-75 kg
PGM	Catalysts 2-5 g		2-6 g	-	Fuel Cell 25-35 g
Pt:Pd ratio	1:4	8:1	1:4		
Metal value per vehicle, US\$ ⁽⁶⁾	370-890	250-480	610-1,180	Up to 1,500	Up to 1,600

Sources: Company estimates, LMC Automotive, Bloomberg

Notes: 1. Plug-in hybrid electric vehicles, 2. Battery electric vehicles, 3. Fuel cell electric vehicles, 3. CAGR for 2018-2025E, 4. Expected market share in 2025 based on production, 5. Excluding additional infrastructure demand of 1-8 kg per charger, 6. Metal values calculated at spot prices as of February 21, 2020

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