NATIXIS
CORPORATE & INVESTMENT BANKING

COMMODITIES REPORT

01 March 2022

RISK OF DISRUPTION TO RUSSIAN COMMODITY FLOWS GROWING

We consider the risk of disruption to Russian commodity supplies to be growing for several reasons. Firstly, it is clear that Western sanctions that go further than expected and Russian President Vladimir Putin's order to place nuclear forces on high alert mark an escalation in the Ukraine crisis. As such, disrupting flows of commodities does not seem as extreme an outcome as just four days ago. Second, the severity of sanctions has prompted extreme caution from Western buyers of Russian commodities, with significant "self-sanctioning" taking place.

Commodity prices have risen in response to the newsflow, with energy commodities in particular incorporating a greater geopolitical risk premium as the risk to Russian exports grows. Although we stick to our base case for now, we see a higher chance of our high case forecasts actualising given the risks to supply. Most metal prices have also moved higher as disruptions from the "self-sanctioning" is materializing quickly, both in terms of demand for Russian metal drying up and logistical hurdles arising.

	Average annual price			
	Spot price	YTD	F2022	F2023
Gold ($/oz)	1,889	1,836	1,785	1,425
Silver ($/oz)	24.27	23.3	23.3	17.5
Aluminium ($/t)	3,387	3,111	2,879	2,525
Copper ($/t)	9,918	9,858	9,175	8,600
Nickel ($/t)	24,700	23,144	21,650	19,300
Iron ore ($/t)	123.7	123.9	88.5	72.5
Brent ($/bbl)	97.9	89.2	89.8	77.8
WTI ($/bbl)	91.6	86.7	87.3	75.8
Henry Hub ($/MMBtu)	4.47	4.34	3.99	3.45
TTF ($/MMBtu)	30.75	27.73	27.23	18.18
JKM ($/MMBtu)	27.51	27.27	28.98	19.93

	Spot	Week on Week Change	MTD change	YTD change
Gold ($/oz)	1,938	2.6%	1.5%	5.9%
Silver ($/oz)	25.3	4.1%	3.3%	8.4%
Platinum ($/oz)	1,053	-0.6%	0.5%	8.7%
Palladium ($/oz)	2,562	8.1%	2.8%	34.5%
Aluminium ($/t)	3,388	0.0%	0.0%	20.7%
Copper ($/t)	9,919	0.0%	0.0%	1.8%
Zinc ($/t)	3,688	1.4%	0.0%	2.7%
Nickel ($/t)	24,661	-0.7%	0.0%	18.1%
Iron ore ($/t)	143.5	2.4%	-7.2%	7.7%
Brent ($/bbl)	105.0	7.2%	3.9%	35.0%
WTI ($/bbl)	103.4	12.9%	8.0%	37.5%
Henry Hub ($/MMBtu)	4.55	1.9%	3.5%	22.1%
TTF ($/MMBtu)	39.81	29.5%	22.4%	69.6%
JKM ($/MMBtu)	31.50	14.5%	12.7%	3.3%


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RESEARCH BY NATIXIS

Western response to Ukraine crisis escalates sharply following Russian Central Bank sanction

Commodity benchmarks opened sharply higher on Monday and continued to rally higher during Tuesday's session following:

- The announcement of significant sanctions on Russia's Central Bank over the weekend, aimed at preventing access to ~ $630bn of foreign reserves.

- The disconnection of key Russian banks from SWIFT (although the banks most involved with the energy trade are expected to be exempt).

- President Vladimir Putin placing Russian nuclear forces on high alert.

Brent was trading above $106/bbl intraday on Tuesday, after closing Friday below $98/bbl. TTF was trading above €120/MWh, after closing on Friday just above €90/MWh. Palladium prices have shot up by 14% since Friday's close and on the 1st of March three-month spot aluminium was up by 2.8% and three-month nickel up by 2.3%.

The newsflow from the last weekend mark a clear escalation both in terms of the Western sanctions response, and Putin's rhetoric.

Our macro team will provide a full breakdown of the implications of the western sanctions in an upcoming report, however for a brief overview:

The sanctions on the central bank are aimed at preventing the state accessing foreign reserves to fund the war effort and offset the impact of the broader Western sanctions response. Up to $630bn of foreign reserves could be impacted, although the full amount is likely to be lower given a lack of up-to-date data (the latest Central Bank breakdown is 8 months old) and inability to sanction all foreign-held assets. In any case, the move will have significant impact on the Russian economy, most notably severely limiting the bank's ability to intervene in the currency markets to shore up the rouble. This essentially renders Russia a *financial pariah state* similar to Iran, Venezuela or North Korea, an unprecedented position for a G20 economy.

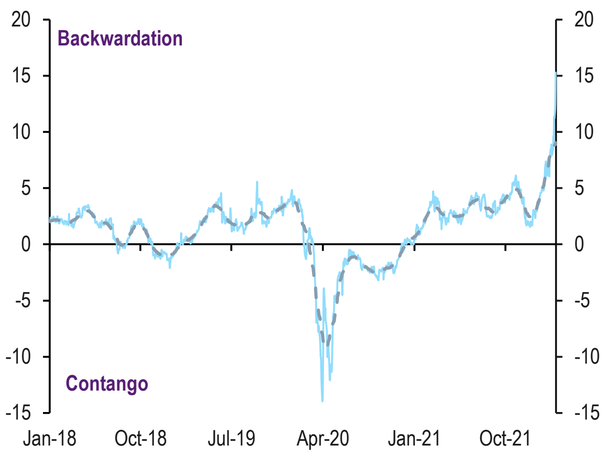
Against this backdrop, and the subsequent nuclear announcement from Putin, **we consider the range of potential outcomes to have shifted to the extremes**. As such, the weaponization of commodity flows (most meaningfully flows of natural gas and oil) is no longer as *off the table* as seemed prior to last weekend. We consider this risk to primarily be derived from the Russian response to the sanctions regime, with the weaponization of commodity flows providing Putin with an escalatory measure against the West that can ultimately be reversed as part of any negotiated settlement.

However, Western willingness to bear the economic costs of disrupted energy flows may be stronger than initially assumed. We have noted several statements from politicians linking the response to the crisis with more persistent inflation, in essence arguing *inflation may be price of fighting Putin.* With this in mind and as a final point, whilst the situation on the ground in Ukraine cannot be independently verified, reporting has implied the initial invasion has not been as straightforward for Russian forces as initially assumed. Several reports have suggested the Russian assault may soon move to a more aggressive phase involving heavier weaponry, which will likely be associated with less discretion whilst operating in civilian areas. Given Western public opinion is firmly supportive of the Ukrainian cause (highlighted by demonstrations attended by hundreds of thousands in several European cities over the weekend) a surge in civilian casualties may push Western governments to limit energy purchases, if protests demanding further action continue.

What does this mean for energy markets?

Given the heightened risk of disruption to energy flows, **both the oil and natural gas markets will be required to incorporate a larger risk premium for as long as hostilities are ongoing.** There is some indication this has begun, with both Brent and TTF rallying strongly from Friday's close and the six-month Brent timespread surging above $15/bbl during Tuesday's session. This level of backwardation is extremely rare, last reached during Iraq's invasion of Kuwait in 1990. This is indicative of a market pricing for near-term supply shortage.

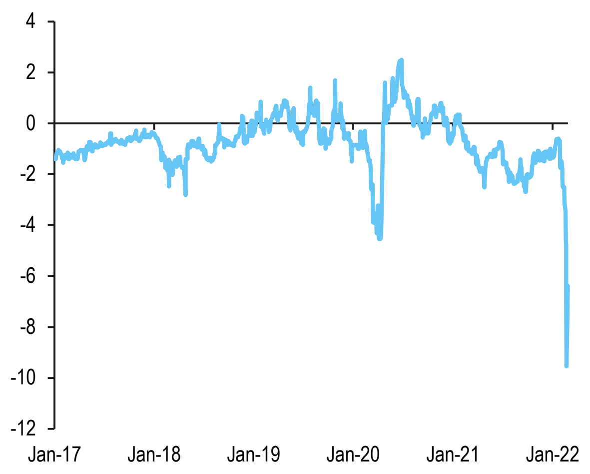
Chart 1: Brent six-month backwardation, $/bbl



Sources: Natixis, Bloomberg

Indeed, the severity of the Western response has been associated with the almost "self-sanctioning" from typical offtakers of Russian export grades, Urals and ESPO. Organising the delivery of a cargo of physical crude is a multi-month process and the risk of further sanctions has resulted in traders struggling to fix ships, organise insurance or obtain letters of credit from financial institutions. So, whilst energy flows have been exempted from sanctions, the reality on the ground has seen Western buyers take a risk-off approach and **over-comply until more information is available,** stepping back from the Russian crude trade. Interestingly, there are reports of Chinese buyers also stepping back from Russian purchases, citing the risk of secondary sanctions on Chinese banks. Although we would expect Chinese buying to step up once more information of exemptions Is available, lower than expected Chinese buying has significant implications given our previous assumption that China would effectively take part of the seaborne Russian export volume displaced from Western markets

Chart 2: Urals differential to Dated Brent, $/bbl



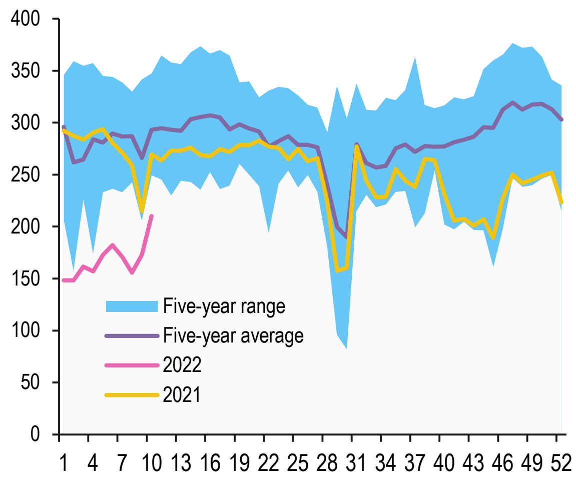
Sources: Natixis, Bloomberg

The implication here is that the "physical market musical chairs" might not be enough to fully offset the drop in demand for Russian barrels, **which could ultimately result in the need for Russian producers to cut production once domestic storage is exhausted**. This would in effect result in more buyers chasing fewer barrels and **force upside pricing pressure on benchmark grades**. This compares to our previous assumption where the *oil market plumbing* was rearranged but the feedback loop to benchmark grades was limited.

So, even without a response to the new sanctions regime, the sanctions regime itself could be enough to reduce Russian crude flows. In this case, the question is whether an oil export cut driven by the above factors (which are largely confined to the opaque world of physical commodities trading, rather than geopolitical theatre of a Biden administration press release or Putin shouting down his extraordinarily long table) **would be viewed as an outage to be mitigated by the market's shock absorbers**. The IEA have already announced the release of 60mn bbl from strategic stockpiles (with 30mn bbl sourced from the US), however our current expectations are for OPEC+ to skirt around the issue at the group's upcoming meetings, quietly rolling over the scheduled 0.4mn b/d increment. Whilst we would expect members with spare capacity to act in the event of an outage**, any action will almost be behind the curve rather than pre-emptive.** For a full overview of the likely response to a Russian outage, please see *Energy Prices Enter the Putin Zone.*

Turning to natural gas, TTF has continued to price a greater risk premium despite a meaningful increase in the flow of Russian gas to Europe in recent days. This has been driven by the contractual nuances of the long-term gas contracts held by European buyers – to put it simply, the spike in spot prices since the invasion has meant it is cheaper to nominate Russian term contracts higher. Also, fearing future disruption, buyers may be lifting now, when they have the chance.

Chart 3: Russian gas flows to Europe, mcm/d



Sources: Natixis, Bloomberg

As we have discussed, in terms of import dependence and budgetary revenue, Russian natural gas exports are more important to Europe and less important to Russia than oil. However, it must also be noted that whilst crude exports could feasibly be re-routed to more accommodating markets, the vast majority of Russian natural gas can only be exported via fixed pipelines to Europe. This was covered in *Russia's capacity to divert gas flows from the EU to China is very limited now and by the time it grows the EU will have other options*. So, it could be argued that natural gas is a bind for both parties.

European gas markets faced a difficult balancing act even before the risk of significant supply disruption was priced into the curve, given Gazprom's unwillingness to return to the spot market. Prices were expected to remain unanchored above the coal to gas switching channel through the summer in order to curtail as much consumption as possible. Our views of a natural gas disruption scenario are outlined in *What if Russia Shuts Off Gas Exports to Europe* . In any disruption scenario, TTF would be forced to price off all industrial demand. Whilst we would expect Europe to be able to get through the remaining winter and summer with existing gas stocks, rebuilding stocks for next winter would be incredibly difficult without significant state intervention.

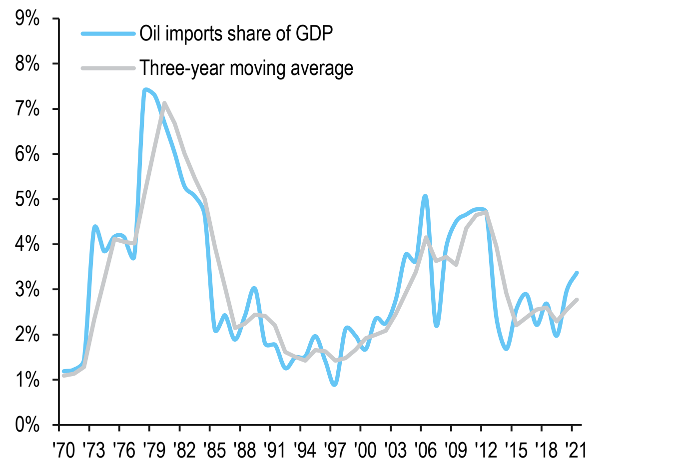
Greater likelihood of high case energy price scenarios

Clearly, flat price volatility and uncertainty has increased significantly over the past four days. Whilst we maintain our base-case scenario for now, we now place a higher likelihood on our high case scenarios for both oil and European natural gas prices, given the heightened risk to supply. The market will need to account for this risk by continuing to price strongly in the front, with backwardation to continue to remain strong. Our high-case scenario for TTF forecasts a 2022 average of €100/MWh, compared to the base case at €79/MWh. Our high-case Brent scenario forecasts a 2022 annual average around $106/bbl, compared to the base-case at $89.8/bbl. Whilst it is impossible to place a rough "ceiling" on oil prices in these conditions, for now we have set quarterly average oil price peak at around $117/bbl in the high-case, which would represent the ~4.7% share of global GDP that oil imports averaged in the 2011-2013 period. It is likely this level would curtail significant amount of industrial oil demand.

Speculative buying absent for now as risk-off dominates

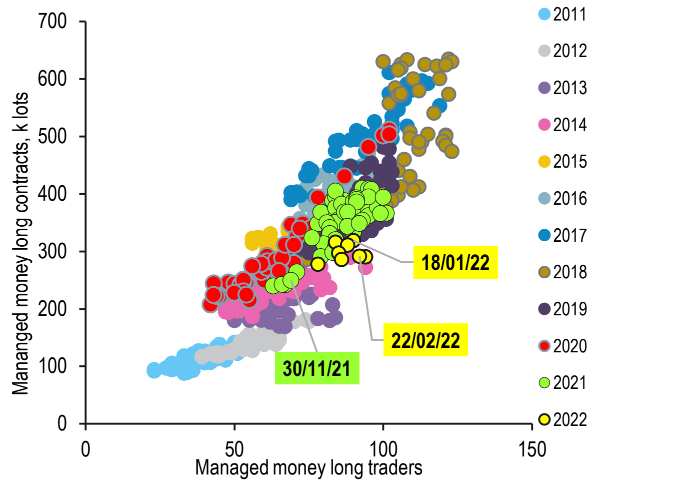
Perhaps understandably in the current climate, market participants are firmly in risk off mode – long positioning as measured by the CFTC COT report remains very muted, even when compared to the 2021 high. Given the risk for significant escalation, there is limited appetite to short crude at this point.

Chart 4: Oil burden (share of GDP taken up by oil imports)



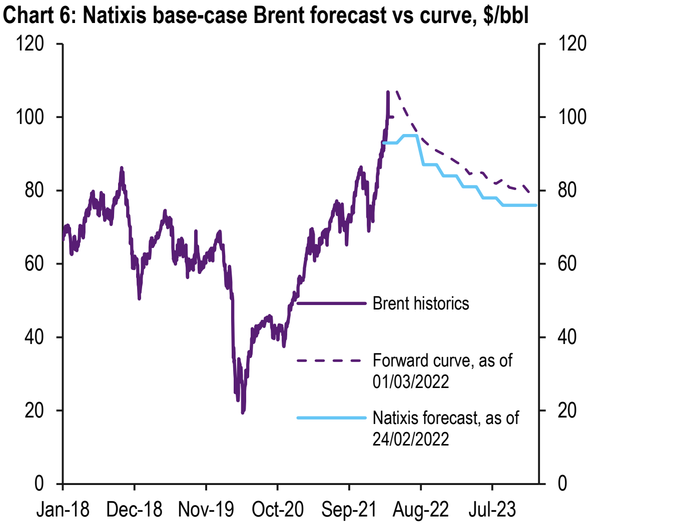
Sources: Natixis, Bloomberg

Chart 5: Managed money long positions vs number of traders in market



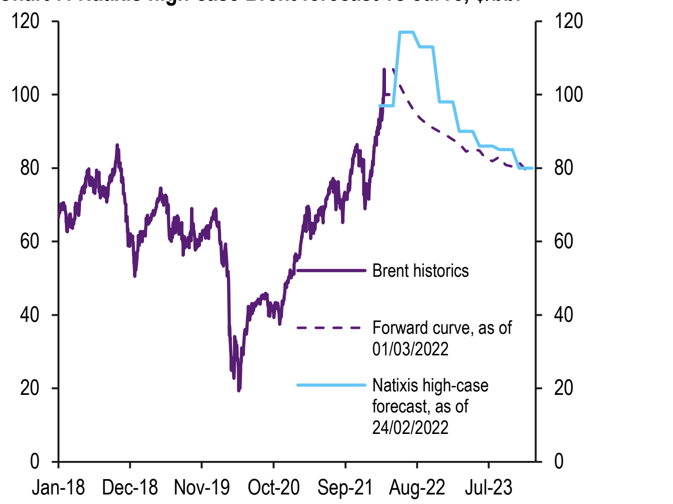
Sources: Natixis, Bloomberg

Chart 6: Natixis base-case Brent forecast vs curve, $/bbl



Sources: Natixis, Bloomberg

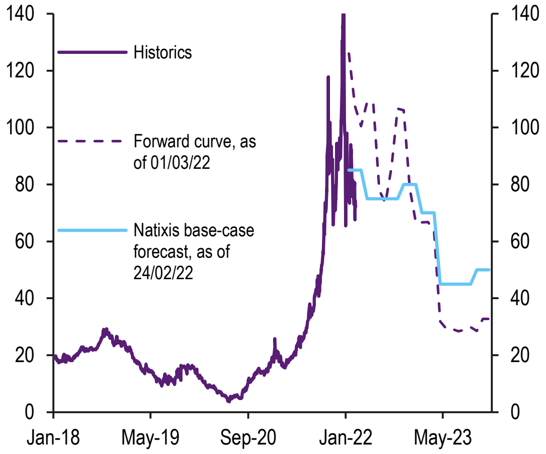
Chart 7: Natixis high-case Brent forecast vs curve, $/bbl



Sources: Natixis, Bloomberg

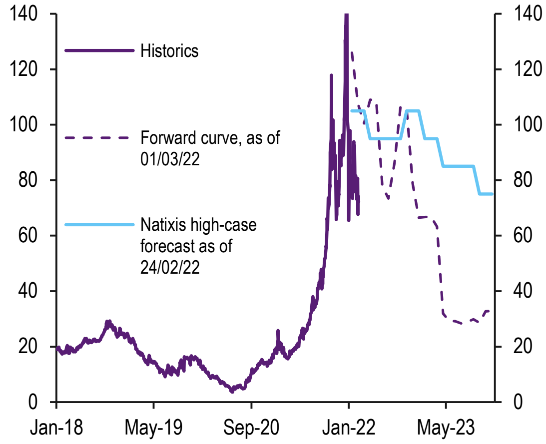
$/bbl - avg.	1Q 22	2Q 22	3Q 22	4Q 22	1Q 23	2Q 23	3Q 23	4Q 23	2022	2023
High	97.0	117.0	113.0	98.0	90.0	86.0	85.0	80.0	106.3	85.3
Base	93.0	95.0	87.0	84.0	81.0	78.0	76.0	76.0	89.8	77.8

Chart 8: Natixis base-case TTF forecast vs curve, €/MWh



Sources: Natixis, Bloomberg

Chart 9: Natixis high-case TTF forecast vs curve, €/MWh



Sources: Natixis, Bloomberg

(€/MWh)	Q1-2022	Q2-2022	Q3-2022	Q4-2022	Q1-2023	Q2-2023	Q3-2023	Q4-2023	2022	2023
High case scenario	105	95	95	105	95	85	85	75	**100.00**	**85.00**
Base case	85	75	75	80	70	45	45	50	**78.75**	**52.50**

What does this mean for metals markets?

As with oil and gas, we are seeing very similar dynamics in the metals market. Palladium prices have shot up by 14% since Friday's close, on the 1st of March three-month spot aluminium was up by 2.8% and three-month nickel up by 2.3%.

Even though the Biden administration stated during a meeting with US industry representatives that it doesn't intend to target Russian aluminium (after all 10% of US aluminium comes from Russia), the metals market has moved into "self-sanctioning" mode.

Generally speaking Banks are refusing to issue credit letters for the purchase of Russian metal and those willing to pay cash upfront are hesitant due to potential reputational damage.

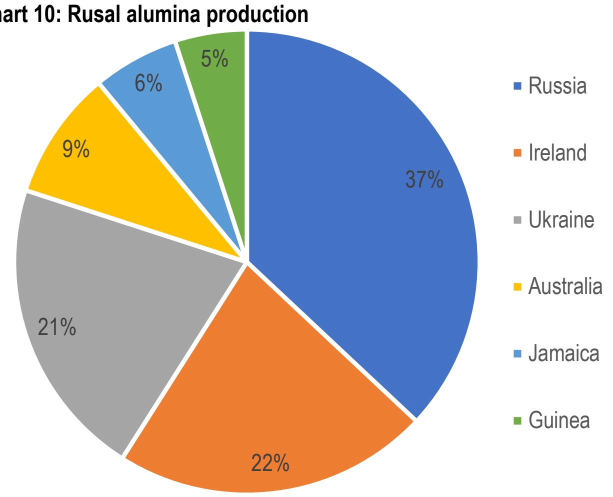
Meanwhile, logistical issues are also springing up with companies like Maersk putting a stop on booking to and from Russia.

How are things developing on a metal by metal basis?

Aluminium:

The "self-sanctioning" be it through the rejection of emitting credit letters or simply of not doing business for reputational reasons could eventually mean that Russia finds itself lacking bauxite. Adding to that is Rusal's inability to receive shipments from its Nikolaev refinery in Ukraine. The unit produces 1.75Mtpa of alumina equal to 21% of Rusal's production (chart 10). This equates to around 900ktpa of aluminium. All in all this represent almost a quarter of Rusal's aluminium production. Rusal's aluminium output isn't expected to drop immediately on the back of the Nikolaev factory. The company is estimated to have weeks' worth of reserves which should let it continue operations, nevertheless its capacity to buy spot alumina is limited given the "self-sanctioning" taking place.For those reasons, and holding things constant, in our view aluminium is the metal that is most at risk of seeing a large price surge.

Chart 10: Rusal alumina production



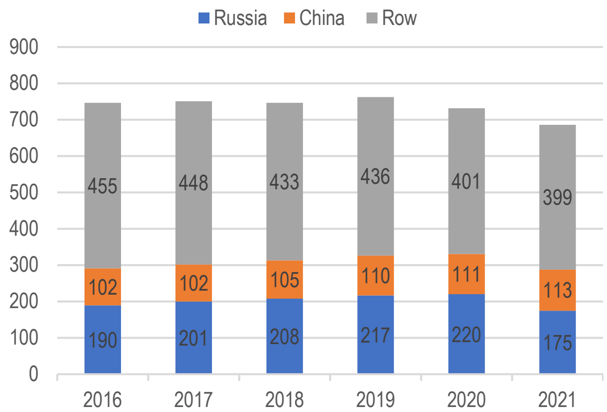
Sources: Natixis, WoodMac

Nickel:

Russia produces around 8.4% of the world's nickel but more importantly, it produces around 25% of the world's nickel sulphide (chart 11), a key component of the production of electric batteries.

Even though this is a substantial amount which is at risk of "self-sanctioning", our view is that even if the current situation drags on or worsens, the impact on prices is likely to be less extreme than for aluminium. This is because Indonesia's HPAL operations are expected to become operational this year which should compensate for Russian disruptions.

Chart 11 : Global nickel sulphide mined output (tonnes)



Sources: Natixis, WoodMac

PGMs:

Currently facing the PGM market is the flight ban over Europe. This is complicating the logistical supply of PGMs which is mainly shipped by plane. This has caused a price surge given that Russia produces around 43% of palladium and 14% of platinum.

Steel:

It has been reported that the biggest Russian steelmakers have seen a drop in exports. Bloomberg reports that Germany has halted almost all of its steel purchase from the country. It was also reported on the 1st of March that Severstal has halted all shipments of steel to Europe (3 million tonnes) and that it is looking for new venues after its owner was sanctioned. We are less concerned about the impact on steel given the depth of the market.

For more details on Russian metal output and Europe's exposure please click here

	2022				2023				Annual	
	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	F2022	F2023
Gold ($/oz)	1,890	1,950	1,700	1,600	1,550	1,400	1,375	1,375	1,785	1,425
Silver ($/oz)	24.0	26.0	23.0	20.0	19.0	17.5	17.0	16.5	23	18
Aluminium ($/t)	3,267	3,400	2,400	2,450	2,450	2,500	2,550	2,600	2,879	2,525
Copper ($/t)	10,000	10,000	8,300	8,400	8,500	8,600	8,600	8,700	9,175	8,600
Nickel ($/t)	24,000	25,000	18,800	18,800	19,000	19,200	19,400	19,600	21,650	19,300
Iron ore ($/t)	110	80	82	82	75	75	70	70	89	73

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