Its been 2weeks since the entire province of Hubei was put under quarantine, shutting in 60m people, which was ill-timed with the Lunar New Year as it negatively impacted risk/liquidity. Now that *global* markets have fully returned and the 'falling knife' price action in Copper (and crude) has somewhat abated, here are some thoughts NOT on the virus itself (which is well covered), but on implications for macro/sentiment & global growth (#1) and an early attempt to gauge whether the sharp repricings and responses in metals are fair or not (#2 for precious, #3 for base).

While headline risk has thawed somewhat, uncertainty remains high while companies warn of an economic crisis and analysts scramble to downgrade growth (and thus base metals) forecasts; markets are pricing in rising downside risks to growth, but less so, further intervention (from OPEC to PBOC and the Fed) and/or the trade complications; the situation remains fluid and visibility murky with large-scale restrictions still in place.

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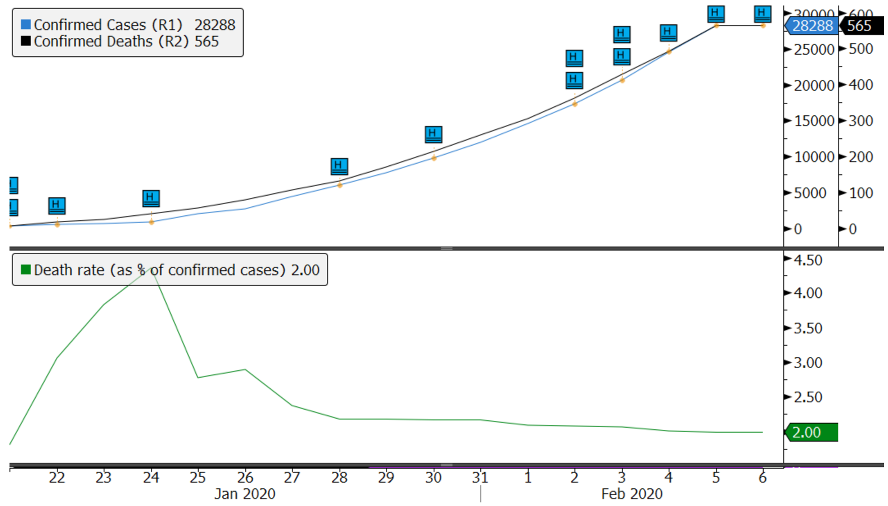
SUMMARY:

- **Macro demand fears shift from Trade to Coronavirus in 2020, but Corona virus impact has potentially larger demand implications as China continues to physically "unplug"**
- **The tug-o-war between deflationary negative event risk (lower commodity prices / demand destruction) being fought by inflationary CB and government stimulus measures, becomes accentuated**
- **The virus recovery is driven by 3 unknown factors; its about timing and whether demand was "lost" vs "delayed" - some was lost, most is delayed (?) but the situation is still very fluid, full impact unknown and policy response/restrictions shifting**
- **SARS comparisons are mostly ONLY useful from a immunology perspective with more differences (than similarities) in market structure, macro backdrop, Chinas role and metals dynamics between SARS in 2003 and Coronavirus in 2020**
- **Respect the striking (Chinese) response, implying the concern (and risk to global growth) is real.**
- **Hubei is a manufacturing & auto hub and physically impacts the production & consumption of Zinc/Lead and Palladium/Rhodium, more so than the others. While the general (and sudden) Chinese demand slowdown & shut-off will continue to upend ALL commodity markets and supply-chains**
- **GOLD is under priced & cheap given reigniting growth fears being fought with additional stimulus from (virus infected) CBs, and potentially also the Fed who can quickly respond to any threat to *global* growth. Marginally weaker physical Asian demand should be offset by protection/haven related Western inflows, despite positioning* making $1550 a buy opportunity, and the start of a new floor into a year where growth risks are firmly tilted to the downside**
- **PLATINUM is overpriced & expensive due to risks around a core sore spot - jewelry demand.**
- **This may be one (demand destruction) event that could knock PALLADIUM lower, due to a "cascade" of auto pant closures in Asia but the structural backdrop remains very bullish due to a rise in loadings this year and a cautious approach by consumers to preemptively restock. With equally convincingly bullish/bearish arguments, when in doubt, respect the trend.**
- **COPPER is underpriced & tactically cheap because the knee-jerk washout of the consensus trade this year (long Cu), also unfairly shouldered most macro fears during an illiquid period; the physical deficits & expected tightening cycle is mostly only delayed due to Corona as Hubei province isn't very important to Copper physical market. Tactical opportunities but not structurally bullish (for now)**
- **ALI prices are (still) overpriced if demand destruction is prolonged, alumina-related supply disruptions don't occur and the surplus (and stocks) continue to build.**
- **The policy wild-child NICKEL usually holds out for any EV upside risk despite fundamentally softening demand profile being accentuated by Corona**
- **Zinc is expensive given demand is acutely affected by Hubei "unplugging" (it is Chinas largest galvanised sheet-producing region), at a time when prices are contending with a shift toward structural surpluses.**

Corona Virus Outbreak

Confirmed cases & deaths & death rate



Source: Bloomberg, Scotiabank Commodities Stratgey

NCOVCASE Index (Coronavirus (2019-nCoV) Globally Confirmed Cases) Coronavirus Ou Copyright© 2020 Bloomberg Finance L.P. 06-Feb-2020 13:43:13

1. MACRO:

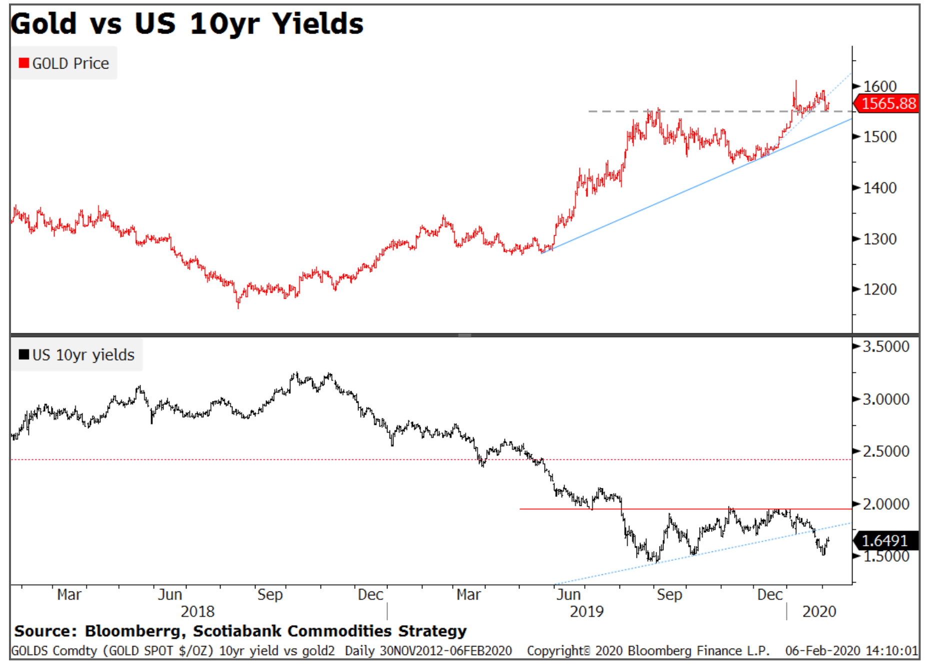
- **The impact of this "sudden stop" economic impact on global growth and related forecasts is large;** it has and will continue to upend commodity markets and supply-chains more so than others given the obvious - China is the largest consumer of most commodities, meaning the potentially significant demand destruction has important prices implications
- **Shift in demand fears**: Demand fears driving market sentiment & focus (and thus positioning) will now swing from trade (dominant feature / driver in 2018-2019), to the Coronavirus (in 2020). The coronavirus is a typical outlier / blackswan / force majeure event that carried an extreme impact (e.g: an -13% and -25% top-to-bottom capitulation in Copper and Oil in 10 days, with $400bn wiped off the Chinese equity market inducing a large scale liquidity injection/response from the PBOC this week)
- **Virus recovery; its all about timing and whether demand was "lost" vs "delayed":** Three factors, largely all unknown, will dictate the recovery's timing: 1) length of time to bring the virus under control (the pace of infections has slowed), 2) how long before the government relaxes its major restrictions on daily life, 3) And how long after that the country resumes normal business activity and the impact on consumer sentiment
- **"Bad-is-good", always?:** Markets will have to navigate 1) the typical 'destruction-reconstruction' cycle (buy natural disasters / sell man-made ones 'theory'), 2) the bad-news-is-good-news cycle due to CB counteraction (tug-o-war between deflationary China shutdown and lower commodity pricing vs inflationary attempts to inject liquidity by PBOC and the Feds "QE" on any *global* weakness via Permanent Market Operations) and 3) the fact that asset prices are increasingly forward looking responding to an ever faster news (or misinformation) cycle while markets await the expected confirmation 'catch-up' in economic data and GDP / growth / earnings downgrades.
- **Consensus trades & beliefs:** a few market dynamics that were widely held include: 1) the inherent ability for US stocks to bounce on any dip (by definition probably the best example of a bull market as it interprets the news cycle in a consistently glass-half-full manner), 2) Chinese GDP was stable, albeit low at 6% YoY pre-virus, but will now likely be downgraded for Q1, 3) US election risk remains underpriced with no protection being priced in on a progressive Democratic nominee; consensus (unfairly) hinges on Trumps reelection no matter the nominee. The Corona virus has only altered #2 views
- **Respect the (Chinese) response**: China's response has been very striking (e.g. locking down entire regions with populations the size of countries, convincingly injecting liquidity into the financial system via open market operations , suspending flight in/out etc), implying the concern (and risk to global growth) is real. Theres a very strong message that the Goverment is committed to stabilizing markets & the economy but its NOT only to boost growth but to ensure social stability (coverage growing around fact that the infected have trouble getting treatment). The idea that Chinese leaders are thus also likely to sign-off on more spending and or tax relief/subsidies for virus-hit sectors, like the auto sector, is gaining traction.
- **SARS comparisons**: they're mostly ONLY useful from a immunology perspective. Through a macro and commodities market lens, there are more differences (than similarities) in market structure, macro backdrop, Chinas role and metals dynamics between SARS in 2003 and Coronavirus in 2020 --> 1) China was growing strongly (>10%) but a smaller % of global economy (~4%) in 2003, vs now (growing arguably sub 6% but accounting for 15% of the global economy), 2) Metals prices were fraction of current prices, were immensely immature markets hosting different market players, 3) news cycle / social media now provides immediate information & data but also comes at a cost of misinformation, 4) the demand destruction from SARS was mainly focused on Guangdong province and Beijing, but Coronavirus is now spreading to most of the economic centers in China, 5) SARS as a national health emergency in April 2003, when people had already returned to their working cities from the CNY, making the disruptions on industrial activities more limited than the Coronavirus.

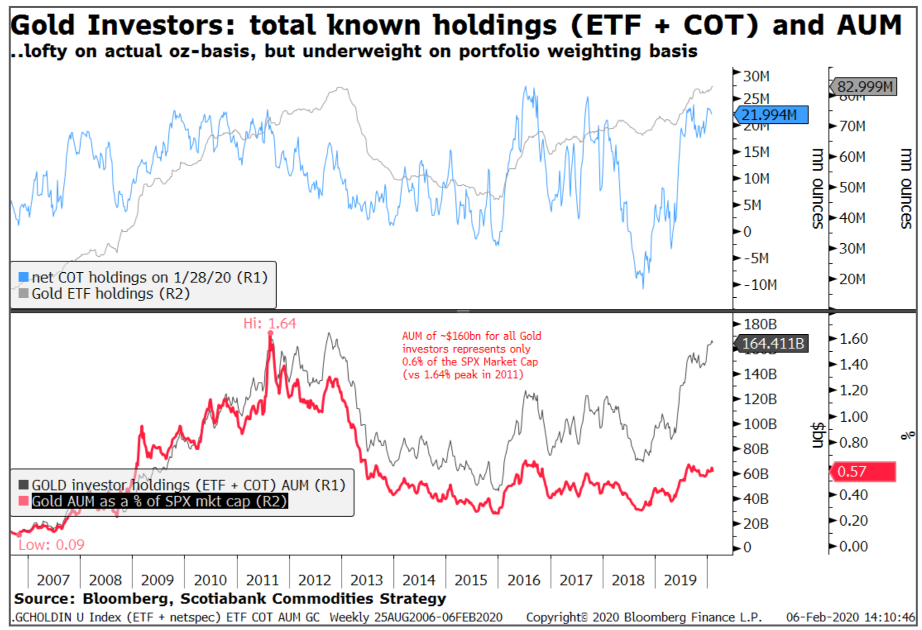
2. PRECIOUS:

GOLD is under priced & cheap given reigniting growth fears which is being fought with additional stimulus from (virus infected) CBs, but also the Fed who could be induced to cut earlier, or at the very least, expand their BS at a faster pace; they've shown that they can quickly respond to any threat to *global* growth. Marginally weaker physical Asian demand should be offset by protection/haven related Western inflows, despite positioning*

- Short-term price reaction ahead of $1600 was disappointing - many expected Gold to breakup above $1600 and hold as it got handed the new (Corona) catalyst, but its refusal to bust up/out was due to both a stronger US$ (competing for similar safe haven flows) and the lack of physical Asia participation/buying.
- Chinese jewelry demand was already fragile before the virus hit (dropping to a ~7 year low in 2019) due to 1) weak consumer sentiment and change in consumer preferences and 2) high prices in local yuan terms. Chinese New Year is supposed to be a strong period of both Gold (and Platinum) jewelry demand so this event knocks that physical support.
- That (physical) demand destruction should be offset by Western inflows hinged on the theme of slower economic / growth forecasts being fought with additional stimulus; for now, peak virus fears seem to be priced in and higher beta/riskier assets (eg: SPX, Palladium) are attracting the additional liquidity inflows since that is where they are best treated
- Virus headline risk & uncertainty remains high, trade issues may reemerge given the dent to demand, and consensus Chinese GDP at about 6% YoY is likely to be convincingly downgraded. Thus despite the upcoming political risks shifting from potentially super bullish scenario (Trumps election odds are at all time highs after the Iowa caucus results), $1540-1550 is a buy opportunity, and the start of a new floor into a year where growth risks are firmly tilted to the downside
- Technically, the uptrend support since the US/China phase one deal announcement (read: USD weakness) has been broken, ensuring $1550 is the new and tentative floor" , with a $1600 upside target; the 50DMA at $1520 is structural support.

**see page 22 of the Precious Outlook indicating that Gold investor (ETF+COT) holdings are still underweight as a % of (equity) portfolios*





<------ LESS BULLISH ------> MORE BULLISH

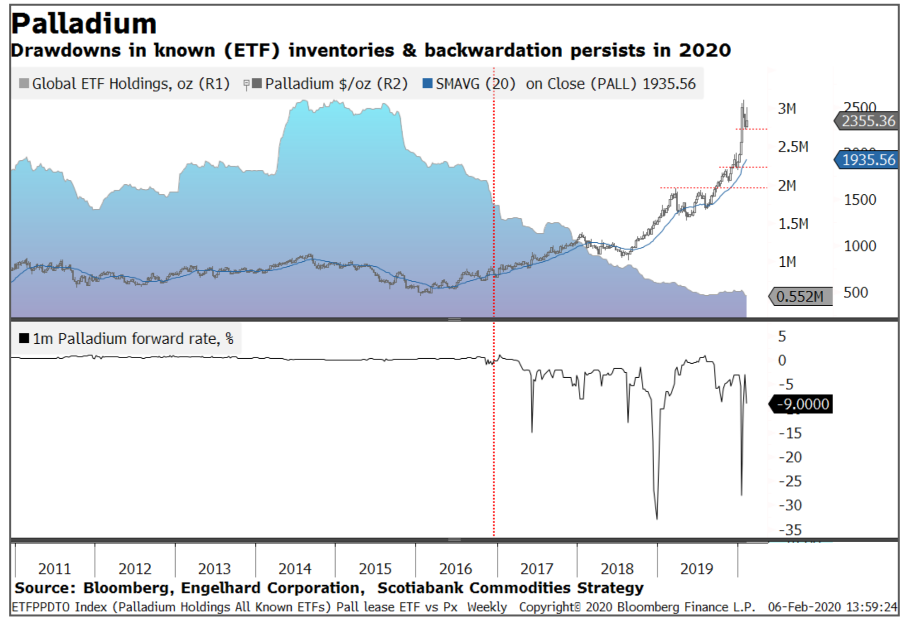
<------ LESS BEARISH ------> MORE BEARISH

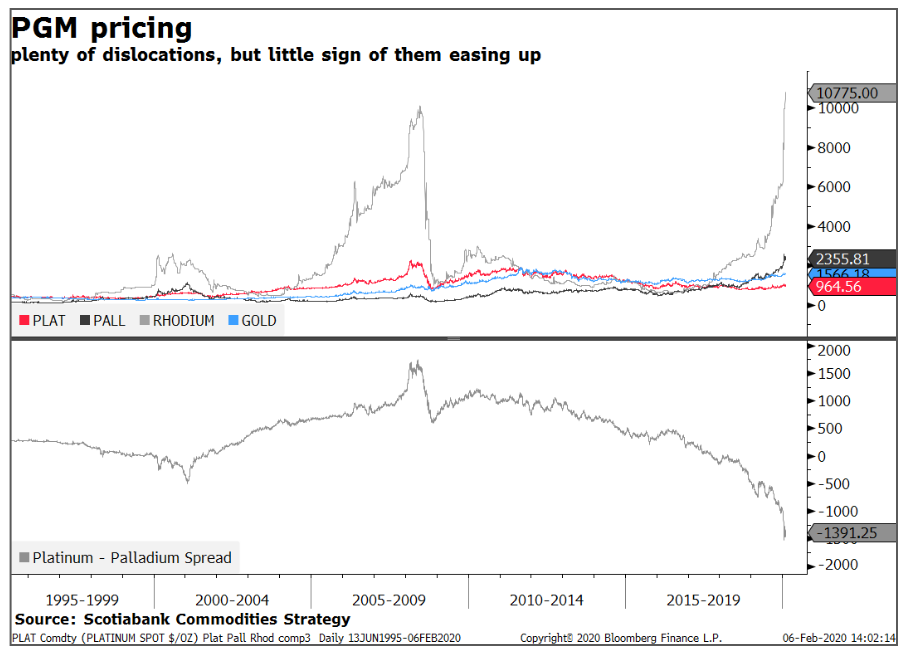
Tailwinds	Neutral	Headwinds
Increasing frequency of **'macro wobbles'** and derisking episodes due to geopolitical or off-calendar events (Corona virus); extreme and fast shifts in risk sentiment (from recession fears to exuberance) indicative of **late business cycle**	**Fed** reluctantly cut rates and now pausing, downplaying QE-lite/expansion of BS. Some **global central bank** policies putting the onus on fiscal policy and highlighting monetary policy limits	**Positioning and sentiment:** fast money (COT + ETF & perhaps OTC) is well ITM, with positioning saturation leading to downsizing; however the generalist (FI, Equities) investor remains largely underweight
Underlying **growth fears** persists, especially the fragile recovery in global **manufacturing** , now likely to escalate given impact on Chinese demand due to **Coronavirus**	**Trade, Geopolitics**: de-escalation in the US/China trade with Phase 1 deal. Any formal comprehensive US/China trade deal or Phase 2 unlikely before US 2020 elections. However, increasing frequency of “off-calendar” geopolitical events/risks	Lack of ***sustained* macro fear/equity volatility** (VIX <20) given the inbred resilience of US equities to bounce. Super complacent risk regime into 2020
US election risk remains underpriced with little premium being priced on a progressive Democratic nominee with consensus (unfairly) hinging on expectation that Trump is reelected no matter the Dem nominee	A stubbornly perky **US$.** Outlook on whether the $ extends into cyclical weakness is mixed, given its reserve currency status & historical resilience	**2020 reflation risk or fear** of sustained US data outperformance and / or trade deal promoting a more hawkish Fed into 2020
Fiat currencies politicized with markets in a **cold currency war**; growing risk of US currency intervention to weaken the $ and reduce the dollar dominance (and dependence on it) in financial system	Higher pace of **Central Bank** gold buying, diversifying against fiat/US$ and slower global growth in 2019; small risk of CB demand slowing in 2020 due to significantly higher prices and renewed trade optimism	**Muted physical support** from India & China as higher prices in local terms defer purchases; XAUINR near record highs & XAUCNH at 6 year highs deterring jewelry consumption
Growing talk around **alternative CB tools** more relevant as monetary policy reaches its limits	Gold Producer consolidation / M&A driving **"peak gold"** supply calls	Large **dishoarding** from traditional physical Gold countries given price surge
The **independence of CB**s increasingly under threat from populist governments; skepticism growing around power of CBs s to remove volatility & pump up asset prices amidst trade tensions	Pushback on negative yielding debt securities (peak level of $17tn likely in), but lower for longer **global bond yields** remain	Higher yielding Gold ‘detractors’ like **alternative currencies or assets** compete for similar flows, especially in EM markets where currencies are depreciating
Unsustainable US **debt/fiscal** path with swelling twin deficits. A structural theme, and one which has taken a backseat to trade/politics		
A pickup in **socialist** rhetoric and policies with social pendulum swinging left in US and abroad		

Source: Scotiabank Commodities Stratgegy

PGMs: Platinum is overpriced & expensive due to risks around a core sore spot - jewelry demand. This may be one (demand destruction) event that could knock Palladium lower, but the structural backdrop remains very bullish due to a rise in loadings this year and a cautious approach by consumers to preemptively restock. With equally convincingly bullish/bearish arguments, when in doubt, respect the trend.

- Given the resurgence in lease rates & tightening of **PALLADIUM** forwards and rallying of Rhodium toward $11,000 this week, the return of China to markets after the New Year has clearly been associated with inventory **RE**stocking, surprisingly to many.
- That is, despite the fact that China is the largest Palladium consumer with auto demand accounting for 30% of global demand, now being affected by the virus causing large scale supply-chain disruptions and Hubei (a major car manufacturing hub) on lockdown. Numerous reports of a "cascade" of auto pant closures in Asia is being overlooked; Palladium & Rhodium are factoring in supply fears (threat of Eskom disruptions, current lack of availability) and technical changes (emission regulations) vs demand fears (reduced or only temporary demand stall because of the automaker closures in Asia). Even with an expected short-lived slowdown in Chinese car sales due to the virus, 2019 auto sales vs palladium price trends clearly proved that auto companies would rather pay up or "do whatever it takes" for those metals than face scrutiny and fines for emissions.
- Chinas determination to shore up their economy and likely with more spending and or tax relief/subsidies for virus-hit sectors, like the auto sector, will support that sector in the longer term limiting the negative impact on car sales & production. Car ownership may actually increase given the restrictions on public transport during the virus outbreak. Note pure Eelectric Vehicles (Teslas) do NOT contain any PGMs, but both assets (Tesla and Palladium/Rhodium) represent the same "clean energy / emission trade" (PGMs with cleaner hybrid cars, Tesla with EVs), which perhaps not coincidentally have strongly repriced in Q1'20.
- **PLATINUMS** 2019 revival was due to Golds statement repricing on the escalating trade dispute and Fed entering a cycle of rate cuts. The combined 3.4m oz accumulated by investors last year is its strongest year of inflows on record and should have been worth more / a larger price reaction. That clearly indicates a structurally oversupplied fundamental profile in which subdued Chinese jewelry demand (already falling for 5 consecutive years) is likely to act as a an even larger drag on prices, as Corono fears keep people at home and spending less on jewelry/luxury items.
- Overall, the **PGM** market is structurally shifting away from a consumer friendly pricing environment the past decade, to a producer friendly regime, and one one with higher volatility and more frequent erratic illiquid episodes as the core end user group has few substitution options and remains under owned.





3. BASE METALS

Copper: Prices are underpriced & tactically cheap because the kneejerk washout of the consensus trade this year (long Cu), also (unfairly) shouldered most macro fears (short-selling) during an illiquid period; the physical deficits & expected tightening cycle is mostly only delayed due to Corona. Tactical opportunities but not structurally bullish

	Model Implied price with China at 4% YoY GDP growth	Monthly correlation since 2002 (conviction level)	Corona Low price	% Distance from 'recession prices'*
Copper	$4,950	0.1	$5,550	12%
Ali	$1,025	0.6	$1,690	65%
Zinc	$1,650	0.2	$2,140	30%
Crude	$47.80	0.2	$49.50	4%

Simple regression of Chinese GDP vs monthly Base metals pricing since 2002.

Source: Scotia Commodities Strategy

- Copper (and oil to a degree) have unfairly shouldered a lot of the demand-shock fears since they are the preferred macro proxy (on Chinese growth) BUT also have been utilized as a hedge by some investors against Chinese equities (downside) exposure given that their market was shut for CNY
- Consensus Chinese GDP is about 6% YoY with "several thinking even 4%" is more likely. That's perhaps a low probability / high risk / recessionary scenario, but with risks firmly tilted to the downside, and markets debating whether demand is simply 'delayed' or actually 'lost', its worthwhile to try outline potential worst case floors (table)
- *Thus, the "Corona lows" of the above come within 12% (Copper), 65% (Ali), 4% (crude), and 30% (Zinc) of the model-implied levels. Through this lens, Copper and Crude have shouldered most of the downside risk, and are technically closer to fundamental 'worst-case' floors vs the rest.
- Copper was one of the few (only) commodity consensus trades that was best positioned to capitalize on the mini/fragile global recovery into 2020, given its expected tightening fundamentals; we were also on board listing Copper as a preferred trade for 2020 *(FICC Top Trade idea note).* This outlier event has changed, well delayed, that thinking
- Fundamentally, Hubei province isn't very important to the global copper PHYSICAL market; theres no smelting/refining operations there. However Hubei is an important center for automobile production (accounting for <10% of China's total copper demand) while semi-fabricating capacity there is more limited (tends to be located in the eastern coastal provinces). This outbreak should not significantly alter coppers S&D balances, and perhaps just "delays" the upcoming deficits (averaging ~110k mt over the 2020-2022 period) to Q2-Q3.
- China's copper buyers are asking Chilean producers to delay/reschedule shipments due to port shutdowns, as construction of new projects are delayed. On the flipside, the buildup of sulphuric acid (by product of Copper production) is also a big threat to smelter production as the high inventory of acid has started to reduce utilization rates and thus output at a few (not many!) smelters. Overall, expect (cathode) stocks to increase more than the seasonal upswing this quarter due to the lackluster domestic demand and reduced road transportation
- There continues to be an asymmetric response to the fear of demand-shocks (in the short-term), over any supply-risks in 2019/2020. Supply-side dynamics should play a greater role in 2020 IF demand fears (trade, Corona virus) aren't as shocking as currently being priced in. I.E: there is a some probability of a pretty bullish outcome with a classic reflation trade and manufacturing rebound post Coronavirus that unleashes pent-up demand). *See table below & Base Outlook page 9*
- Coppers other upside stems from potential currency risks (structurally weaker USD) and underappreciated inflation risks (PBOC stimulus measures; the affinity for Global CBs to let their economies run a little hot). That will create a strong tailwind for all commodities (as an expected inflation hedge), but especially Gold, Oil and Copper; they could earn some late-cycle respect from investors as markets shift from financial/equity inflation into real asset inflation.

	Tailwinds	Neutral / supportive	Headwinds	
<----LONGER-TERM ---- SHORT-TERM --->	**1H'20 reflation risk** on Global data outperformance, phase one trade deal and/or Chinese manufacturing improvement (post Coronavirus unleashing pent-up demand); that will promote inflows into growth-sensitive commodities	**The Fed** pre-emptively cuts rates in 2020 due to trade, geopolitical/off-calendar risks & slower growth. **Global central bank** policies follow suit which supports manufacturing PMIs	An unpredictable multi-front **trade/economic war.** Despite phase 1 deal, 25% tariffs remain on most imported Chinese goods ($250bn), with Phase 2 and/or any comprehensive US/China trade deal unlikely before US 2020 elections	<----LONGER-TERM ---- SHORT-TERM --->
	Exchange inventories running well below 10 year average; LME + SHFE + CME hold under 400k mt	**Chinese macro demand data** remains overall supportive --> auto sector remains weak & investment in the power grid behind budget but offset by solid growth in machinery & household appliances & a ramp up in semis	A stubbornly perky **US$ and overall still weak EM/FX & yuan** (despite recent strength). Outlook on whether the $ extends into cyclical weakness is mixed, given its reserve currency status & historical resilience	
	Negative supply growth in 2019 (the second year the past 3 years) potentially having a lagged impact on prices, spreads and inventories	Collective rollover in **Global Manufacturing** sector in 2019, but a bottom has formed, followed by with a fragile recovery due to steady CB easing	Geopolitical / off-calendar event risks re-emerge with **Coronavirus** a hit to Chinese demand potentially causing **Chinese GDP to fall** toward to 5.5% (vs 6%)	
	Fundamental balances shifting from period of surpluses to deficits, as highlighted by large downward trend in TCRCs indicating a structurally tightening path	Extreme negative sentiment reflected in outsized **short paper positioning,** with around half of the original positioning already covered	Scrap supply and **aluminum substitution** (given low availability risk and relatively lower prices) are constraints to upside Copper pricing	
	The **decarbonisation** of stationary power (wind technology) and **electrification** of transport (Electric Vehicles) should progress.	**Chinese stimulus:** past fiscal response (increase in project approvals and special bond issuance by local gov) could translate into more infrastructure spending; monetary policy (loan prime rate guided lower, cut in RRR) meant to fade on trade optimism but will be reignited due to virus/growth fears	**Late business cycle** & late **super commodity** cycle, provide structural headwinds	
	Emerging Asia (China, India, ASEAN), China's **Belt and Road** initiative, population growth, rising living standards and the continuation of **urbanization** are opportunities for rising Cu demand growth			
	Grade declines, rising input costs, a scarcity of high-quality future developments and **ESG** should constrain the ability to meet growing demand at low cost and with limited political risk			

Source: Scotiabank Commodities Strategy

Ali prices are (still) overpriced if demand destruction is prolonged, alumina-related supply disruptions don't occur and the surplus (and stocks) continue to build.

- We expect marginally lower prices in 2020 of $1750/mt, as the marginal cost curve will continue to fall , while the demand rebound remains fragile. The virus creates even more downside risk to the forecast given auto supply-chain disruptions.
- While Hubei province is NOT a center for Ali production, downside price risk hinges on this prolonged (Chinese) demand destruction ensuring stocks keep building from already high levels.
- Upside price risk stems from the chance that alumina cannot be supplied to smelters (triggering shut downs & causing supply disruptions) and/or if producers delay ramp-ups given weak prices and suppressed demand.
- Ali enjoys the closest correlation with Chinese GDP, with a model implied 'recessionary price' (GDP at 4%) of $1690 (or 65% below current levels) outlining some decent downside risk. In addition, the major repricing in crude has now lowered Aluminums cost of production floor even further which should drive Chinese Ali production growth, especially once economic activity returns

Nickel: the policy wild-child usually holds out for any EV upside risk despite fundamentally softening demand profile.

- Hubei province has NO NPI capacity, but theres still downside risk around any impacts which would come from a supply-chain / logistical disruptions as the extended holiday means stainless steel production will remain weak for longer than normal.
- The idea that Chinese leaders are also likely to sign-off on more spending and or tax relief/subsidies for virus-hit sectors, like the auto sector, has put a bid into “clean energy / emission” trades (i.e.: Tesla, as well as battery and or “green metals” such as PGMs), and could be an upside price risk for Nickel.

Zinc is expensive given demand is acutely affected by Hubei "unplugging" (it is Chinas largest galvanised sheet-producing region), at a time when prices are contending with a shift toward structural surpluses.

- Hubei is a major auto production hub and China’s largest galvanised sheet-producing region. Downside price risk arises especially if demand destruction is prolonged but also because the eastern provinces (Guangdong, Tianjin, Shanghai, Jiangsu, Zhejiang) host many zinc-related industrial plants and have extended the holiday to 9 February.
- Zincs “Corona low” of $2140 is still $500/30% above the worst case floor (4% Chinese GDP), and fundamentally Zinc is shifting into structural surpluses, implying prices are overpriced even if the best case plays out (a resumption in activity offsets all previous demand losses)

Lead:

- Hubei is a large a lead recycling province (it doesn’t have any major primary producing mines or smelters) but it is also a large lead-based battery production region. Seasonally & historically, Q1 lead consumption is very soft, so its likely this virus accelerates the consumption slowdown. Prices are perhaps overpriced/ expensive.

Referenced notes:

2020 Base Outlook*

2020 Precious Outlook*

Top FICC ideas: Long Copper

*Both do NOT take into account the effect of the Corona virus on demand, S&D balances and price forecasts! Scotia house view has yet to change balances & forecasts (likely); this will be communicated as soon as possible.

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