

Metals Strategy: Flow update—who owns what?

Weekly data positioning recaps add little value unless put into context of price action, seasonal norms and historical flows. Thus, with Q1 behind us, some noteworthy price changes (the Palladium capitulation, strong Nickel & Zinc rallies, Golds new YTD lows) and outsized flows (abnormally large investor inflows into platinum, newfound bearish bets in Silver, strong zinc inflows), there are a few interesting questions & themes around positioning worth exploring:

CONTACTS

Nicky Shiels

Commodity Strategist (Metals)

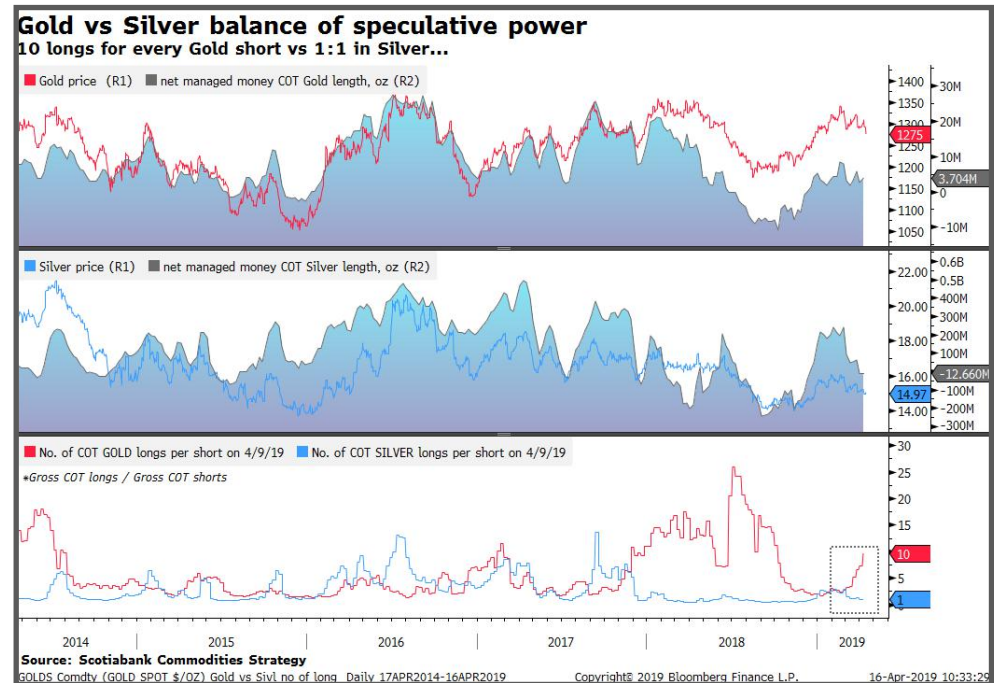
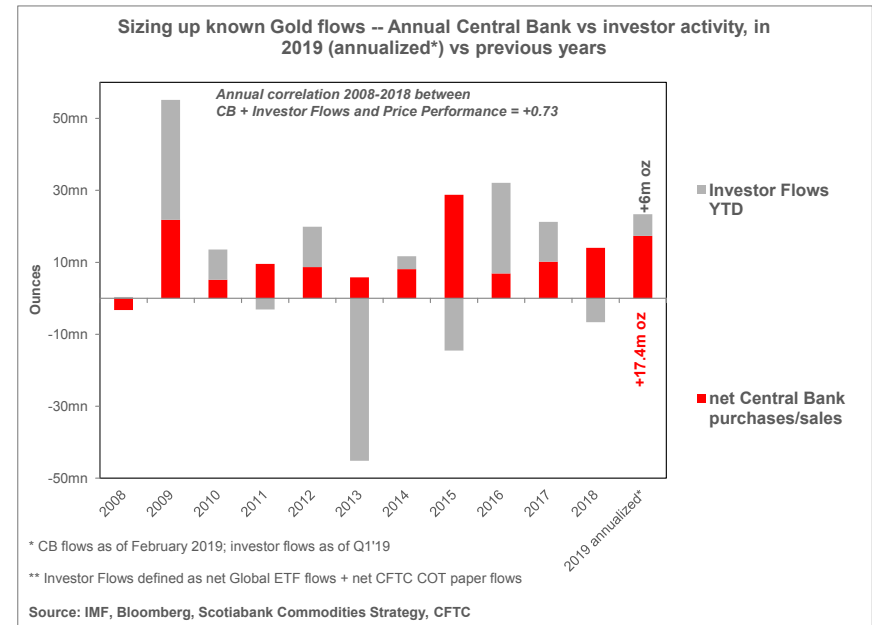
212-225-6724

Commodities Derivatives

- **Has Silver positioning been a leader indicator; is this the return of the overpowering short precious trade (seen in 2H'18)?**
 - Despite combined CB & investor annualized inflows of over 23m oz (which would be the largest since 2016), Gold prices were largely unchanged in Q1'19, highlighting that the known flow data doesn't fully explain away price action; there was either a lack of physical OTC buying or there was active (and unknown) OTC selling
 - There are currently 10 long investors for every short in Gold; in Silver there is 1 long for every short; that serves to show there is still scope for fresh Gold shorts to enter from either a historical basis, or relative to Silver as a somewhat leading indicator. Page 2
- **Is the combined 2.4m oz Platinum investor inflows (ETF + COT) real or fake, given the lack of expected price appreciation?**
 - Potentially, but tough to confirm. A few explanations behind the lack of a larger repricing higher in platinum (only 10%) given outsized inflows: 1). The reporting data is wrong. 2) Inflows are not fresh; its simply the reallocation and shifting in ownership of unwanted metal onto exchange, due to a lack of real demand and/or event risk, 3) Platinum is wildly oversupplied more than expected
 - Applying an assumption that ~500K oz (almost all) ETF inflows YTD are 'fake' and accounting for real COT inflows, Platinum, should still be >30% higher vs current prices, based off historical flows/price correlations. However, the longer platinum doesn't own up to this (by reclaiming \$1000 and/or -\$200 discount to Gold, at a minimum) the larger the threat grows if there's any unwind in these investor flows. Page 3
- **Who is actually participating in Palladium given investors were not a major contributor to the large price reset?**
 - Given price volatility and limited exchange stocks, theres plenty of barriers to entry for larger investors to enter the paper market—that's indicated by Aggregate Open Interest plummeting to 22K contracts, near a 7 year low.
 - However daily average volumes have not been dented at all and given that price action is extremely technical (its 'performed' and consistently trended above the 50DMA for 9 months before mach) intraday CTAs, momentum participants and/or larger OTC players are actively playing; longer term positioning commitment to the space is low, but (daily) activity is high which may seem counter-intuitive. Page 4
- **Nickel & Zinc outperformed in Q1— is the East (SHFE) or West (LME), fresh length or short covering—behind the moves**
 - LME positioning surged 1.5m mt (to multi month high of ~7m mt), while SHFE added relatively less (+1.1m mt) but took their positioning, on an historical basis, to record highs. The combined SHFE & LME positioning sitting at ~10m mt is lofty and a warning sign given the short-lived nature of extreme positioning in zinc.
 - SHFE shorts were caught out following the rally in Iron Ore after the Vale dam disaster the end of January, and were forced to buyback ~260K mt (of Aggregate OI) taking Nickel from under \$11K to over \$13K. Nickel has since been able to hold these gains, straddling \$13,000, led mostly by equally steady inflows across LME (Agg OI increased ~120K mt since Vale) and SHFE (~140k mt). Page 5
- **How much fire power does Copper have into key sticky resistance at \$6550-6600?**
 - Aggregate Open Interest across CME (HG), LME & SHFE, own a combined 13m mt (low 11.5m mt, high >16m mt), with no sizeable inflows in 2019. Thus, given the heavy lifting required to retain \$6600, its a somewhat constructive setup that Copper is rather underinvested, with scope for a combined 1m mt (to attain 5year average) up to 2-3m mt (to attain peak positioning) of inflows potentially available across all listed exchange products
- **Any clues into why Aluminum is so complacent and contained?**
 - No. SHFE participants exited out of a chunky 1.2m mt of positioning in 2019, helping to take a combined proxy (LME + SHFE) of ownership down to cyclical lows below 20mt mt highlighting the market indifference, compressed price action amidst a lack of a catalyst and conflicting fundamentals

GOLD:

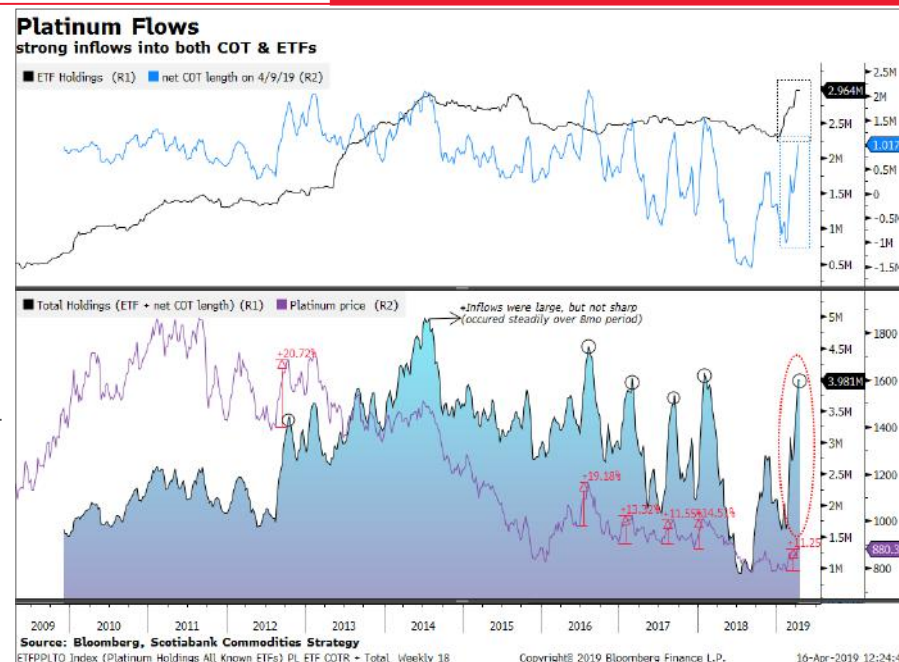
- During Q1'19, Central Banks* bought almost 90tonnes (2.9m oz; an annualized rate is 17.4m oz). Over the same period, investors (ETF & COT) added 1.5m oz to Gold holdings, almost 1/3rd less than what Central Banks accumulated. Overall despite combined CB & investor) annualized inflows of over 23m oz (which would be the largest since 2016), Gold prices were largely unchanged in Q1'19, highlighting that the known data doesn't fully explain away price action; there was either a lack of physical OTC buying or there was active unknown OTC selling.
- The most recent COT report shows net managed COT investors only own 5.6m oz (down from a YTD peak of 11m oz and brushing up against cyclical lows). The positioning exit, unlike in Silver, was driven by long liquidation—as Gold prices failed (terribly!) at \$1350, almost 5.5m oz of gross investor length exited. Silver, on contrary, saw fresh shorts enter (gross spec shorts doubled from a low of 26K contracts to a YTD peak of 52K contracts in 6weeks as Silver prices failed at \$15.60).
- There are currently 10 gross COT longs for every COT short in Gold; in Silver there is 1 long for every short (graph 2, panel 3). And while the relationship between the these 2 positioning proxies hasn't correlated well from 2018, it serves to show there is still scope for fresh Gold shorts to enter from either a historical basis, or relative to Silver as a somewhat leading indicator
- Thus, the further \$40 repricing lower in Gold through key support at \$1280 yesterday was/is probably mostly driven by the influx of fresh opportunistic shorts. The macro backdrop for owning Gold has soured considerably as prices are torn between dovish Central banks but rising risk assets, a lack of any macro, economical or geopolitical fear, a stubbornly structurally strong \$ and rising yields on hopes for better ex-US data.



Platinum

- Inflows into Platinum products in 2019 has been astounding; ETFs have accumulated ~660k oz in Q1'19 (taking overall platinum holdings to record highs of ~3m oz) while levered money (paper) increased holdings by ~2m oz. These extremely large combined inflows only helped platinum reprice from a multi-decade low, up >10% in Q1'19 toward \$900?
- Despite Platinum's trait of the gross underperformer ('let down') of the complex, very large inflows have historically been associated with more than 10% price appreciation over the past few years:
 - There's been 5 similar instances of large *sharp* investor inflows since 2012, that were associated with price rises ranging from 12% to 21% (graph 1, panel 2).
 - If total investor holdings are above 3.5m oz (current = 4m oz), Platinum has averaged almost 50% higher the past 10 years (\$1270), and has averaged a slight (\$20) premium vs Gold (almost double the current spread level). Table 1A.
- There are a few explanations behind the lack of a larger repricing higher in platinum given outsized inflows:
 1. The reporting data is wrong
 2. Inflows are *not* fresh with new shares created and but not new metal secured; its simply the reallocation and shifting in ownership of unwanted / unneeded metal onto exchange/ ETF vaults*, due to a lack of real demand and/or event risk (SA elections, M&A activity)
 3. Platinum is wildly oversupplied more than expected
- The breakdown in ETF *Palladium* flows and price action the past year, highlighted the idea that metal outflows (inflows) may actually indicate strong (weak) real demand and not necessarily point to the traditional relationship between investors inflows and price appreciation (and vice versa). Thus one can't rule out the belief that *some* (not all) Platinum ETF inflows perhaps stems from above ground inventory holders opting to put metal on exchange, perhaps in the hopes that inflows beget inflows and/or price appreciation, similar to the smoke & mirror game within the LME warehouse system.
- Applying an assumption that ~500K oz (almost all) ETF inflows YTD are 'fake' and accounting for real COT inflows, Platinum, *should still be* >30% higher vs current prices (table 1B), based off historical flows/price correlations.
- Overall, if most of these recent ETF inflows mimicked the 2013/2014 period (in which the market believed producers allocated metal onto newly created SA ETF products), the recent paper inflows alone and historical & relative price levels, show that prices should be over \$1000 at the very least; the longer platinum doesn't own up to this fact the larger the threat grows if there's any unwind in these investor flows.

* Note, the Platinum ETF inflows have occurred mainly on the South African exchange (Absa PT ETF "NGPLT"), the Swiss (ZKB "ZPLA" ETF) and the German exchanges (DBs "XAD3" PT ETF) - not coincidentally all consumer and/or producer hubs.



| Table 1A | |
|--|-----------|
| 2019 ETF inflows, oz | 660,000 |
| 2019 COT inflows, oz | 2,000,000 |
| Current Investor Holdings (ETF + net COT), oz | 4,000,000 |
| Average Platinum price, the past 10 years, when holdings >3.5m oz | \$ 1,272 |
| Current Platinum Price | \$ 890 |
| Average Platinum-Gold spread, the past 10 years, when Platinum holdings >3.5m oz | \$ (22) |
| Current Platinum-Gold Spread | \$ (400) |

| Table 1B: Scenario | |
|--|----------|
| Assumption that almost all (~500K oz) of YTD ETF inflows are not fresh purchases (but a reallocation onto exchange) | |
| I.E: Average Platinum price, the past 10 years, when holdings >3m oz but < 3.5m oz | \$ 1,158 |

Palladium

- The capitulation from palladiums all-time high of \$1615, toward lower \$1300s where it has currently found support, has some questioning just how much of a role speculative investors played. Box 1 highlights through an historical lens that investors profiting was minimal. In addition, there was not a large influx of predatory shorts (gross COT shorts actually bought back 120K oz on the palladium fall).
- ETF outflows—in this new regime—has not contributed to price declines, but to price appreciation. There was no sizable ETF flows during the Palladium repricing in March, but given the already limited holdings (multiyear lows of ~670k oz), the recent 50K oz of outflows the past month, is one sign that forward tightness could follow.
- Given price volatility and limited exchange stocks, there's plenty of barriers to entry for larger investors to enter the paper market—this is indicated by Aggregate Open Interest plummeting to 22K contracts, near a 7 year low. However that doesn't imply that *intra-day* CTAs, momentum participants and/or larger OTC players (which would not show up on Aggregate OI) are actively participating. Active month palladium price action is extremely technical (it's 'performed' and consistently trended above the 50DMA for 9 months) and average daily volume data for 2019 (see note 2) indicates no dent to daily participation rates.
- Overall, while there's limited scope (and inclination thus far) for shorts to enter, there's also limited room for gross investor length to exit as positioning has largely already been cleaned up. Length can potentially rebuild, but large accumulation is unlikely given the lackluster appetite now for Chinese end-users to stockpile again given persistent uncertainties around the auto industry (slowdown in local auto sales, implication of tax cuts and threat of Trump tariffs on the industry). Palladium prices are more elastic to short-term lease/forward rates, perhaps ETF flows, and any newfound technical trend which will be capitalized on by (still active) CTAs, as was the case for most of 2018/2019; longer term positioning commitment to the space is low, but (daily) activity is high, which may seem counter-intuitive

Note 1: Gross paper longs own 1.2m oz, a decent amount but only half of what they owned at the peak (2.6m oz in 2017 and 2013-2015 era). The below summarizes the positioning changes (Aggregate Open Interest) vs historically large 5-day moves to inform just how much of a role paper investors played...

The March 2019 \$200+ 5-day move saw ~390K oz of positioning (OI) outflows. Other large 5-day repricing:

1. May 2010 ~\$150 5-day fall with 390K oz of OI outflows
2. Nov 2010 ~\$100 fall with 330K oz of outflows
3. June 2011 ~\$100 fall with >400K oz of outflows

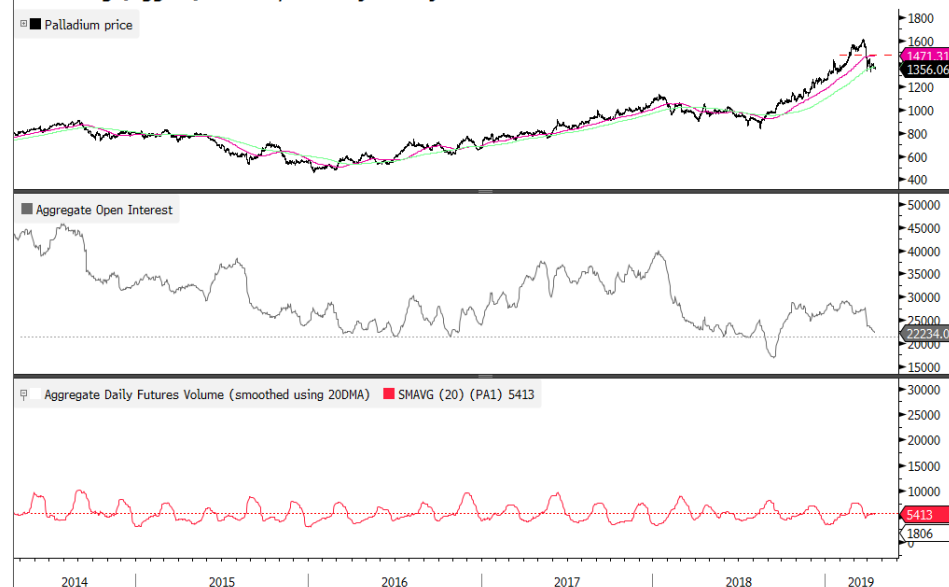
This recent \$ repricing was around *double* the historically large moves, but the size of the positioning exit was similar. IE: **IF there was major liquidation, positioning outflows should've and would've been much larger.**

Note 2: Average daily volumes:

- 2019 (YTD): ~5700x contracts, matching ~5700 contracts (2018), and more than the 2017 average volumes (~5600 contracts)

Palladium technicals & participation rates

Positioning (Agg OI) is clean, but daily activity remains normal



Source: Scotiabank Commodities Strategy, Bloomberg

PALL Comdty (PALLADIUM SPOT \$/OZ) pall tech Daily 17APR2014-16APR2019

Copyright© 2019 Bloomberg Finance L.P.

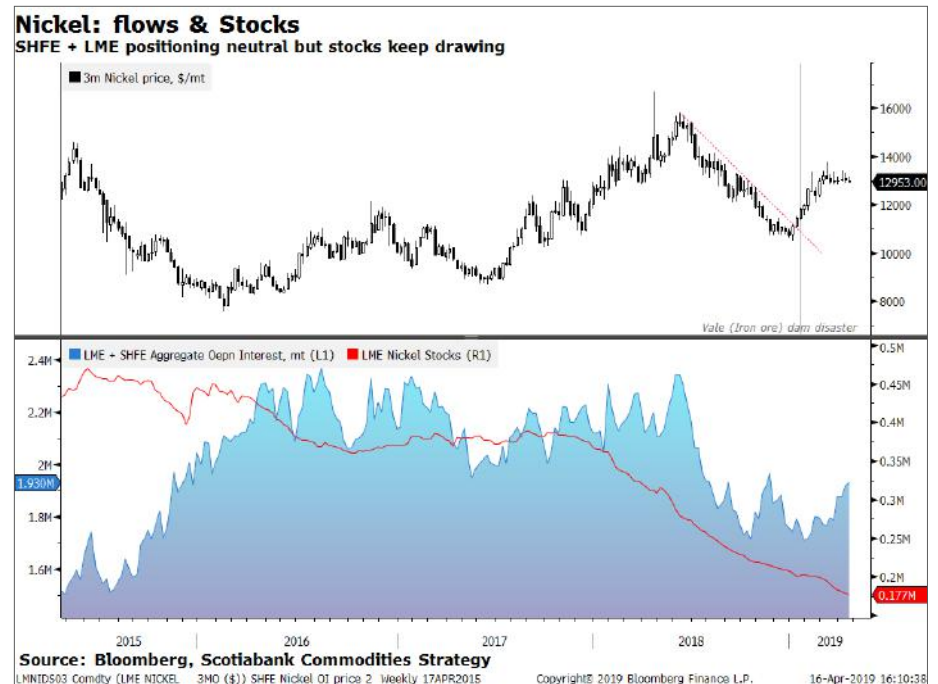
16-Apr-2019 14:32:50

Zinc:

- Given zincs surge in Q1'19 toward psychological \$3000, dissecting the type of flows behind the repricing is helpful. Both LME and SHFE participants accumulated, as stocks dwindled which shifted the curve into extreme backwardation (again) and investors began to price in the idea that stocks could reach zero before additional new supply is ramped up to feed the refined deficit.
- LME positioning surged 1.5m mt (to multi month high of ~7m mt), while SHFE added relatively less (+1.1m mt) but took their positioning, on an historical basis, to record highs. The combined SHFE & LME positioning (chart 1, panel 2 of Aggregate Open interest) sitting at ~10m mt, is both lofty and a warning sign given the short-lived nature of extreme positioning in zinc.

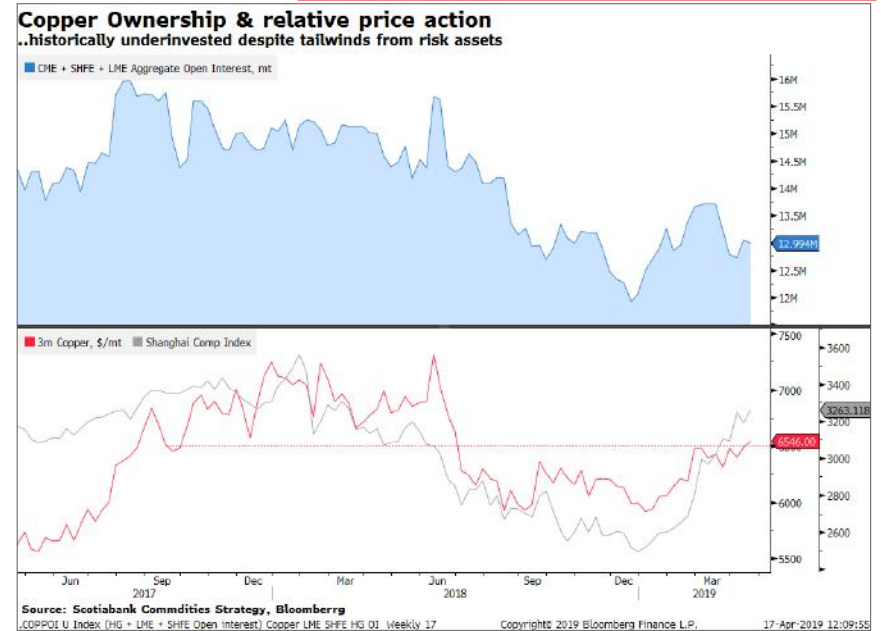
Nickel:

- SHFE shorts were caught out following the rally in Iron Ore after the Vale dam disaster the end of January, and were forced to buyback ~260K mt (of Aggregate OI) taking Nickel from under \$11K to over \$13K; they were the largest contributor to the bull market YTD gains.
- Nickel has since been able to hold these gains, straddling \$13,000, led mostly by equally steady inflows across LME (OI increased ~120K mt since Vale) and SHFE (Agg OI increased ~140k mt).
- Overall combined positioning stands at under 2m mt, extremely neutral and at cyclical averages; potential tailwinds could stem from either underinvested LME and/or SHFE crowd, which have not yet 'reacted' to the continued drawdown in stocks (graph 2, panel 2), probably since the market has not yet seen the required curve tightening.



Copper:

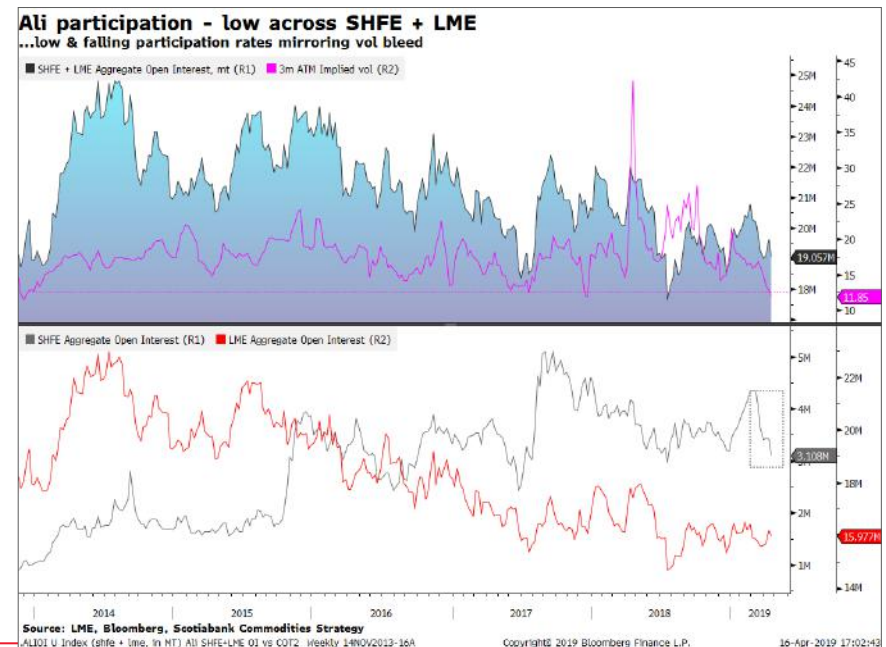
- Despite Copper managing to breakup and hold gains above the old \$6300-ceiling, overall investor positioning (CME, LME or SHFE) remains rather muted. That has allowed pricing to remain in a tight range below \$6600 (and one which have lagged Asian risk assets like ShanghaiComp) capped by a mix of heavy flows, technical selling and the recent threat of LME warehouse inflows (which have worked to really weaken front month spreads back into a contango).
- Aggregate Open Interest across CME (HG), LME & SHFE, own a combined 13m mt (low 11.5m mt, high >16m mt), with no sizeable inflows in 2019. The influx of option related upside call buying was the dominant driver of price action, less so direct outright futures purchases. Thus, given the heavy lifting required to retain \$6600, its a somewhat constructive setup that Copper is rather underinvested, with scope for a combined 1m mt (to attain 5year average) up to 2-3m mt (to attain peak positioning) of inflows potentially available across all listed exchange products (graph 1, panel 1).



Aluminum:

- Ali prices have drastically underperformed its peers, and other risk assets, with volatility a reminder that it currently lacks a catalyst given many of the 2018 vol drivers/events are now resolved.
- The extreme price compression between \$1840 and \$1940 highlights the fundamental picture (large ex-China deficits being fed by Chinese semis and/or ramped up cheaper cost of production ROW capacity).
- Positioning also highlights this indifference, with SHFE participants exiting out of a 1.2m mt of positioning in 2019, helping to take a combined proxy (LME + SHFE) of positioning down to cyclical lows below 20mt mt (graph 2, panel 1 & 2)

*Given the lack of long-term historical data for Mifid LME COT, Ive only analyzed the exchange (LME, CME< SHFE) Open Interest data for base metals as positioning proxy for investor activity. Do note OI inflows doesn't necessarily imply new purchases and subsequent price action needs to be taken into account, as is done.



The information contained in this presentation is being provided for information and discussion purposes only. An investment decision should not be made solely on the basis of the contents of this presentation. This presentation is being provided upon the express understanding that no representation or warranty, express or implied, is made, or responsibility of any kind accepted, by The Bank of Nova Scotia, Scotiabank Europe plc, or any of their respective affiliates (“**Scotiabank**”TM), their directors, agents or employees with respect to the completeness or accuracy of the information, conclusions and opinions provided herein, or as to the achievement or reasonableness of any projections, targets, estimates, or forecasts and nothing in this presentation should be relied upon as a promise or representation as to the future. Past performance or simulated past performance is not a reliable indicator of future results. Forecasts are not a reliable indicator of future performance. This presentation has not been prepared (i) by a member of the research department of Scotiabank, or (ii) in accordance with the legal requirements designed to promote the independence of investment research. It is considered a marketing communication for regulatory purposes and is solely for the use of sophisticated institutional investors. This presentation does not constitute investment advice or any personal recommendation to invest in a financial instrument or “investment research” as defined by the UK Prudential Regulation Authority and the UK Financial Conduct Authority, and its content is not subject to any prohibition on dealing ahead of the dissemination of investment research.

The information contained in this presentation reflects prevailing conditions and our judgment as of the date of the presentation, all of which are subject to change or amendment without notice, and the delivery of any such amended information at any time does not imply that the information (whether amended or not) contained in this presentation is correct as of any time subsequent to its date. Scotiabank undertakes no obligation to update or correct any information contained herein or otherwise to advise as to any future change to it. Scotiabank does not provide any applicable tax, accounting or legal advice and in all cases independent professional advice should be sought in those areas.

This presentation incorporates information which is either non-public, confidential or proprietary in nature, and is being furnished on the express basis that this information will not be used in a manner inconsistent with its confidential nature or be disclosed to anyone other than as may be required by law or to those who have been informed of the confidential and proprietary nature of this presentation. This presentation and its contents are strictly confidential to the person to whom it is delivered and may not be copied or distributed in whole or in part or disclosed by such persons to any other person without the prior written consent of Scotiabank. This presentation and the information contained herein remain the property of Scotiabank.

This presentation is not and shall not be construed as an offer, invitation, recommendation or solicitation to sell, issue, purchase or subscribe any securities or bank debt in any jurisdiction or to enter into any transaction. Nothing in this document contains a commitment by Scotiabank to sell, issue, purchase or subscribe for financial instruments, or securities, to provide debt or to invest in any way in any transaction described herein, or otherwise provide monies to any party. Any participation by Scotiabank in any transaction would only be provided in writing after satisfactory legal, financial, tax, accounting and commercial due diligence, as well as being subject to internal approval processes. Any transaction implementing any proposal discussed in this document shall be exclusively upon the terms and subject to the conditions set out in the definitive agreement related thereto.

This presentation is not directed to or intended for use by any person resident or located in any country where the distribution of such information is contrary to the laws of such country. Scotiabank, its directors, officers, employees or clients may currently or from time to time own or hold interests in long or short positions in any securities referred to herein, and may at any time make purchases or sales of these securities as principal or agent. Scotiabank may also have provided or may provide investment banking, capital markets or other services to the companies referred to in this presentation.

TM Trademark of The Bank of Nova Scotia. Used under license, where applicable. Scotiabank, together with “Global Banking and Markets”, is a marketing name for the global corporate and investment banking and capital markets businesses of The Bank of Nova Scotia and certain of its affiliates in the countries where they operate, including Scotia Capital Inc., Scotia Capital (USA) Inc., Scotiabanc Inc.; Citadel Hill Advisors L.L.C.; The Bank of Nova Scotia Trust Company of New York; Scotiabank Europe plc; Scotiabank (Ireland) Designated Activity Company; Scotiabank Inverlat S.A., Institución de Banca Múltiple, Scotia Inverlat Casa de Bolsa S.A. de C.V., Scotia Inverlat Derivados S.A. de C.V. – all members of the Scotiabank Group and authorized users of the mark. The Bank of Nova Scotia is incorporated in Canada with limited liability. Scotia Capital Inc. is a member of CIPF. Scotia Capital (USA) Inc. is a registered broker-dealer with the SEC and is a member of the NASD and SIPC. The Bank of Nova Scotia is authorised and regulated by the Office of the Superintendent of Financial Institutions of Canada. Scotia Capital Inc. is authorised and regulated by the Investment Industry Regulatory Organization of Canada. The Bank of Nova Scotia and Scotiabank Europe plc. are authorised by the UK Prudential Regulation Authority. The Bank of Nova Scotia is subject to regulation by the UK Financial Conduct Authority and limited regulation by the UK Prudential Regulation Authority. Scotiabank Europe plc is regulated by the UK Financial Conduct Authority and the UK Prudential Regulation Authority. Details about the extent of The Bank of Nova Scotia's regulation by the UK Prudential Regulation Authority are available upon request. Scotiabank Inverlat, S.A., Scotia Inverlat

The information contained in this presentation is being provided for information and discussion purposes only. An investment decision should not be made solely on the basis of the contents of this presentation. This presentation is being provided upon the express understanding that no representation or warranty, express or implied, is made, or responsibility of any kind accepted, by The Bank of Nova Scotia, Scotiabank Europe plc, or any of their respective affiliates (“**Scotiabank**”TM), their directors, agents or employees with respect to the completeness or accuracy of the information, conclusions and opinions provided herein, or as to the achievement or reasonableness of any projections, targets, estimates, or forecasts and nothing in this presentation should be relied upon as a promise or representation as to the future. Past performance or simulated past performance is not a reliable indicator of future results. Forecasts are not a reliable indicator of future performance.. This presentation has not been prepared (i) by a member of the research department of Scotiabank, or (ii) in accordance with the legal requirements designed to promote the independence of investment research. It is considered a marketing communication for regulatory purposes and is solely for the use of sophisticated institutional investors. This presentation does not constitute investment advice or any personal recommendation to invest in a financial instrument or “investment research” as defined by the UK Prudential Regulation Authority and the UK Financial Conduct Authority, and its content is not subject to any prohibition on dealing ahead of the dissemination of investment research.

The information contained in this presentation reflects prevailing conditions and our judgment as of the date of the presentation, all of which are subject to change or amendment without notice, and the delivery of any such amended information at any time does not imply that the information (whether amended or not) contained in this presentation is correct as of any time subsequent to its date. Scotiabank undertakes no obligation to update or correct any information contained herein or otherwise to advise as to any future change to it. Scotiabank does not provide any applicable tax, accounting or legal advice and in all cases independent professional advice should be sought in those areas.

This presentation incorporates information which is either non-public, confidential or proprietary in nature, and is being furnished on the express basis that this information will not be used in a manner inconsistent with its confidential nature or be disclosed to anyone other than as may be required by law or to those who have been informed of the confidential and proprietary nature of this presentation. This presentation and its contents are strictly confidential to the person to whom it is delivered and may not be copied or distributed in whole or in part or disclosed by such persons to any other person without the prior written consent of Scotiabank. This presentation and the information contained herein remain the property of Scotiabank.

This presentation is not and shall not be construed as an offer, invitation, recommendation or solicitation to sell, issue, purchase or subscribe any securities or bank debt in any jurisdiction or to enter into any transaction. Nothing in this document contains a commitment by Scotiabank to sell, issue, purchase or subscribe for financial instruments, or securities, to provide debt or to invest in any way in any transaction described herein, or otherwise provide monies to any party. Any participation by Scotiabank in any transaction would only be provided in writing after satisfactory legal, financial, tax, accounting and commercial due diligence, as well as being subject to internal approval processes. Any transaction implementing any proposal discussed in this document shall be exclusively upon the terms and subject to the conditions set out in the definitive agreement related thereto.

This presentation is not directed to or intended for use by any person resident or located in any country where the distribution of such information is contrary to the laws of such country. Scotiabank, its directors, officers, employees or clients may currently or from time to time own or hold interests in long or short positions in any securities referred to herein, and may at any time make purchases or sales of these securities as principal or agent. Scotiabank may also have provided or may provide investment banking, capital markets or other services to the companies referred to in this presentation.

TM Trademark of The Bank of Nova Scotia. Used under license, where applicable. Scotiabank, together with "Global Banking and Markets", is a marketing name for the global corporate and investment banking and capital markets businesses of The Bank of Nova Scotia and certain of its affiliates in the countries where they operate, including Scotia Capital Inc., Scotia Capital (USA) Inc., Scotiabanc Inc.; Citadel Hill Advisors L.L.C.; The Bank of Nova Scotia Trust Company of New York; Scotiabank Europe plc; Scotiabank (Ireland) Designated Activity Company; Scotiabank Inverlat S.A., Institución de Banca Múltiple, Scotia Inverlat Casa de Bolsa S.A. de C.V., Scotia Inverlat Derivados S.A. de C.V. – all members of the Scotiabank Group and authorized users of the mark. The Bank of Nova Scotia is incorporated in Canada with limited liability. Scotia Capital Inc. is a member of CIPF. Scotia Capital (USA) Inc. is a registered broker-dealer with the SEC and is a member of the NASD and SIPC. The Bank of Nova Scotia is authorised and regulated by the Office of the Superintendent of Financial Institutions of Canada. Scotia Capital Inc. is authorised and regulated by the Investment Industry Regulatory Organization of Canada. The Bank of Nova Scotia and Scotiabank Europe plc. are authorised by the UK Prudential Regulation Authority. The Bank of Nova Scotia is subject to regulation by the UK Financial Conduct Authority and limited regulation by the UK Prudential Regulation Authority. Scotiabank Europe plc is regulated by the UK Financial Conduct Authority and the UK Prudential Regulation Authority. Details about the extent of The Bank of Nova Scotia 's regulation by the UK Prudential Regulation Authority are available upon request. Scotiabank Inverlat, S.A., Scotia Inverlat Casa de Bolsa, S.A. de C.V., and Scotia Derivados, S.A. de C.V., are each authorized and regulated by the Mexican financial authorities.