Base Metals Monthly: Copper holds, Zinc runs but lead hunkers back down

Summary:
Most base metals are trading near the top end of YTD ranges, yet still have a long way to break cyclical ranges evidenced during the synchronized global growth period of 2017-8. The core question is whether the base metals rally in Q1 was simply a dead cat bounce in response to dovish-inspired firming sentiment, or not; Q4’18 arguably marked peak bearish levels as markets priced in a “worst case” trade deal scenario and equity volatility ravaged risk assets. We believe the micros will begin to play a larger role and play catch-up in those well-accepted deficit metals (copper and potentially aluminum) and will become a headwind in surplus ones (zinc, nickel). Coppers Q1 gains toward $6500/mt has held well (unlike Golds gains...), and we see further upside, as the micros tighten further in 2019 (due to a decline in supply growth expectations) and builds on this positive macro/financial base.

- The broad $6500 ceiling—which Copper can’t convincingly escape from—has many similarities to the $6300 ceiling (which converted to new support); that handle should continue to come under pressure so long as ultra accommodative global CB policies persistent, global risk assists probe upsides and Chinese data bottoms from suppressed levels. Copper is afforded the opportunity to look through some negative demand indicators (such as vehicle sales), given these stimulus hopes and measures. Overall, we thought the fairer range in Q1 was simply a dead cat bounce based on global stocks vs the rest of the base complex, but it also has the fastest supply growth profile this year, and given the remarkable inflows from SHFE + LME to take the Fed, amidst tightening fundamental balances—is here; its only a matter of time before $6500-$6700 is the new range.

- Global Aluminum market balances are expected to stabilize at ~1.7m mt due to supply curtailments in China offsetting supply increases in ROW. However, the S&D picture remains muddied given the (unknown) level of off exchange stocks so “deficits” alone and its relative underperformance (vs its peers in 2019) aren’t good enough catalysts for a repricing higher. Overall, with the removal of Rusal sanctions, potential full operations at Norsk Hydro, and extremely sidelined investor participation rates given compressed price action, the market could be forced to lower its $2000 ceiling even more in the short-term, unless a bullish shock emerges.

- Nickels short-term pricing characteristics have the ability to capitalize on positive macro & sentiment drivers (eg: Vale dam disaster, Chinese stimulus, EV adoption ‘hopes; etc.). Thus the market should be cognizant of the potential for Chinas new EV subsidy policy to promote Nickel (and Cobalt) in the longer-term, attracting in (early) tactical inflows. Structural rallies toward $15,000 should be faded given the HPAL and Indonesia supply growth.

- Zinc was the base metals outperformer in March, posting gains of 5%, and ensuring its total Q1 run outperformed its peers. Zinc knowingly has the tightest available levels of global stocks vs the rest of the base complex, but it also has the fastest supply growth profile this year, and given the remarkable inflows from SHFE + LME to take positioning to lofty levels, prices may find it tough to extend in short-term.

- Lead was unable to scalp any of the strong gains seen in its sister metal in March, and despite the cumulative deficits and strong Chinese imports (indicating a real physical shortage), these constructive drivers have failed to inject much enthusiasm amongst investors. Persistently soft Chinese auto numbers (putting a cap on rallies) and bullish systematic Zinc-lead ratio buying, has made lead prices attractive from a relative value perspective.

**Contents:**
- Copper, page 2
- Aluminum, page 3
- Zinc & Lead, page 4
- Nickel, page 5
Copper prices ended March flat, holding its YTD gains of over 8% as it continues to probe and attempt to break away from the $6500 magnet. In our January 2019 FICC piece, we outlined and expected a tactical rally to likely occur in Q2’19, after the Lunar New Year when Chinese growth would bottom in response to ongoing piecemeal policy response. That rally occurred earlier than expected, largely in February, as Copper capitalized on 1) the repricing higher in underweight and oversold EM risk assets (responding to the convincing Fed pause at the January FOMC & trade deal optimism) and 2) some constructive micro developments (stock drawdowns, tighter spreads, & supply downgrades).

February trade data for China was awful (even accounting for seasonal factors) showing exports plummeted by the largest in 3 years (-21% YoY). Combined with other soft macro data (global PMIs) and the increase in stocks around mid-March, Copper had little reason to find a higher range and extend its price appreciation. However, China’s Official Manufacturing PMI for March was a solid and welcomed surprise, back up above the 50-handle from a 3-year low of 49.2 in February, marking the first expansion in 4 months in 1 sign that Chinese credit growth has bottomed and thus metal/commodities demand is following. China’s parliament in early March also ‘responded’ and announced an additional ~$300bn of tax cuts and raised the special bond issuance for local governments to RMB 2.2tn to facilitate further infrastructure spending. Thus, recently soft fundamental negative pricing such as falling Shanghai premiums & rising SHFE bonded stocks should reverse as we enter seasonally stronger Q2.

While demand growth is expected to overall moderate in 2019, the decline in supply growth expectations is more profound and will continue to tighten the physical market. This is already being evidenced in falling TCs and national output levels (Chile confirming Copper production in February fell to its lowest in 2 years). Weather/rainfall and community protests in Chile & Peru (MMGs Las Bambas), ramp-up issues at Chilean operations (Caserones, Sierra Gorda, Codelco), announced production cutbacks in Africa (Glencore) and the transition losses to underground operations (Freeport/Grasberg) are some notable supply developments that should pose a risk to our expected FY’19 270K mt deficit.

With the Fed playing a larger role in 2019 handing some outsized moves to Fixed Income in late March, the macro market has become less fixated with the “trade deal on/off” headlines. That ensured Copper has become less elastic to trade headline risk, and any ‘trade optimism premium’ - which arguably would be unwound on any trade deal confirmation - is limited; positioning is simply cleaner and promising with LME COT investors owning net ~670k mt of Copper, 26% (~230K mt) less than the historical average.

Technically, the broad $6500 ceiling—which Copper can’t convincingly escape from—has many similarities to the $6300 ceiling (which converted to new support); that handle should continue to come under pressure so long as ultra accommodative global CB policies persistent, global risk assists probe upsides and Chinese data bottoms from suppressed levels. Copper is afforded the opportunity to look through some negative demand indicators (such as vehicle sales), given these stimulus hopes and measures. Overall, we thought the fairer range in Q1 for a potentially widening >200K mt deficit market was $6300-$6600. A new catalyst—the Fed amidst tightening fundamental balances—is here; its only a matter of time before $6500-$6700 is the new range.

3 structural risks to upside copper: 1) stubborn technical overhang & selling 2) any collapse in risk assets/SPX on a potentially hawkish Fed, 3) European recession or prominent deceleration (as they contend with Brexit, worries over trade, the rise of populist governments and the ongoing fallout from the diesel emissions scandal)
Aluminum:

Ali finished March, once again flat and continues to trade well within its tight compressed $1800-$2000 range. Alumina prices continued through $400, and 3m Ali didn't probe new lows despite the increasingly likelihood that Alunorte will return to full production given that Hydro and Brazil’s prosecutor agreed on steps that could lead to their restart by the end of May. Frontmonth spreads remained comfortably in a contained contango range ($20-$30c) while LME warehouse stocks declined again in March toward 1.1m mt. Any stock piling (from producers, or trade houses) off warrant, given the juicer contango spreads, will reduce immediate availability and begin to boost local premiums, which has been the case in Europe.

Fundamentally, demand growth is slighted to slow in 2019 due to substantial slowing in Europe (to just 1% YoY as the construction and transport markets remain weak) and slower Chinese growth. On the supply-side, despite the cost argument remaining a focal point, CRU estimates that ex-China smelters are ramping up at a pace not seen since 2011 (!) due to low costs producers (such as Rusal and Alba) expanding low cost capacity. The market is still touted to be in a ~1.7m mt deficit due to Chinese supply curtailments (since 2018 well over 2 mt of closures has occurred in China). However, that figure is pretty variable given the rather flat Chinese cost curve (small changes in SHFE aluminum prices and VAT quickly changes what % of smelters are)

US MidWest premiums remained stable and below $19.50/lbs in March, and this relative firmness should continue in 2019 as local inventories continue to draw and Ali imports fall as the 10% tariff remains on overseas supply. Both European and Japanese premiums continue to shift up albeit from cyclically low levels. The European price appreciation has been driven by larger contangos, while the disruption at Rios Bell Bay smelter reduced availability to Asia/Japan and boosted premiums now to >$100/t for Q2'19.

Global market balances are expected to stabilize at ~1.7mt due to supply curtailments in China offsetting supply increases in ROW. However, the S&D picture remains muddied given the (unknown) level of off exchange stocks so “deficits” alone and its relative underperformance (vs its peers in 2019) aren’t good enough catalysts for a repricing higher. Overall, with the removal of Rusal sanctions, potential full operations at Norsk Hydro, and extremely sidelined investor participation rates given compressed price action, the market could be forced to lower its $2000 ceiling even more in the short-term, unless a bullish shock emerges.

<table>
<thead>
<tr>
<th>SUMMARY</th>
<th>General Outlook</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals medium-term</td>
<td>neutral-bearish</td>
<td>Steep deficits in 2018 and 2019 due to swing into mild surpluses (~200kt) by 2020</td>
</tr>
<tr>
<td>Macro short-term</td>
<td>neutral-bullish</td>
<td>Structurally strong $ as other CBs join dovish till (bearish) vs Trade concerns &amp; unresolved policies abating, buoyant equities and EM risk, strong oil price action &amp; dovish Fed stance (bullish)</td>
</tr>
<tr>
<td>Macro medium-term</td>
<td>neutral-bullish</td>
<td>Late cycle fears, increased volatility being suppressed by collective CB dovish till and threat of inflationary outcomes</td>
</tr>
<tr>
<td>China</td>
<td>neutral-bullish</td>
<td>China’s piece meal stimulus &amp; VAT cut aimed at boosting demand in 2019 should maintain confidence, offsetting the soft data in Jan / Feb (PMIs, exports) which should induce stronger demand for metals/commodities in Q2-Q3’19</td>
</tr>
<tr>
<td>Production costs</td>
<td>neutral-bearish</td>
<td>Alunorte restart now unlikely to be delayed which removes further upside risk to alumina. However uncertainty around Brazilian bauxite supply outbacks is providing tailwinds. Ex China low cost smelters to restart some capacity in 2019</td>
</tr>
<tr>
<td>Technicals</td>
<td>neutral-bearish</td>
<td>Prices remain in a contained &amp; compressed $1800-$2000 range. Complacency high which is not comforting.</td>
</tr>
<tr>
<td>Market positioning &amp; sentiment</td>
<td>neutral</td>
<td>LME &amp; SHFE positioning stands at cyclical year average of ~19mt; investor activity is rather muted. Overall sentiment thawing on China stimulus/Fed stance and rallies across other metals, but Ali price momentum has stalled</td>
</tr>
</tbody>
</table>
Zinc and Lead:

Zinc was the base metals outperformer in March, posting gains of 5%, and ensuring its total Q1 run outperformed its peers. $3000 was breached but follow-through wasn’t attained as technical and producer-related pressures capitalized on price action.

It’s no secret that zinc is contending with 2 vastly different markets—the concentrate market is in a marked surplus while the refined market remains in deficit just as LME stocks continue to decline beyond what’s deemed critically low. Despite the view that perhaps zinc missed its opportunity to capitalize on the low-stock story in 2018, 2019 is working out. That’s probably since the market is receiving price and flow confirmation from

1. Decidedly tightening front month spreads that have been unable to attract volumes to warehouses, unlike what has occurred in other metals
2. A key reversal in SHFE stocks from its Q1 peak toward 100k mt
3. The re-arrangement of near-term buying trends (after the floods in Queensland disrupted concentrate flows/shipments in February)

Ultimately that served to drive home the idea that global refined stocks are in fact incredibly tight and that off-exchange inventories are very limited (or fully exhausted?), attracting in a chunky 2.7m mt of SHFE + LME inflows in Q1 alone (graph 1). The market seems to be less cautious to when the wall of (conc) supply is meant to impact the market this year—mine supply is expected to be close to double digits in 2019, which is clearly indicated in TCs rising to well over $200. Rising TCs also highlights the depressed refining capacity (especially in China where they have been effected by environment regulations). Higher TCs should spur higher smelter utilization rates and help to ease the bottleneck mostly likely only in 2H, but price action may react a lot sooner to that ‘event’. Expect zinc prices to become increasingly more elastic to TC agreements as it serves as the ‘release valve in balancing this bifurcated (over with the under-supplied) markets.

Lead erased all of its strong gains launched the final few days of February, and more, to disappointedly close closer to $2000 in March. It was unable to scalp any of the strong gains seen in its sister metal, and despite the cumulative deficits (~150k mt in 2017, 100k mt in 2018) and strong Chinese imports (indicating a real physical shortage locally as mine supply contracts for an expected 3rd year straight), these constructive drivers have failed to inject much enthusiasm amongst investors. A reversal in warehouse outflows that started in February and continued throughout most of March, bringing LME stocks back up toward 80K mt, perhaps thwarted much optimism for a sustained rally through $2200. However, warehouse flows have been particularly noisy in lead, and overall SHFE + LME stock still remain at structurally low levels. For now, sentiment is indifferent unless the persistently soft Chinese auto numbers (leads main use in auto batteries leaves it very exposed) reverses, or the systematic bullish Zinc-lead ratio buying unwinds (graph 2): rallies are capped from a macro China perspective, but from a relative value perspective, lead prices are attractive.
Nickel:
Nickel stabilized in March, finishing unchanged, as prices found decent support sub $13,000. However there was a lack of any believable catalyst (as was the case in February, with the Vale disaster) necessary for prices to revisit 2019 highs of $13,765.

Beneath the lackluster price action in March there's been a few simmering bullish drivers, that one needs to monitor in the event they accelerate:

1. LME stocks continued to fall in March, but the pace of outflows accelerated its, taking LME stocks to ~180K mt (5 year lows). SHFE stocks are also back down to 2015 levels. Spreads tightened only incrementally in March.

2. Talk of slower Indonesian NPI project development and lower Filipino ore exports.

3. China introduced a new subsidy policy for EVs in 2019 with subsidies declining by 50-50% (expected at 40%). The subsidies are designed to target and promote higher range, good quality vehicles which rely heavily on NCA, NMC 811 and NMC 622 batteries, and thus is a positive development for Nickel and Cobalt in the longer-term, as China transitions to these higher quality EVs. In the short-term however, EV sales likely to slow since the current bulk of the Chinese EV fleet are low-quality, low range vehicles which wouldn't qualify for subsidies.

4. Strong demand for Stainless Steel scrap in Europe (prices for Nickel in SS scrap are rising); this could be a mix of re-stocking (which were run down in 2H 2018) or real demand; its likely the former, which is mildly supportive not outright bullish.

Nickel's short-term pricing characteristics has the ability to capitalize on positive macro & sentiment drivers (eg: Vale dam disaster, Chinese stimulus, EV adoption 'hopes; etc.), and the market should be cognizant of the potential in point 3 above. In addition, Q2 seasonal price action favors Nickel best versus all other base metals — on average the past 10 years, Nickel has posted average gains of ~3% in Q2 (vs Copper of ~1.2% for example). In the medium term—when S&D usually win out—actual demand is all about stainless steel and our expectations have SS demand growth slowing to below 2% in 2019 (from almost 5% in 2018) creating a smaller deficit of 50k mt for 2019 (vs 2018). The market will continue to remain weary of a sustainable repricing above $15K due to the ability for battery producers to 'respond’, finance and invest in HPAL projects; thus any sustained rallies, from current levels, and especially if its sentiment-based, creates an opportunity for market participants to fade.

\[\text{Source: Bloomberg, LME, Scotiabank Commodities Strategy} \]
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™”), 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.

™ 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 authorized and regulated by the Office of the Superintendent of Financial Institutions of Canada. Scotia Capital Inc. is authorized 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.
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™”), 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 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 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 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™”), 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 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 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 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™”), 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.

™ 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 authorized and regulated by the Office of the Superintendent of Financial Institutions of Canada. Scotia Capital Inc. is authorized and regulated by the Investment Industry Regulatory Organization of Canada. The Bank of Nova Scotia and Scotiabank Europe plc. are authorized 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.