

Commodity outlook

Key Highlights :

□ **Base metals** after making highs during first half of 2018 fell 20-30% in the second half of 2018. While supply tightness and environmental concern related plant shut down in China were reason behind the initial rally. And improved supply due to reopening of many production lines and demand shrinking due to lower auto sales in China and US were the reasons behind recent decline.

□ **Aluminum:** During the January-November period of 2018, production has increased by 1.4% to 58.82 million tonnes. US have lifted sanctions on Rusal, the world's largest aluminum producer and strike has ended at Alcoa's Australian alumina refinery.

On the contrary, China's biggest aluminum producers are discussing production cutbacks of 800,000 tonnes and LME aluminum inventories stands at just 1.2 million tonnes.

We expect aluminum to remain bearish towards \$1,820 per tonne for the first quarter of 2019 on the current oversupply worries though production cut may stabilise it in the second half of 2019.

□ **Copper:** Global copper production has increased due to end of mines strike in Indonesia and Chile. For 2019, world refined copper consumption is expected to be 24,890 metric tonnes implying narrowing of deficit to 65 thousand tonnes.

Looking at the market fundamentals and the current state of the economy, we expect Copper prices to remain weak unless any supportive fiscal and monetary measure comes from China to help the economy grow.

We expect copper prices to trade in a range of \$5700 per tonne to \$6250 per tonne.

□ **Lead:** Global Lead market is expected to turn into surplus of 50,000 tonnes from deficit of 120,000 tonnes in 2018. The mine supply is expected to increase by 4.1% in 2019 as some mine supply is likely to come on-stream from Coeur Mining's Silvertip mine in Canada and Vedanta's Gamsberg.

China contributes around 40% to the world's lead demand but tight environment inspection has put production limitation.

During Q1 2019, we expect MCX Lead prices to trade positive on lower Chinese production but during the second half of 2019 we expect Lead prices to witness selling pressure on surplus scenario and to decline towards \$1800 per tonne.

□ **Nickel:** Nickel deficit in 2019 will fall to 33000 tonnes from 146000 tonnes in 2018 due to rising mine supply from Indonesia Philippines and China. But Nickel demand in long term is expected to increase from electric vehicle sector and lithium-ion batteries.

Also inventories have fallen, Shanghai stocks stands at just 14,517 tonnes, down from a 2016 peak of above 100,000 tonnes. On the other side, LME stocks have fallen by 41% since the January 2018. We hold a bullish outlook in Nickel for 2019 with price target of \$13250 per tonne.

Research Analyst

Sakina Mandsaurwala

Sakina.m@narnolia.com

Dhwanik Shah

Dhwanik.shah@narnolia.com

The views expressed above accurately reflect the personal views of the authors about the subject companies and its(their) securities. The authors have not and will not receive any compensation for providing a specific recommendation or view. Narnolia Financial Advisors Ltd. does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Key Highlights :

□ **Zinc:** Global zinc market is expected to wipe out its deficit in 2019. Global zinc mine production will increase by 6.5% in 2019 as strong prices in past have influenced zinc miners to bring the idled capacity back online.

Century mine and Dugald River mine is likely to expand its output capacity by 250,000 tonnes and Rampura Agucha mine in India will add 100,000 tonnes. Vedanta's mine in South Africa has plans to double its capacity in 2019.

We expect LME Zinc prices to remain weak and move towards \$2350 per tonne.

US-China trade conflict further added to the negative sentiment. Going forward, slowing Chinese economy remains a key concern. Lower inventory is the key support. Key trackable for 2019 is – resolution of US –China trade conflict and announcement of stimulus in Chinese economy, if any.

We have a positive view on Nickel and negative view on Lead and Zinc. Copper and Aluminum are expected to maintain downward trajectory during the early part of 2019 before entering into a consolidation phase.

□ **Gold-** Going forward, mine supply output is expected to slow and if global growth reduces or there are any macro-economic shocks, fresh ETFs purchases would be expected. Comex Gold prices in 2019 are expected to remain positive and move higher towards \$1330-1360 per oz.

□ **Silver:** the current Gold Silver ratio is likely to support silver prices in the coming year. We expect Comex Silver to remain moderately bullish in the coming year and expect prices to average \$16.2 per oz and move higher towards \$16.8-\$17.5 per oz in 2019.

□ **Crude-** During the first half of 2019, Brent crude price is likely to move in the range of \$48-\$60/bbl. Some bounce back in January can come on account of expected lower supplies from Canada and OPEC planned production cut.

□ **Natural Gas-** Overall, our outlook remains positive for natural gas prices. We maintain a buy on dips strategy in Nymex Natural gas prices and expect prices to trade higher towards \$2.8-3.2 per mmbtu in 2019.

Index

Commodity	Page number
<i>Aluminum</i>	<i>03-04</i>
<i>Copper</i>	<i>05-06</i>
<i>Lead</i>	<i>07-08</i>
<i>Nickel</i>	<i>09-10</i>
<i>Zinc</i>	<i>11-12</i>
<i>Gold</i>	<i>13-14</i>
<i>Silver</i>	<i>15-16</i>
<i>Crude</i>	<i>17-18</i>
<i>Natural Gas</i>	<i>19-20</i>

Aluminum prices have shown drastic moves in both the direction last year. Aluminum prices swiftly moved higher in April 2018 and made a high of \$2700 per tonne on the news of US sanctions on Rusal and tightening in the alumina supply due to production curtailment at Alunorte's smelter. The price direction reversed during the month of October 2018 as US delayed the decision of sanction and weakness in China's economy started to impact the growth. Prices weakened not only on supply easiness but also due to trade war concerns

	2015	2016	2017(jan-aug)	2018(jan-aug)
<i>World refined production</i>	57.6	58.8	39.7	39.9
<i>World refined consumption</i>	57.5	59.0	40.2	40.1
<i>Surplus/Deficit</i>	0.1	-0.2	-0.5	-0.2

Demand & Supply:

Global aluminum production has risen by 0.36% to 39.85 million tonnes during the first eight months of 2018 as compared to the same period last year while global demand fell by 0.35% during the same period. Higher production and lower demand led to deficit reduction. The global aluminum markets remained in a deficit of 240,000 tonnes during the Jan-Aug period as per the World Bureau of Metal Statistics. Looking at the current scenario, we expect the deficit in global aluminum to further narrow in the year 2018. According to the International Aluminum Institute, the global production has risen by 7.6% to 5.312 million tonnes in the month of November 2018. During the January-November period of 2018, the world production increased by 1.4% on year- on-year basis at 58.825 million tonnes. During the year 2018, the aluminum output has increased in Middle East, China and other Asian countries while the output has dropped in other countries like United States and Europe.

The supply of Alumina, raw material of aluminum, remained tight in the year 2018 due to supply cutbacks and indefinite strikes led to increase in the alumina price. Brazil's Alunorte smelter, the world's largest alumina refinery has declared force majeure due to environmental concern which reduced its capacity by 50%. Alcoa's Australia alumina refinery faced an indefinite strike losing some 8% of world's alumina production. However, during the latter half of 2018, supply concerns eased as strike ended and after China eased its restriction during winter period led to the downside in aluminium prices in 2018.

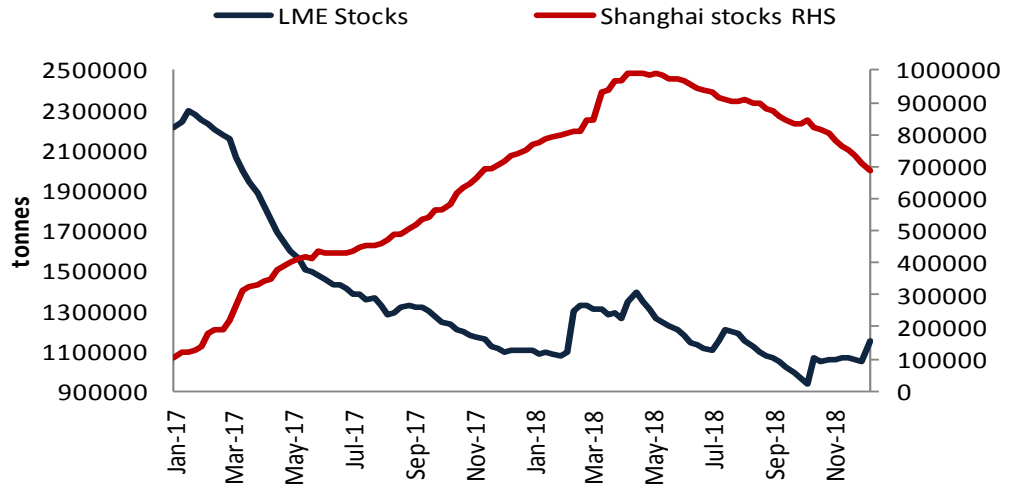
China's macroeconomic scenario:

China production has remained down marginally during the first ten months of 2018 at 30.227 million tonnes but the production has risen by 14% in Nov on year on year basis on account of lower alumina and coal prices leading to increase in producer's margin. At present, Chinese smelters are losing money on lower aluminum prices and therefore China's biggest aluminum producers are scheduled to meet to discuss production cutbacks of 800,000 tonnes if possible during the weak demand and as the lower prices are eating their margins. This step might alleviate the oversupplied domestic market and support global prices next year.

Inventory

LME aluminum have fallen by 18% since the start of 2018 while the LME stocks have remained stable near its all time low level. Inventories have reduced tremendously since 2013 and currently the stock stands at just 1.2 million tonnes. **This falling trend in inventory has provided support to the aluminum prices.**

Exhibit 1: Aluminum Inventory



Source: Bloomberg

Outlook:

Taking all the above points into consideration, we expect aluminum to remain bearish towards \$1820 per tonne for the first quarter of 2019 on the current oversupply worries with rising production and exports and weakening demand in China. The current downside in aluminum prices is due to uncertain trade agreement between US and China until March 1, 2019. On the other side, we believe the aluminum prices may rebound and trade higher in the second quarter of 2019 as any production cutbacks from China will help to shoot up prices and China may provide stimulus measures to providing a backbone support to the slowing economy. Also, the lower inventory level is likely to build a floor on the aluminum prices.

With the China's clampdown on illegal aluminum smelters being a part of supply side reform will reduce the China's output in the long run. We expect aluminum prices to average around \$2000-\$2075 per tonne for the year 2019.

The recent past has seen a strong downtrend in the price of copper from \$7300 to \$5800 per tonne. The sharp decline can be attributed to easing supply concerns along with the escalating trade concerns between US and China

	2016	2017	2018	2019
<i>Global mine production</i>	20357	20041	20471	21233
<i>World refined production</i>	23338	23498	24169	25646
<i>World refined consumption</i>	23605	23759	24253	24890
<i>Surplus/Deficit</i>	-267	-261	-92	-65

Demand & Supply:

World copper demand is expected to rise by 2.6% in 2019. The main driver of the demand growth is supposed to be the Chinese economy as there is tightness in scrap availability in China. China scrap imports have fallen tremendously this year after the Chinese central government announced in April that it will ban imports of all Category 7 scrap items by the end of 2018 and the importation of several other scrap items by 2019 on environmental grounds. This ban will likely affect some 300,000 tonnes of copper and will lead to higher imports of refined copper into the country.

Most of the supply increase this year came from Indonesia and Chile due to the recover the output loss occurred due to mine strikes in 2017. The forecast for 2019 mine production is set to rise by 1.2% year on year. The increase in mine production is to come from Chile, Peru and South America while Indonesia will see a fall in its mine output.

China's macroeconomic scenario:

The major fall in copper prices have been due to macroeconomic weakness in China's economy as China remains the largest consumer of copper. Looking at this year's performance, China's economy seems to be slowing and it may soon need to take some stimulus measures to revive the economy. China's GDP for this year stands at 6.5% but next year the country's growth is forecasted to slow towards 6-6.2%.

Inventory:

The total inventory held at all three exchanges have showed a fall of 29% and currently the stocks stands at 154,000 tonnes. The current inventory level will provide strong support to the copper prices during the next year.

Exhibit 2: Copper Inventory



Source: Bloomberg

Outlook:

Looking at the market fundamentals and the current state of the economy, we expect Copper prices to remain weak unless any supportive fiscal and monetary measure comes from China to help the economy grow. During the first quarter of 2019, Copper prices may remain supportive due to seasonal demand and tight concentrate market and lower inventory levels. But due to macroeconomic weakness we may not expect prices to sustain the upside move. Therefore, broadly we expect Copper prices to trade in a range between \$5700 per tonne to \$6250 per tonne.

During the year LME Lead prices have made a high of \$2640 per tonne in the first half of the 2018 on positive demand outlook and a deficit market however, in the second half of the 2018, the demand deteriorated on macro-economic worries due to which the prices started to fall below \$2000 per tonne.

	2016	2017	2018	2019
<i>Global mine production</i>	4665	4597	4580	4770
<i>World refined production</i>	11163	11546	11590	11840
<i>World refined consumption</i>	11127	11693	11710	11790
<i>Surplus/Deficit</i>	17	-147	-120	50

Demand & Supply:

Global lead demand has fallen by 0.6% in the first nine months of 2018 and forecast for the next year shows a 0.7% rise in global lead demand in 2019. However, the usage is expected to fall in China by 1.9% next year on lower e-bikes sector demand and slower growth in automotive demand. However, the demand is likely to increase in Europe and United States by 1.8% and 2.5% respectively in 2019.

Lead demand will remain sensitive to automotive production. Any change in the automotive production in the two major car producing countries i.e. United States and China could have a significant impact on the global lead market. Since the last three months, China auto sales have been falling by 11% on yearly basis. The overall slowdown in China, uncertainty over trade war outcome and lower car loans have contributed to fall in car sales in China. The slow pace of US auto sales is also been seen this year, however the year on year growth rate is zero percent as compared to last year.

Global lead mine supply fell by 0.8% during the first nine months of 2018 as compared to same period last year. This lower mine production is due to fall in concentrate supply in Australia, China, Kazakhstan and United States. The mine supply is however, expected to increase by 4.1% in 2019 as some mine supply is likely to come on-stream from Coeur Mining's Silvertip mine in Canada and Vedanta's Gamsberg is set to commence its operation until the Q3 and Q4 of 2019. The refined lead supply in 2018 remained close to 2017 levels this year as higher production from Australia, India and United States offsets the decline in production from China, Canada and Europe.

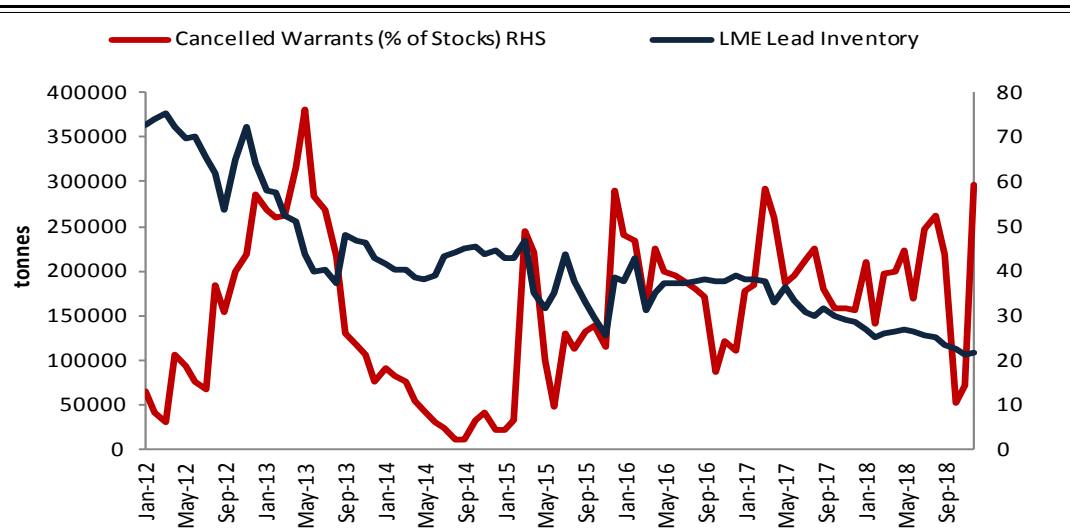
China's macroeconomic scenario:

China plays an important role in determining the demand supply outlook. China contributed around 40% to the world's lead demand in 2017. Currently, China's refined production fell by 1.4% in 2018 on production curtailments wherein secondary smelters failed to meet new environmental regulations and have been asked to permanently shut down its operations. Output of refined lead from secondary production i.e. scraps accounts for 60% of global output in 2017. Therefore, any change in lead scrap supply will lead to major increase/decrease in primary lead output. China's tight environment inspection has put production limitation on secondary lead processing sector and decreased Chinese output. Chinese smelters at high altitude began to shut down its production due to unpleasant weather and start to stockpile inventory for the winter season. Going into next year, miners will cut some of its output ahead of Chinese New Year increasing the supply deficit in China and depressing concentrate TCRC charges in 2018-19.

Inventory:

Inventories at the both the exchanges have remained tight indicating low supply and high demand scenario. The stocks at LME and Shanghai have witnessed a fall by 24% and 76% respectively. This lower inventory levels are helping the build the strong support in the Lead prices.

Exhibit 3: Lead Inventory



Source: Bloomberg

Outlook:

Given the subdued macroeconomic climate and disappointing lead price performance we forecast LME Lead prices to average at \$2150 per tonne in the year 2019. Also, with the ongoing uncertain trade fight between the world's largest countries, the demand for lead will remain subdued. During the Q1 2019, we expect MCX Lead prices to trade positive on lower Chinese production and tight concentrate supplies however during the second half of 2019 we expect Lead prices to witness selling pressure on surplus scenario and when the new mine production starts to come online, lead prices will start to decline towards \$1900 per tonne. Overall, we expect LME Lead prices to move in a range of \$1850- \$2100 for the year 2019.

Nickel prices started the year on a strong footing and tested the high of \$16687 per tonne on the LME. However, the soon after the rally fizzled, the prices reversed into a negative territory standing near lows at \$10900 per tonne. Among the base metal complex, nickel has been the best performing metal rising almost 33% since the start of the year but this gains remained unsustainable. Nickel prices weakened on worries about slowing growth in China due to US-China trade dispute impacting the demand of nickel. Nickel prices fell on slowdown in demand from the stainless steel industry arising due to lower steel prices. Another important factor is the increasing nickel pig iron production from Indonesia and China

	2016	2017	2018	2019
<i>World refined production</i>	1989	2070	2204	2389
<i>World refined consumption</i>	2033	2184	2350	2422
<i>Surplus/Deficit</i>	-44	-144	-146	-33

Demand & Supply:

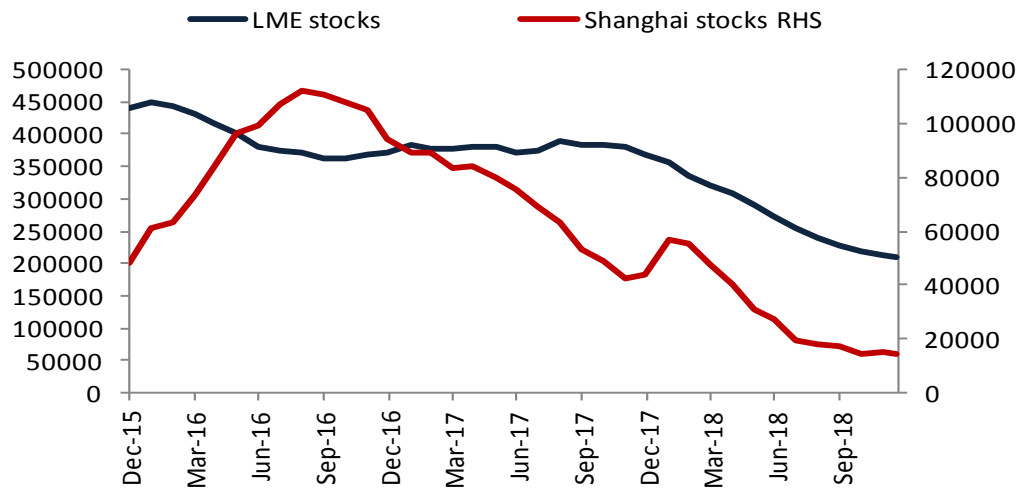
Nickel pig iron production in China recovered in 2017 and is projected to increase further in 2018 and 2019. In Indonesia, NPI production increased in 2017 and is also expected to continue to grow this year and in 2019, due to the ramp up of new projects. The supply of nickel ore started to rise after the Philippines government allowed the nickel mines to resume production if conditions met, in a move that will increase the nickel mine supply. On the demand side, the increase in crude steel production in China is over the years on the rise standing at 77.62 million tonne in 2018, up by 15% from 2017 and it is forecasted that this production to exceed in 2019. Nickel is also important element in production of lithium ion batteries used to power electric vehicles by 2025-2030 period by which the demand is set to increase exponentially in few years time.

Global demand supply of nickel is expected to end the year with the deficit of 146000 tonnes however, this deficit is expected to widen in 2019 with just 33000 tonnes. This reduction in deficit is due to increasing mine supply from Indonesia and China. Strong growth in nickel pig iron production increased the global supply in the market pressuring nickel prices drastically. Nickel pig iron (NPI) production in China in the first nine months of 2018 reached 344,168 mt in nickel content, registering a 21% year-on-year increase due to the increased availability of Indonesian ore. NPI production in Indonesia has continued to increase due to the ramp up of new projects.

Inventory:

Nickel inventories on London-based metals exchange the LME and the Shanghai Exchange have been drawn down by a huge percentage since the start of the 2018. Shanghai stocks stands at just 14,517 tonnes, down from a 2016 peak of above 100,000 tonnes.

Exhibit 4: Nickel Inventory



Source: Bloomberg

Outlook:

Nickel is widely expected to have a long term bullish outlook on expected increased demand from electric vehicle sector and lithium-ion batteries. The continuous downtrend in Class1 nickel inventory will trigger bullish upside in prices. However, at present due to increase in nickel supply from Indonesia and China prices faced selling pressure. For the next quarter, this downside pressure is likely to continue due to uncertainty over US-China trade agreement and global economic growth concerns. We believe, Nickel prices to stay supported at lower levels near \$9000 per tonne on declining inventories and rising stainless steel production. We hold a bullish outlook in Nickel for 2019 with prices moving in the range of \$12,000-\$14500 per tonne.

Zinc market witnessed a massive shift in its supply demand fundamentals this year from a huge deficit scenario in 2017. This shift is mainly occurred as the concentrate zinc supply forecast changes from undersupply to oversupply in 2018-2019.

	2016	2017	2018	2019
<i>Global mine production</i>	12.69	12.78	13.03	13.87
<i>Global refined production</i>	13.55	13.23	13.42	13.81
<i>Global refined demand</i>	13.67	13.68	13.74	13.88
<i>Global Zinc balance</i>	-0.12	-0.45	-0.32	-0.07

Demand & Supply:

Global zinc market is expected to wipe out its deficit of 2018 and remain balanced in the coming year on account of new mine supply and mine expansions/restarts. The easing of tightness in concentrate supply will help the smelters to boost their output in 2019 and the next year. Global zinc mine production is forecasted to increase by 6.5% in 2019 as strong prices influenced the zinc miners to bring the idled capacity back online. The new mine expansion of about 0.7-0.9 million tonnes is likely to take place in 2019-2020. The main contributor to this growth in mine supply is coming from Australia, India and South Africa. Century mine and Dugald River mine is likely to expand its output capacity by 250,000 tonnes and Rampura Agucha mine in India will start to commission its mine capacity by 100,000 tonnes in 2019 and further increase its capacity in the coming years. Vedanta's mine in South Africa named Gamsberg have started its mine capacity in 2018 and have plans to double its capacity in 2019. The commissioning of new projects is already in progress and is due to start by at-least partially in 2019. Global zinc demand is forecasted to increase by just 0.4% in 2018 and on the contrary the demand fell in the month of October by 0.3%. The global demand for zinc will remain stable in 2019 and is expected to rise by 1.1%. During the first quarter of 2019, the zinc usage may remain weak as the macro economic weakness persists and due to trade uncertainty between China and US until any final outcome or agreement comes in a 90-day period.

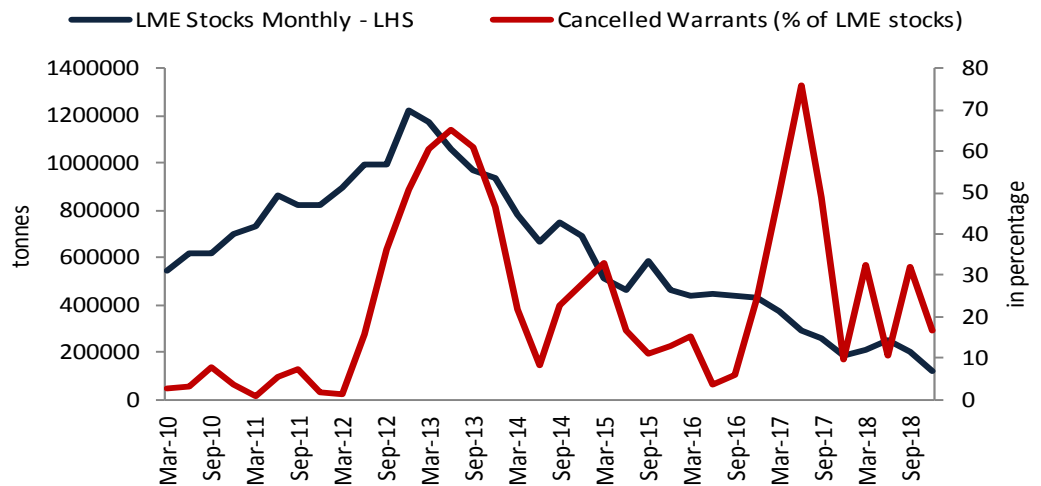
China's macroeconomic scenario:

China's refined zinc production has moved down by 1.95% during the Jan-Nov period of 2018 due to strict environmental inspection on smelters and lower concentrate supplies. Lower domestic production led to increased zinc imports and lower inventory at both the exchanges. China's zinc production is forecasted to slow down for the next year as well on stricter rules on maintaining the carbon emission standards by the smelters in the zinc producing region in China. The increasing zinc imports in China will be insufficient to balance the demand supply situation in China and therefore the apparent demand is expected to rise by a small 0.5% in 2019. Treatment charges have rallied from \$20 per tonne in September 2018 to more than \$150 in December 2018, highest in two years which means the higher refined production is expected to enter the market. These charges have surged on rising supplies in Australia and South Africa. Going forward, we expect the TCRC charges to remain high in 2019

Inventory:

The inventory on both the exchanges LME and Shanghai have drawdown drastically since the year 2013 and currently the stocks at the LME warehouse is near the lows of 2007. This scenario occurred on heavy physical tightness in the physical markets due to unavailability of concentrate ore and mine closures during the year 2016-17.

Exhibit 5: Zinc Inventory



Source: Bloomberg

Outlook:

We forecast LME Zinc prices to remain weak in H1 2019 towards \$2400-\$2350 per tonne and we expect the zinc prices to average around \$2800 per tonne in 2019 i.e. fall of 10% from the last year's average. To conclude, the massive rally in Zinc prices is likely to reverse in 2019. We expect the tightness in global zinc concentrate market is likely to ease from this year onwards as new mine capacity and restarts leading to increasing mine supply in 2019. The demand for zinc will take a hit due to slowdown in China

Gold prices started the year on a positive note in the first quarter of 2018 followed by the strong downside in the gold prices in the second and third quarter of 2018 keeping the investors away from the counter. During the last quarter Comex Gold prices rallied some 6% till date. We are seeing some safe haven demand emerging due to low prices and keeping the prices above 200 day moving average signaling further upside in prices in 2019. Gold prices weakened during the year on account of looming trade war between US and China, higher dollar and treasury yields and US Fed rate hike alarm put the pressure on gold prices this year. Gold prices witnessed a greater contradictory price movement between the MCX and international gold price due to weakness in Indian rupee. With the upcoming election next year, it is unlikely to witness any major appreciation in the rupee keeping the MCX Gold prices well supported at lower levels.

Description	2016	2017	Q218	Q318
Total Demand	4387.6	4108.5	964.3	964.3
Jewellery demand	2059.3	2159.9	510.3	535.7
Investment	1595.5	1231.9	281.4	194.9
Central banks	389.8	374	89.4	148.4
Technology	323.4	332.8	83.3	85.3
Total Supply	4590.9	4398.4	1120.2	1161.5
Mine production	3263	3268.7	835.5	875.3
Net producer hedging	32.8	-30.4	-10	-20
Recycled gold	1295.1	1160	294.7	306.3

Demand & Supply:

During the first half of the year, the demand for gold imports in India remained tepid while the imports slowly grew in the second half of 2018. The latest import figure of October declined due to higher gold prices in India but going forward the demand will increase ahead of wedding season and higher international prices.

Global jewellery demand has remained stable during the three quarter of 2018 as compared to the last year rising only by 1%. Total jewellery demand in the third quarter increased by 6% yoy at 535.7 tonnes. Jewellery demand contributes largely to the global gold demand. It contributes almost 55% to the global gold demand. Therefore any major increase or decrease in demand from this sector affects the entire demand chain. The global bar and coin market saw significant growth rising 28% year on year. The demand increase was seen in China and India both rising 25% and 11% respectively.

A significant increase in demand from the central banks has supported the global gold demand at lower levels. It saw a healthy rise in demand by 22% in the Q3 2018 at 148.3 tonnes. The major central bankers buying gold are Russia, Turkey and Kazakhstan. Russia has continued to grow its gold holding by 92.3 tonnes in the Q3 2018 as the country is selling majority of its US treasury and following its policy of de-dollarization.

The global gold backed ETF saw its first largest quarterly outflow since Q4 2016. During the third quarter of 2018, the ETFs declined by 103.2 tonnes from 13.2 in Q2 2018. This huge outflow from ETF was largely contributed by United States due to gains in equity market and strong economic growth. Although in the coming year we expect demand from this sector to improve on investor's safe haven buying

On the supply side, the mining sector had continued to see stronger output, with further modest gains in the September quarter. The gold mine production has seen a quarterly rise of 2% at 875.3 tonne in the third quarter. This is the highest level of quarterly production staying above the five year quarterly average of 809.8 tonne as the new mine projects are pushing the production to an all time high. The production declines in China, South Africa, Indonesia and Peru were offset by the production increases in Mali, Papua New Guinea, United States and Canada. The mine supply output in 2019 is expected to slow on supply growth

Gold performance in relation to us dollar, dow jones, bond yields

Gold prices are in a negative correlation with dollar index, equity market and treasury yields. US dollar at the start of the year remained strong on US economic optimism and on expectation over continuous rate hike by US Fed. However, at present the economic outlook turns weak due to political uncertainty and weakness in equity markets. The upside in dollar remains limited in the future as the US Fed changes its future path of rate hikes. Fed could even stop its monetary tightening cycle if the economy deteriorates further.

Economic policy

Fed started to unwind its balance sheet will likely put the downward pressure on dollar and supporting bullion prices in 2019. US expected to slow in 2019. GDP is projected to slow from 3.0 percent in 2018 to 2.3% in 2019 and 2.0% in 2020 and inflation is forecasted to increase in 2019 at 2.0% from 1.9% in 2018. US Federal funds rate is projected to increase from 2.4% in 2018 to 2.9% in 2019 and 3.1% in 2020 which means that Fed may hike its interest rate by 2 times in 2019 and once in 2020

Outlook:

Gold prices will remain positive in the first half of 2019 due to ongoing global slowdown worries and geo-political uncertainty. Going forward, with US Fed reducing its future interest rate hike projection and downgrading US growth prospects into 2019, we remain of the view that US dollar will show limited upside in the coming year supporting dollar-priced commodities. Domestic gold demand from rural sector is also expected to rise on improving purchasing power of farmer due to higher prices of MSP for crops announced by the government. We expect Comex Gold prices to remain positive and move higher towards \$1330-\$1360 per oz in the coming year.

Silver prices have restrained from buying in the year 2018 due to subdued global outlook and stronger dollar. Comex Silver prices have remained in the downward trajectory since the start of the year from \$17.52 per ounce in January 2018 to the low of \$13.98 per ounce in the month of November 2018. Also, due to weakness in the base metals complex, silver prices failed to show any upside in 2018.

<i>Description</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>
Total Demand	1155.1	1033.1	992.8	963
<i>Jewellery demand</i>	<i>280.7</i>	<i>249.4</i>	<i>254.4</i>	<i>252.9</i>
<i>Investment</i>	<i>291.7</i>	<i>207.4</i>	<i>142.1</i>	<i>124.8</i>
<i>Industrial Fabrication</i>	<i>582.6</i>	<i>576.3</i>	<i>596.3</i>	<i>585.4</i>
Total Supply	1044.1	1010.6	995.2	998.4
<i>Mine production</i>	<i>895.1</i>	<i>888.6</i>	<i>852.1</i>	<i>865.5</i>
<i>Other</i>	<i>149</i>	<i>122</i>	<i>143.1</i>	<i>132.9</i>
Deficit/Surplus	-111	22.5	2.4	35.3

Demand & Supply:

Looking at the fundamental scenario, Silver market is expected to remain in surplus for the consecutive second year in a row. This surplus was created due to increase in mine production by 1.6% which attributed to lower scrap supply. Physical demand for silver is expected to reduce by 3% in 2018 dragged lower by the fall in the retail investment. The biggest decline is to be seen in coin and bar demand contracting by 12% at 124.8 million ounce.. The investment demand in the physical market is the largest driver of silver demand. The demand from jewellery and silverware remains subdued due to demand softness in China and India. The usage of silver from the industrial fabrication accounts for more than 60% of the total silver demand. The industrial fabrication demand will see a fall by a smaller figure of 1.8% in 2018.

Gold Silver ratio

The gold/silver ratio has risen to 86.56 in November 2018, which is well above its long-term average of 60. This suggests that silver is underpriced relative to gold and that Silver prices could outperform Gold prices as and when precious metals start to rally. Looking at the above chart, silver prices and the Gold Silver ratio is negatively co-related and in the current scenario, the ratio is standing near its record high while Silver prices are sitting near lows of 2015, signifies Silver prices are set to rebound sharply in 2019

Monetary Policy Changes

US monetary policy is likely to see some reduction in number of rate hikes in 2019, with only two more rate hikes in 2019 and just one in 2020. On the contrary, ECB ended its QE program in 2018 and 2019 will mark the return of normalization in monetary policy in the Euro region. These two scenarios of the Fed rate hike projection and higher rates in Europe should keep the euro as a currency strong pushing the dollar down

Outlook

Silver prices are to receive support from weaker dollar and as the Fed rate cycle slows or comes to an end in the coming year. The concerns of huge outflows of money from bonds and currency market will make the investors shift towards commodities and equity creating an inflationary scenario supporting Silver prices while dollar staying weak. Also, the current Gold Silver ratio is likely to support silver prices in the coming year. We expect Comex Silver to remain moderately bullish in the coming year and expect prices to average \$16.2 per oz and move higher towards \$16.8-\$17.5 per oz in 2019.

Crude oil prices started the year on healthy note with rising global growth fueled with stimulus from US and prices moving up from \$60/bbl at the start of the year to almost \$76.9/bbl on 3rd October 2018 however, in the second half of the year we saw prices slipping to \$42/bbl on worries over slowdown in global growth creating a surplus scenario in oil.

Crude oil prices declined in the second half of 2018 as the global growth expectation remained fragile along with fiscal challenges having worrisome effects on the future demand for oil. The downgrade of global growth put the brake on rising crude oil prices on increasing trade tension, monetary tightening in US and geopolitical worries and after US planned to remove its sanctions on oil supply on some oil importing countries on temporary basis.

	2017	2018	1Q 19	2Q 19	3Q 19	4Q 19
<i>Global Demand(a)</i>	97.25	98.79	99.1	99.26	100.64	101.29
<i>Non-OPEC supply</i>	57.53	60.03	61.01	61.06	62.63	64.01
<i>Open NGL's</i>	6.24	6.36	6.42	6.43	6.46	6.45
Total Non-OPEC supply(b)	63.8	66.37	67.43	67.49	69.1	70.5
<i>Difference(a-b)c</i>	33.45	32.42	31.67	31.77	31.54	30.79
<i>OPEC crude oil production(d)</i>	32.62	32.52	31.8	31.8	31.6	31.6
Balance(d-c)	-0.83	0.1	0.13	0.03	0.06	0.81

Demand & Supply:

Looking at the above global demand supply table of oil, the balance of demand supply is estimated to show a surplus of 0.1 mbpd in 2018 from the deficit of 0.8 mbpd in the previous year and as per our expectation, we believe the oil market will continue to remain in surplus of 0.26 mbpd in 2019.

Going forward, the global oil demand has increased from 97.25 mbpd in 2017 to 98.79 mbpd in 2018, a rise of 1.5%. The projected demand is set to increase by another 1.3% in 2019 as the lower oil prices demand revival is offset by the demand weakening due to lower economic growth. The demand for OPEC crude in 2018 is estimated at 32.4 mbpd which is 1.1 mbpd lower than the 2017 level and is forecasted to remain 31.4 mbpd, around 1.0 mbpd lower than the estimated 2018 level.

The non-Opec supply is expected to grow by 2.5 mbpd in 2018, mainly due to supply additions from US and Canada as well as higher production from Russia. The supply increase has also come from Kazakhstan, UK, Ghana all of which offset the declines in oil output in Mexico, Norway and Vietnam. During the next year, the non-opec supply growth is forecasted to slow in the first half of the year due to compulsory production curtailments in Alberta, Canada on pipeline bottleneck and Russia as the production cut agreement with OPEC member from January 2019. There are many supply challenges to be faced by the non-opec producers in 2019 like shale production with lower prices, bottlenecks in transportation of oil in Canada and North Dakota.

OPEC Production

OPEC members along with non-Opec countries like Russia, met in Vienna on Dec 6th 2018 and agreed to reduce the oil output by 1.2 mbpd in total with Venezuela, Iran and Libya have been exempted from cutting its oil production. OPEC shared to cut the oil production by 0.8 mbpd while the other non-Opec countries agreed to contribute to cut by 0.4 mbpd. The cuts were in response to increasing facts that oil markets could become oversupplied in 2019. Before this cut, OPEC members had agreed to raise its oil production by close to 1.0 mbpd in June meeting on expectation of tightening in oil markets due to loss of Iranian production on upcoming US sanctions.

At present, Opec oil production averaged near 32.96 mbpd in November 2018 slightly down from the last month on lower Iran oil output. And going into the next year, the OPEC oil put is set to reduce in 2018 ahead of planned output cuts. The reduction in output will be reflected slowly in the months to come and will be seen in the drawdown of global inventories, helping oil prices bounce back in the Q2 2019.

Three Big Oil Movers - United States, Saudi Arabia and Russia

Together all three nations closely produce around 40% of the global oil supply. With United States, one of the world's largest producer, producing near record high due to shale revolution is expected to increase its oil output to 12.06 mbpd in 2019 while the other two nations - Saudi Arabia and Russia produces closely around 11 mbpd, work closely together and swing output one way or the other. United States also being one of the largest consumer of oil, lower oil prices always remains an advantage.

US imports have drastically fallen from 11 mbpd in 2008 to almost 7.2 mbpd this year. This lower import has been due to higher domestic oil production. The oil production in the country has increased to such an extent that it became the net exporter of oil during the week for the first time since 1991

Iran may reduce its oil exports – US waivers granted to some oil importing countries will expire in the month of May. There are high chances of US President Trump would not consider extending waivers in May as oil prices have fallen drastically from November. Iran's oil production declined from 3.8 mbpd in June 2018 to below 3.0 mbpd in November 2018. If the US denies on extending waivers, we might see a huge fall in Iran's oil production in 2019.

Inventory Scenario

The total OECD Commercial stocks stands at 2,880 million barrels in 2018, which are 41 million barrels lower than the last year average however, higher by 4 million barrel than the five year average. US commercial crude oil inventory rose in November currently standing at 443.2 million barrels, which is 2% above the last year average and 5.5% above the five year average. The distillate stocks are standing at 125.6 million barrels, which are 10% below the five year average levels. On the contrary, gasoline inventory levels stands at 226.3 million barrels which are close to the last year and five year average levels.

Outlook

To conclude, we believe that the current oil surplus scenario will take time to ease with no immediate demand to arrive in early 2019. The slowdown in the world-wide economic growth and tensions between US and China is also weighing on oil prices. During the first half of 2019, we expect WTI crude prices to move higher towards \$52-\$55/bbl on lower output from Canada and OPEC as it starts to reduce its oil supply from January 2019. We anticipate this reduction in oil output to reflect after few months and any breakthrough in the US-China trade war would bring a quick sentimental revival in oil prices. On the contrary, towards the end of the year, the growing US oil supply will keep the upside in crude oil prices limited.

We expect global demand supply of oil to remain slightly in surplus during the year 2019 as growing oil production in US will keep the supplies sufficient in the market offsetting any reduction in oil output from OPEC. Although, any unexpected reduction in OPEC output will reverse the trend and put a floor on oil prices in 2019 and may see the market approach balance by end 2019.

Natural gas prices started to shoot up more than 44% in the month November 2018 on supply tightness worries ahead of the winter season. With the inventories being 16% lower than the five year average created a panic and pushed the natural gas prices higher. The historically low pre-winter levels of natural gas stocks and rising demand and supply contributed to the rise in price volatility in November and December.

Demand & Supply:

US Natural gas market will remain balanced or shifts into deficit during the start of the winter season. Currently the market is in surplus of 2 bcf per day. During this high period of demand, natural gas market should be well-supplied or else supply tightness worry will emerge and prices will start to rally higher.

US Dry natural gas production is rising this year and is estimated to be at 87.8 bcf per day in November, almost 8.82 bcf per day higher than last year. In 2018, US Dry gas production has increased by almost 11% on an average as compared to last year. Furthermore, EIA expects the dry natural gas production to keep rising on an average of 89.9 bcf per day in the coming year. Due to significant natural gas production increase in 2018, NYMEX natural gas prices have been unable to breach \$3 per MMBtu for the most of the year.

US Natural gas consumption has increased by 11% this year standing at 87.21 bcf per day. This increase in consumption is due to higher demand from the residential and industrial sector along with higher exports as compared to last year levels. Higher consumption of natural gas has been one of the reason for the lowest storage injection this December since the year 2005.

There are two demand driving season for natural gas – Winter and Summer. During winter, demand is measured by number of heating degree days and during summer, natural gas demand is measured by the number of cooling degree days.

Cooling degree days (CDD) reflects the amount of energy required to cool a residence, industrial or a business. In 2018, CDD stood 18% higher than the previous years and averaged 255 above normal on hottest summer leading to strong air conditioning demand in the summer season. Warmer than normal temperatures extended into the month of September and provided further firmness to the natural gas prices

Going forward, into the winter season, Heating Degree Days will be measured as to number of days required to heat the residence and industries. Higher the number of heating degree days, higher will be the demand for natural gas.

LNG Exports – Future Source of Demand

EIA projects that U.S. liquefied natural gas export capacity will reach 8.9 bcf per day by the end of 2019, making it the third largest in the world behind Australia and Qatar. US Exports accounts for 12% of the total natural gas consumption. Currently, U.S. LNG exports stands at 3.6 bcf per day and it is expected to end the year at 4.9 bcf per day as two new liquefaction units will be operational. As of now, only few US companies have been allowed to export natural gas to other countries. Moreover, more permission will be granted to other companies to exports this year. We expect US LNG exports to rise by threefold by 2020.

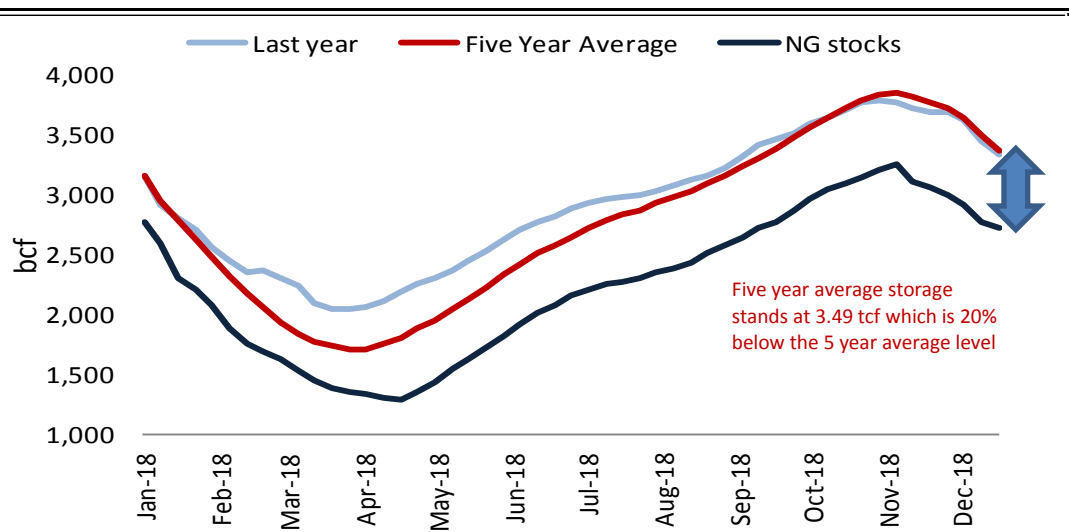
China is increasing its imports of LNG since 2017 and has become world's largest imported ahead of Japan. With US exporting around 5% of the China LNG imports in 2018. In 2018, China was the fourth largest destination for U.S but since the China imposed 10% tariff on U.S. LNG imports, only two LNG shipments from the United States went to China

Inventory Scenario

U.S. natural gas inventories have totaled 2.77 trillion cubic feet (Tcf) at the end of December 2018 which will be way below the five year average of 3.49 tcf. At present, natural gas inventories are at 2.722 tcf, natural gas inventories are 586 bcf or 20% below than the last year level and 672 bcf or 17.5% below the five-year average.

The inventory level is at the lowest level for that time of year since 2005 on high air conditioning demand this summer causing power generators to burn more gas than usual and leaving less gas available to go into storage. U.S. gas inventories will start the winter heating season at the lowest level since 2005, leaving the market vulnerable to winter price spikes.

Exhibit 5: Natural Gas storage



Source: Bloomberg

Outlook

Natural gas prices are expected to remain positive for the year 2019 as both demand and supply are expected to hit fresh highs during the year. However, with lower inventories and rising exports, the demand for natural gas will rise during the winter season. Overall, our outlook remains positive for natural gas prices. We maintain a buy on dips strategy in Nymex Natural gas prices and expect prices to trade higher towards \$2.8-3.2 per mmbtu in 2019.

Disclosures: Narnolia Financial Advisors Ltd.* (NFAL) (Formerly Microsec Capital Ltd.) is a SEBI Registered Research Analyst having registration no. INH30002407 valid till 01.12.2020. NFAL is engaged in the business of providing Stock Broking, Depository Participant, Merchant Banking, Portfolio Management & distribution of various financial products. Details of associate entities of NFAL is available on the website at www.narnolia.com

No penalties have been levied on NFAL by any Regulatory/Statutory authority. NFAL, its associates, Research Analyst or their relative may have financial interest in the subject company. NFAL and/or its associates and/or Research Analyst may have beneficial ownership of 1% or more securities in the subject company at the end of the month immediately preceding the date of publication of the Research Report. NFAL and its associate company(ies), their directors and Research Analyst and their relatives may; (a) from time to time, have a long or short position in, act as principal in, and buy or sell the securities or derivatives thereof of companies mentioned herein. (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies) or may have any other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of NFAL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report. Research Analyst may have served as director/officer, etc. in the subject company in the last 12 month period. NFAL and/or its associates may have received compensation from the subject company in the past 12 months. In the last 12 months period ending on the last day of the month immediately preceding the date of publication of this research report, NFAL or any of its associates may have: a) managed or co-managed public offering of securities from subject company of this research report, b) received compensation for investment banking or merchant banking or brokerage services from subject company of this research report, c) received compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company of this research report. d) Subject Company may have been a client of NFAL or its associates during 12 months preceding the date of distribution of the research report. NFAL and its associates have not received any compensation or other benefits from the Subject Company or third party in connection with the research report. NFAL and / or its affiliates may do and seek to do business including Investment Banking with companies covered in the research reports. As a result, the recipients of this report should be aware that NFAL may have a potential conflict of interest that may affect the objectivity of this report. Compensation of Research Analysts is not based on any specific Merchant Banking, Investment Banking or Brokerage service transactions. Research Analyst's views on Subject Company may vary based on Fundamental research and Technical Research. Proprietary trading desk of NFAL or its associates maintains arm's length distance with Research Team as all the activities are segregated from NFAL research activity and therefore it can have an independent view with regards to subject company for which Research Team have expressed their views.

Terms & Conditions: This report has been prepared by NFAL and is meant for sole use by the recipient and not for public circulation. The report and information contained herein is strictly confidential and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of NFAL. The report is based on the facts, figures and information that are considered true, correct, reliable and accurate. The intent of this report is not recommendatory in nature. The information is obtained from publicly available media or other sources believed to be reliable. Such information has not been independently verified and no guaranty, representation of warranty, express or implied, is made as to its accuracy, completeness or correctness. All such information and opinions are subject to change without notice. The report is prepared solely for informational purpose and does not constitute an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments for the clients. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. Certain transactions -including those involving futures, options, another derivative products as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of an investment in the securities of companies referred to in this document (including the merits and risks involved), and should consult his/her/its own advisors to determine the merits and risks of such an investment. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. NFAL will not treat recipients as customers by virtue of their receiving this report. Neither the Company, not its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profits or lost opportunities that may arise from or in connection with the use of the information/report. The person accessing this information specifically agrees to exempt NFAL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold NFAL or any of its affiliates or employees responsible for any such misuse and further agrees to hold NFAL or any of its affiliates or employees free and harmless from all losses, costs, damages, expenses that may be suffered by the person accessing this information due to any errors and delays.

This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject NFAL & its group companies to registration or licensing requirements within such jurisdictions.

Analyst Certification The views expressed in this research report accurately reflect the personal views of the analyst(s) about the subject securities or issues, and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations and views expressed by research analyst(s) in this report.

Disclosure of Interest Statement-

Analyst's ownership of the stocks mentioned in the Report	NIL
-----------------------------------------------------------	-----

A graph of daily closing prices of securities is available at www.nseindia.com, www.bseindia.com.

*The name of the Company has been changed from "Microsec Capital Limited" to "Narnolia Financial Advisors Limited" pursuant to change of control. The change in name has been duly effected in the records of the Registrar of Companies (ROC). The application for fresh registration in the new name of "Narnolia Financial Advisors Limited" pursuant to change of control is under process with SEBI.

Correspondence Office Address: Arch Waterfront, 5th Floor, Block GP, Saltlake, Sector 5, Kolkata 700 091; Tel No.: 033-40541700; www.narnolia.com.

Registered Office Address: Marble Arch, Office 201, 2nd Floor, 236B, AJC Bose Road, Kolkata 700 020; Tel No.: 033-4050 1500; www.narnolia.com

Compliance Officer: Manish Kr Agarwal, Email Id: mkagarwal@narnolia.com, Contact No.:033-40541700.

Registration details of Company: Narnolia Financial Advisors Ltd. (NFAL): SEBI Stock Broker Registration: INZ000166737 (NSE/BSE/MSEI); NSDL/CDSL: IN-DP-380-2018; Research Analyst: INH300002407, Merchant Banking: (Registration No.: INM000010791), PMS: (Registration No.: INP000002304), AMFI Registered Mutual Fund distributor: ARN 3087

Registration Details of Group entities: G. Raj & Company Consultants Ltd (G RAJ)-BSE Broker INZ260010731; NSDL DP: IN-DP-NSDL-371-2014 || Narnolia Commerze Limited-MCX/NCDEX Commodities Broker: INZ000051636 || Narnolia Velox Advisory Ltd.- SEBI Registered PMS: INP000005109 || Eastwind Capital Advisors Pvt Ltd. (EASTWIND)-SEBI Registered Investment Adviser: INA300005439 || Narnolia Insurance Brokers Limited-IRDA Licensed Direct Insurance Broker (Life & Non-Life) License No.134 || Narnolia Securities Ltd. (NSL)-AMFI Registered Mutual Fund distributor: ARN 20558, PFRDA NPS POP: 27092018 || Narnolia Capital Advisors Pvt. Ltd. - RBI Registered NBFC:B.05.02568.

Disclaimer:

This report has been prepared by Narnolia Financial Advisors Ltd. (NFAL) and is meant for sole use by the recipient and not for public circulation. The report and information contained herein is strictly confidential and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of NFAL. The report is based on the facts, figures and information that are considered true, correct, reliable and accurate. The intent of this report is not recommendatory in nature. The information is obtained from publicly available media or other sources believed to be reliable. Such information has not been independently verified and no guaranty, representation of warranty, express or implied, is made as to its accuracy, completeness or correctness. All such information and opinions are subject to change without notice. The report is prepared solely for informational purpose and does not constitute an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments for the clients. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. Certain transactions -including those involving futures, options, another derivative products as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of an investment in the securities of companies referred to in this document (including the merits and risks involved), and should consult his/her/its own advisors to determine the merits and risks of such an investment. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. NFAL will not treat recipients as customers by virtue of their receiving this report. Neither the Company, not its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profits or lost opportunities that may arise from or in connection with the use of the information/report. The person accessing this information specifically agrees to exempt NFAL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold NFAL or any of its affiliates or employees responsible for any such misuse and further agrees to hold NFAL or any of its affiliates or employees free and harmless from all losses, costs, damages, expenses that may be suffered by the person accessing this information due to any errors and delays.

This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject NFAL & its group companies to registration or licensing requirements within such jurisdictions.