TransGraph





Research Consulting Technology

Agriculture

Metals

Energy

Dairy

Currency

Economy

Brands







Medium term outlook on Copper

July 2017



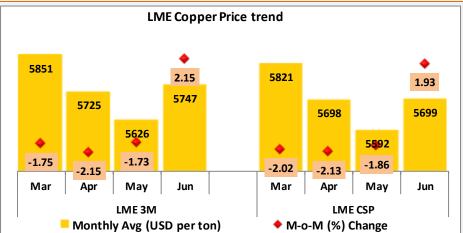


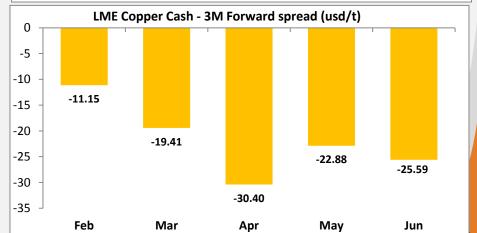


Silide

Market Recap

- Copper prices traded positive in the past one and half month.
- Major price drivers
 - Upbeat Chinese demand and import appetite
 - Improvement in Chinese CIF premiums
 - ILZSG SnD numbers
 - Increase in LME inventory while cancelled warrants remained same leading to widening of forward spread
 - Weak Dollar which fell to 10 month lows against the basket of currencies





Summary price drivers

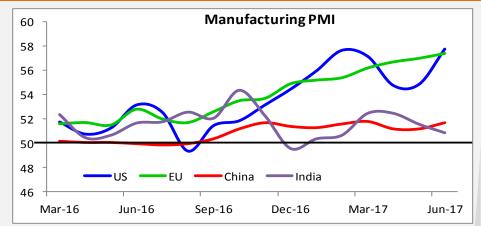
Duine duiver	Time	1 month		2-3 months	
Price driver	Туре	Weight %	Score (1-5)	Weight %	Score (1-5)
China Exchange/Physical Stocks	Stocks	25	4	20	3
China Copper Net Refined Imports	Demand	20	3	25	4
Copper Concentrate Imports	Raw Material Supply	15	3	5	2
LME Stocks/Forward Spread	Stocks	10	3	10	4
Physical premium	Demand	5	3	5	4
China Housing sector	Demand	5	2	15	3
ICSG Copper Forecast release	Supply-Demand	5	4	5	5
Dollar Index Currency		5	2	5	3
China Macroeconomic cues	Demand	5	3	5	2
Chile Mine Production	Supply	5	5	5	4
Total indexed score:		3.	30	3.	45

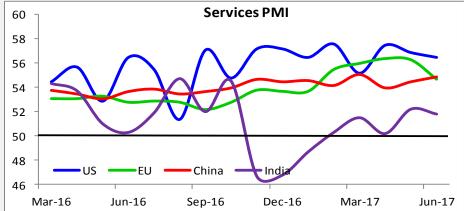
Index score (1-5, 3:consolidation, 1&2:bearish, 4&5:bullish)

Global PMI trends portend to improving global conditions in unison

TransGraph

- US ISM manufacturing PMI for the month of June came in at 57.8, sharply higher than the market consensus and the May reading of 53.5 portending an upbeat growth outlook in US for AMJ
- Euro Zone continues to grow at a good pace and the upbeat manufacturing PMI for June (57.4 vs 57 in May) reinforces the same keeping the broad strength intact in the Euro
- China manufacturing PMI came in at 51.7 for June, higher than the market consensus and the May reading of 51.2, aiding positive growth sentiments in the economy. Services PMI continues to expand and for June came in at 54.9 compared to May's 54.5
- Indian PMIs although ebbed slightly after recovering from demonetization slump, continues to remain in expansion zone

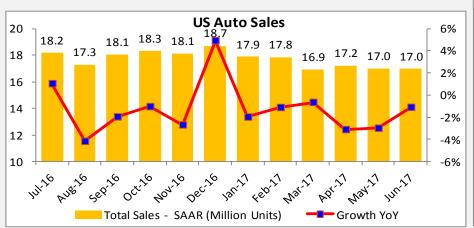




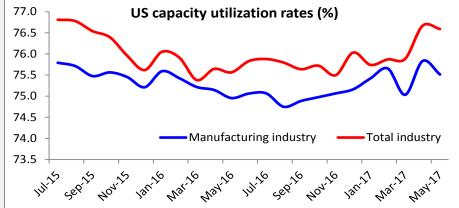
With personal consumption slowing retail inventories are on the rise in US

TransGraph

- Retail sales have declined but improvement witnessed in capacity utilization rates in the last few months led to building up of inventories which shall eventually lead to manufacturing slowdown in the coming months
- Auto sales remained subdued despite discounts from car makers underpinning the higher inventory levels at the dealer front





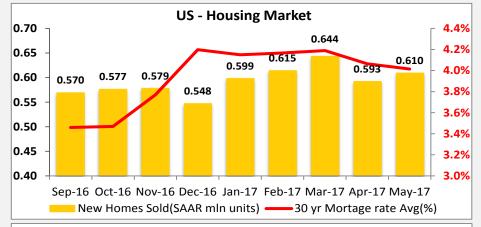


Housing demand remain strong but slowdown likely with increasing monetary

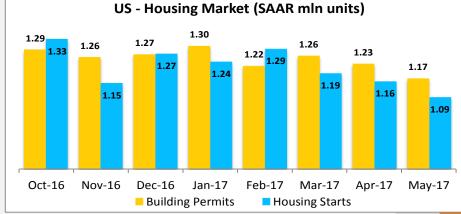
costs and higher house prices

 Although sales declined marginally in April, broad strength in housing remained intact in the recent months amid benefits discounts from mortgage lenders

- However, with increasing monetary costs as FED continues to push ahead with its monetary tightening shall lead to credit tightness and is expected to result in slowing sales in the coming months
- In line with the same, even housing starts and build permits have been declining in the last few months underpinning the expected slowdown in US housing



TransGraph



- Aided by fiscal boost, Chinese growth momentum remained stable
- Amid upbeat industrial activity and improvement seen in export momentum price sentiments in commodities shall remain strong







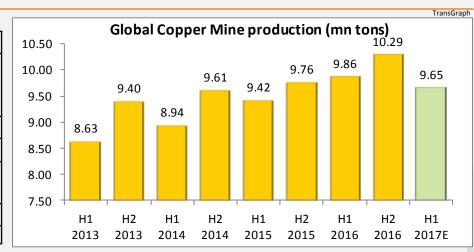
© TransGraph Consulting PVI Ltd

2111.45

ICSG Refined Copper Market Balance – Steady Mine supply seen in 2016 to decline in 2017 on

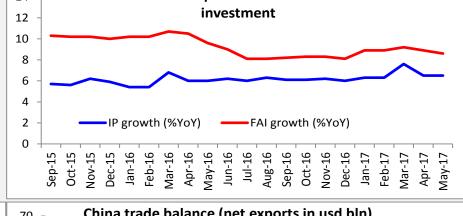
Mine disruptions aiding deficit conditions

		2018			
ICSG global Copper market forecast	Mar'16 forecast	Oct'16 forecast	Apr'17 forecast	Apr'17 forecast	
Mine Production	20.889	20.702	20.398	21.241	
Refined Production	23.436	23.791	23.748	24.157	
Refined Consumption	23.416	23.628	23.895	24.327	
Balance	0.020	0.163	-0.147	-0.169	
All units in million tons, Source: ICSG					



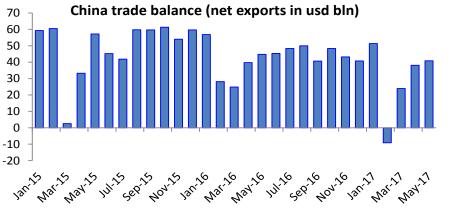
- Supply Disruptions seen in Feb-Mar'17 to lead to lower production during H1 2017.
- Peru could continue to boost output for 2017 partially offsetting decline from Chile.
- ICSG having revised its forecast for 2017 to deficit of 147 KT mainly on account of decline in refined production and steady usage leading to deficit conditions aiding sentiments.

- Aided by fiscal boost, Chinese growth momentum remained stable
- However, with moderation in industrial activity and decline in exports shall lead to overall growth moderation



China industrial production and fixed asset



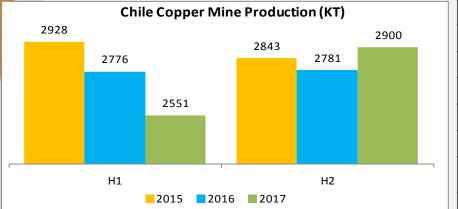


© TransGraph Consulting Pvt Ltd

14

Copper mine production lower in 2017 due to supply disruptions in H1



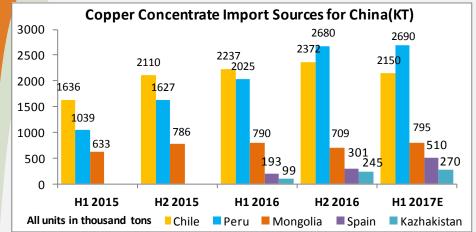


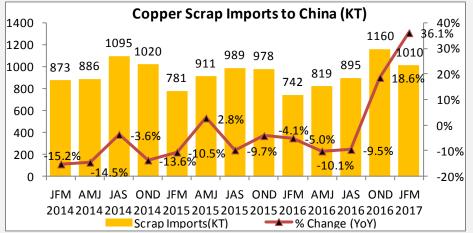
	Freeport Copper production (KT)					
Year	South America	North America	Indonesia	Total		
2013	600	649	415	1664		
2014	522	758	288	1568		
2015	394	883	341	1618		
2016	602	831	482	1915		
2017P 562		812	495	1869		
Source: Company reports						

- Decline in Chile Output in H1 2017 due to loss of over 200K of production from Escondida mine during Feb-Mar'17.
- Freeport Mcmoran operated Grasberg Mine in Indonesia also witnessed supply disruptions during
 JFM'17 while strike still continues since May'17 resulting in further losses.

Declining China Conc. Imports from Chile to be offset by rising imports from other sources while steady scrap imports to keep refined production steady for H1 2017.



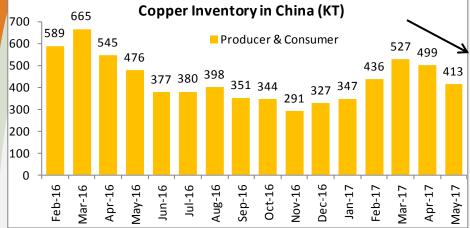


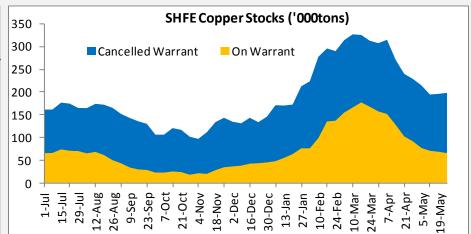


- With Copper prices rising more than 20 % since OND'16, had led to improved scrap availability in the spot market during JFM'17 while China scrap imports rose by 18 % from Jan-Apr period keeping refined production steady.
- Decline of Copper Conc. Imports from Chile due to loss of production during Feb-Mar'17 was seen offset by rise in imports from other sources including Peru, Spain & Kazakhistan.

Physical stocks to decline in China during AMJ'17 amid seasonal consumption period

while premiums could rise aiding sentiments.





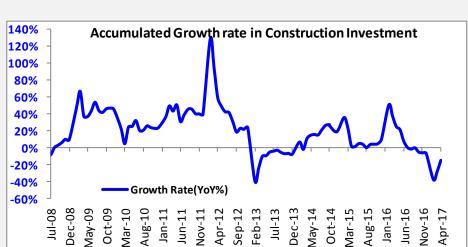
- Inventories in China rose during JFM'17 in line with restocking ahead of stronger Consumption period in AMJ'17.
- However with deficit condition to persist in 2017 inventories could decline during H2 2017 aiding price sentiments.

China Bonded Warehouse Premiums				
Date	Premiums(Usd/Ton)			
1st Oct'16	60			
1 st Jan'17	80			
1 st Apr'17	65			
30 th May'17	70			
Source: Reuters				

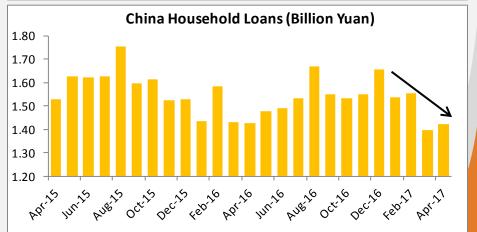
Increasing government curbs to control housing prices growth indicated by declining investment to weigh on sentiments.

China increased average interest rate for first-time homebuyers to 4.52% in April in cities around China, up from 4.49% from a year earlier and was the fourth consecutive monthly rate hike since January.

With China witnessing declining Investment growth in Fixed Assets into Construction sector during JFM'17 could continue to weigh on sentiments for Copper.



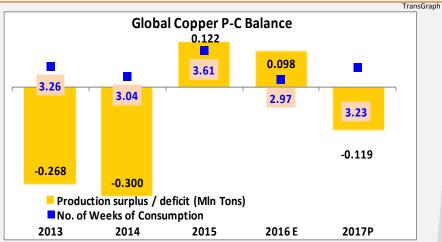


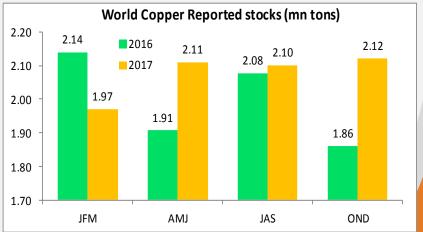


Copper – Effective Balance Sheet

Description	2015	2016 E	2017 P	Change
Refined Copper Production	22.987	23.524	23.85	0.325
Refined Copper Consumption	22.865	23.426	23.971	0.545
P-C Balance	0.122	0.098	-0.119	
Ending Stocks (Producer)	1.100	0.860	0.930	0.070
Ending Stocks (Exchange)	0.488	0.480	0.560	0.080
China bonded warehouse stocks	0.400	0.520	0.630	0.110
No. of Weeks of Consumption	3.61	2.97	3.23	
No. of Weeks of Consumption (incl. china bonded)	4.52	4.13	4.60	

Source: ICSG, TG Estimates, * All figures are in Million tons unless mentioned otherwise





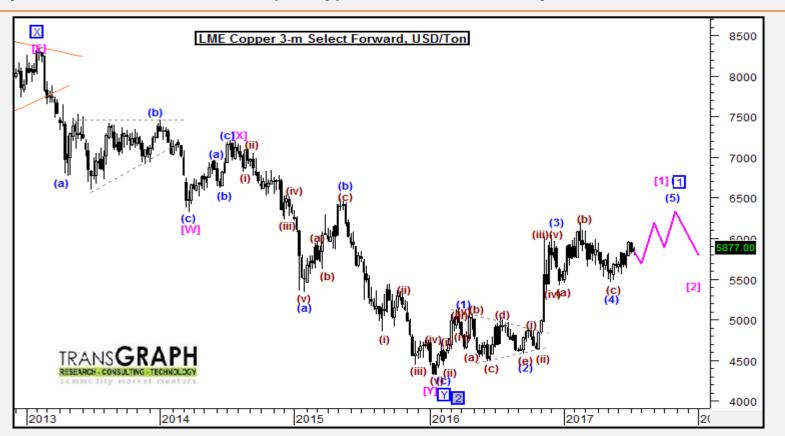
Technical Analysis







LME Copper 3 – Month Forward (Daily) Elliott wave analysis



From Elliott wave perspective, prices have culminated primary wave "Y" at USD 4318 levels and started the primary wave "1" within that price have completed minor wave "4" at USD 5460 and resuming the positive trend which can extend towards USD 6300 as final leg of intermediate wave "1" in the coming 2-3 months.

Slide 17

LME Copper 3 – Month Forward Mother Chart analysis



LME Copper prices are likely to extend the gains towards USD 6300 in the coming 2-3 months and turn negative.

	Last Closing (USD/ton) (as on July 14, 2017)	Price outlook summary for next 2-3 months		
Commodity		Range	Direction	
LME Copper 3- month forward	5926	5750 – 6300	Prices are likely to stay above USD 5750 and trade higher towards USD 6300 in the coming 2-3 months.	

Note: Price close below USD 5750 will delay the expected gains and likely to trade lower towards USD

5450





Thanking you for your attention.

Talk us on: +91-40-46619999 Schedule an interaction:



Research Queries: services@transgraph.com

Sales: mktg@transgraph.com

TransRisk software: demo@transgraph.com

More info: www.transgraph.com | www.transrisk.net





TransGraph Consulting Private Limited

6C/A, Melange Towers, Sy.No.80-84, Hitech City, Hyderabad – 500081, India

LEGAL INFORMATION

This document is the whole property of TransGraph Consulting Private Limited, Hyderabad, India (hereafter "TransGraph").

The following acts are strictly prohibited:

Reproduction and/or forwarding for sale or any other uses

Posting on any communication medium

Transmittal via the Internet

Terms of usage

Upon receipt of this document either directly or indirectly, it is understood that the user will and must fully comply with the other terms and conditions of TransGraph. By accepting this document the user agrees to be bound by the foregoing limitations.

This publication is prepared by TransGraph and protected by copyright laws. Unless otherwise noted in the Service Agreement, the entire contents of this publication are copyrighted by TransGraph, and may not be reproduced, stored in another retrieval system, posted on any communication medium, or transmitted in any form or by any means without prior written consent of TransGraph. Unauthorized reproduction or distribution of this publication, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent necessary to protect the rights of TransGraph.

The information and opinions contained in this report have been obtained from sources TransGraph believed to be reliable, but no representation or warranty, express or implied, is made that such information is accurate or complete and it should not be relied upon as such.

This report does not constitute a prospectus or other offering document or an offer or solicitation to buy or sell any assets (commodities, currencies, etc) or other investment. Information and opinions contained in the report are published for the assistance of recipients, but are not to be relied upon as authoritative or taken in substitution for the exercise of judgment by any recipient; they are subject to change without any notice and not intended to provide the sole basis of any evaluation of the instruments discussed herein. Any views expressed reflect the current views of the analysts, which do not necessarily correspond to the opinions of TransGraph or its affiliates. Opinions expressed may differ from views set out in other documents, including research, published by TransGraph.

Any reference to past performance should not be taken as an indication of future performance. No member in the public related to TransGraph accepts any liability whatsoever for any direct or consequential loss arising from any use of material contained in this report.

Analyst Certification

Each analyst responsible for the preparation of this report certifies that (i) all views expressed in this report accurately reflect the analyst's views about any and all of the factors and assets (commodities, currencies, etc) named in this report, and (ii) no part of the analyst's compensation is directly or indirectly, related to the execution of the specific recommendations or views expressed herein.

Copyright © TransGraph Consulting Private Limited, Hyderabad, India.