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Commodity price monitor

Mar-18

Prepared for ACMA

April 2018



pwc

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Commodity trend dashboard

Commodity trend dashboard Quarter-on-Quarter changes (1/2)-Rolling view

Calendar Year 17-18: Q vs. Q update

Commodity	Region	Q-o-Q Up	Q-o-Q Down
Iron & Steel			
Iron Ore	International	5%	▲
	Domestic low grade		
	Domestic high grade		
Pig Iron	International	10%	▲
	Domestic	12%	▲
Stainless steel	Domestic HR	4%	▲
	Domestic CR	9%	▲
Wire rod	International	8%	▲
	Domestic	14%	▲
Steel Billets	International	7%	▲
	Domestic	12%	▲
Hot-rolled coils	International	8%	▲
	Domestic	10%	▲
Cold-rolled coils	International	4%	▲
	Domestic	8%	▲
EN8	Domestic	9%	▲
20MnCr5	Domestic		
Ferro-alloys			
Ferro titanium	International	7%	▲
Ferro chrome	International	4%	▲
	Domestic	16%	▲
Ferro molybdenum	International	11%	▲
Ferro vanadium	International	37%	▲
Ferro silicon	International		-2% ▼
	Domestic		-8% ▼

ND: Not disclosed by the source

Commodity trend dashboard Quarter-on-Quarter changes (2/2)- Rolling view

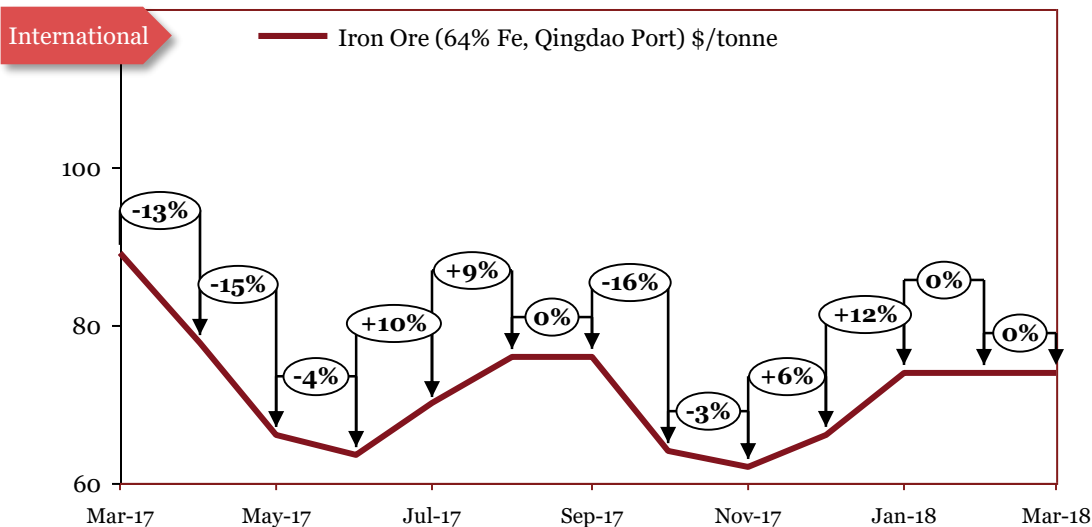
Calendar Year 17-18: Q vs. Q update

Commodity	Region	Q-o-Q Up	Q-o-Q Down
Base Metals			
Aluminium	International	7%	▲
	Domestic	2%	▲
Copper	International	2%	▲
	Domestic	1%	▲
Zinc	International	6%	▲
	Domestic	5%	▲
Nickel	International	15%	▲
	Domestic	14%	▲
Tin	International	7%	▲
	Domestic	6%	▲
Magnesium	International	7%	▲
Precious Metals			
Platinum	International	6%	▲
Palladium	International	4%	▲
Rhodium	International	24%	▲
Polymers			
Low density polyethylene (LDPE)	International		-2% ▼
	Domestic		-8% ▼
Polypropylene (PP)	International	6%	▲
	Domestic	8%	▲
Rubber	Domestic		-3% ▼
Forex Movement			
Dollar	Domestic	0.1%	▲
Pound	Domestic	5%	▲
Euro	Domestic	5%	▲
Yen	Domestic	5%	▲

Iron & Steel

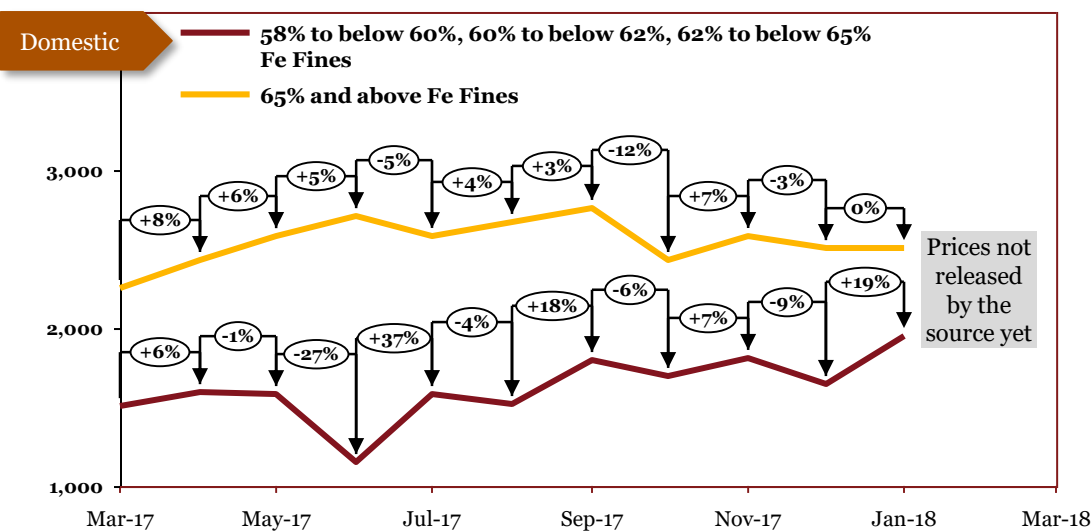
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Iron Ore



Source: Crisil

Monthly Average Prices			
Period	*Int'l \$/tonne	*Dom Rs/tonne	
		65% & below	65% & above
Apr-17	78	1,593	2,432
May-17	66	1,585	2,588
Jun-17	64	1,158	2,713
Jul-17	70	1,586	2,585
Aug-17	76	1,525	2,676
Sep-17	76	1,799	2,765
Oct-17	64	1,697	2,426
Nov-17	62	1,812	2,585
Dec-17	66	1,646	2,512
Jan-18	74	1953	2507
Feb-18	74	-	-
Mar-18	74	-	-



Source: Crisil

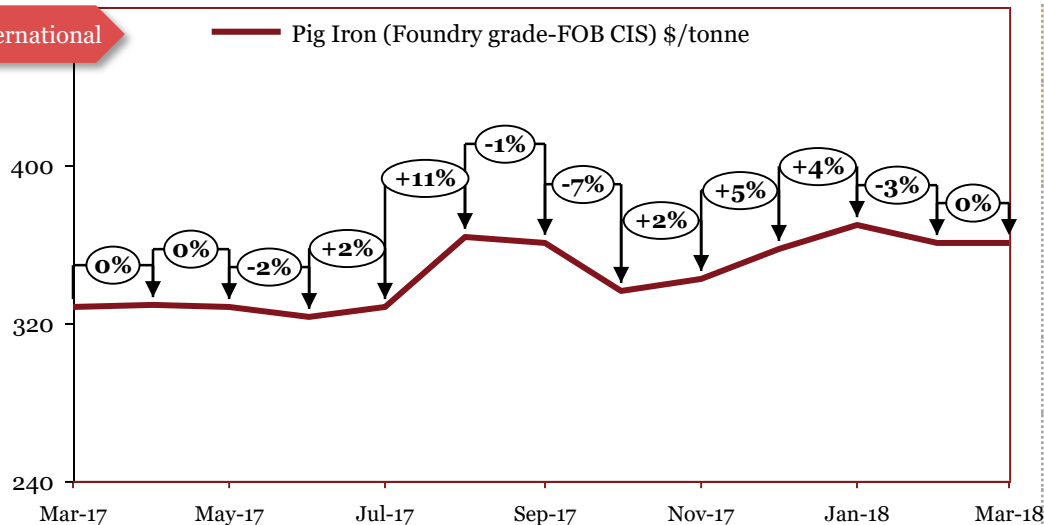
*The actual prices may vary depending on city, player, grade etc.

Outlook

The fear of decline in the steel demand due to expected credit crunching in China has further fuelled the fearful sentiments in the market. Indian domestic Iron ore prices have remained range-bound owing to the country's balanced supply and demand. The iron ore prices continued to increase in August owing to increased imports of iron ore by China. In September, the international prices of iron ore remained stable. In October, the ore prices decreased in the international market due to slack in demand. In November, the international prices decreased due to slack in demand from the consuming industries. In December, the international iron ore prices increased due to supply shortage from China caused by Chinese government restrictions. Additionally, strong steel prices aided the ore price hike. In January 2018, international ore prices followed similar trends as it did last month. However, the prices are expected to slow down as the market stabilizes. In Feb 2018, the international ore prices remained constant. In March, the international prices remained stable as the supply and demand balanced.

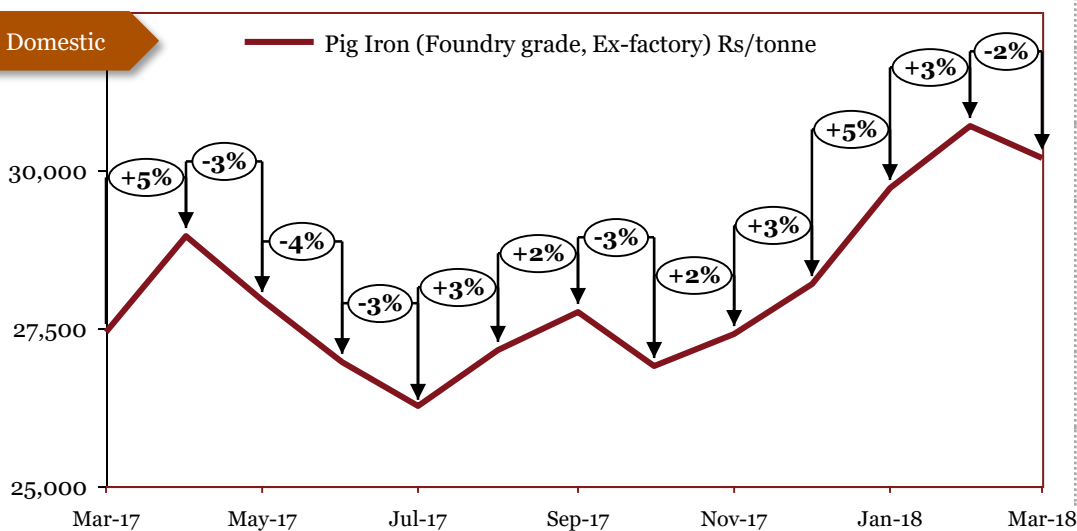
Pig Iron

International



Source: Crisil

Domestic



Source: Crisil

Monthly Average Prices		
Period	*Int'l \$/tonne	*Dom Rs/tonne
Apr-17	329	28,950
May-17	328	27,950
Jun-17	323	26,950
Jul-17	328	26,250
Aug-17	363	27,150
Sep-17	360	27,750
Oct-17	336	26,900
Nov-17	342	27,400
Dec-17	357	28,200
Jan-18	370	29,700
Feb-18	360	30,700
Mar-18	360	30,200

*The actual prices may vary depending on city, player, grade etc.

Outlook

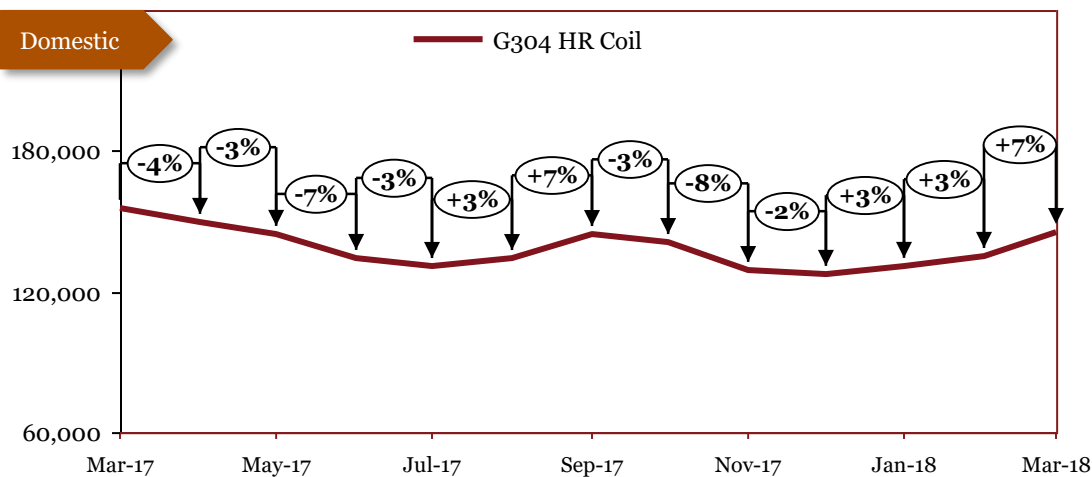
In the month of August, in global market and domestic market, the prices of pig iron increased owing to the increase in demand and increase in the raw material prices. In September, the domestic prices increased owing to the increased demand from the steel sector. The international prices fell moderately owing to the uncertainty in the scrap market. In October, the domestic and international prices decreased owing to the fall in prices of coking coal. In the month of Nov, the international and domestic prices have increased owing to the rise in the raw material prices. In December, the increase in the international and domestic prices could be attributed to the rise in raw materials costs. Furthermore, the rising steel prices are aiding the price hike. In January 2018, the international prices increased due to rise in the iron ore and scrap prices, coupled with increase in demand from North America. The domestic prices followed the international prices. In Feb 2018, the international prices decreased as the raw material prices stabilised. In the domestic market, the supply crunch and increasing billet prices fuelled the pig iron domestic prices. In March, the international prices remained flat owing to the continued decrease in the raw material prices. In the domestic market the prices declined as the supply of raw materials stabilised.

Stainless Steel

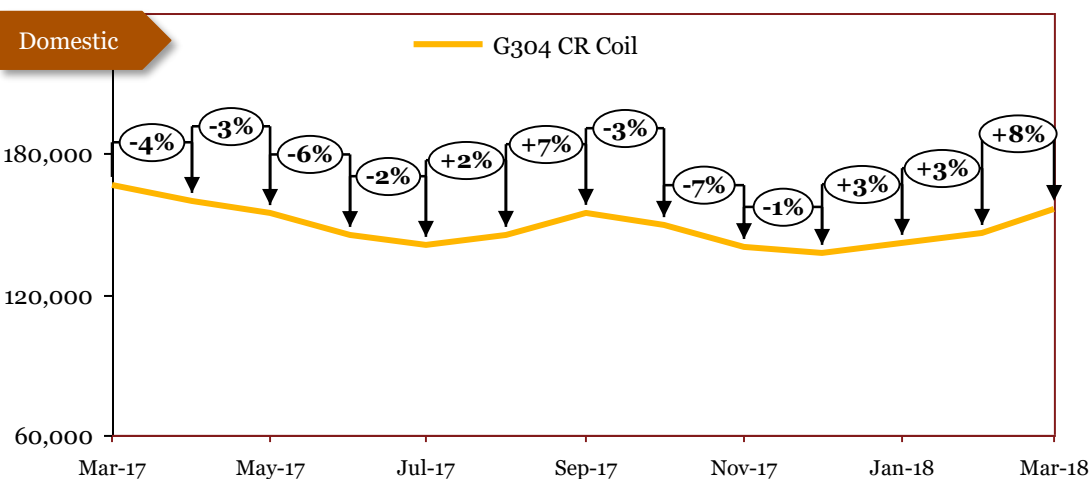
International

Data not available for relevant
(comparable to domestic) grades

Domestic



Domestic



Monthly Domestic Average Prices

Period	*G304 HR (Rs/tonne)	*G304 CR (Rs/tonne)
Apr-17	149,400	159,950
May-17	144,400	154,950
Jun-17	134,400	144,950
Jul-17	130,900	141,450
Aug-17	134,400	144,950
Sep-17	144,400	154,950
Oct-17	140,750	149,950
Nov-17	129,400	139,950
Dec-17	127,400	137,950
Jan-18	131,200	141,750
Feb-18	135,200	145,750
Mar-18	145,200	156,750

*The actual prices may vary depending on city, player, grade etc.

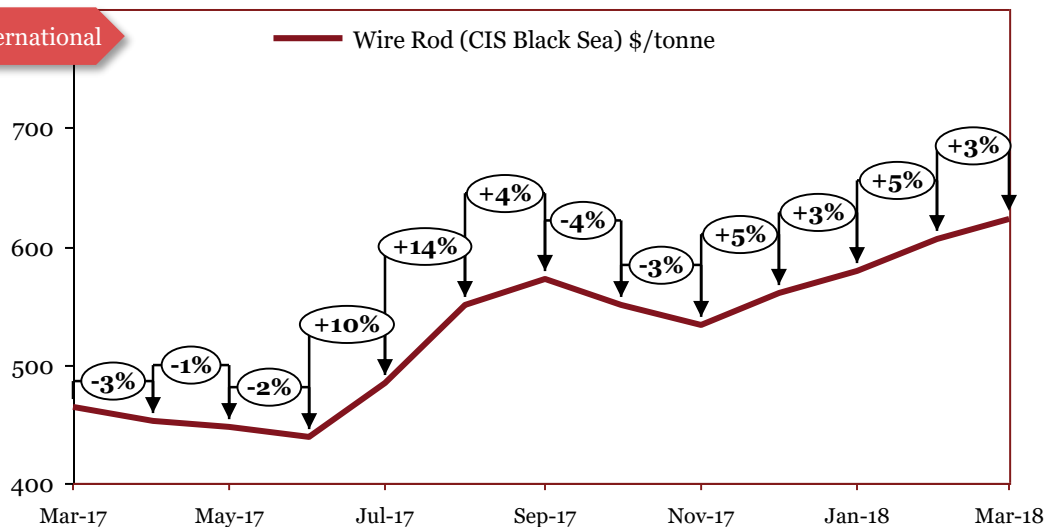
Source: PwC Research

Outlook

The ISSDA, association representing stainless steel industry of India, has urged the Government of India to increase the duty on the stainless steel imports. Last year, 'Stainless Steel Products QC Order' has made it mandatory for the manufacturers to register with BIS, otherwise they are prohibited to import, store or distribute the SS products. Since, >60% of the SS products used in the country do not conform to BIS, this order seemingly created an air of uncertainty in the market, which seems to continue this year as well. In September, the rise in the prices could seemingly be caused by the increasing prices of nickel and other base metals. In October, the international prices decreased owing to the decrease in demand from China. In November, the domestic prices followed the suit of international prices, which decreased owing to the reduced demand in China. In December, the domestic prices decreased due to low export demand, caused by stable supply from China. In January 2018, the domestic prices increased owing to the increase in the zinc prices. In Feb 2018, the increase in the domestic prices continued on the back of the rising input material prices. In March, the prices continued to increase on the back of the rising demand.

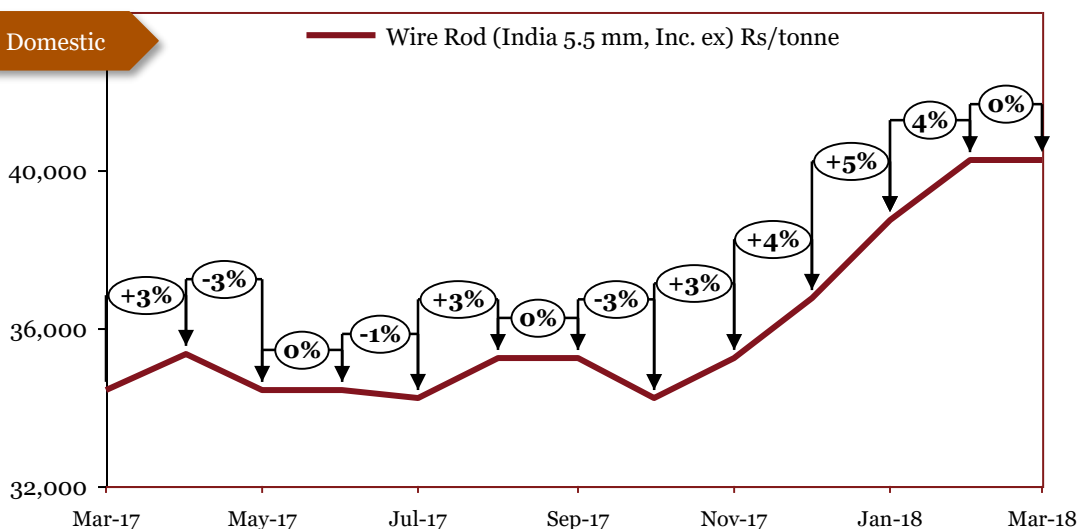
Wire Rod

International



Source: Crisil

Domestic



Source: Crisil

Monthly Average Prices

Period	*Int'l (\$/tonne)	^*Dom (Rs/tonne)
Apr-17	452	35,333
May-17	448	34,444
Jun-17	439	34,444
Jul-17	484	34,244
Aug-17	550	35,244
Sep-17	573	35,244
Oct-17	550	34,244
Nov-17	534	35,244
Dec-17	561	36,744
Jan-18	578	38,744
Feb-18	606	40,244
Mar-18	623	40,244

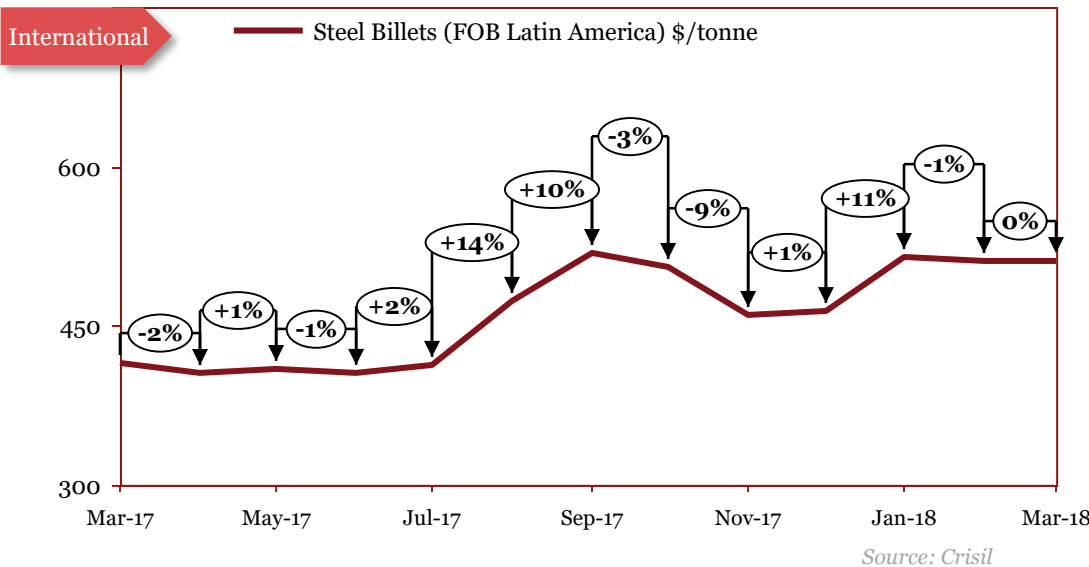
*The actual prices may vary depending on city, player, grade etc.

Outlook

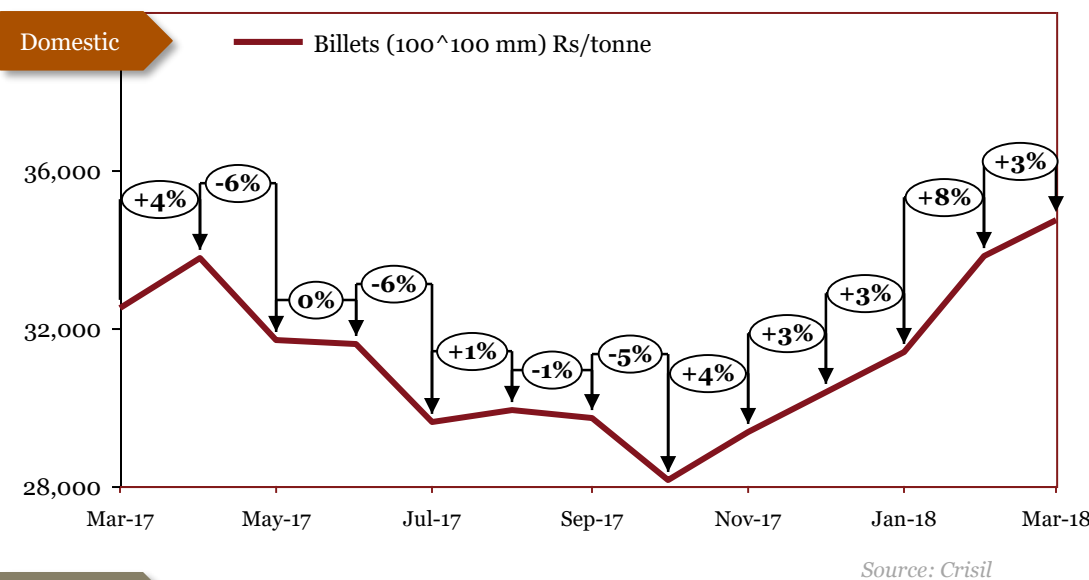
The international wire rod prices increased sharply in August owing to the increase in the raw material prices (coking coal etc.) and increased demand. Domestic prices followed the suit. In September, the international prices increased owing to the steady increase in demand for the long steel. The domestic prices remained stable. In October, the international prices decreased owing to the muted demand. In domestic market, the decrease in the export demand triggered selling at lower prices to reduce the inventory. In November, the international prices decreased owing to the slack in demand. However, the domestic prices increased due to increase in local demand. In December, the international and domestic prices increased owing to the rise in raw material costs. Furthermore, Chinese winter production cuts seemingly aided in the price hike. In January 2018, the international and domestic prices increased due to hike in the raw material prices. In Feb 2018, the international and domestic prices continued to increase due to increased demand. In March, the international prices increased on back of the high raw material prices and robust demand. In domestic market, the prices remained flat due to downward pressure from the lower demand.

^Prices have been retrospectively revised by the source to accommodate impact of GST

Steel Billets



Monthly Average Prices		
Period	^*Int'l (\$/tonne)	^*Dom (Rs/tonne)
Apr-17	405	33,763
May-17	410	31,700
Jun-17	406	31,600
Jul-17	414	29,600
Aug-17	473	29,917
Sep-17	518	29,733
Oct-17	505	28,133
Nov-17	460	29,383
Dec-17	463	30,375
Jan-18	515	31,375
Feb-18	511	33,800
Mar-18	511	34,733



*The actual prices may vary depending on city, player, grade etc.

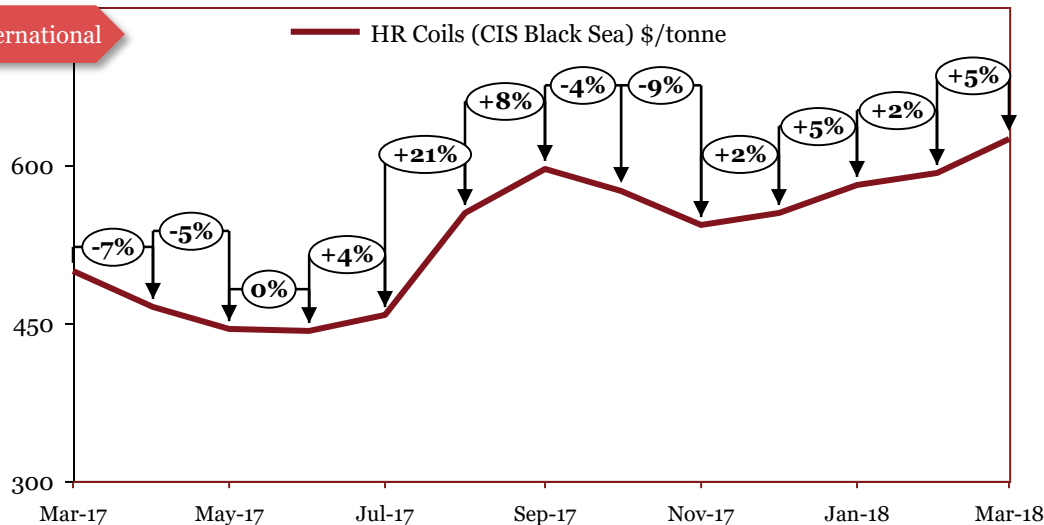
Outlook

In the month of May, a steep decline in the prices is observed and it's mostly is predicted as the result of slowing demand. In July, the domestic billet prices continued to fall owing to the slack in the demand; this is also aided by the slowing finished steel products prices locally. In August and September, the domestic billet prices have fluctuated marginally. In October, the domestic price decreased owing to the muted demand. In November, the billet prices in Latin America decreased due to slack in export and local Latin American market demand. However, in the domestic market, lower supply lead to increased prices. In December, the domestic prices increased owing to the reduced supply in the domestic market. In January 2018, the international and domestic prices increased due to hike in the raw material prices. In domestic market, the increase in billet price also reflected the increase in the ore prices by NMDC. In Feb 2018, the international prices remained constant owing to the balanced market conditions. However, in the domestic market prices increased due to increase in the raw material prices. In March, International prices remained flat owing to the limited demand. However, the domestic prices increased due to robust demand.

Int'l price index changed by the source ^Prices have been retrospectively revised by the source to accommodate impact of GST

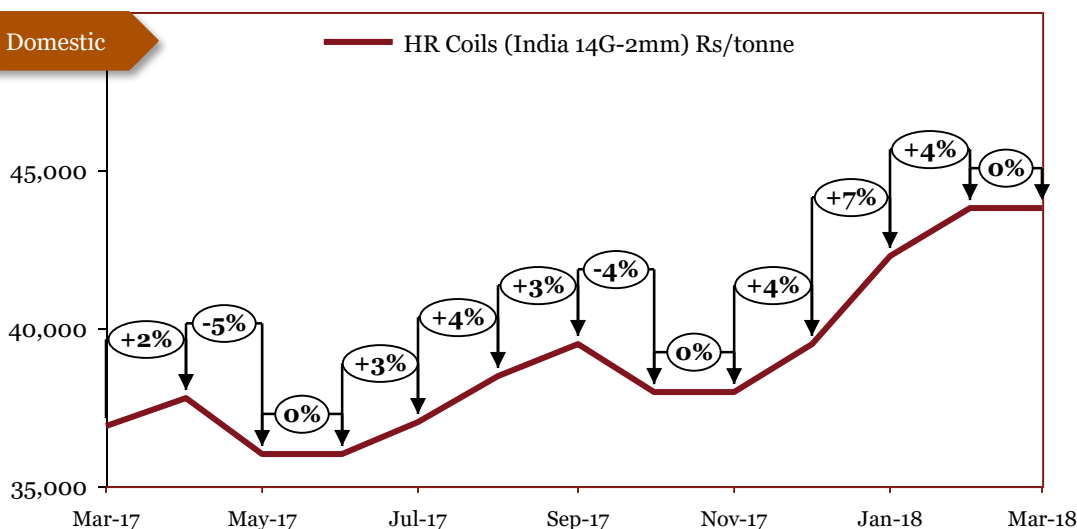
Hot-Rolled (HR) Coils

International



Source: Crisil

Domestic



Source: Crisil

Monthly Average Prices

Period	*Int'l (\$/tonne)	^*Dom (Rs/tonne)
Apr-17	465	37,778
May-17	444	36,000
Jun-17	442	36,000
Jul-17	458	37,000
Aug-17	554	38,500
Sep-17	597	39,500
Oct-17	576	38,000
Nov-17	544	38,000
Dec-17	555	39,500
Jan-18	581	42,300
Feb-18	592	43,800
Mar-18	624	43,800

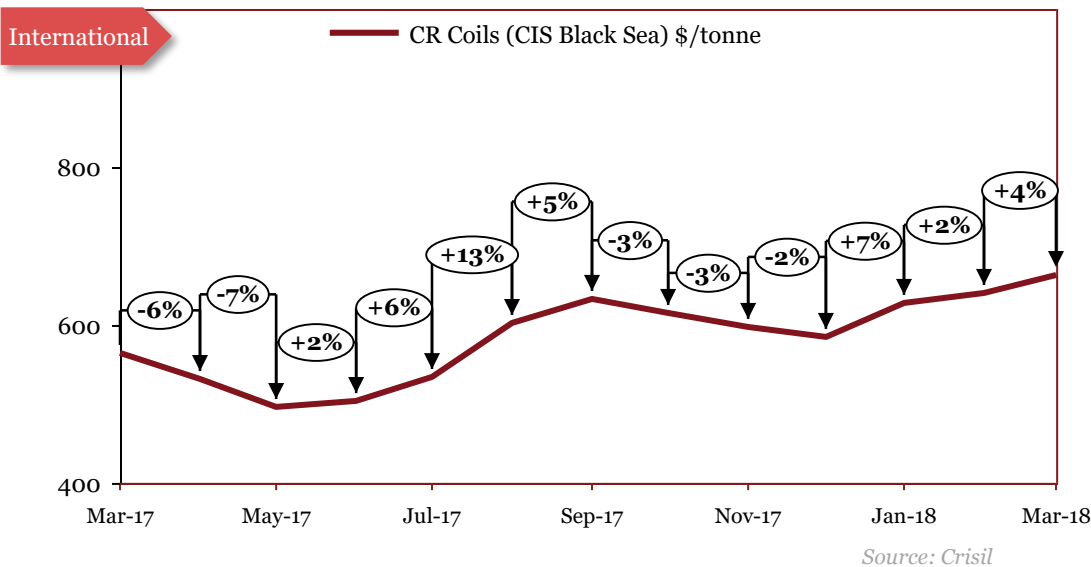
*The actual prices may vary depending on city, player, grade etc.

Outlook

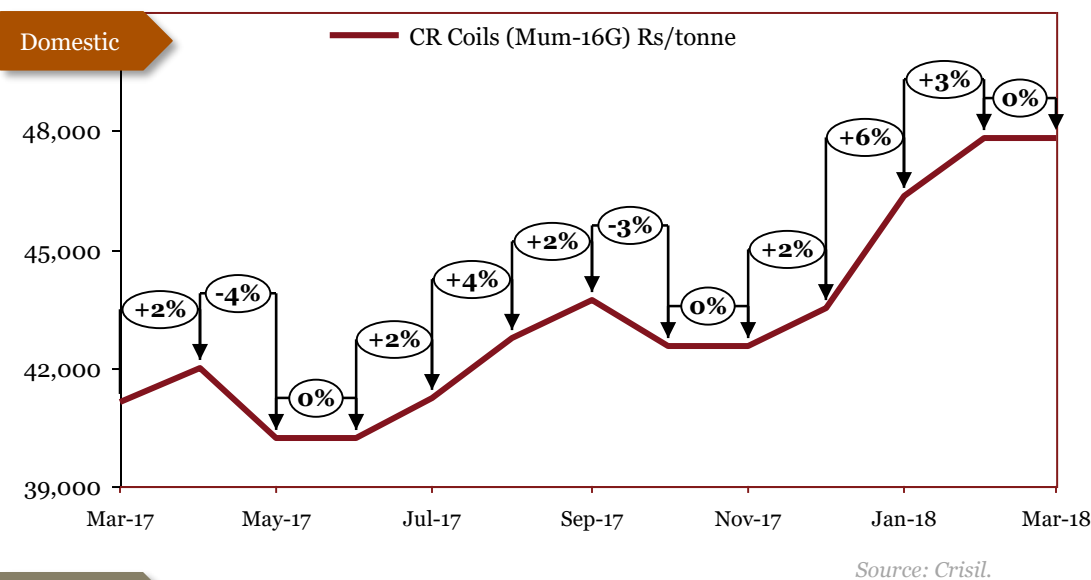
In October, the international prices decreased owing to the decrease in the coking coal prices. The domestic prices followed suit. In November, the international prices decreased owing to the slack in demand, however, in the domestic market, the prices remained stable due to stable demand and supply. In December, increased demand and increased raw material costs aided the increase of international and domestic prices of HR coils. In January 2018, the international prices increased due to improved market sentiment and increase in the ore prices. However, the increase was limited by the declining prices of coke. Domestic prices increased as steel makers hiked prices to reflect the increase in the ore prices by NMDC. In Feb 2018, the international prices increased owing to the elevated coking coal prices. In the domestic market, the prices increased due to supply crunch caused by the temporary shutdown at Tata Steel Kalinganagar plant due to technical issues and multiple other plants due to maintenance activities. In March, the international prices increased owing to the increased demand. In the domestic market, the prices increased initially, however, lower demand pushed the prices downward leading to flat rate.

^Prices have been retrospectively revised by the source to accommodate impact of GST

Cold-Rolled (CR) Coils



Monthly Average Prices		
Period	*Int'l (\$/tonne)	^*Dom (Rs/tonne)
Apr-17	533	42,000
May-17	496	40,222
Jun-17	504	40,222
Jul-17	535	41,222
Aug-17	603	42,722
Sep-17	633	43,722
Oct-17	615	42,522
Nov-17	597	42,522
Dec-17	585	43,522
Jan-18	627	46,322
Feb-18	640	47,822
Mar-18	664	47,822



*The actual prices may vary depending on city, player, grade etc.

Outlook

The CR coils international and domestic prices are mostly reflective of the trends in the HRC prices. After a relatively stable phase, the international prices started to come down due to slowdown and policy uncertainty in the Chinese market. The trends follow that of the HR Coils. In August, CR coils prices increased following the increase in the prices of the HR coils. In September and October CR coils prices followed the same trend as that of the HR coils. In November, the CR prices followed similar trends as HR prices. In December, the CR coil prices followed the HR coil prices. In January 2018, the CR prices followed similar trends as that of HR prices. In Feb 2018, the CR coils prices followed the HR coils price trends in domestic as well as international market. In March 2018, the CR coils prices followed the HR coils price trends in domestic as well as in the international market.

^Prices have been retrospectively revised by the source to accommodate impact of GST

20MnCr5 Alloy Steel (Forging)

International

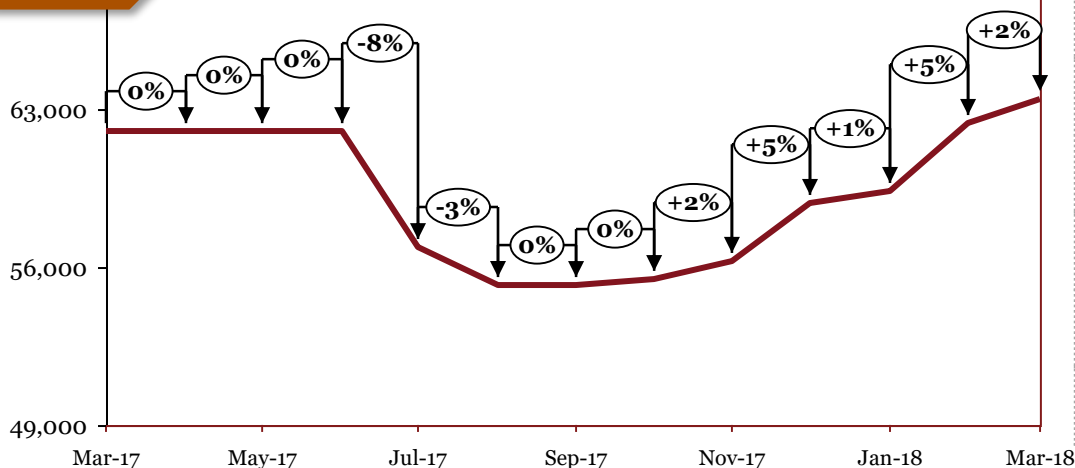
Data not available for relevant (comparable to domestic) grades

Monthly Average Prices

Period	*Dom (Rs/tonne)
Apr-17	62,000
May-17	62,000
Jun-17	62,000
Jul-17	56,916
Aug-17	55,222
Sep-17	55,222
Oct-17	55,437
Nov-17	56,300
Dec-17	58,860
Jan-18	59,400
Feb-18	62,400
Mar-18	63,400

Domestic

Alloy Steel (forging)-20MnCr5 India Rs/tonne



Source: PwC Research

*The actual prices may vary depending on city, player, grade etc.

Outlook

Due to demonetization and GST implementation, the demand has mostly remained flat over the last year and ongoing current year. However, Government's focus on improving manufacturing scenario in the country is expected to fuel the long term growth in demand of the forging steel. The influx of global manufacturers is also expected to boost the demand. Thus, the long term prospects seems promising for the forging industry as a whole. In November, increase in the domestic iron ore prices has resulted in the increase of alloy steel prices. In December, the price hike can be attributed to the rising cost of raw materials. In January and Feb, the prices continued to increase due to increase in the raw material prices. In March, the domestic prices increased due increased demand.

EN8 Alloy Steel (Forging)

International

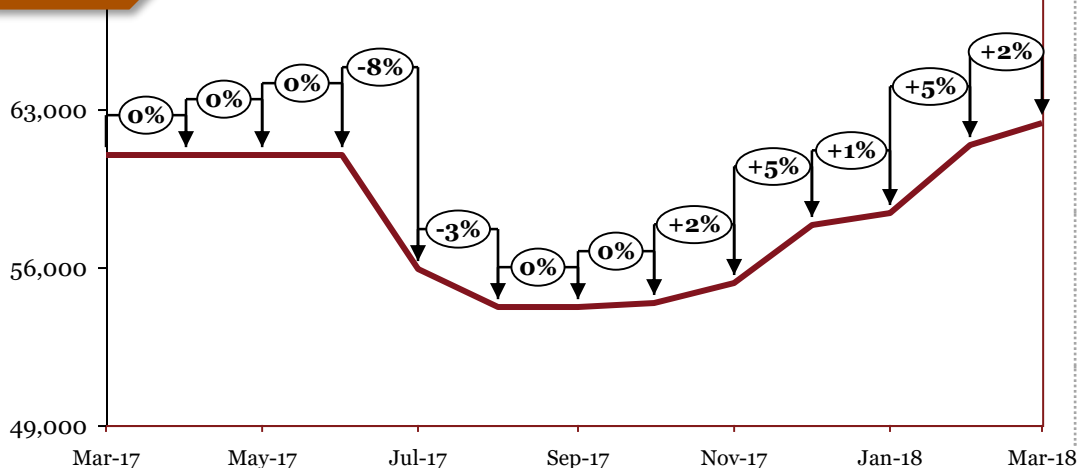
Data not available for relevant (comparable to domestic) grades

Monthly Average Prices

Period	*Dom (Rs/tonne)
Apr-17	61,000
May-17	61,000
Jun-17	61,000
Jul-17	55,916
Aug-17	54,222
Sep-17	54,222
Oct-17	54,437
Nov-17	55,300
Dec-17	57,860
Jan-18	58,400
Feb-18	61,400
Mar-18	62,400

Domestic

Alloy Steel (forging)-EN8 India Rs/tonne



Source: PwC Research

*The actual prices may vary depending on city, player, grade etc.

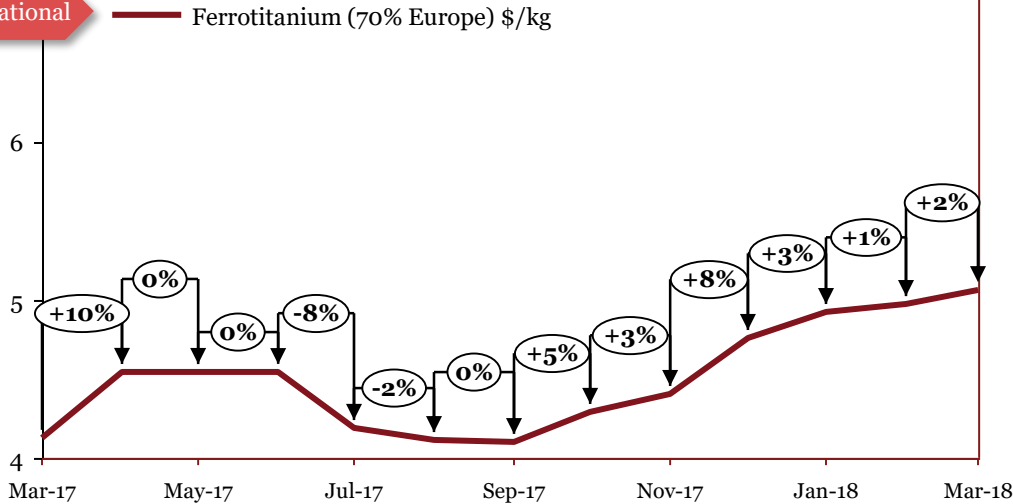
Outlook

Due to demonetization and GST implementation, the demand has mostly remained flat over the last year and ongoing current year. However, Government's focus on improving manufacturing scenario in the country is expected to fuel the long term growth in demand of the forging steel. The influx of global manufacturers is also expected to boost the demand. Thus, the long term prospects seems promising for the forging industry as a whole. In November, increase in the domestic iron ore prices has resulted in the increase of alloy steel prices. In December, the price hike can be attributed to the rising cost of raw materials. In January and Feb, the prices continued to increase due to increase in the raw material prices. In March, the domestic prices increased due to increased demand.

<i>Ferro-alloys</i>	Ferro-alloys	18
10	Ferro titanium	19
11	Ferro chrome	20
12	Ferro molybdenum	21
13	Ferro vanadium	22
14	Ferro silicon	23

Ferro titanium

International



Grade specifications changed from Metal Bulletin to Asian Metals
 Source: Bloomberg

Domestic

Relevant domestic price data not available

Monthly Average Prices

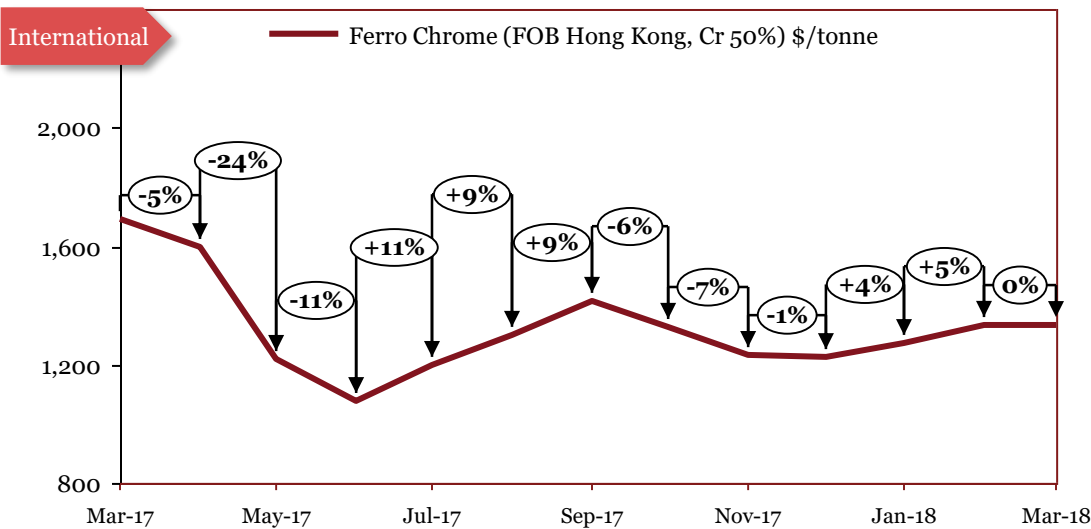
Period	*Int'l (\$/kg)
Apr-17	4.5
May-17	4.6
Jun-17	4.5
Jul-17	4.2
Aug-17	4.1
Sep-17	4.1
Oct-17	4.3
Nov-17	4.4
Dec-17	4.8
Jan-18	4.9
Feb-18	5.0
Mar-18	5.1

*The actual prices may vary depending on city, player, grade etc.

Outlook

Ferro titanium prices increased in August owing to the increase in the demand. In September, the prices increased following the last month's trends. In October, the prices increased owing to the increased demand. In November and December, the prices increased as due to limited production by sellers owing to the contractual agreements restricting them to address the spot market demand. In January 2018, the prices increased owing to the steady increase in demand. In Feb 2018, the prices remained steady due to balanced market conditions. The traders are awaiting tenders from the global steel mills for deciding the price direction. In March, the prices in Europe increased on the back of the increasing demand.

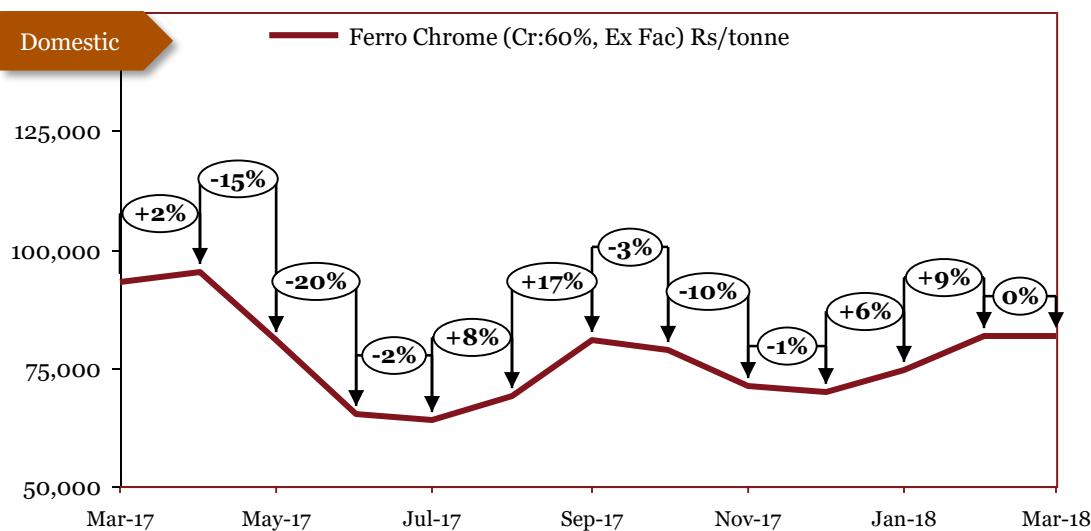
Ferro chrome



Source: Crisil

Monthly Average Prices		
Period	*Int'l (\$/tonne)	*Dom (Rs/tonne)
Apr-17	1,600	95,000
May-17	1,217	81,000
Jun-17	1,079	65,000
Jul-17	1,198	64,000
Aug-17	1,301	69,000
Sep-17	1,412	81,000
Oct-17	1,327	78,500
Nov-17	1,233	71,000
Dec-17	1,224	70,000
Jan-18	1,275	74,500
Feb-18	1,335	81,500
Mar-18	1,335	81,500

*The actual prices may vary depending on city, player, grade etc.

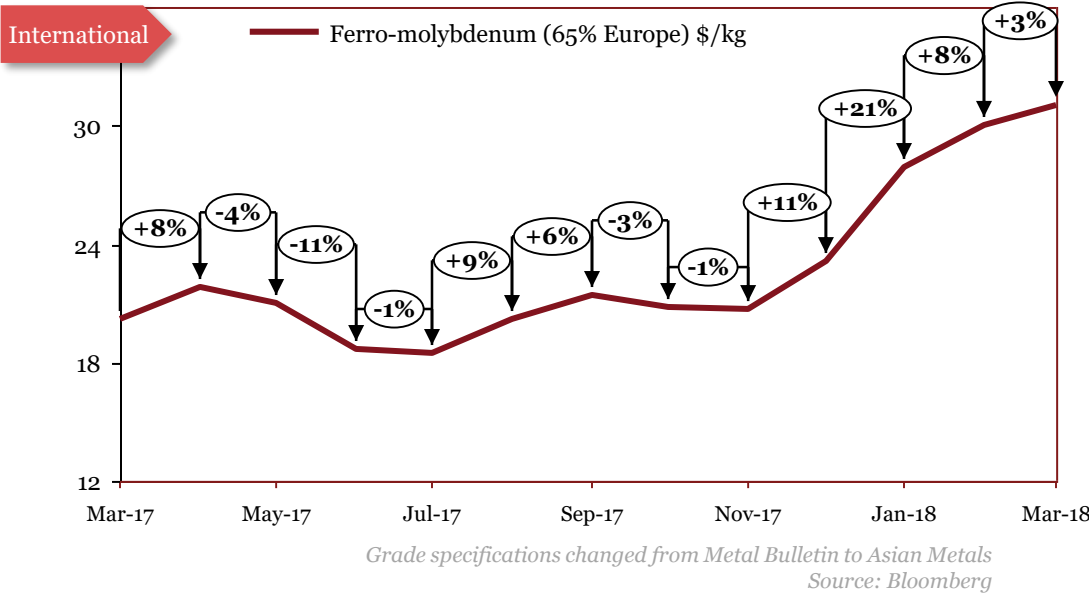


Source: Crisil

Outlook

In August, the international prices of ferro chrome increased due to increase in the chrome ore prices and shut down of a few ferro chrome plants in China owing to the new environmental policy. Domestic prices followed the international prices. In September, the international prices increased owing to the moderately increased demand from China. The domestic prices increased following the international trends coupled with increase in the domestic stainless steel demand. The decrease in the international and domestic prices. In October, the prices decreased owing to the decrease in the demand. In November, the international prices decreased owing to the increased supply of local ferro chrome in China. The domestic market seems to follow the suit. In December, the international prices decreased owing to the slow demand, domestic prices followed the suit. In January 2018, the international prices increased due to increase in demand from China's stainless steel industry. The domestic market followed the international market. In Feb 2018, the international prices increased due to increase in demand. Domestic market followed suit. In March, the rate of increase in the prices slowed down as Chinese ferro chrome prices decreased ahead of expected low tenders. Domestic market followed suit.

Ferro molybdenum



Monthly Average Prices	
Period	*Int'l (\$/kg)
Apr-17	21.9
May-17	21.0
Jun-17	18.7
Jul-17	18.5
Aug-17	20.2
Sep-17	21.4
Oct-17	20.9
Nov-17	20.7
Dec-17	23.1
Jan-18	27.9
Feb-18	30.0
Mar-18	31.0

*The actual prices may vary depending on city, player, grade etc.

Domestic

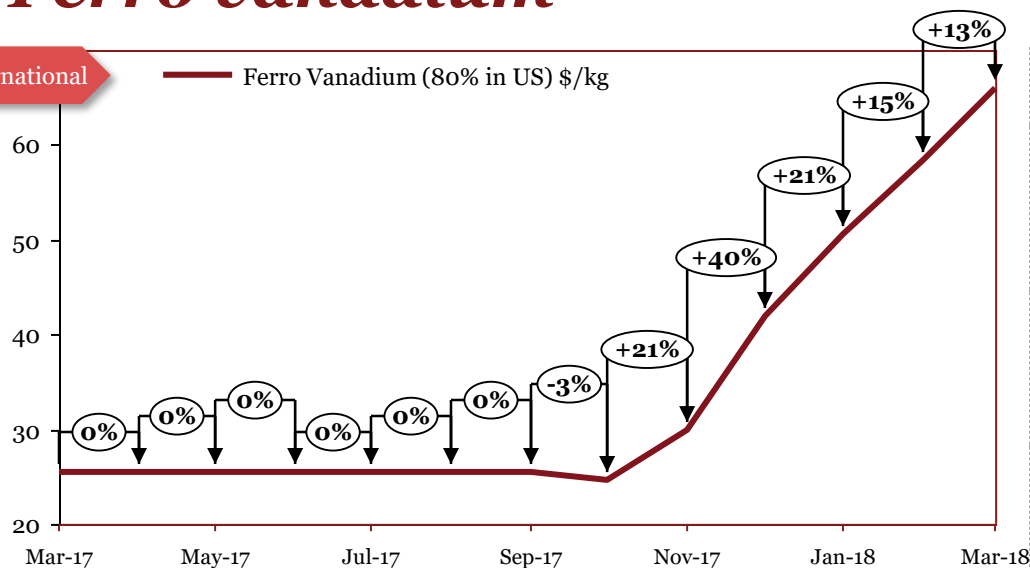
Relevant domestic price data not available

Outlook

The spread between the ferro molybdenum and molybdic acid prices has been increasing over the past year. Moreover, weaker demand in the Chinese domestic market and overall international market has further created a downward pressure in the prices. In July, the steadily decreasing prices of Molybdic oxide are supposedly keeping downward pressure on the alloy prices. Prices increased in August owing to the increased demand from the Asian markets. In September, the prices continued to increase owing to the increasing demand from the Asian markets. In October, the prices decreased due to subdued demand. In December, the prices increased due to tight supply, restocking and increased costs of raw materials. In January 2018, the prices continued to increase on back of the rising demand. In Feb 2018, the prices increased due to continued demand. The prices in March increased as the demand increased.

Ferro vanadium

International



Grade specifications changed from Metal Bulletin to Asian Metals
 Source: Bloomberg

Domestic

Relevant domestic price data not available

Monthly Average Prices

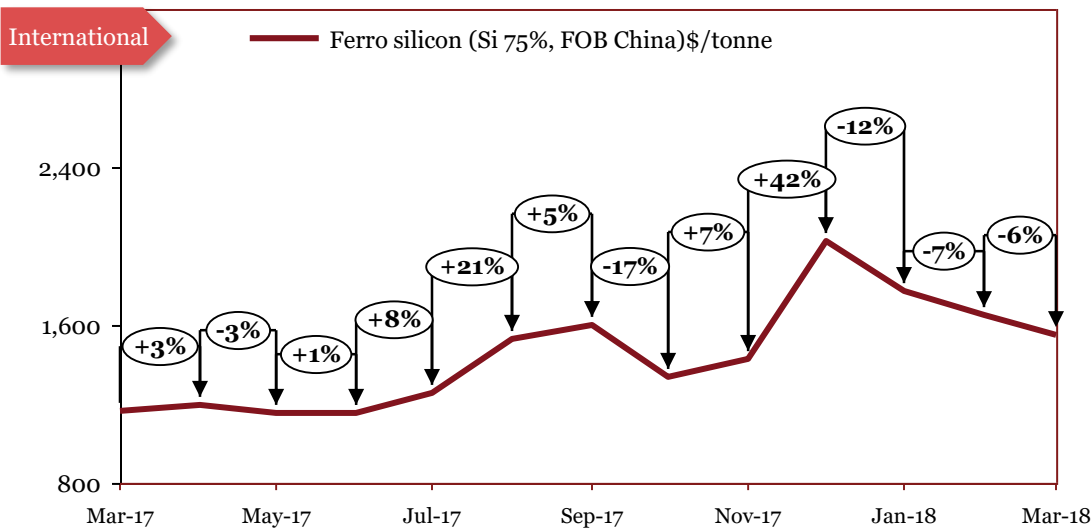
Period	*Int'l (\$/kg)
Apr-17	25.5
May-17	25.5
Jun-17	25.5
Jul-17	25.5
Aug-17	25.5
Sep-17	25.5
Oct-17	24.7
Nov-17	29.8
Dec-17	41.9
Jan-18	50.6
Feb-18	58.4
Mar-18	65.9

*The actual prices may vary depending on city, player, grade etc.

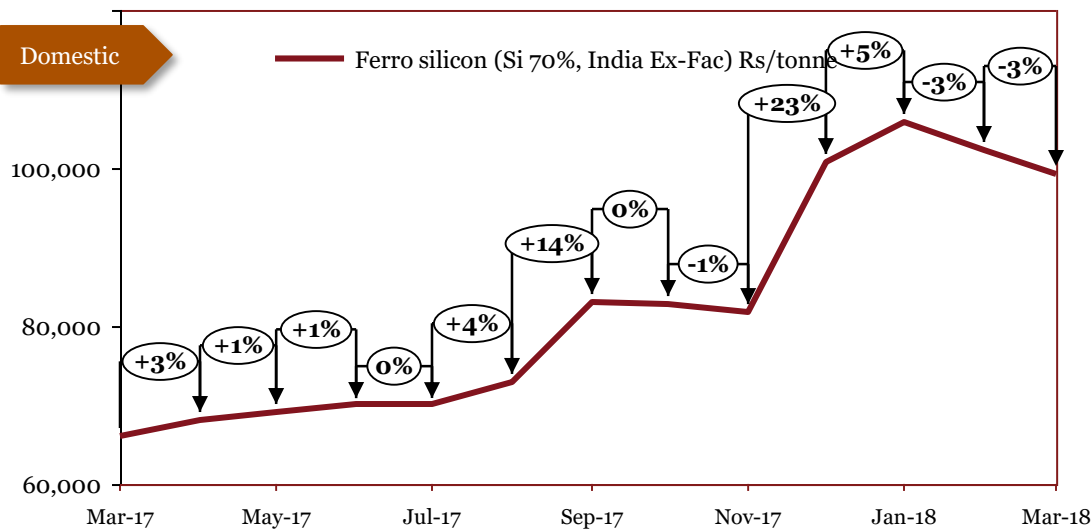
Outlook

The ferro vanadium prices have been fluctuating (within 5% range) since the beginning of this year. This may be attributed to the fluctuations of supply and demand in the international market. The European traders are benefiting from higher spot prices in Asian countries as Europe remains a slump in the current period. In October, the prices reduced owing to the slack in overall demand and increased supply from China. In November and December, the prices increased due to limited supply and steady demand. In January 2018, the prices continued to increase due to restricted supply from China. Increase in local demand in China for ferro vanadium has restricted the supplies globally. Moreover, the rising prices of Vanadium has also put an upward pressure on the ferro vanadium prices. In Feb 2018, the prices continued to increase due to supply tightness in Europe, US and China. In March, the prices increased owing to the rising supply constraints.

Ferro silicon



Source: Crisil



Source: Crisil

Monthly Average Prices		
Period	*Int'l (\$/tonne)	*Dom (Rs/tonne)
Apr-17	1,193	68,000
May-17	1,153	69,000
Jun-17	1,159	70,000
Jul-17	1,256	70,000
Aug-17	1,525	73,000
Sep-17	1,601	83,000
Oct-17	1,332	82,700
Nov-17	1,428	81,700
Dec-17	2,022	100,700
Jan-18	1,773	105,700
Feb-18	1,649	102,200
Mar-18	1,546	99,200

*The actual prices may vary depending on city, player, grade etc.

Outlook

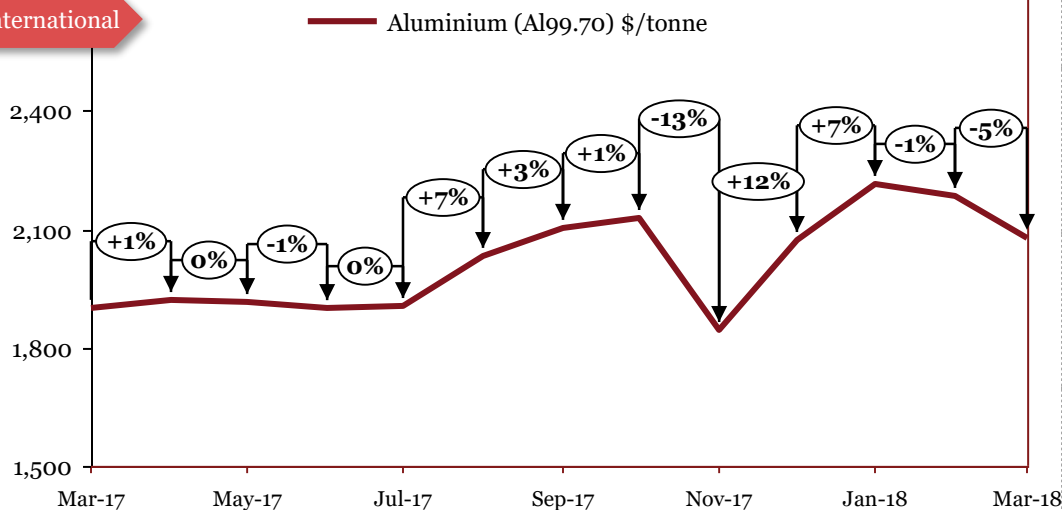
In October, the international prices decreased owing to the muted demand. However, the domestic prices seemingly remained unaffected by the international price trends. In November, the international prices increased owing to the supply constraint in China and increasing demand in Europe. The domestic market is expected to catch-up with the international market trends. In December, the international prices increased sharply due to increase in demand coupled with production cuts in China and supply restraints from Malaysia. Domestic prices followed international prices, aided by the rising domestic steel prices. In January 2018, the international prices declined due to lunar new year holidays in China, during which the Chinese ferro silicon prices decrease cyclically. Domestic prices increased due to high local demand and increase in the exports due to rise in demand from European markets. In Feb 2018, the international ferro silicon prices decreased due to muted demand. Domestic market followed the suit. In March, the international prices decreased due to excess supply and a negative outlook due to weakness in Chinese steel sector. The domestic prices followed suit as producers lowered the prices to remain competitive.

Base Metals

	Base Metals	24
15	Aluminium	25
16	Copper	26
17	Zinc	27
18	Nickel	28
19	Tin	29
20	Magnesium	30

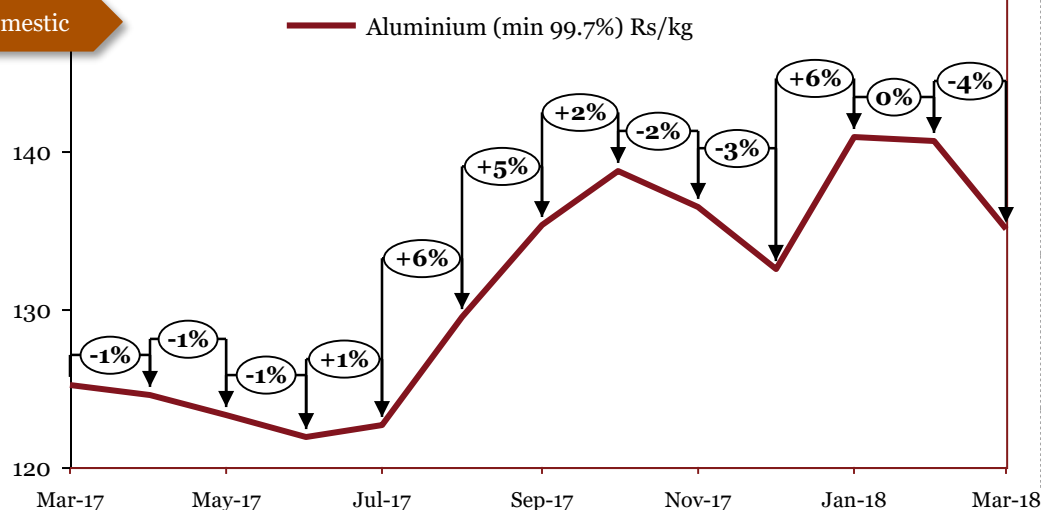
Aluminium

International



Source: LME

Domestic



Source: NCDEX

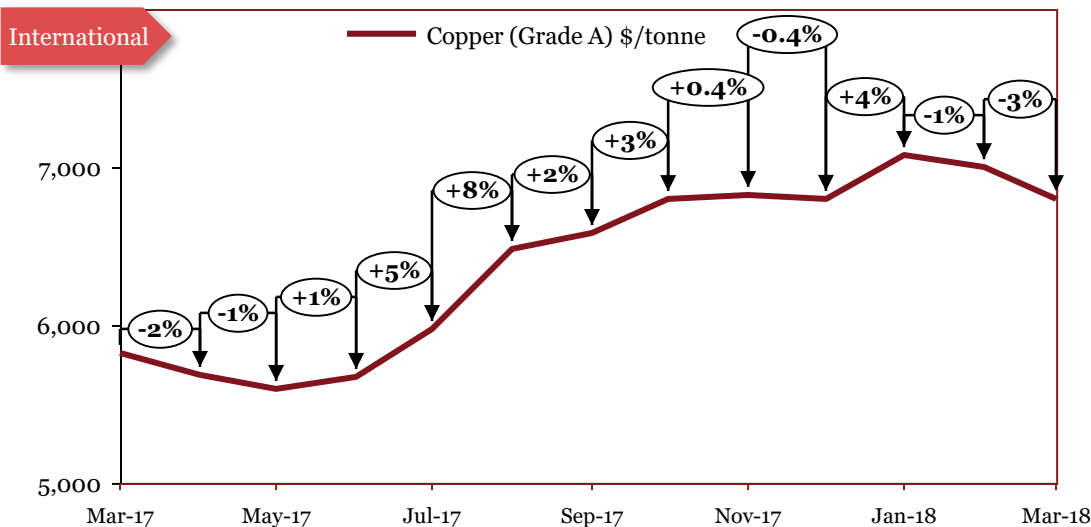
Monthly Average Prices		
Period	*Int'l (\$/tonne)	*Dom (Rs/kg)
Apr-17	1,921	125
May-17	1,913	123
Jun-17	1,898	122
Jul-17	1,903	123
Aug-17	2,030	129
Sep-17	2,100	135
Oct-17	2,130	139
Nov-17	1,845	136
Dec-17	2,070	133
Jan-18	2,214	141
Feb-18	2,185	141
Mar-18	2,076	135

*The actual prices may vary depending on city, player, grade etc.

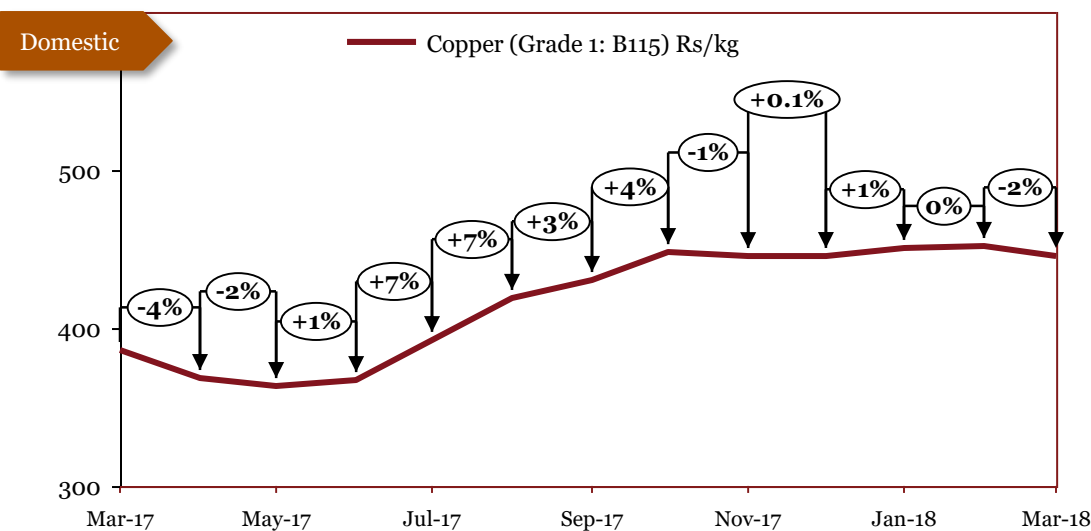
Outlook

In September, increase in the international prices continued owing to supply deficit caused by reduction in supply from China. Domestic prices followed the international trend. In October, the LME aluminium prices increased owing to the rising energy prices in China. The domestic prices followed the international prices. In November, the LME prices fell over the uncertainty in demand from China owing to the stringent environmental policy of the Government. This has in-turn triggered heavy dumping by the sellers leading to the decrease in prices. The domestic prices have declined comparatively less owing to the sustained local demand. In December, the international prices increased due to the supply disruption in China owing to the environmental protection policies. However, in the domestic market, the excess supply caused reduction in the prices. In January 2018, the supply restraint owing to the Chinese capacity cuts and increase in demand from the European and North American markets pushed the prices of aluminium in the global market. Domestic market followed the suit. In Feb 2018, the international and domestic prices remained steady compared to last month due to balanced supply-demand conditions in the market. In March, the international prices decreased owing to the strengthening of the dollar and simmering trade concerns between US and China. Domestic market followed suit.

Copper



Source: LME



Source: MCX

Monthly Average Prices		
Period	*Int'l (\$/tonne)	*Dom (Rs/kg)
Apr-17	5,684	369
May-17	5,600	363
Jun-17	5,667	367
Jul-17	5,978	392
Aug-17	6,478	418
Sep-17	6,583	431
Oct-17	6,797	448
Nov-17	6,825	445
Dec-17	6,801	446
Jan-18	7,080	451
Feb-18	7,001	452
Mar-18	6,795	445

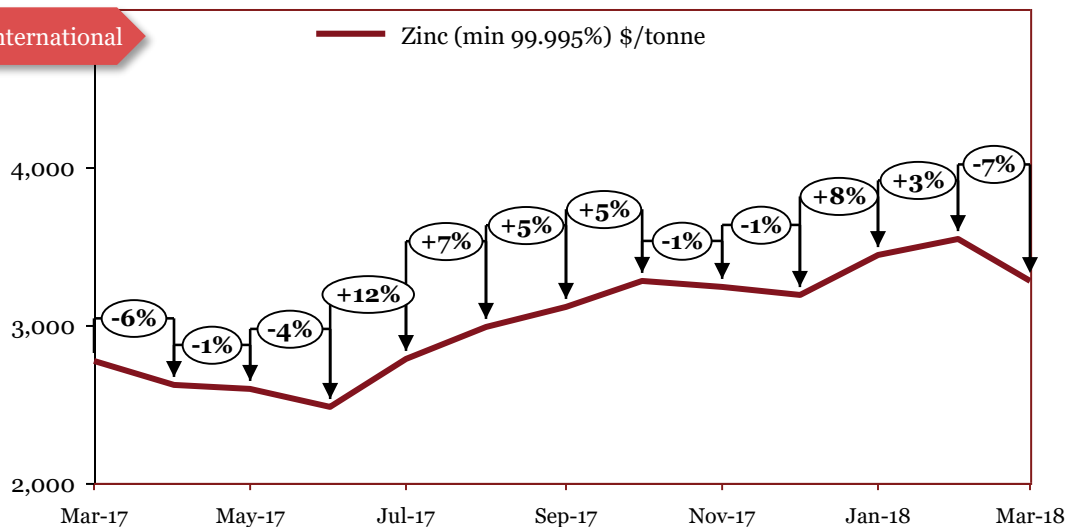
*The actual prices may vary depending on city, player, grade etc.

Outlook

The copper prices continued to increase in August owing to the speculation of a possible ban of copper scraps in China. In September, the copper prices continued to increase owing to the supply disruptions from Indonesia. In October, the international prices increased owing to the increased demand on speculation of a supply disruption caused by an Earthquake hitting the major copper producing region in Chile. Domestic prices increased due to increase in the local industrial demand. In November, the international prices remained stable due to continued demand from China, however, the domestic prices decreased due to decreased demand. In December, the international prices and the domestic prices didn't variate much as the supply and demand seemingly remained balanced. In January 2018, the international prices increased owing to the speculation of supply disruptions as 20% of the copper mines are due for wage re-negotiations this year. Domestic prices remained unperturbed from the international sentiments. In Feb 2018, the international and domestic prices remained steady compared to last month as the supply and demand in the market remained stable. In March, the international prices decreased owing to the strengthening of the dollar and simmering trade concerns between US and China. Domestic market followed suit.

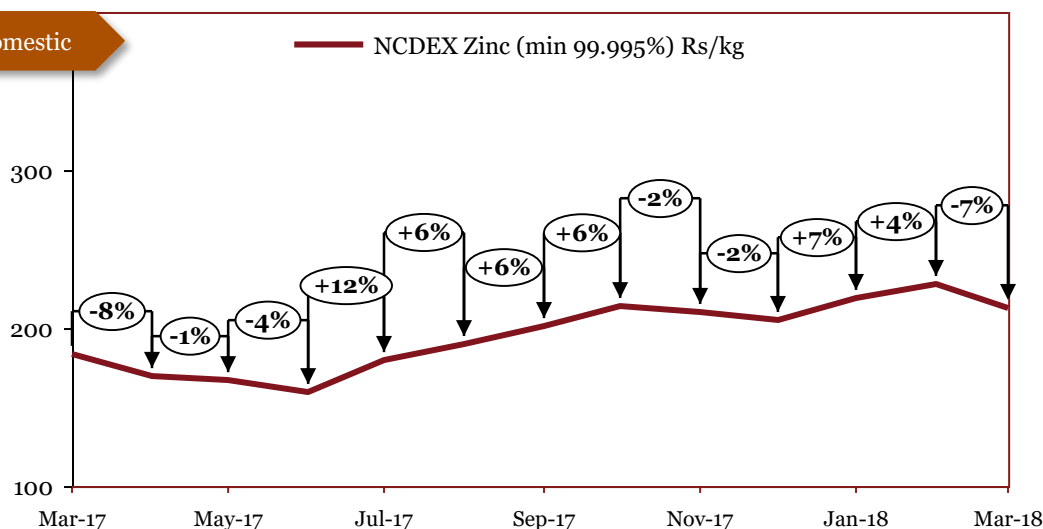
Zinc

International



Source: LME

Domestic



Source: NCDEX

Monthly Average Prices

Period	*Int'l (\$/tonne)	*Dom (Rs/kg)
Apr-17	2,615	169
May-17	2,590	167
Jun-17	2,478	160
Jul-17	2,785	179
Aug-17	2,981	190
Sep-17	3,119	201
Oct-17	3,274	214
Nov-17	3,236	210
Dec-17	3,192	205
Jan-18	3,447	219
Feb-18	3,539	228
Mar-18	3,280	213

*The actual prices may vary depending on city, player, grade etc.

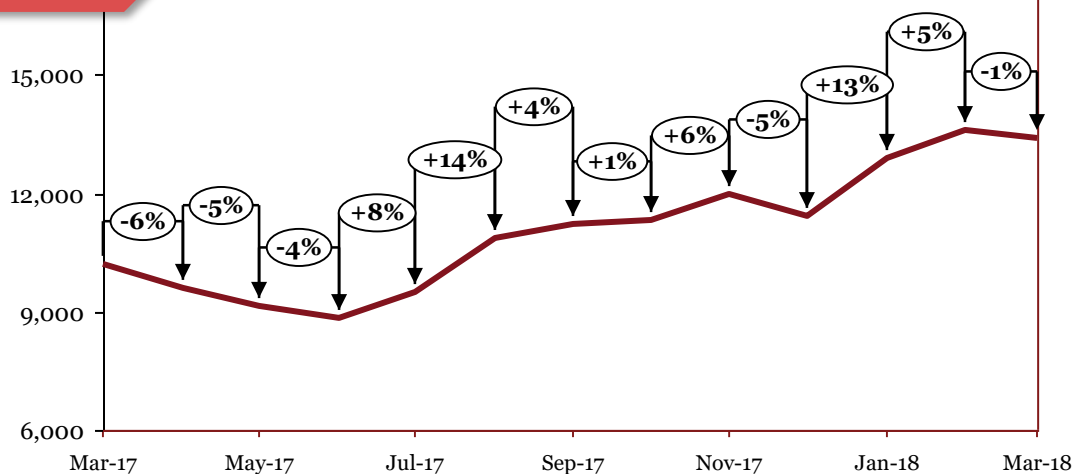
Outlook

The zinc prices have been decreasing globally due to slowing demand from the consuming industries. However, the zinc prices have increased significantly from over the last year, which has been seemingly attributed to the mining constraints, downscaling and closures in the countries such as Canada, Peru and Australia. The zinc prices in July rallied on the back of the rising demand; the recovery of steel sectors in US and China aided the increase in the demand for zinc. The international zinc prices have increased owing to the higher steel demands due to Chinese infrastructure development. The domestic market followed suit. In September and October, the international and domestic prices continued to increase due to steady demand from the consuming industries. In November, the international and domestic zinc prices fell owing to the lower demand from the consuming industries. In January 2018, prices increased owing to the increased demand in the international and domestic markets. In Feb 2018, the international and domestic zinc prices increased due to increased demand. In March, the international prices decreased owing to the strengthening of the dollar and simmering trade concerns between US and China. Domestic market followed suit.

Nickel

International

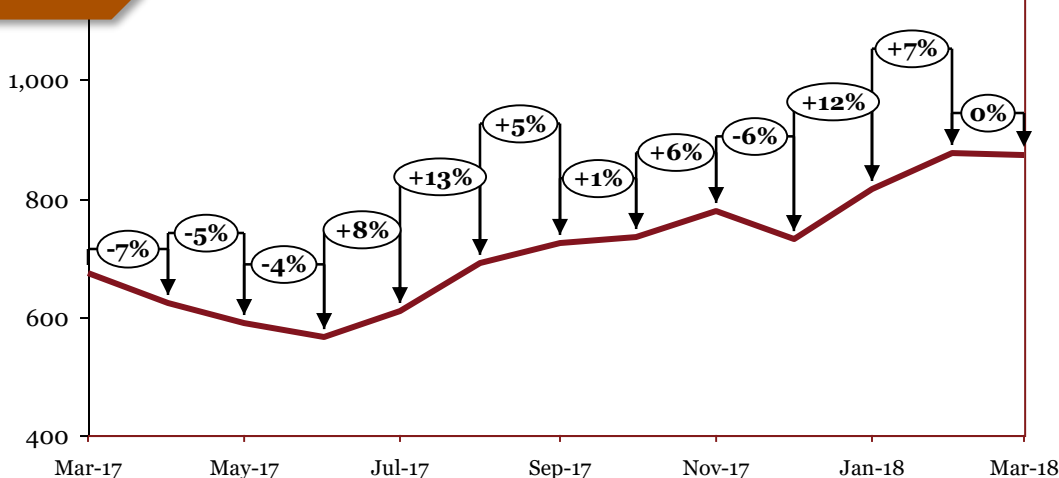
Nickel (min 99.80%) \$/tonne



Source: LME

Domestic

Nickel (4"×4" cut Nickel min 99.80%) Rs/kg



Source: NCDEX

Monthly Average Prices

Period	*Int'l (\$/tonne)	*Dom (Rs/kg)
Apr-17	9,609	624
May-17	9,155	590
Jun-17	8,814	567
Jul-17	9,479	610
Aug-17	10,844	692
Sep-17	11,230	725
Oct-17	11,320	735
Nov-17	11,990	779
Dec-17	11,406	730
Jan-18	12,876	816
Feb-18	13,573	875
Mar-18	13,400	873

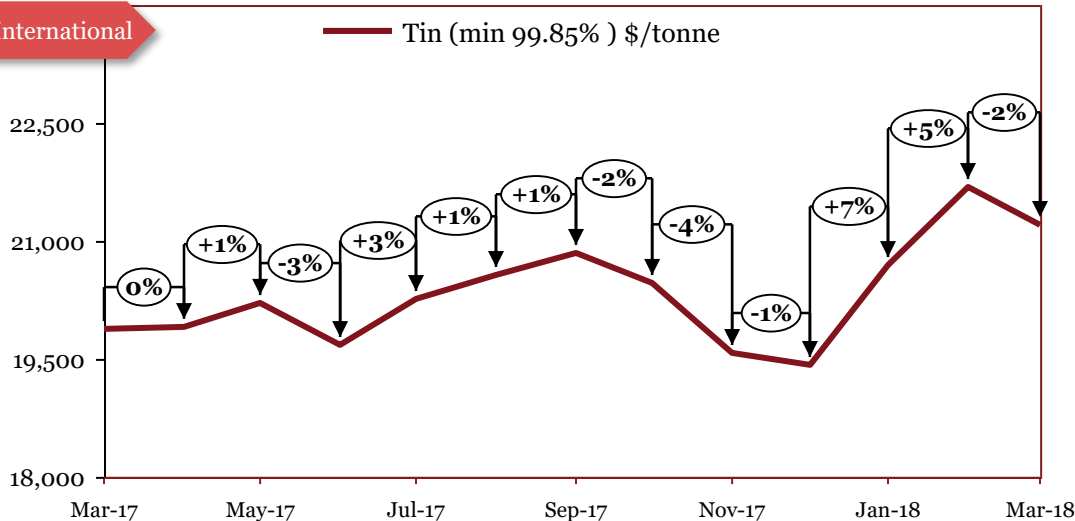
*The actual prices may vary depending on city, player, grade etc.

Outlook

In July, strong demand from the alloy makers seemingly increased the nickel demand. Nickel prices continued to rise in August owing to the strong demand from the end industries. The rise of electrical vehicle market affected the demand for nickel for advanced batteries. In September and October, the prices increased owing to the continued demand from the consuming industries. In November, the nickel prices increased due to increasing demand from the consuming industries in the domestic and international market alike. In January 2018, the international prices increased due to supply constraints caused by halting of operations at Madagascar's Ambatovy nickel mine, one of the largest nickel producing mines globally, due to damage caused by a cyclone. Domestic prices followed suit. In Feb 2018, the international prices increased owing to the weaker dollar. Domestic prices followed suit. In March, the geopolitical instability put a downward pressure on the nickel prices, however, the increasing demand offset the expected decline in the prices.

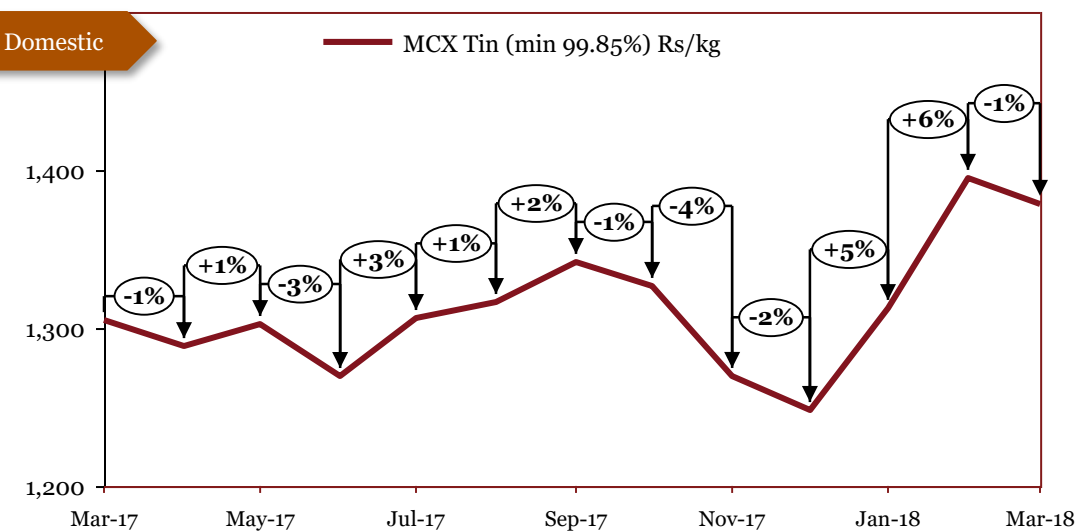
Tin

International



Source: LME

Domestic



Source: MCX

Monthly Average Prices		
Period	*Int'l (\$/tonne)	*Dom (Rs/kg)
Apr-17	19,910	1,289
May-17	20,200	1,302
Jun-17	19,667	1,270
Jul-17	20,261	1,306
Aug-17	20,560	1,316
Sep-17	20,843	1,342
Oct-17	20,459	1,326
Nov-17	19,567	1,269
Dec-17	19,432	1,248
Jan-18	20,703	1,313
Feb-18	21,681	1,395
Mar-18	21,203	1,379

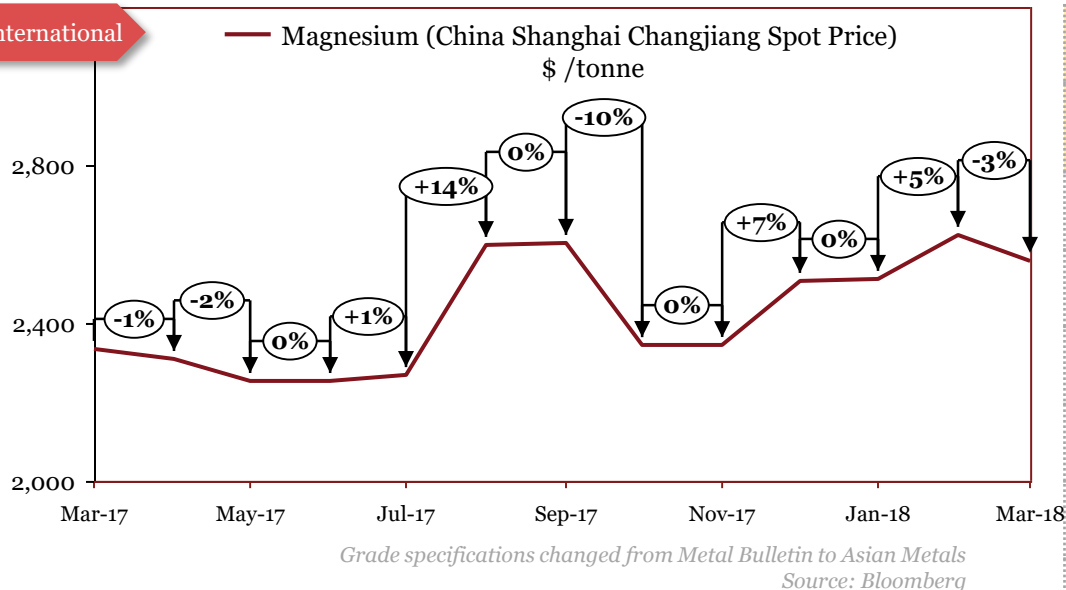
*The actual prices may vary depending on city, player, grade etc.

Outlook

Tin prices increased in July owing to the increased demand from the alloy industry; furthermore, the new Chinese policy affecting Chinese tin producers by VAT restructuring fuelled the increase in prices. Tin did not see any significant movement in August. Tin prices increased marginally in September. In October, the domestic and international Tin prices decreased owing to the decrease in demand. In November, the international and domestic prices continued to decrease following slow demand. In December, the international and domestic prices continued to follow the same trend as that in the last month. In January 2018, the prices increased due to increased demand. In Feb 2018, the LME tin prices increased riding on weaker dollar and continued demand. Domestic market followed suit. In the month of March, the LME tin prices declined due to strengthening dollar. Domestic market followed suit.

Magnesium

International



Monthly Average Prices

Period	*Int'l (\$/tonne)
Apr-17	2,310
May-17	2,254
Jun-17	2,251
Jul-17	2,269
Aug-17	2,598
Sep-17	2,604
Oct-17	2,347
Nov-17	2,343
Dec-17	2,506
Jan-18	2,509
Feb-18	2,622
Mar-18	2,556

*The actual prices may vary depending on city, player, grade etc.

Domestic

Relevant domestic price data not available

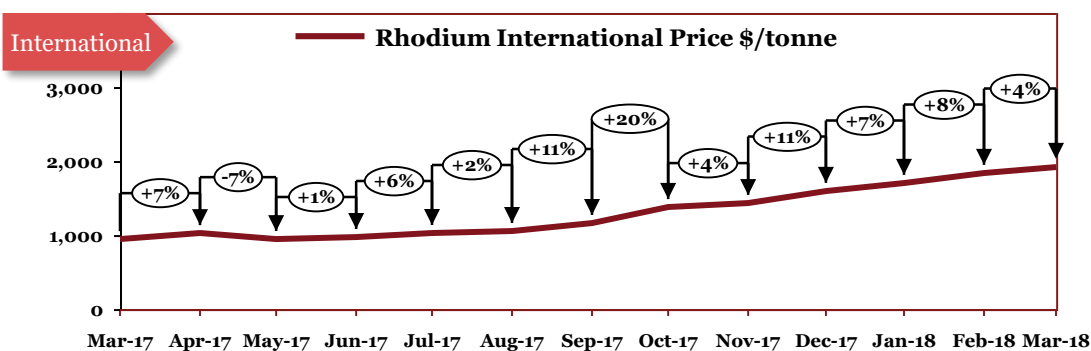
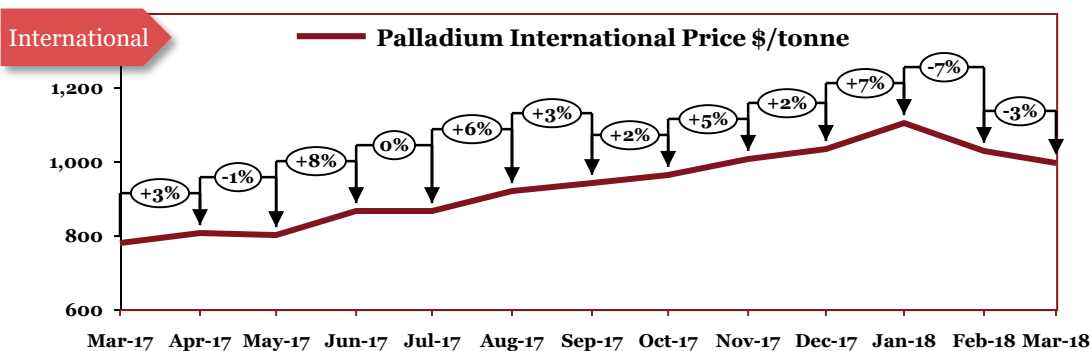
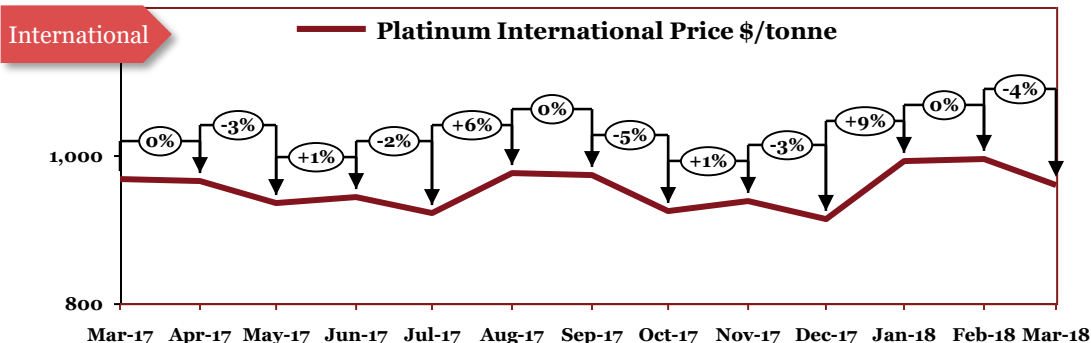
Outlook

China accounts for ~80% of the global magnesium production, thus the global prices are significantly affected by movement in the Chinese economy. The global consumers vary to use magnesium as a long term substitute due to Chinese export quotas and duties. However, the recent explorations of this metal in North America might reduce the dependence on the Chinese supply and make the industrial use of magnesium more streamlined. Prices remained more or less stable in July. The prices increased drastically in August owing to the reduced supply from China. In September, the prices decreased owing to the increased supply from Chinese refineries. In December, the prices increased owing to the higher raw material costs. In January 2018, the market remained stable resulting in no fluctuations in prices. In Feb 2018, prices increased due to supply deficits and continued demand. In March, the prices declined due to decrease in the raw material prices.

Precious Metals

	Precious Metals	31
21	Precious Metals	32

Precious Metals



Monthly Average Prices (\$/Oz)			
Period	Pt	Pd	Rh
Apr-17	965	804	1,024
May-17	934	798	956
Jun-17	942	865	963
Jul-17	922	862	1,025
Aug-17	976	917	1,049
Sep-17	974	943	1,159
Oct-17	926	961	1,391
Nov-17	938	1,005	1,445
Dec-17	912	1,030	1,597
Jan-18	991	1,101	1,706
Feb-18	995	1,027	1,847
Mar-18	960	993	1,923

Source: Johnson Matthey

*The actual prices may vary depending on city, player, grade etc.

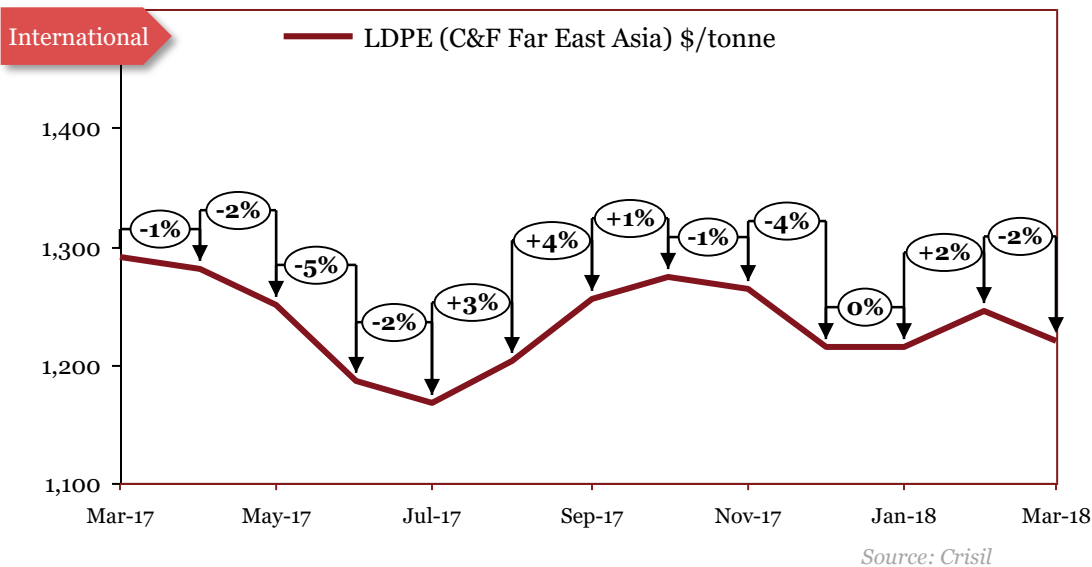
Outlook

In October, the platinum prices decreased owing to a short term decrease in the demand. The palladium prices continued to increase riding on the increasing demand from the consuming industries. In November, the prices of precious metals increased owing to the increased demand. In December, the platinum prices continued to decrease owing to the decrease in the diesel cars globally. In case of palladium, the substantial supply deficit and increase in the Chinese auto-catalyst demand fuelled the price rise. In January 2018, platinum prices rose because of the supply constraint caused by halting of operations by several mines in South Africa. Palladium prices continued to rise riding on the back of a higher preference to gasoline fuelled vehicles in Europe and China. In Feb 2018, the platinum prices remained steady as the slackened demand and the restrained supply balanced each other. The palladium prices fell due to weaker dollar and slack in demand owing to the Chinese new year holidays. In March, the prices of platinum decreased as the market is in surplus supply owing to the stable demand and more recovery from the secondary sources. Palladium prices decreased seemingly due to continued uncertain climate on the back drop of US's announcement of tariffs on the steel and aluminium imports.

Polymers & Rubber

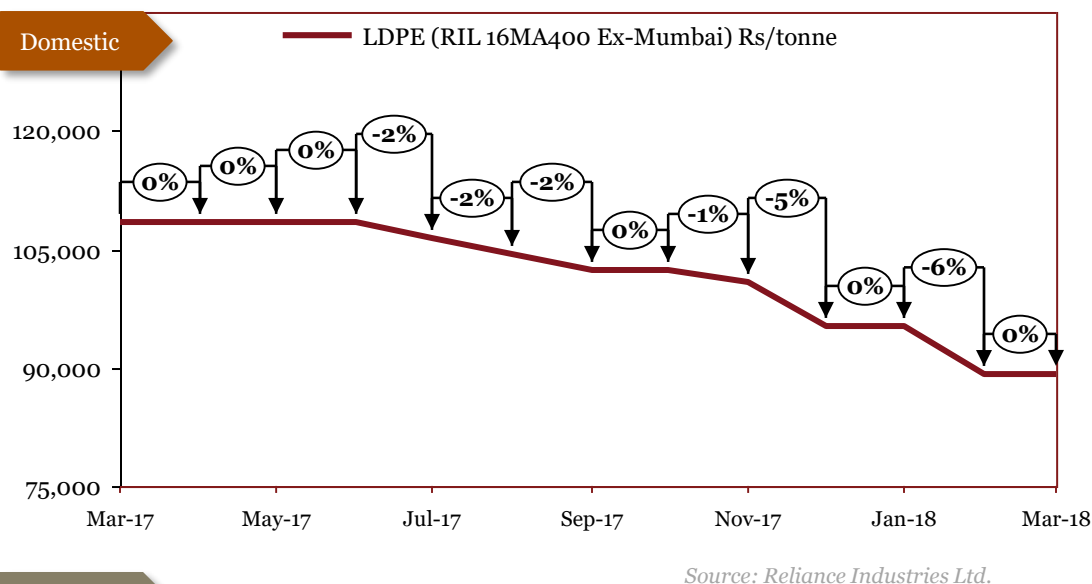
Polymers & Rubber		33
22	Low density polyethylene (LDPE)	34
23	Polypropylene (PP)	35
24	Rubber	36

Low density polyethylene (LDPE)



Monthly Average Prices

Period	*Int'l (\$/tonne)	*Dom (Rs/tonne)
Apr-17	1,280	108,360
May-17	1,250	108,360
Jun-17	1,186	108,360
Jul-17	1,168	106,360
Aug-17	1,203	104,360
Sep-17	1,256	102,360
Oct-17	1,273	102,360
Nov-17	1,263	100,860
Dec-17	1,214	95,360
Jan-18	1,215	95,360
Feb-18	1,245	89,190
Mar-18	1,220	89,190



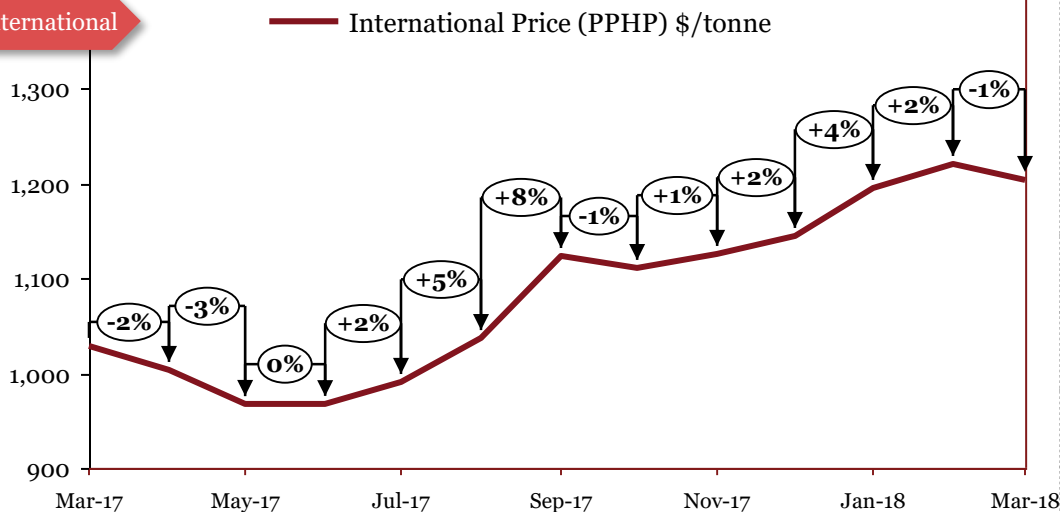
*The actual prices may vary depending on city, player, grade etc.

Outlook

In August, the international LDPE prices increased owing to the increase in the feedstock prices. However, the increase in feedstock prices globally did not affect the domestic market. In September, the international prices increased owing to the increasing feed stock prices. Global prices did not seem to affect the domestic market. In October, the international prices seemed to follow similar trends as in September. In the domestic market, the prices seemingly remained unaffected by the international price trends. In November, the domestic prices decreased due to slack in demand. In December, the domestic prices reduced due to weakening demand. Additionally, RIL introduced regional discounts causing a price dip. In January 2018, the international and domestic prices remained stable as there was no significant movement in the market. In Feb 2018, the LDPE international prices increased due to increased demand and constrained supply caused by the maintenance shutdowns in several plants globally. In the domestic market, the prices decreased owing to the decrease in the ethylene feed stock prices. In March, the international prices decreased due to ample inventories. The domestic market remained stable.

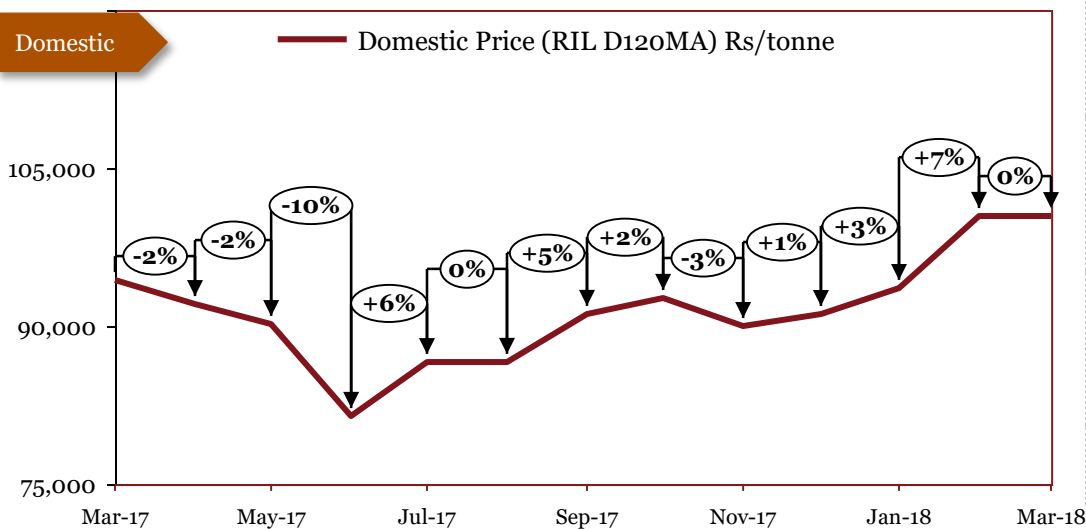
Polypropylene (PP)

International



Source: Crisil

Domestic



Source: Reliance Industries Ltd.

Monthly Average Prices

Period	*Int'l (\$/tonne)	*Dom (Rs/tonne)
Apr-17	1,003	92,060
May-17	968	90,100
Jun-17	968	81,470
Jul-17	991	86,588
Aug-17	1,038	86,588
Sep-17	1,124	91,058
Oct-17	1,110	92,740
Nov-17	1,125	90,058
Dec-17	1,144	91,058
Jan-18	1,195	93,558
Feb-18	1,220	100,488
Mar-18	1,203	100,488

*The actual prices may vary depending on city, player, grade etc.

Outlook

In September, the international prices increased owing to the higher feed stock prices and maintenance shut down of China Reform Corp. Domestic prices seems to have followed the international price trends. In October, the international prices decreased owing to the slack in demand, however, the domestic prices increased due to the continued local demand. In November, the international prices increased owing to the decreased supply caused by the growing emphasis on environmental regulations in China. In domestic market, prices reduced as a result of decrease in the feedstock prices. In December, the international and domestic prices increased as the market remained stable with steady increase in demand. In January 2018, the prices increased on the back of increased feedstock prices, in international and domestic market alike. In Feb 2018, the international and domestic prices increased due to increase in the feedstock propylene prices. However, the increase was lower for international prices as the demand slacked due to Chinese new year holidays. In March, the international PP prices decreased owing to the decrease in feedstock prices, however, the decline was restricted by the supply constraints caused by the maintenance shutdown in various plants. The domestic market remained stable.

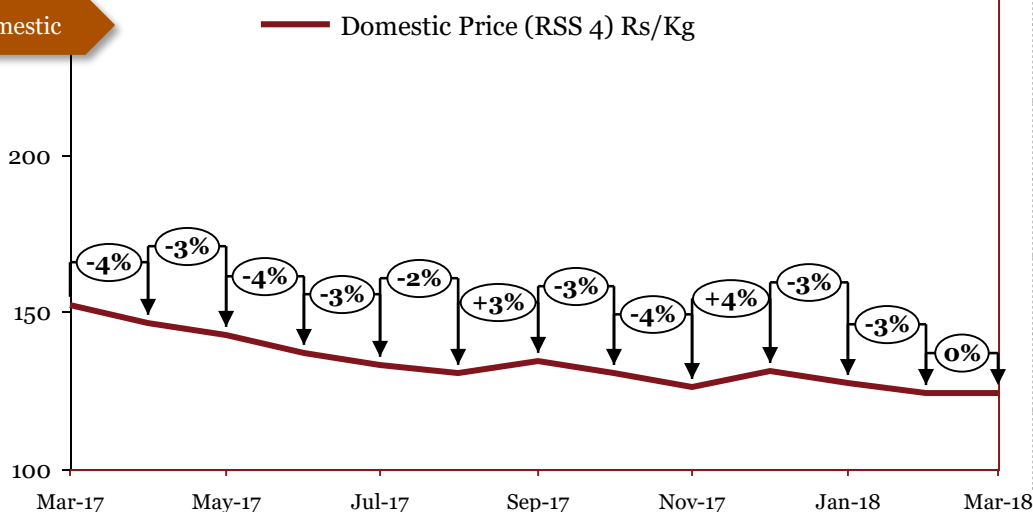
Rubber

International

Data not available for relevant (comparable to domestic) grades

Monthly Average Prices	
Period	*Dom (Rs/kg)
Apr-17	146
May-17	143
Jun-17	137
Jul-17	133
Aug-17	131
Sep-17	134
Oct-17	131
Nov-17	126
Dec-17	131
Jan-18	127
Feb-18	124
Mar-18	124

Domestic



Source: Rubber board

*The actual prices may vary depending on city, player, grade etc.

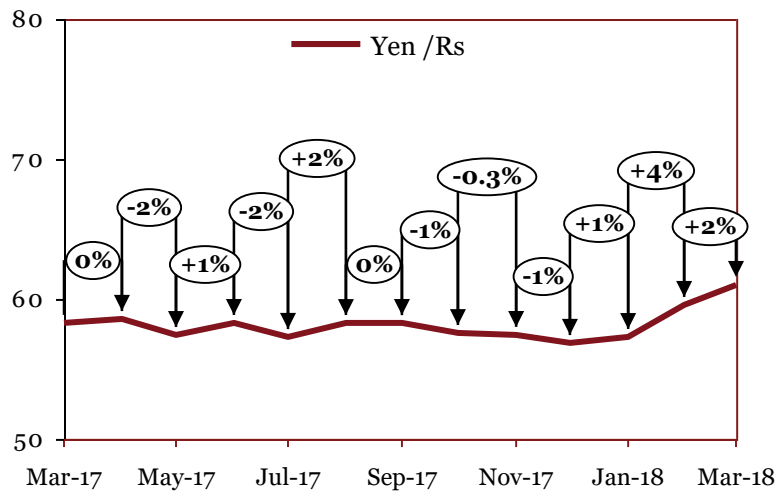
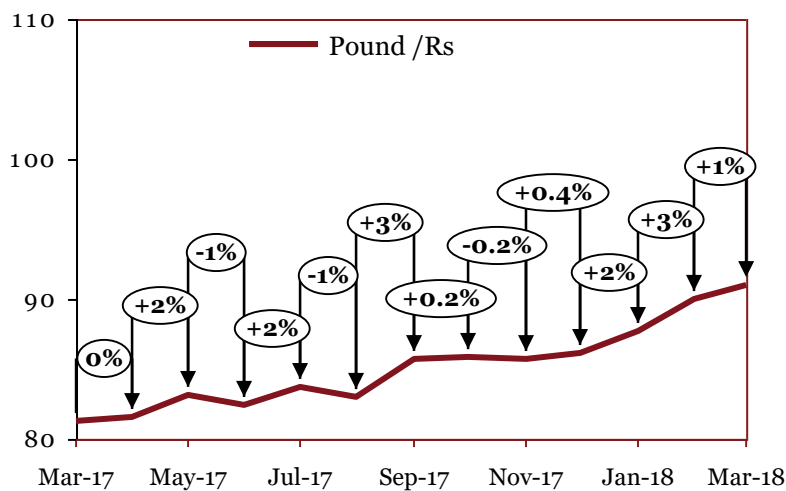
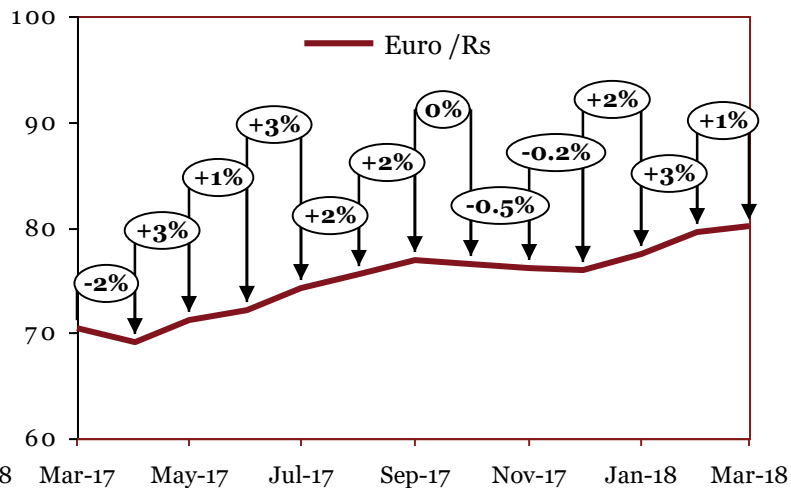
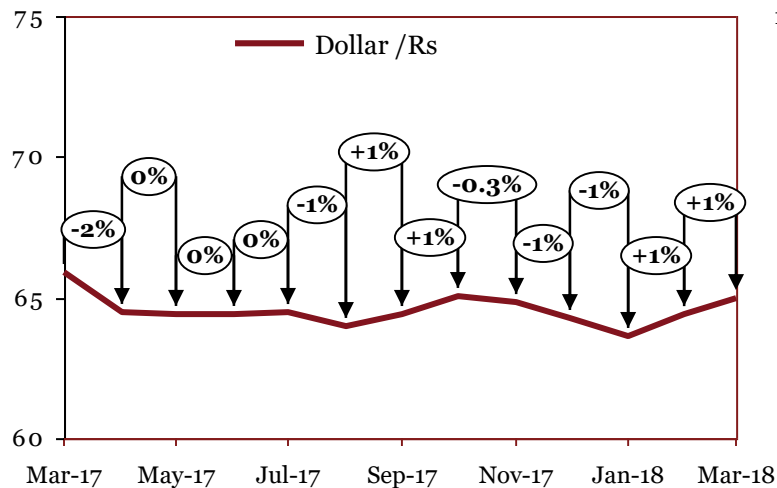
Outlook

The prices of rubber have been on an increase since last year owing to the loss of production in Thailand and Malaysia due to late rains. The situation stabilized to an extent in Mar-April and the prices have been declining since. The decrease in the rubber price in the overseas market and expected surplus rubber supply caused the decline in the domestic rubber prices for July. In August, the rubber prices continued to drop as the global supply scenario gains stability. In September, the prices increased owing to the increased demand. In October, the domestic prices declined riding on the decreasing international prices. In November, the prices followed the similar trends as in the last month. In December, the rubber prices increased due to higher demand and increase in the crude oil prices. In January 2018, the prices decreased owing to weaker demand. In Feb 2018, the prices continued to decrease due to slackened demand. In March, the rubber market remained stable.

Appendices

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Forex Movement

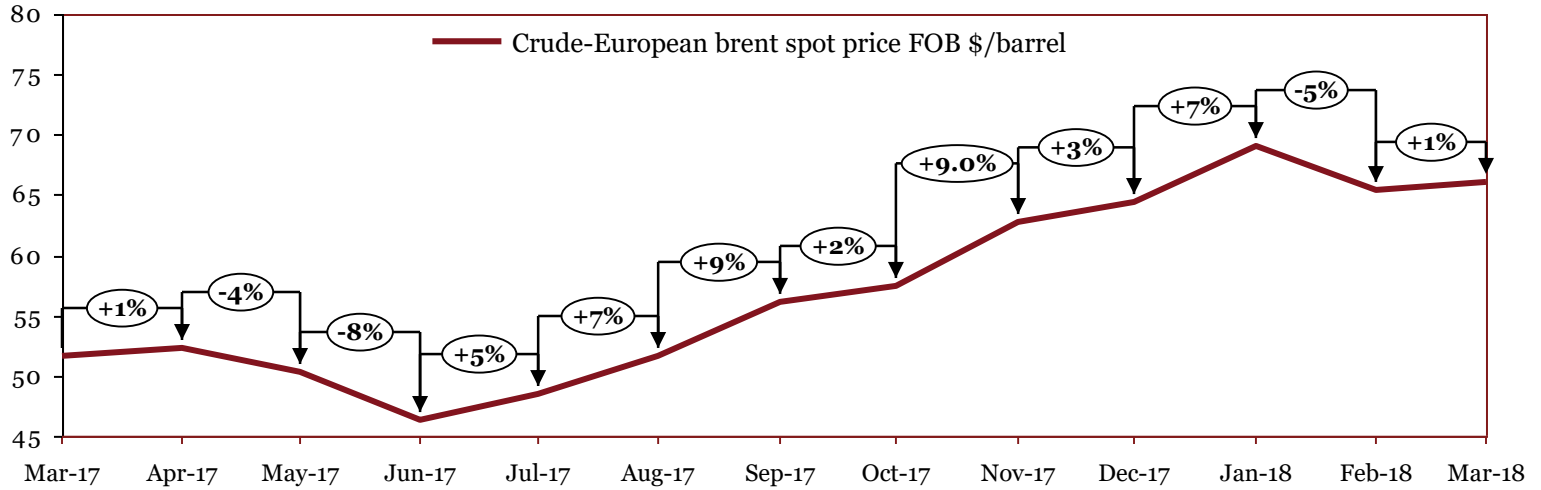


Source: Reserve Bank of India

Monthly Average Prices (Rs)

	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
\$	65	64	64	64	64	64	65	65	64	64	64	65
£	82	83	82	84	83	86	86	86	86	88	90	91
€	69	71	72	74	76	77	76	76	76	77	79	80
¥	59	57	58	57	58	58	58	57	57	57	59	61

Crude Oil



Source: EIA

Monthly Average Prices (\$/barrel)

	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
	52	50	46	48	52	56	58	63	64	69	65	66

Commodity Specifications

Commodity	International	Domestic
Iron Ore	IOECI635 Index (CIF China) - (Fe63.5%) CIF China	Crisil - Grade 1: 58% to below 60% Fe Fines - Grade 2: 60% to below 62% Fe Fines - Grade 3: 62% to below 65% Fe Fines - Grade 4: 65% and above Fe Fines
Pig Iron	Crisil -Foundry grade FOB CIS	Crisil -Foundry grade ex-factory, India
Stainless steel	NA	PwC Research -G 304 CR Coil -G 304 HR Coil
Wire rod	Crisil -CIS Black Sea (US \$/Tonne)	Crisil - Wire rods: 5.5 mm (Prices are inclusive of excise duty by exclusive of VAT/Sales tax)
Steel Billets	Crisil -FOB Latin America	Crisil - 100^100 mm (Avg. prices collated from 2-3 locations)
Hot-rolled coils	Crisil -CIS FOB Black Sea	Crisil - 14G 2mm (Avg. prices collated from 2-3 locations)
Cold-rolled coils	Crisil -CIS FOB Black Sea	Crisil - Mumbai 16G (Avg. prices collated from 2-3 locations)
EN 8	NA	PwC Research -EN8 Alloy forging
20MnCr5	NA	PwC Research -Alloy forging
Ferro titanium	Ferrotitanium (min 70% in warehouse Rotterdam, Europe) \$/kg <i>Previously: Ferro titanium (70%, max 4.5% Al, free market d/d Europe) \$/kg</i>	NA
Ferro chrome	Crisil : FOB Hong Kong Cr 50%	Crisil: Ex-factory Cr 60%
Ferro molybdenum	Ferro-molybdenum (65%min in warehouse Rotterdam, Europe) \$/kg <i>Previously: Ferromolybdenum min 65% Mo max 1.5% Si FOB North America warehouse (per lbs. Mo) USD/lbs</i>	NA

Commodity Specifications

Commodity	International	Domestic
Ferro vanadium	Ferro Vanadium (80% in warehouse Pittsburgh, US) \$/kg <i>Previously: Ferrovandium 78-82% V max 1.5% Si FOB North America warehouse USD/lbs</i>	NA
Ferro silicon	Crisil - FOB China Si 75%	Crisil - Ex-factory Si 70%
Aluminium	LME -Primary aluminium with impurities no greater than the chemical composition of one of the registered designations: •P1020A in the North American and International Registration Record entitled “International Designations and Chemical Composition Limits for Unalloyed Aluminium” (revised March 2007) •Al99.70 in the GB/T 1196-2008 Standard entitled “Unalloyed aluminium ingots for remelting”	NCDEX -Primary aluminium 99.7% purity (minimum) form: ingots, T-bars,
Copper	LME -Grade A copper must conform to the chemical composition of one of the following standards: •BS EN 1978:1998 - Cu-CATH-1 •GB/T 467-2010 - Cu-CATH-1 •ASTM B115-10 - cathode Grade 1	MCX - Grade 1 electrolytic copper as per B115 specification
Zinc	LME -Special high-grade zinc of 99.995% purity (minimum) must conform to the chemical composition of one of the following standards: •BS EN 1179:2003 - 99.995% grade •ISO 752:2004 - ZN-1 grade •ASTM B6-12 - LME grade •GB/T 470-2008 - Zn99.995 grade	NCDEX - Zinc of 99.995% minimum purity. Zinc must conform with the 99.995% graded chemical composition of BS EN 1179:1996 Standard entitled “Zinc and Zinc alloys primary Zinc” Form: ingots

Commodity Specifications

Commodity	International	Domestic
Nickel	LME - Nickel of 99.80% purity (minimum) conforming to B39-79 (2013) - GB/T 6516-2010	NCDEX - 4”*4” approved pure cut Nickel of 99.80% purity (minimum)
Tin	LME - Tin of 99.85% purity (minimum) conforming to BS EN 610:1996	MCX - The LME approved tin ingot of 99.85 purity (minimum)
Magnesium	Magnesium (China Shanghai Changjiang Spot Price) CNY/tonne <i>Previously: Magnesium (99.8% FOB China Main Ports Spot Price) \$/tonne</i>	NA
Platinum	Metal in sponge form with minimum purities of 99.95% for platinum and palladium, and 99.9% for rhodium	
Palladium		
Rhodium		
Low density polyethylene (LDPE)	International price (C&F FEA) \$/tonne	RIL-16MA400 grade
Polypropylene (PP)	International Price (PPHP) \$/tonne	RIL-D120MA grade
Rubber Prices	NA	NCDEX/Rubber board - RSS 4 (Ribbed Smoked Sheet 4) ex-warehouse Kochi exclusive of all taxes
Forex Movement	RBI reference rates	
Crude	European Brent spot price FOB \$/barrel – Energy Information Administration (EIA)	



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