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Commodity price monitor

September-18

Prepared for ACMA

Strictly private and confidential

25 October 2018

pwc

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Commodity trend dashboard

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

Calendar Year 18-19: Q vs. Q update

Commodity	Region	Q-o-Q Up	Q-o-Q Down
Iron & Steel			
Iron Ore	International		-1% ▼
	Domestic low grade		
	Domestic high grade		
Pig Iron	International		-1% ▼
	Domestic	0% ▲	
Stainless steel	Domestic	0% ▲	
	Domestic	0% ▲	
Wire rod	International	2% ▲	
	Domestic		-4% ▼
Steel Billets	International		-4.7% ▼
	Domestic		-4% ▼
Hot-rolled coils	International		-3% ▼
	Domestic		-1% ▼
Cold-rolled coils	International		-1% ▼
	Domestic	1% ▲	
EN8	Domestic		0% ▼
20MnCr5	Domestic		0% ▼
Ferro-alloys			
Ferro titanium	International	10% ▲	
Ferro chrome	International		-8% ▼
	Domestic		-3% ▼
Ferro molybdenum	International	7% ▲	
Ferro vanadium	International	21% ▲	
Ferro silicon	International		-2% ▼
	Domestic		-11% ▼

ND: Not disclosed by the source

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

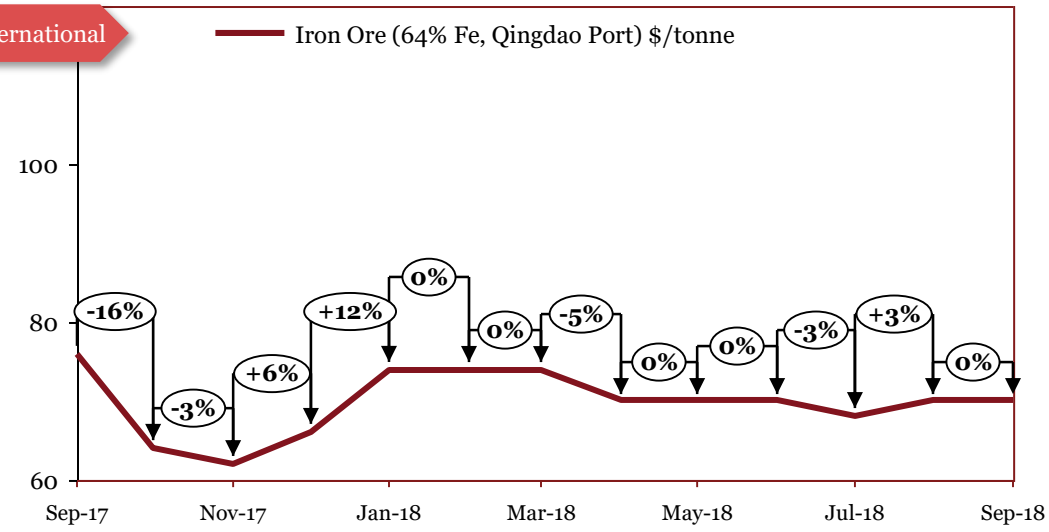
Calendar Year 18-19: Q vs. Q update

Commodity	Region	Q-o-Q Up	Q-o-Q Down
Base Metals			
Aluminum	International		-9% ▼
	Domestic		-5% ▼
Copper	International		-11% ▼
	Domestic		-7% ▼
Zinc	International		-19% ▼
	Domestic		-15% ▼
Nickel	International		-9% ▼
	Domestic		-4% ▼
Tin	International		-7.8% ▼
	Domestic		-3% ▼
Magnesium	International	6% ▲	
Precious Metals			
Platinum	International		-10% ▼
Palladium	International		-2% ▼
Rhodium	International	10% ▲	
Polymers			
Low density polyethylene (LDPE)	International		-6% ▼
	Domestic	6% ▲	
Polypropylene (PP)	International		-0.3% ▼
	Domestic	1.6% ▲	
Rubber	Domestic	6% ▲	
Currency Exchange			
Dollar	International	3.9% ▲	
Pound	International	2% ▲	
Euro	International	0% ▲	
Yen	International	2% ▲	

Iron & Steel

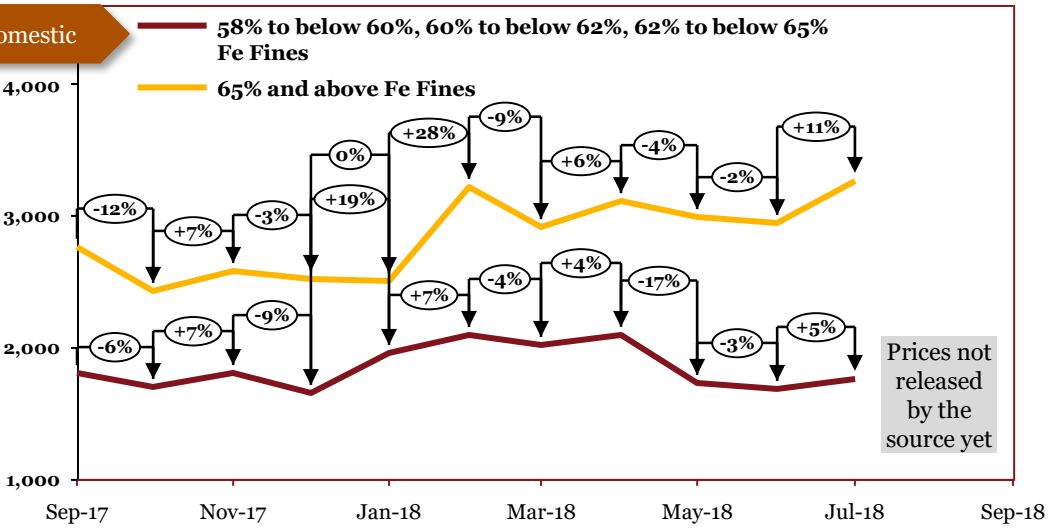
Iron Ore

International



Source: Crisil

Domestic



Source: Crisil

Monthly Average Prices			
Period	*Int'l $/tonne	*Dom Rs/tonne	
		65% & below	65% & above
Oct-17	64	1,697	2,426
Nov-17	62	1,812	2,585
Dec-17	66	1,646	2,512
Jan-18	74	1,953	2,507
Feb-18	74	2,099	3,216
Mar-18	74	2,012	2,919
Apr-18	70	2,087	3,106
May-18	70	1,726	2,993
Jun-18	70	1,676	2,946
Jul-18	68	1,757	3,264
Aug-18	70	-	-
Sep-18	70	-	-

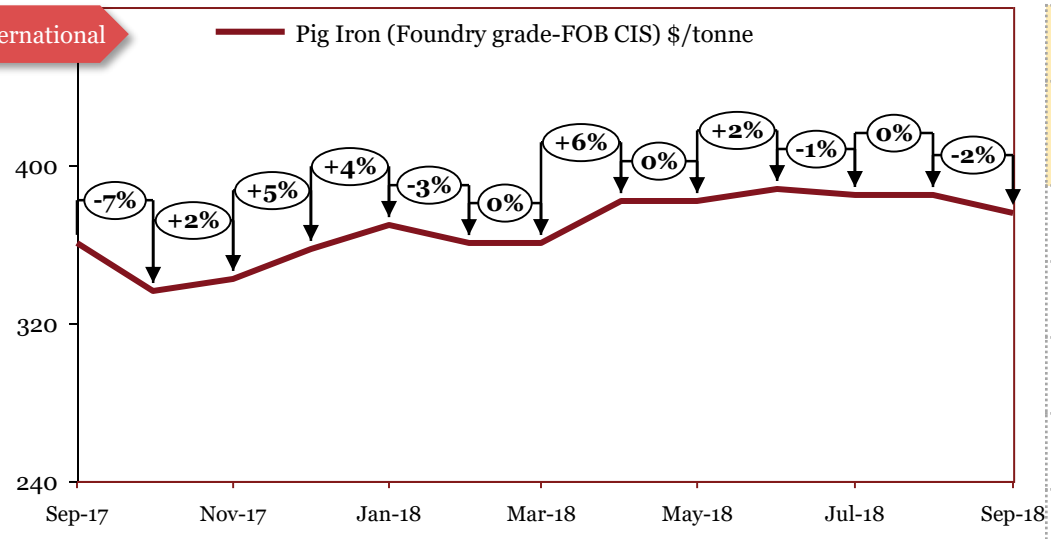
The actual prices may vary depending on city, player, grade etc.

Outlook

In January 2018, international ore prices followed similar tends 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. In April, the international prices decreased owing to the closure of steel mills in China due to environmental sanctions. In May, prices in the international market remained unchanged due to slated capacity cuts by Chinese steel producers owing to government regulation. In June, prices in the international market remained unchanged owing to stable demand. In July, expansion in global mine supply, easing in steel prices and renewed production curbs at mills in China blunted overall demand and caused a decline in prices in the international market. In August, international prices rose mainly due to increased demand from China and decreased supply from Brazil. In September, international prices remained stable.

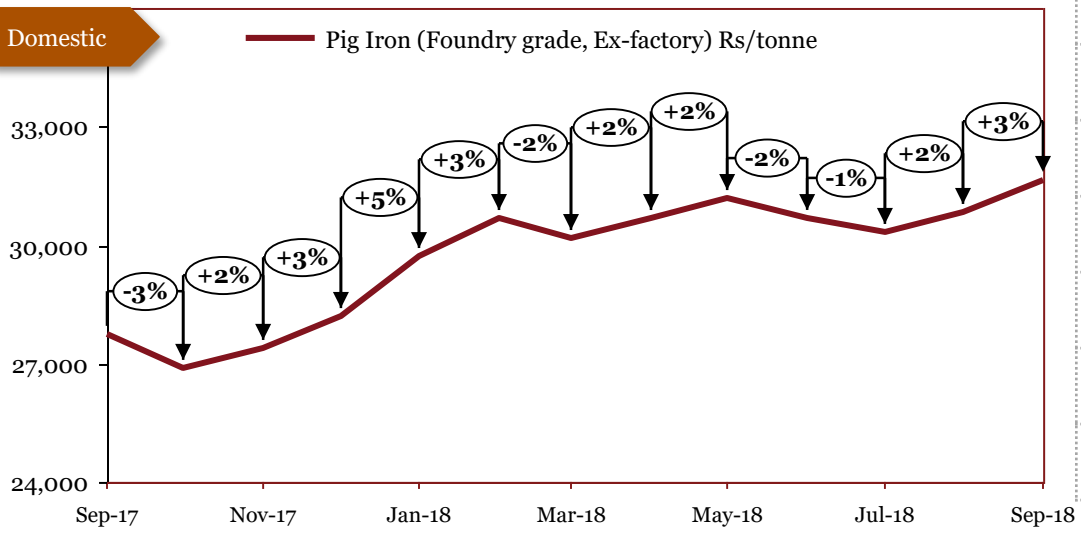
Pig Iron

International



Source: Crisil

Domestic



Source: Crisil

Monthly Average Prices		
Period	***Int'l $/tonne**	***Dom Rs/tonne**
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
Apr-18	382	30,700
May-18	382	31,200
Jun-18	388	30,700
Jul-18	385	30,350
Aug-18	385	30,850
Sep-18	376	31,650

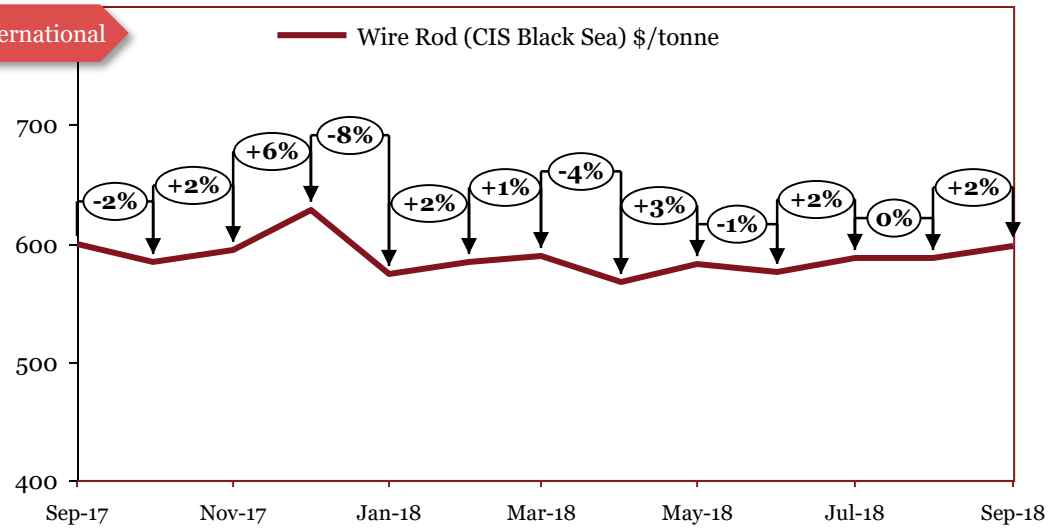
**The actual prices may vary depending on city, player, grade etc.*

Outlook

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. In April, the international prices increased owing to the increased demand. The domestic prices increased on back of the rising domestic steel prices. In May, the international prices increased initially due to increased purchasing activity, however, this slowed down after buyers' restocking activity, resulting in stable prices. Domestic prices continued to increase at a steady pace. In June, international prices increased due to higher deal prices in Italy, where buyers accepted higher offers as they needed to restock. Domestic pig iron prices declined in June on back of increased supply in the market. In July, domestic prices declined in line with falling domestic steel prices. Further, seasonally subdued demand along with dull export market created downward pressure on prices. In August, domestic pig iron prices increased in line with the rising steel prices. Further, rising raw material prices have also pushed up the price. In September, domestic pig iron prices increased during the month on back of higher raw material cost and rising steel prices.

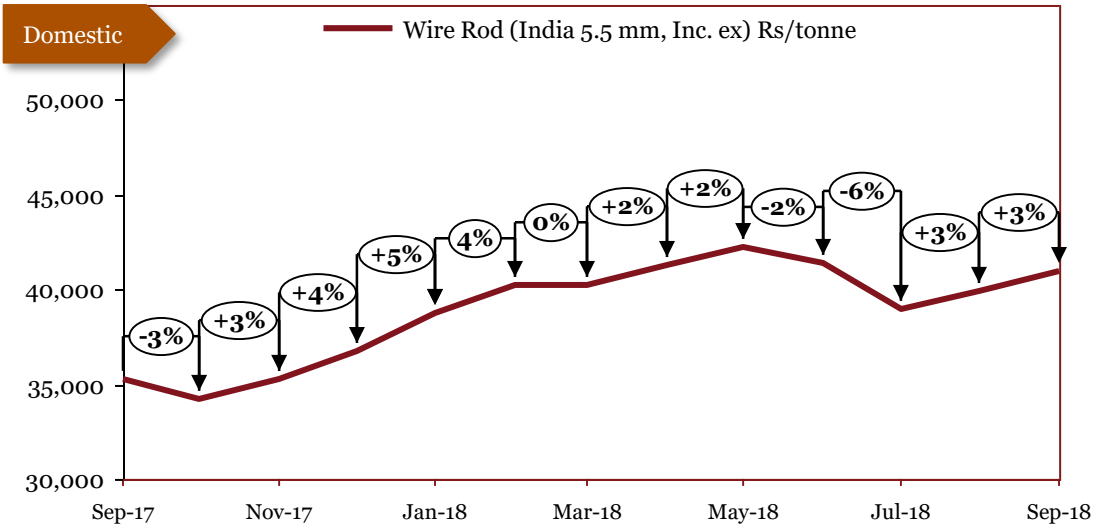
Wire Rod

International



Source: Crisil

Domestic



Source: Crisil

Monthly Average Prices		
Period	^*Int'l ($/tonne)	*Dom (Rs/tonne)
Oct-17	584	34,244
Nov-17	593	35,244
Dec-17	627	36,744
Jan-18	574	38,744
Feb-18	584	40,244
Mar-18	588	40,244
Apr-18	568	41,244
May-18	583	42,244
Jun-18	576	41,444
Jul-18	587	38,944
Aug-18	587	39,944
Sep-18	597	40,944

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

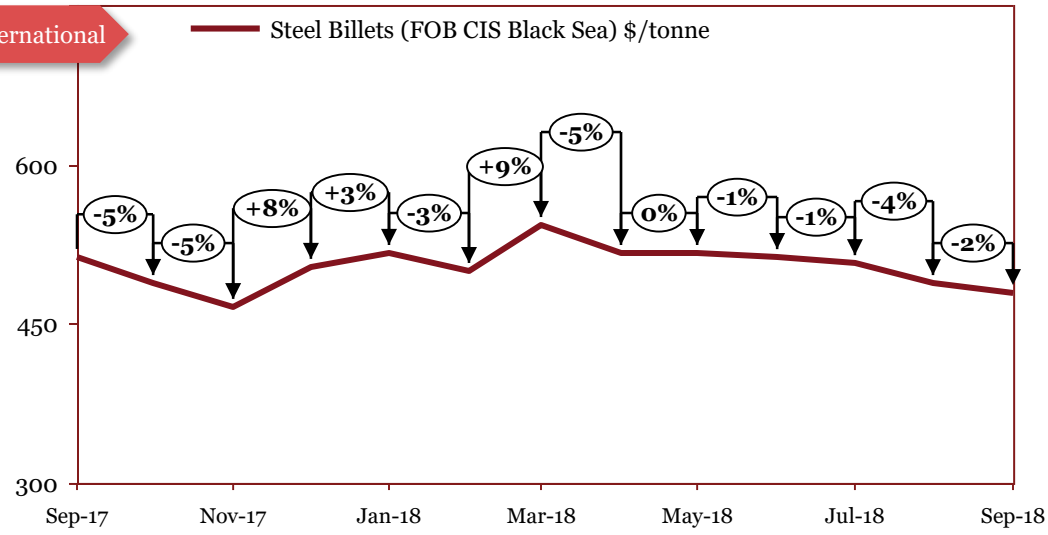
Outlook

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. In April, the international prices decreased owing to the slower demand. Domestic prices increased owing to the improved demand. In May, international prices increased due to improved demand. Domestic prices increased due to demand outpacing supply. In June, international prices declined owing to subdued demand. Domestic prices decreased primarily owing to muted demand due to onset of monsoon. In July, international prices increased and domestic prices continued to decline owing to decreased demand due to the monsoon season. In August, declining trend in domestic prices was reversed due to small and medium sized players increasing prices due to increased demand. In September, domestic prices increased led by healthy domestic demand and rise in raw material costs..

^Prices have been retrospectively revised by the source due to change in base year

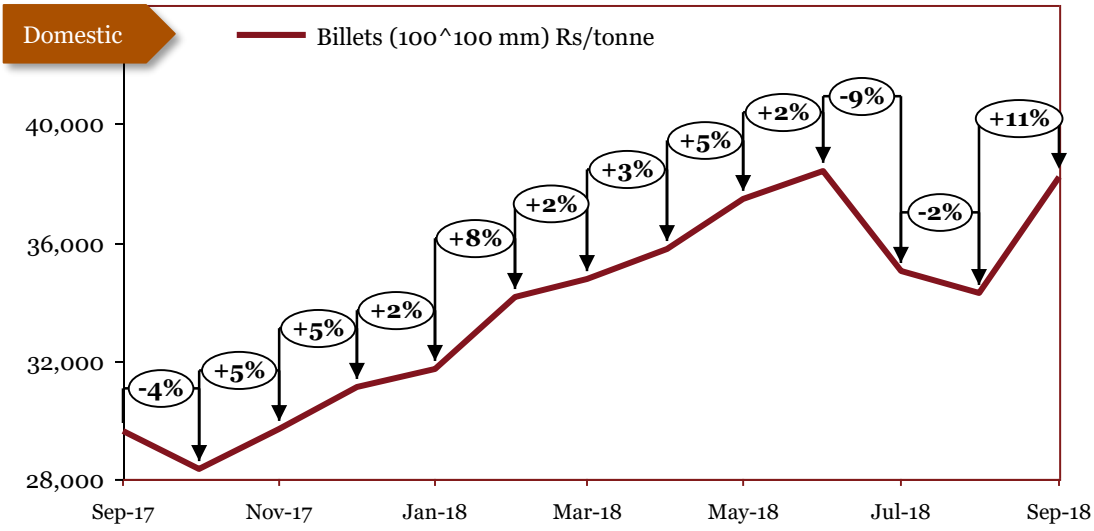
Steel Billets

International



Source: Crisil

Domestic



Source: Crisil

Monthly Average Prices		
Period	**^*Int'l ($/tonne)**	***Dom (Rs/tonne)**
Oct-17	489	28,133
Nov-17	465	29,383
Dec-17	503	30,375
Jan-18	516	31,375
Feb-18	500	33,800
Mar-18	543	34,733
Apr-18	517	34,700
May-18	516	37,467
Jun-18	513	38,367
Jul-18	507	35,050
Aug-18	487	34,300
Sep-18	479	38,200

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

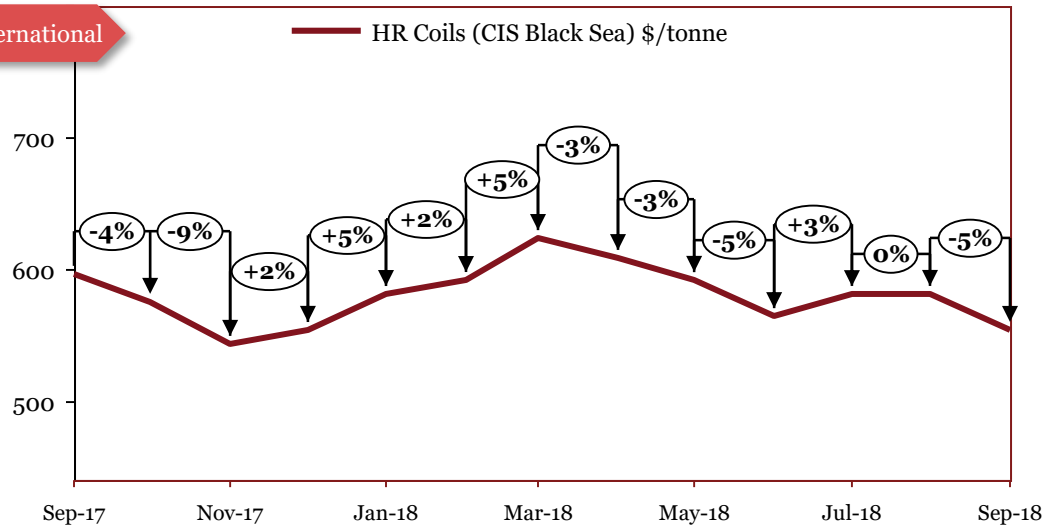
Outlook

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. In April, the international and domestic prices remained flat owing to the limited activity in the market. In May, the rate of price increase in international markets fell due to decrease in scrap prices and market activity. Domestic prices increased owing to a pick-up in demand coupled with limited inventories. In June, international prices fell due to muted demand amid the threat of an escalating global trade war. Domestic prices rose on account of short supply of scrap. In July, prices in the domestic market fell due to decreased demand owing to fall in construction activity because of the monsoon season and reduced ability to export owing to international trade wars. In August, domestic prices continued to fall. In September, domestic prices increased primarily owing to increased off-take of medium size mills, lower inventories coupled with elevated input material costs.

^International prices changed due to change in the grade

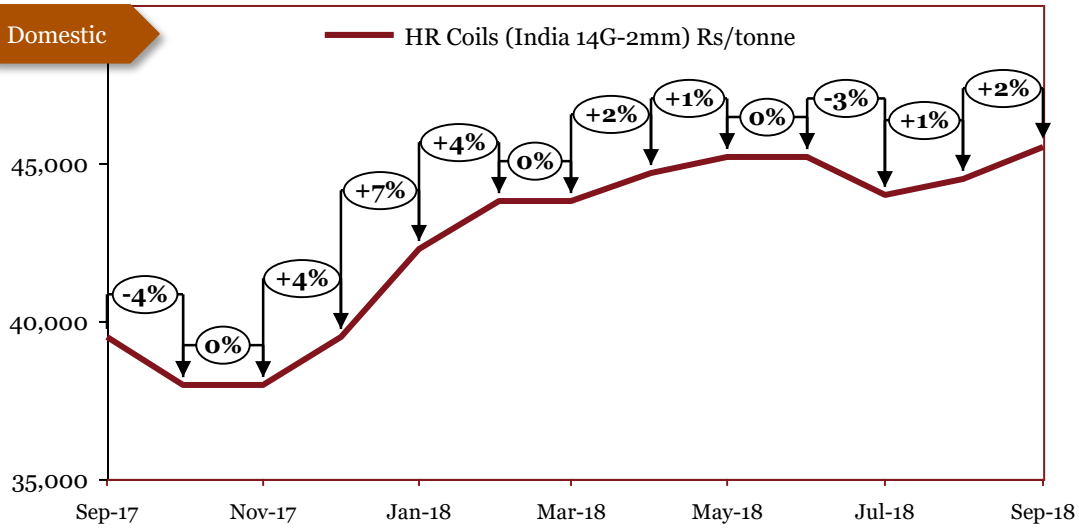
Hot-Rolled (HR) Coils

International



Source: Crisil

Domestic



Source: Crisil

Monthly Average Prices		
Period	*Int'l ($/tonne)	^*Dom (Rs/tonne)
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
Apr-18	608	44,700
May-18	592	45,200
Jun-18	565	45,200
Jul-18	581	44,000
Aug-18	581	44,500
Sep-18	554	45,500

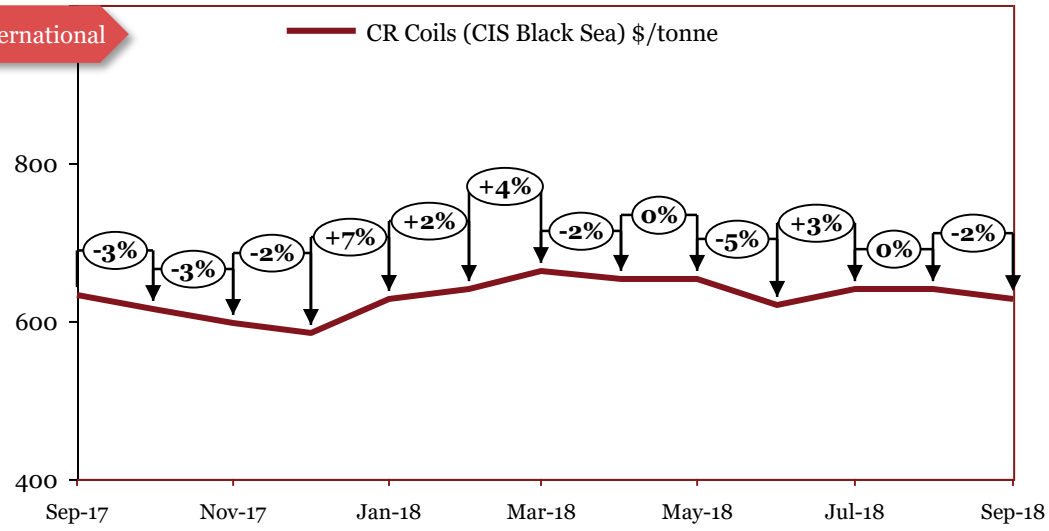
The actual prices may vary depending on city, player, grade etc.

Outlook

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. In April, the international prices decreased owing to the muted demand. However, the domestic prices increased due to imbalance of supply-demand and lower inventories. In May, international prices declined due to muted demand. Domestic prices increased due to lower inventories, increase in demand and higher raw material prices. In June, international HR prices declined by about 5% led by muted demand prospects whereas domestic prices remained stable. In July, domestic prices declined on account of weak demand amid seasonal slowdown. Prices also fell due to increased competition in exports to South East Asia market. Prices increased in August on the domestic front on account of higher raw material prices like iron ore. In the beginning of the month, large players had rolled over the prices, however, on account of muted demand prices fell down. Hike in HR prices can also be attributed to iron ore prices increasing from the second week. In September, prices increased on the domestic front on account of higher raw material prices like iron ore.

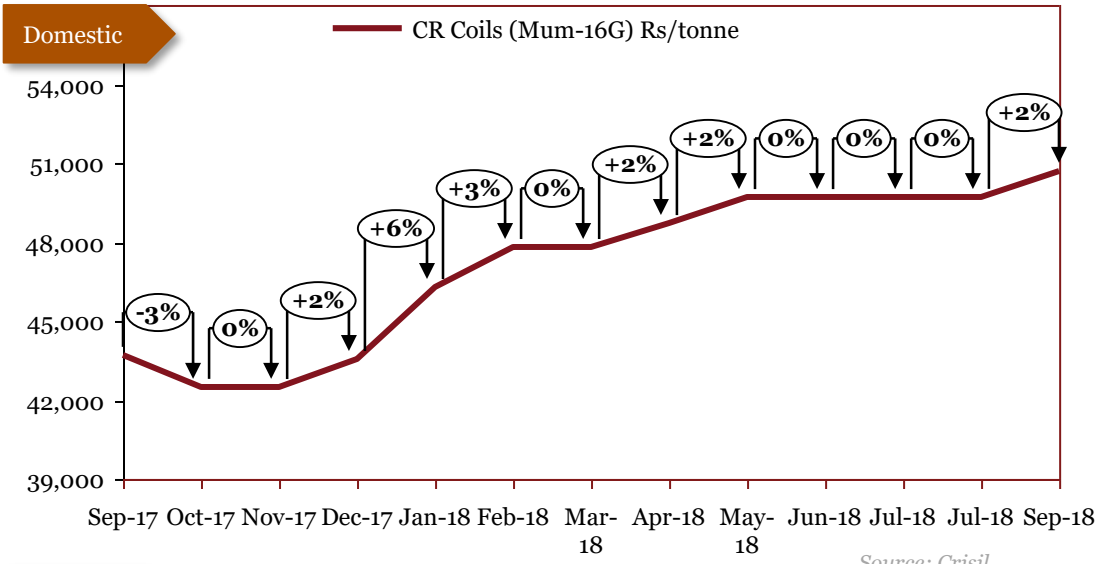
Cold-Rolled (CR) Coils

International



Source: Crisil

Domestic



Source: Crisil.

Monthly Average Prices		
Period	***Int'l ($/tonne)**	**^*Dom (Rs/tonne)**
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
Apr-18	652	48,722
May-18	652	49,722
Jun-18	621	49,722
Jul-18	640	49,722
Aug-18	640	49,722
Sep-18	627	50,722

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

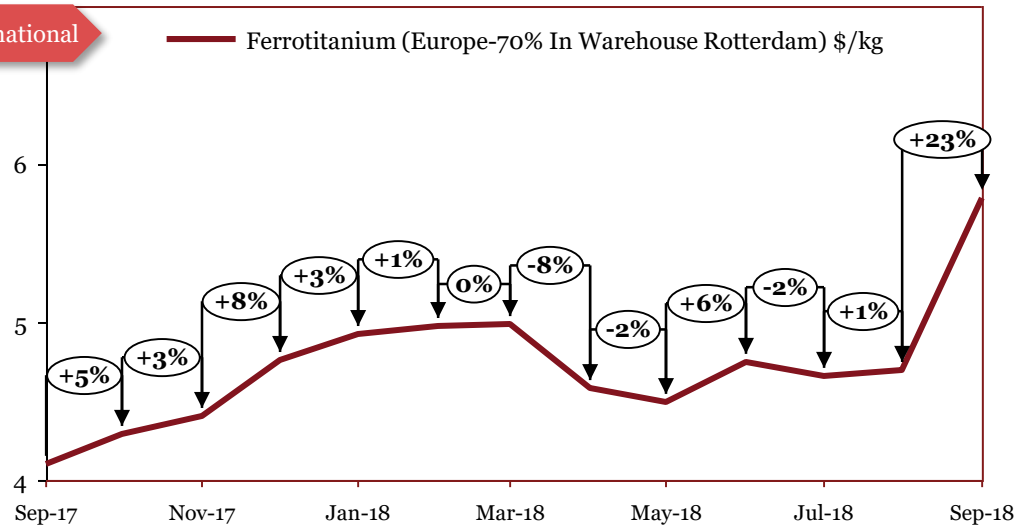
Outlook

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. In April, the CR coils followed the HR coils trends. In May, international CR prices remained flat due to tepid demand. Domestic prices increased due to rise in demand owing to lower inventories. International CR coil prices declined in June on back of decline of 5% in International HR prices. Domestic CR prices remained stable, mirroring HR prices trend. In July, international CR prices rose on the back of rise in international HR prices. Domestic CR prices remained stable in August. In September, International CR coil prices declined on back of declining international HR prices. Domestic CR prices increased during the month, following the same trend as that of the HR coils.

Ferro-alloys

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)**
Oct-17	4.29
Nov-17	4.40
Dec-17	4.76
Jan-18	4.93
Feb-18	4.98
Mar-18	4.98
Apr-18	4.59
May-18	4.50
Jun-18	4.75
Jul-18	4.66
Aug-18	4.70
Sep-18	5.78

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

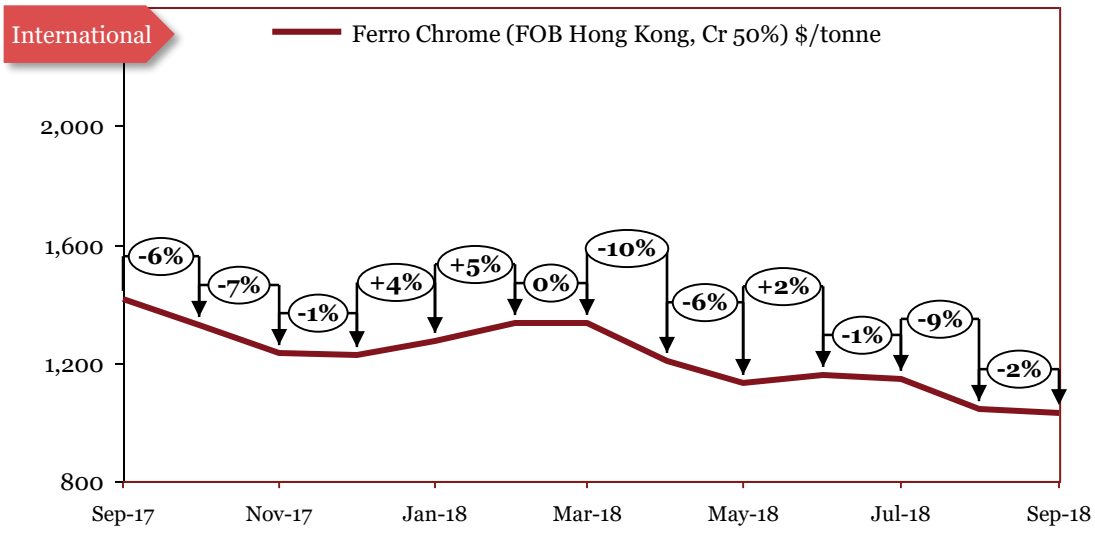
Outlook

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. In April and May, prices in the global market declined due to lower demand. Prices increased in June and declined in July due to seasonal slowdown. In August, prices increased due to persistent low supply. Global prices in September increased due to tightness in ferro-titanium availability as well as higher grade scrap - particularly from Russia. In addition, consumer activity picking up after seasonal slowdown also led to increase in prices.

^International prices changed due to change in grades at the source

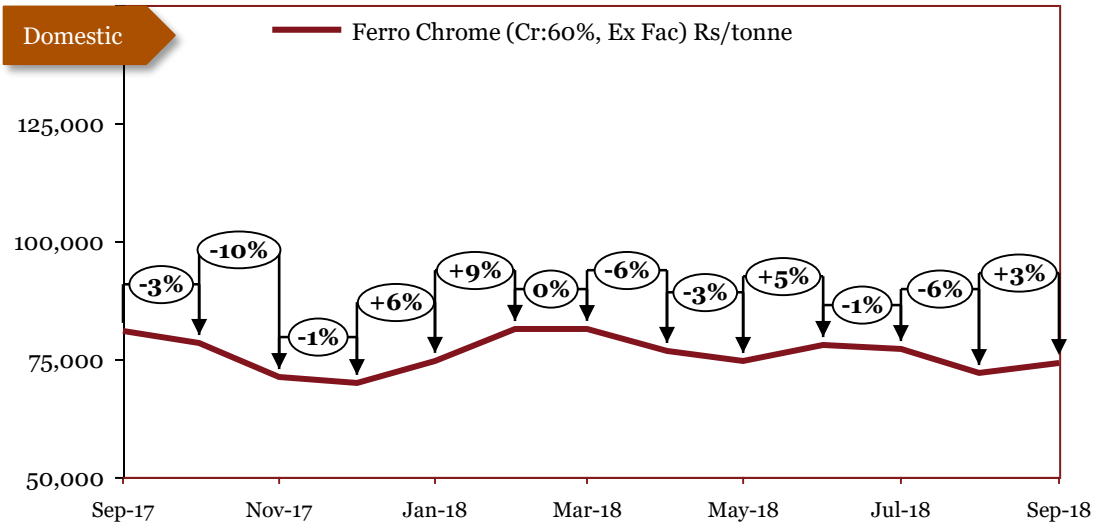
Ferro chrome

International



Source: Crisil

Domestic



Source: Crisil

Monthly Average Prices		
Period	***Int'l ($/tonne)**	***Dom (Rs/tonne)**
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
Apr-18	1,207	76,500
May-18	1,130	74,500
Jun-18	1,156	78,000
Jul-18	1,147	77,000
Aug-18	1,044	72,000
Sep-18	1,027	74,000

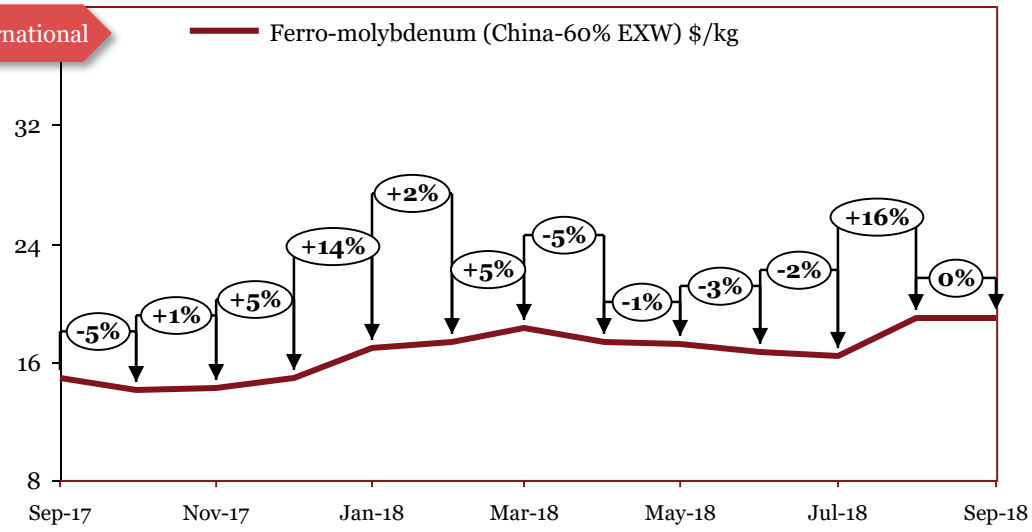
**The actual prices may vary depending on city, player, grade etc.*

Outlook

In April the international prices decreased owing to the deteriorating Chinese stainless steel market which caused lowering of demand. Similar trends were observed in the domestic market. In May, international and domestic markets experienced price decrease owing to the decreased demand. In June, international prices increased by about 2% on account of improved demand for stainless steel in China and on domestic front, similar price trend followed. In July, international index price of ferro chrome declined on account of oversupply in the market. On domestic front, similar price trend was followed with prices declining as demand in China is weak, pushing domestic producers to lower prices. In August, international price of ferro chrome declined on account of lackluster demand in China. Further, due to increased production there is abundant supply of the commodity in China. However, on account of lower demand from stainless steel market, demand for the commodity has been impacted. In September, international price of ferro chrome declined on account of muted demand in China. On domestic front, prices increased owing to firm demand and low inventory.

Ferro molybdenum

International



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

Monthly Average Prices	
Period	***^Int'l ($/kg)**
Oct-17	14
Nov-17	14
Dec-17	15
Jan-18	17
Feb-18	17
Mar-18	18
Apr-18	17
May-18	17
Jun-18	17
Jul-18	16
Aug-18	19
Sep-18	19

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

Domestic

Relevant domestic price data not available

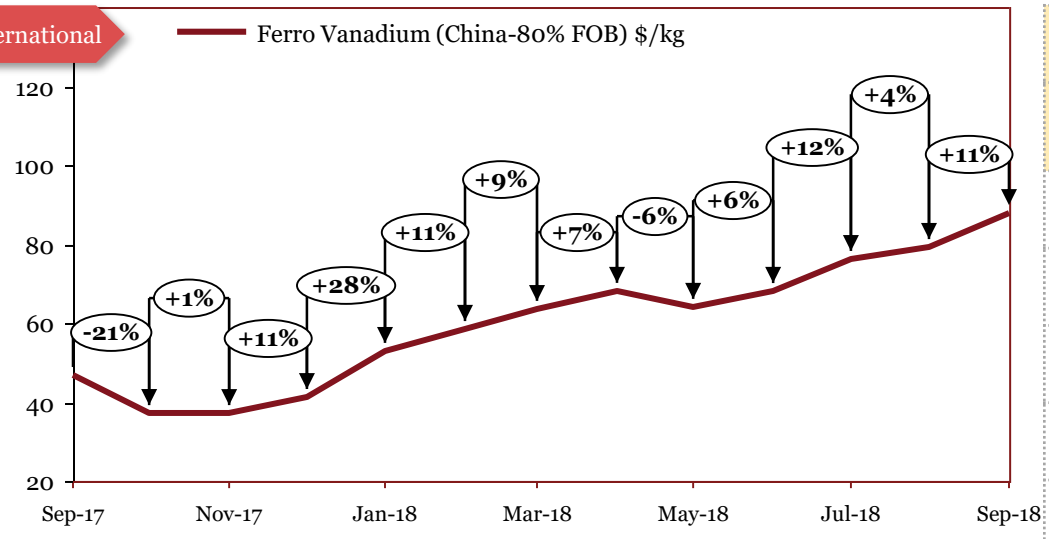
Outlook

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. In May, production from Chinese ferro molybdenum producers and global copper producers (molybdenum is produced as a by-product of copper production) acted as a cap for ferro molybdenum prices by enabling stable supply. In June and July, prices continued with declining trend. In August, declining trend in prices was reversed on account of firm demand. In September, prices remained stable.

^International prices changed due to change in grades at the source

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)**
Oct-17	37
Nov-17	37
Dec-17	41
Jan-18	53
Feb-18	59
Mar-18	64
Apr-18	68
May-18	64
Jun-18	68
Jul-18	76
Aug-18	79
Sep-18	88

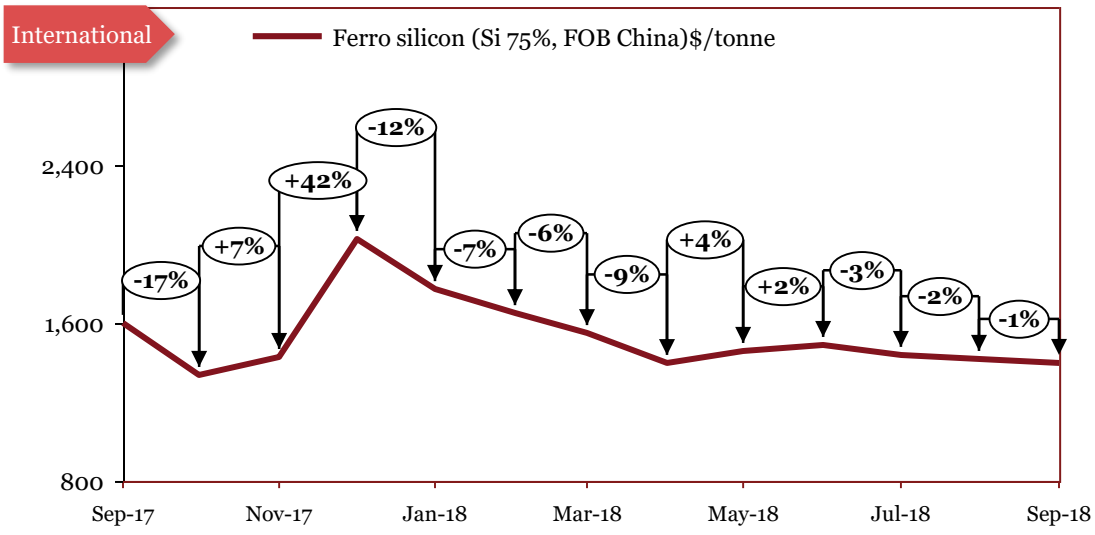
**The actual prices may vary depending on city, player, grade etc.*

Outlook

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. In April, the prices increased owing to the increased demand. In May, prices registered a decline due to limited demand. In June and July, prices witnessed increase due to persistent tight supply in the international market. In August, prices continued to rise. In September, global prices continued with increasing trend due to global supply constraints.

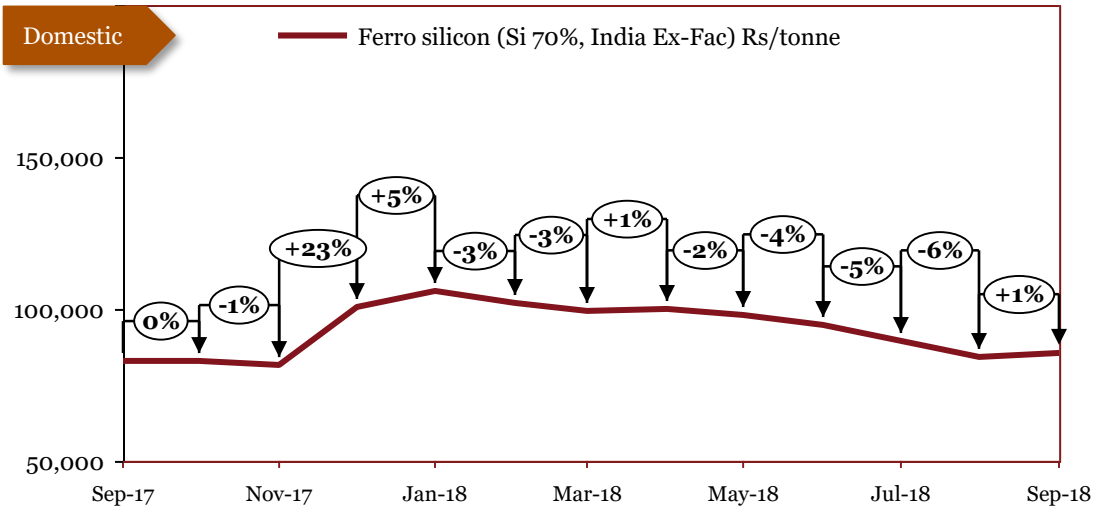
Ferro silicon

International



Source: Crisil

Domestic



Source: Crisil

Monthly Average Prices

Period	*Int'l ($/tonne)	*Dom (Rs/tonne)
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
Apr-18	1,401	99,700
May-18	1,456	98,200
Jun-18	1,490	94,700
Jul-18	1,442	89,700
Aug-18	1,415	84,500
Sep-18	1,401	85,500

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

Outlook

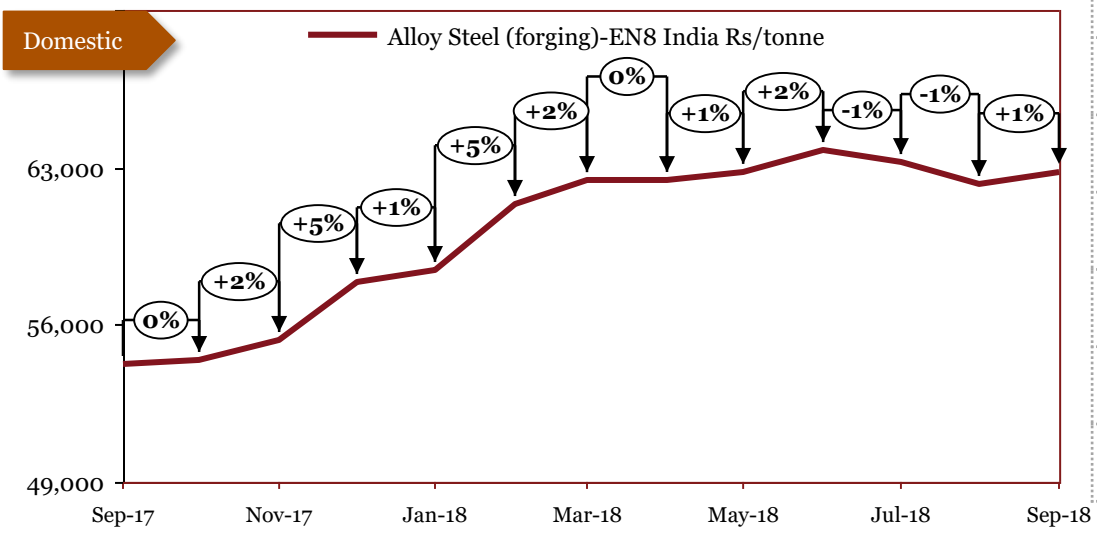
In April, the international prices decreased substantially, however, the domestic prices increased marginally owing to the continued demand. In May, international prices rose due to decreased production owing to pollution control restrictions in China. Domestic prices fell due to decrease in demand. International prices increased in June due to increased prices in China owing to tight supply and improved demand form European markets. Domestic prices decreased by about 4% owing to sale of commodity below the industry average price by few producers to meet their urgent cash requirement. This has led to downward trend in prices as many producers are reducing their offer price, resulting in demand-supply imbalance in the market. International ferro silicon prices declined in July 2018 as inventory levels have increased resulting in increased supply in the market. Domestic ferro silicon prices decreased in line with global prices. International ferro silicon prices declined in August on account of low demand for the commodity. Domestic ferro silicon prices decreased in line with global prices due to lower off-take in the market. In September, international ferro silicon prices declined on account of low demand for the commodity. Domestic ferro silicon prices increased, on account of limited inventory.

EN8 Alloy Steel (Forging)

International

Data not available for relevant (comparable to domestic) grades

Domestic



Source: PwC Research

Monthly Average Prices	
Period	***Dom (Rs/tonne)**
Oct-17	54,437
Nov-17	55,300
Dec-17	57,860
Jan-18	58,400
Feb-18	61,400
Mar-18	62,400
Apr-18	62,400
May-18	62,750
Jun-18	63,800
Jul-18	63,200
Aug-18	62,300
Sep-18	62,800

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

Outlook

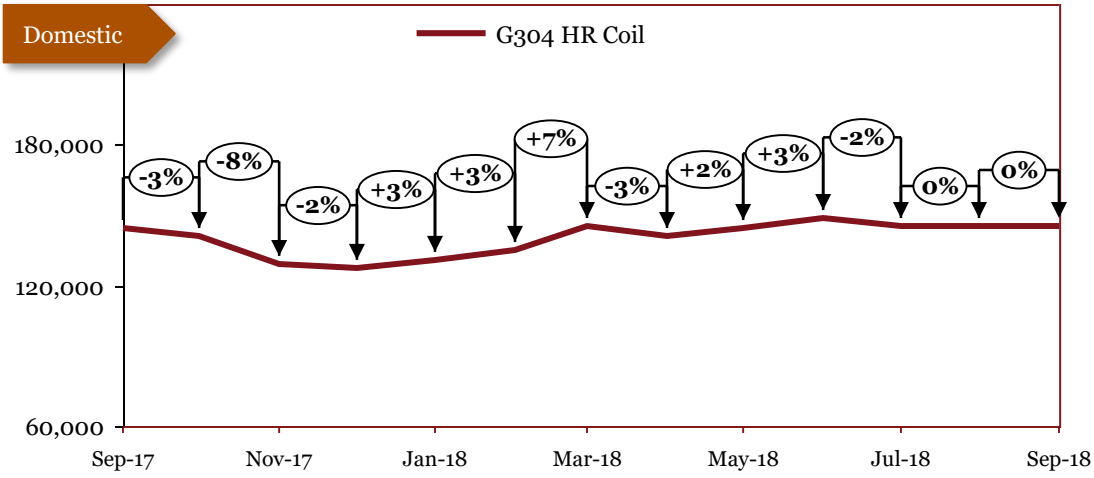
The influx of global manufacturers is also expected to boost the demand. Thus, the long term prospects seems promising for the forging industry as a whole. In November, increase in the domestic iron ore prices has resulted in the increase of alloy steel prices. In December, the price hike can be attributed 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. In April, prices remained constant due to stable market conditions and increased in May along with other steel products. Similarly, prices increased in June in step with other steel products. In July, prices fell due to unfavourable demand. In August, prices continued to fall. In September, prices increased along with price rise in other steel products.

Stainless Steel

International

Data not available for relevant (comparable to domestic) grades

Domestic



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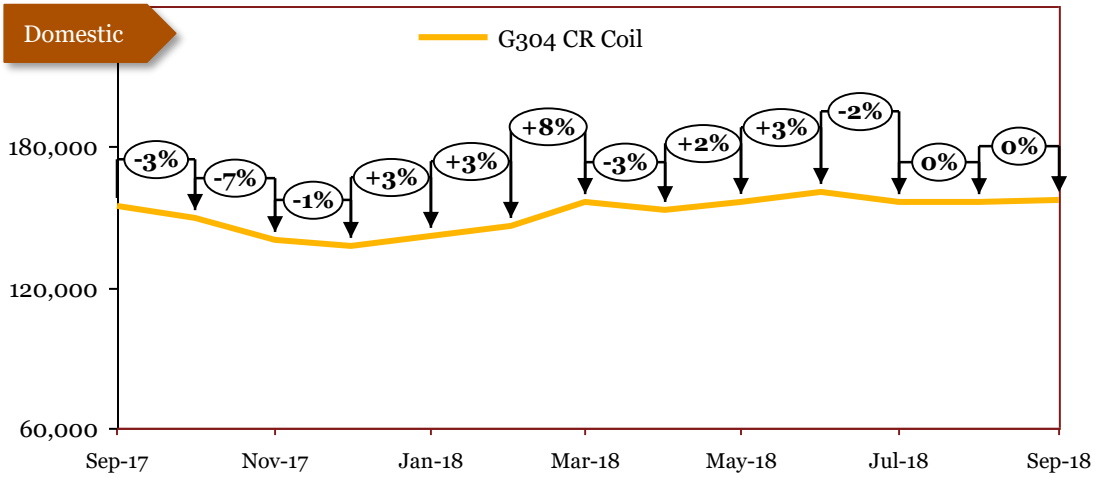


Monthly Domestic Average Prices

Period	*G304 HR (Rs/tonne)	*G304 CR (Rs/tonne)
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
Apr-18	141,200	152,750
May-18	144,700	156,250
Jun-18	148,700	160,250
Jul-18	145,200	156,750
Aug-18	145,200	156,750
Sep-18	145,700	157,250

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

Source: PwC Research

Outlook

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. In April, the domestic prices decreased owing to the reduced demand and continued higher supply. In May, declining trend was reversed as prices increased. In June, prices increased owing to strong demand. In July, domestic prices for stainless steel declined following global cues. In August, prices remained the same owing to stable market conditions. In September, prices continued to remain stable.

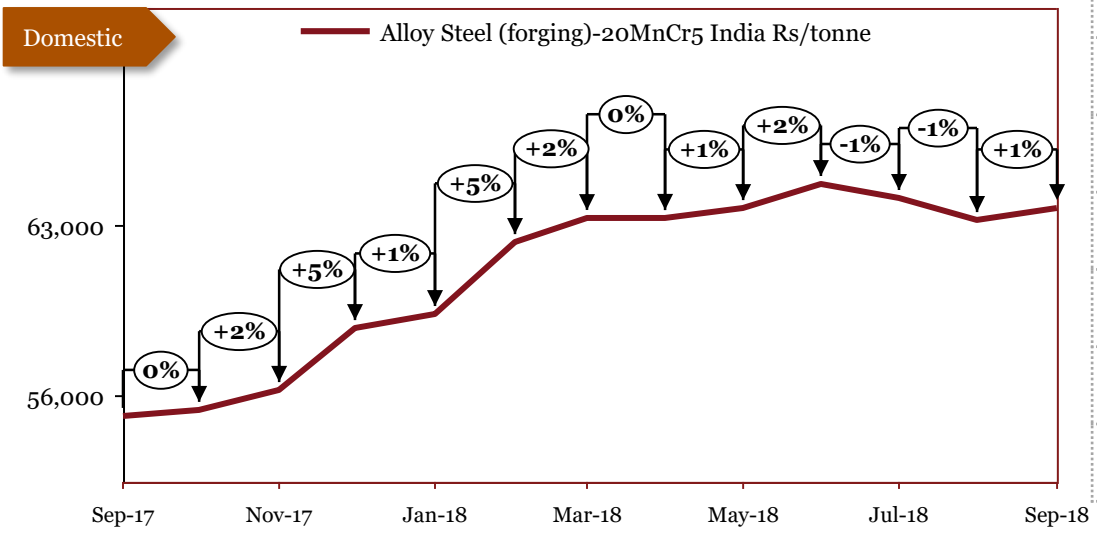
20MnCr5 Alloy Steel (Forging)

International

Data not available for relevant (comparable to domestic) grades

Monthly Average Prices	
Period	***Dom (Rs/tonne)**
Oct-17	55,437
Nov-17	56,300
Dec-17	58,860
Jan-18	59,400
Feb-18	62,400
Mar-18	63,400
Apr-18	63,400
May-18	63,750
Jun-18	64,800
Jul-18	64,200
Aug-18	63,300
Sep-18	63,800

Domestic



Source: PwC Research

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

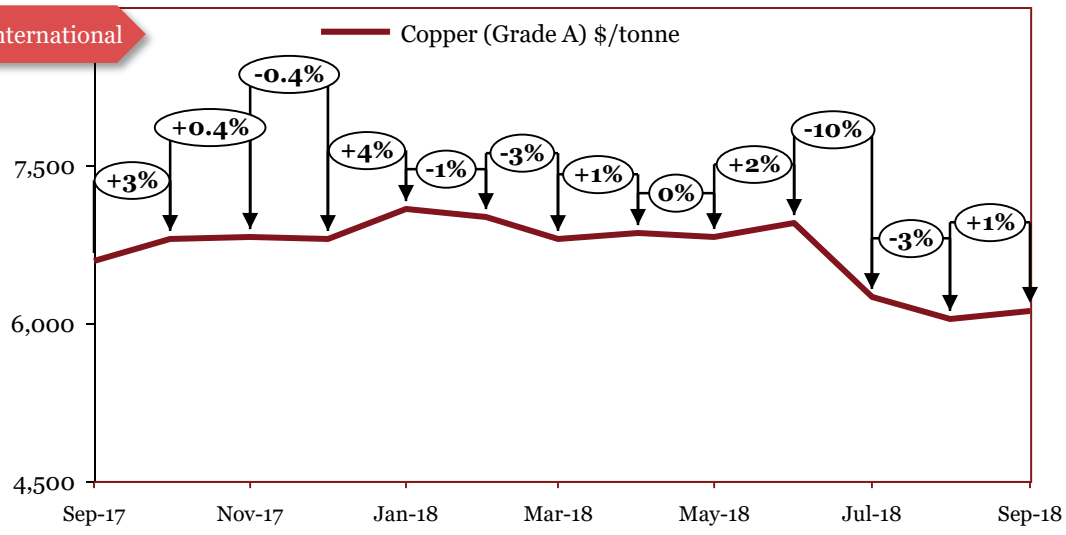
Outlook

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. In April, prices remained constant due to stable market conditions and increased in May along with other steel products. In June, prices increased in step with other steel products. Similarly, prices in the domestic market fell in line with other steel products owing to muted demand. In August, process continued to fall. In September, domestic prices reversed declining trend.

Base Metals

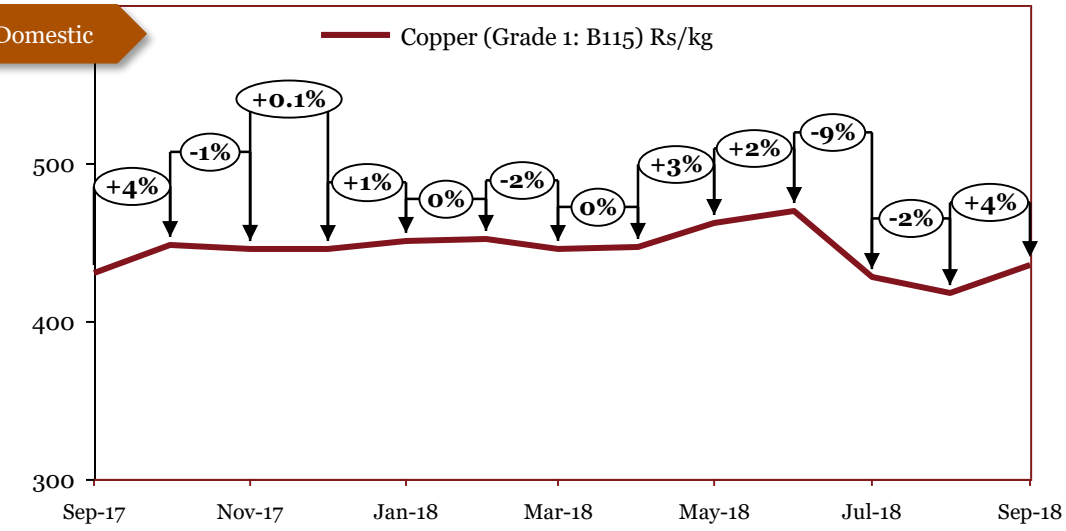
Copper

International



Source: LME

Domestic



Source: MCX

Monthly Average Prices		
Period	***Int'l ($/tonne)**	***Dom (Rs/kg)**
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
Apr-18	6,852	447
May-18	6,821	462
Jun-18	6,954	469
Jul-18	6,248	428
Aug-18	6,039	418
Sep-18	6,020	436

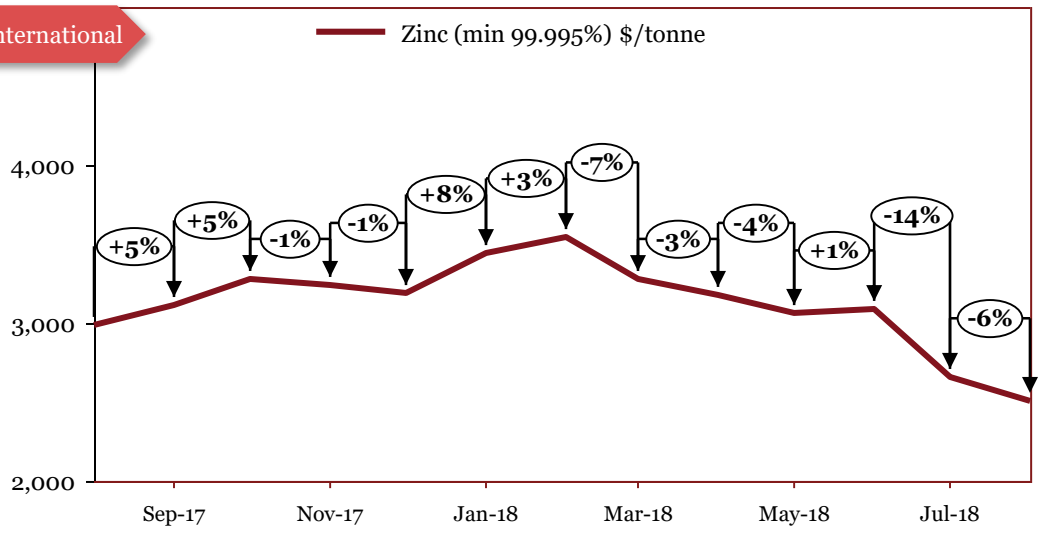
**The actual prices may vary depending on city, player, grade etc.*

Outlook

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. In April, the domestic and international prices remained flat due to limited movement in the market. In May, international prices remained flat due to stable supply and demand, however, the domestic prices increased due to a supply crunch caused by the shut down of Vedanta plant in Tamilnadu. In June, international copper prices increased due to an escalating trade war between US and China. Domestic prices rose on account of reduced supply resulting from aforementioned closure of Sterlite Copper's plant. In July, copper prices in the international market fell due to escalating trade war fears and fears of weakening demand from China. Domestic prices also fell due to developments in the international market. In August, international market prices declined owing to dampened demand that can be attributed to fall in value of emerging market currencies. Domestic market prices reflected the trend in international markets. In September, global prices fell further while domestic prices reversed declining trend.

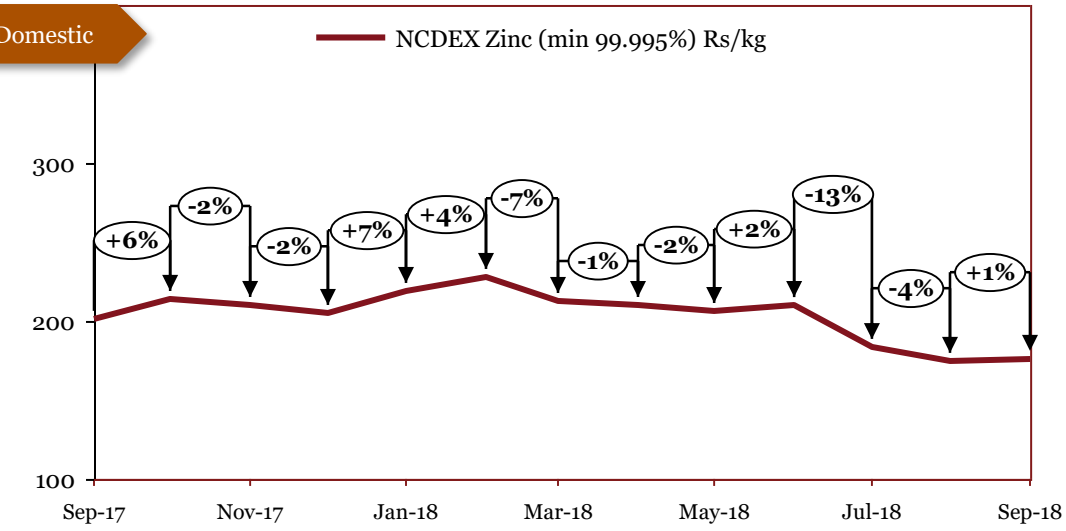
Zinc

International



Source: LME

Domestic



Source: NCDEX

Monthly Average Prices		
Period	***Int'l ($/tonne)**	***Dom (Rs/kg)**
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
Apr-18	3,183	210
May-18	3,057	206
Jun-18	3,091	210
Jul-18	2,658	183
Aug-18	2,510	175
Sep-18	2,433	176

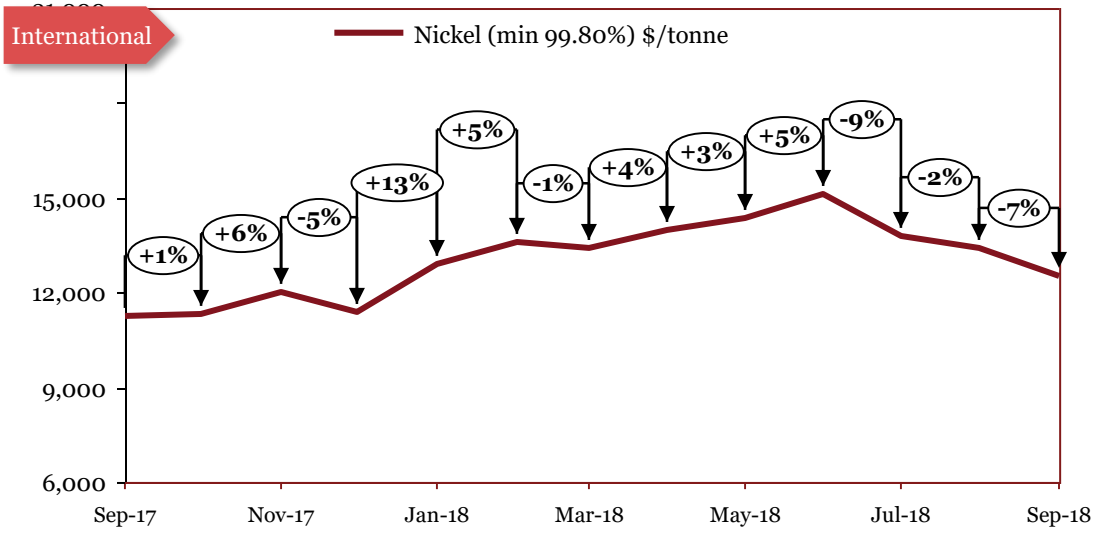
**The actual prices may vary depending on city, player, grade etc.*

Outlook

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. In April, the international and domestic zinc prices decreased owing to the decrease in the demand. In May, international prices fell due to increased supply. Domestic prices fell due to similar increase in output. In June, decline in international prices and domestic prices was stemmed. In July, international prices fell due to surplus supplies and a narrowing deficit. The decline in prices was further catalyzed by escalating trade tensions. Domestic prices fell on the back of weak global cues amid easing demand from consuming industries. In August, zinc prices crashed owing to excess supply in the market and muted demand from China. In September, international prices fell further while domestic prices rose amid sustained demand from alloy industries.

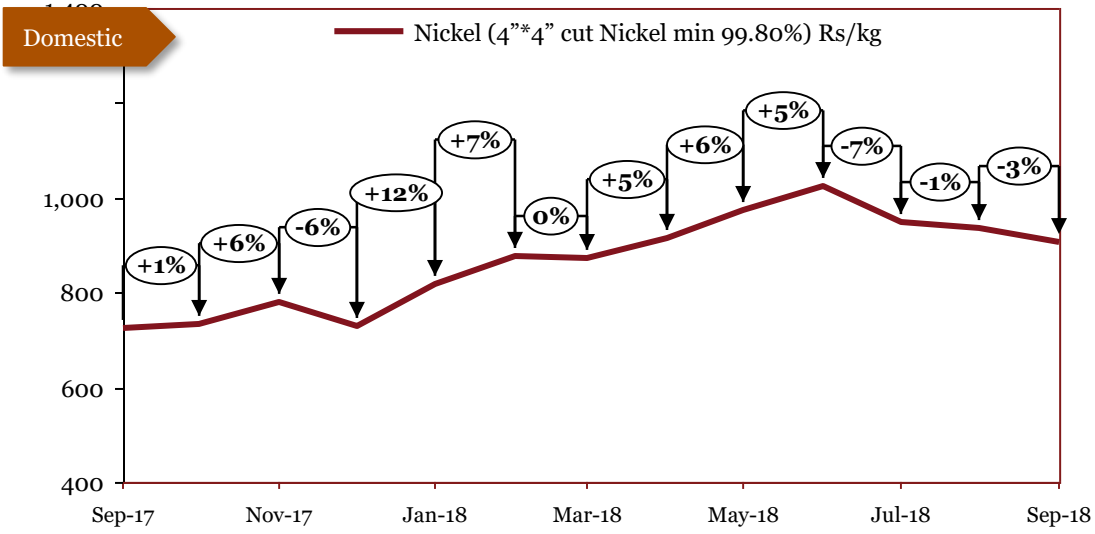
Nickel

International



Source: LME

Domestic



Source: NCDEX

Monthly Average Prices		
Period	***Int'l ($/tonne)**	***Dom (Rs/kg)**
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
Apr-18	13,965	915
May-18	14,352	970
Jun-18	15,107	1025
Jul-18	13,768	948
Aug-18	13,429	936
Sep-18	12,524	906

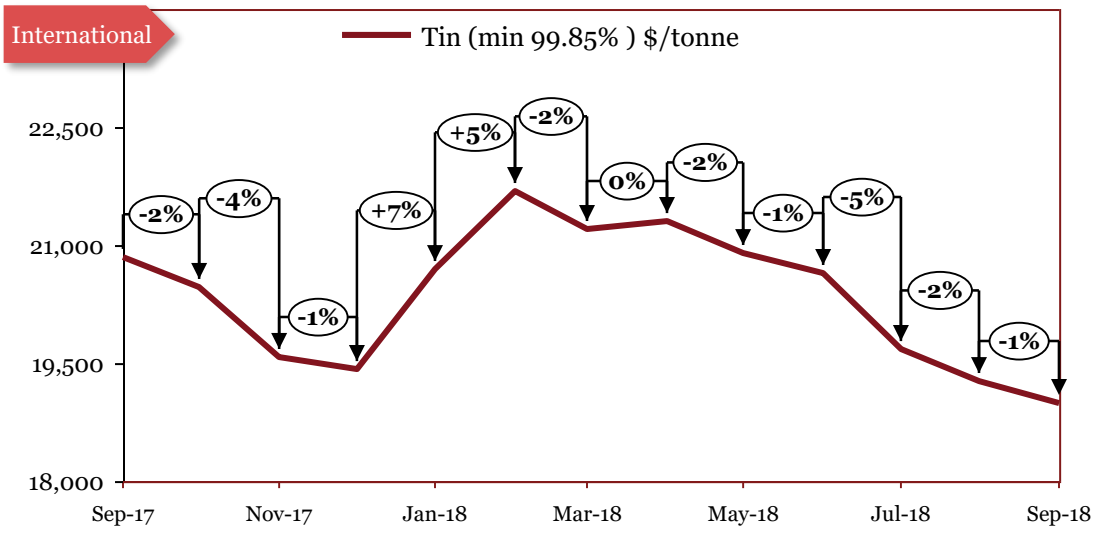
**The actual prices may vary depending on city, player, grade etc.*

Outlook

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. In April, the international prices increased owing to fear of Rusal sanctions being extended to the Nornickel, company linked with Rusal. Domestic prices followed suit. In May, nickel prices increased due to lower inventories, stronger demand and a weaker dollar. In June, domestic and overseas nickel prices rose after a blast at an iron ore mine in China and amid falling inventories. In addition, anticipation of increased electric vehicle demand and strong demand in the Stainless Steel sector further supported prices. In July, prices in the international market fell due to excess supply and ongoing trade dispute between US and China. Domestic prices followed suit. In August, prices declined following the trend in base metal prices. In September, prices continued to fall.

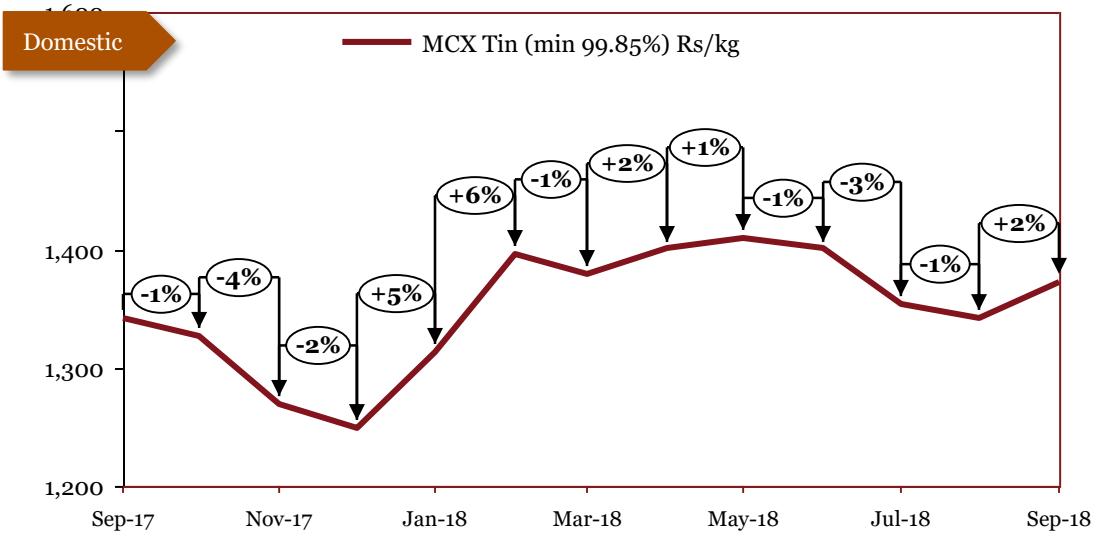
Tin

International



Source: LME

Domestic



Source: MCX

Monthly Average Prices		
Period	***Int'l ($/tonne)**	***Dom (Rs/kg)**
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	1379
Apr-18	21,293	1,400
May-18	20,888	1,410
Jun-18	20,652	1,400
Jul-18	19,689	1,353
Aug-18	19,268	1,342
Sep-18	18,990	1,372

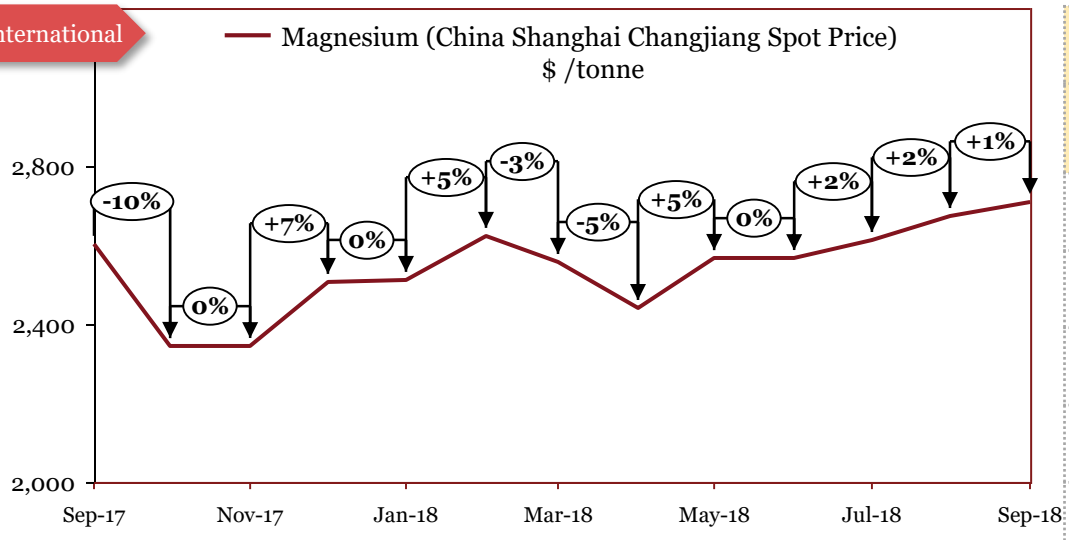
**The actual prices may vary depending on city, player, grade etc.*

Outlook

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. In May, tin prices declined due to higher inventories owing to rising Indonesian exports and order cancellations by buyers. Domestic prices rose due to higher industrial demand. In June, international tin prices fell owing to weak demand. In July, tin prices decreased in line with decrease with price trends for other base metals. In August, prices declined owing to strong dollar and weakening emerging market currencies in the international market. In September, international prices continued to fall while domestic prices witnessed reversed trend.

Magnesium

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 ($/tonne)
Oct-17	2,347
Nov-17	2,343
Dec-17	2,506
Jan-18	2,509
Feb-18	2,622
Mar-18	2,556
Apr-18	2,440
May-18	2,565
Jun-18	2,569
Jul-18	2,612
Aug-18	2,675
Sep-18	2,708

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

Outlook

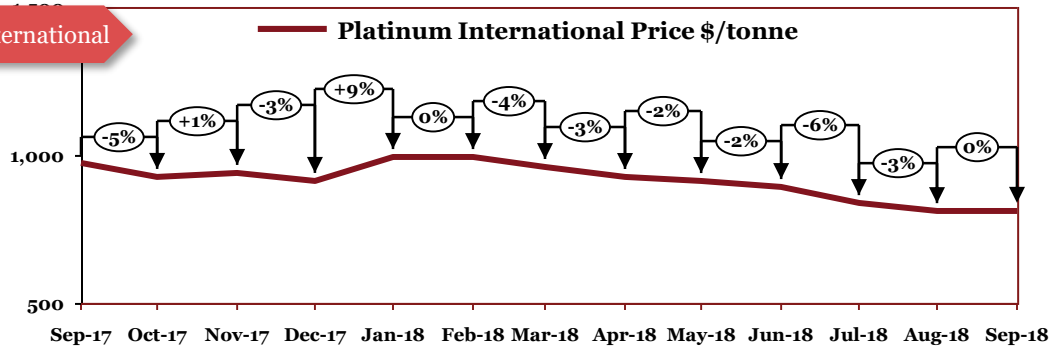
The global consumers vary to use magnesium as a long term substitute due to Chinese export quotas and duties. However, the recent explorations of this metal in North America might reduce the dependence on the Chinese supply and make the industrial use of magnesium more streamlined. Prices remained more 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. In April, the prices decreased owing to the slack in demand. In May, June and July, magnesium prices have witnessed increasing trend owing to favourable market conditions. In August, prices continued to rise. In September, prices rose on account of tighter supply.

^International prices changed due to change in grades at the source

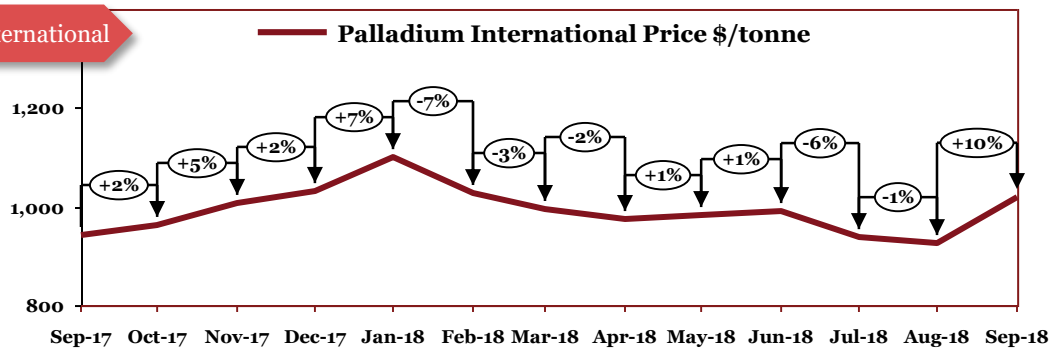
Precious Metals

Precious Metals

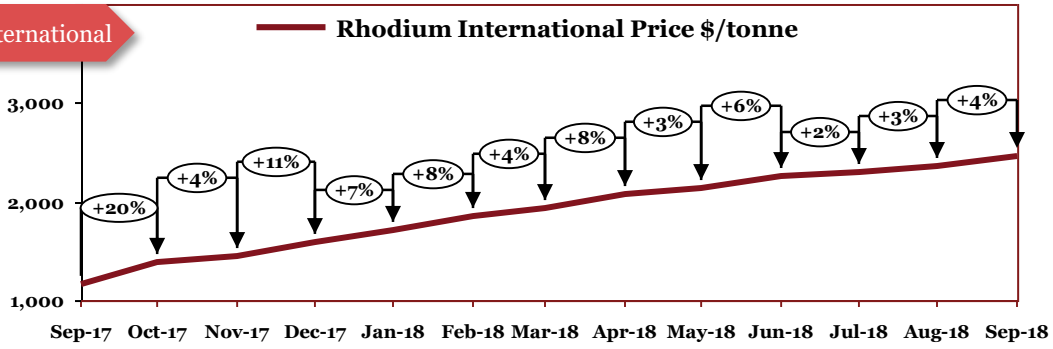
International



International



International



Monthly Average Prices ($/Oz)

Period	Pt	Pd	Rh
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
Apr-18	929	975	2,071
May-18	909	984	2,133
Jun-18	890	991	2,255
Jul-18	835	936	2,295
Aug-18	809	924	2,358
Sep-18	808	1,017	2,463

Source: Johnson Matthey

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

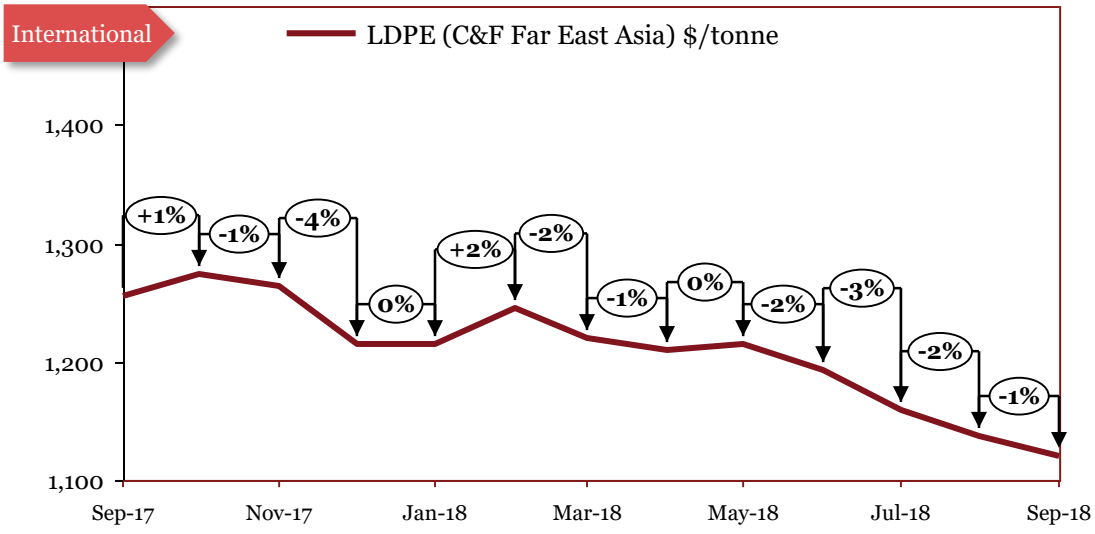
Outlook

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. In April, the prices continued to decrease owing to the slack in demand. In May, platinum prices continued to fall due to lower demand. Continued decline in palladium prices was stemmed and rhodium continued to rise due to strong industrial demand. In June, platinum prices continued to fall owing to concern over future demand and state of diesel car sales whereas rhodium and palladium prices registered an increase. In July, platinum prices experienced downward pressure by trade tensions and the prospect of higher electric-vehicle adoption. Palladium prices experienced decline whereas rhodium prices increased owing to favorable market conditions. In August, platinum and palladium prices continued to fall owing to strong dollar. In September, rhodium prices increased owing to constricted supply from South Africa. Palladium prices increased on account of expected increase in the amount of palladium needed in every car owing to new emissions standards in China for cars becoming effective in 2020. Concerns over the intensifying trade dispute between the U.S. and China is also a contributor to the gains in palladium prices more recently.

Polymers & Rubber

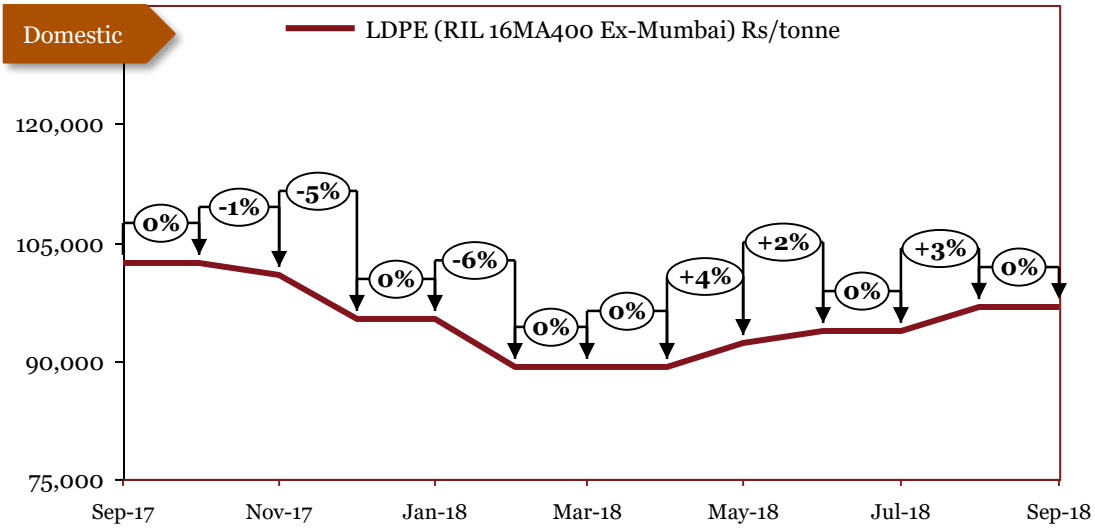
Low density polyethylene (LDPE)

International



Source: Crisil

Domestic



Source: Reliance Industries Ltd.

Monthly Average Prices		
Period	***Int'l ($/tonne)**	***Dom (Rs/tonne)**
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
Apr-18	1,210	89,190
May-18	1,214	92,319
Jun-18	1,192	93,819
Jul-18	1,159	93,819
Aug-18	1,137	96,819
Sep-18	1,121	96,819

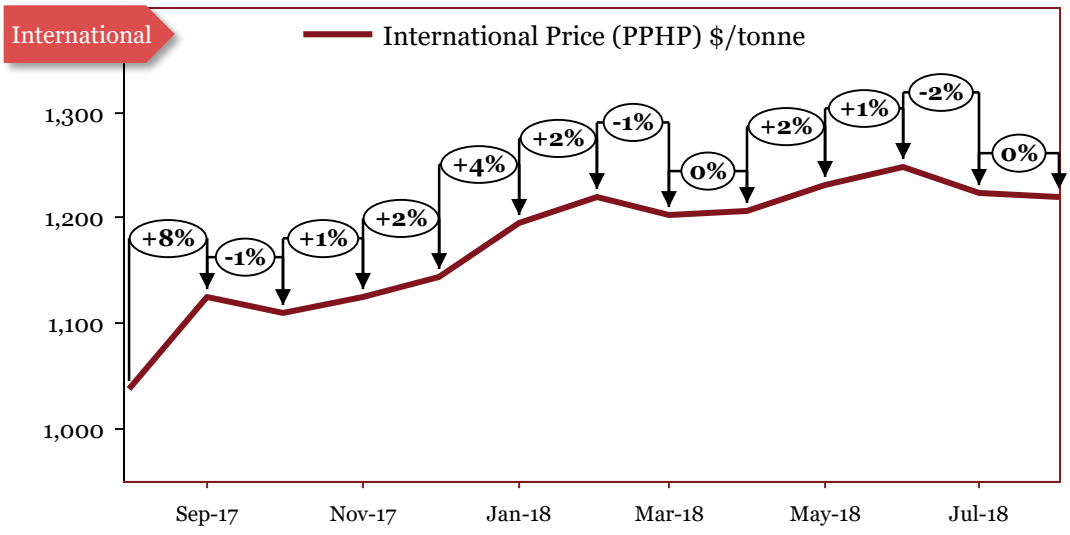
**The actual prices may vary depending on city, player, grade etc.*

Outlook

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. In April, the international prices decreased due to ample supply. In the domestic market, the prices remained flat for most of the month, however, the prices increased towards the end of the month. In May, international prices remained stable. In June, international prices witnessed decline whereas domestic prices continued to rise. In July, international prices fell owing to fall in feedstock ethylene prices coupled with weak demand. In August, international LDPE prices decreased in spite of rise in ethylene prices. On the domestic front, RIL increased domestic and deemed export prices of LDPE. In September, international LDPE prices declined due to due to weak demand.

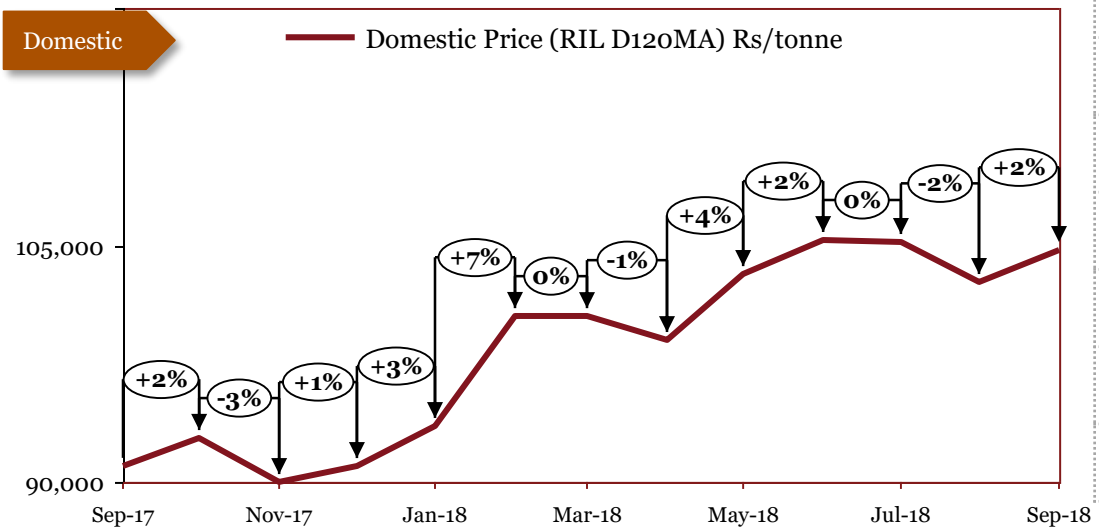
Polypropylene (PP)

International



Source: Crisil

Domestic



Source: Reliance Industries Ltd.

Monthly Average Prices		
Period	***Int'l ($/tonne)**	***Dom (Rs/tonne)**
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
Apr-18	1,206	98,988
May-18	1,231	103,128
Jun-18	1,248	105,378
Jul-18	1,224	105,128
Aug-18	1,220	102,628
Sep-18	1,226	104,628

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

Outlook

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. In April, the prices of PP remained range bound. In May, international prices increased due to supply tightness on account of ongoing maintenance turnaround. Domestic prices followed suit. In June, prices rose on account of supply tightness. In July 2018, prices decreased due to decline in feedstock propylene prices coupled with weak demand. In August, despite rise in feedstock propylene prices, international prices were range bound due to weak demand. In September 2018, PP prices increased due to rise in feedstock propylene prices.

Rubber

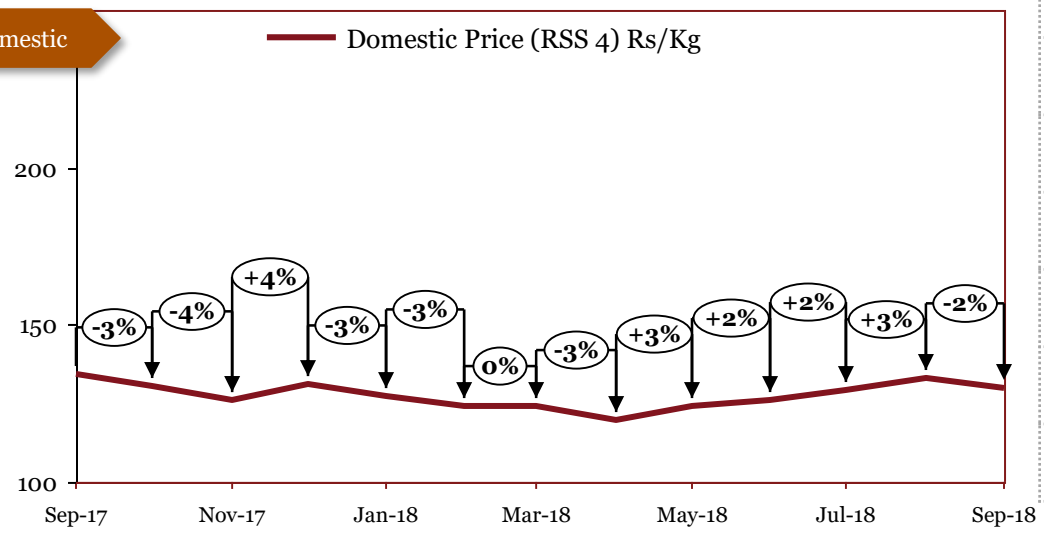
International

Data not available for relevant (comparable to domestic) grades

Monthly Average Prices	
Period	***Dom (Rs/kg)**
Oct-17	131
Nov-17	126
Dec-17	131
Jan-18	127
Feb-18	124
Mar-18	124
Apr-18	120
May-18	124
Jun-18	126
Jul-18	129
Aug-18	133
Sep-18	130

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

Domestic



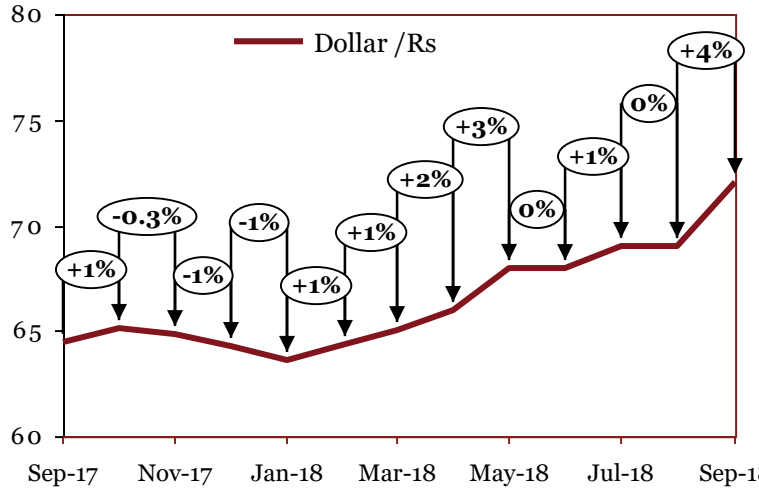
Source: Rubber board

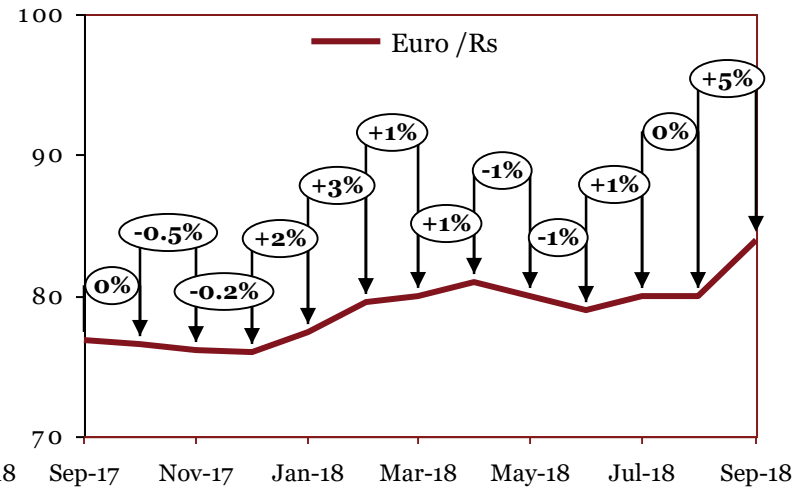
Outlook

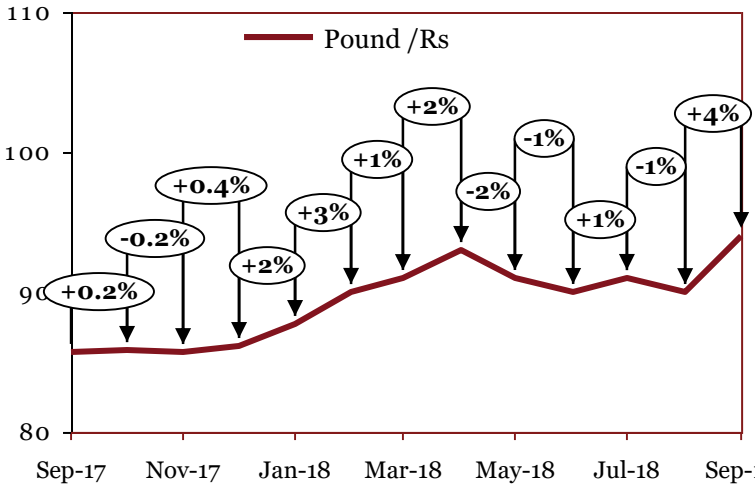
In September, the prices increased owing to the increased demand. In October, the domestic prices declined riding on the decreasing international prices. In November, the prices followed the similar trends as in the last month. In December, the rubber prices increased due to higher demand and increase 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. In April, the prices decreased owing to the increase in the supply. In May, rising production coupled with high consumption led to an increase in prices. In June, prices rose due to supply tightness, demand from tyre manufacturers to deliver pending natural rubber contracts, and fluctuations in international prices. In July, rubber prices increased due to improved demand. In August, domestic rubber prices increased owing to floods in Kerala. In September, prices declined on account of subdued demand.

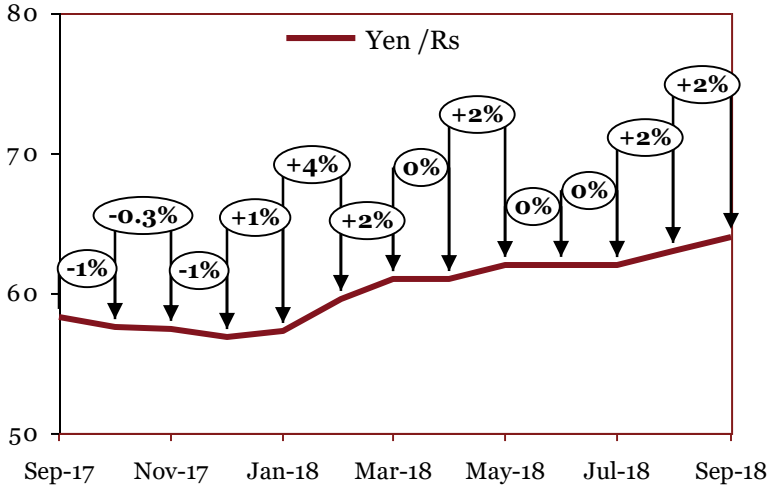
Appendices

Forex Movement







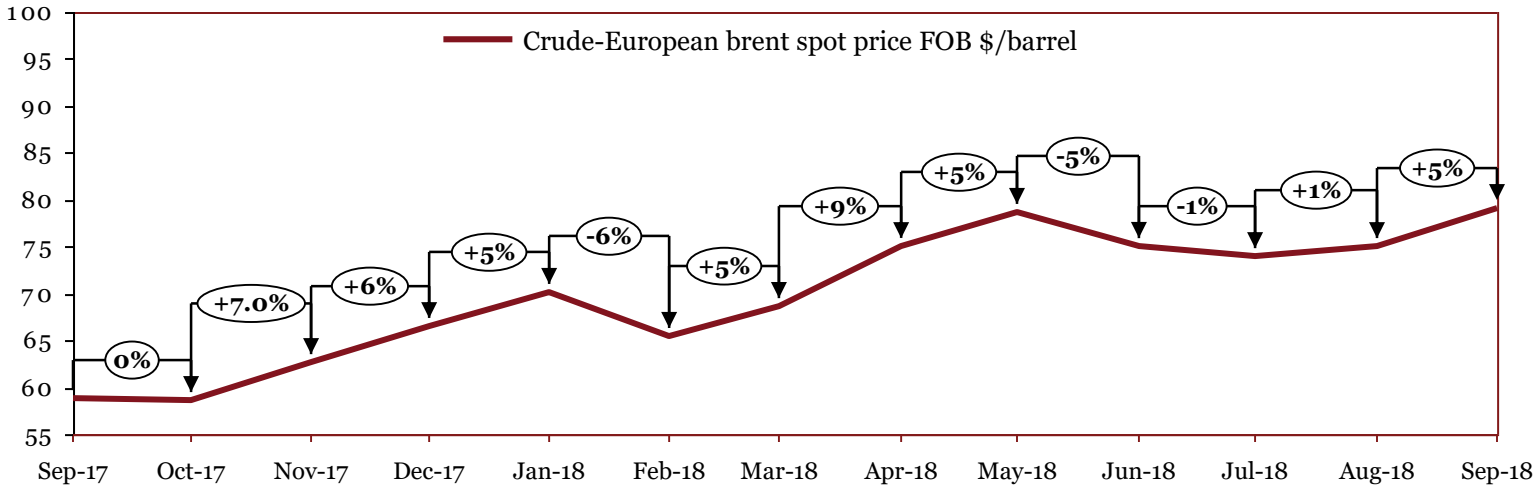


Source: Reserve Bank of India

Monthly Average Prices (Rs)

	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18
$	65	65	64	64	64	65	66	68	68	69	69	72
£	86	86	86	88	90	91	93	91	79	80	80	84
€	76	76	76	77	79	80	81	80	90	91	90	94
¥	58	57	57	57	59	61	61	62	62	62	63	64

Crude Oil



Source: EIA

Monthly Average Prices ($/barrel)												
	Oct-17	**Nov-17**	**Dec-17**	**Jan-18**	**Feb-18**	**Mar-18**	**Apr-18**	**May-18**	**Jun-18**	**Jul-18**	**Aug-18**	**Sep-18**
	59	63	67	70	66	69	75	79	75	74	75	79

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 CIS Black Sea *Previously: 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 (Europe-70% In Warehouse Rotterdam) *Previously: Ferrotitanium (min 70% in warehouse Rotterdam, Europe) $/kg*	NA
Ferro chrome	Crisil : FOB Hong Kong Cr 50%	Crisil: Ex-factory Cr 60%
Ferro molybdenum	Ferro-molybdenum (China-60% EXW) *Previously: Ferro-molybdenum (65%min in warehouse Rotterdam, Europe) $/kg*	NA

Commodity Specifications

Commodity	International	Domestic
Ferro vanadium	Ferro Vanadium (80% in warehouse Pittsburgh, US) $/kg *Previously: Ferrovanadium 78-82% V max 1.5% Si FOB North America warehouse USD/lbs*	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 *Previously: Magnesium (99.8% FOB China Main Ports Spot Price) $/tonne*	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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