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Commodity price monitor

November-23

Prepared for ACMA

*Strictly private
and confidential*

November-23



pwc

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Commodity trend dashboard

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

Calendar Year 2023: Q vs. Q update

Commodity	Region	Q-o-Q Up	Q-o-Q Down
Iron & Steel			
Iron Ore	International	1.74% ▲	
	Domestic low grade		
	Domestic high grade		
Pig Iron	International		-8.89% ▼
	Domestic		-2.06% ▼
Stainless steel	Domestic		-0.11% ▼
	Domestic		-0.54% ▼
Wire rod	International		-3.35% ▼
	Domestic		-4.29% ▼
Steel Billets	International		-12.50% ▼
	Domestic		-4.30% ▼
Hot-rolled coils	International		-9.12% ▼
	Domestic		-2.47% ▼
Cold-rolled coils	International		-9.44% ▼
	Domestic		-2.65% ▼
Steel Scrap	Domestic		-3.27% ▼
EN8	Domestic		-7.38% ▼
20MnCr5	Domestic		-7.28% ▼
Ferro-alloys			
Ferro titanium	International	N/A	
Ferro chrome	International		-2.66% ▼
	Domestic	2.68% ▲	
Ferro molybdenum	International	N/A	
Ferro vanadium	International	N/A	
Ferro silicon	International		-9.67% ▼
	Domestic		-8.02% ▼

ND: Not disclosed by the source

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

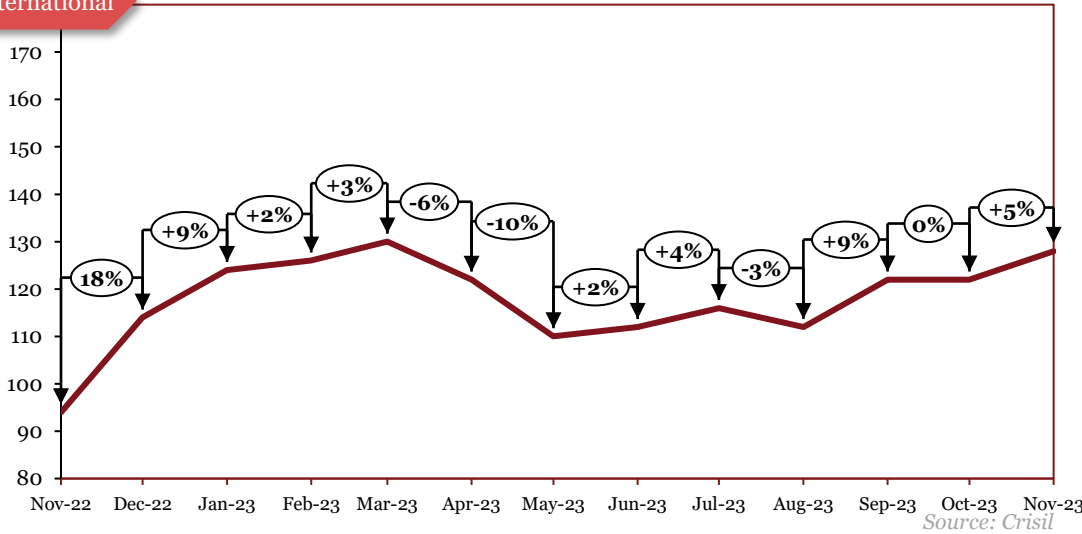
Calendar Year 2023: Q vs. Q update

Commodity	Region	Q-o-Q Up	Q-o-Q Down
Base Metals			
Aluminum	International		-4.03% ▼
	Domestic		-2.88% ▼
Copper	International		-1.44% ▼
	Domestic		-1.22% ▼
Zinc	International		-4.37% ▼
	Domestic		-3.88% ▼
Lead	International	2.47% ▲	
	Domestic	1.12% ▲	
Nickel	International		-9.16% ▼
	Domestic	N/A	
Tin	International	0.08% ▲	
	Domestic	N/A	
Magnesium	International	N/A	
Precious Metals			
Platinum	International		-9.56% ▼
Palladium	International		-13.89% ▼
Rhodium	International		-41.83% ▼
Polymers			
Low density polyethylene (LDPE)	International	0.46% ▲	
	Domestic		-2.65% ▼
Polypropylene (PP)	International		-2.39% ▼
	Domestic		-2.40% ▼
Acrylonitrile Butadiene Styrene (ABS)	International		-0.46% ▼
	Domestic	0.37% ▲	
Polystyrene (PS)	International		-2.69% ▼
	Domestic		-3.07% ▼
Rubber	Domestic		-3.45% ▼
Currency Exchange			
Dollar	International	0.64% ▲	
Pound	International	0.51% ▲	
Euro	International	1.80% ▲	
Yen	International		-4.61% ▼

Iron & Steel

Iron Ore

International

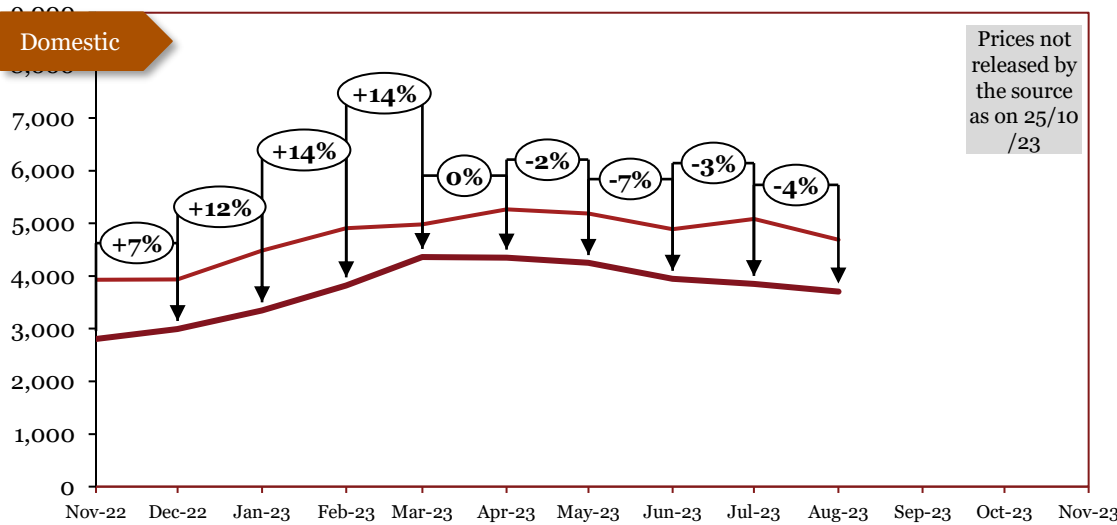


Source: Crisil

Monthly Average Prices

Period	*Int'l	*Dom	
	\$/tonne	Rs/tonne	
		65% & below	65% & above
Nov-22	94	2803	3931
Dec-22	114	2996	3936
Jan-23	124	3346	4484
Feb-23	126	3821	4906
Mar-23	130	4361	4980
Apr-23	122	4350	5264
May-23	110	4248	5189
Jun-23	112	3947	4886
Jul-23	116	3847	5084
Aug-23	112	3702	4686
Sep-23	122		
Oct-23	122		
Nov-23	128		

Domestic



Prices not released by the source as on 25/10/23

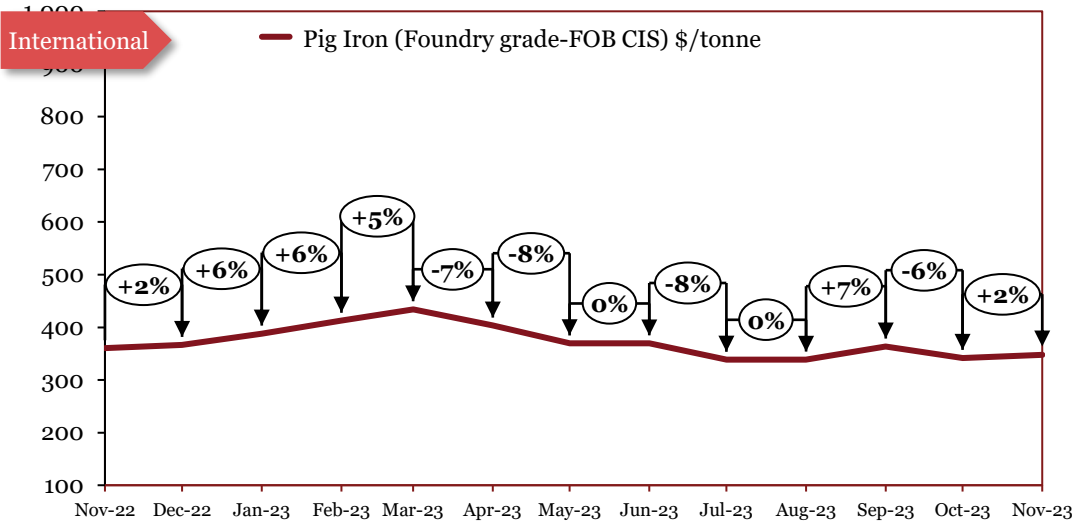
Source: Crisil

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

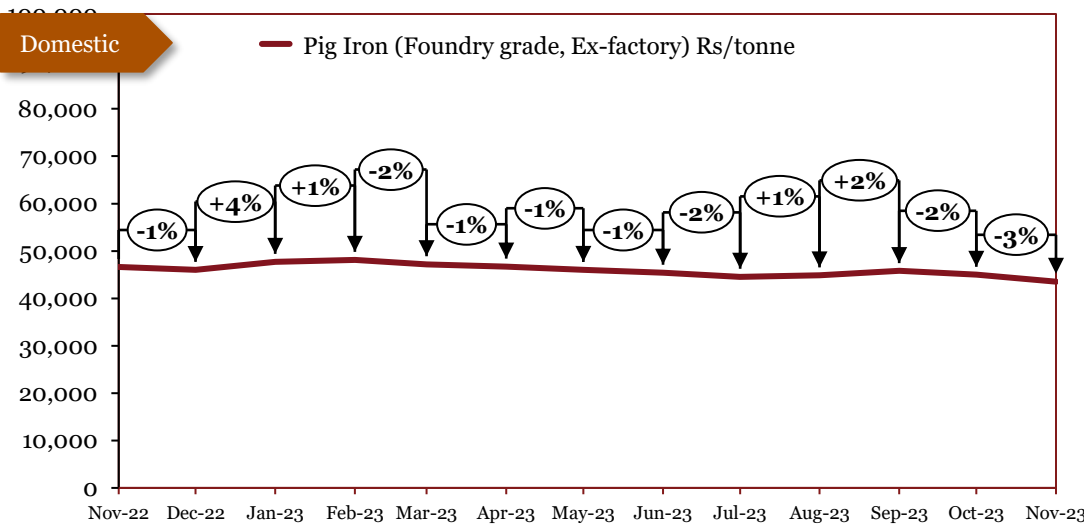
Outlook

In April, international prices fell amid weak demand from Chinese steelmakers and increased inventories at Chinese ports. In May, prices decreased due to increased supply in an already flooded market as several companies ramped up production amid lower raw material costs. In June, international prices increased as the market remained optimistic about the outlook for demand amid growing signs that the world's top steel producer, China, would introduce more economic stimulus. Domestic prices decreased due to lower raw material costs. In July, prices increased due to the improvement of the credit policy in China and the expectation that Chinese authorities will ease mortgage restrictions to restart the economic recovery. In August, prices decreased due to the threat of limited steel production in China, the lack of economic incentives from the Chinese authorities, and excess supply from Brazil and Australia. In September, prices increased due to increasing demand from Chinese steel mills and increasing steel demand from the construction industry. In October, international prices remained relatively stable. In November, prices increased owing to improving sentiments in the Chinese market, reducing Chinese inventory and a lower-than-expected supply from Australia and Brazil.

Pig Iron



Source: Crisil



Source: Crisil

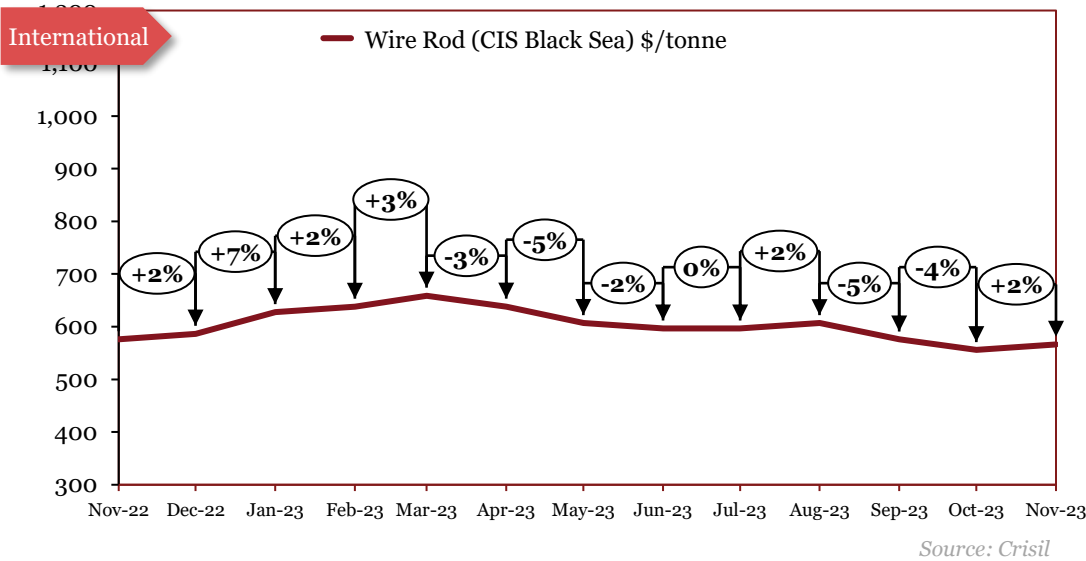
*The actual prices may vary depending on city, player, grade etc.

Monthly Average Prices		
Period	*Int'l	*Dom
	\$/tonne	Rs/tonne
Nov-22	360	46600
Dec-22	367	46000
Jan-23	388	47700
Feb-23	413	48100
Mar-23	434	47200
Apr-23	403	46700
May-23	370	46000
Jun-23	370	45400
Jul-23	339	44550
Aug-23	339	44900
Sep-23	363	45800
Oct-23	342	45000
Nov-23	348	43500

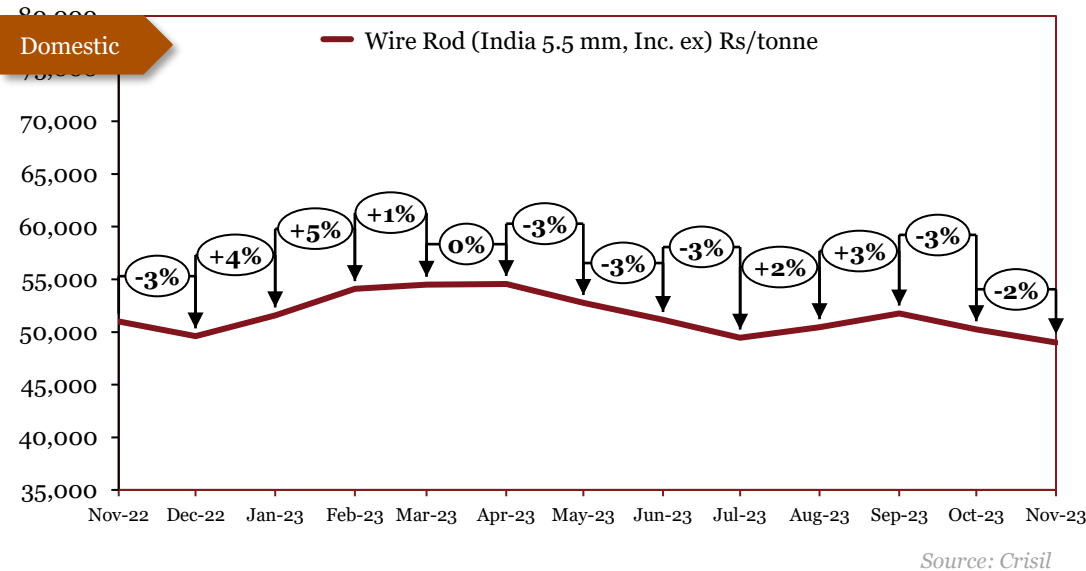
Outlook

In February, prices increased in tandem with key raw material prices of coking coal and iron ore. In March, domestic prices fell due to moderate demand for finished steel in the secondary sector. International prices increased in tandem with iron ore prices. In April, prices decreased due to a negative correction in coal and coke prices. In May, domestic prices plummeted as coking coal prices fell by almost 15%. International prices decreased due to subdued steel demand caused by high inflation and liquidity crunch. In June, prices remained relatively stable. In July, prices fell due to sufficient supply and weak demand coupled with the decline in coke and steel prices. In August, prices remained relatively stable. In September, prices increased due to a sharp increase in prices of raw materials and an increase in the price of coking coal. In October, prices decreased due to sluggish offtakes from steel manufacturers coupled with discounts on payment conditions due to cash crunch, especially in the domestic market. In November, international prices surged due to an increase in the price of iron ore, higher domestic demand in Europe, and a tightening of supply from Brazil. Domestic prices fell in tandem with coking coal.

Wire Rod



Monthly Average Prices		
Period	^*Int'l (\$/tonne)	*Dom (Rs/tonne)
Nov-22	576	50994
Dec-22	587	49594
Jan-23	628	51594
Feb-23	638	54094
Mar-23	659	54494
Apr-23	638	54554
May-23	607	52754
Jun-23	597	51154
Jul-23	597	49454
Aug-23	607	50455
Sep-23	576	51754
Oct-23	556	50254
Nov-23	566	49004

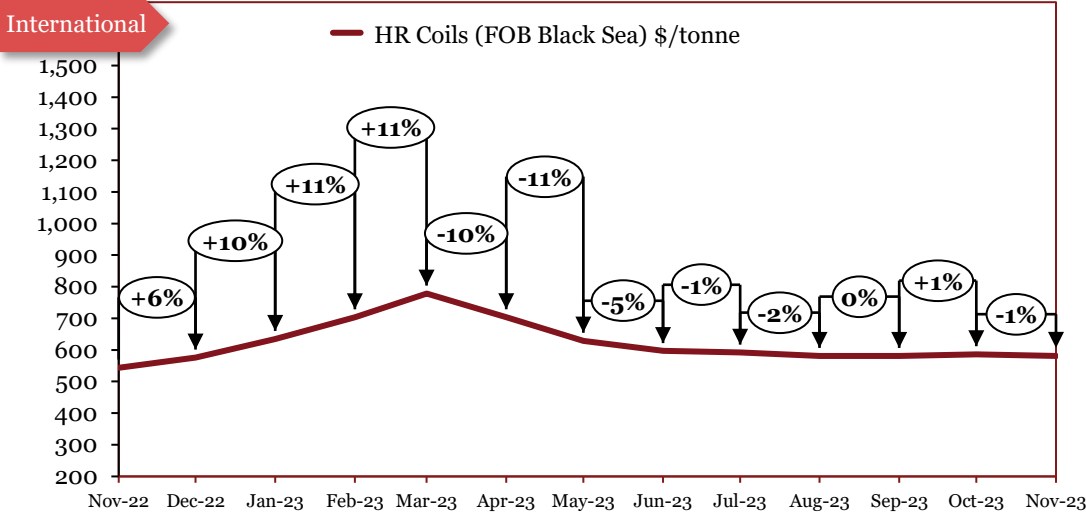


*The actual prices may vary depending on city, player, grade etc.

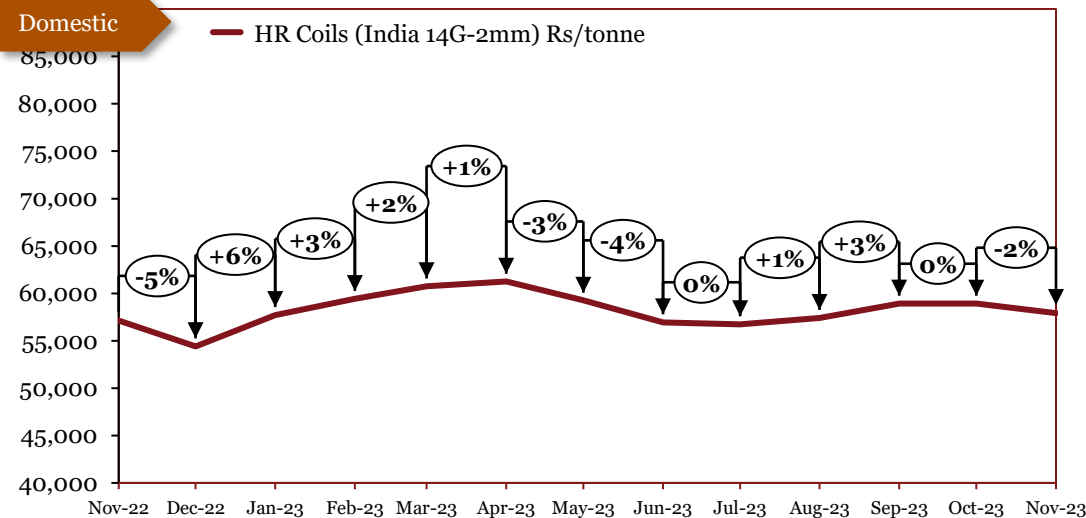
Outlook

In February and March, prices increased due to an increase in the price of steel, iron ore, and coking coal. In April, domestic prices remained stable. International prices decreased in tandem with steel and coking coal prices. In May, prices plummeted in tandem with coking coal prices and a fall in steel demand from the real estate sector in China. In June, prices decreased due to limited demand and sluggish global trends. In July, international prices remained stable. Domestic prices continued to fall due to reduced demand, a drop in prices of raw materials, and decreased blast furnace activity. In August, prices increased due to the increase in price of coking coal. In September, international prices decreased as the inflation rate increased across major European nations leading to decreased demand. Domestic prices increased due to an increase in prices of raw materials. In October, international prices decreased due to the high inflation rate across major European nations leading to decreased demand. Domestic prices decreased due to sluggish demand from steel manufacturers. In November, international prices increased with a surge in iron ore prices. Domestic prices reduced due weak domestic demand coupled with decreasing coking coal prices.

Hot-Rolled (HR) Coils



Source: Crisil



Source: Crisil

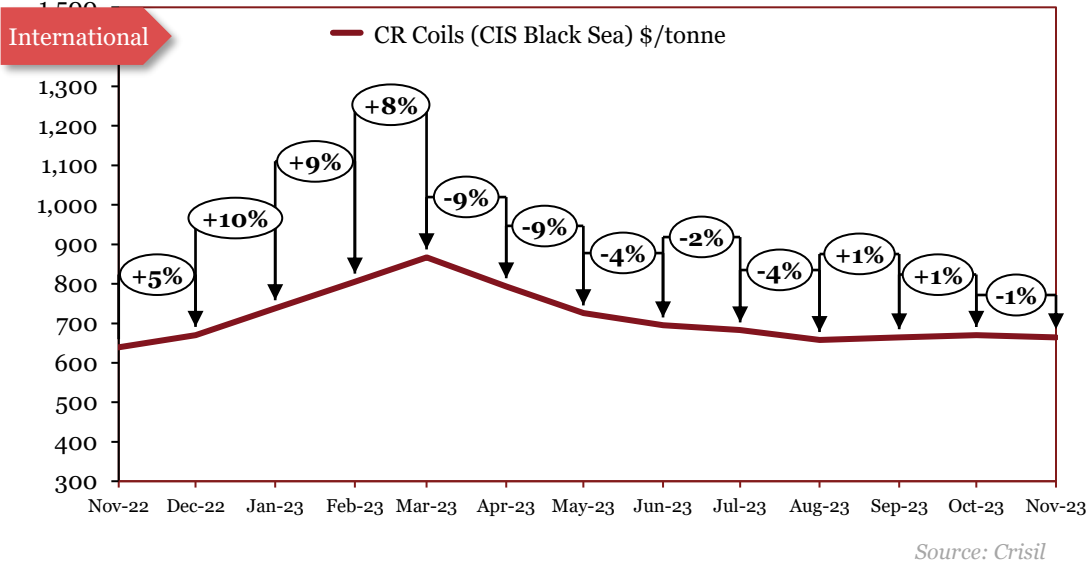
Monthly Average Prices		
Period	*Int'l (\$/tonne)	^*Dom (Rs/tonne)
Nov-22	544	57150
Dec-22	576	54400
Jan-23	634	57725
Feb-23	704	59425
Mar-23	778	60750
Apr-23	704	61250
May-23	629	59250
Jun-23	597	56950
Jul-23	592	56750
Aug-23	581	57400
Sep-23	581	58925
Oct-23	586	58925
Nov-23	581	57925

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

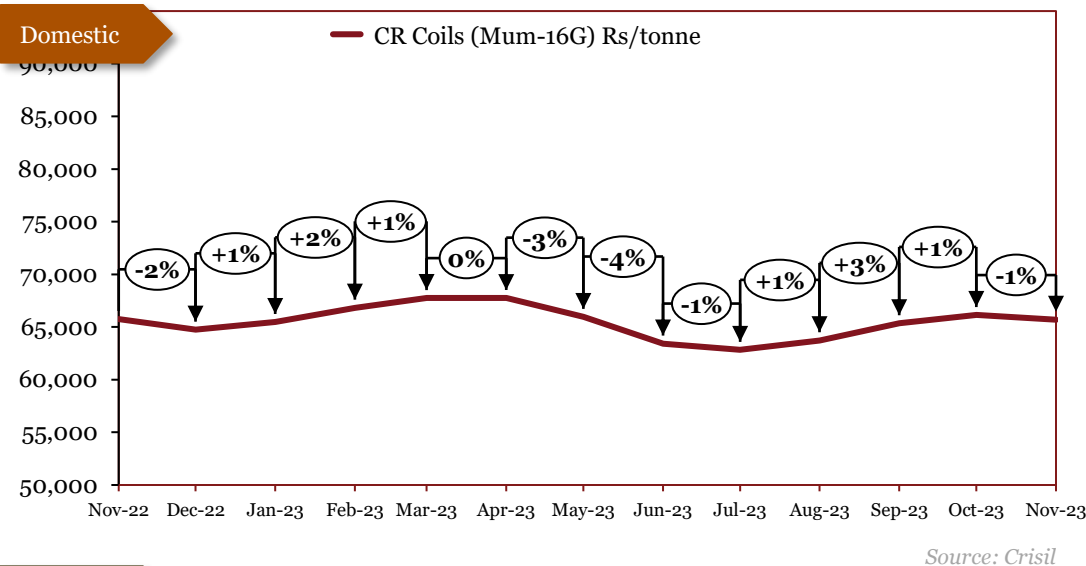
Outlook

In June, prices decreased as demand continued to be subdued as customers across sectors resorted to 'wait-and-watch' or 'need-based buying' along with a decrease in coking coal prices. In July, the prices remained relatively stable. In August, international prices dropped due decrease in prices of raw materials, lack of demand, and overall negative macroeconomic conditions. Domestic prices remained relatively stable. In September, international prices remained stable. Domestic prices increased due to strong demands from the construction and kitchen appliances industries. In October prices remained relatively stable. In November, international prices remained relatively stable. Domestic prices were reduced due to a decreased demand from the construction sector in Northern India as a result of a halt on construction activity due to pollution as part of the govt's graded action plan.

Cold-Rolled (CR) Coils



Monthly Average Prices		
Period	*Int'l (\$/tonne)	^*Dom (Rs/tonne)
Nov-22	640	65750
Dec-22	670	64750
Jan-23	738	65475
Feb-23	806	66825
Mar-23	867	67750
Apr-23	793	67750
May-23	726	65950
Jun-23	695	63425
Jul-23	683	62825
Aug-23	658	63725
Sep-23	664	65350
Oct-23	670	66150
Nov-23	664	65700



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

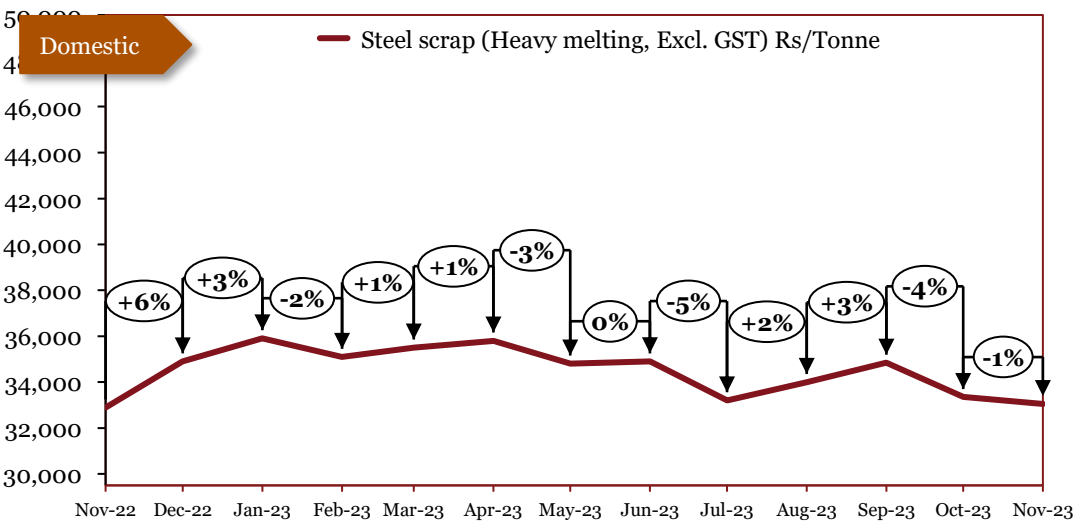
Outlook

In May, domestic prices decreased in tandem with iron ore and coking coal prices. International prices decreased. International prices decreased amid uncertainty and market concerns about the macroeconomic prospects. In June, domestic prices fell on account of the monsoon which weakened construction activities, Indian steel mills witnessed a demand slowdown and a fall in coking coal prices. International prices decreased due to a lack of demand, negative market sentiment influenced by the uncertainty of the Chinese market, and negative macroeconomic factors. In July, the prices continued to drop carrying the momentum from previous months due to slowing global demand. Domestic prices dropped due to cheap imports and softer input costs. In August, international prices decreased due drop in prices of raw materials, lack of demand, and overall negative macroeconomic conditions. Domestic prices remained relatively stable. In September, international prices remained stable. Domestic prices increased due to an increase in prices of raw materials like chromium and pig iron. In addition to this, heavy demand from domestic industrial and kitchen appliance manufacturers impacted the price. In October, prices remained relatively stable. In November, prices remained relatively stable.

Steel Scrap (Heavy Melting)

Monthly Average Prices

Period	*Dom (Rs/Tonne)
Nov-22	32900
Dec-22	34900
Jan-23	35900
Feb-23	35100
Mar-23	35500
Apr-23	35800
May-23	34800
Jun-23	34900
Jul-23	33200
Aug-23	34000
Sep-23	34850
Oct-23	33350
Nov-23	33050



Source: CRISIL

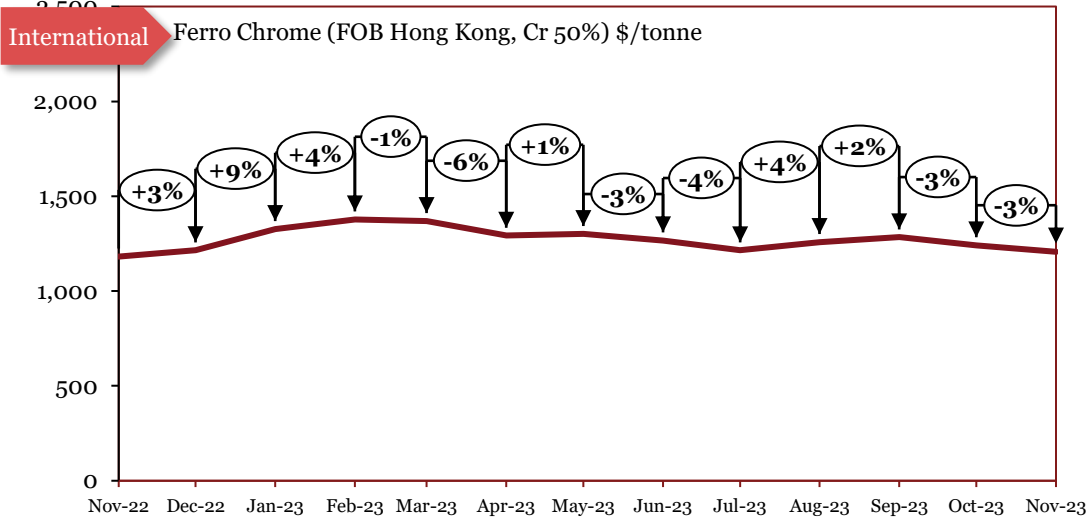
*The actual prices may vary depending on city, player, grade etc.

Outlook

In December and January, prices increased due to low availability during the winter period, as adverse weather conditions slowed down the collection and processing of scrap. In February, prices decreased due to the consequences of the Turkey-Syria earthquake. In March, prices increased due to inclement weather, low inventories, a reported shortage of prime steel scrap substitute DRI, and rising finished steel prices. In April, prices increased slightly due to tight supply caused due to supply chain issues in Turkey. In May, prices decreased due to a decrease in steel prices and declining import offers. In June, prices remained relatively stable. In July, prices fell due to higher VAT and excise duty on fuel in Turkey coupled with reduced demand due to the global economic slowdown. In August, prices increased due to an increase in the price of coking coal. In September, prices increased due to an increase in prices of iron ore and coking coal. In October, prices decreased due to slower offtake in finished steel amid sufficient restocking earlier amid the festive season, a decrease in prices of competing raw materials like sponge and billets affecting market sentiments and the import of cheaper melting scrap from Europe. In November, prices remained relatively stable.

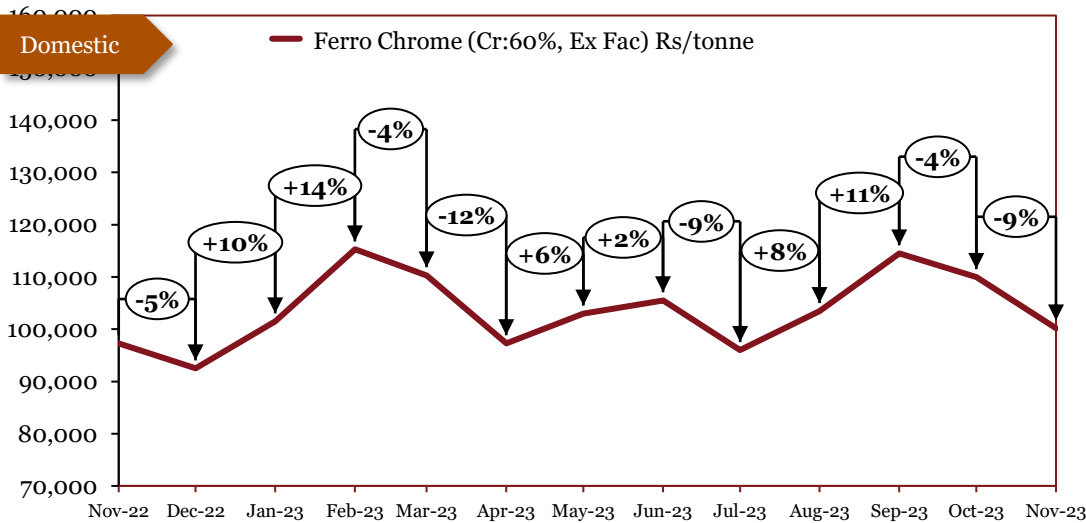
Ferro-alloys

Ferro chrome



Source: Crisil

Monthly Average Prices		
Period	*Int'l (\$/tonne)	*Dom (Rs/tonne)
Nov-22	1181	97300
Dec-22	1216	92500
Jan-23	1327	101500
Feb-23	1378	115300
Mar-23	1370	110300
Apr-23	1293	97300
May-23	1301	103000
Jun-23	1267	105500
Jul-23	1216	96000
Aug-23	1258	103500
Sep-23	1284	114500
Oct-23	1241	110000
Nov-23	1207	100150



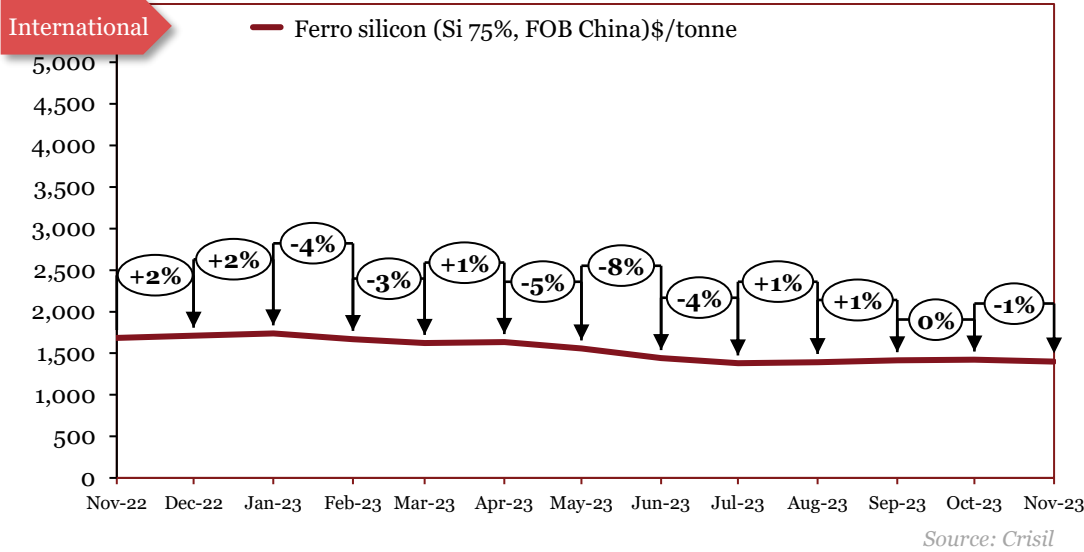
Source: Crisil

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

Outlook

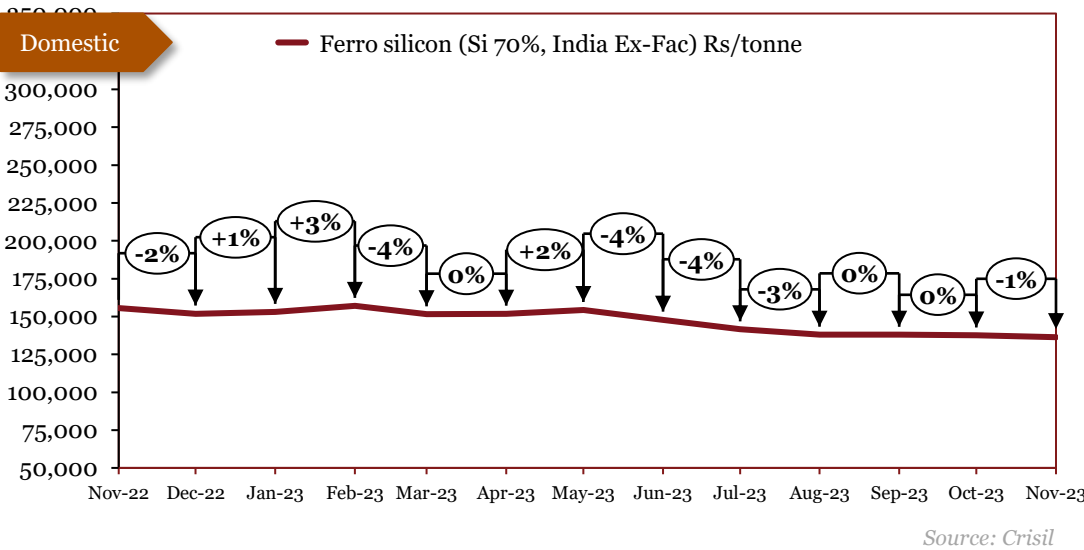
In May, prices increased due to scarce availability and high demand. In June, international prices decreased in tandem with coking coal prices. Domestic prices increased due to high electricity costs. In July, prices dropped due to uncertainty over steel production in China, a drop in prices of raw materials, and sluggish demands from the end consumer. In August the prices increased due to the launch of a new round of chrome ore futures transactions and strong demand from south China steel plants. In September, International prices increased due to sharp increase in prices of raw materials, increase in price of coking coal, and strong demand from Chinese steel manufacturers. Domestic prices increased due to market anticipation of an increase in prices due to elevated premiums in OMC's chrome ore auction and FACOR's lumps auction after more than a month-long gap. In October, prices decreased owing to reduced demand both globally and domestically, caused by a fall in stainless steel production. In November, international prices fell in tandem with decreased raw material prices. Domestic prices declined due to restricted demand from the stainless steel sector.

Ferro silicon



Monthly Average Prices

Period	*Int'l (\$/tonne)	*Dom (Rs/tonne)
Nov-22	1684	155650
Dec-22	1711	151850
Jan-23	1739	153050
Feb-23	1670	157050
Mar-23	1622	151550
Apr-23	1635	151850
May-23	1559	154350
Jun-23	1442	147850
Jul-23	1380	141650
Aug-23	1394	138000
Sep-23	1415	138000
Oct-23	1421	137650
Nov-23	1401	136400

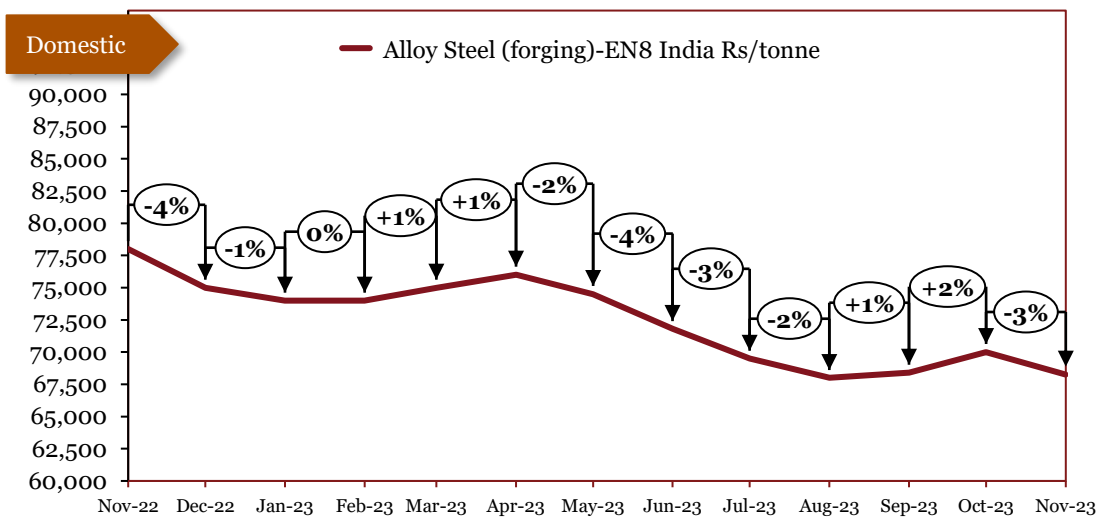


*The actual prices may vary depending on city, player, grade etc.

Outlook

In February, domestic prices inched up in anticipation of material shortage due to restrictions on imported material from sellers who did not have a BIS certificate. International prices decreased amidst fears of recession. In March, prices decreased due to sluggish demand and oversupply at the producers. In April, prices rose due to an increased supply crunch in the domestic (labor issue in Bhutan) and global markets (power curtailment in the Ningxia region of China). In May, international prices fell in tandem with iron ore and coking coal prices. Domestic prices increased due to low production caused by power outages in northeast India, a major production center. In June, prices dropped on account of higher supplies, and sluggish steel demand amid intense bargaining in the market and low coking coal prices. In July, prices dropped due to uncertainty over steel production in China, reduced prices of raw materials, and sluggish demands from the end consumers. In August, international prices remained relatively stable. Domestic prices decreased because of low demand, and delay in price announcement from Bhutan which created uncertainty in the market. In September, prices remained relatively stable. In October, prices remained relatively stable. In November, prices remained relatively stable.

EN8 Alloy Steel (Forging)



Source: SIAM

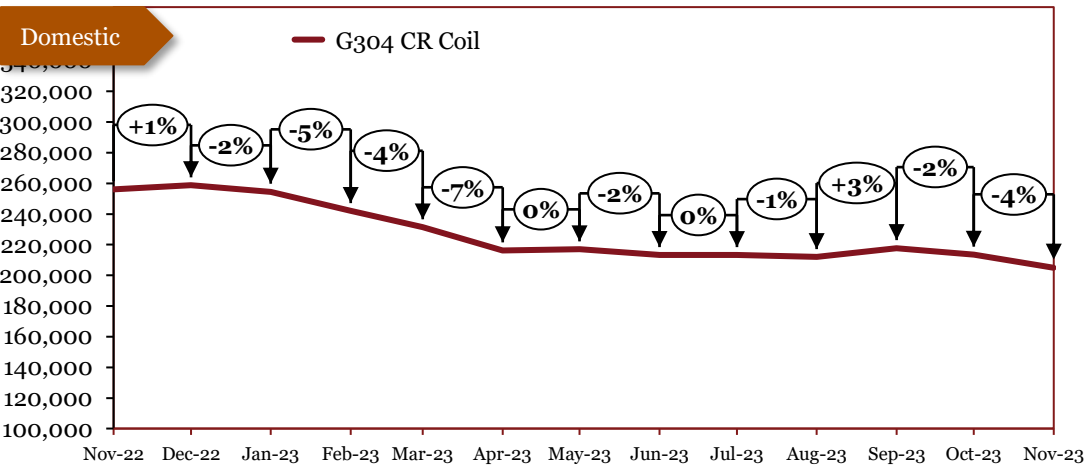
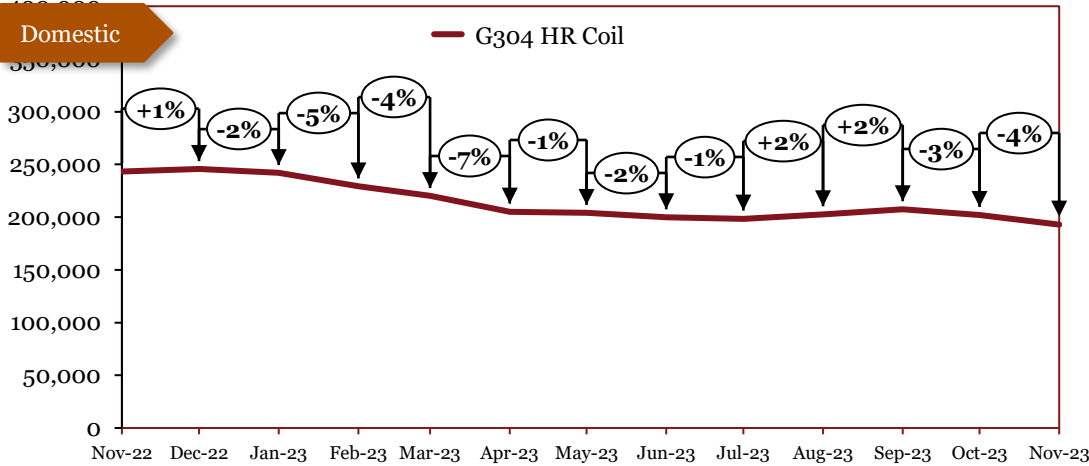
Monthly Average Prices	
Period	*Dom (Rs/tonne)
Nov-22	78000
Dec-22	75000
Jan-23	74000
Feb-23	74000
Mar-23	75000
Apr-23	76000
May-23	74500
Jun-23	71800
Jul-23	69500
Aug-23	68000
Sep-23	68400
Oct-23	70000
Nov-23	68250

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

Outlook

In August, prices fell slightly owing to price cuts by steel mills, along with a fall in demand from the automotive industry. In September, prices remained stable. In October, prices remained stable. In November, prices fell due to concerns over an impending global recession and geo-political unrest, leading to a decline in demand and a downturn in the metal cycle. In December, prices fell due to the higher availability of stocks caused by a slowdown in export markets and global recessionary pressures. In January, prices decreased in tandem with stainless steel prices. In February, prices remained stable. In March, prices rose in tandem with elevated raw material and energy costs. In April, prices increased slightly due to a positive market outlook. In May, prices decreased in tandem with coking coal prices. In June and July, prices decreased as Chinese steel mills continued dumping alloy steel into Indian markets due to a shortage of customers in China leading to oversupply. In August, prices decreased due to the decrease in the price of raw materials. In September, prices remained relatively stable. In October, prices increased as a result of higher demand for EN8 in the production of automotive axles. In November, prices decreased due to reduced prices of raw materials (silicon).

Stainless Steel



Source: SIAM

Monthly Domestic Average Prices		
Period	*G304 HR (Rs/tonne)	*G304 CR (Rs/tonne)
Nov-22	243400	256000
Dec-22	245750	258750
Jan-23	242000	254500
Feb-23	229375	242000
Mar-23	220200	231400
Apr-23	205188	216250
May-23	204000	217000
Jun-23	200000	213250
Jul-23	198500	213250
Aug-23	202625	212000
Sep-23	207375	217750
Oct-23	202000	213500
Nov-23	193000	205000

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

Outlook

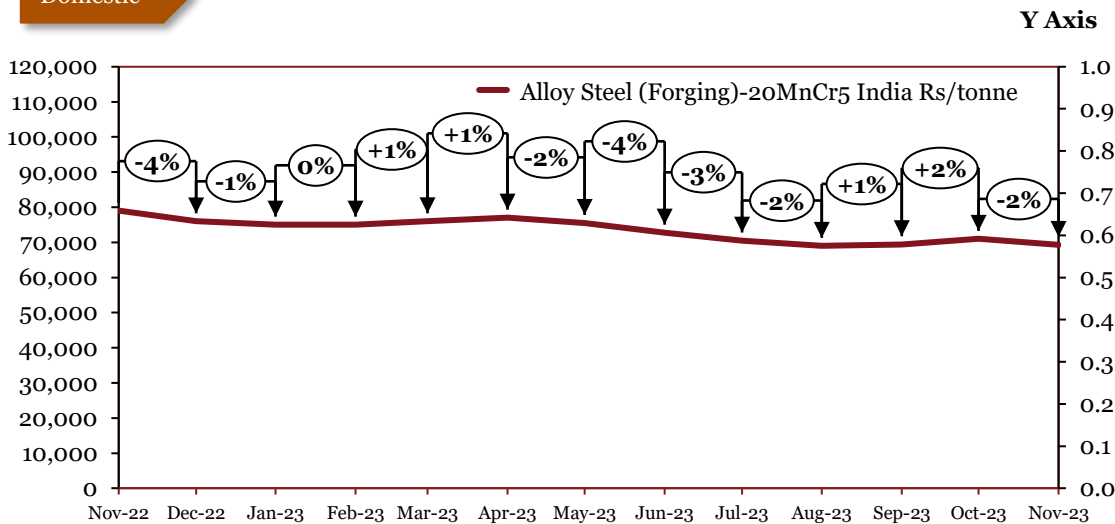
In February and March, prices dropped sharply due to weak demand amid fears of recession and a high level of inventory at the producers. In April and May, prices decreased due to a drop in raw material prices, rising stock levels, higher interest rates impeding downstream construction & automotive sector, and fears of recession. In June, prices fell due to sluggish demand in the traders' market amid need-based procurement, low demand from end consumers due to inflation, and high energy prices. In July, prices remained relatively stable as demand decreased in Asian markets, so did the supply from European markets. In August, HR coil prices increased due to higher demand, especially from the construction industry. CR coil prices remained relatively stable as demand decreased in Asian markets, so did the supply from European markets. In September, prices increased due to an increase in prices of raw materials and an increased demand from the construction sector. In October, prices decreased owing to a multitude of factors, such as reduced construction in northern India due to pollution, elections in various states impacting the liquidity of the market, and the festive season. In November, prices fell due to reduced demand from the construction and infrastructure sector amidst winter in the northern hemisphere and due to ample supply of raw materials (Nickel) leading to decreased prices.

20MnCr5 Alloy Steel (Forging)

Monthly Average Prices

Period	*Dom (Rs/tonne)
Nov-22	79000
Dec-22	76000
Jan-23	75000
Feb-23	75000
Mar-23	76000
Apr-23	77000
May-23	75500
Jun-23	72800
Jul-23	70500
Aug-23	69000
Sep-23	69400
Oct-23	71000
Nov-23	69250

Domestic



Source: SIAM

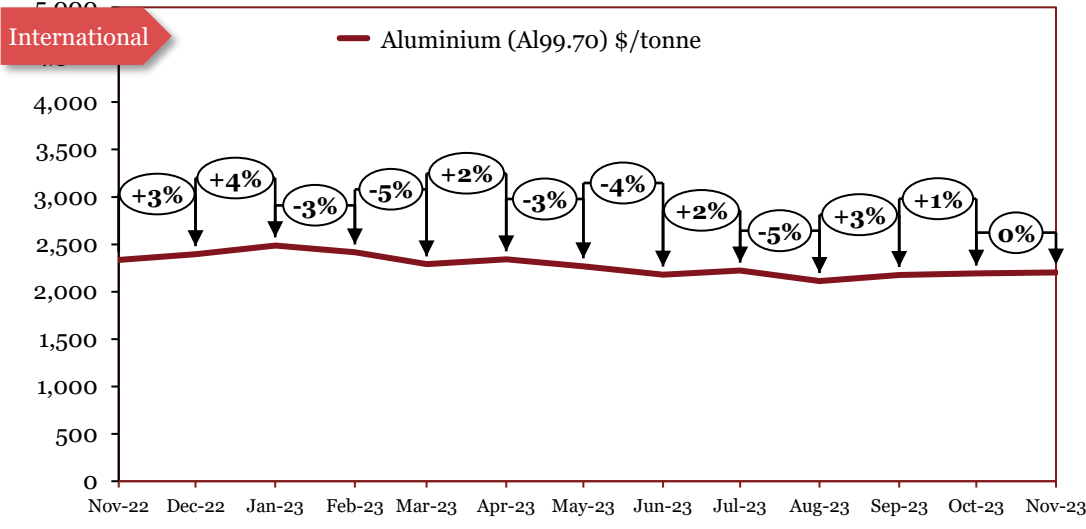
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Outlook

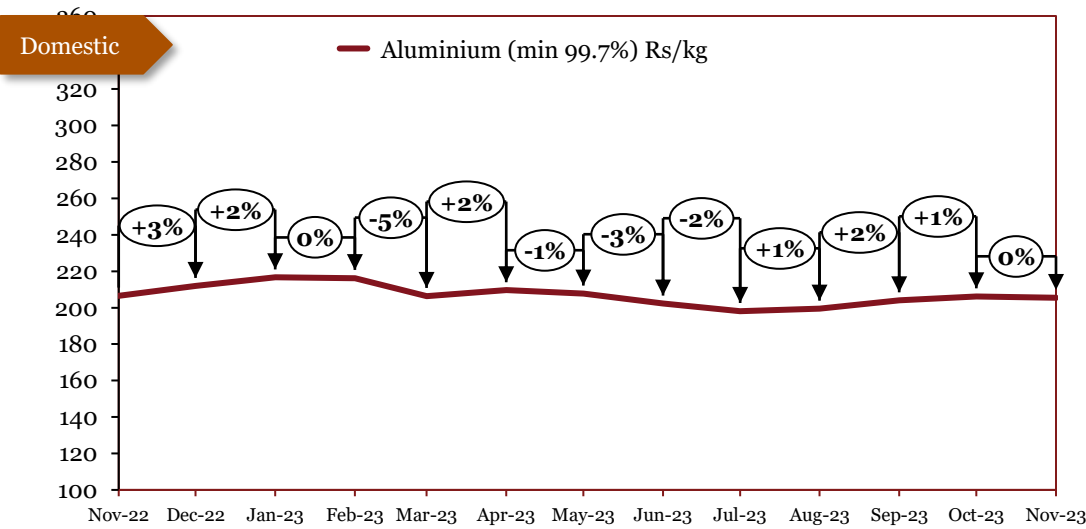
In October, prices remained stable. In November, prices fell due to subdued overseas demand - particularly in China which is a major consumer of stainless steel - and concerns over a global recession. In December, prices declined due to a slowdown in export markets amid global recessionary pressures. In December and January, prices declined due to a slowdown in export markets amid global recessionary pressures. In February, prices remained stable. In March and April, prices rose in tandem with production costs- higher energy and steel scrap prices. In May, prices decreased in tandem with steel scrap and coking coal prices. In June, prices continue to spiral down, primarily driven by the demand weakness in China and falling coking coal prices. In July, prices fell due to consecutive downward corrections driven by high input costs, particularly expensive coal, and iron ore supplied by Odisha Mineral Corporation. In August, prices decreased due to reduced demand from the automotive industry and a decrease in the price of raw materials. In September prices remained relatively stable. In October, prices increased due to an increase in the production of pistons, boxes, spindles, gears, and camshafts for 3-wheelers. In November, prices decreased as the prices of raw materials like ferro chrome and ferro manganese fell.

Base Metals

Aluminium



Source: LME



Source: MCX*

*Source updated in July 2019

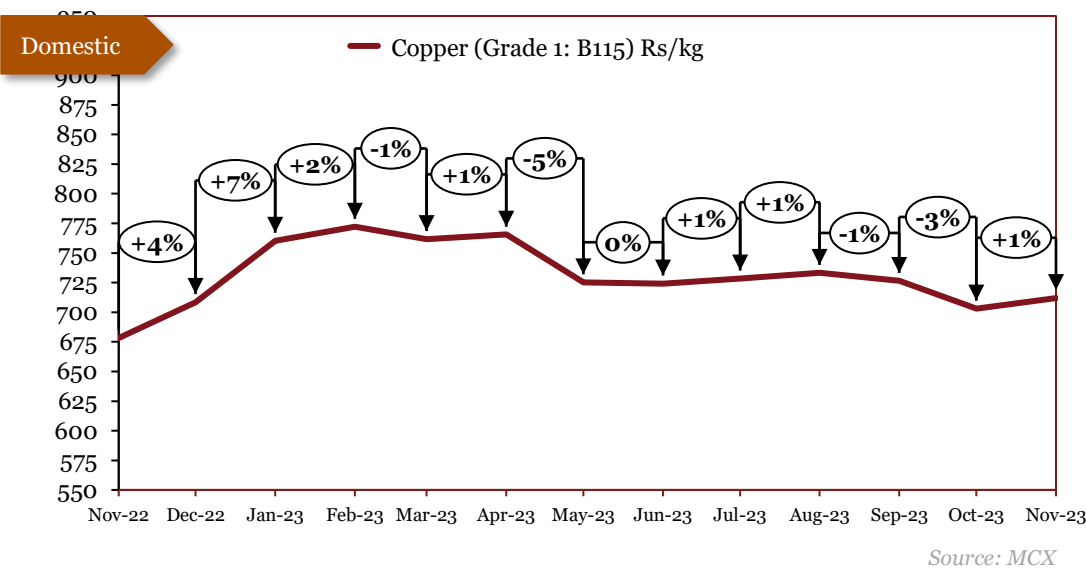
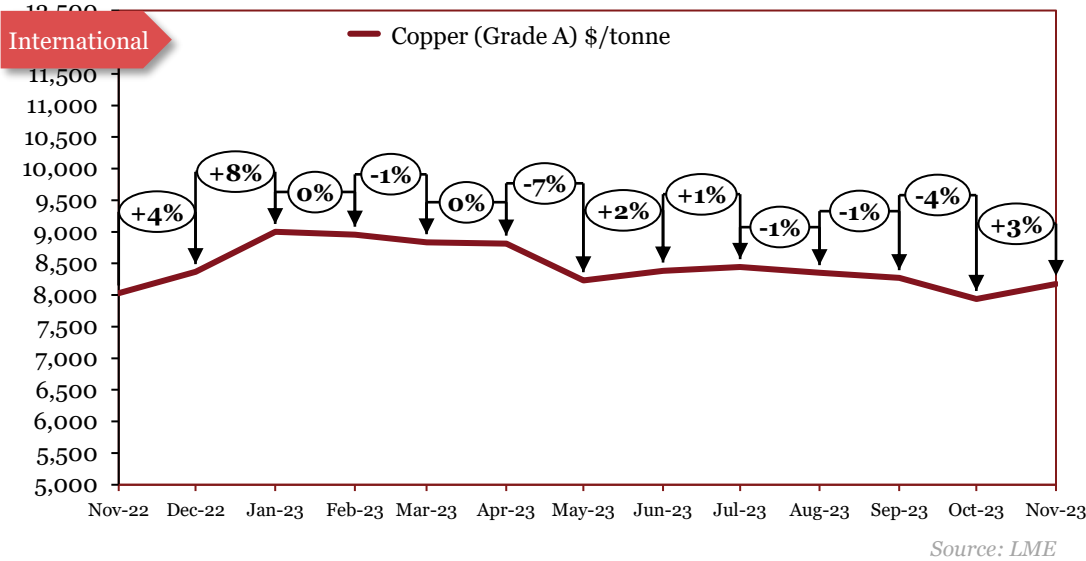
Monthly Average Prices		
Period	*Int'l (\$/tonne)	*Dom (Rs/kg)
Nov-22	2335	207
Dec-22	2394	212
Jan-23	2489	217
Feb-23	2417	216
Mar-23	2290	206
Apr-23	2341	210
May-23	2267	208
Jun-23	2181	202
Jul-23	2224	198
Aug-23	2114	199
Sep-23	2177	204
Oct-23	2192	206
Nov-23	2202	205

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

Outlook

In March, prices continued to fall due to slack demand, increasing stock inventories, and recessionary trends. In April, prices increased because of spurred consumption due to a lower US Dollar and power cuts in China affecting Aluminium smelters. In May, domestic prices remained relatively stable. International prices decreased as output increased and inventories rose amid tepid demand for the metal used in the auto, packaging, and construction sectors. In June, prices decreased as demand from some end-user sectors like construction remained tepid amid the ongoing high-inflation environment and poor economic conditions in Europe and Germany entering into a recession. In July, international prices increased due to high demand caused by the stimulus pay in China. Domestic prices continued the downward trend due to reduced demand in the local markets. In August international prices decreased due to decreased demand, increased supply of cheaper Chinese goods and a surplus of Russian metal due to self-sanctions by US and European entities. In September, prices increased as US dollar index eases on the Aluminium market, property supportive policies in China and lack of inventories. In October, prices remained relatively stable. In November, prices remained relatively stable.

Copper



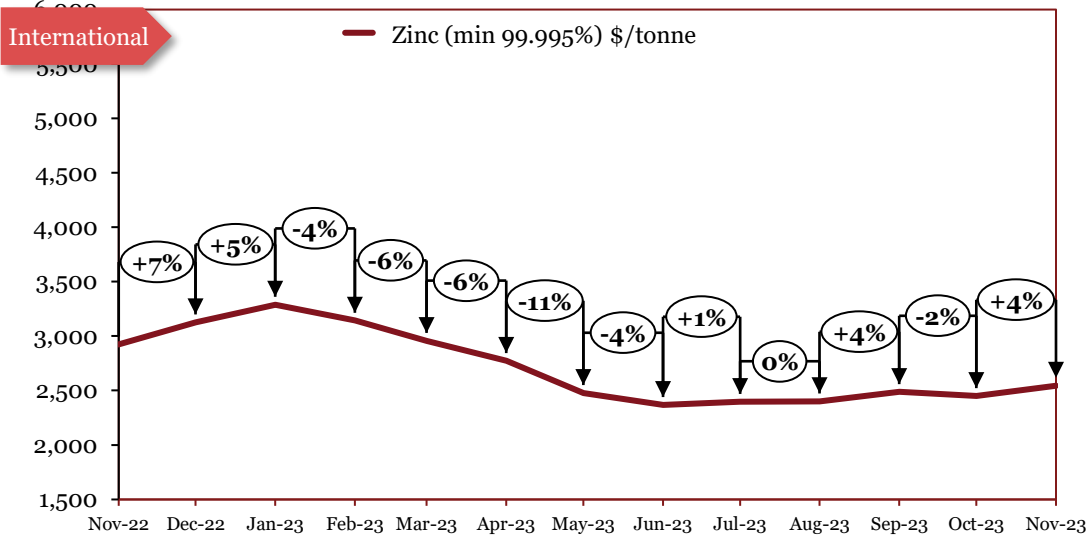
Monthly Average Prices		
Period	*Int'l (\$/tonne)	*Dom (Rs/kg)
Nov-22	8029	678
Dec-22	8367	709
Jan-23	8999	760
Feb-23	8954	772
Mar-23	8835	762
Apr-23	8813	766
May-23	8234	725
Jun-23	8386	724
Jul-23	8445	728
Aug-23	8351	733
Sep-23	8270	726
Oct-23	7939	703
Nov-23	8173	712

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

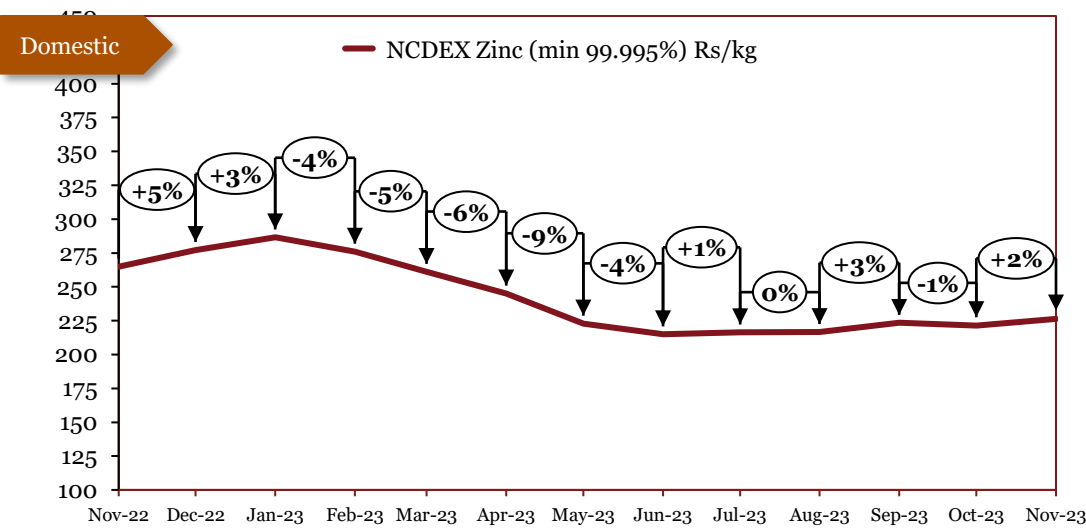
Outlook

In March, international prices decreased due to inflation in the US in a downward trend, with market players betting on the US Fed to slow down interest rate hikes and weak supply. In April, international prices continued a downward trend due to weak global demand caused by rising interest rates, high inventories, and a global slowdown. Domestic prices remained relatively stable. In May, prices continued a downward trend due to contracting manufacturing activity and slumping industrial profits in China. In June, international prices rose supported by a vote of approval from the U.S. House of Representatives to suspend the debt ceiling and improvement in the fundamentals of copper as an EV green energy metal. Domestic prices remained stable. In July, the prices gained upward momentum due to increased demand among Chinese consumers. In August, prices remained relatively stable. In September, prices remained relatively stable. In October prices continued to fall amidst concerns over lower demand and high inventories piling up. In November, prices rose on the back of expectation of interest rates cut moving forward leading to increased economic activity.

Zinc



Source: LME



Source: MCX*

Monthly Average Prices		
Period	*Int'l	*Dom
	(\$/tonne)	(Rs/kg)
Nov-22	2923	265
Dec-22	3128	277
Jan-23	3289	287
Feb-23	3143	276
Mar-23	2956	261
Apr-23	2772	245
May-23	2477	223
Jun-23	2368	215
Jul-23	2396	216
Aug-23	2400	217
Sep-23	2488	223
Oct-23	2449	221
Nov-23	2543	226

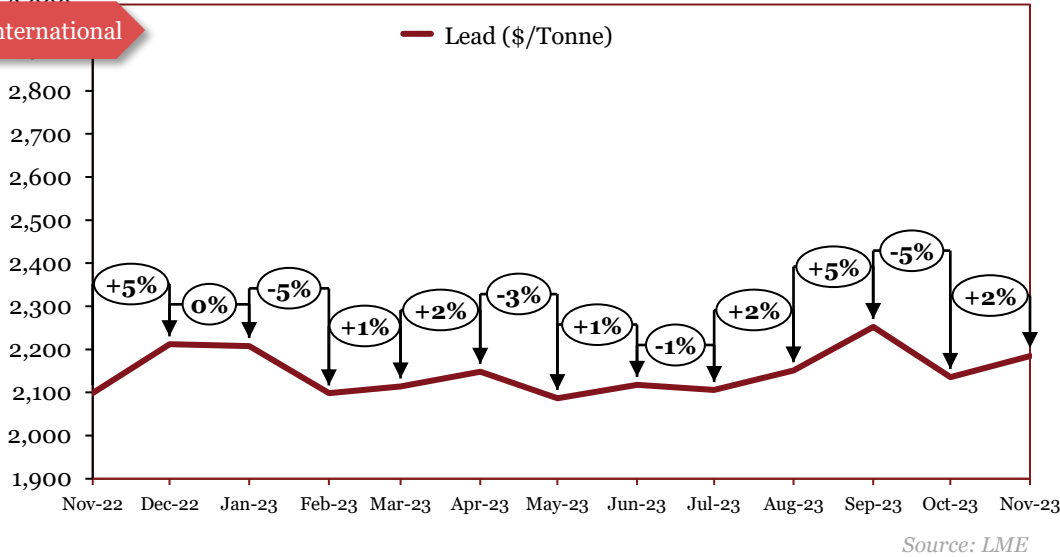
*The actual prices may vary depending on city, player, grade etc.

Outlook

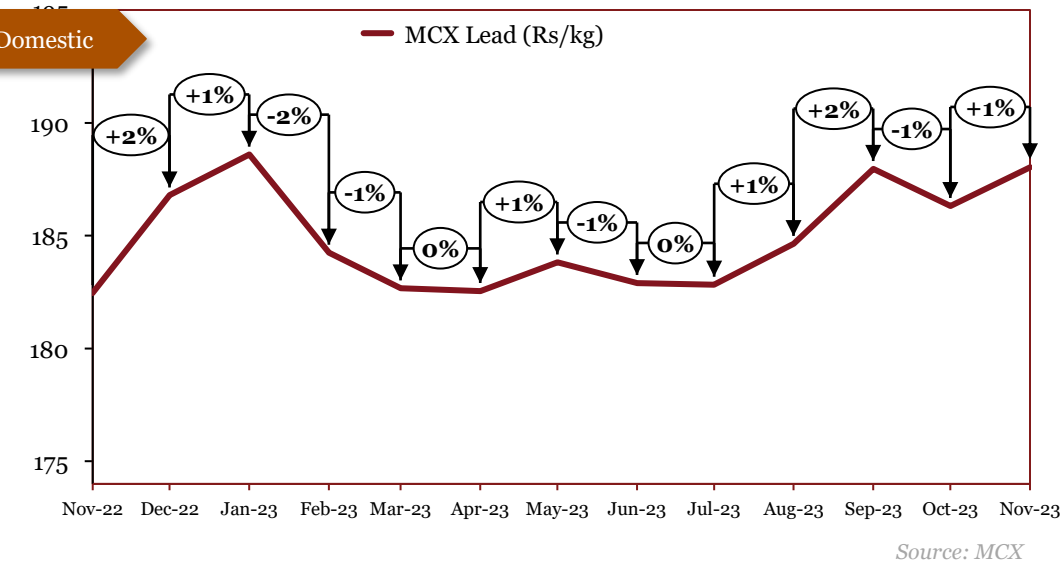
In January, prices increased due to higher costs of production as coal prices rose. In February prices tumbled due to the potential for a significant supply recovery and a return to zinc surplus after two years of shortfall. In March, prices fell as a result of continuing concerns about global economic growth, lack of momentum from China, weak manufacturing activity in the USA, and a stronger dollar. In April, prices plummeted due to the flagging global economy, vulnerable US banking sector, and higher inventory levels, and resumed operations in France's smelters. In May, prices fell due to interest rate hikes, dollar strength, an increase in smelter supply, and a weaker-than-expected economic recovery in China -- biggest consumer of zinc. In June, prices declined due to weak demand, coupled with an increase in smelter and sluggishness in the steel sector, which impacted the demand for galvanizing. In July, prices remained relatively stable. In August, prices remained relatively stable. In September, prices increased due to increased demands from construction and infrastructure sector, especially in China, the largest producer of Zinc. In October, prices decreased slightly amidst increasing supply globally. In November, prices rose amidst tightening global supply.

Lead

International



Domestic



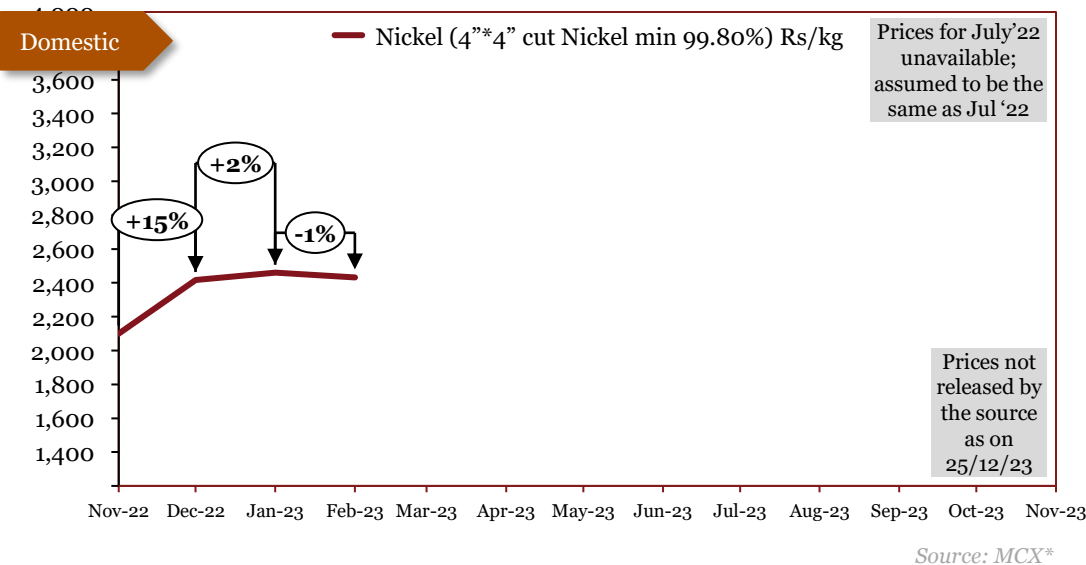
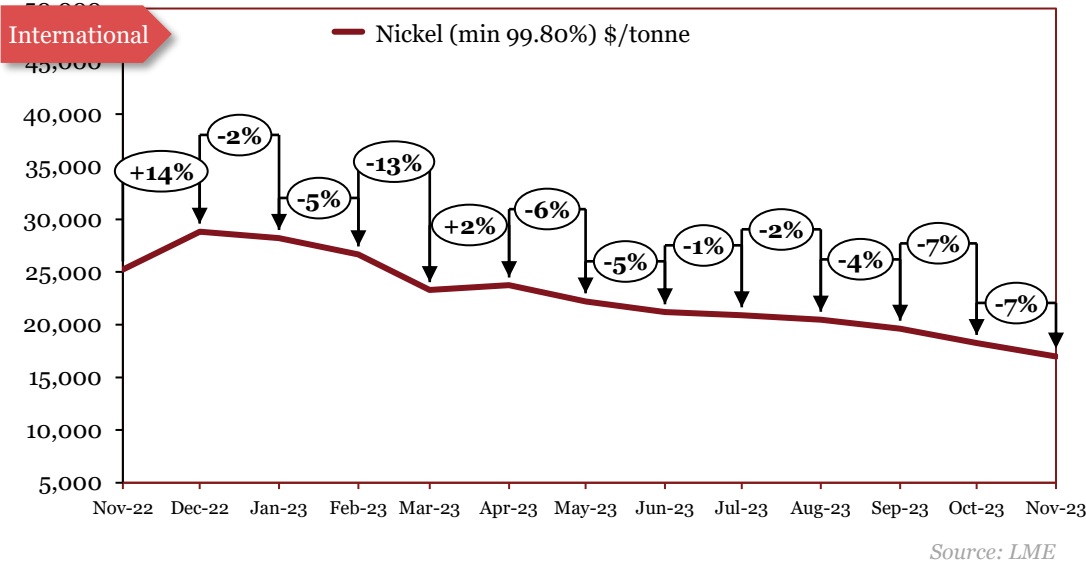
Period	*Int'l (\$/tonne)	*Dom (Rs/kg)
Nov-22	2099	182
Dec-22	2212	187
Jan-23	2208	189
Feb-23	2098	184
Mar-23	2114	183
Apr-23	2148	183
May-23	2087	184
Jun-23	2118	183
Jul-23	2106	183
Aug-23	2151	185
Sep-23	2252	188
Oct-23	2136	186
Nov-23	2185	188

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

Outlook

Domestic prices remained relatively stable. In April, international prices increased due to supply chain disruptions as Russia- the world's seventh-largest producer of lead launched a fresh offensive against Ukraine. Domestic prices remained relatively stable. In May, international prices continued a downward trend due to slower global activity, low growth in China's property sector due to high debt levels, and only services-oriented recovery in China. Domestic prices remained stable. In June, international prices increased as the peak lead acid car battery replacement season of summer commenced coupled with high demand from the EV industry. Domestic prices remained relatively stable. In July, prices remained relatively stable. In August, prices increased due to shortage of supply which is caused by shortage of battery scrap. In September, prices increased due to a global shortage of supply caused by reduced Chinese exports and ongoing mine disruptions, especially the Penasquito strike in Mexico. In October, International prices decreased due to reduced demands from EV battery manufacturers, as a result of a tentative geopolitical outlook. Domestic prices remained relatively stable. In November, prices increased due to increased demand from lead acid battery manufacturers.

Nickel



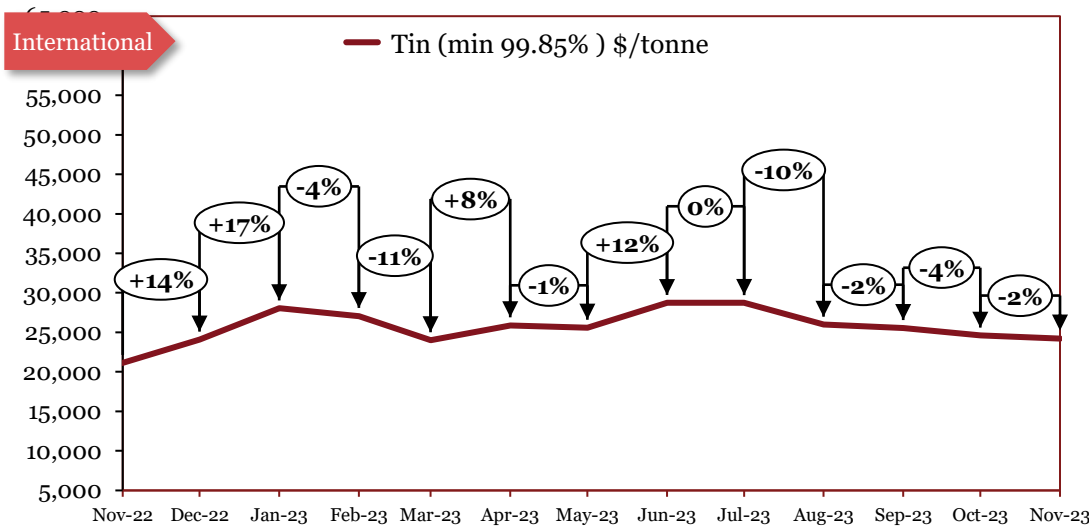
Monthly Average Prices		
Period	*Int'l (\$/tonne)	*Dom (Rs/kg)
Nov-22	25246	2100
Dec-22	28838	2418
Jan-23	28226	2460
Feb-23	26679	2433
Mar-23	23289	
Apr-23	23749	
May-23	22215	
Jun-23	21184	
Jul-23	20890	
Aug-23	20484	
Sep-23	19621	
Oct-23	18249	
Nov-23	16974	

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

Outlook

In January, international prices decreased due to macroeconomic headwinds and a surplus of inventory. Domestic prices increased due to a surge in demand from the EV industry. In February, prices tumbled on expectations of easing supply tightness. In March, international prices fell due to concerns about the impact of Tsingshan's planned production switch. In April, international prices increased as the US dollar index weakened, and low inventory levels of refined nickel. In May, International prices decreased after the release of disappointing trade data from top industrial metals consumer China. In June, international prices continued a downward trend as global production volumes rose while the market remained in surplus. In July, international domestic prices continued a downward trend due to subdued demand in major economies and increased Indonesian supply. In August, prices decreased due to underwhelming stimulus measures from China. In September, prices decreased due to excess supply from Australia and Indonesia. In October, prices fell sharply due to reduced demand from stainless steel manufacturers. In November, prices continued the downward spiral due to increased supply from Indonesia and weakening demand from stainless steel sector.

Tin



Source: LME

Monthly Average Prices	
Period	*Int'l (\$/tonne)
Nov-22	21114
Dec-22	24075
Jan-23	28058
Feb-23	27047
Mar-23	23997
Apr-23	25866
May-23	25586
Jun-23	28728
Jul-23	28728
Aug-23	25975
Sep-23	25540
Oct-23	24597
Nov-23	24204

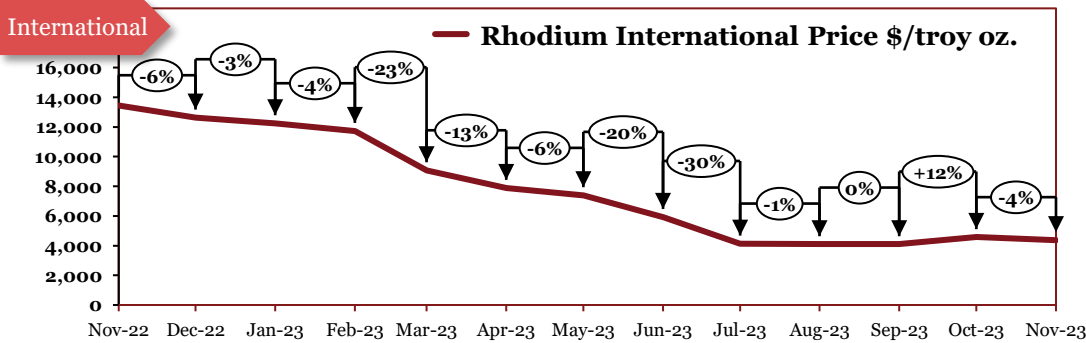
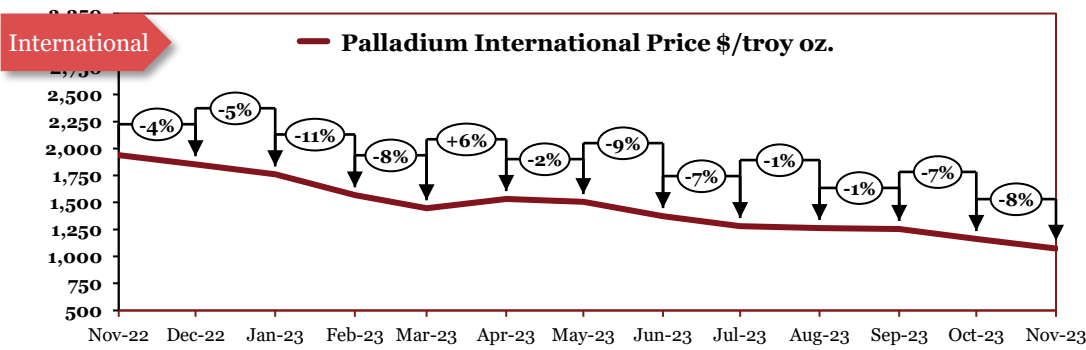
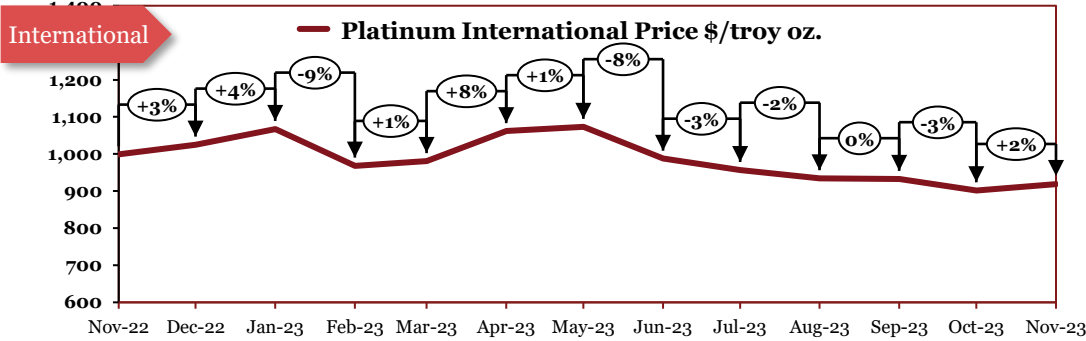
*The actual prices may vary depending on city, player, grade etc.

Outlook

In February, prices decreased as the global economy continues to slow and major economies fall into recession. In March, prices fell as the global demand outlook fell substantially on weakening macroeconomic fundamentals, a strengthening US dollar, and still high levels of global inflation. In April, prices increased as tin mining was suspended in Myanmar- the world's third-largest tin producer. In May, prices fell as the global demand outlook fell substantially on weakening macroeconomic fundamentals. In June, prices increased because of a looming supply crunch in the global tin market as Myanmar, the world's third-largest tin producer announced a suspension of tin mining activities, and Indonesia, the world's largest exporter of tin, announced a proposed ban on the exports of tin ingots. In July, the prices remained stable. In August, prices decreased in August primarily due to rising inventories and reduced demand from the electronics industry. In September, prices decreased due to reduced demand from Semiconductor industry amidst tentative geopolitical outlook. In October, prices decreased owing to reduced demand – as the production of steel declined so did the demand for tin in steel coating. In November, prices decreased due to adequate supply and subdued demand.

Precious Metals

Precious Metals



Source: Johnson Matthey

Monthly Average Prices (\$/Oz)			
Period	Pt	Pd	Rh
Nov-22	999	1940	13450
Dec-22	1025	1854	12626
Jan-23	1067	1761	12246
Feb-23	968	1567	11730
Mar-23	981	1447	9070
Apr-23	1062	1532	7881
May-23	1073	1505	7383
Jun-23	987	1374	5924
Jul-23	957	1282	4124
Aug-23	935	1263	4100
Sep-23	933	1253	4100
Oct-23	902	1161	4578
Nov-23	919	1071	4378

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

Outlook

In July, Platinum prices dropped due to reduced demand as automakers are producing fewer catalytic converters. Palladium continued to drop with momentum caused by negative macroeconomic factors. Rhodium plummeted due to a build-up of unsold China 6A emissions-compliant car stocks which are being sold before 6B-compliant cars (auto catalysts made from Rhodium) in China leading to some de-stocking from OEMs and low demand due to fears of global recession. In August Platinum prices dropped due to reduced demands from the automotive industry. Palladium and Rhodium prices remained relatively stable. In September, prices remained relatively stable. In October, Platinum and Palladium prices fell due to inhibited demand from jewellery manufacturers. Rhodium prices increased due to increased demand from the automobile sector as a result of stricter environmental regulations and advancements in the automobile industry. In November, Platinum prices increased due to increased demand from jewellery industry. Palladium prices decreased due to reduced demand from transport equipment (railway coaches, shipbuilding equipments, etc) sector. Rhodium prices decreased due to decreased demand in manufacturing of catalyst converters.

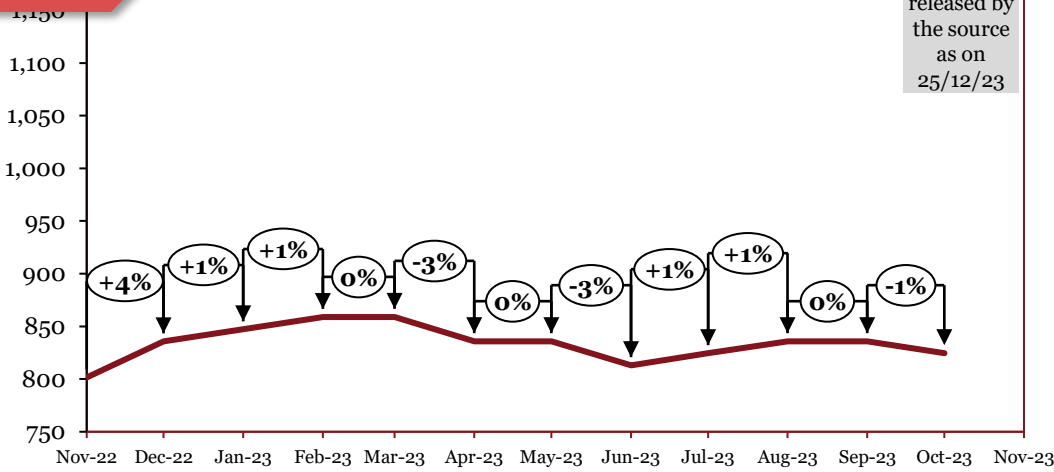
Polymers & Rubber

Low density polyethylene (LDPE)

International

— LDPE (C&F Far East Asia) \$/tonne

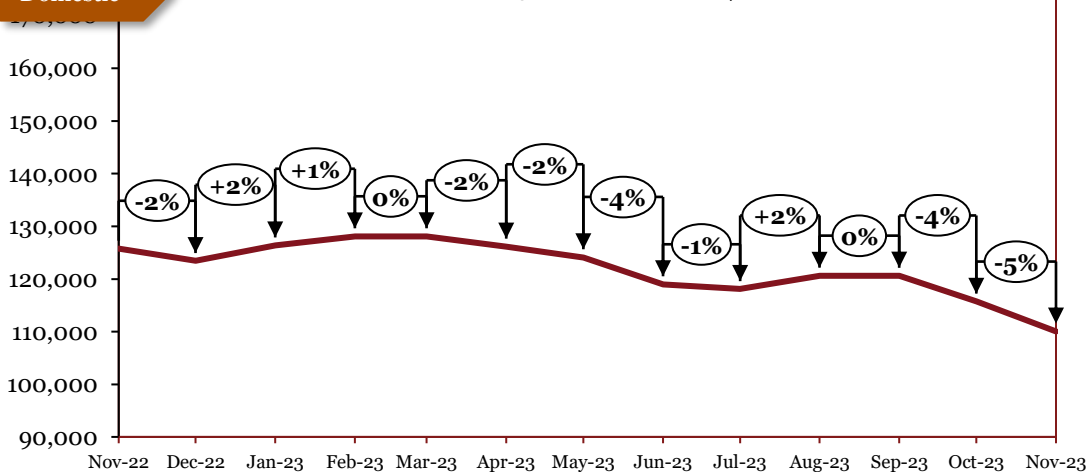
Prices not released by the source as on 25/12/23



Source: Crisil

Domestic

— LDPE (RIL 16MA400 Ex-Mumbai) Rs/tonne



Source: Reliance Industries Ltd.

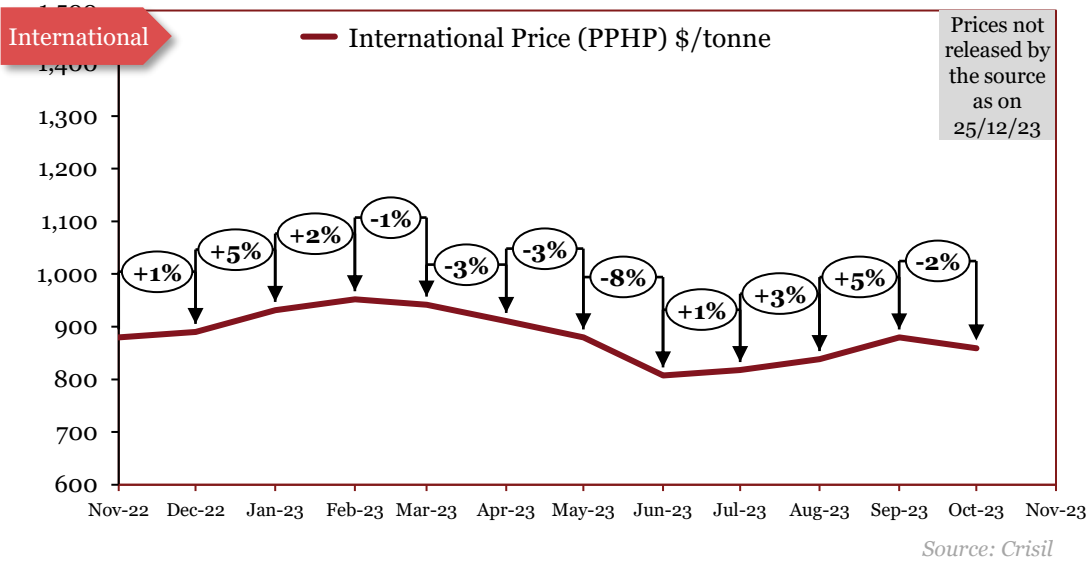
Monthly Average Prices		
Period	*Int'l (\$/tonne)	*Dom (Rs/tonne)
Nov-22	802	125758
Dec-22	836	123439
Jan-23	847	126385
Feb-23	859	128095
Mar-23	859	128095
Apr-23	836	126116
May-23	836	124084
Jun-23	813	118956
Jul-23	824	118117
Aug-23	836	120620
Sep-23	836	120625
Oct-23	824	115727
Nov-23		110030

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

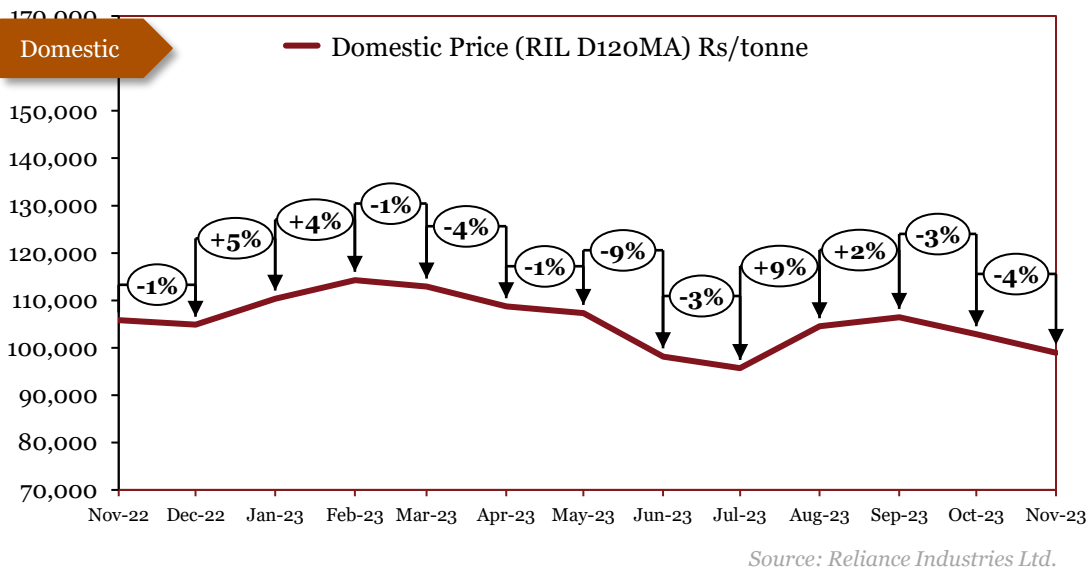
Outlook

In March, prices remained stable. In April, prices fell as the purchase pulse has been continually tepid amid ample product avails. In May, international, prices remained stable. Domestic prices fell in tandem with crude oil prices. In June, international prices continued to drop with the momentum of sluggish market demands of previous weeks which was aggravated by the European fuel crisis. Domestic prices continued to fall on the back of sluggish market sentiment and surplus product avails in the region, and lower import offers from overseas suppliers. In July, prices remained relatively stable. In August, domestic prices increased due to increased demands from plastic container manufacturing industries. International prices remained relatively stable. In September, prices remained relatively stable. In October, domestic prices decreased due to lower imports caused by sluggish market demand. In November, domestic prices decreased due to increased supply coupled with falling crude oil prices.

Polypropylene (PP)



Monthly Average Prices		
Period	*Int'l (\$/tonne)	*Dom (Rs/tonne)
Nov-22	880	105802
Dec-22	890	104896
Jan-23	932	110342
Feb-23	952	114285
Mar-23	942	112908
Apr-23	911	108733
May-23	880	107330
Jun-23	807	98166
Jul-23	818	95706
Aug-23	838	104516
Sep-23	880	106467
Oct-23	859	102850
Nov-23		98912

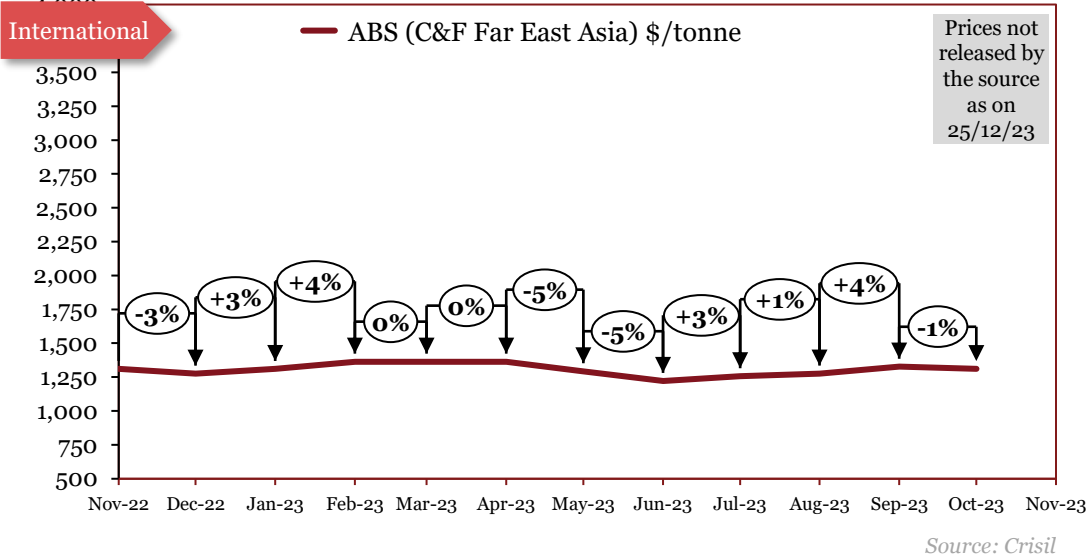


*The actual prices may vary depending on city, player, grade etc.

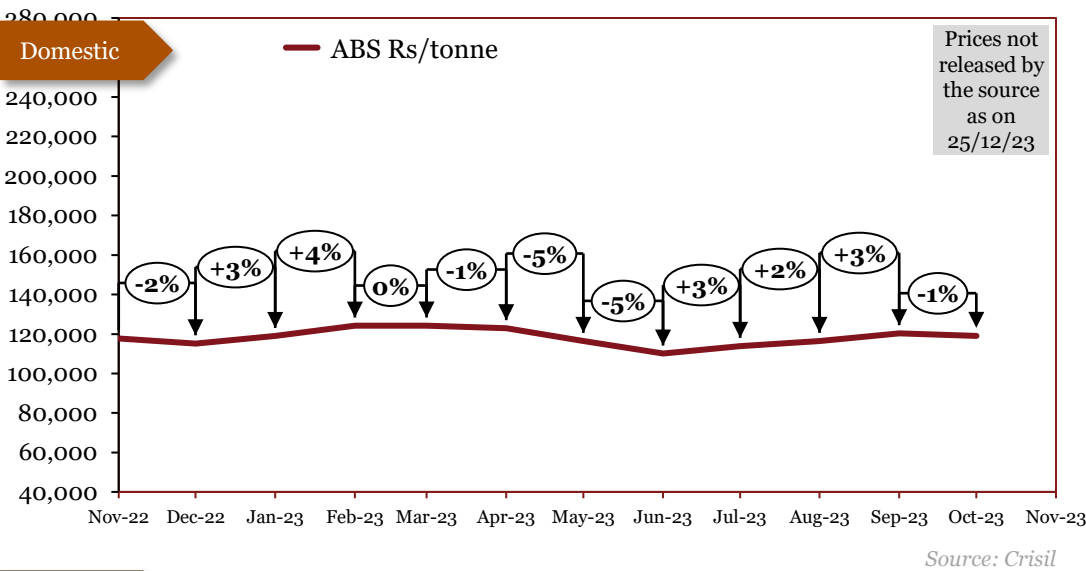
Outlook

In January, prices increased due to a significant increase in Prices for feedstock Polymer-Grade Propylene (PGP) in North America. In February, prices increased as propylene and crude oil prices increased. In March, prices fell in tandem with crude oil prices. In April, prices fell amid falling feedstock costs. In May, prices fell in tandem with crude oil prices. In June, prices declined due to persistently subdued demand sentiment coupled with surplus product avails in the region and a weak macroeconomic environment. In July, prices continued to drop as the market failed to generate demand for the surplus supply condition and a drop in feedstock prices. In August and September, prices increased due to rising demand for lightweight vehicle materials in the automotive sector. In October, prices decreased as a result of lower demand from the construction industry. In November, domestic prices continued to drop with the falling crude oil prices.

Acrylonitrile Butadiene Styrene (ABS)



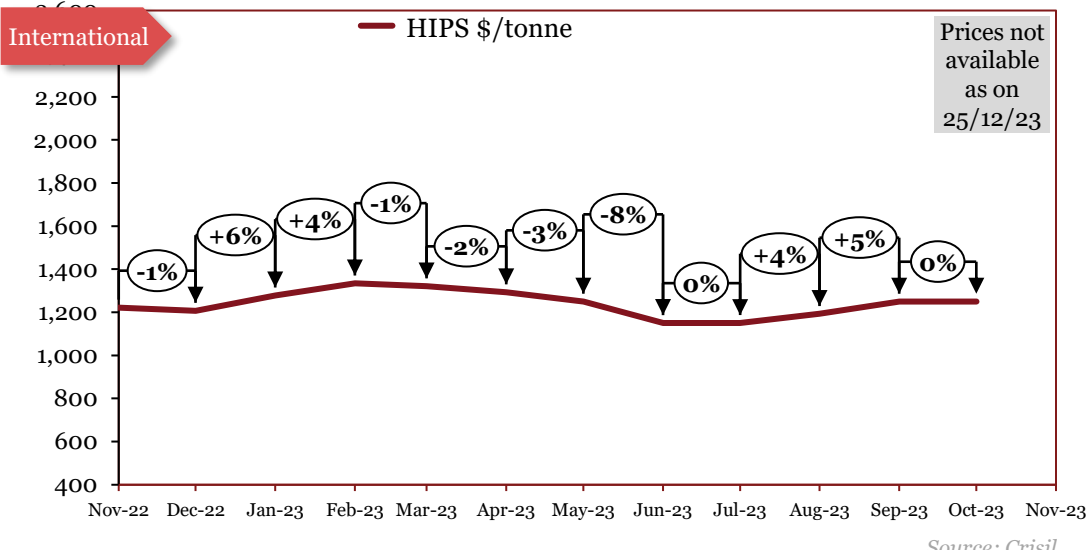
Monthly Average Prices		
Period	*Int'l (\$/tonne)	*Dom (Rs/tonne)
Nov-22	1310	117760
Dec-22	1274	115200
Jan-23	1310	119040
Feb-23	1363	124160
Mar-23	1363	124160
Apr-23	1363	122880
May-23	1292	116480
Jun-23	1221	110080
Jul-23	1257	113920
Aug-23	1274	116480
Sep-23	1328	120320
Oct-23	1310	119040
Nov-23		



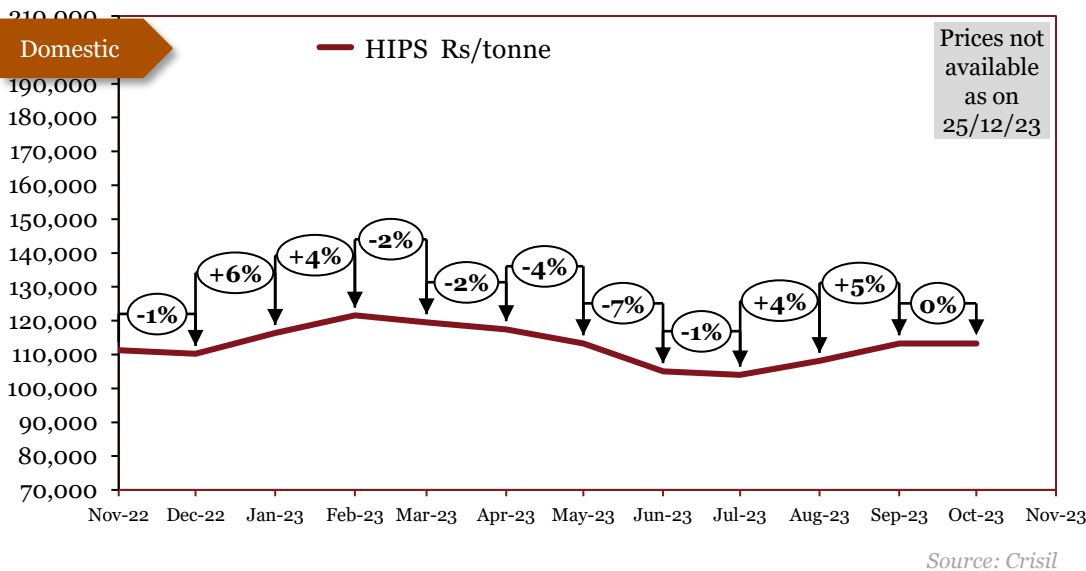
Outlook

In September, prices declined owing to a sustained fall in Styrene prices - a key raw material in the production of ABS. In October, domestic prices rose in tandem with crude oil and coal prices. In October and November, international prices fell due to price drops in the three feedstocks, i.e., Acrylonitrile, Butadiene, and Styrene. In December, prices fell sharply in tandem with crude oil prices. In January and February, prices increased due to stability in production activities, a rise in crude oil prices combined with an increase in feedstock costs (Acrylonitrile and Butadiene), and a recovery in downstream offers. In March and April, prices remained relatively stable. In June, prices declined due to subdued demand, ample supply, and heavily hit consumption as Europe remains hawkish with rate hikes. In July, prices increased due to increased raw material costs (butadiene) and supply cuts from Europe. In August and September, both international and domestic prices increased due to higher demand from medical and electrical equipment manufacturers. In October, prices remained relatively stable.

High Impact Polystyrene (HIPS)



Monthly Average Prices		
Period	*Int'l	*Dom
	(\$/tonne)	(Rs/tonne)
Nov-22	1221	111240
Dec-22	1207	110210
Jan-23	1278	116390
Feb-23	1335	121540
Mar-23	1321	119480
Apr-23	1292	117420
May-23	1250	113300
Jun-23	1150	105060
Jul-23	1150	104030
Aug-23	1193	108150
Sep-23	1250	113300
Oct-23	1250	113300
Nov-23		

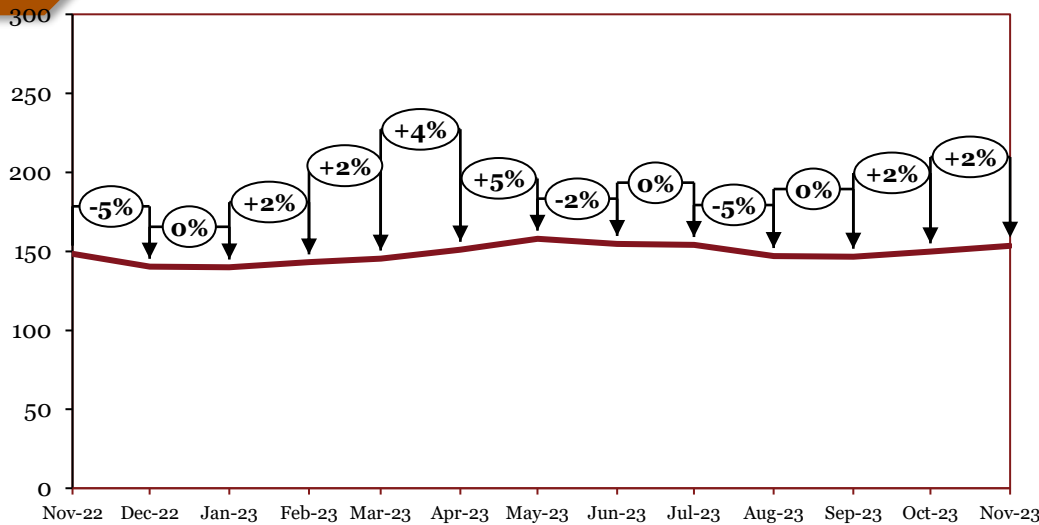


Outlook

In October, international prices fell due to low end-consumer demand caused by rising concerns over an economic slowdown and a slowdown in the construction sector. Domestic prices rose on account of the high input cost of coal and crude oil. In November, International prices fell in tandem with crude oil prices. Domestic prices remained stable. In December, prices fell sharply in tandem with the price of crude oil. In January and February, prices increased as crude oil prices stabilized. In March, prices fell in tandem with crude oil prices. In April prices surged in tandem with crude oil prices. In May, prices slumped in tandem with crude oil prices. In June, weak demand led to a surplus supply situation causing a significant price drop. In July, prices remained relatively stable. In August, prices increased due to increase in prices of crude oil. In September, prices increased due to higher demand from the food and beverage packaging industry. In October, prices remained stable.

Natural Rubber

Domestic



Source: Rubber Board

Monthly Average Prices	
Period	*Dom (Rs/kg)
Nov-22	149
Dec-22	140
Jan-23	140
Feb-23	143
Mar-23	145
Apr-23	151
May-23	158
Jun-23	155
Jul-23	154
Aug-23	147
Sep-23	147
Oct-23	150
Nov-23	154

— Domestic Price (RSS 4) Rs/Kg

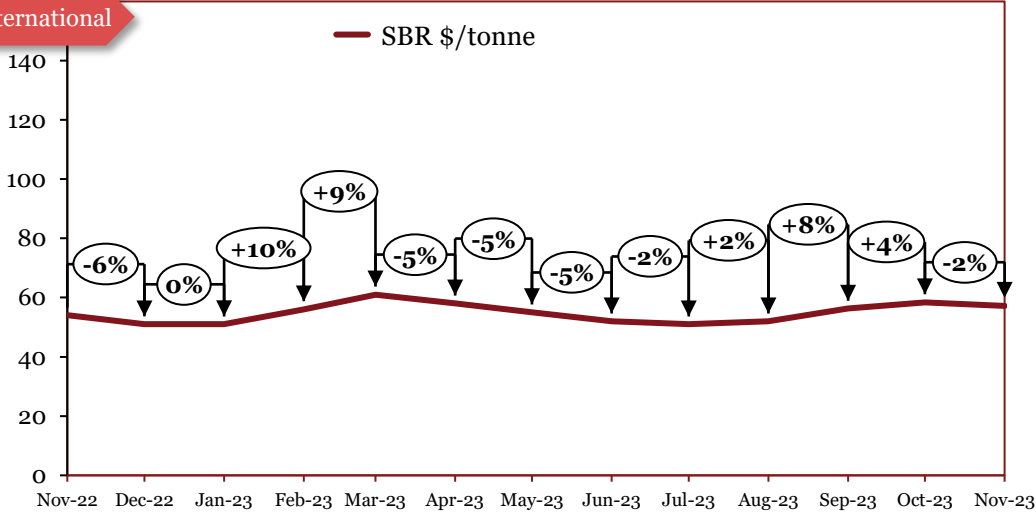
**The actual prices may vary depending on city, player, grade etc.*

Outlook

In November, prices declined due to lower demand from tire-makers and other domestic bulk buyers, particularly in Kerala's key markets. In December, prices declined on the back of poor demand from the tyre market, along with the onset of the peak tapping season. In January and February, prices remained relatively stable. In March and April, prices increased due to reduced production from the other major producers of rubber -Thailand, Malaysia, and Indonesia. In May, prices increased slightly in tandem with demand. In June, prices fell amid lingering concerns about faltering demand from top consumer China. In July, prices remained stable. In July prices remained relatively stable. In August, prices decreased to supply of cheaper imported rubber from South-east Asia. In September, prices remained relatively stable. In October, prices rose due to increased demand from the tire industry, especially in China. In November, prices increased due to a shortage of supply caused by heavy rains in south and south-east Asia.

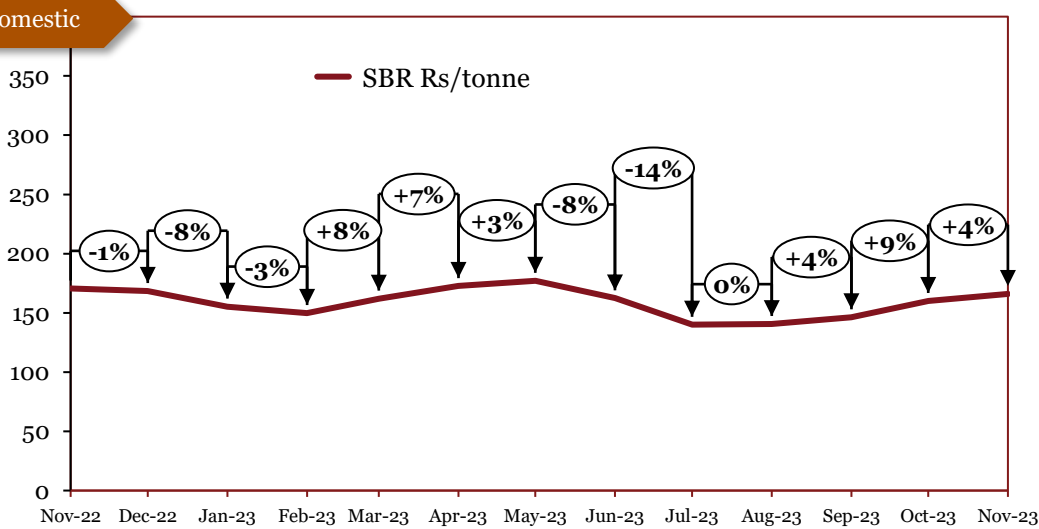
Styrene Butadiene Rubber (SBR)

International



Source: Crisil

Domestic



Source: SIAM

Monthly Average Prices		
Period	*Int'l (\$/tonne)	*Dom (Rs/tonne)
Nov-22	54	171
Dec-22	51	169
Jan-23	51	155
Feb-23	56	150
Mar-23	61	162
Apr-23	58	173
May-23	55	177
Jun-23	52	162
Jul-23	51	140
Aug-23	52	141
Sep-23	56	146
Oct-23	58	160
Nov-23	57	166

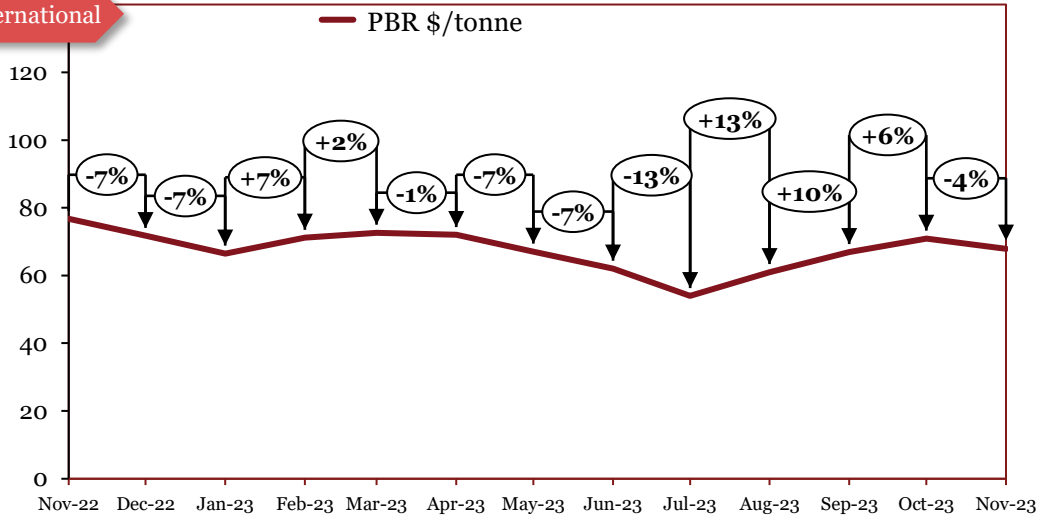
*The actual prices may vary depending on city, player, grade etc.

Outlook

In May, prices increased owing to a rebound in demand fundamentals. In June, domestic prices decreased as market growth remained sluggish because of feeble demands from downstream automotive and rubber industries combined with low coking coal prices. In July, prices declined due to decreased prices of its major feedstock (butadiene). In August, international prices increased due to increase in raw material costs (butadiene). Domestic prices remained relatively stable. In September, prices increased due to an increase in price of crude oil. In September, prices increased due to increase in price on Butadiene. In addition to this, price of crude oil and an increased demand from rubber and polymer industry led to an increase in prices. In October, prices increased due supply shortage caused by the maintenance shutdown of styrene and butadiene plants in China. In November, international prices decreased due to weak demand caused by negative macroeconomic conditions. Domestic prices continued to increase amidst higher demand for 2w and 3w tire production.

Polybutadiene Rubber (PBR)

International

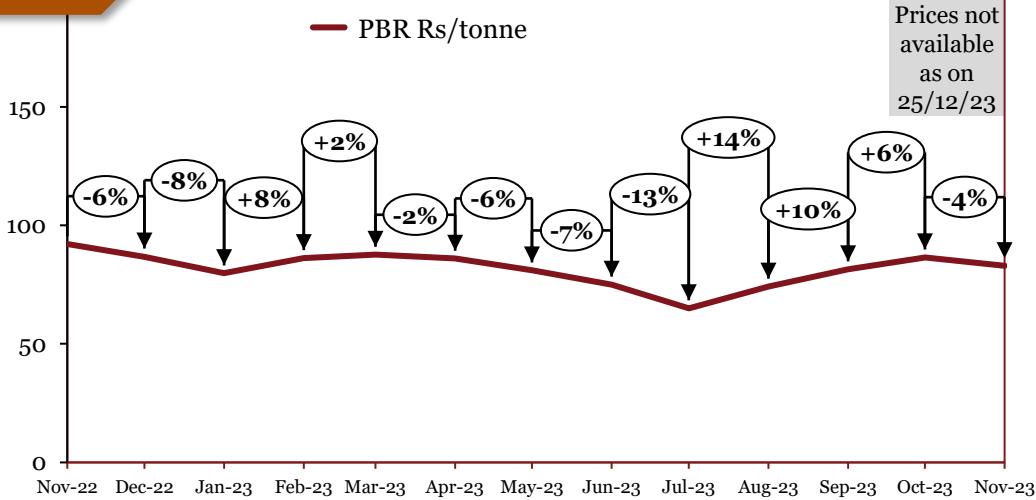


Source: Crisil

Monthly Average Prices

Period	*Int'l (\$/tonne)	*Dom (Rs/tonne)
Nov-22	77	92
Dec-22	72	87
Jan-23	66	80
Feb-23	71	86
Mar-23	73	88
Apr-23	72	86
May-23	67	81
Jun-23	62	75
Jul-23	54	65
Aug-23	61	74
Sep-23	67	81
Oct-23	71	87
Nov-23	68	83

Domestic



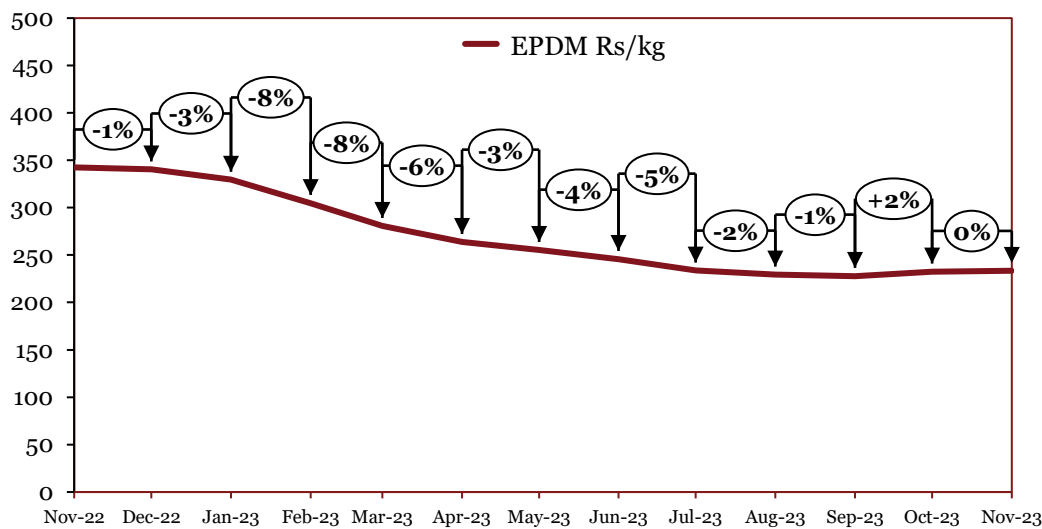
Source: Crisil

Outlook

In March, prices increased as the automotive industry recovered from the semiconductor crisis. In April prices remained relatively stable. In May, prices plummeted in tandem with crude oil prices. In June, the prices dropped due to the underperformance of the tire industry, the stable manufacturing sector, reduced feedstock costs, and surplus inventories. In August, prices increased due to an increase in the price of raw materials (butadiene) and an increased demand from the tire industry. In September and October, prices increased due to the increase in prices of Butadiene. In addition to this, the price of crude oil and an increased demand from the rubber and polymer industry led to an increase in prices. In November, prices fell in tandem with the falling crude oil prices.

Ethylene Propylene Diene Monomer (EPDM)

Domestic



Source: SIAM

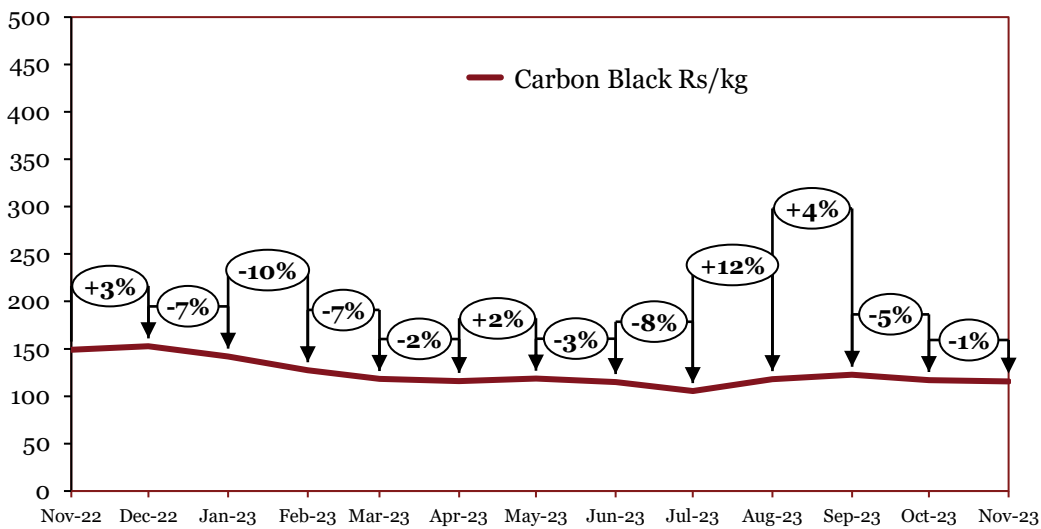
Monthly Average Prices	
Period	*Dom (Rs/kg)
Nov-22	342
Dec-22	340
Jan-23	329
Feb-23	305
Mar-23	281
Apr-23	264
May-23	255
Jun-23	246
Jul-23	234
Aug-23	229
Sep-23	228
Oct-23	233
Nov-23	233

Outlook

Prices have been on a decline after the auto industry was hit first by the semiconductor chip shortage followed by the general economic downturn. The price war initiated by Tesla in China to destock inventories and reduce production also has taken its toll on EPDM consumption. In May, prices decreased in tandem with crude oil prices. In June, prices continued to fall despite easing supply chain constraints, lower shipping container costs, and fewer berth delays. In July, the price drop was attributed to a consistent fall in the prices of feedstock ethylene and propylene for several weeks, as a result, the manufacturing cost of EPDM rubber was substantially reduced, leading to lower market prices. In August, prices decreased due to falling ethylene and propylene feedstock prices, which in turn reduced manufacturing costs. In September, prices remained relatively stable. In October, prices rose due to an increase in prices of ethylene and propylene. In November, prices remained stable.

Carbon Black

Domestic



Source: SIAM

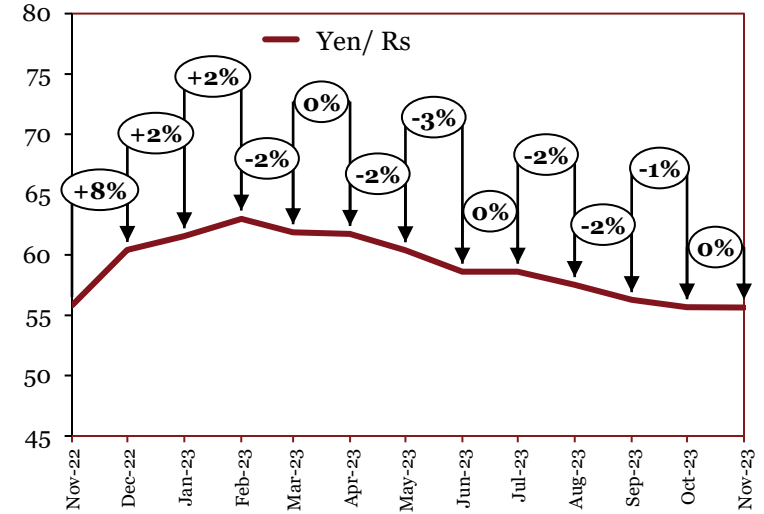
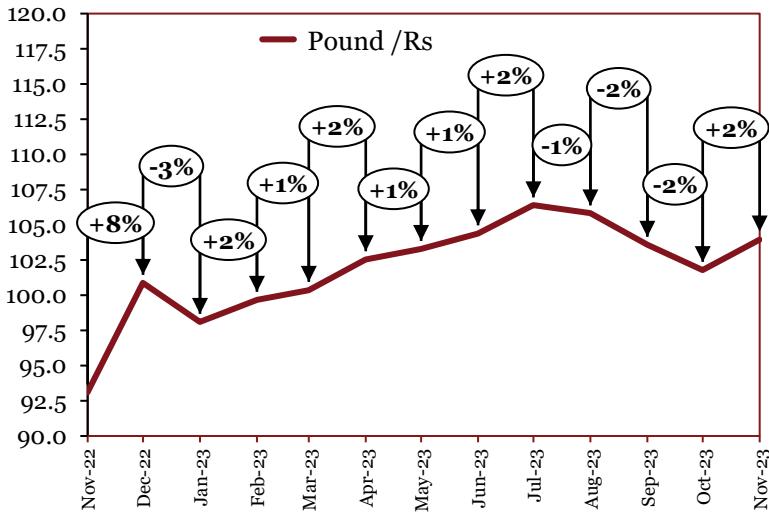
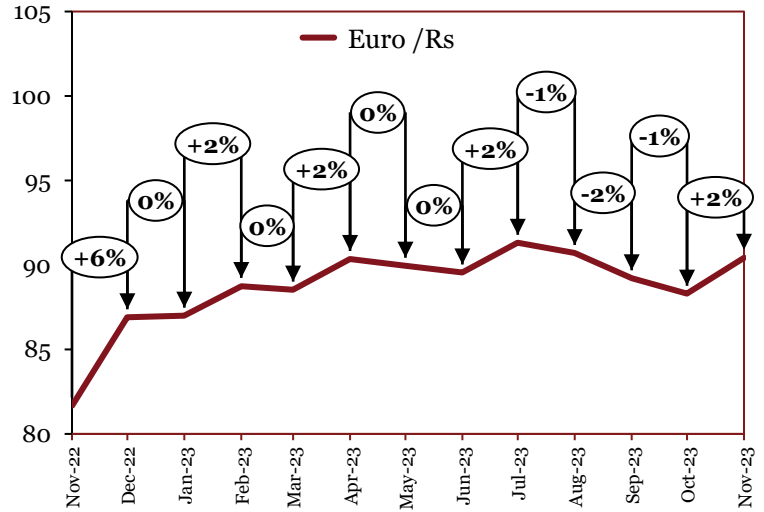
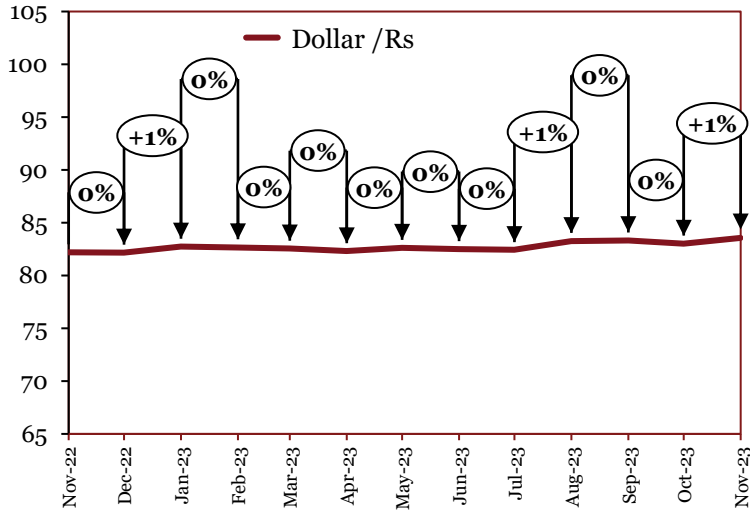
Monthly Average Prices	
Period	*Dom (Rs/kg)
Nov-22	149
Dec-22	153
Jan-23	142
Feb-23	127
Mar-23	118
Apr-23	116
May-23	119
Jun-23	115
Jul-23	106
Aug-23	118
Sep-23	123
Oct-23	117
Nov-23	116

Outlook

Multiple sanctions on Russia, a key carbon black exporter, have added pressure on supplies. Rising wage costs and the government’s tab on rising pollution have restrained supply in China as well, further affecting supply. In May, prices remained relatively stable. In June, prices decreased on account of low demand from the end-consumer. In July, the prices continued to plummet with greater momentum as demand from end-consumer remained constant, increased cost of production, surplus inventories and economic slowdown in China. In August, prices increased due to stricter Chinese environmental regulations led to reduced Chinese exports, causing price surges. In addition to this, increased production in the tire and rubber industry also led to increased demand. In September, prices increased due to increased demand from tire industry and reduced imports. In October, prices decreased due a decrease in the price of oil, combined with sluggish local demand. In November, prices remained stable.

Appendices

Forex Movement



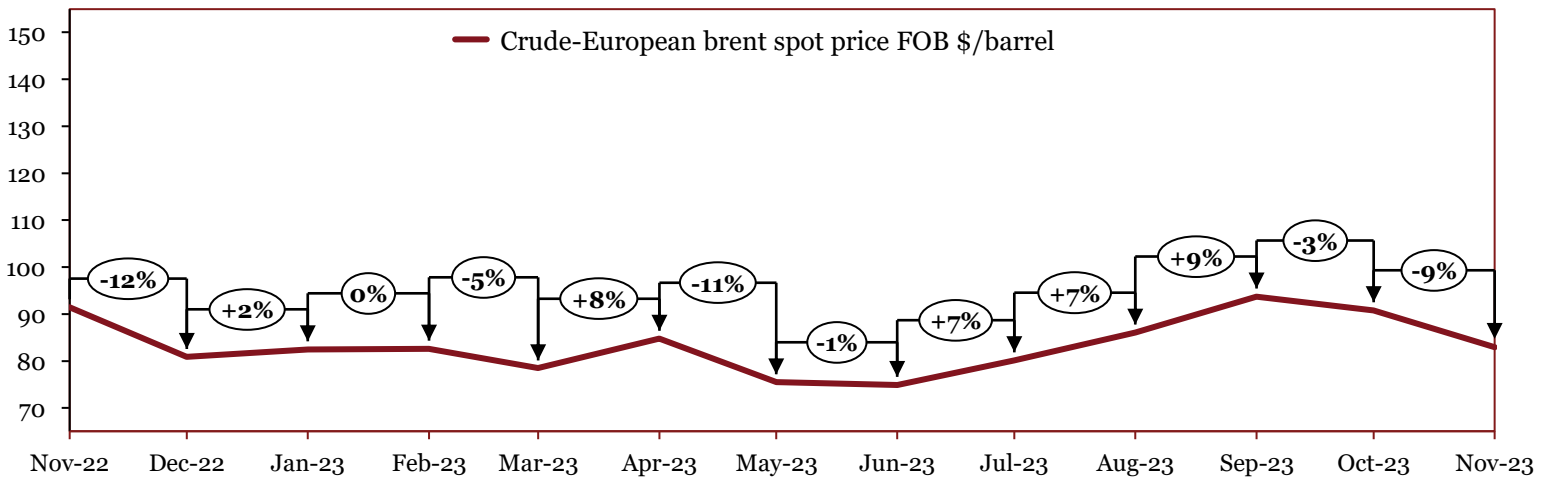
Source: SIAM

Monthly Average Prices (Rs)

	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23
\$	82	82	83	83	83	82	83	83	82	83	83	83	84
£	93	101	98	100	100	103	103	104	106	106	104	102	104
€	82	87	87	89	89	90	90	90	91	91	89	88	90
¥	56	60	62	63	62	62	60	59	59	58	56	56	56

Crude Oil

Source: SIAM



Monthly Average Prices (\$/barrel)

	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23
	91	81	82	83	78	85	75	75	80	86	94	91	83

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 <i>Previously: Bloomberg Black Sea Steel Billet Spot FOB</i>	Crisil - 100^100 mm (Avg. prices collated from 2-3 locations)
Hot-rolled coils	Crisil -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)
Steel Scrap	NA	Crisil - Heavy melting (excl. GST)
EN 8	NA	PwC Research -EN8 Alloy forging
20MnCr5	NA	PwC Research -Alloy forging
Ferro chrome	Crisil : FOB Hong Kong Cr 50%	Crisil: Ex-factory Cr 60%
Ferro silicon	Crisil - FOB China Si 75%	Crisil - Ex-factory Si 70%

Commodity Specifications

Commodity	International	Domestic
Aluminium	<p>LME</p> <p>-Primary aluminium with impurities no greater than the chemical composition of one of the registered designations:</p> <ul style="list-style-type: none"> •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” 	<p>NCDEX, MCX (July’19 onwards)</p> <p>-Primary aluminium 99.7% purity (minimum) form: ingots, T-bars,</p>
Copper	<p>LME</p> <p>-Grade A copper must conform to the chemical composition of one of the following standards:</p> <ul style="list-style-type: none"> •BS EN 1978:1998 - Cu-CATH-1 •GB/T 467-2010 - Cu-CATH-1 •ASTM B115-10 - cathode Grade 1 	<p>MCX</p> <p>- Grade 1 electrolytic copper as per B115 specification</p>
Zinc	<p>LME</p> <p>-Special high-grade zinc of 99.995% purity (minimum) must conform to the chemical composition of one of the following standards:</p> <ul style="list-style-type: none"> •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 	<p>NCDEX, MCX (July’19 onwards)</p> <p>- 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</p>
Lead	<p>LME</p> <ul style="list-style-type: none"> - Lead of 99.97% purity (minimum) conforming to BS EN 12659:1999 - GB/T 469/2005 	<p>MCX</p> <ul style="list-style-type: none"> - Lead ingots with minimum purity of 99.97%

Commodity Specifications

Commodity	International	Domestic
Nickel	LME - Nickel of 99.80% purity (minimum) conforming to B39-79 (2013) - GB/T 6516-2010	NCDEX, MCX (July'19 onwards) - 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	Bloomberg - Tin (min 99.85%) \$/tonne
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
Acrylonitrile Butadiene Styrene (ABS)	International price (C&F FEA) \$/tonne	Landed Cost Rs/tonne
High Impact Polystyrene (HIPS)	International price \$/tonne	Landed Cost Rs/tonne
Rubber Prices	NA	NCDEX/Rubber board - RSS 4 (Ribbed Smoked Sheet 4) ex-warehouse Kochi exclusive of all taxes
Styrene Butadiene Rubber (SBR)	International Price Index (Base Price: \$ 2,825-2,875 per tonne)	Landed Cost Rs/kg
Polybutadiene Rubber (PBR)	International price Index (Base Price: \$ 2,730-2,780 per tonne)	Landed cost Index (Base cost: Rs 207,000 - 211,000 per tonne)

Commodity Specifications

Commodity	International	Domestic
Ethylene Propylene Diene Monomer (EPDM)	NA	Landed Cost Rs/kg
Carbon Black	NA	Landed Cost Rs/kg
Forex Movement	RBI reference rates	
Crude	European Brent spot price FOB \$/barrel – Energy Information Administration (EIA)	



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