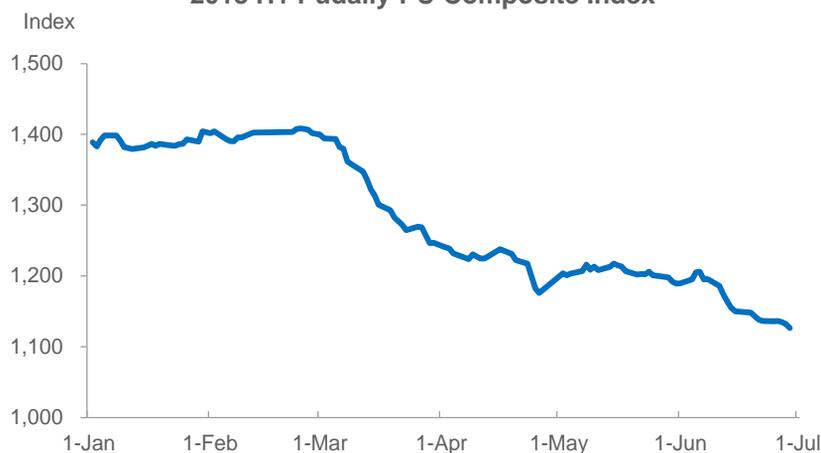


APAC PU Market Report (2018 H1)

Pudaily, July 2018

Economic Environment and PUdaily Index

2018 H1 Pudaily PU Composite Index



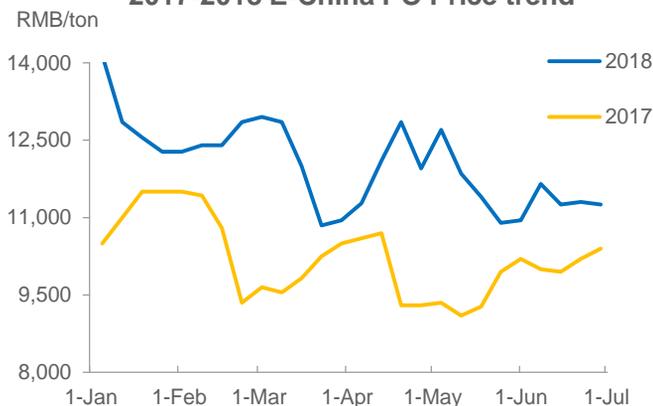
Note: using November 21, 2005 as the base day, the PUdaily PU Index is calculated based on the prices of polyurethane raw materials and their weights. The main raw materials involved include PMDI, pure MDI, TDI, PO, slab polyols, rigid polyols, AA, BDO and DMF.

According to the preliminary estimate, China's GDP for H1 2018 reached RMB 41896.1 billion, up to 6.8 percent year over year at comparable prices. In terms of different quarters, the year-on-year GDP growth for the first quarter was 6.8%, and that for the second quarter was 6.7%. This means the growth rate has remained between 6.7% and 6.9% for 12 consecutive quarters. In terms of different industries, the added value of the primary industry was RMB 2208.7 billion, up 3.2% year over year, that of the secondary industry was RMB 16929.9 billion, up 6.1% and that of the tertiary industry stood at RMB 22757.6 billion, an increase of 7.6%. As for the industrial structure, in the first half, the growth in added value of the tertiary industry was 1.5 percentage points higher than that of the secondary industry. And the added value of the tertiary industry accounts for 54.3% of GDP, up 0.3 percentage points from the same period last year and 13.9 percentage points higher than that of the secondary industry does. In terms of demand structure, the final consumer spending contributed to 78.5% of economic growth, 47.1 percentage point higher than gross capital formation. New industries and new products are growing rapidly. In terms of the industrial structure, in the first half, the added value of industrial strategic emerging industries increased by 8.7% compared with the same period last year, 2.0 percentage points higher than that of industries above designated size. The output of new energy vehicles increased by 88.1% year over year, industrial robots by 23.9% and integrated circuits by 15.0%.

It can be seen that the PUdaily PU Composite Index remained largely stable between January and February 2018. The index began to fall in March. And by June, it had fallen by about 14%. This is mainly because many polyurethane raw material manufacturers and dealers reduced their prices to slash the accumulating inventories resulting from the hindered sale during the Spring Festival holiday, when most buyers suspended operation of their plants. The composite index further fell slightly in mid-to-late June. This is primarily because the restriction on transportation of dangerous chemicals was removed as the SCO Summit came to an end, also downstream demand became sluggish as the environmental check got tighter.

Propylene Oxide

2017-2018 E-China PO Price trend



In the first half of 2018, China's PO market has been maintained at more than RMB 10,000/ton and is significantly higher than that of 2017. As of the end of June, the mainstream offer for East China was RMB 11,100 – 11,300 /ton, which is about RMB 2,900 /ton less than that in January.

In January, the PO market opened at a high level, but the price soon falls down as the downstream goods are well stocked. At the end of March, the PO price unexpectedly rebounded due to the overhaul of a mainstream factory in Shandong. Due to the opening of the Shanghai Cooperation Summit in early June, the transportation of dangerous chemicals was restricted, the mainstream factories reduce the facility loads, and the price is immediately higher.

With the strict implementation of environmental protection inspection, many downstream terminal factories are closed or reduced facility loads, resulting in weak demand for downstream polyether, which further affects the demand for raw material PO. Although the inspection operation is coming to an end, the general trend of environmental protection is still in place, and the improvement of small downstream factories is imperative. For upstream PO & polyether, the weak demand may continue.

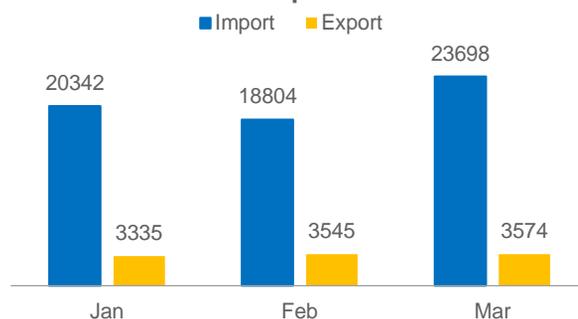
Commentary



Looking forward to the second half of the year, Pudaily expects that 120,000 tpa from Hongbaoli and 80,000 tpa from CITIC Guoan, with a total of 200,000 tpa of new PO production capacity will be put into the market. Meanwhile, 300,000 tpa of new capacity by South Korea's S-oil is also likely to enter the mainland market. The market supply and demand pattern is absolutely to be affected. Although the hot-season is worth looking forward to, but the market is not going to be as good as it was last year.

Imports and exports

2018 Jan.-Mar. China PO Import and Export



From January to March, China imported 728,000 tons of PO, down 0.73 million tons (1.2%) from the same period last year. The main importers are Saudi Arabia, Thailand and Singapore. Meanwhile, China's exports of 10500 tons PO, increasing of 10200 tons year-on-year. The export volumes here are mostly transhipped through the Chinese customs.

*Due to force majeure, updated data in this section will be delayed to next month

Polyether Polyols

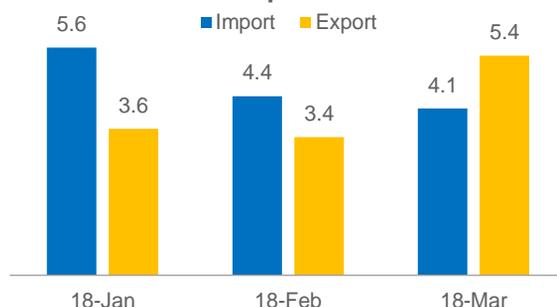


Commentary

In 2018, a new facility of polyether polyols is put into operation in Jiangsu Changhua with an officially announced capacity of 100,000 tons. In addition, Fujian Tianjiao, Changshu Yltong, Gulei put their new plants into production in May. At present, the environmental protection inspection is strict, with a certain impact to the downstream manufacturers. The trade war between China and the U.S. might also impact the economic environment, the imbalance between supply and demand of domestic polyether polyols market will be intensified probably.

Imports and exports

China Jan-March Polyether Polyols Im & Export Trend

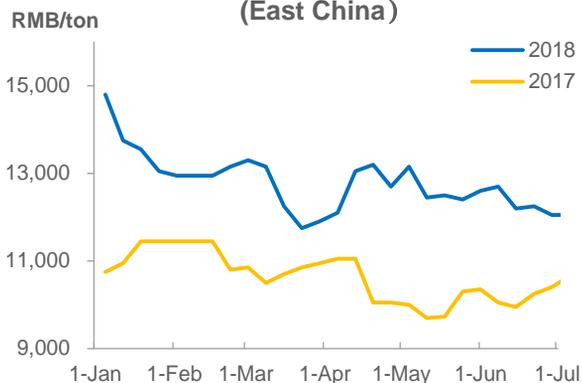


In the first three months of 2018, imports of domestic polyether polyols is about 141,000 tons, an increase of 11,000 tons (8.6%) over the same period of last year. Imports fall every month from January to March. The main countries of imports are Saudi Arabia, Singapore and Thailand.

From January to March, exports of China polyether polyols are about 124,000 tons, is increased by about 20,000 tons, growth of 19% year on year. Major export destinations include India, Vietnam, South Korea, Turkey and Pakistan.

*Due to force majeure, updated data in this section will be delayed to next month.

2017-2018 China PPG Price Trend (East China)



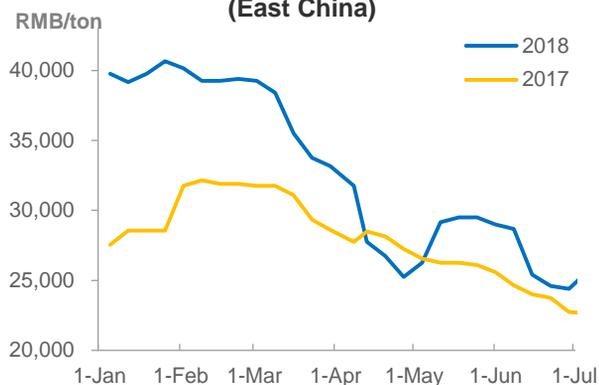
In the first half of 2018, the polyether polyols market fluctuated downward, basically following the price trend of PO. By the end of June, the price of domestic flexible slabstocks polyols for East China originated is around RMB 12,050 /ton DEL in bulk in cash, which is decreased by RMB 2,750/ton comparing to the price at beginning of January. At the end of 2017, under the influence of the news of mainstream plants overhaul, the price of flexible slabstocks polyols went up. The high prices start to fall at the beginning of 2018. In February, before the Chinese New Year, there is a small rebound of the flexible slabstocks polyols market due to the rigid demands from downstream clients. In March, market demand went weak, PO market dropped rapidly. Inventory was at a high level, suppliers lowered the quotations. Then, one of a manufacturers in Shandong started their overhaul, markets got warm again.

The SCO summit was held in Qingdao at the beginning of June. Government began to implement restriction for the transportation of some raw materials. Some manufacturers in Shandong reduced their production load or started overhaul. Supply becomes tight make the market increased.

Generally, because of the influence of environmental protection, the downstream demand is relatively flat and it is hard to cheer the market up. Therefore, the market showed a downward trend after April.

TDI

**China TDI Price Trend in 2017 & 2018
(East China)**



In H1 2018, domestic TDI market experiences ups and downs, with the price fluctuating considerably. Overall, the price went through the successive phases of staying high, declining, rallying, dropping and becoming stabilized.

In January, the short supply provided support for the TDI price, enabling it to stand at around RMB 40,000/ton. At the beginning of February, downstream manufacturers withdrew from the market to spend the Spring Festival. Their demands didn't recover until the Lantern Festival. But the production of TDI manufacturers largely remained normal during the Spring Festival holiday. Thus, the price began to drop. In March and April, domestic manufacturers experienced even greater inventory pressure. The previous "edging down" turned into "dramatic decline". At the end of April, the price fell to RMB 24,000/ton. However, some major downstream manufacturers and dealers began to make purchase. The manufacturers' inventories were gradually depleted and consequently the price started to rebound. The bullish sentiments were strong, some dealers were reluctant to sell goods, pushing up the price to around RMB 29,000/ton.

In early June, the dealers' sale was hindered because of rare purchase made by buyers at high price. Thus, the delicate balance was disrupted and the price began to fall rapidly. On June 20, the price approached RMB 24,000/ton. Meanwhile, downstream inventories were nearly depleted. As some downstream manufacturers made purchase to meet rigid demand, the price stopped falling and stabilized.

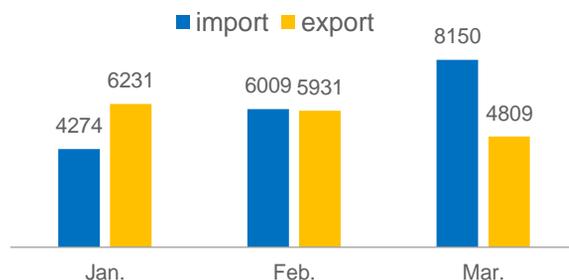
Commentary



Looking ahead, at end of September, Wanhua's new 300k t/a TDI facility will be put into production. The manufacturers will face fiercer competition. It is expected that the current windfall profit will not continue, and both the price volatility and profitability of TDI products will decline. However, it is worth noting that although there is great oversupply pressure in the coming years, the price in peak season will still be much higher than that in off-season. Especially when a peak season coincides with facilities maintenance by domestic and foreign manufacturers, there is a great possibility that the price will increase significantly.

Imports and exports

**2018 China TDI Im & Export Trend
(Tons)**

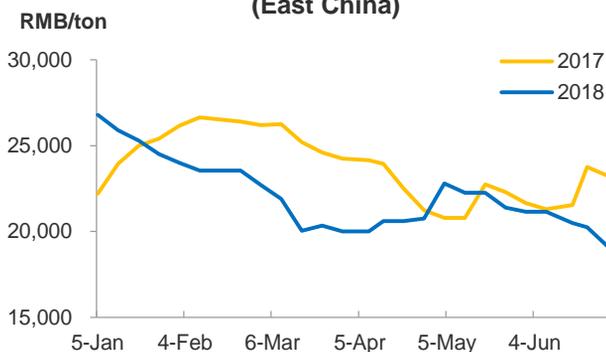


In terms of imports, from January to March 2018, China imported 18,000 tons of TDI, up 46.0% year on year. East and south China imported the largest volume of TDI, accounting for 53.7% and 41.2% of China's total import volume, respectively. The main import sources were South Korea and Saudi Arabia, which accounted for 61.2 per cent and 21.4 per cent of China's total TDI imports, respectively.

In terms of exports, during the same period, China exported 17,000 tons of TDI, down 28.1% year over year. The top three exporters were Covestro, BASF and Fujian Southeast Electrochemical, accounting for 82.2%, 8.4% and 5.9% of China's total TDI exports, respectively. Major export destinations were Pakistan (2,160 tons), India (2,109 tons), Indonesia (1,960 tons) and Australia (1,823 tons), whose imports accounted for 12.7%, 12.4%, 11.6% and 10.7% of China's total TDI exports, respectively.

MDI

China PMDI Price Trend in 2017 & 2018 (East China)



In the first half of 2018, the price for polymeric MDI (PMDI) saw went through the phases of sharp fall, small rebound and slight drop, as shown in the figure below. In the first 3 months of the year, the declining PMDI price seen at the end of 2017 continued. In mid-March, the price fell to a low of RMB 18,000-19,500/ton. Later, the demand gradually recovered as sectors such as refrigerator, freezer and pipeline insulation entered the peak season. As a result, the PMDI price consolidated after a small rebound.

Beginning in May, some manufacturers entered the maintenance period. Meanwhile, some raised their list prices and reduced the supply. Due to the bullish sentiments, some middlemen increased their prices significantly to hit a high of RMB 22,500-23,000/ton. But great cost pressure resulted in reduced downstream demand, the price again set on a downward trajectory.

In June, the low operating rate of downstream manufacturers due to the central government's "revisit" action in the environmental inspection campaign, coupled with the increasingly hot weather, resulted in sluggish downstream demand. The price continued to fall. By the end of June, it had fallen to RMB 17,500-19,200/ton.

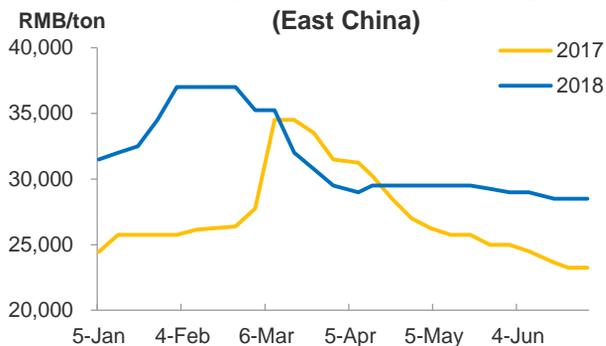
Commentary



In the second half of the year, the supply of PMDI will largely remain stable and close attention should be paid

to the operation status of facilities. As for the demand, affected by the environmental inspection, the overall demand will be somewhat sluggish. In terms of imports and exports, for China, a net exporter of PMDI, the United States remains the most important export destination. Close attention should be paid to the Sino-U.S. trade war. If the additional tariff (which involves MDI) is imposed, domestic PMDI producers will have to look for alternative export destinations. Considering the supply and demand in H2, the price of PMDI is expected to mostly remain stable. But at the juncture of transition from off season to peak season, the price will rise slightly.

China PMDI Price Trend in 2017 & 2018 (East China)



In the first half of this year, the price of pure MDI mostly remained high. At the beginning of the year, the price went up due to the force majeure on facilities and the strong downstream demand. Into March, the price went down as the operation of facilities gradually became stable, and the downstream sectors entered their off-season. In April, although the production load of downstream sectors such as PU resins for synthetic leather and PU resins for shoes sole stayed low, that of spandex sector was high. As a result, the overall downstream demand was stable, which provided some support to enable the price to remain stable. By the end of June, the ruling offer for pure MDI was RMB 28,000-29,000/ton.

MDI

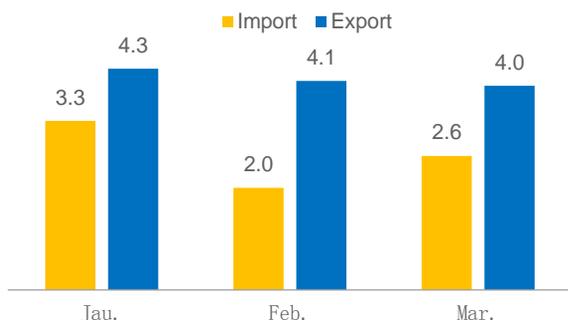
Commentary



Like PMDI, the overall supply of pure MDI will remain stable in the second half and close attention should be paid to the operation status of facilities. As for the demand, the overall demand will remain sluggish due to environmental inspection. In terms of imports and exports, the volume of exports will be greater than that of imports as seen in H2 2017. And it is expected that the volume of net exports will also be higher than that in the second half of last year. Considering the factors above and the current price, the price for pure MDI is expected to remain high in the second half of the year.

Imports and exports

2018 China PMDI Im & Export Trend (Tons)



In the first quarter of 2018, the volume of China's PMDI imports was close to 80,000 tons, up 16% year over year. The Middle East, currently China's largest PMDI import source, made the biggest contribution to the growth. In the quarter, China imported approximately 30,000 tons of PMDI from the region (mainly from the new market player Sadara). As its market share in China stabilizes, the region will maintain its status as a leading exporter. It was followed by Japan, from which China imported nearly 30,000 tons of PMDI. South Korea ranked third, from which China imported about 10,000 tons of PMDI. But imports from the two countries were down 24% and 57% year over year, respectively.

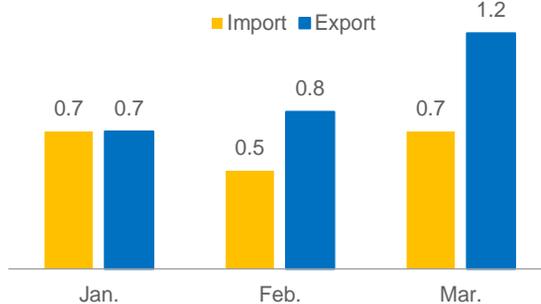
Data source: PUDaily

The decrease in imports was partly a result of the abnormal operation of the facilities there. But it was more related to the changing MDI market landscape in China and the resulting shifted focus of Japanese and South Korean manufacturers from China to other countries.

In terms of exports, the total export volume in the first quarter was 136,000 tons, up 12% year over year. It is worth noting that, data from PUDaily shows that China's PMDI exports to top 10 export destinations in the first quarter increased, suggesting that the exports were gaining momentum. It is expected that the volume of net exports will continue to grow in H2.

Imports and exports

2018 China MMDI Im & Export Trend (Tons)



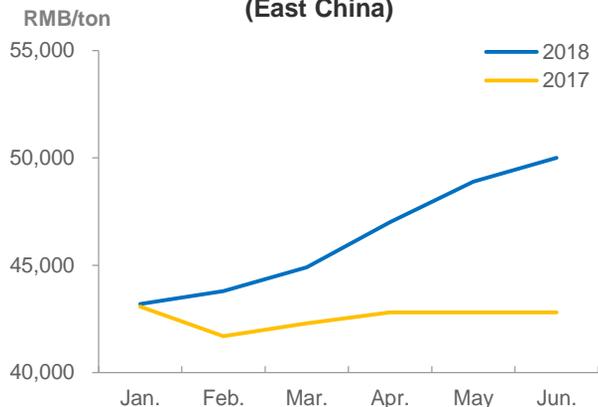
In the first quarter, the volume of pure MDI imports totaled about 19,000 tons, a year-on-year decrease of 16%. Like PMDI, the decrease in imports was associated with the unstable operation of Kumho Mitsui Chemicals' plant. Thanks to the stable operation of most facilities in China, the volume of pure MDI exports totaled about 27,000 tons, up 44% year on year.

The volume of pure MDI exports has been higher than that of imports since May 2017. This is closely related to the change in the market landscape in China. On the condition that no new facilities are built in other countries, China's net export volume will further increase as Wanhua completes its expansion project in the near future.

*Due to force majeure, updated data in this section will be delayed to next month

HDI (hardener)

China HDI hardene Price Trend in 2017 & 2018
(East China)



Into 2018, much to the surprise of many market players, the movement of HDI hardener price changed suddenly and began to show an upward trend.

Facilities of most HDI manufacturers were operating well below the capacity due to the restricted hexamethylenediamine (HMDA) supply. Consequently, the overall HDI supply decreased from 2017.

The price of HMDA shot up due to the global tight supply, which was caused by force majeure on the plants of major HMDA manufacturers. The spot price of hexamethylenediamine in China rose by 72% from RMB 25,000/ton at the end of January to RMB 43,000/ton at the end of June. Driven by the high cost, some HDI suppliers began to increase their prices in February. As a result, the spot price of HDI hardener in China rose by 16% from RMB 43,000/ton at the end of January to RMB 50,000/ton at the end of June.

Commentary

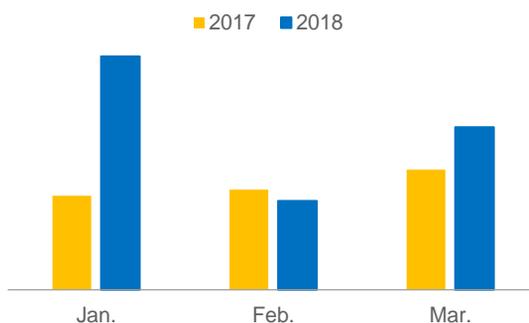


Looking ahead, in the second half of 2018, the tight supply of hexamethylenediamine may continue until the end of

the year, which will to some extent restrict the operating rate of HDI manufacturers. As the increase in HMDA cost is far more significant than that in HDI hardener price, domestic HDI manufacturers never think about reducing their strong motivation to raise price. For example, Covestro's offer for July increases by 7-8%, and Tosoh's offer for August increases by about 5%. Therefore, HDI price is expected to further increase in the second half of the year with the advent of the traditional peak season for downstream sectors.

Imports and exports

China's HDI hardener Exports
in 2017 and 2018 (Tons)



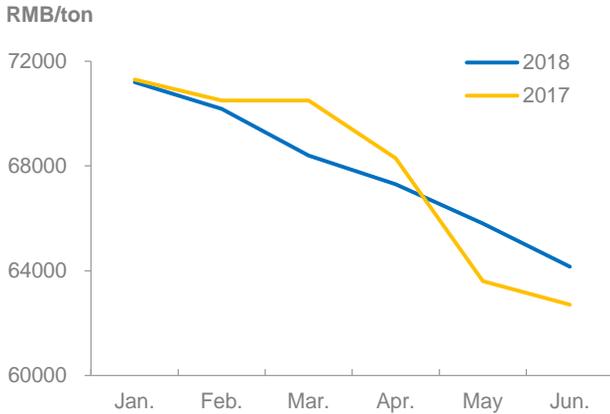
Imports: In the first three months of 2018, the volume of China's HDI hardener imports reached 1,768 tons, decreasing significantly by about 59.8% year over year.

Exports: Meanwhile, China exported 10,711 tons of HDI hardener, increasing significantly by 54.3% from the same period last year. It can be seen that with the start-up of domestic new HDI hardener facilities in recent years, domestic manufacturers are devoting more efforts to develop overseas markets.

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IPDI

2017-2018 E-China IPDI Price Trend



In the first half of 2018, although Wanhua's IPDI supply decreased, competition among suppliers was fierce due to the significant increase in the supply of imported goods and the less-than-expected demand. At the end of June, the price of imported goods fell to approach the cost. In the first half of the year, the IPDI price was on a downward trend. The market opened at RMB 71,200/ton at the beginning of the year, and closed at RMB 64,160/ton in the mid-year, down RMB 7040/ton, or 9.9%.

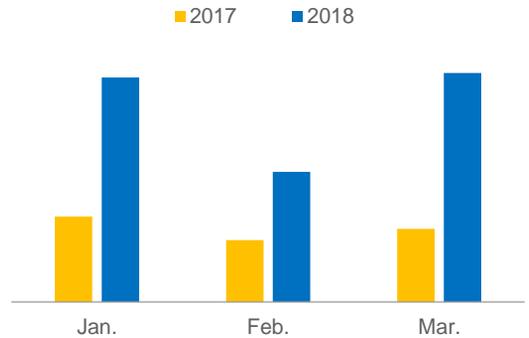
Commentary



In the second half of the year, Wanhua's inventories will gradually be depleted and imported goods will play a dominant role in domestic supply, resulting in a further shift in the landscape of domestic supply. Since most of the imported goods are sold at a price that is close to the cost, the future increase in the cost of imported goods will force the IPDI dealers to increase price to pass on the extra cost to customers. Besides, the peak season for downstream sectors will arrive in the second half. Thus, the market will turn around and IPDI price is expected to go up in H2.

Imports and exports

2017-2018 China IPDI Imports Trend (Tons)



In terms of imports, owing to the shutdown of Wanhua Chemical's IPDI plant in July 2017, the volume of IPDI imported increased significantly to 2,990 tons in the first quarter of 2018. The IPDI imports mainly came from Germany, the United States, France, Spain and South Korea. Of which Germany and the United States are the biggest two import sources where Evonik and Covestro's IPDI facilities are located; while imports from France primarily come from Vencorex.

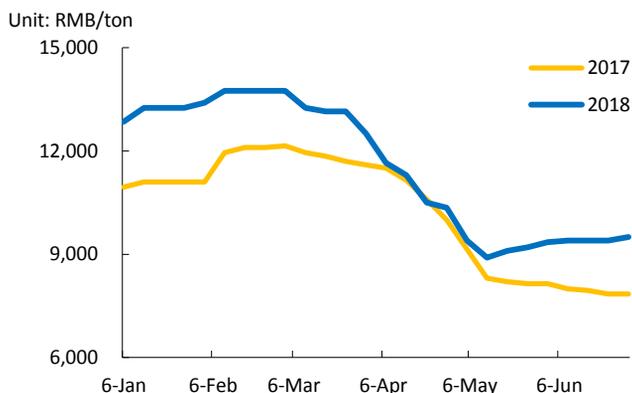
*Due to force majeure, updated data in this section will be delayed to next month

Adipic acid (AA)

Commentary



2017-2018 E- China AA Price Trend



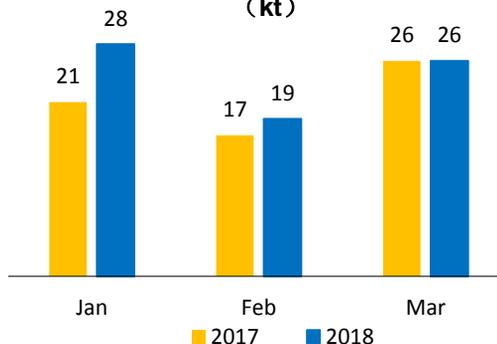
In the first half of 2018, the domestic AA price went through the phases of gradual increase, setting on a downward trajectory and consolidating at low price. Generally, the price volatility was significant. At the beginning of the year, the market opened at RMB 12,850/ton, and closed at RMB 9,500/ton in the mid-year, down by RMB 3,350/ton, or 26%.

The price movement for the period from Jan. to May 2018 was very similar to that for the same period last year. From Mar. to May, AA price was on a downward trajectory. This is mainly because the downstream demand was low. Added to that is the fact that the manufacturers lowered their list prices several times to pare inventories accumulated at the beginning of the year. In May and June, in contrast with last year, the price managed to bounce back. Specifically, in May the settlement price was equal to the list price, boosting the price to some extent. In addition, the exports increased as supply of the manufacturers was adequate. In June, many manufacturers performed maintenance, which was bullish for the market. However, the downstream demand was low due to environmental inspection, putting downward pressure on the AA price.

In H2 2018, in terms of supply, as most of the manufacturers have completed their maintenance, which was mainly carried out in June and July, the normal operation of their facilities is expected to be resumed at the end of July and the supply will be sufficient at the time. As for the demand, demands from the TPU and PA66 sectors are expected to grow at high pace. Whereas those from the sectors of PU resins for synthetic leather and PU resin for shoes sole will grow relatively slowly. As for the exports, as the domestic supply increases suppliers will actively expand into overseas markets to relieve great competitive pressure at home. So, exports are expected to continue to grow if no special events happen.

Imports and exports

2017-2018 China AA Export Trend (kt)

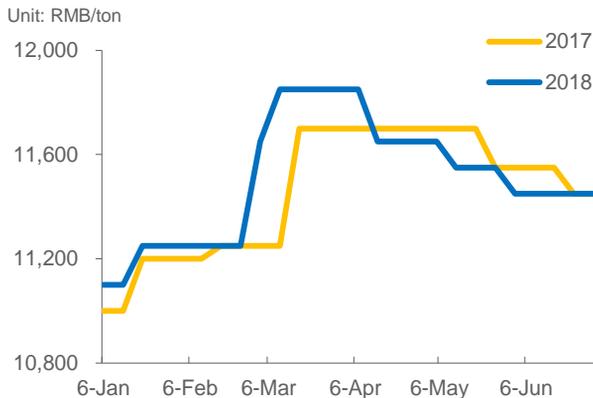


In the first quarter of 2018, China's AA exports rose slightly compared with last year. The volume of exports reached 73,000 tons from Jan. to Mar., increasing by about 14% year over year. It is expected that the volume for H1 will reach over 170,000 tons. Singapore ranked first among the destinations for China's AA exports, followed by Turkey and Taiwan (China).

*Due to force majeure, updated data in this section will be delayed to next month



2017-2018 E-China BDO Price Trend



In H1 2018, the BDO price fluctuated significantly, with the highest price for east China-originated BDO standing at RMB 11,800/ton in bulk, and the lowest at RMB 11,000/ton in bulk. The price in the middle of the year was 3% higher than that at the beginning of the year.

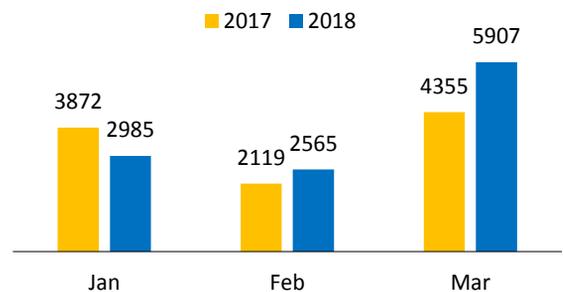
The price trends for 2017 and 2018 are almost the same. Specifically, from Jan. to Mar., the manufacturers' operating rate remained low as there were intensive turnarounds of units, which provided a boost to the price. This year's downward price movement began in April, earlier than last year. This is primarily due to the sluggish demands from downstream sectors such as PU resins for synthetic leather and PU resin for shoes sole, which had reduced operating rate as a result of the environmental inspection and only made purchase to meet rigid demand.

According to PUdaily, the capacity utilization rate of BDO facilities using Reppe process in the first half was about 60%. The price ranged between RMB 11,300 and 11,600/ton in the first half of the year, with price at the end of June 2018 being equal to that at the same time last year.

Looking ahead to the second half of 2018, the problem of excess BDO capacity will persist. Thus, manufacturers can satisfy downstream demands with a modest operating rate. The operation of downstream factories will be affected as environmental inspection remains tight. Additionally, the impact of the traditional off-season will be significant. Thus in short term, the manufacturers face shipment pressure, and the market outlook is not optimistic. This year's BDO exports increased substantially compared with last year, easing the pressure of excess domestic supply.

Imports and exports

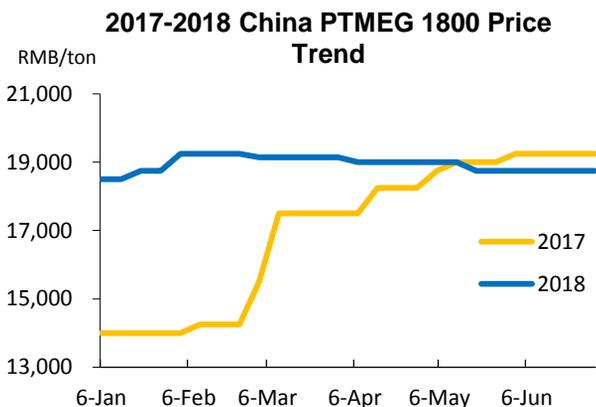
2017-2018 China BDO Export Trend (ton)



In the 1st quarter of 2018, the volume of China's BDO exports increased slightly compared with last year. In the 1st quarter, the volume of exports reached 11,457 tons, increasing by about 10% year over year. This positive growth is a result of BDO manufacturers' efforts to increase exports as domestic new capacity was put into production and products demanded by domestic market were limited. Top three exporters of BDO products were Changchun Dairen Chemical (Panjin), Markor Chemical and Henan Kaixiang Chemical. Among them, Changchun Dairen Chemical (Panjin) and Markor Chemical made up about 35.35% of China's total BDO exports.

*Due to force majeure, updated data in this section will be delayed to next month

PTMEG



In the first half of 2018, domestic PTMEG price consolidated within a narrow range, with a price difference of RMB 1,000/ton. At present, China's production capacity totals more than 780,000 tons/year, and the overall operating rate remains at around 70%.

In recent years, the expansion of capacities for both PTMEG and spandex has slowed. This year, the demand for PTMEG increased compared with last year. In the first half, the price for PTMEG fluctuated between RMB 18,000 and 19,000/ton. At this point, the PTMEG manufacturers are still under pressure to sell products at such high price, with buyers placing orders only to meet rigid demand.

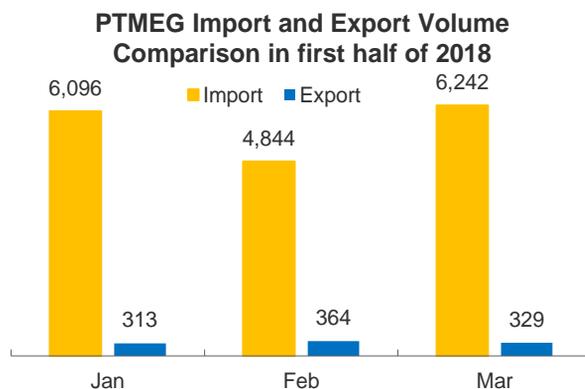
The price of TPU has mainly remained stable since it rose at the end of last year. The increased consumption of PTMEG by this sector provided some boost to the price of PTMEG. In the first half of the year, the price of PU resins for synthetic leather remained stable for a period of time and then declined. The overall operating rate in the industry stood at about 50%. As the price for raw materials declined recently and downstream demand is low, market participants are not optimistic about the future market.

Commentary



In the second half, most of the manufacturers will maintain normal operating rate, which will ensure a supply that can meet the downstream demands. From the fact that the import volume increased and the export volume decreased, it can be inferred that domestic demand is increasing. Thus, there is a good possibility that the price of these products will fall. but the role of costs in boosting the price cannot be neglected. It is expected that the PTMEG price will mainly move in a consolidation mode in the second half.

Imports and exports

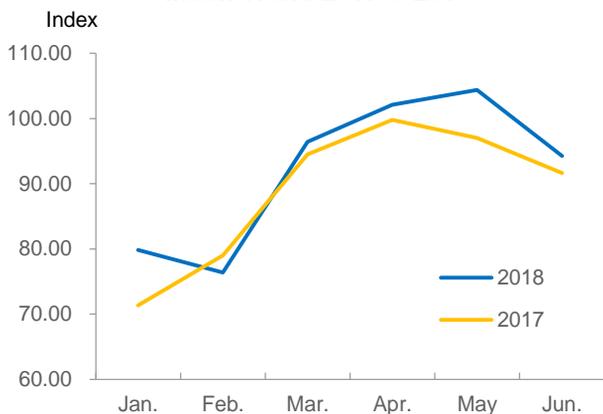


In 2018, the growth in China's PTMEG imports slowed down compared with last year. In the first quarter, the volume of imports reached 17,182 tons, increasing by about 3.6% year over year. Major import sources are Taiwan, South Korea and Japan. Whereas the export volume decreased from last year. In the first quarter, the volume of exports reached 1,006 tons, decreasing by about 42% year over year. The biggest destination for China's PTMEG exports was Thailand, which accounted for 95% of China's total PTMEG exports, followed by Turkey and Russia in order.

*Due to force majeure, updated data in this section will be delayed to next month

Furniture

National Building Materials Home Boom index Trend 2017 & 2018



In the first half of 2018, the overall performance of the national building materials household market is stable, with more new vitality emerging from the industry. As the traditional Spring Festival in 2018 is later, BHI starts from a higher level than last year. February becomes the lowest of first half year (the market closes for the Spring Festival). In March, BHI rebounds rapidly and rises to the highest point in May, and then it fell back In June. In the first half, the overall trend of BHI is higher than that of 2017.

The sales of building materials and household stores above the national scale in June were RMB 80.90 billion, down 11.21% month-on-month, up 4.60% year on year. In the first half of 2018, the cumulative sales volume was RMB 448.78 billion, up 10.23% year on year.

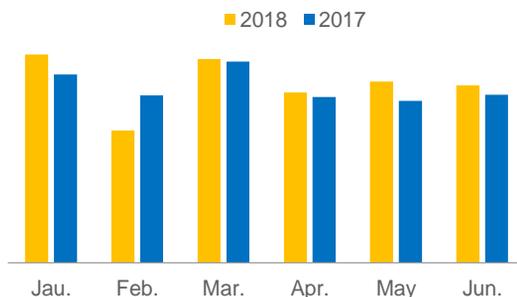
It is expected that the second half of the national real estate market regulation policy will continue to be strict; the national real estate market MPN will remain stable. In the current industry transformation and upgrading of the national building materials of home market has a new breakthrough, market pattern produced new changes and other positive factors, and it is expected to maintain a good momentum throughout the year.

TDI The price of TDI increased sharply, and the profit of the soft furniture industry is greatly compressed, which caused a

certain drag on the overall development of the industry. It is expected that the whole soft furniture market will be difficult to change in the short term.

Automobile

Automobile Production Trend 2017 & 2018 (10 thousand units)



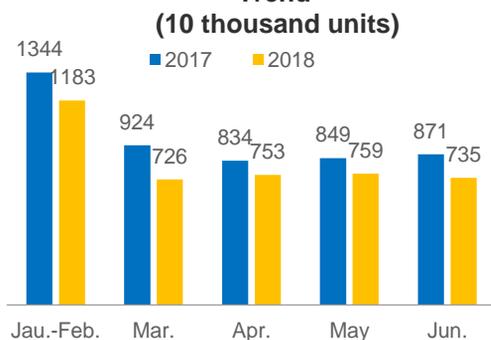
From January to June, automobile production and sales volume are respectively 14.0577 million and 14.0665 million, an increase of 4.15% and 5.57% year-on-year. Compared with the same period of last year, production growth slows down by 0.49% and sales growth increases by 0.83 %

Among them, the production and sales volume of passenger vehicles are 11.8537 million and 11.773 million, up 3.23% and 4.64% year on year. The production and sales of commercial vehicles total 2.04 million and 2.2911 million, an increase of 9.41% and 10.58% year-on-year.

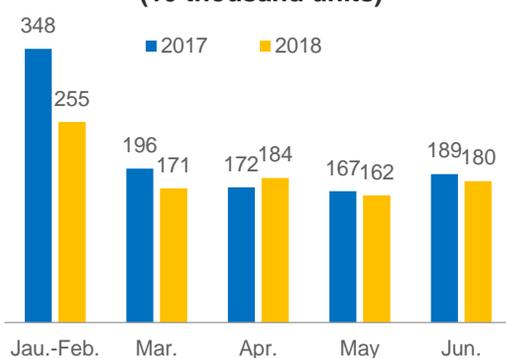
Between January and June, sales of the top 3 enterprises in the order are: Jiangling Holding, Zhengzhou Yutong, Foton, Baoding Changan, Nanjing Iveco, Jinlong Joint, Saic Chase, Jinbei Automobile, Xiamen Golden Dragon and Zhongtong Coach. From January to June, the enterprises sold a total of 176,500 vehicles of top 10 enterprises, accounting for 81.83% of the total sales of passenger cars.

Refrigerator & Freezer

2017-2018 Refrigerator Production Trend



2017-2018 Freezer Production Trend



In the first half of, China produced about 41.56 million household refrigerators, down 13% year-on-year. The decline in the production of refrigerators marks refrigerator industry as a sunset industry in China. Current sales are largely dependent on consumer substitution. Exports have also fallen since May. Meanwhile, in the trade war, refrigerators are involved in the 200 billion tariff list.

In the first half of 2018, China's household freezers' production is about 9.52 million, down 9% year-on-year. Similar to refrigerators. But later, with the development of cold chain industry, the terminal refrigeration display cabinet will benefit a lot.

Light Leather

According to the national bureau of statistics From January to April, China's light leather output is 205,344,700 square meters, a year-on-year increase of 10.71%. The output in April is 51.9582 square meters, a year-on-year increase of -0.11%.

Textile

The retail sales volume of China above-norm clothing, shoes and hats in the first five months of 2018 increases by 7.2%, 0.2% higher than the same period last year. Online retail growth has accelerated and the national online retail sales volume of clothing items increases by 20.6% in the first five months of 2017, 4.4% higher than the same period of last year.

The turnover of clothing, shoes, hats and knitwear above in the first 5 months of 2018 increased by 9.1% year-on-year to RMB 556.4 billion. The growth of online retail has been accelerated. From January to May, China's online retail sales of apparel products increased by 24.9% year-on-year.

Footwear

According to the National Bureau of Statistics, the national leather footwear industry has achieved a total output of 1273 million pairs in the first four months of 2018, a year-on-year increase of 1.15%. The production in April is 320 million pairs, a year-on-year increase of 3.21%.

Coating

From January to April 2018, China's total output of coating is 5.4 million tons, and the growth rate of coating production is 1.3 % lower than that of the same period in 2017. The situation is more serious. The main reasons for the decline in output growth are as follows : High pressure does not reduce from environmental protection, the situation not only impact to the coating production enterprises but also the downstream application industry. The early year order volume growth is slow. After the middle of 2018, when the use of coating surges, the growth rate will rebound. With the green transformation and technological innovation are driven by the high pressure of environmental protection, green development has reached consensus and the development of environment-friendly products has a large space, which will become a growth point in the second half of the year

From January to April, the industry's main business revenue reached RMB 105.972 billion with an increase of 5.4% year on year. The main reasons for the decline in growth from January to April period are as follows: Environmental protection situation is grim, coating and upstream and downstream enterprises present the quandary of more production stoppage and difficult to return to production.

From January to April, the total profit of the whole industry is RMB 6.301 billion, up 2.9% from the same period in 2017, and the profit margin of the whole industry is about 5.95 %. Profit margins grow at a rate of -2.2% from January to April period, down 6.69 % from the same period in 2017 and up 6.83% from the January to March. The main reason for the reduced profit margin is: Environmental pressure has led to a significant increase in investment and governance cost, commodity prices have raised.

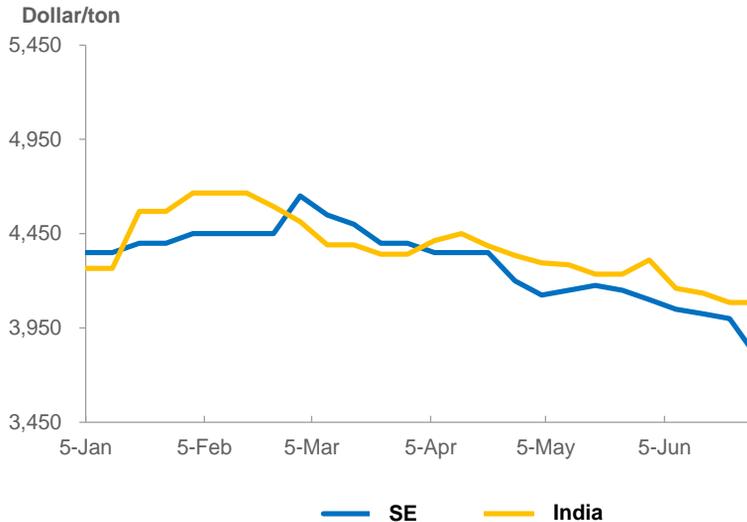
Adhesive

Since the second half of last year, adhesive prices have continued to rise. Recently, various adhesive giants have raised their prices, up to 16%. In 2018, due to environmental protection and overcapacity, the adhesive industry urgently needs to upgrade its industry and eliminate backward production capacity. But the “one-size-fits-all” approach to dealing with backward production capacity has undoubtedly put pressure on companies in the middle and lower reaches.

During the 13th five-year plan period, the overall development goal of China's adhesive and adhesive tape industry is to maintain annual average growth rate of about 8%, sales grew at an average annual rate of about 8.5%. The key products are mainly environmental protection performance and functional hot melts, water-based glue, photo curable adhesive and so on. Limit the development speed of solvent - based adhesive. In particular, concrete projects such as building energy saving glue and film, medical pressure-sensitive glue (tape), electronic glue and electronic packaging glue, automobile and high-speed iron glue and film should be developed. The total production of adhesives in China is expected to reach 10.34 million tons by the end of 2020.

TDI Markets in Southeast Asia and India

SE Asia and India TDI Price in 2018



Note: currently, southeast Asian markets include those in Thailand, Indonesia, Vietnam, Cambodia and Malaysia.

The TDI price in southeast Asia rose slowly at the beginning of the year and began to decline in March. At the end of June, the price of TDI in Southeast Asia was around USD 3,600-3,800/ton CIF, down by nearly USD 550/ton from the beginning of the year, but up by about USD 300/ton from a year earlier. The TDI price in India rose more rapidly than that in southeast Asia at the beginning of the year and reached its peak in February. After mid-February, the price in India began to fall at a pace that was slower than that in southeast Asia. At the end of June, the TDI price in India stood at USD 4,050-4,120/ton, down by about USD 150-200/ton from the beginning of the year, but up by USD 700/ton from a year earlier.

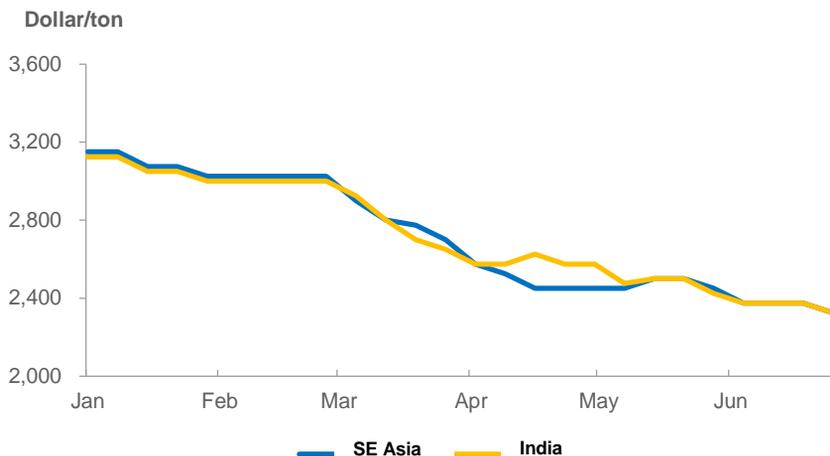
In terms of downstream demand, due to the high TDI price and the impact of exchange rate, foam manufacturers were not strongly motivated to make purchase. Especially in June, when Thailand, Vietnam, India and other countries entered rain season, and countries such as Indonesia and Malaysia entered the holy month of Ramadan, downstream manufacturers had sluggish demand and made purchase only on rigid demands. Therefore, the price of TDI fell significantly in June.

In addition, as India began to impose anti-dumping duties on TDI imports from China, Japan and South Korea last year, the three countries had less enthusiasm for exporting TDI to India. As a result, GNFC, the local TDI producer, has seen significant rise in its market share. Under the protection of anti-dumping duties, India's TDI price was higher than that in southeast Asia because of fewer competitors. GNFC also exported a big volume of TDI to regions such as Africa.

Looking ahead to H2, the TDI prices in southeast Asia and India are expected to largely remain stable. With the advent of Lesser Bairam in countries such as Indonesia in August, the TDI price will increase slightly. Also, in the second half, as market in China approaches the peak season of September and October, the demand for TDI will recover. This will have an effect on TDI markets in other parts of Asia. Thus, demands in Southeast Asia, India and other countries will also rise in August. But as some small downstream factories have been closed due to the prevalent devaluation of currencies of southeast Asian countries, the demand is expected to be more sluggish in the second half than in previous years. Besides, the start-up of Wanhua's 300k t/a TDI plant in Q4 will inevitably have an impact on the market.

MDI Markets in Southeast Asia and India

SE Asia and India MDI Price in 2018



Note: currently, southeast Asian markets include those in Thailand, Indonesia, Vietnam, Cambodia and Malaysia.

As there is no MDI plant in southeast Asia and India, markets there are supplied mainly by manufacturers in China, Japan and South Korea. In the second half of 2017, Sadara's MDI products began to enter these markets and capture market share. In the first half of 2018, the supply of PMDI in southeast Asia and India remained stable.

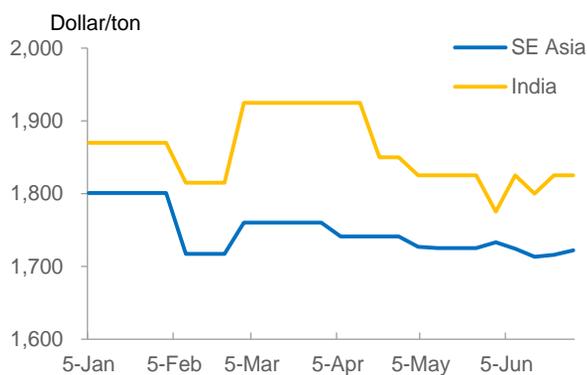
The PMDI price in southeast Asia and India remained flat in early 2018 due to the significant increase in the price in 2017. In the first two months, the price of PMDI for southeast Asia and India stayed at USD 3,000-3,200/ton CIF. After February, as the high price could not hold and buyers had a strong tendency to take a wait-and-see attitude, PMDI price began to show a downward trend, with March seeing the biggest drop. Into June, some countries in southeast Asia, such as Indonesia and Malaysia, entered Ramadan and as a result their MDI demands fell sharply. In addition, as countries such as India, Thailand, Vietnam and Cambodia entered the rainy season, which indicated the coming of busy farming season, the consumption of MDI also declined. All this led to continuing drop in MDI price. By the end of June, PMDI for Southeast Asia and India was quoted at USD 2,200-2,250/ton CIF, down USD 800/ton from the beginning of the year and USD 250/ton from the same time last year.

The published data shows that from January to March, China exported about 19,000 tons of polymeric MDI and 7,000 tons of pure MDI (both containing modified MDI) to southeast Asia (including Indonesia, Thailand, Malaysia, Vietnam, the Philippines, Singapore and Cambodia). From January to June, South Korea exported about 20,000 tons of PMDI and 10,000 tons of pure MDI. And from January to May, Japan exported about 10,000 tons of PMDI and 6,500 tons of pure MDI to the region. In the first half, demands for MDI (including PMDI I and pure MDI) from Southeast Asian countries are expected to be around 110,000 tons, remaining flat compared with last year. Of which Thailand has increased MDI demand, while other countries have decreased demand.

In the January-March period of this year, China exported 12,000 tons of PMDI and nearly 2,700 tons of pure MDI to India. South Korea exported 19,000 tons of PMDI to India and 3,000 tons of pure MDI in the first half. Japan exported about 9,400 tons of PMDI and 1,400 tons of pure MDI to India from January to May. In the first half of 2018, both PMDI and pure MDI consumptions in India are expected to remain flat compared with the same period last year. Both PMDI and pure MDI contain a lot of modified MDI.

PPG Markets in southeast Asia and India

SE Asia and India PPG Price in 2018



In the first half of 2018, the average price of flexible slabstocks polyols for Southeast Asia is USD 1,747/ ton CIF in bulk in cash. The average price for the same period in 2017 was USD 1,733/ton. This year is up USD 14 from the same period last year, which is generally relatively stable.

According to the PUdaily source, at the beginning of this year, the flexible slabstocks polyols is reported to reach shore in Southeast Asia at USD1750-1850/ton CIF in bulk in cash. That for India stands at USD 1840-1900/ton CIF in bulk in cash. In February, due to the Spring Festival, the market is relatively weak, demand destruction makes price goes down. PO prices continue to raise in March, driving the market for polyether up to about USD1,925/ton. But the downstream demand is mostly just demand, so the market mainly remains stable

Southeast Asia and other countries begin to enter the rainy season in April; the market demand is even weaker. In addition, Malaysia is close to the presidential election in May, with more and more uncertainties in the market. After entering June, countries like Indonesia entered Ramadan, with more holidays and weaker downstream demand. The market showed a trend of shock consolidation in May and June.

Markets in Southeast Asia and India are relatively stable. The trend is closely related to the Chinese market. However, the increasingly fierce Sino-us trade war since 2018 would certainly impact the polyether market in Southeast Asia and India. Market news mostly reflects weak demand

PO Markets in southeast Asia and India

In the first half of 2018, the PO production capacity of Southeast Asia, India and other countries remained at last year's level, which means no new production capacity is put into operation of this region in the first half. The mainstream production in Southeast Asia and India is still Dow chemical and Shell. Among them, Dow chemical has a HPPO device of 390,000 tons/year in Rayong prefecture, Thailand. Shell has two PO/SM factories in Jurong Island with a total production capacity of 425,000 tons/year.

According to the relevant data, Thailand exported 39,000 tons of propylene oxide to China, Taiwan and Australia in the first five months, down about 26% from last year. The main reason is that in the first half year of the Dow factory makes an overhaul for a month, production decline affected exports. The volume of Thailand's imported PO is less, only 80,000-ton from January to May, mainly from Korea and Saudi Arabia

Automobile

According to Frost&Sullivan, an international research agency, car output in southeast Asian countries is expected to reach 4.96 million units by 2022. Among them, Thailand will maintain its position as the largest producer of automobiles (2.347 million units), followed by Indonesia and Malaysia (1.47 million units and 746,000 units, respectively). Car sales in the region will reach 4.65 million units by 2022, making it the world's eighth largest car market behind China, the United States, India, Brazil, Japan, Germany and Russia.

From January to May 2018, 494,920 cars were sold in Indonesia, an increase of 5.86% from 467,529 units in the same period last year. Toyota, Daihatsu, Honda, Mitsubishi and Suzuki are the top five brands in terms of sales. The combined sales volume of these five brands for this period account for 85% of the total sales volume in Indonesia.

From January to May 2018, Malaysia produced a total of 241,582 cars, of which 224,945 were passenger cars. During the same period last year, the country produced a total of 223,139 cars, of which 206,859 were passenger cars and 16,280 were commercial cars. Thus, the year-over-year increase was 8.27%. According to market sources, the strengthening of Ringgit could lead to reduced exports of components and finished auto parts, thus helping to keep auto parts prices stable in 2018. In contrast, the Malaysian central bank has continued to tighten the loan requirements, making it difficult for low-income families, young people and small businesses to borrow money. The move will have an adverse impact on car sales in 2018. Other factors such as the government's policy on automobile industry, the improvement in the country's transport infrastructure and the increased car sharing will also have an effect on the automobile market in the long term. But the effect won't be shown in 2018.

From January to May 2018, the volume of car sales in Thailand totalled 401,264 units. Of which 153,179 units are passenger cars, up 15.99 percent from the same period last year when 132,059 vehicles were sold.

And 248,085 units are commercial cars, up 19.2 percent from the same period last year when 208,123 vehicles were sold. As for passenger cars, the top five brands (by sales volume) were Toyota, Honda, Mazda, Nissan and Mitsubishi. As for commercial cars, the top five brands (by sales volume) were Honda, Isuzu, Ford, Mitsubishi and Honda.

Refrigerator

In recent years, people have been increasingly talking southeast Asia as the "new factory of the world". Players in domestic industries see southeast Asia as a market with huge potential. In this context, home appliance giants have begun to expand into southeast Asian markets.

As the world's largest refrigerator manufacturer, Haier is actively expanding business in southeast Asia and India. With the completion of the expansion of its Indian plant in November 2017 and the technical support of its research and development center in Bangalore, 96% of the manufacturer's refrigerators sold there are now locally produced. Its "no pain" BM refrigerator has won a market share of 70%, which tripled within two years and ranks NO.1 in the category of its kind. In the southeast Asian countries covered by the Indian factory, sales of Haier's high-end refrigerators experienced exponential growth: In Vietnam, the company's T-door and side-by-side refrigerators capture the second biggest market share. In Indonesia, the sales of its AQUA brand grew by 47% against the backdrop that the country's refrigerator market declined by 9.7%. In Thailand, the sales of its T-door refrigerator also rank high.

Southeast Asia's home appliances production bases are concentrated in Thailand, Indonesia and Vietnam. Major refrigerator manufacturers that have factories in Thailand include Hitachi, Mitsubishi Electric, Samsung, Toshiba and Haier. In addition to meeting local demands, their products are exported to neighboring countries such as Malaysia and Singapore.



Furniture

Given the steady growth of economy, global furniture consumption and trade are expected to increase by 3.5% to 4.1% in 2018.

In 2017, Asia's largest furniture exporter was China, followed by Vietnam. In the year, Vietnam's furniture exports hit \$6.7bn, up more than 10% year on year and accounting for 6% of global furniture exports. Its biggest export destination was the United States, which made up 52 percent of the country's total exports. Vietnam is known for its wooden furniture. Most of wooden furniture makers have received orders for the midyear and even the year-end shipments. Targeting American and European customers, Vietnam will focus on developing mid- and high-end furniture in the future. Vietnam is expected to export \$8.66 billion worth of wooden furniture in 2018.

As one of the top 10 furniture exporters in the world, Malaysia is famous for its high quality and cheap furniture, which is exported to more than 160 countries. In 2017, the value of Malaysia's furniture exports reached 10.14 billion ringgit, up 6.4% year on year. The country's exports target is 12 billion ringgit by 2020. The Malaysian government encourages exports by providing export credits for small- and medium-sized furniture manufacturers.

Benefiting from the global economic recovery and the development of real estate industry, the furniture market in Thailand is expected to grow by 4.5% in 2018. The domestic sales and exports will amount to 46.5 billion baht. In January, Thailand's furniture exports maintained the growth momentum in 2017, growing 33% year over year.

In 2017, Thailand's furniture sales reached 44.5 billion baht (42.2 billion baht in 2016 and 40.5 billion baht in 2015), of which 36 billion baht (34 billion baht in 2016 and 32.5 billion baht in 2015) came from exports. Its furniture exports are expected to reach 37.6 billion baht in 2018. Of which 30% will go to Japan, 20% to the United States, 10% to Europe and 8% to China.

Indonesia is the world's leading furniture-manufacturing country. The government aims to export \$5 billion worth of furniture by 2019. In 2017, Indonesia's furniture industry turned the negative growth in 2016 into a positive one. In 2017, the value of the country's furniture exports reached \$1.6 billion, up 1% year on year. Currently, Indonesia lags behind Vietnam, Malaysia and the Philippines in furniture exports. The main obstacle to the development of Indonesia's furniture industry is the government's red tap. Many foreign furniture makers have moved their factories to Vietnam because of the excessive regulations and licensing.

Today, India is the 14th largest furniture market in the world. In 2017, India is the world's fifth largest Furniture making country. The size of Indian furniture market is expected to reach \$32 billion by 2019. In late 2017, IKEA announced that it would set up its global furniture and sofa manufacturing center in India.

Shoe Material

The footwear industry has long been an important industry for India, which not only creates jobs at home, but also increases the country's exports and thus the foreign currency earnings. In 2018, India grows into the second largest shoe-manufacturing country as well as a leading shoe exporter in the world. According to statistics, India can produce more than 2.2 billion pairs of shoes a year, accounting for 9.6 percent of global footwear production. The country is also the world's third-largest consumer of footwear. Thus, 90% of shoes made in India are marketed domestically and 10% are exported. 58 percent of shoes sold at home are men's shoes, and the sector is expected to maintain a CAGR of 10% in the coming years. With the development of the global economy and the rapid growth of India's economy, it is expected that India's footwear industry will boom in the future. Also, the Indian government provides strong support for the development of the industry. At the end of 2017, for example, the government came up with the plan to put \$400 million into the leather and footwear industries to boost employment.

As the third largest shoe-manufacturing country in the world, Vietnam produced approximately 1.2 billion pairs of shoes in 2017, accounting for 5.2% of the global shoe production. Also, Vietnam is the world's second largest shoe exporter in 2017, accounting for 7.4% of the global exports. Unlike India, about 86% of shoes made in Vietnam are for export and only about 14% of them are for domestic sale. Vietnam's shoe exports are expected to reach \$16bn in 2018, up 9.2 per cent year on year. After the Sino-U.S. trade war began, many leading sports brands in China planned to relocate their manufacturing plants to other countries. Adidas announced in June 2018 that it would relocate its manufacturing base from China to Vietnam. Puma is also considering relocation of its factory from China to another Asian country. Besides, Nike has invested heavily in shoe production in Vietnam in recent years because of the country's low labor costs and preferential policies.

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