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ACIDS

ACETIC ACID

ASIA’S ACETIC ACID POISED FOR MORE BALANCE AMIDST UNCERTAINTIES

BY HELEN LEE  JANUARY 2019

Asia’s acetic acid spot prices may experience comparatively reduced volatility in 2019 because of a more balanced market, although lingering uncertainties on the macroeconomic front will continue to cloud the sentiment of suppliers.

In the near term, suppliers are of the view that the downward correction phase - which started in October and corresponding with the decline of crude futures values - may prevail into January or February 2019, pending the start of the plant turnaround season in March 2019.

This is in view of rising output in China, balanced market conditions outside China and weak derivatives market performances.

Furthermore, downward trending upstream methanol values amid faltering upstream crude futures coupled with uncertainties on the macroeconomic front, weigh on the market sentiment, prompting most buyers to adopt a cautious stance.

Asia’s acetic acid spot prices consequently concluded 2018 by correcting downwards to the low-to-mid $500s/tonne CFR (cost and freight), their lowest levels in more than a year, amid subdued demand and rising output in China following the completion of plant turnarounds.

The overall operating rate of acetic acid plants increased to 89% of capacity by mid-December 2018, following the completion of plant maintenance shutdowns.

Feedstock spreads between methanol and acetic acid across Asia are at its lowest levels in a year but are expected to remain healthy in 2019.

LONGER TERM BALANCED VIEW

In the longer term, a lack of new acetic acid plant capacities coupled with an anticipated 6% GDP growth rate in China bolster the sentiment of producers.

In India, general elections in 2019 and its impact on the country’s economy on the other hand weigh on the general mood.
On the supply front, acetic acid capacity expansions in China in 2018 are expected to operate in full next year, while there are fewer acetic acid plants scheduled for turnarounds in the first quarter compared to the same period of 2018.

ACETIC ACID SUPPLY DISRUPTIONS

On the demand side, China continues to see the bulk of downstream plant capacity additions, which would offset new acetic acid plant capacities.

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ACETIC ACID SUPPLY DISRUPTIONS

On the demand side, China continues to see the bulk of downstream plant capacity additions, which would offset new acetic acid plant capacities.
Asia’s adipic acid (ADA) market may remain weak in the first quarter of 2019, as the outlook is expected to be dulled by the twin combination of new plant capacities in China and a paucity of healthy demand.

The ADA market is expected to see a slippery slope, with prices trending weaker going forward as uncertainties over the impact of the US-China trade row lingers.

Meanwhile, spot ADA prices for China-origin cargoes fell by $20-30/tonne on a weekly basis to $1,050-1,070/tonne CFR Northeast (NE) Asia in the week ended 19 December, according to ICIS.

The ADA prices for international-origin cargoes also dropped by $50/tonne at the high end to $1,350-1,400/tonne CFR NE Asia over the same period, ICIS showed.

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The recent price decrease was mainly attributed to the lower feedstock cost and prevailing sluggish demand.

Major Asian suppliers were compelled to slash prices in a bid to elicit buyers, as the downstream end-users were not keen to build stocks during the year-end lull.

"Buying interest will remain low before the Lunar New Year holiday in early February, as downstream users are already covered with enough stocks when prices fell in the past few weeks," said a major downstream user.

“If there is any buying to pick up, we have to wait till March when the peak demand season commences,” he added.

China and many Asian markets will be celebrating the Lunar New Year that begins in early February, traditionally celebrated for fifteen days.

Businesses are expected to be slow around half a month before and after the holiday.

Some small downstream PU plants may close their plants earlier ahead of Lunar New Year holiday, due to the decreasing export orders of finished goods in China caused by the ongoing trade war between China and the US.

“I think domestic prices in China may not be supported by the pre-holiday restocking in 2019 amid the trade war. If the local market in China were to remain soft, the Asia market will also be affected," a major Chinese supplier said.

On the supply side, China’s Henan Shenma Industrial is expected to start up its new 75,000 tonne/year new line by the first quarter of 2019, which will dampen market sentiment.

Other major suppliers Huafon and Shandong Hualu-Hengsheng Chemical will also start up their new 200,000 tonne/year plants by the end of 2019 or early 2020.

“We are not rushing to build stocks for 2019 given the increasing new supply from China,” a separate end-user said.

Overall, the market outlook is pessimistic, but the price downtrend will also be limited as most producers are facing the squeezed margins, and they will cut their operating rates to deter the price decline once prices fall below their cost.

A major Chinese producer has shut down its ADA line due to weak market sentiment and falling prices.

"We will reduce output if prices fall below our cost. We could not afford to lose money," a separate Chinese supplier said.
BY LI LI CHNG  JANUARY 2019

Asia spot etac prices are likely to track feedstock prices in the first quarter of 2019 as the overall market structure is one of balanced-to-long supply over largely stable but slow demand.

Spot prices fell steadily in the fourth quarter of 2018 to levels last seen in November 2017.

In the week ended 22 December, etac prices were at an average of $870-880/tonne FOB China, a $10/tonne decrease from the previous week.

This represented a 12.9% decrease since mid-October 2018, tracking feedstock acetic acid’s trend.

Acetic acid FOB (free on board) China spot prices shed more than 29% over the same period.

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Etac prices will largely track those of acetic acid, which are expected to remain bearish in the near term.

However, with new acetic acid supply coming on stream in China in 2019, and fewer outages expected in 2019 compared with 2018, acetic acid supply and prices are expected to see less fluctuation.

This will provide more stability to etac prices.

Demand from the key paints and coatings downstream sector will likely remain slow amid the seasonal lull, when the building industry slows down due to winter in parts of Asia.

Some re-stocking activities may be expected in January as end users had kept their inventory low at the end of 2018.

However, they are also unlikely to keep stock level high ahead of the Lunar New Year holiday that begins in early February and is widely celebrated in Asia.

Uncertainties and slowdown in the global economy and volatility in crude oil prices have impacted market sentiment for most of 2018.

The uncertain outcome of the US-China trade war after the 90-day truce, and the expectation of a slowdown in economic growth in many markets, continues to weigh on sentiment.

In one key Asia importing market, Japan, market players expected a steady 3-5% growth in etac consumption in the coming year, as the trend switches towards more environmentally friendly solvent to substitute solvents like methyl ethyl ketone (MEK) and toluene.

Demand from downstream application of acrylic pressure-sensitive adhesive is also expected to remain healthy in Japan.

In terms of supply, stringent environmental measures taken by the Chinese authorities may curtail operation rates at plants.

China’s Jiangmen Handsome Chemical Development’s expansion at its current Taixing site in Jiangsu will likely come on stream in mid-2019, delayed from 2018.

The new 500,000 tonne/year capacity will consist of 250,000-300,000 tonnes/year ethyl acetate; 150,000 tonnes/year butyl acetate; 100,000 tonnes/year butyl acrylate and 50,000 tonnes/year normal propyl acetate.

The producer is slated to relocate its butac/etac swing plant from Jiangmen to Xinhui, in Guangdong in 2020-2021.

It remains to be seen if demand picks up in 2019 to absorb the new supply.
ALCOHOLS

ETHANOL

ASIA-PACIFIC ETHANOL MARKET TO REMAIN UNDER PRESSURE

BY IZHAM AHMAD  JANUARY 2019

The Asia-Pacific market for fuel-grade ethanol and b-grade ethanol is expected to remain depressed in the early months of 2019 as demand has shown little signs of improving.

This is par for the course since many buyers had already secured enough cargoes to meet their immediate needs.

The US-China trade tensions put a lid to demand when China drastically increased import tariffs on US ethanol as part of retaliatory action against the US move to hit China’s exports with higher duties.

Prices of fuel-grade anhydrous ethanol rose to just shy of $500/cbm (cubic metre) CFR (cost & freight) southeast (SE) Asia in March 2018, but decreased to $431/cbm CFR SE Asia by early-December, mainly guided by values of ethanol futures.

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Prices of b-grade hydrous ethanol also gained to 2018 highs of $615/cbm CFR northeast (NE) Asia in March but then lost ground to around $570/cbm CFR NE Asia by the year-end, just about where they had started 2018.

Supply of anhydrous fuel-grade ethanol was ample from the US during April and September, as the corn harvest in the US continued at levels similar to the previous year.

Adding to the reduced demand from China, demand in the Philippines, the main export destination for US fuel-grade ethanol in southeast Asia, also decreased as the government there tried to raise requirements for blenders to purchase locally produced ethanol.

Philippines blenders are required to purchase certain volume of higher priced domestically produced ethanol under a quota system before they are allowed to import any material as part of efforts to support the local ethanol industry.

These efforts to support the domestic industry could persist in 2019 and further affect demand for fuel ethanol imports from the US.

But some relief could perhaps appear if the recent thawing of the tariff row were to result in China reducing its import tariffs on US ethanol.

Elsewhere, buyers in northeast briefly encountered difficulties securing b-grade hydrous ethanol from Brazilian suppliers due to logistical issues during a trucker strike in Brazil in 2018 which was then followed by heavy rains there.

Brazil's harvest/crush season resumed at healthy levels later in 2018 and that was supported as the northeast Asian buyers rebuilt their stocks.

Toward the end of the Brazilian harvest/crush season, demand in northeast Asia tapered off as inventories had been replenished and with some players eyeing the new harvest in Pakistan for more competitive prices.

In 2019, with the Brazil harvest essentially not yet started and with Pakistan unlikely to have much spot material left, prices could remain supported as demand would likely remain around similar levels.

There would also be some uncertainty over the ethanol volumes to be produced from the sugar industry given that ethanol prices have also been under pressure over the final months of 2018.

Ethanol in countries like Brazil and Pakistan are produced mainly from sugar cane but can also be produced from corn, wheat or cassava.
**ALCOHOLS**

**ETHANOLAMINES**

**ASIA ETHANOLAMINES MAY STAY SOFT ON WEAK UPSTREAM, SLOW Q1 DEMAND**

**BY KHENG WEE LOY**  JANUARY 2019

Asia’s ethanolamines markets may be weighed down by weak upstream ethylene and ethylene oxide (EO) values, as well as slow demand in the first quarter of 2019.

Recent spot prices of monoethanolamines (MEA), diethanolamines (DEA) and triethanolamines (TEA) for drummed cargoes have broadly been on the decline across Asia, in step with falling feedstock costs.

Notably, China has finalised anti-dumping duties (ADD) on imports of ethanolamines from the US, Saudi Arabia, Malaysia and Thailand, the Ministry of Commerce said.

The final levies were announced on 29 October, following an investigation that lasted one year.

However, the earlier preliminary ADDs in June and final ADDs in October did not appear to bolster the domestic prices, amid bearish market conditions particularly in the second half of 2018.

Domestic spot prices for MEA were pegged at yuan (CNY) 9,000/tonne EXWH (ex-warehouse) in mid-December, on average, 17.4% lower than the CNY 10,900/tonne EXWH in January, ICIS data showed.

MEA import prices in China were at $1,095/tonne CIF (cost, insurance & freight) China on 12 December, marking a 11% drop from the $1,230/tonne CIF China seen in January.

Similarly in India, MEA import prices plunged to $1,120/tonne CIF India in mid-December, down by 11.5%, from the all-year high of $1,265/tonne CIF India at the start of 2018, ICIS data showed.

In southeast Asia, spot values declined to $1,190/tonne CIF SE (southeast) Asia, softer by 8.5% from the $1,300/tonne CIF SE Asia over the same period, according to ICIS data.

These decreases generally tracked losses in upstream ethylene and ethylene oxide (EO) sectors.

Ethylene import prices nosedived towards the fourth quarter to hit around $870/tonne CFR (cost & freight) NE (northeast) Asia, nearly a 40% slump from those in January, ICIS data showed.
Local users are likely to place orders in January instead, but could require smaller volumes with the upcoming Lunar New Year holidays in early February.

Consumers in southeast Asia and India are anticipated to procure on a hand-to-mouth basis.

Regional supply is set to stay adequate, with a slight uptick possible given that some glitches heard previously in southeast Asia are said to have been resolved.

Many sellers face pressure to clear stocks and adjust offers, especially in China.

Domestic supply in China has been aplenty towards the year end, owing to curbed demand and high production inventories.

Some downstream sectors in China are expected to be less active during winter and have limited restocking requirements.

Ethanolamines are used to make personal care and household products, detergents and herbicides.
Asia methanol market is poised to see new capacities adding to the global pool of supply that may not allow prices to rebound to high levels seen in 2018.

Methanol spot prices saw large movements in 2018, quite a few upwards, which went against predictions made back in 2017 when participants expected prices to swing mostly downwards.

Market players were initially bullish when average spot prices in the key China market hit a high of $414/tonne CFR (cost & freight) China on 19 October 2018 - prices were last around this level in January 2018 and March 2014, according to ICIS data.

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However, upbeat market sentiment was reversed when prices fell over the next eight weeks to $273/tonne CFR China on 14 December, a drop of 34.1% and the lowest price point since June 2017.

There were a few bullish factors in 2018 that helped to support prices for most of the year, namely the US sanctions on Iran, delays in new plant start-ups, and to some extent, the US-China trade war.

A string of unscheduled plant shutdowns in southeast Asia and thriving demand from the Indonesian biodiesel industry helped to boost prices too.

Except for the latter part of 2018, higher crude prices for most of 2018 also supported methanol market sentiment and prices.

In 2019, many market players are not expecting prices to rebound to levels seen in 2018, and instead fluctuate around 2017 levels.

There are more bearish factors expected for 2019 as well, sources said.

Despite the full Iran sanctions coming into effect in November 2018, Iranian methanol producers were able to move significant volumes to China and India.

Many market players commented that they did not see too much of a difference before and after the sanctions, as regular buyers of Iranian materials did not see their businesses affected.

The situation is expected to remain unchanged in 2019.

In 2018, two major methanol producers delayed their plant start-ups, but nonetheless were able to achieve stable commercial operations in the year.

Natgasoline LLC, located in the US, with a nameplate capacity of 1.75m tonnes/year, and Marjan Petrochemical Company, located in Iran with a nameplate capacity of 1.65m tonnes/year, reached stable operations in end June and August 2018 respectively.

Another two major methanol plants, Kaveh Methanol Company located in Iran with a nameplate capacity of 2.3m tonnes/year, and Caribbean Gas Chemical Ltd (CGCL) located in Trinidad with a nameplate capacity of 1.5m tonnes/year, should come on line in 2019.

These plants are expected to have a prominent effect on the Asian market in 2019, adding significant volumes to the supply pool, and thus, weighing on prices.

The effects would be most prominent in China and India, which remain the two largest consumers of Iranian materials for the near future.

From late October to December 2018, ample Iranian spot materials were available in both markets, leading to a sharp price drop.

In India, average spot prices fell from $437.50/tonne CFR WC (west coast) India on 26 October to $246.50/tonne CFR WC India on 14 December.

Domestic ex-tank India prices saw a similar trend, falling from Indian rupee (Rs) 37.625/kg ex-tank India on 19 October to Rs20.75/kg ex-tank India on 14 December.

Demand for methanol in 2019 appears to be mixed as global economy forecast is bearish, and this is sure to affect many downstream buyers of methanol.

Demand from some downstream sectors may increase though, like methanol-to-olefins (MTO) plants.

A few MTO plants are expected to come on line in China that should absorb some material, but new methanol capacities would balance it out.

In southeast Asia, the Indonesian biodiesel industry was widely expected to see the fastest demand growth compared with other downstream sectors.

In addition, a major downstream methyl tertiary-butyl ether (MTBE) plant is set to come on line in Malaysia in 2019, absorbing a large portion of methanol produced there.
Downstream olefin prices should directly have an impact on methanol via the Chinese MTO industry throughout 2019, similar to what happened in the last quarter of 2018.

Ethylene prices fell from a near 2018 highs of $1,410/tonne CFR NE (northeast) Asia on 17 August to a multi-year low of $870/tonne CFR NE Asia on 7 December, a price level last seen in September 2015.

Similarly, propylene prices fell from a 2018 high of $1,185/tonne CFR China on 12 October to $850/tonne on 30 November, a level last seen in June 2017.

These weighed down on the profitability of MTO plants, causing some plants to shut down or lower their operating rates, and buy olefins and sell methanol instead.

The average operating rates in the Chinese MTO industry fell from 79% during the week of 12 October, to 63% in the week ended 14 December.

The drop in methanol consumption and the outflow of methanol from the MTO industry led to a softening in Chinese domestic prices.

Olefins prices in 2019 are expected to continue to come under pressure from longer supply compared with previous years.

Hence, some market players projected that the ceiling price for Chinese methanol to be lower for 2019.

Upstream crude prices would continue to influence methanol market sentiment.

With crude outlook for 2019 bearish due to ample production in the US and weak global economy, many methanol players do not see an opportunity for methanol prices to undergo a significant recovery in the year.
Oxo-alcohols

ASIA OXO-ALCOHOLS TO ENJOY SOME SUPPORT IN Q1

BY JOSON NG JANUARY 2019

Spot prices for oxo-alcohols in Asia could enjoy some support in the first quarter of the year on restocking ahead of the Lunar New year in the first week of February.

For n-butanol (NBA), supply in northeast Asia could start the year on the low side as Taiwan’s Formosa Plastics Corp (FPC) shut its NBA unit for maintenance in end of November. While the 250,000 tonnes/year unit restarted in December, the producer was also carrying out works on the jetty, meaning that exports of bulk cargoes was curtailed. The producer was putting finishing touches on the works in early January.

The run up to the Lunar New Year could also see some traditional restocking activities in the region.

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The post-holiday market could see some uncertainties as major feedstock propylene spot prices have declined following the week-long holiday for the last 2 years.

On the feedstock front, spot propylene prices in Q1 could see some support in the run up to the Lunar New Year in early February after ending 2018 on a dismal note.

The Lunar New Year factor should still come into play amid market uncertainties in the propylene market as Chinese buyers do have the traditional mindset of stocking up before they leave for their week-long holiday.

The key question is the amount of cargoes that they are prepared to buy.

On the demand front for oxo-alcohols, Chinese downstream markets could see some uncertainties due to the on-going trade war with the US.

While tensions have somewhat eased after the US and China reach trade truce but a final outcome is awaited.

With demand from various downstream markets and plasticizers unclear, off take could mirror developments in the upstream propylene market, where pre-Lunar New Year restocking activities are expected but the degree of buying remains unclear.

On the supply front, China will enjoy ample supply on paper but plant-operating rates will dictate prices in the domestic market.

In northeast Asia, there are no turnaround plans expected in the first quarter. Supply is expected to be stable.

Deep sea cargoes from the US could possibly increase as demand for oxo-alcohols in the country could decrease on weaker consumption from paint makers and plasticizers markets.

The situation in Europe is relatively harder to gauge, as there were a few variables in play.

Asia 2-ethylhexanol (2-EH) and N-butanol (NBA) spot prices started and ended 2018 in roughly the same price trend.

Prices peaked in the middle part of the year and gradually came down from October, following a swift drop in the propylene spot market.

2-EH average price in east Asia was $1,040/tonne CFR (cost and freight) E (east) Asia on 5 January. It was $1,055/tonne CFR E Asia in the end of December.

NBA spot price was $910/tonne CFR NE (northeast) Asia in 5 January. It was $860/tonne CFR NE Asia in end of November, according to ICIS data.
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AROMATICS & DERIVATIVES

BENZENE

ASIA’S BENZENE TO CONTINUE STRUGGLING WITH LONG SUPPLY

BY CLIVE ONG  JANUARY 2019

A long supply scenario aptly describes the Asia benzene market in 2018, a situation unlikely to change in 2019.

With limited outlet to the US and other destinations, most of the volume produced has remained within Asia, and in 2019 ample supply is expected with new capacity across Asia and the Middle East due to come on stream.

However, a majority of new downstream capacities of key downstream styrene monomer (SM) are also planned to come onstream from 2020 and beyond.

This lead and lag between benzene and SM start-ups is expected to cause temporary imbalances between demand-supply dynamics in 2019.

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- Validate commercial and growth strategies

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After all, the pause in the trade war remains temporary with no guarantee of resolution in the near term.

"Demand in China will continue to grow but is hampered by the ongoing trade dispute," said a producer in Korea.

Meanwhile, the spot east-west arbitrage window, which was not viable for most part of this year, shows little signs of opening up next year.

Demand for Asia benzene from the US remained lacklustre in 2018 year with shutdowns at major SM plants.

Sellers harbor hopes that the situation may change in 2019, for if there were less SM outages next year, demand in the US for Asia benzene could revive.

"Spot arbitrage opportunities to the US was limited this year, hopefully that will change next year[2019]", said a trader in Korea.

Based on the current start-up schedule, it appears that benzene supply in Asia and the Middle East will increase by 3.6m tonnes in 2019, while the total increase for SM is expected to be around 2.2m tonnes.

The benzene market has weakened from the third quarter as the US-China trade war escalated.

Spot prices, which were hovering between $800 and $900 per tonne in the first half of the year, crashed to below $700/tonne in the fourth quarter, ICIS data showed.

The temporary truce in the trade war, emanating out of the G-20 summit in Argentina in early December, is expected to buoy the market to some degree into the first quarter.

"Firmer crude futures on the trade war pause should help the benzene market in the near term," said a trader in Singapore.

Benzene is a base chemical used to make other chemicals like styrene, phenol and caprolactam.

However, market players remained cautious after the downside volatility seen in the fourth quarter.

![BENZENE & SM PROJECTS](chart)

![BENZENE/NAPHTHA SPREAD](chart)
Supply of paraxylene (PX) in Asia should gradually lengthen as a result of PX capacity expansion growth, driven by two large production units coming on stream in the key China market this year.

Hengli Group’s PX new capacity would stand at around 4.5m tonnes/year, while Zhejiang Petrochemical Corporation will be able to produce 4m tonnes/year of PX.

PX is a feedstock for purified terephthalic acid (PTA), which mainly goes into polyester fibres and polyethylene terephthalate (PET).

Around 98% of PX is used for PTA or dimethyl terephthalate (DMT) production.

China is the key PX demand hub globally, with the country being net-short and heavily reliant on imports.

Furthermore, global demand growth is mainly driven by China, with China’s PTA production capacity standing at around 57% of total global PTA production capacity.

In 2017, China imported around 14.4m tonnes of PX, while imports in 2018 from January to November stood at 14.3m tonnes.

China PX imports in 2019 are expected to decline from the previous year as a result of new PX capacities being added within the country.

Aside from the two mega COTC projects, Sinopec is planning to start up a new 800,000 tonne/year PX unit in the third quarter of 2019. The PX unit is located in Hainan, with mixed xylenes being its main feedstock.

Towards the end of 2018, two idled PX capacities restarted due to improved PX production margins.

The PX and naphtha price differential has risen above the 3-year average price since August 2018, as seen in the chart above.

Indonesia’s Trans Pacific Petrochemical Indotama (TPPI) restarted its 550,000 tonne/year PX unit in October 2018. The unit had been shut since May 2014.

China’s Fuhaichuang Petrochemical, formerly Dragon Aromatics (Zhangzhou), also resumed PX production at one 800,000 tonne/year PX line on 25 December 2018.

Its other 800,000 tonne/year PX line is expected to restart in January 2019. Both PX lines were shut after a massive fire in April 2015.

In the last two years, PX demand has been supported by strong growth in the key Chinese downstream PTA and polyester markets.

In both years, downstream demand saw double-digit growth, compared to the more typical 6-7% annual growth.

A 10% demand growth in China implies that 2.5m-3m tonnes/year of new PX capacity is required.

However, demand growth outlook is unlikely to see more double-digit growth in 2019, amid a bearish macroeconomic environment.

PX supply in Asia will be in excess in the near term once smooth operations have been achieved at the new PX capacities.
Furthermore, there are limited new downstream PTA facilities scheduled for startup in 2019, with the majority of new PTA capacity only expected to be added in the year 2020.

However, there might be a little relief for Asian PX following the announcement of the closure of Chevron Philips Chemical’s 495,000 tonne/year PX unit located in Pascagoula, Mississippi.

This might allow an increase in trade flows of Asian PX to the US.

### PX NEW CAPACITY

<table>
<thead>
<tr>
<th>Company</th>
<th>Country</th>
<th>Location</th>
<th>Capacity ('000 tonnes)</th>
<th>Expected startup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hengli Petrochemical</td>
<td>China</td>
<td>Dalian</td>
<td>4,500</td>
<td>Q3 ’19</td>
</tr>
<tr>
<td>Saudi Aramco</td>
<td>Saudi Arabia</td>
<td>Jizan</td>
<td>800</td>
<td>Q4 ’19</td>
</tr>
<tr>
<td>Sinopec Hainan No 2</td>
<td>China</td>
<td>Hainan</td>
<td>1,000</td>
<td>Sep/Oct ’19</td>
</tr>
<tr>
<td>Zhejiang Petrochemical (Zhoushan)</td>
<td>China</td>
<td>Zhoushan</td>
<td>4,000</td>
<td>Q3 ’19</td>
</tr>
<tr>
<td>Hengyi Brunei</td>
<td>Brunei</td>
<td>Pulau Muara Besar</td>
<td>1,500</td>
<td>2020</td>
</tr>
</tbody>
</table>

### PTA NEW CAPACITY

<table>
<thead>
<tr>
<th>Company</th>
<th>Country</th>
<th>Location</th>
<th>Capacity ('000 tonnes)</th>
<th>Expected startup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sichuan Shengda</td>
<td>China</td>
<td>Sichuan</td>
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<td>JBF</td>
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<td>end-19</td>
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<tr>
<td>Hengli Petrochemical</td>
<td>China</td>
<td>Changxing</td>
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<td>Q4 ’19</td>
</tr>
<tr>
<td>Zhongtai Kunyu</td>
<td>China</td>
<td>Karamay</td>
<td>1,200</td>
<td>2020</td>
</tr>
<tr>
<td>Zhongjin PC</td>
<td>China</td>
<td>Ningbo</td>
<td>3,300</td>
<td>2020</td>
</tr>
<tr>
<td>Formosa</td>
<td>China</td>
<td>Ningbo</td>
<td>1,500</td>
<td>2020</td>
</tr>
</tbody>
</table>
Movements in Asia’s styrene market for the first quarter of 2019 are likely to hinge on the viability of deep-sea arbitrage flows from exporters in the West and buying appetite from several downstream sectors.

In most parts of 2018, Asian SM prices have remained the highest in the world – particularly so even after the implementation of anti-dumping duties (ADDs) on cargoes from South Korea, Taiwan and the US since June 2018.

Prices have been mostly supported by increased spot activity and demand from Chinese importers in early part of 2018 amid limited contractual requirements signed, with the uncertainty of the ADD panning out and heavy maintenances taking place.

Subsequently, the market was supported in the third quarter of the year because of limited supply of non-ADD cargoes since buyers preferred to minimise their procurement risk for ADD cargoes.

Since the fourth quarter of 2018, however, it became evident traders and sellers have started to find opportunities for non-ADD supply elsewhere such as Europe – which is typically balanced in terms of demand-supply – to boost spot trading liquidity.

“Traders try to swap the US cargoes out to Europe and then bring the European cargoes here, since exports from the US to Europe were already common and they are just adding on to the volumes,” one trader said.

The mostly wide price differential between CFR China and prompt FOB Rotterdam prices was clearly in the favour of sellers for these arbitrage cargoes as well.

Volumes from Europe going into China have increased exponentially from June-July 2018 in comparison to the past three years, when cargoes are typically exported towards year-end ahead of the clearing of inventories to avoid heavy tax levies.
European cargoes are currently not subject to any form of ADDs by China and this has been resulting in much higher than expected inventory levels at east China main ports, as ICIS data continues to hit new highs since the end of November.

The burning question now is whether this newly established tradeflow will continue going forward into the first few months of 2018.

Majority of the market expect at least 10,000-20,000 tonnes of product will still be available on a monthly basis from Europe to China, with volumes being able to hit close to 30,000-40,000 tonnes on some months.

"Already we are seeing at least 15,000 tonnes of Europe-origin arrivals for January and February respectively, which means that this deep-sea arbitrage flow will continue but the magnitude will still be dependent on spreads and how long Western supply is," one major Chinese importer at east China said.

This was amid the unexpected outage at one of Trinseo’s Netherlands plant since 10 December, which is likely to weigh on the number of exports available for Asia.

Supply from other regions that provide non-ADD cargoes is unlikely to cease in the short run, given that margins are still above the 2017 average and there is still weakness in the upstream benzene market expected for early 2019.

However, the supply flow to China from regions such as southeast Asia and the Middle East has always been present and may have less impact on the market.

"We probably need to look at Thailand as the next opportunity, as some traders may swap cargoes from Thailand/Singapore/Malaysia out for export to China if there are selling pressures in Taiwan and South Korea," one northeast Asian buyer said.

The second price and market trend determinant will be the consistency of demand from downstream EPS, PS and ABS from China and outside of China.

Run rates in domestic China for these three key markets are close to the highest level for 2018, with expectations it could perhaps maintain the momentum to early 2019 because of healthy downstream spreads.

This was a reversal of the situation in early 2018, when some PS makers switched to buying PS instead of styrene because of the better netbacks and poor PS production economics.

Imports for PS - both GPPS or HIPS - hit a high of around 108,000 tonnes in July 2018, a level unseen in the past three years, customs data showed. For the same corresponding month, SM import volumes were only at around 220,000 tonnes.
A key reason is because the potential supply loss could have already been factored in by market players before it happens, as some end-users in South Korea and Taiwan preparing much earlier beforehand for December or January arrivals from the US.

“The maintenances were already a given since September and October, when producers started to announce their plans and asking end-users to prepare way in advance since there may not be any spot cargoes available in end-March and April from one or two majors,” one traders said.

The expected supply shortage, however, could cause a reverse rift between CFR NE Asia and CFR China prices during that period – given that units undergoing turnarounds are mostly producing ADD-origin product.

As of late 2018, prices between these two regions have been widening as selling pressures emerge for ADD-origin product, with sellers having to offload cargoes into northeast Asia because of potentially better netbacks in comparison to the Chinese import market.

Naturally, CFR NE Asia prices started to trend lower than CFR China since Taiwanese, Hong Kong and South Korean buyers have been receiving much more competively-priced offers.

Should ADD-origin cargoes be lower in volumes, it could result in CFR NE Asia prices going on par with CFR China or even higher, reversing the current trend of CFR China prices being higher than CFR NE Asia, several market participants said.

The expected supply increments in China after the construction of mega refineries begun, which have been a key concern since 2017, could take a backseat as market players expect production delays to extend into end-2019 and early 2020.

Separately, in northeast and southeast Asia, end-users were facing a different predicament and better production spreads was not exactly their push factor for current spot procurement.

Buying activity for January and February parcels mostly stems from the lack of confirmation for contractual cargoes next year, with some term negotiations still yet to be concluded between some domestic suppliers and end-users as of the time of this article publication.

Furthermore, with the US-China trade war still playing out for tariffs on ABS downstream home appliances market at the backdrop, end-users find it tough to be bullish.

ABS producers in the northeast Asia region typically sells cargoes to China to downstream end-users and these end-users will sell the finished products into the US usually.

Separately, while there is market belief the heavy maintenance schedule at several producers’ plants in the Asia region, starting mostly from February, will lead to positive impact on prices – it may not be the key determining factor.
“It would be a stretch to say that the three major plants coming up can start up and have regular production towards the end of 2019, because they have a lot of other technical aspects to iron out first in the upstream refinery units,” one Chinese trader said.

Despite the presence of all these demand-supply factors at play, there is a nagging suspicion at the back of everyone’s minds that sentiment play and traders’ position taking could still result in market shifts that are beyond expectations.

"Ultimately, it depends on how the big traders’ sentiment will evolve and how speculative the futures market will become as SM becomes the a dominant product on the Huaxi Securities Exchange after MEG gets listed on a second platform - the Dalian Commodity Exchange - subsequently," one Chinese small end-user said.

### NEW START-UPS IN CHINA (2019-2020)

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
<th>Capacity ('000 tonnes)</th>
<th>Estimated start up timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sinopec SK-Wuhan</td>
<td>Hubei, Wuhan</td>
<td>27</td>
<td>Jan-Feb 2019</td>
</tr>
<tr>
<td>CITIC Zhongxin Guoan</td>
<td>Dongying, Shandong</td>
<td>200</td>
<td>Mar-Apr 2019</td>
</tr>
<tr>
<td>Zhejiang Petrochemical</td>
<td>Danshan, Zhejiang</td>
<td>1200</td>
<td>H2 2019</td>
</tr>
<tr>
<td>Hengli Petrochemical</td>
<td>Liaoning, Dalian</td>
<td>720</td>
<td>H1 2020</td>
</tr>
<tr>
<td>CNOOC-Shell</td>
<td>Huizhou, Guangdong</td>
<td>700</td>
<td>H1 2020</td>
</tr>
<tr>
<td>Abel Chemical</td>
<td>Taixing, Jiangsu</td>
<td>500</td>
<td>2020</td>
</tr>
<tr>
<td>Sinochem Quanzhou</td>
<td>Quanzhou, Fujian</td>
<td>450</td>
<td>H2 2020</td>
</tr>
</tbody>
</table>

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Asia’s toluene poised for higher spot liquidity amid volatility

By Trixie Yap  January 2019

Asia toluene is poised for increased spot trading liquidity and cargo availability, be it free-on-board (FOB) Korea basis or cost-and-freight (CFR) China, though demand in the downstream benzene market is seen slightly weaker in the first quarter.

Buying interest from key importer China will remain a wildcard.

For the most parts of 2018, especially the first half of the year, toluene prices have been mostly trending in line with downstream benzene prices because of the healthy production spreads via the toluene disproportionation (TDP) unit process.

The average spreads between benzene and toluene, as well as between isomer xylenes and toluene, were above the typical producer break-even level. Levels surged to beyond $100/tonne on average in first-half 2018.

As a result, a large part of toluene was allocated for benzene production, especially in northeast Asia namely South Korea and sometimes Taiwan, because these two regions tend to be slightly short on supply.

Demand was healthy from these few regions and it was the key market driver, even if Chinese import buying interest was lukewarm throughout the year.

It led to lower supply from South Korea as well, as several integrated refineries placed more toluene for benzene production instead of selling it in the merchant market.

The country remained as a net importer through the months leading up to the third quarter of 2018.

However, starting the third quarter of 2018, there has been a change of fortunes with TDP production spreads narrowing significantly and toluene prices surging past benzene prices for at least a month.

This anomaly was mostly attributed to weak benzene fundamentals and slight prompt supply shortages at Chinese importers’ tanks.

Despite the resolution of prompt supply shortage after a month, benzene prices continued to trade almost flat to toluene prices and as a result, the emergence of lesser toluene demand from the TDP sector became more evident.

There was either a cut in the percentage of toluene used for benzene production, with some producers focused on more mixed aromatics to extract isomer xylenes from the pool, or a total reduction in average run rates for the smaller units.
Such a situation is likely to extend into the first quarter of 2019, with the benzene-toluene spread still less than $40/tonne on average in the last few weeks of 2018, ICIS data showed.

This in turn could result in a potential increase of spot availability for the merchant market and trading opportunities if some producers do not have the need to allocate it for downstream units.

Furthermore, because of squeezed trading margins this year for buyers who took FOB Korea contracts, there were no firm willing parties who wanted to renew their term contracts with producers.

Some producers as a result have been in the market for January-loading parcels since there were no contractual requirements needed to be fulfilled.

"The spot cargoes would have to be sold either ways, by traders or by producers themselves, but most of the time the producers will sell FOB since they do not want to bear the operational costs and risks," one southeast Asian trader said.

So far, the only conclusion of 2019 contracts between producer and trader is Taiwan’s CPC Corp and some producers in southeast Asia such as Thailand.

All were concluded at lower premiums in comparison to 2018.

The slight increase in usage of heavier naphtha feedstock during the first few months of the year, because of higher costs for using lighter liquefied petroleum gas (LPG) feedstock, is likely to add on the spot availability from pygas-based producers.

There are however expectations that such supply will taper off from second-half February onwards because of scheduled maintenances that are likely to happen at several producers’ units including LG Chemical’s Daesan aromatics unit.

Buying interest in the first quarter from the wildcard importer – China – will be the second key determinant for the potentially higher pace of spot trading activity.

This is despite the rising inventory levels at main east China public shore tanks since December 2018.

"Importers are still there for various reasons, be it to average out their earlier costs from November or to get wider credit terms from procuring CFR cargoes or to take position because of expectations that the market is close to the bottom," one Chinese trader said.

Furthermore, a lack of signed contracts for CFR China cargoes for 2019 – a situation that mirrored that in the FOB
Korea market – meant that buyers must emerge in the spot market if they had buying requirements.

Hopes for end-users entering the market after the Lunar New Year to replenish stocks led market players to believe that import demand could improve as well.

However, rising domestic supply due to new capacity expansions could still cap overall CFR China demand, even if these increments are no longer as large as the plants which started between 2016 and 2018.

There is also a fear of additional spot supply from domestic producers, following the implementation of GBVI gasoline from 2019 in most provinces in China, because of the lower aromatics content required for the blending pool.

Already, exports from China have emerged because some major refineries are looking to seek out new opportunities and open trade routes, should there be limited usage from their integrated system for gasoline blending.

The key destination for China exports is still South Korea for the time being because of the freight convenience and logistical costs.

In contrast, southeast Asia and Indian import demand is unlikely to reflect any large changes since downstream buyers are mostly in the solvent industry, where the growth rate per year is expected only at 1-2%.

“Ultimately, it is the same old situation every year but this time China buying behaviour will be less predictable than before owing to their lower dependency on imported product,” one trader said.
Asia’s isomer-grade xylenes (IX) market sentiment is likely to stay positive in the coming months on increased demand from the planned startups of downstream capacities in the region.

A few substantial downstream paraxylene (PX) plants are expected to start up in 2019, increasing the appetite for feedstock isomer-grade xylene.

In comparison, the capacities of fresh feedstock IX capacities planned to come online in 2019 are lesser than that of downstream PX.

One thousand tonnes of IX produces around the same quantity of PX.

A 500,000 tonne/year reformer/disproportionation unit in Japan will be permanently shut down from end-March 2019, according to a company’s source.

IX prices were driven higher by positive margins with downstream PX this year, a trend likely to continue as more PX capacities on stream later.

The Asia IX and PX spread has been above $400/tonne since end-August on the back of firm PX values, according to ICIS data.

The spread was at $466/tonne on 3 September, which is the highest levels since March 2011.

The break even for regional end-users was $120-140/tonne.

Market participants attributed the spread to overall firmer PX prices, supported by regional turnarounds and buoyant downstream futures.

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Est. start up</th>
<th>IX capacity ('000 tonne/year)</th>
<th>PX capacity ('000 tonne/year)</th>
</tr>
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<tbody>
<tr>
<td>Hainan Refinery</td>
<td>Q3 2019</td>
<td>240</td>
<td>1,000</td>
</tr>
<tr>
<td>Zhejiang Petrochemical</td>
<td>Q3 2019</td>
<td>Not disclosed</td>
<td>4,000</td>
</tr>
<tr>
<td>Fuhaichuang (Dragon aromatics)</td>
<td>Q1 2019</td>
<td>1,360</td>
<td>1,600</td>
</tr>
<tr>
<td>Hengli Petrochemical</td>
<td>Q3 2019</td>
<td>3,800</td>
<td>4,500</td>
</tr>
</tbody>
</table>

“PX is definitely the main driver of IX price movements compared with benzene next year,” a trader said. “Benzene is so weak [in 2018], and more capacities are coming up [for 2019].”

Isomer-grade xylene is produced alongside benzene and toluene, and producers tend to look at margins of the three products as a whole rather than focus on just one.

In 2017 aromatics producers were usually driven by benzene margins but that changed in 2018.
This was because margins between naphtha and benzene fell steadily with the spread falling to between $133-227.50/tonne so far from August 2018.

Due to increased PX demand, market participants expect the spread between IX and feedstock naphtha to remain positive and the US arbitrage to open up.

Spread between FOB (free on board) Korea IX and CFR (cost & freight) Japan naphtha has been above $180/tonne since July 2018, hitting an intra-year peak at $293/tonne on 9 November.

"IX has been the most profitable compared with the other aromatics also because supply of IX in Asia is snug due to light feed at certain crackers," a regional producer commented.

Lighter feedstock in certain crackers produces lesser IX and solvent-grade xylenes.

Term contracts for 2019 have so far been concluded at higher levels compared to 2018, an indicator of a stronger market ahead.

In Taiwan, state-owned CPC Corp, for one, has committed close to 20,000 tonnes/month in total to its term buyers at a discount of between $5-7/tonne on a FOB Korea basis, sources said. Its 2018 term cargoes were sold at a discount of $11-13/tonne to FOB Korea prices.

Northeast Asian traders have sold the term cargoes to Taiwan’s largest buyer Formosa Chemical and Fibre Corporation at discounts of around $9/tonne on a CFR Taiwan basis, a narrower discount than 2018 contract prices of around CFR Taiwan minus $12/tonne, sources said.

A southeast Asian seller sold at a discount of $10/tonne on FOB Korea basis which is $5/tonne higher compared with 2018’s term contract prices.

A northeast Asian seller was in talks for 2019 term contract prices at $3-5/tonne premium to the FOB Korea price, which is higher compared with flat prices in 2018.

China is likely to remain intermittent importer of IX cargoes, as the usage of IX in gasoline blending remains unattractive amid gasoline supply glut.

While wider IX/Toluene spread in 2018 rendered IX unfavorable as a gasoline blendstock, the situation is expected to continue for 2019 while toluene remains well supplied. Furthermore, China will implement a National VI emission standard from January 2019, setting a lower maximum aromatic content of 35 percent from 40 percent in the earlier National V standard.

The country’s environmental protection agency requires lesser emission from vehicles by adapting fuel specifications.

<table>
<thead>
<tr>
<th>Property</th>
<th>China V</th>
<th>China V/A</th>
<th>China V/B</th>
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<td>45-85 (Winter), 40-65 (Summer, May-Oct)</td>
<td>45-85 (Winter), 40-65 (Summer, May-Oct)</td>
<td>47-80 (Winter, May-Aug), 42-62 (Summer, May-Aug), 45-70 (Spring/Fall, Mar/May-Sep-Nov)</td>
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By Matthew Chong January 2019

Asia’s spot import prices for Group II low viscosity 150N as well as high viscosity 500/600N base oils are expected to come under further pressure in the first quarter of 2019 as a result of long supply.

Group II spot supply from northeast Asia is set to rise as refiners in this region have switched back to producing more base oils instead of gas oil following the plunge in crude and gas oil prices since early October.

Declines in gas oil prices slumped to an 18-month low on 2 January, tumbling 36% to $455/tonne FOB (free on board) Singapore from its 2018-high of $709.5/tonne FOB Singapore recorded on 12 October 2018, according to ICIS data.

Taiwan’s Formosa Petrochemical Corp (FPCC) and most South Korean refiners – the main spot exporters of Group II cargoes – have resumed full base oils production after having cut their base oils output by around 10-20% in October and November 2018 to switch to produce more gas oil, which was generating better margins at that time.

In South Korea, three of the four refiners in the country have recovered their base oils production to full capacity in mid-November, while the other refiner has resumed its normal operating rate at around 80% capacity.

The expected increase in Group II supply going forward will continue to weigh on prices, with the India market especially hard-hit as Asian suppliers will have to face stiff competition from the Middle East- and US-origin material.

The same could also be said for Group III base oils whereby lower-priced Middle Eastern cargoes is set to gradually expand their market share in Asia including India.

Besides South Korea being the main Group III export nation in Asia, Malaysia’s Petronas and Indonesia’s Pertamina also produce Group III base oils.

South Korea’s S-Oil will shut its 880,000 tonne/year Onsan Group III unit in March 2019 for scheduled maintenance which will likely result in lesser spot availability from the refiner in the first quarter. SK Lubricants is the other Group III refiner in South Korea.

Upcoming capacity expansions in Asia such as China’s Hengli Petrochemical’s (Dalian) 540,000 tonne/year Group II and III base oils units, slated to come on stream in Q1 2019, will aggravate the oversupply situation even further, albeit new start-ups may not run at high rates amid long supply and poor market sentiment.

For Group I, SN500 and brightstock prices are expected to track the broader movements of Group II prices although the overall supply of Group I material is relatively tighter than that of Group II.
Japan’s JX Nippon & Energy, a major exporter of Group I cargoes, will be taking several of its Group I base oils units in turns for maintenance in Q2 and Q3 2019, including its 180,000 tonne/year Mizushima A, 300,000 tonne/year Mizushima B and 200,000 tonne/year Kainan units.

The refiner has another 240,000 tonne/year Negishi Group I unit which is not scheduled for a turnaround in 2019.

Iran Group I cargoes is also expected to be less prevalent in the India market due to uncertainties following the renewed US sanctions on Iran in early November 2018, which will likely result in Indian buyers sourcing more of their imports from Asia.

General demand in Asia including India is expected to remain sluggish in January as global economic concerns in 2019 will likely weigh on market sentiment.

Demand is unlikely to see any significant improvement until the second half of February at the earliest after the Lunar New Year in early February, as downstream plants in China and Taiwan especially, will be closed for at least one to two weeks from late January.
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20 - 22 February 2019, London  
[www.icisevents.com/worldbaseoils](http://www.icisevents.com/worldbaseoils)

**The 14th ICIS World Olefins Conference**  
06 March 2019, Monaco  
[www.icisevents.com/worldolefins](http://www.icisevents.com/worldolefins)

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September 2019, Boston  
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**The 8th ICIS European Butadiene & Derivatives Conference**  
September 2019, Europe  
[www.icisevents.com/europeanbutadiene](http://www.icisevents.com/europeanbutadiene)

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September 2019, Chicago  
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**The 7th ICIS Indian Base Oils & Lubricants Conference**  
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**The 7th ICIS US Butadiene & Derivatives Conference**  
December 2019, New York  
[www.icisevents.com/usbutadien](http://www.icisevents.com/usbutadien)

**The 16th ICIS Middle Eastern Base Oils & Lubricants Conference**  
October 2019, Dubai  
[www.icisevents.com/mebaseoils](http://www.icisevents.com/mebaseoils)

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Downstream alumina refineries located in east India typically use cargoes imported from northeast Asia. Domestic trade with caustic soda producers located in west India is therefore infrequent due to logistical hurdles. Nonetheless, domestic trade in caustic soda has seen an uptick, largely spurred on by lowered inventory levels caused by the halted imports. Mounting inventory concerns remain if producers do not find any outlets for the excess volumes in early 2019, and supply in the region is expected to remain long moving into the first quarter of next year.

In the meantime, they are negotiating earlier contract shipments to other regions such as the US West Coast or Australia, according to a market source. The analytical widget below shows the threshold for Asia-to-US caustic soda arbitrage. The present situation does not affect producers in China and South Korea as much, said market sources.

While China is a net exporter of caustic soda, stable domestic demand and lower spot prices in Asia have led to scant export volumes since mid-2018 as producers focus on the more lucrative domestic market. Chinese domestic demand for caustic soda is driven by various industries, such as alumina refiners, rayon, and water treatment.
Alumina producers in China have seen less winter production cuts in 2018 as the country seeks to maintain its economic growth amid the US-China trade war, and the trend may continue next year amid the uncertain global political landscape.

An alumina refinery in Dubai that came online in end-2018 will consume an additional 130,000 tonnes of caustic soda annually, and may continue to source for spot volumes from northeast Asia, said market sources.

Other regional alumina factories are located in India, Indonesia, Vietnam, the Philippines and Australia.

Downstream expansions in South Korea from the epoxy resin, super absorbent polymers, semiconductor and oil and gas sectors is expected to come on line in the first half of 2019, and domestic consumption is expected to increase by around 120,000 dmt/year (dry metric tonne), according to market sources.

A South Korean caustic soda producer’s capacity expansion of 150,000 dmt/year is planned to come on line only in November 2019. In the meantime, less export volume is expected to come from the country next year amid an expected shortfall in domestic supply.

In spite of the above factors, caustic soda supply in Asia is expected to remain long until exports to India resume, simply due to the large volumes being displaced at the moment.

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China’s epichlorohydrin (ECH) prices are likely to face downward pressure from weak downstream epoxy resins demand in 2019 even as domestic ECH supply remains tight.

Prices of ECH in the China domestic market plunged to year-lows on 11 December at yuan (CNY)9,000-10,000/tonne amid weak demand from downstream epoxy resins. This price translates to $1,248-1,387/tonne on an import parity basis.

On 26 October 2018, key domestic producer Shandong Haili shut its 320,000 tonne/year ECH plant in Zibo, Shandong. The plant has four lines with equal capacity.

A company source said the plant may restart by end-2018 and run at a lower operating rate. However, no scheduled restart date was provided.

Despite tight supply, buyers are cautious in their procurement as demand for downstream epoxy resins has been sluggish even after the typical seasonal lull from June to August.

“It is likely that demand for both ECH and epoxy resins remains tepid in the first quarter of 2019 as Lunar New Year is in February and most buyers are still well-stocked with inventories,” said one epoxy resins market participant in Mandarin.

ECH is mainly used to produce epoxy resins.

The latter is used as adhesives on metals and construction materials, as well as in coatings and automobiles.

Demand for both ECH and epoxy resins is usually subdued at the end of the year due to a slowdown in construction and manufacturing activities. Consequently, domestic prices of epoxy resins have been declining in December.

On 18 December, prices were at CNY17,000-17,500/tonne compared with CNY18,000-18,500/tonne on 11 December.

The slide in epoxy resins prices in the China domestic market has led some suppliers to allocate cargoes into southeast Asia.

While buyers in the region typically procure cargoes from Korea, Japan and Taiwan, some market participants observed that buyers may switch to China-origin epoxy resins if prices are lower.

“The market situation in 2018 is very similar to 2016 whereby spot enquiries from southeast Asia, Europe and US remained rather sporadic even when it wasn’t the seasonal lull. It is likely that this would extend into 2019,” explained one epoxy resins producer.

On 18 December, epoxy resins prices were at $2,500-2,700/tonne FOB (free on board) NE (northeast) Asia.
Against this backdrop, market participants observed that ECH makers may see their margins squeezed in the near-term.

One northeast Asian producer placed minimum selling indication at $1,550/tonne CFR (cost and freight) CMP (China Main Ports) but conceded that it would take a selling indication of $1,200/tonne CFR CMP to draw buyers’ attention.

“The buy-sell gap in the CFR CMP market will continue. China has become self-sufficient and even with current tight supply, there is no way anyone would import given weak demand for epoxy resins. At the same time, we will be making a loss if we offer cargoes at $1,200/tonne CFR CMP,” said one northeast Asian ECH producer.

On 18 December, ECH prices were at $1,450-1,550/tonne CFR CMP, according to ICIS data.
Asia’s methyl methacrylate (MMA) spot markets could tumble on the back of ample supply and sluggish buying momentum in the first quarter of 2019, industry players said.

The overall outlook for the year is seen dim despite extended turnarounds and unplanned shutdowns, as the market will be awash with cargoes from China and imported Middle East material.

The relatively weak China markets and sharp depreciation of Chinese yuan could weigh further on trading sentiment and compel players to continue exporting volumes towards the rest of Asia. Saudi cargoes would also be re-shipped to other areas, raising availability outside China.

“China could become a growing source of MMA, in view of the domestic supply and Middle East cargoes that often head towards major ports in the country. Conversely, China’s anti-dumping duties on some origins would serve as a deterrence for imports,” a market player said.

Certain manufacturers are under pressure to reduce stocks and attract orders while others prefer to adjust operating rates slightly. New players with Middle East goods are anticipated to actively sell their cargoes and compete for more market share.

Buying momentum is poised to stay subdued, owing to sustained losses in the Chinese domestic markets and prior fluctuations in Asian spot markets. Users are more inclined to keep low stocks and take time to consider the various supply options.

Market uncertainty in Asia could persist due to the ongoing US-China trade war and devaluation of Asian currencies. Spot buyers have remained unenthusiastic despite the US-China trade war truce, citing the poor macroeconomic conditions.

Meanwhile, import prices have slipped from record highs in September 2018, snapping a two-year uptrend. This reversal is seen as a major turning point for the industry.

Regional MMA prices had been on an upward trajectory from the first half of 2016 and had hiked by 103-115% up to June 2018. The price gains in Asia occurred more slowly in 2018.

Spot values rose across 2018 by around 9-11% for small cargoes and bulk cargoes, before reaching peak levels between June and August.

The market prices for small cargoes of 20-300 tonnes were assessed at $2,465/tonne CFR (cost and freight) SE.
(southeast) Asia on average in early December, 16% lower from in late August, according to ICIS data.

Spot prices for bulk cargoes of 500 tonnes or more were assessed at $2,365/tonne CFR SE Asia on average, marking a 14% decline over the same period, ICIS data showed.

Some users opted to cut their high inventories at the end of the fiscal year for accounting purposes or focus on their contract discussions. Other consumers were open to obtain cargoes at low price points and engaged in some spot deals.

Downstream polymethyl methacrylate (PMMA) prices persisted on a downtrend in the second half of 2018 amid dwindling demand.

Differences in MMA costs between China and the rest of Asia would be a key factor. Some users of cast sheets had recently turned to cheaper exports from China, and as such, placed fewer orders with their regular suppliers.

The near-term outlook will hinge on downstream performance and cost competitiveness for end-users, on top of any macroeconomic changes, many players noted.

Contract discussions for 2019 are underway.

MMA is used in the manufacture of polymethyl methacrylate (PMMA), acrylic sheets, surface coatings, emulsion polymers and adhesives.

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NAPHTHA

ASIA NAPHTHA TO DRAW SUPPORT FROM STABLE PETCHEM DEMAND

BY MELANIE WEE  JANUARY 2019

Asia’s naphtha market is envisaged to draw support from healthy regional demand for petrochemical production, which might outpace supply despite expectations of ample western arbitrage cargo flows.

A ship being loaded at a port in Tokyo.

Spot naphtha prices have been on a rollercoaster, fluctuating heavily in the fourth quarter of the year due to volatility in upstream global crude oil futures markets.

Naphtha prices in Asia have plummeted to historical lows of below $500/tonne CFR (cost and freight) Japan, in part dragged down by substantial falls in crude oil futures combined with a supply overhang situation.

But consistent end-user demand for downstream petrochemical production has helped to soak up regional supply, alleviating some of the bearish sentiment.

The naphtha market was mostly in a contango, where prompt-month prices are weaker than the forward month. A contango market structure underlines weak market fundamentals.

In contrast, the market was at a backwardation this time in the preceding year.

As of 14 December, Asia’s naphtha crack spread to prompt-month February ICE Brent crude futures stood at $53.18/tonne, significantly weaker than levels at $121/tonne during the same period in 2017.

Crude oil markets were pressured down on concerns over China and the global economy. The downward slide was limited by expectations that supply will tighten in 2019, following the agreement between OPEC and its allies to lower production.

On the flip side, most downstream cracking facilities in Asia Pacific continue to run at optimum or full capacity, thanks to steady ethylene demand.

“Demand is still there and we are managing [olefins] margins okay,” said a northeast Asia-based market source.

In northeast Asia, naphtha-based ethylene margins were at $315/tonne as of 7 December, up from $178/tonne a month ago. Margins were, however, well below $612/tonne levels seen a year ago.

LPG-based margins in the northeast Asia region rose to $258/tonne on 7 December from week-earlier levels at $204/tonne, according to ICIS’ weekly margin report.

The market took comfort from expectations of limited availability of cheap alternative feedstock liquefied petroleum gas (LPG), which might help sustain reliance on naphtha in the near term, according to industry sources.

An estimated 1.7m tonnes of western arbitrage naphtha cargoes, possibly more, are expected to reach Asia in December. Volumes are on par with the previous month, but well above monthly volumes averaging at around 1.2-1.3m tonnes.

Steady demand, at the very least, is helping to counter the heavy deep-sea cargo flows from Europe and the Mediterranean.

Source: ICIS
Meanwhile, commodities trader Trafigura observed a challenging trading environment for the year, according to its 2018 annual report.

“Trading conditions in naphtha were robust throughout the year, with strong petrochemical and gasoline blending margins supporting demand growth,” it stated in the report.

“Looking forward to 2019 … we are closely watching refinery margins and the price relationship between gasoline and other clean products,” it said.

In China, consumption of naphtha was healthy even as the country’s trade war with the US has weighed on its economy.

China imported 516,985 tonnes of naphtha in October, rising by 11% from the same period a year earlier, latest Customs data showed.

According to Chinese private media group Caixin, China posted a General Purchasing Managers’ Index (PMI), which is a measure of manufacturing activity, stood at 50.2 in November, hovering just above the 50 level – the threshold for expansion. Its October PMI reading for China was 50.1.

A PMI reading of 50 or higher indicates an expansion, while a number below that denotes a contraction.

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A PMI reading of 50 or higher indicates an expansion, while a number below that denotes a contraction.
Asia’s polymethyl methacrylate (PMMA) import markets may extend losses due to dwindling demand and high inventories in the first quarter of 2019.

PMMA spot prices in southeast Asia and China have fallen over the past six months, shedding around 14-20% across the period, reversing from a peak that occurred in June.

For the week ended 13 December, regional PMMA prices were assessed stable at $2,725/tonne CFR (cost & freight) SE (southeast) Asia and stable to soft at $2,550/tonne CFR China on average, according to ICIS data.

In the middle of June, spot prices for general purpose (GP)-grade goods were pegged at $3,175/tonne CFR SE Asia and $3,200/tonne CFR China, ICIS data showed.

Spot supply is expected to be fairly abundant in early 2019, considering high inventories and restricted run rates among producers.

Manufacturers and traders actively sought to clear some stocks towards the year end, boosting volumes available on the market.

New Middle East suppliers are also projected to aggressively push cargoes further in order to gain market share.

These new supplies, coupled with highly attractive prices, have played a huge role in pushing PMMA discussions down swiftly.

A 40,000 tonne/year integrated facility in Saudi Arabia, belonging to Saudi Methacrylates Company (SAMAC), has started commercial operations in April 2018. It is a joint venture between Mitsubishi Chemical and SABIC.

Separately, a 50,000 tonne/year unit in Saudi Arabia, operated by Petro Rabigh, has commenced PMMA production by early 2018.

The project is shared between Sumitomo Chemical and Saudi Aramco.

In China, domestic manufacturers are able to provide more competitive PMMA products on the back of cheaper feedstock methyl methacrylate (MMA) costs locally, as compared to the rest of Asia.

This has placed intense downward pressure on the China import markets.

“It is very difficult to compete with the local makers in China right now, so [we] may have to cut operating rates further,” a regional producer said.

Moreover, fresh PMMA volumes are expected from China’s Wanhua Chemical soon, in light of recent talks of...
on-spec output from its new MMA unit in early December, sources said. At the same time, integrated manufacturers in Asia could switch accordingly and raise MMA production instead, depending on the profitability for PMMA.

From a feedstock perspective, the spread between PMMA and MMA remains narrow, and it will take time for any price change in MMA to take effect on the PMMA production front, sources said.

Regional demand is anticipated to be slow. Consumers are in a wait-and-see mode due to weak downstream offtake and economic uncertainty amid the US-China trade war truce. Recent steep declines in spot prices have also affected market confidence.

Re-stocking activity may occur after the year-end lull, given that buyers have reduced their stocks and are operating on a need-to basis.

However, the upcoming Lunar New Year holiday in February 2019 could curtail near-term appetite in China to some extent, players said.

Future price movements for polycarbonate (PC) are likely to sway spot sentiment for PMMA, sources said in view of the drastic PC falloffs.

PC can be used as substitutes in some applications and is traditionally more expensive.

With PC “unusually cheaper” than PMMA, PMMA markets may not recover immediately even if PC values inch up, according to some sources. PMMA is used in the manufacture of automotive, household and electronic products, and is the largest downstream market of MMA.
The perennial year end soda ash price spikes in Asia due to tightened supply from China may prevail albeit at a moderated manner as new supply from Turkey was insufficient to meet demand.

China’s soda ash supply took a hit from idled capacities in 2018 due partly to environmental protection measures, prompting the majority of producers to prioritise their output on the more lucrative domestic market.

The majority of southeast Asia-based buyers saw no justification in paying close to $300/tonne cost and freight (CFR) SE Asia for dense grade soda ash from China as prices were higher than their contractual volumes, but supplies from other sources such as Russia and Africa were likewise insufficient to meet demand in Asia.
As for Turkish supplies, Kazan Soda Elektrik’s new 2.5m tonne/year soda ash plant in Ankara, Turkey finally in September ramped up its fifth and final new line after several delays since December 2017.

A company official confirmed that the majority of newly produced Turkish soda ash is headed for export markets rather than the European market.

**NEAR TERM OUTLOOK**

Prices may continue to find support after China’s Lunar New Year holidays in early February 2019, due to overall low inventories in China amid reduced output.

Shandong Haihua Group since around 1 December 2018 cut output at its 3m tonne/year soda ash plant to 70% of capacity from 100% previously, as mandated by Chinese authorities for environmental protection.

The output cut was expected to last into the first quarter of 2019.

**INDIAN MARKET**

Prices of the dense grade material were likewise supported by good demand from major segments while the depreciation of the Indian Rupee versus the US dollar has exerted upward pressure on the cost of imports.

India’s domestic soda ash capacities remained fully committed for domestic customers, with capacity additions scheduled in 2020 or 2021.

For prevailing shipments from Kenya and Botswana, import prices were bolstered at $260/tonne CFR (cost & freight) India for customers with bi-annual contracts.

Fresh offers for January deliveries are heard firmer at $280-285/tonne CFR India.

New soda ash capacities are not due until 2020/2021.

**ELSEWHERE IN ASIA**

Demand for the light grade material from the downstream detergent sector is stable in Indonesia and Vietnam, but in developed countries, the popularity of liquid versus powder detergent continues to curb demand growth.

Soda ash is used in the manufacturing of glass, detergents, chemicals and other industrial products.

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### IDLED SODA ASH PLANTS IN CHINA

<table>
<thead>
<tr>
<th>Company</th>
<th>Capacity (tonnes/year)</th>
<th>Operating rates/ Turnaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gansu Jinchang</td>
<td>250,000</td>
<td>Shut since 20 January 2018*</td>
</tr>
<tr>
<td>Huainan Debang</td>
<td>600,000</td>
<td>Shut since 3 March 2018*</td>
</tr>
<tr>
<td>Zhongyan Debang Chemical</td>
<td>300,000</td>
<td>Shut since March 2018*</td>
</tr>
<tr>
<td>Hunan Xiangtan</td>
<td>300,000</td>
<td>Shut since 14 May 2018*</td>
</tr>
<tr>
<td>Sichuan Zigong Fuyuan</td>
<td>120,000</td>
<td>Shut since 25 July 2018*</td>
</tr>
</tbody>
</table>

*according to sources close to the company. No updates on restart dates.

### SODA ASH PLANT SHUTDOWN SCHEDULE 2019/NEW CAPACITY UPDATES

<table>
<thead>
<tr>
<th>Company</th>
<th>Capacity (tonnes/year)</th>
<th>Location</th>
<th>Operating rates/ Turnaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lianyungang Alkali Industry Co.</td>
<td>1.3m</td>
<td>Lianyungang city, Jiangsu</td>
<td>To shut in April or May 2019 for two to three days.</td>
</tr>
<tr>
<td>Sandong Haihua</td>
<td>3m (1.8m + 1.2m)</td>
<td>Weifang, Shandong, China</td>
<td>To shut each line in turns for two weeks in May or June 2019.</td>
</tr>
<tr>
<td>Tata Chemicals</td>
<td>900,000 (+ 250,000)</td>
<td>Mithapur, Gujarat, India</td>
<td>Awaiting statutory approval for capacity addition. Target onstream 2020/2021.</td>
</tr>
<tr>
<td>Yildirim Holding</td>
<td>400,000</td>
<td>Togyzkent village, Sarysu district, Zhambyl, Kazakhstan</td>
<td>To start construction in late 2019</td>
</tr>
</tbody>
</table>

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Asia’s titanium dioxide (TiO2) market looks set to start the year on a bearish note for the first time in two years on weak demand from China and volatile global trade conditions.

Quarterly contract prices were on a consecutive rise since early 2016, rising by more than 57% over 10 consecutive quarters. Reduced operating rates in China amid the government’s implementation of stricter environmental protection measures and unexpected turnarounds elsewhere in the world tightened global supply of the pigment.

However, TiO2 contract prices peaked in the second quarter of 2018, amid growing availability of competitively-priced Chinese export cargoes.

The sharp depreciation of the Chinese yuan amid escalating trade tensions in the second half of the year further incentivized Chinese producers to target the export market, where margins were more attractive.

Spot prices came under pressure for the rest of 2018, as US demand for Chinese TiO2 exports waned in light of the US-China trade war.

As Chinese suppliers sought alternative outlets for their exports, some compromise on price levels were necessary in order to offload volumes.

Spot prices for Chinese origin TiO2 were last assessed at $2,200-2,400/tonne FOB (free on board) China on 21 December 2018, according to ICIS data.
Chinese export volumes are likely to continue to increase year-on-year, as Chinese producers continue to push their export agenda.

“Demand in China may stagnate soon and there is little room for any substantial growth in the domestic market in the longer run. Hence, many producers are seeking to grow their export market share,” a Chinese producer said.

Some market players are hoping for an up-tick in demand in the second quarter of the year, amid the start-up of some major downstream paint and coatings manufacturing units in China.

There is unlikely to be any significant downstream manufacturing expansions of small-to-medium sized businesses in China, as such start-ups have become more challenging to set up in view of the clampdown on polluters in the country.

However, larger international players do have the means and financial ability to adhere to the more stringent environmental requirements in place and still reap profits from economies of scale; and these are the players who are expected to start up more downstream manufacturing facilities in China.

On the TiO2 supply front, capacity expansions in China are expected to be limited in 2019.

While future expansions are expected to be focused on chloride-based TiO2 productions, market players were quick to dismiss ideas that sulphate-based TiO2 capacities would be rendered redundant as a result.

“Downstream applications for sulphate-based TiO2 pigments do exist for which chloride-based pigments cannot be a perfect substitute for. Hence, there is still a place for sulphate-based TiO2 production capacities in the market,” a Chinese producer pointed out.
BY HELEN LEE  JANUARY 2019

Asia’s vinyl acetate monomer (VAM) prices in the first quarter may be underpinned on expectations of demand from Europe and a supply curtailment owing to regional plant shutdowns.

Spot prices in most parts of Asia had fallen since June 2018 to below $1,000/tonne CFR SE Asia/South Asia, tracking the feedstocks direction and slow seasonal demand, as well as increased import costs following the depreciation of key Asian currencies versus the US dollar amid the US-China trade tensions.

The prices had bottomed out, although recent declines stemming from weakened upstream energy values, impacted the buying sentiment while macroeconomic indicators remain pessimistic.

China’s official manufacturing purchasing managers’ index (PMI) fell to 49.4 in December, the first contraction in two and a half years, according to National Bureau of Statistics (NBS).

PMI is a barometer of an economy’s manufacturing activity, in which a reading above 50 means expansion and below 50 as contraction.

MIXED DEMAND

While expectations of improved demand in Europe by mid-January ahead of the anticipated duty-free quota in 2019 contributed to the optimistic sentiment of producers in Asia, there is a view that supply in Europe may become even more plentiful in 2019.

Also, there is little doubt around about the impending suspension of import duty into the EU.

Both of these factors suggest that further correction of contract prices in Europe will occur.

Most importers in Asia are opting to pare down inventories.

Nevertheless, the first quarter typically sees weak demand from the downstream adhesives sector in the key south Asia market of India as well as in northeast Asia.

The VAM consumption from the downstream ethylene vinyl acetate (EVA) sector on the other hand, is likely to be boosted this year.

An unstable outlook in the co-product low density polyethylene (LDPE) sector may prompt certain swing EVA/LDPE producers in Asia to focus on EVA production instead.

In China, where domestic VAM prices were supported at above yuan (CNY) 8,000/tonne ex-tank since November by
curtailed domestic output, demand is set to decline ahead of the Lunar New Year holidays in early February.

**SHORT TERM SUPPLY CURBS**

Meanwhile, the impact of ongoing VAM plant shutdowns due to reduced upstream gas feeds at Sinopec Sichuan Vinylon’s 500,000 tonne/year VAM plant since around mid November during peak winter heating season, as well as the maintenance shutdown at Celanese’s Nanjing VAM plant in December, were deemed to have been factored into prevailing prices.

While these factors kept the sentiment of suppliers upbeat, uncertainties on the macroeconomic front remain a key concern.

“Overall I feel [there is hope] in January due to plant shutdowns and as destocking finishes and if there are no ‘accidents’ on the crude values front, there will be upward pressure on margins and inventory levels although this depends on macroeconomic support factors,” said a major producer.

**SHUTDOWN SCHEDULE 2019**

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
<th>Capacity (tonnes/year)</th>
<th>Shutdown schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sinopec Sichuan</td>
<td>Chongqing, China</td>
<td>200,000 + 300,000</td>
<td>Shut till early February for maintenance.</td>
</tr>
<tr>
<td>Vinylon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nippon Gohsei</td>
<td>Mizushima, Okayama, Japan</td>
<td>180,000</td>
<td>Shutting in Q1 for 45-60 days.</td>
</tr>
<tr>
<td>Celanese</td>
<td>Jurong island, Singapore</td>
<td>210,000</td>
<td>Shut on 5 January 2019, January on equipment issues. Shutting March/April for 15 days.</td>
</tr>
<tr>
<td>Dairen Chemical Corp</td>
<td>Mailiao, Taiwan</td>
<td>300,000</td>
<td>Shutting 11 March 2019 till March/early April.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>120,000</td>
<td>Shutting 15 February 2019 for one month.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lotte BP</td>
<td>Ulsan, South Korea</td>
<td>210,000</td>
<td>Shutting 6 April 2019 for around 25-26 days.</td>
</tr>
</tbody>
</table>

*according to sources close to the company.

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ACRYLONITRILE

ASIA ACN PRICES TO FOLLOW COST TREND ON NEW SUPPLY, LESS TURNAROUNDS

BY JUDITH WANG  JANUARY 2019

Asia’s acrylonitrile (ACN) price trend may take a cue from feedstock propylene in 2019 as ACN plants are expected to run in full throttle given a lower rate of turnarounds next year, and Chinese and South Korean supply is expected to increase as such.

The ACN prices may not show a similar trend in 2018, when razor-thin supply bolstered prices and led to eight rounds of price hikes in a single year. After all, the prospects of supply tightness will ease next year since there will be new capacities coming onstream.

In 2019, China’s Jiangsu Sailboat Petrochemical plans to start up its second ACN unit with a capacity of 260,000 tonnes/year in the second quarter of 2019.

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Another major producer South Korea’s Tongsuh Petrochemical plans to debottleneck its No 4 plant with a capacity of 245,000 tonnes/year by 10% in October 2019.

“There will be a supply increase in 2019, which means prices may have little chance to surge like 2018,” a regional trader said.

On the other hand, heavy global turnarounds in 2018 pushed up Asian ACN prices to a record-high at $2,250/tonne at the end of August, the strongest since late April 2012. However, such a price may not be replicated next year in light of a lower load of maintenance works on schedule.

“The ACN prices will return to basics. They will be cost-driven instead, given relatively ample supply in 2019,” a regional trader said.

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
<th>Capacity (tonnes/yr)</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asahi Kasei</td>
<td>Mizushima, Japan</td>
<td>200,000</td>
<td>May-early July, 45 days</td>
</tr>
<tr>
<td>Tongsuh Petrochemical</td>
<td>Ulsan, Korea</td>
<td>245,000 No 4</td>
<td>October, one month</td>
</tr>
<tr>
<td>China Petrochemical Development Corp (CPDC)</td>
<td>Kaohsiung, Taiwan</td>
<td>240,000</td>
<td>One week in May, two weeks in November</td>
</tr>
<tr>
<td>Taekwang Industrial Co Ltd</td>
<td>Ulsan, South Korea</td>
<td>240,000</td>
<td>September-October, 25 days</td>
</tr>
<tr>
<td>Formosa Plastics Corp</td>
<td>Mailiao, Taiwan</td>
<td>280,000</td>
<td>Mid-February, 25-26 days</td>
</tr>
<tr>
<td>PTT Asahi Chemical</td>
<td>Map Ta Phut, Thailand</td>
<td>200,000</td>
<td>Mid-May, one month</td>
</tr>
</tbody>
</table>

The issue of adequate supply comes with pros and cons. For buyers, they may easily get cargoes but it is not a good thing for producers as this may weigh on the prices.

However, major producers indicated that they will consider output rationing if the prices fall below the cost.

“We will cut operation if the prices were to fall below the cost, like we used to do,” a major Asian producer said.

“I think the prices levels seen this year will not appear again in 2019 and the ACN prices will track closely the feedstock price trend in 2019,” a downstream user said.
BY LI LI CHNG  JANUARY 2019

Butyl glycol spot prices in Asia may continue a trend of decline going into the first quarter of 2019, as the market would be inundated with Middle East flows and growing exports from other Asian producers.

Demand wise, weakness would persist as China, a key buyer, faces shrinking economic growth.

Signs of weakness were already apparent in the last three months of this year when fundamentals were bearish, and the outlook for next year is little changed.

In the week ended 19 December, spot BG prices in China on zero antidumping duty (ADD) but subject to import duty basis, were assessed stable at an average of $930/tonne CFR (cost & freight), according to ICIS data.

The levels were the lowest since September 2016.

Spot BG prices in southeast Asia were assessed at $1,010/tonne CFR southeast Asia, down by $10/tonne week on week; prices declined to their weakest level since July 2017.

While supply from producers of various origins were readily available, demand from the downstream sectors was lukewarm and would remain unchanged going forward.

A CHANGING SUPPLY LANDSCAPE

China is the biggest import market in Asia, importing 151,403 tonnes of BG/butyl dy-glycol (BDG) between January to October 2018, while the total imports in 2017 were 156,141 tonnes. (please see interactive below)

The market has gone through a phase of change in trade flow since China imposed an increase in antidumping duties for cargoes of deep-sea origin earlier in the year.

On 12 April 2018, BG/BDG originating from the US is subject to 37.5-75.5% ADD rates, up from 10.6-14.1% previously.

Cargoes from the EU is subject to ADDs of 10.8-43.5%, up from 9.3-18.8% previously.

There was also an increase in supply in 2018.

For origins not subjected to China’s ADD, the BG/BDG plant of Taiwan’s Oriental Union Chemical Corp (OUCC) -- with a combined annual capacity of 30,000-40,000 tonnes -- started commercial operations in early 2018.

In addition, volumes from Sadara Chemical Company, which is a joint venture (JV) between US Dow Chemical and Saudi Aramco, became stable and cargoes are regularly exported to Asia from early 2018.

Sadara’s BG/BDG plant with a capacity of 200,000 tonnes/year, started commercial runs in mid-2017.
As the hefty hike in ADDs of US and EU cargoes hampered the sales of deep-sea material to China, Middle Eastern and other Asian producers became the key suppliers for China.

Some of these deep-sea cargoes were then diverted to the wider Asia region where there is no ADD concern.

Together with the increased capacity, Asia is awash with ample supply and intense competition from suppliers of various origins.

This situation would persist in 2019 and some market consolidation could happen.

South Korea’s Lotte Chemical has been running on reduced operation rate at above 50% from November 2018 amid slow market conditions with no certainty when operation will resume to normalcy.

While Sadara plans to undergo a turnaround in end January for around three weeks, it is unlikely to result in any supply tightness as the turnaround coincides with the Lunar New Year period.

China and many Asian markets will be celebrating the Lunar New Year that begins in early February, traditionally celebrated for fifteen days.

Businesses are expected to be slow around half a month before and after the holiday.

**WEAK SENTIMENT, SLOW DEMAND**

The market has been plagued with weak sentiment and slow demand for most part of 2018.

China’s industrial firms reported 1.8% decrease in profits to CNY952.8bn ($86bn) in November comparing with one-year ago, the first contraction since May 2015, data from the National Bureau of Statistics (NBS) showed.

Slowing growth in sales and factory prices, combined with rising cost, led to the profits decline last month, the NBS said.

The November’s figure also marked the seventh consecutive drop.

Downstream demand had been hit amid dismal business conditions largely attributed to the US-China trade war and China’s stringent environmental protection measures that affected downstream plant operation.

Moving forward, the outlook remains uncertain.

Even as market players take a breather during the 90-Day trade truce between US and China, existing tariffs continue to be in place.

Market players are largely uncertain if any concrete and positive outcome could be reached after the 90-Day truce.

In the near term, demand from downstream paint and coating sectors would likely remain in a lull, amid a slowdown of the building industry during winter.

Feedstock n-butanol and higher upstream ethylene have been largely on a downtrend in the fourth quarter of 2018 and may provide limited support to BG prices in January.

BG, derived from ethylene oxide (EO) and n-butanol (NBA), is also known as ethylene glycol ethers (EGE).
Asia’s caprolactam prices are expected to see more weakness in 2019, pressured by rising supply amid high runs and upcoming plant expansions in China.

The production output is expected to see an increase in China, as new capacities are expected to come onstream in 2019.

This is expected to drive down prices, especially if facilities in China were to run at full capacity.

The caprolactum prices had declined in mid-November 2018 amid poor sales caused by weak demand for finished nylon products, mainly cold-weather apparel.
The trade war saw declining caprolactam imports in China, as buyers increasingly favoured domestic suppliers, prompting local makers to increase run rates amid a shift in buying preference.

However, an unexpectedly warm winter hindered downstream nylon sales during the traditional peak months in the fourth quarter, which in turn affected caprolactam sales.

The producers in domestic China struggled to offload their high inventories, which led to week-on-week lower offers, starting from mid-November.

The poor demand prompted some producers to shut units in November and December, but attempts to revive spot caprolactam sales fell through as buyers were unwilling to commit to purchases amid high inventories.

Meanwhile, buyers in China are increasingly looking to the domestic market to fulfill inventory needs in view of the fluctuating US dollar-Chinese yuan exchange rates.

This could mean more spot availability for major importers in Taiwan from other producers in Asia.

Taiwan, which relies heavily on caprolactam imports for nylon production, was short on the material for most of the year.

In addition, Chinese caprolactam producers are looking at the possibility of exporting to Taiwan, with some producers announcing flaking facilities to produce caprolactam flakes for export.

However, whether export plans materialize remains to be seen.

The Chinese caprolactum market is entirely domestic at the moment, with producers selling the product locally as high taxes make it difficult for them to export their material.

China’s environmental policies are also a factor as some cyclohexanone plants remain unable to operate at full capacity due to strict emissions control.

A limited supply of the intermediate could support caprolactum prices nonetheless.

In the downstream sector, nylon demand is expected to remain weak for the rest of the winter months as the warm weather has dampened replenishing for winter apparel.
BY ERIC SU  JANUARY 2019

Asia’s monoethylene glycol (MEG) prices are expected to be weighed down in the first half by an economic slowdown in key China market, along with slower growth in downstream polyester sectors.

Unfavourable macroeconomic conditions will likely lead to weakness in downstream demand growth.

Polyester demand posted double-digit growths in 2017 and 2018 as the industry expanded, but the exceptional increase in the past two years may not be sustained in the long run.

The US-China trade tensions have weighed on the Chinese economy in the fourth quarter of last year, and is expected to dampen sentiment early in 2019.

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Any significant uptick in exports of polyester-made end-products such as clothing, upholstery and shoes, among other, may not happen without a clear resolution to the US-China trade spat.

The Chinese yuan (CNY) may weaken further against the US dollar amid the slowdown of the world’s second-biggest economy and hit China’s MEG imports.

A weaker currency makes US dollar-denominated imports more expensive.

Stocking up activities, meanwhile, will be curtailed by the week-long Lunar New Year holiday in China in early February. The Lunar New Year, which is celebrated in most parts of southeast and northeast Asia, is on 5 February 2019.

GLOBAL MEG CAPACITY TO GROW

Global MEG supply in 2019 is expected to increase further, particularly from the second half of 2019, when huge additions are due to come on stream.

In China, mega refineries with large MEG capacities are scheduled to start up during the period.

Zhejiang Petrochemical will begin operations at its 700,000 tonne/year MEG line in Q3-Q4, along with Hengli Petrochemical’s 900,000 tonne/year line.

The two companies operate downstream polyester plants, and the start-ups of the MEG lines will mean reduced dependence on raw material imports.

Meanwhile, production rates at coal-based MEG plants in China, though comparatively lower than ethylene-based MEG have increased in 2017 to around 45% and 2018 to around 55%, from below 40% in 2016, as margins remained healthy.

Overall production from the coal-based plants will also depend on whether or not China will continue easing down on its environmental checks in the year.

Nonetheless, imports will remain as China’s dominant source of supply this year.

In 2018, 58% of the country’s MEG requirements were covered by imports, down from 58.8% in the previous year.

New plants are also expected to start up in the US and Malaysia, augmenting the supply available to Asia in 2019.

In the US, Lotte Chemical’s 700,000 tonne/year and Sasol’s 250,000 tonne/year MEG plants are expected to come on line in the first quarter.

In Malaysia, PETRONAS new 740,000 tonne/year MEG plant in Malaysia is estimated to start-up by the second quarter of 2019.
BY ZHI XUAN HO  JANUARY 2019

Asia’s nylon prices are to stay soft in the first quarter, as demand is expected to stay weak while supply is seen increasing further in the year owing to feedstock plant expansions in China.

The market is not expected to improve in the near term, given the ensuing US-China trade row and upcoming Lunar New Year holidays in early February.

Players typically strive to maintain lean inventories ahead of the major holiday, so spot trading is likely to remain thin until the holidays are over.

In addition, producers tend to adjust production levels lower in order to avoid an oversupply of stock.

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This could give a succor to the market already beset by slow demand.

Players are likely to remain cautious amid the ongoing trade war, so the buying interest would be little changed after the holidays.

It is par for the course for buyers to make purchases on a need-to basis, with a majority of the Chinese buyers looking to domestic suppliers on better payment terms and faster delivery, in view of the fluctuating USD-CNY exchange rates.

The nylon producers continue to strive to maintain healthy margin levels between caprolactum and nylon, adjusting nylon offers in line with movements in feedstock values.

However, there are some concerns about upcoming caprolactum plant capacities in domestic China.

Already, the region is experiencing an oversupply of the feedstock, and at one point, domestic Chinese prices for caprolactum and conventional grade nylon chips were at almost parity.

While this should not affect the supply of high-speed spinning nylon chips, they will face pressure if the price gap between the high-speed and conventional grade chips widens too much.

This will affect Taiwanese producers as Chinese buyers make up the bulk of their export sales.

Meanwhile, commitments to larger parcels are unlikely to materialize in the near future, with purchases expected to remain on an as-needed basis, especially if demand for finished products were to remain weak.

The Asian nylon market has been bearish since the end of last year because of falling demand and a mild winter.

The clement temperatures had led to reduced demand for finished nylon products, contributing to the current downtrend in values.

In addition, the US-China trade wars have been weighing on market sentiment in the region, with main buyers in China reducing order quantities from major suppliers in Taiwan.

The poor US dollar-CNY exchange rate has also resulted in an increasing number of buyers turning to the domestic market to fulfill inventory needs.
Asia’s polyethylene terephthalate (PET) market is expecting to be balanced in supply and demand next year, and margins are likely to be within range following a tumultuous 2018.

Some buyers have already approached Chinese sellers for cargoes slated for delivery in the first half of 2019, with some transactions done.

With semi-term cargoes secured, panic buying that happened in 2018 is not expected to repeat itself.

Seasonal peak demand will rise at the end of March. During this period, downstream pre-form converters start to prepare for the next summer peak bottled beverages consumption.

PET suppliers tend to run their plants at full throttle, leading up to the peak demand season.

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Supply is not seen an issue as most plants would have wrapped up maintenance works by the end of 2018 or January 2019.

China Resources Packaging has an ongoing plant maintenance affecting 600,000 tonnes/year of its production.

During the turnaround, the plant will undergo a change in its energy source from coal to gas and the maintenance is expected to complete in end-January.

A Taiwanese producer has planned maintenance from mid-December 2018 to mid-January 2019.

Oman’s Octal Holding will be having a three-week turnaround in January at one of its four lines, with a combined capacity of 850,000 tonnes/year.

In Asia, there are a few new plants coming onstream by Yisheng Petrochemical and Zhejiang Wankai New Materials in 2019-2020.

Only one 600,000 tonnes/year capacity is slated to start up in mid-2019, while others plan to start up in late 2019 and 2020. Hence supply is seen stable.

The PET prices will stick to tracking production cost in 2019 after the market stabilized in the fourth quarter.

In April this year, PET prices had detracted from following feedstock price trends. Then PET producers saw good margins, broadly driven by tight global supply.

There were several outages in the US, Europe and Asia that coincided with the peak demand season.

The PET spread subsequently narrowed sharply in August-September, as plants restarted and demand slowed.

One recent change that impacted PET FOB China prices was the increase in tax rebate of China PET exports.

Chinese PET producers have the flexibility of basing their prices on local feedstock cost and not import valuation, after factoring in export rebate from the use of domestic feedstock.

Meanwhile, in China, with recent rebounds in feedstock purified terephthalic acid (PTA), the price gap between the local PTA after rebate and PTA import narrowed.

Similarly, the price spread between China and other Asian PET offers was narrower. Such price relationships will be keenly monitored going forward.

The market also awaits the outcome after the US PET producers’ appealed to the International Trade Commission’s (ITC).

The anti-dumping investigation on PET resin imports from Brazil, Indonesia, Korea, Pakistan and Taiwan may curb US buying interest.
BY SAMUEL WONG  JANUARY 2019

Asia’s purified terephthalic acid (PTA) supply is likely to remain largely balanced to tight in 2019 as a result of limited capacity expansion, while demand is expected to continue growing.

China will remain the key demand growth driver for Asia, followed by India.

The expected demand growth for China is at around 6-7%, tracking the country’s expected GDP growth, representing a slowdown from the double-digit growths posted in the past two years.

Uncertainties in the global macroeconomic environment, generated by the ongoing US-China trade war, could cap PTA demand growth. China’s PTA consumption increased by 2.4m-2.8m tonnes in 2018 to around 40m tonnes.

Within Asia, supply of PTA is expected to be tighter in 2019 amid increasing demand, as majority of new capacities will only come on stream toward the end of the year.

Majority of upcoming PTA expansions are in China, with the bulk of effective capacities coming on line in 2020.

There are new PTA capacities being added this year amid expansions in the feedstock paraxylene (PX) sector. No new PTA capacity came stream in Asia in 2018.

PTA margins should remain relatively healthy for the year, spurred by balanced to tight PTA supply demand, on the backdrop of ample feedstock availability.

<table>
<thead>
<tr>
<th>Company</th>
<th>Country</th>
<th>Location</th>
<th>Capacity ('000 tonnes)</th>
<th>Expected start-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sichuan Shengda</td>
<td>China</td>
<td>Sichuan</td>
<td>1,000</td>
<td>Q1 ’19</td>
</tr>
<tr>
<td>JBF</td>
<td>India</td>
<td>Mangalore</td>
<td>1,250</td>
<td>2019</td>
</tr>
<tr>
<td>Xinlongming</td>
<td>China</td>
<td>Jiaxing</td>
<td>2,200</td>
<td>End-19</td>
</tr>
<tr>
<td>Hengli Petrochemical</td>
<td>China</td>
<td>Changxing</td>
<td>2,500</td>
<td>Q4 ’19</td>
</tr>
<tr>
<td>Zhongtai Kunyu</td>
<td>China</td>
<td>Karamay</td>
<td>1,200</td>
<td>2020</td>
</tr>
<tr>
<td>Zhongjin Petrochemical</td>
<td>China</td>
<td>Ningbo</td>
<td>3,300</td>
<td>2020</td>
</tr>
<tr>
<td>Formosa</td>
<td>China</td>
<td>Ningbo</td>
<td>1,500</td>
<td>2020</td>
</tr>
</tbody>
</table>

In 2018, the PX and PTA spread for US-dollar denominated cargoes stood at around an average of $158/tonne, while the spread for China yuan (CNY) cargoes stood at an average of $134/tonne.

With the expectation of a healthy market fundamentals this year, the PX and PTA spread for both US-dollar denominated cargoes and CNY cargoes are expected to be within the range of $140-160/tonne, much higher than the breakeven level of around $85/tonne.

PTA inventories in key China begin the year at a low, with the China PTA futures warehouse received cargoes at the lowest level compared to the last two years.
Majority of market players are keeping their inventories low, wary of incurring losses amid the global macroeconomic uncertainties.

China’s polyester average operating rates in 2018 stood at around 82%, compared to 79.4% in the previous year, according to ICIS data.

Going into 2019, Chinese polyester average operating rates are expected to be maintained within the 80-85% range.

PTA operating rates in Asia are likely to be very margin sensitive, especially in the key China market.

Historically, producers tend to shut their plants when margins are negative for a sustained period of at least two to three months.

In 2018, the average operating rates of PTA facilities in the key China market stood at around 78%, up from an average of 65.8% in the previous year.

Yuan-denominated PTA cargoes are likely to continue to closely track price movement in the futures market, which is sensitive to global macroeconomic trends, as well as fiscal and monetary policies in China.

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OLEFINS

BUTADIENE (BD)

ASIA BD MAY RISE AHEAD OF LUNAR NEW YEAR HOLIDAYS

BY HELEN YAN  JANUARY 2019

Asia butadiene (BD) prices may rise in January ahead of the Lunar New Year holidays on re-stocking although the price uptrend may fizzle out unless US-China trade war tensions ease or there is positive news during this period.

Equities and commodities markets have roiled since the 90-day truce was announced on 1 December to pause the spike in tariffs from 10% to 25% in January 2019 on all Chinese imports into the US.

Market players stayed on the sidelines in light of the uncertainty amid the US-China trade war.

However, trading usually picks up momentum prior to the Lunar New Year as buyers or traders re-stock inventories ahead of the festive holidays.

Lunar New Year falls on 5 February in 2019 and is celebrated in several countries in Asia including the key Chinese market, South Korea, Taiwan, Indonesia, Singapore, Malaysia and Vietnam.

2019 may, however, see a departure from this seasonal demand trend if traders and the downstream synthetic rubber producers, the major consumers of BD, adopt a cautious stance and curb their spot appetite.

Nonetheless, BD spot prices are expected to rise in January ahead of the Lunar New Year holidays, although gains may not be sustainable as demand is expected to be subdued in February and March, given a slowing Chinese economy, the world’s largest automotive market.

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BD is the feedstock for synthetic rubber such as styrene butadiene rubber (SBR) and polybutadiene rubber (PBR) which are used to make tyres for the automotive industry.

BD spot prices showed modest gains on heightened Chinese spot interest for BD imports in early December as local product in China was more expensive than import cargoes.

However, if there is positive development in the US-China trade talks, or if BD supply is disrupted by sudden unplanned cracker or plant outages, spot appetite will pick up momentum and spur end-users’ support for a price uptrend in the first quarter of 2019.

The BD price uptrend may, however, be likely to be moderate and tempered by the subdued downstream synthetic rubber market, which had been weighed down by the continued weakness in the natural rubber (NR) price.

Natural rubber and synthetic rubber are feedstock substitutes in the production of tyres for the automotive industry and their price movements tend to impact each other.

Natural supply is long into 2019 and the NR price is likely to remain soft in the first quarter of 2019.

Meanwhile a slowing global economy is likely to see softer growth in the automotive sector – which will ultimately weigh on demand for synthetic rubber - and cap any significant upside in the BD price.
BY YEOW PEI LIN  JANUARY 2019

Asia ethylene is expected to be more ample in 2019, on the back of fewer cracker turnarounds in Japan, regional capacity expansions and possible downstream output cuts.

The outlook for deep-sea supply is mixed, with European exports likely to be curtailed by a slew of cracker maintenance shutdowns, while shipments from the US may be lifted by a new export facility in the fourth quarter.

Spot ethylene prices in northeast Asia ended 2018 on a weak note.

Deals were at below $1,000/tonne CFR (vost & freight) NE (northeast) Asia in the fourth quarter, lower compared with prices in the low $1,200s/tonne to low $1,400s/tonne CFR NE Asia during January-September.

The market was undermined by ample supply from the Middle East and southeast Asia, owing to strong cracker run-rates, weak polyethylene (PE) sales and planned and unplanned downstream outages.

The abundant supply in the fourth quarter may continue in 2019.

Japan – the second largest exporter after South Korea – shipped out 455,742 tonnes of ethylene during January-October of 2018, down 24.5% from the period a year earlier due to a heavy cracker turnaround schedule.

The country’s 2019 exports will likely recover to around 700,000 tonnes, similar to levels seen in 2017, in line with higher production.

Capacity losses from annual maintenance shutdowns are expected to fall by around 64% from 2018 to around 183,000 tonnes.

Producers in South Korea and Malaysia will also increase shipments to regional markets in 2019, amid a slew of capacity expansions.

Five projects with a combined capacity of 2.24m tonnes/year are coming on-stream between the third quarter of 2018 and mid-2019.

Up to 27-28% of that supply, or 610,000-630,000 tonnes/year, are potentially available for merchant sale – for companies that are not owned or affiliated with the producer - with suppliers targeting mainly the key China market.

South Korea’s Hanwha Total Petrochemical will become a net seller temporarily when its additional capacity is on-stream in mid-2019.

It will return to a net short position towards the end of the year once its new 400,000 tonne/year high density polyethylene (HDPE)/linear low density polyethylene (LLDPE) plant starts up.

The impact of the higher domestic ethylene supply will be moderated by a reduction in Yeochun NCC’s (YNCC) exports and capacity losses from multiple cracker turnarounds in the first half of 2019.

YNCC will allocate more ethylene to its own styrene monomer (SM) unit and downstream plants of its shareholder Hanwha Chemical, to support several debottlenecking projects.

In addition, four plants in South Korea will shut for maintenance in the first half of the year, with capacity losses of around 387,000 tonnes.
The Petronas-Saudi Aramco joint venture plant in Malaysia will help mitigate production losses from a series of cracker turnarounds in southeast Asia in the second half of 2019.

Major southeast Asian suppliers such as Petronas Chemicals Olefins, Chandra Asri and Shell will take their facilities down, contributing to scheduled capacity losses of around 522,000 tonnes, which are higher compared to 270,000 tonnes in 2018.

**THE DEMAND OUTLOOK IS MIXED**
Production activity in some downstream sectors in Asia may weaken, under pressure from rapid capacity expansions in the US and Asia as well as the ongoing US-China trade war. PE supply glut could worsen if shipments from the US increase as producers there resolve their logistics issues progressively.

The US polymer capacity will continue to climb in 2019, with another 2.37m tonnes/year slated to come on-stream, adding to expansions totalling 4.115m tonnes/year completed in the country since 2017. Competition in the monoethylene (MEG) and styrene monomer (SM) markets is set to intensify.

Over 4m tonnes/year of additional MEG capacity is scheduled to be operational in China, Malaysia and the US between late 2018 and 2019.

Suppliers in the US, which will turn into a net exporter, are likely to go around to circumvent the tariff on their imports into China - the leading polyester market - through internal swaps with their facilities in other locations.

Chinese SM makers may see lower margins when Zhejiang Petrochemical enters the fray. The company will have a massive 1.2m tonnes/year SM plant in 2019.

On a more upbeat note for suppliers, ethylene import demand in China will continue to draw support from downstream capacity expansions.

Four non-integrated plants that are scheduled to start up between the third quarter of 2018 and 2019 could boost consumption of ethylene by up to over 480,000 tonnes/year.

Some of the increases in import requirements in 2019 may be offset by new domestic supply from SP Chemicals’ cracker, China’s first project that uses a combination of ethane and propane feed, as well as Nanjing Chengzhig New Energy’s methanol-to-olefins (MTO) plant.

The plant is due to come on-stream in the second half of 2019, although some market players expect possible delays to 2020.

When operational, SP Chemicals, which currently relies on imports of ethylene for its vinyl chloride monomer (VCM) and styrene monomer (SM) plants, will turn into a net seller.

It currently requires up to around 320,000 tonnes/year of ethylene imports when its plants are operating fully.

Separately, Nanjing Chengzhig, which does not have any ethylene downstream facilities will have a second MTO unit with 240,000 tonnes/year of ethylene capacity.

Shipments to China have continued to grow strongly in 2018, even after the sterling 30% year-on-year increase in import volumes in 2017.

Imports in the first 10 months of the year totalled 2.09m tonnes, an increase of 17.9% over the same period a year ago.

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Find out more
By the end of December, imports are likely to cross above the 2.5m tonnes mark, which will represent a growth of more than 15% from the previous year’s 2.16m tonnes.

Indonesia’s import demand will likely increase from the second half of 2019 due to a structural tightening in the domestic balance.

The country’s sole domestic producer Chandra Asri plans to start up a 400,000 tonne/year PE unit in late 2019, after its cracker completes an expansion during a turnaround in the third quarter.

Its net ethylene surplus will shrink to 60,000 tonnes/year, from close to 420,000 tonnes/year currently.

### WEST-EAST ARBITRAGE OUTLOOK IS MIXED

US exports will increase towards the end of the year if Enterprise Products Partners and Navigator Holdings’ new export terminal with a capacity of 1m tonnes/year starts up in the fourth quarter of 2019.

The terminal, however, will not be able to operate at full capacity until its refrigerated storage facility is ready in 2020. Shipments from Europe could be crimped by a heavy cracker turnaround schedule in spring of 2019.

The affected units include a cracker that belongs to Italy’s Versalis, which is a key exporter to Asia.

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### ASIA ETHYLENE PROJECTS

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
<th>Facility</th>
<th>C2 capacity (KTA)</th>
<th>Start-up schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-Oil</td>
<td>Onsan, South Korea</td>
<td>Ethylene recovery unit</td>
<td>200</td>
<td>End Aug/early Sept 2018</td>
</tr>
<tr>
<td>Lotte Chemical</td>
<td>Yeosu, South Korea</td>
<td>Steam cracker</td>
<td>+200 to 1,200</td>
<td>Dec 2018</td>
</tr>
<tr>
<td>LG Chem</td>
<td>Daesan, South Korea</td>
<td>Steam cracker</td>
<td>+230 to 1,270</td>
<td>Apr 2019</td>
</tr>
<tr>
<td>Hanwha Total Petrochemical</td>
<td>Daesan, South Korea</td>
<td>Steam cracker</td>
<td>+310 to 1,400</td>
<td>May 2019</td>
</tr>
<tr>
<td>Pengerang Refining</td>
<td>Johor, Malaysia</td>
<td>Steam cracker</td>
<td>1,300</td>
<td>Late Q1/early Q2 2019</td>
</tr>
<tr>
<td>SP Chemicals</td>
<td>Jiangsu, China</td>
<td>Steam cracker</td>
<td>650</td>
<td>H2 2019-2020</td>
</tr>
<tr>
<td>Nanjing Chengzhi Clean Energy</td>
<td>Nanjing, China</td>
<td>MTO</td>
<td>240</td>
<td>Apr 2019</td>
</tr>
<tr>
<td>Total net C2 surplus*</td>
<td></td>
<td></td>
<td>1,180-1,200</td>
<td></td>
</tr>
<tr>
<td>Chandra Asri**</td>
<td>Cilegon, Indonesia</td>
<td>Steam cracker</td>
<td>+40 to 900</td>
<td>H2 2019</td>
</tr>
<tr>
<td>Zhejiang Petrochemical***</td>
<td>Zhejiang, China</td>
<td>Steam cracker</td>
<td>1,400</td>
<td>2019</td>
</tr>
</tbody>
</table>

*Figure is based on Hanwha Total Petrochemical’s balance before it starts up its PE plant in end 2019
**Chandra’s ethylene balance will tighten when its PE plant starts up in end 2019
***Structurally balanced

---

### CHINA DOWNSTREAM PROJECTS

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
<th>Product</th>
<th>Capacity (KTA)</th>
<th>Start-up schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhui Haoyuan Chemical</td>
<td>Anhui</td>
<td>SM</td>
<td>260</td>
<td>Aug-18</td>
</tr>
<tr>
<td>Jiangsu Jurong Chemical</td>
<td>Jiangsu</td>
<td>EO</td>
<td>200</td>
<td>Dec 2018-early 2019</td>
</tr>
<tr>
<td>CITIC Guoan Chemical</td>
<td>Shandong</td>
<td>SM</td>
<td>200</td>
<td>2019</td>
</tr>
<tr>
<td>Hebei Jinniu Chemical Industry</td>
<td>Hebei</td>
<td>VCM/PVC/EDC</td>
<td>400/400/300</td>
<td>2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total 483</td>
</tr>
</tbody>
</table>

### SOUTH KOREA DOWNSTREAM PROJECTS

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
<th>Product</th>
<th>Capacity (KTA)</th>
<th>Start-up schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG Chem</td>
<td>Daesan</td>
<td>SM</td>
<td>+80 to 370</td>
<td>Mid-2019</td>
</tr>
<tr>
<td>Hanwha Chemical</td>
<td>Yeosu</td>
<td>VCM</td>
<td>+150 to 535</td>
<td>2019</td>
</tr>
<tr>
<td>Hanwha Chemical</td>
<td>Yeosu</td>
<td>LDPE, LLDPE</td>
<td>+50 to 732</td>
<td>Q1 2019</td>
</tr>
<tr>
<td>Hanwha Total Petrochemical</td>
<td>Daesan</td>
<td>HDPE/LLDPE</td>
<td>400</td>
<td>End 2019</td>
</tr>
</tbody>
</table>
Spot propylene prices in the first quarter 2019 could see some support in the run up to the Lunar New Year in early February after ending 2018 on a dismal note.

Though downstream demand from key markets are difficult to gauge with market uncertainties permeating most petrochemical sectors, the Lunar New Year factor should still come into play as Chinese buyers do have the traditional mindset of stocking up before they leave for their week-long holiday.

The key question is the amount of cargoes that they are prepared to buy.

While the traditional pre-Lunar New Year restocking activity is one reason, the lack of buying in the last six weeks of 2018 suggests that buyers in northeast Asia were relying on their inventory and even as consumption might have been arguably slow, buyers would have to return to the spot market eventually.

On the supply front, there are no major turnaround plans in the first two and a half months of 2019 for propylene production units in northeast Asia (outside of China).

As such, price movements could well be demand-driven and on upstream performance.
Beyond the Lunar New Year, demand could possibly slide as downstream units could take up to 15 days to get up to speed following the holidays in China, resulting in a sluggish post-holiday market.

It had been the case for the last two years and 2019 could well trend in a similar vein.

Towards the end of the first quarter, things may start to pick up from the sellers’ point of view as downstream run rates should resume to pre-holiday levels by end of February in China.

In addition, from end of March, some producers in northeast Asia are expected to start their turnaround season.

In South Korea, Hanwha Total plans to shut its cracker in Daesan sometime in end of March for maintenance works.

The cracker, which has a propylene capacity of about 640,000 tonnes/year, is expected to restart in the first half of May.

The company will also shut its olefin conversion unit (OCU) situated in Daesan during the same period. The unit has a capacity of 220,000 tonnes/year.

LG Chem will shut its Daesan cracker in early March for about 1 month. The propylene capacity is about 600,000 tonnes/year.

Spot prices in Asia were trending in a fairly narrow range for the first 10 months of 2018.

The prices were never below $1,000/tonne CFR (cost and freight) NE (northeast) Asia.

Spot supply were tight due to significant production losses as it was a heavy turnaround year for crackers in south Korea and Japan.

Things started to unravel in the last two and a half months of the year and prices fell significantly, reaching mid-$800s/tonne CFR NE Asia in end November, as weak demand and poor crude oil prices combined to dull sentiments.

The average spot price was $925/tonne CFR NE Asia on 14 December.
Oleochemicals & Surfactants

Fatty Acids

Asia Fatty Acids to Continue Tracking Palm Oil Movements

By Jackie Wong  January 2019

Spot prices of fatty acids in Asia will continue tracking feedstock palm oil prices closely in 2019 as they did in 2018.

Following aggressive expansion plans that were mostly finalized in 2015-2016, the natural fatty acids market faces a chronic overcapacity issue for at least the next five years with demand growth lagging the capacity increase. Throughout 2018, fatty acids prices followed feedstock price movements closely.

Instead of dragging themselves into a price war, producers in southeast Asia have been seeking a balance point where they can protect the margins of their fatty acids products while running their plants at reduced rates.

This resulted in tightness in C14 myristic acids supply in the first half of 2018 which allowed C14 myristic acids to regain the premium that it enjoys over C12 lauric acids. C14 myristic acid is a by-product of C12 lauric acids that is produced at a 1:3 ratio.

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the local economy until at least the second half of 2019.

Trade activities in first quarter 2019 are expected to remain slow with Chinese buyers not keen to carry excess stock over the Lunar New Year period in the first week of February when a number of plants would be shut down for the holiday.

In addition, feedstock palm oil price movements have been erratic in the second half of 2018, resulting in a more prudent attitude among both buyers and sellers.

Typically, palm oil prices would see downward pressure from increased production during the peak palm harvest season from July to October, before receiving upward support from lower output from November to February.

Historically, C14 myristic acids have always commanded a premium over C12 lauric acids, until oversupply and a lack of demand closed the gap between the prices of these two cuts in 2015-2017.

The demand for fatty acids in 2018 remained relatively sluggish compared to the heyday of 2011-2012, with an uncertain economic outlook amid the trade war between the US and China affected buying appetite.

Even with the truce between the US and China and a possible resolution in 2019, market participants expect any effects to be felt only a few months later.

Overall, the sentiment in China remains bearish with a number of players not expecting any significant recovery in

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**MALAYSIA’S CPO AND PKO STOCKS**

- **CPO**
  - 2M
  - 1.5M
  - 1M
  - 0.5M
- **Total PKO**
  - 400K
  - 300K
  - 200K
  - 100K

**MALAYSIA’S CPO VS PKO VS PALM STEARIN PRICES**

- **PKO ($/tonne)**
  - 2015-6-1
  - 2018-12-1
- **Palm Stearin ($/tonne)**
  - 2015-6-1
  - 2018-12-1
- **CPO ($/tonne)**
  - 2015-6-1
  - 2018-12-1

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Source: ICIS
However, palm oil prices declined from September to the first half of December in 2018, before rebounding upward. Market participants remain skeptical whether the latest uptrend in palm oil prices would last.

Official data from Malaysia and Indonesia showed relatively high oil stocks in both countries, which may cap the upside potential of palm oil prices. There is little indication at the moment to suggest that palm oil exports would increase significantly to relieve the stock pressure.
Asia’s fatty alcohols prices may continue to receive upward support from supply tightness in 2019 as a result of some shutdowns in Asia.

Overall, the natural fatty alcohols market faces a chronic capacity issue for at least the next five years following aggressive expansion plans in southeast Asia which were mostly finalised in 2015-2016.

Supply abundance plagued fatty alcohols prices from 2015-2017, but forced shutdowns in China and changes in India’s import tax structure for vegetable oils brought some balance to the market.

In addition, fatty alcohols producers in southeast Asia also protected the margins of their products by running at lower plant operating rate.

As China stepped up its efforts in enforcing strict environmental regulations, production of some fatty alcohols plants was affected.

Smaller Chinese producers were forced to shutdown their plants until investments are made to improve the waste treatment facilities.

Production of some major Chinese fatty alcohols plants were also affected.

As a result, some Chinese buyers had to turn to import cargoes to fulfill their requirements in 2018.

Besides capacity losses in China, fatty alcohols producers also became less competitive on the export front with the Indian government increasing the import tax on crude and refined palm oil in March 2018.

The India government announced import duties cuts for crude and refined palm oil from southeast Asian countries at the start of 2019 with the tax on crude palm oil lowered from 44% to 40%, while the tax on refined palm oil was cut from 54% to 45% for imports from Malaysia and 50% for purchases from Indonesia and other ASEAN countries.

This is unlikely to boost fatty alcohols exports from India and local producers would mostly likely remain focused on the domestic market.

Southeast Asian fatty alcohols producers also saw greater demand from Europe following the force majeure of a synthetic alcohols plant in Europe, which would likely remain in place until the fourth quarter of 2019.

In the near term, fatty alcohols supply in Asia is expected to remain tight and that together with an uptrend in feedstock palm oil prices since the second half of December 2018 would provide some upward pricing support.

On the demand side, softer crude oil prices may make synthetic alcohols more competitive, especially if palm oil prices continue to rise.

In the second half of 2018, some alcohols buyers were interested in switching from synthetic to natural alcohols when palm oil prices were soft.
The growing gap between crude oil and palm oil prices are likely to deter alcohols buyers from making the switch.

Uncertain economic outlook also affected buying appetite, particularly in India and China.

Depreciation in the Indian rupees against the US dollar in September 2018 increased the cost significantly for India palm oil and alcohols buyers.

In China, buying sentiment remains relatively bearish even with the truce between the US and China and a possible resolution of the trade war in 2019 with a number of players not expecting any significant recovery in the local economy until at least the second half of 2019.

Trade activities in Q1 2019 are expected to remain slow with Chinese buyers not keen to carry excess stock over the Lunar New Year period in the first week of February when a number of plants would be shut down for the holiday.

In addition, feedstock palm oil price movements have been erratic in the second half of 2018, resulting in a more prudent attitude among both buyers and sellers.
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OLEOCHEMICALS & SURFACTANTS

FATTY ALCOHOL ETHOXYLATES (FAE)

ASIA FAE COULD GAIN STEAM IN Q1 ON SOME UPSTREAM REBOUNDS

BY KHENG WEE LOY  JANUARY 2019

Fatty alcohol ethoxylates (FAE) import markets in Asia could gain steam on some upstream rebounds and steady demand in the first quarter of 2019.

The expected start-up of a new plant in China could temper trading sentiment slightly.

Regional prices for FAE have been mainly on a downtrend for the past year, tracing the spot volatility in feedstock markets to reach all-year lows.

For the week ended 2 January, import prices for FAE-7,9 were assessed steady at $1,340/tonne CIF (cost, insurance & freight) China on average, having slumped by 24.3% from the start of 2018, according to ICIS data.

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Likewise in southeast Asia, drummed spot prices were at $1,435/tonne CIF SE (southeast) Asia on average, reflecting a 20.3% drop over the same period, ICIS data indicated.

Upstream fluctuations would remain as key concerns for market participants.

The co-feedstocks required for FAE production are ethylene oxide (EO) and C12-14 fatty alcohols.

Recent uplifts in these two sectors could point to some upward pressure for FAE values in the short term, some players said.

Weekly prices for C12-14 fatty alcohols appeared to halt its downtrend in the second half of December 2018 and hiked up by $50/tonne, amid a sharp increase in feedstock palm oil prices and limited supply.

Palm kernel oil (PKO) price movements may remain erratic in the near future.

Regional PKO in south Malaysia were transacted higher in the $760s/tonne DEL (delivered) on 31 December, according to data collected by ICIS.

Ethylene import prices freshly rebounded to around $925/tonne CFR (cost & freight) NE (northeast) Asia in mid-December, after nosediving within the fourth quarter to touch a multi-year low, ICIS data showed.

Domestic EO values in China declined to yuan (CNY) 8,500/tonne EXWH (ex-warehouse), the lowest since July 2016, based on data compiled by ICIS on 2 January.

Regional availability is projected to be slightly mixed.

Certain manufacturers would likely choose to allocate more volumes for their local markets to reap higher margins or produce on a make-to-order basis.

Export discussions typically take place for excess goods in such cases.

On the other hand, some producers may prefer to export cargoes actively to achieve sales volumes, especially with the increased selling interest observed towards the end of the fiscal year for accounting purposes.

Separately, a new 150,000 tonne/year alkoxylation facility, managed by Sasol Limited, is slated to start operations in 2019. The unit is located in China's Jiangsu province.

It may take time for the product volumes to emerge and then for participants to gain clarity and respond accordingly, some market participants said.

Consumer demand is set to be steady. Buying appetite could strengthen on the back of restocking activities in January, following the December lull for some downstream sectors towards the year-end holidays and winter season in northeast Asia.

Local players in China might be more inclined to obtain domestic cargoes as opposed to imports, given the unstable upstream conditions.

Import discussions typically come with additional risks associated with currency rates and longer delivery periods, sources said.
Traders and buyers would stay marginally cautious in their purchasing activities amid the uncertain macroeconomic situation and US-China trade war truce.

A slight pause in trading momentum may occur during early February, in light of the Lunar New Year celebrations observed in some areas.

In the meantime, most industry participants will have their eyes on the feedstock markets before making any firm decisions.

FAE is a non-ionic surfactant often used in the manufacture of personal care and industrial cleaning products.
LINEAR ALKYL BENZENE/SULPHONATE (LAB/LAS)

ASIA LAB MARKET MIXED IN THE NEAR TERM ON UNCERTAIN UPSTREAM

BY YUANLIN KOH JANUARY 2019

The Asia/Middle East linear alkylbenzene (LAB) market is likely to be mixed in the near term on uncertain upstream crude and benzene values.

Key feedstock Brent crude oil prices had lost about 27% of its value since early October to $62.60/bbl as of 23 November 2018, ICIS data showed.

Crude prices are expected to remain under pressure due to the expected global economic slowdown in 2019 as the trade war between the world’s two biggest economies - the US and China - escalates.

Another key upstream, benzene, has also been posting losses since late September 2018.

Values fell 24.4% from $862.50/tonne FOB (free on board) Korea on 28 September, to $652/tonne FOB Korea on 23 November, closely tracking crude prices.

There is particular concern about the long supply issue that has been plaguing the benzene market since 2017.

With new supplies slated to come on stream in China, southeast Asia and the Middle East in 2019, sentiment among benzene participants remains weak.

At the same time, the benzene market has entered the year-end lull and demand appeared unlikely to improve until after the Lunar New Year holidays in early February of 2019.
Currently, majority of the downstream LAB market players are on the sidelines, waiting for further and a clearer direction of its feedstocks.

Sentiment is mostly bearish in the market in the near term, as production costs fell.

ICIS data showed LAB prices in southeast (SE) Asia plunged to a six-month low on 21 November 2018, at $1,315/tonne CFR (cost & freight) SE Asia last seen on 2 May and down 3.7% from 20 June.

LAB prices reached a peak of $1,365/tonne CFR SE Asia on 20 June 2018, according to ICIS data.

Following that, the market generally saw a downtrend, before hitting a six-month low on 21 November 2018.

The market generally sees a slight uptick in demand before the Lunar New Year holidays which most of northeast and southeast Asia celebrates.

However, it seems with the volatility of feedstock values, demand may be softer than usual.

Market sentiment traditionally improves after the Lunar New Year holidays, when the market would restock inventories.

“Regardless of the US-China trade war, buyers would have to restock inventories after the Lunar New Year holidays [in 2019], as they haven’t really bought in months,” said a northeast Asia producer.

However, with the simmering US-China trade war continuing, it is hard to predict if the market will follow its traditional recovery after Lunar New Year holiday in 2019.
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*Next six months for methanol

To find out more, click here
Asia spot prices for plasticizers could some see support in the first quarter of 2019 on restocking ahead of the Lunar New year in the first week of February, and slight thaw in trade tensions between the US and key Asian market of China.

The US and China managed to agree on a 90-day truce to deescalate trade tensions during the G20 meeting in December and that may be good news for the plasticizers market for the first quarter of the year.

While uncertainties remain, producers or end users alike would in theory be able to plan their run rates safe in the knowledge that the trade war would not get worse in the near term.

And with the traditional pre-Lunar New Year restocking activities, demand for plasticizers could possibly improve.

On the feedstock front, 2-ethylhexanol (2-EH) could enjoy some support in the first quarter of the year. The run up to the Lunar New Year could also see some traditional restocking activities in the region.

The post-holiday market could see some uncertainties as major feedstock propylene spot prices have declined following the week-long holiday for the last 2 years.

On the propylene front, spot prices in Q1 could see some support in the run up to the Lunar New Year (in early February) after ending 2018 on a dismal note.
Supply of diisononyl phthalate (DINP) in northeast Asian could start the year on the tight side as one feedstock isononanol (INA) unit is only set to resume production in February.

As such, supply of DINP could be limited.

In Europe, there are some uncertainties on demand for Asian cargoes as inventories are set to end the year 2018 on a low.

Some European buyers are not very optimistic with current economic climate and that could be a dampener for demand.

In the US, there too are some uncertainties for Asian cargoes as 2019 supply and demand may depend on the production of the auto industry.

Margins for dioctyl phthalate (DOP) have been healthy for most of 2018, according to ICIS data.

Dioctyl terephthalate (DOTP) was trending largely in a similar vein, with margins in the positive territory in the final quarter of 2018.

Spot prices for DOTP were trending up overall in 2018.

Spot prices were at $1,210/tonne CFR (cost and freight) China on 5 January and was at $1,240/tonne CFR China in end of December.

DOP on the other hand was slightly lower. It started the year at $1,130/tonne CFR east Asia and was at $1,080/tonne CFR east Asia in end December.
Asia spot prices of 1,4-butanediol (BDO) and its downstream polybutylene terephthalate (PBT) are expected to continue their downward trend in the first quarter of 2019, and the prospects for recovery are seen weak for the rest of the year.

The BDO prices in China will face mounting pressure from reduced PBT demand, though production cuts in China will cushion the fall in the PBT price downside.

Chinese BDO supply is expected to remain ample as government restrictions on industrial energy usage in winter will be less prominent than last year, prompting producers to run at higher rate in the absence of stringent rules on hopes of exporting more material for better net-backs.

Suffice to say, Chinese BDO import volumes will most likely remain subdued in 2019, and Chinese producers will count on the export market.

In the Chinese import market, both BDO and PBT prices are expected to track the price movements in the key China market to some extent, although there has been a noticeably widening price gap between Chinese BDO imports and domestic cargoes.

Poor local Chinese demand will persist in the early weeks of the new year. Consumption in China had dwindled in the past months with the approach of the year-end lull as buyers were hesitant to stock up on cargoes because they prefer to keep their inventory levels lean.

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Demand will likely pick up only from the second half of February onwards as downstream plants in China are expected to shut for two weeks ahead of the Lunar New Year holiday in early February.

Upstream-wise, the prices of various feedstock used by different BDO producers outside China - including butadiene (BD), propylene, propylene oxide (PO) and maleic anhydride (MA) - are not expected to increase significantly in the first quarter 2019, amid declining crude oil values and overall poor market sentiment.

The other main feedstock used in PBT production besides BDO – purified terephthalic acid (PTA) – may see price gains. The price upside in PTA, however, may be limited in early 2019 after China import prices plunged by 25% from its peak in mid-September 2018 before bottoming out in end-November. There are limited scheduled maintenance at PTA facilities in the near term, and the current tight supply may gradually ease going forward.

Meanwhile, the average operating rate of PBT plants in China dropped to around 70% of capacity in early December, from 80% in the second half of November, following the tumble in PBT domestic prices in late-November.

PBT domestic prices had slumped to a low of Chinese yuan (CNY) 9,500/tonne ($1,381/tonne) DEL (delivered) China at one point before recovering to CNY11,000/tonne DEL China within a couple of weeks after the output cuts, according to market sources.

Low-priced China PBT exports will likely vanish after the rebound in China domestic prices since early December.

As for BDO, China domestic prices have been on a steady downtrend trend, with average prices hovering at slightly above the CNY10,000/tonne DEL China mark as of 11 December, down from its 2018 peak of CNY11,700/tonne DEL China in April.
By Melanie Wee, January 2019

Asia’s polycarbonate (PC) prices are expected to take on a soft trend in the first quarter at least, with ample supply expected to keep a lid on any potential upsurge, market sources said.

Spot prices of PC are poised to take cues from movements in upstream raw material bisphenol A (BPA) markets, particularly in China. A persistently weak Chinese Yuan currency to the US dollar, compounded with the ongoing US-China trade tensions, has depressed sentiment, making imports uneconomical.

Meanwhile, substantial falls in BPA prices in China have generated downward pressure on most PC grades, along with prices of other engineering plastics over the last three months. BPA is used in the production of PC resins.

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Spot prices for most grades of PC spiralled downwards through most of the fourth quarter.

The spread between PC and BPA narrowed to around $800/tonne levels towards the end of the fourth quarter, from the low $1,000s/tonne in the third quarter of 2018.

This consequently forced PC producers in parts of northeast Asia to trim production to mitigate squeezed margins.

In the week ended 12 December, spot prices of GP moulding-grade PC or the injection grade averaged at $2,200/tonne CIF (cost, insurance and freight) China, marking a hefty decline of 35% compared to the same period in 2017, according to ICIS data.

The bearish sentiment may persist from January to March, amid a slowdown prior to the Chinese Lunar New Year festival that takes place on 5 February 2019.

“Prices [of optical-grade PC] are likely to hold stable at best just before the Lunar New Year in February,” a northeast Asia-based market source said.

In addition, the market is expected face ample supply, given China’s Luxi Chemical’s newly-added 65,000 tonne/year PC unit to its plant located in Shandong province.

This brings the PC capacity of Luxi to 130,000 tonne/year with the current 65,000 tonne/year included.

Meanwhile, a third PC line, of a similar capacity, is on a trial run.

On the other hand, demand already rattled by the impact and uncertainty from the trade tensions as well as a slowing Chinese economy, may be bleak going forward.

“February [markets] should be quiet because of the Lunar New Year holiday,” a separate northeast Asia-based market source said.

Depending on [the outcome] of the US-China trade talks and crude oil’s price direction, spot PC prices are unlikely to see much of a rebound,” a China-based market source said.

China’s official manufacturing purchasing managers’ index (PMI) fell to 49.4 in December, the first contraction in two and a half years, according to National Bureau of Statistics (NBS).

PMI is a barometer of an economy’s manufacturing activity, in which a reading above 50 means expansion and below 50 as contraction.
Southeast Asia polyethylene (PE) market is likely to face some downward pressure in 2019 on oversupply as demand could not catch up with the large capacity additions.

Import PE supply is expected to swell amid another round of new PE plants start-ups, creating more options for converters while suppressing prices in return, industry sources said.

The first wave of shale gas projects in the US and PE expansions in India had added around 6m tonnes of PE capacity from 2017 to 2018 with linear low density polyethylene (LLDPE) being the most volume added, followed by high density polyethylene (HDPE) and low density polyethylene (LDPE) grades.

In the first half of 2018, both domestic and import prices saw some gains across all PE grades, with dutiable HDPE prices surging above $1,400/tonne CFR SE Asia on average in March, a price level last seen in 2015. Prices were supported by tight supply situation amid limited production and commercial shutdowns, stemming from much higher feedstock ethylene price and robust demand in PE pipe market. Regional PE producers with integrated plants switch to selling their ethylene when prices are high for better netback, lowering their PE production.

The surge in demand for HDPE pipe, amid growth in the construction sector in Asia, has given more incentive for HDPE producers to switch their production to pipe instead of film grade, tightening the latter supply in the process.

In the second half of the year, PE prices moved away from their respective peaks and steadily declined month-on-month, with LLDPE film grade performing the worst.

Dutiable LLDPE prices reached a 9-year low at $1,000/tonne CFR SE Asia on average, as of mid-December 2018, amid mounting supply pressure.

India is exporting heavily to southeast Asia after it turned into a net exporter in 2018, with the region making close to 20% of its total export volumes in 2018.

An additional 25% tariffs, imposed on 23 August, for most US import PE cargos in China had rendered US cargoes unappealing to Chinese buyers, effectively closing the prime import destination to US producers.

As a large chunk of export volume from the new US PE plants that came online in 2017 and 2018 were initially meant for China, US suppliers need to find many other markets to sell to, to bridge the gap.

In order to gain foothold and market share in Asia, US suppliers were inclined to offer competitive prices, particularly for LLDPE grade, should the US-China trade tension continues throughout 2019.

Offers for US LLDPE cargoes were readily available below $1,000/tonne CFR SEA, largely at $950-980/tonne CFR SEA, around $50/tonne lower than other offers available from regular Saudi and Middle East suppliers.

The supply glut looks set to intensify in 2019 as more PE producers are on track to start up their plants, adding close to 7m tonnes of additional PE supply globally.

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On 21 December, dutiable LLDPE film prices were assessed at $1,100-1,020/tonne CFR SE Asia, up $20/tonne from the week before amid a lack of competitively-priced offers, according to ICIS data.

Dutiable HDPE film prices were assessed stable-to-soft at $1,030-1,050/tonne CFR SE Asia, while dutiable LDPE film prices were stable week-on-week at $1,020-1,030/tonne CFR SE Asia, ICIS data showed.

Demand growth for PE, including LDPE grade, in most Asian markets is expected to be slower in 2019, in tandem with the global economic slowdown, uncertainty surrounding the geopolitical market and rising environmental concerns on plastic waste.

There is relatively limited supply pressure for non-dutiable ASEAN (Association of Southeast Asian Nations) cargoes as the bulk of additional supply were for dutiable cargoes.

This might act as a catalyst to widen the price gap between dutiable and non-dutiable cargoes further in 2019.

On the demand side, most buyers in southeast Asia have largely been weighed by bearish market sentiment, which might continue to manifest in 2019 amid tilted supply-demand balance.

Most converters opt to rely on more prompt shipment imports for their immediate requirements amid market uncertainty.

Similarly, traders and stockists are cautious to take any position, opting to hold on to minimally comfortable allocations and stock levels amid market uncertainty.

Industry sources see Vietnam becoming a more targeted exports market in Asia, apart from China, in the foreseeable future.

Vietnam market has been inundated with competitively-priced import cargoes from India and the US due to its full reliance on imports and zero import duty policy while other southeast Asian countries impose between 5-15% of import duty for non-ASEAN PE cargoes.

Prices in Vietnam could be significantly lower than other southeast Asian regions, which might isolate price movements in Vietnam from the rest of southeast Asia, warranting separate price assessments, sources said.

Overall outlook for 2019 remains cautious with some risk of further downtrend across PE grades while some market players believe that LLDPE prices had reached the bottom.

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The ICIS Price Forecast Reports include a rolling 12-month price forecast, current and historical prices for key commodities with information on upstream markets and major industry drivers that affect the prices and margins of the commodities you are tracking. Our reports also enable you with a bigger picture of macroeconomic factors that are shaping the chemical markets, with an economic outlook, alternative scenarios and projections to help you plan for the future.
Polypropylene (PP) spot prices in southeast Asia may continue to be suppressed moving into the first quarter of 2019 as the market continues to grapple with fresh supplies and tepid downstream demand amid global trade tensions.

2018 started on a bullish note, with all-origins PP flat yarn grade prices peaking for the year at $1,305/tonne CFR (cost and freight) southeast (SE) Asia in early June, a close to 10% increase from January, according to ICIS data.

For the first three quarters of 2018, spot prices stayed consistently higher than the same period in the year prior, with all-origins spot prices mostly staying over the $1,250/tonne CFR SE Asia mark; supported by healthy import buying appetite and lower than anticipated inventory levels in China.

Some unexpected turnarounds in the Middle East and parallel gains in the upstream propylene market further propelled regional PP spot prices.

However, sentiment took a dramatic turn for the worse in the last quarter, with spot prices plunging by more than 13% within the short span of seven weeks.

Trade tensions between US and China stoked volatility in the petrochemical markets in the later part of 2018, and the PP market was not spared. For most of Q4, demand in southeast Asia was in the doldrums.

Converters and end-users in southeast Asia were making procurements on a hand-to-mouth basis, opting to keep stocks lean amid concerns that spot prices may lose further ground in the weeks ahead.

Meanwhile, the market continues to grapple with fresh supply, with the start-up of Nghi Son Refinery and Petrochemical’s (NSRP) 400,000 tonne/year production unit in Vietnam and Lotte Chemical Titan’s 200,000 tonne/year facility in Malaysia.

Availability of duty-exempted ASEAN origin cargoes in particular has lengthened considerably as a result, resulting in a narrower price gap between dutiable and non-dutiable PP cargoes in SE Asia; a trend that is likely to continue well into 2019.

The scheduled mid-2019 start-up of the Refinery and Petrochemical Integrated Development (RAPID) project in Malaysia’s southern state of Johor is expected to add a further 900,000 tonnes/year of PP capacity in the region.
With the start-up of the new unit, Malaysia is expected to become a net PP exporter with a total production capacity of 1.54m tonnes/year by 2020, putting a massive dent on its demand for imports.

In Thailand, some local traders harboured concerns over political uncertainties surrounding the upcoming general election after four years of military rule which could have possible implications on the country’s economy.

The local market in Vietnam continues to struggle to achieve a new equilibrium with the start-up of NSRP’s new PP production unit. The producer’s main focus thus far has been on commodity homopolymer grades, leading to a reduced dependency on imports for commodity grades in the country.

In particular, Vietnam has seen very limited imports of Chinese origin PP cargoes.

Initially, there were expectations that new capacities in China may result in Chinese suppliers seeking to export more volumes to Vietnam.

However, NSRP’s start-up has led to increased price-competition between locally-produced materials and imports within Vietnam, as new market players struggle to establish market share in the country.

Meanwhile, Indonesia is expected to see growing volumes of South Korean origin exports in 2019, in particular for copolymer grades; for which South Korean exporters enjoy duty-free status in Indonesia.

Throughout the past year, Indonesia has seen competitively-priced South Korean copolymer exports being offered in the country, exerting increasing pressure on ASEAN producers, whose cargoes are similarly exempt from duties in Indonesia.

While there are concerns that the increased availability may lead to an eroded price gap between dutiable and non-dutiable copolymer prices, it is worth noting that the bulk of PP start-ups in China and southeast Asia have thus far been focused on mainly homopolymer grades.

Hence, some market players are hopeful that spreads between homopolymer and copolymer grades could be maintained, at least in the near term.

Critical market data, tools & expertise
PLASTICS & POLYMERS

POLYSTYRENE

ASIA’S POLYSTYRENE TO BE DRIVEN BY FEEDSTOCK VOLATILITY

BY YAW MIN JIE AND YUANLIN KOH JANUARY 2019

Asia’s polystyrene (PS) prices shall take strong cues from volatility in upstream feedstock styrene monomer (SM), as margins are a main driving force for liquidity in the regional markets.

The PS prices largely mirrored the movements of feedstock SM last year: they plunged to an intra-year low of $1,220/tonne and $1,285/tonne CFR (cost & freight) China in November in tandem with SM for both general purpose (GP) and high-impact (HI) grades.

The SM prices, as a matter of fact, hit an intra-year low of $982.50/tonne CFR China over the same period, ICIS data showed.

In a swift response to falling prices, Chinese PS producers reduced their run rates and curbed supply for December and January.

“Suppliers in China cut their run rates to around 70% and above as they had purchased SM earlier at higher prices, rendering their margins narrower since PS is softer now given sluggish seasonal demand and falling feedstock prices,” a regional distributor said.

The market is on the edge over the price movements of SM in the new year, as the product is regarded a key driver in determining PS pricing trends.

Demand wise, buying interest is expected to pick up slightly in the first quarter in key market China, as the manufacturing sector gears up ahead of the Lunar New Year festivities.

Traditionally, China is a huge PS consumer, raking in 600,000-700,000 tonnes on a yearly basis.

Around 10% of the total PS output in Asia is fed into China, one of the top buyers in the region.

The total capacity of plants in northeast and southeast Asia is estimated to be around 7.66m tonnes in 2019.

PS resins are used for packaging, toys, consumer electronics, and a variety of consumer items including utensils and disposable food-ware.

“The mood of the market is more optimistic [this year] because US has agreed not to raise tariffs on Chinese goods and thus US demand for Chinese PS end-products will not be adversely affected,” a northeast Asian producer commented.

It was agreed on 1 December that Washington would not raise tariffs on $200bn Chinese goods from 10% to 25% from 1 January 2019.

The US is a key importer of PS end-products.

Meanwhile, with several SM plants in northeast Asia and the Middle East scheduled for turnarounds from January 2019, a cut in supply would bolster the feedstock prices and support PS offers.

The situation, however, can be a double-edge sword.

The margins could narrow if higher PS offers fail to inspire buyers.

“There is no increase in downstream capacities in 2019. This may prompt a cut in PS run rates again,” one PS trader said.
In the Middle East, the buyers prefer to source within the region and rely less on Asia, on the back of competitive rates on a delivered basis, flexible payment terms and shorter delivery times.

Already, the buying interest for Asian PS has waned in the Middle East.

The Middle East buyers tend to seek Asian material only when the regional supplier has sold out all its cargoes, and at small quantities.

The demand in the Middle East is likely to be stable-to-soft in the near term during the seasonal lull in the first quarter.

In the Gulf Cooperation Council (GCC), the market is optimistic about the peak tourism season in the first quarter because of clement weather conditions.

Therefore, the consumption of food disposables would be higher.

In south Asia, market players are upbeat about the near term when buyers would replenish their inventory levels after months of paltry purchases.

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Source: ICIS
Sustained demand in India for polyvinyl chloride (PVC) and increased safety concerns in China are likely to lend support to firmer prices in the first quarter of 2019.

In 2018, PVC prices saw a downturn in May and June due to ample supply from US cargoes. Prices recovered slightly and then fell again in late September amid depreciating Asian currencies caused by the US-China trade war, as well as continued supply from the US.

For the week ended 21 December, average prices of multi-purpose PVC remained stable at $880/tonne CFR China, reflecting scant discussions.

PVC material headed to southeast Asia were assessed at an average of $867.50/tonne CFR SE Asia, as some sellers reduced their January-loading indications amid a year-end seasonal lull in demand.

The trade war between US and China certainly affected the PVC market in 2018. In late August, tariffs on 25% kicked in on US shipments of precursor ethylene dichloride (EDC) to China.

US EDC export volumes into Asia also fell last year, as US producers kept their volumes for captive use into PVC production.

Tariffs of 10% were imposed by the US on finished goods containing PVC from China in late September. While these tariffs were scheduled to rise to 25% on 01 January 2019, the hikes were delayed by 90 days as both countries enter talks to resolve the dispute.

Despite the temporary truce, outcomes of the US-China trade war still remain unclear, and continues to weigh on sentiments in the region.

In China, ongoing safety inspections ordered by the government are likely to continue affecting production rates in the country.

The increased safety concerns come after an accident in late November near a carbide-based PVC producer in Hebei. The blast caused 23 fatalities, and was caused by a leakage of flammable vinyl chloride.

While around 80% of Chinese producers are carbide-based and get their feedstock from limestone and coke, market sources say both carbide-based and ethylene-based producers are affected by the ongoing inspections.

This may lend support to higher prices amid tighter supply in the country.

Apart from China, India was another key player in the Asian PVC market last year, and both countries will continue to play instrumental roles in 2019.

Sentiments in India were particularly affected by the rupee devaluation against the US dollar in 2018, caused by the US-China trade war.

On the other hand, the south Asian country’s economy is expected to grow at 7.5 percent in fiscal year 2019/20, reflecting robust private consumption and strengthening investment, according to the World Bank. Overall demand for PVC is likely to strengthen on infrastructure demand and housing projects.

Nevertheless, any currency headwinds will continue to be a potential disruptive force on India’s buying sentiments this year.

Southeast Asian importers are expected to be monitoring the Chinese market as well. When Chinese domestic prices are higher than import prices, very limited or no Chinese cargoes will be exported. Buyers in southeast Asia then have to source for other alternatives, typically at higher prices.
INDIA PVC DEMAND TO RECOVER IN Q1 ON AGRICULTURAL PIPES

BY ZIN XUAN HO JANUARY 2019

Polyvinyl chloride (PVC) demand in India is expected to improve in early 2019 in view of the peak season for pipe laying in the region.

Traditionally stronger demand for pipes from the agricultural sector is expected to support prices during Q1 2019.

In 2018, the market saw seasonal demand in Q1 while prices were largely stable from May to September after which prices declined owing to poor demand in the wake of an extended monsoon season.

Lower crop prices for the year also affected PVC sales as farmers were cautious with investments due to a tighter cash flow.

The US-China trade war has also impacted the market, with the US dollar-Indian rupee exchange rate reaching all-time lows in the year.

This caused Indian buyers to be sidelined for most of the year, opting only to buy as-needed from domestic suppliers where possible to recoup margins.

The low interest in imports and excess supply prompted many producers to decrease offers, resulting in an all-year low price in November 2018.

However, players believe the prices had bottomed out in mid-December, and demand is slowly improving ahead of the seasonal peak starting in January.

The Indian PVC market is now poised for a recovery, as players believe activity should increase in the new year.

About 70 per cent of the total demand for PVC in India comes from the pipes sector as PVC is widely used in the manufacture of underground irrigation and water distribution pipes.

The remaining 30 percent of demand comes from the construction sector where PVC is used to manufacture films, profiles, insulation and in calendaring applications.

The first quarter of 2019 is expected to see better sales and higher demand, although a slowdown is expected ahead of the the upcoming elections in April.

In the Middle East, trends for the Gulf Cooperation Council (GCC) and East Mediterranean (East Med) were similar.

The region saw an uptick in demand in the beginning of the year, from stock replenishing activities.

There was a fall from March to May, as demand dwindled, but slowly recovered and prices were mostly stable from June to September.

The market then saw a dip in prices as demand tapered off amid an unexpectedly weak Q3.

Exporters reduced offers in a bid to attract buyers, but majority of the region’s buyers were well-supplied by a local producer and said they saw no need to order import cargo given higher prices and longer delivery times.

Inventories were high due to limited demand for finished PVC pipes, and buyers were mostly purchasing only on an as-needed basis, from a major domestic producer, whose prices were deemed more competitive.

Much of the demand for PVC in the Middle East comes from the construction sector where PVC is used for making pipes.

Last year, Dubai approved the biggest ever budget for 2018, to ramp up infrastructure spending ahead of Expo 2020, which was expected to give a push to demand for PVC within the UAE from 2018 onwards.

Contrary to expectations, demand was dull for much of 2018.

While the region saw traditional market lulls in the months of the Ramadan and Eid ul-Fitr holidays, much of the weak sentiment was attributed to the US-China trade wars, which prompted most players to remain cautious about volume import purchases.
US-origin cargoes were deemed too expensive for majority of the buyers and offers attracted limited interest for much of the year.

Other offers from Europe and Asia were met with similarly weak interest, in view of higher prices and longer delivery windows.

Market sources conceded that the cash flow issues plaguing the region in recent years also contributed to the lack of demand for PVC in the region as investments in construction slowed.

Looking ahead, demand in the region is not expected to show great improvement in the near future, considering the limited market for finished goods.

This is because the region continues to be affected by slow investments in construction, cash flow issues, and high prices of imports.

While the market expected rehabilitation efforts following wars in Syria and Iraq to drive construction and building activity, thereby supporting greater PVC demand in 2018, this did not happen as the ongoing trade war weakened market sentiment, increasing cautiousness in the way players approached purchasing.
METHYL DI-P-PHENYLENE ISO CYANATE (MDI) & TOLUENE DI-ISOCYANATE (TDI)

ASIA TDI SOFTENING ON STABLE DEMAND OUTPACED BY SUPPLY

BY IZHAM AHMAD JANUARY 2019

Toluene di-isocyanate (TDI) prices in Asia are expected to be soft as weak demand is expected to continue in the early months of 2019.

In 2018, TDI prices in Asia hit fresh all-time highs and then reversed direction from around mid-year to then fall to two-year lows by the fourth quarter of the year.

In the week ended 20 December, import prices in southeast Asia also hit their 2018 lows at $2,100/tonne CFR SE Asia while import prices in China also traded similar levels. These were the lowest prices for TDI in Asia since May 2016.

These two events together combined to drag TDI prices down from the highs they traded at around $4,650/tonne CFR, the highest on record since ICIS began tracking these prices.

In 2019, further pressure could be forthcoming as producers such as Hanwha and OCI have resumed production after undergoing regular maintenance shutdowns in November and December.

More supply is expected this year with Wanhua Chemical’s 300,000 tonnes/year TDI plant in Shandong province having started production in October with on-spec production expected to have been achieved by the end of 2018.

Given the current downtrend in TDI prices in China and the rest of Asia, it would be generally fair to assume Wanhua’s new supply could contribute to further declines in prices there.

But the Middle East is a much smaller market for TDI and it is unlikely that Wanhua would allocate significant volumes to the region just yet.

More declines could be expected in the weeks ahead as the anticipated peak demand season usually seen in the months of October and November was hugely disappointing for producers as prices continued to slide and buyers remained on the sidelines, buying only on needs basis.

China’s domestic yuan-denominated TDI prices are coming off as demand continues to languish, prompting sellers to moderate offers in a bid to close more sales and move cargoes.

To date, products from the new plant have yet to be verified but stocks among domestic traders have been replenished since November.

And as downstream requirements failed to recover in tandem, traders are again now “feeling the heat from mounting inventory pressures to sell more aggressively”, a TDI maker in China said.

If sales continue to languish, it is likely “prices could drop further in coming weeks”, an end-user said, adding that this means he is in no hurry to book fresh cargoes at yet.

In 2018, TDI supply received a boost with the entry of Saudi Arabia’s Sadara Chemical Co. into the TDI supply chain in the first quarter of 2018.

The company can produce 400,000 tonnes/year of MDI and polyether polyols and 200,000 tonnes/year of TDI.

Sadara’s TDI were heard to have been sold in Asia and in many parts of the Middle East and Africa as well.

Also in 2018, BASF installed a new reactor at its Ludwigshafen plant and resumed TDI output from its 300,000 tonnes/year plant in Germany.

In 2018, TDI prices in Asia hit fresh all-time highs and then reversed direction from around mid-year to then fall to two-year lows by the fourth quarter of the year.

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If sales continue to languish, it is likely “prices could drop further in coming weeks”, an end-user said, adding that this means he is in no hurry to book fresh cargoes at yet.
As long as buyers’ confidence stays low, market participants said that pricing sentiment for TDI is unlikely to strengthen much in the near term. The following chart shows the spread between feedstock against TDI prices. They show a narrowing spread between the costs of feedstock and the prices of isocyanates, reflecting the weak demand and hence the recent downtrend in isocyanates prices.

Similarly, in other parts of Asia, TDI import prices into southeast Asia and India have essentially been dropping by $50-100/tonne on a weekly basis over the last few months as sellers dropped offers to stimulate buying interest.

Cumulatively, import prices into southeast Asia, for instance, have already lost over 10% since end October, settling at average of $2,200/tonne CFR (cost & freight) southeast Asia on 5 December, according to ICIS data.

The situation in India is no better either, as prices there moved in line with those in southeast Asia.

Demand in southeast Asia and India is “paltry”, a trader said, as off-take from various key applications like foam or automotive has been much slower than expected.

Even if they may have any import requirements, regional end-users’ buying ideas for fresh TDI cargoes are “disproportionately bearish”, a regional trader lamented.

Most TDI buyers remain convinced that with supply expected to increase further in China, possibly by early 2019, the ensuing length in supply would further suppress domestic prices in China, as well as drag US dollar-denominated pricing lower too.
POLYURETHANE CHAIN

POLYMERIC METHYL DI-P-PHENYLENE ISOCYANATE (PMDI)

ASIA, MIDDLE EAST PMDI TO REMAIN UNDER PRESSURE

BY IZHAM AHMAD  JANUARY 2019

It has been yet another tumultuous 2018 for the isocyanates in the Asia and the Middle East and 2019 is likely to see further volatility with prices expected to remain under pressure at the start of the new year.

In the Middle East, PMDI prices started 2018 already under downward pressure after the highs traded in October 2017. Within the first three months of 2018, PMDI prices in the Gulf Cooperation Council (GCC) lost about 15% of their value and the decline continued into Q2.

The trend was mirrored to some extent by import values in China and SE (southeast) Asia with prices there also under pressure through 2018 although China’s import prices have been more volatile.

Taking prices in the GCC as representative of the broader Middle East region, PMDI prices started 2018 around $3,250/tonne CFR (cost & freight) GCC and then declined to $2,750 CFR GCC by end-March.

Since August, PMDI prices in the GCC continued to decline at a slightly faster pace before trading down to $1,475/tonne CFR GCC in the week ended 13 December, the lowest level seen in 2018.

In terms of supply in the Middle East, there are essentially two main producers of MDI, namely Karoon Petrochemical Co. in Iran, with a nameplate capacity of 40,000 tonnes/year, and Sadara Chemical in Saudi Arabia, with an annual capacity of 400,000 tonnes/year.

Both these MDI plants are believed to be running but operating rates are not publicly available. Sadara’s entry into the supply chain in 2017 has had minimal impact on prices.

PMDI prices in the GCC were under downward pressure through the latter half of 2018 but most players said this was largely tracking a broader downtrend in prices in China.

“Supply is sufficient and demand is stable,” said a source in the Middle East. “End-users are waiting for prices to decline further.” Toward the end of 2018, the decline in prices slowed as Wanhua Chemical started maintenance at its MDI plants in Ningbo.

Also around the same time, Kumhoi Mitsui’s plant in Yeosu, South Korea, also encountered some difficulties, which have sporadically persisted through the month. In the GCC, PMDI demand has generally been soft amid broader slowdown in economic activity in the region.

Despite the reduced availability starting from around November 2018, prices are not expected to see a significant boost in the early months of 2019 as demand has not shown signs of any major recovery.

Elsewhere in the Middle East region, 2018 was also an important year for Iran, as the US decided in May to withdraw from the nuclear deal Iran signed with six other global powers in 2015.

Between May and the full implementation of fresh sanctions in November, PMDI imports to Iran appear to have thinned out significantly.

Some key Asian suppliers said they had suspended dealings with Iranian customers due to increased restrictions over financial transactions with Iran and tighter regulations over shipping of physical cargoes to and from Iran.

Iran meanwhile appears to have stayed generally self-sufficient with regards to its PMDI production and consumption in 2018.

PMDI import prices in Iran through 2018 generally tracked the direction of prices in other parts of the Middle East and is expected to continue to do so in 2019.
In 2019 many market participants said although the US has granted sanctions waivers that would allow some countries to still buy crude oil from Iran, the uncertainty over financial transactions remains in place.

“For now it is still impossible to import or export with Iran,” said one source. “Sanctions waivers are given but no one can trade yet.”

Longer-term, most players view the PMDI market as largely oversupplied. In total, global MDI production is forecast at 8.65m tonnes by 2020, according to the ICIS Supply and Demand Database. With consumption estimated to be at 6.55m tonnes by that time, there is sufficient evidence to support the view that prices will soften.

In November, Wanhua Chemical, the world’s biggest MDI producer, announced that it selected Convent in St James Parish, Louisiana as the site for its new 400,000 tonnes/year MDI plant.

Construction is expected to begin in 2019, and operations is scheduled to begin in 2021.

With supply set to increase, prices in Asia also look set to be under further pressure in 2019, as offers are reduced to elicit buying interest.

However, demand especially in China, may not recover due to the lingering US-China trade dispute.

PMDI demand is “extremely slow”, a China-based trader conceded, as talk emerged that Chinese factories are cutting back on production of appliances like refrigerators and air-conditioners, until they get more clarity on how future export opportunities to the US will pan out. Trade tensions have renewed following the December arrest in Canada of a senior executive from the Chinese telecom giant Huawei, purportedly for reasons linked to the US probe on possible violations of the sanctions against Iran.

Many are now doubtful how fruitful subsequent US-China trade negotiations may be, failing which the stark reality remains that the US would eventually escalate import tariffs, squeezing out inflow of many China-origin products.

If this scenario materializes, PMDI demand in China could sink further, weighing down prices even more.

The chart shows the spread between feedstock against PMDI prices in the GCC. It shows a narrowing spread between the costs of feedstock and the prices of isocyanates, reflecting the weak demand and hence the recent downturn in isocyanates prices.

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POLYURETHANE CHAIN

POLYOLS

CHINA PO UNDER PRESSURE ON LONG SUPPLY, SLUGGISH DEMAND

BY AI TENG LIM  JANUARY 2019

China propylene oxide (PO) prices may stay capped in 2019, unless demand from key application polyols could pick up sufficiently to absorb burgeoning supplies.

PO supplies in Asia are set to grow in 2019, with several new plants coming on stream.

For instance, in the second half of 2018, South Korea’s S-Oil started up a new 300,000 tonne/year PO plant in Ulsan, and products were available for exports since November 2018, and set to grow in time, according to sources familiar with the matter.

Another new 120,000 tonne/year plant in Nanjing, China, owned by Nanjing Hong Bao Li, is also undergoing trial operations, and may be able to achieve on-spec production in early 2019, market sources said.

As for existing plants in northeast Asia, including Japan and China, most are running at healthy rates, and have no known maintenance plans in 2019.

PO plant maintenances are typically conducted once in two years, and many regional plants went through their last overhaul in the first half of 2018.

The heavy wave of regional turnarounds in first-half 2018 and ensuing tightness in regional PO availabilities had pushed PO prices to two-year highs during that period, market participants said.

ICIS data showed that, at its peak in H1 2018, PO trades fetched $1,725/tonne CFR (cost & freight) China, nearly 5% more than the year-high of $1,650/tonne CFR China recorded in 2017.

But a repeat of this in 2019 seems unlikely, now that the supply constraints seen in H1 2018 have eased substantially, at a time when demand starts to wither under the impact of US-China trade rows.

According to ICIS data, PO prices nose-dived recently, with CFR China prices chalking up 30% of cumulative losses to finish at barely $1,200/tonne in early December 2018.

PO prices recovered somewhat in late December, as 200,000 tonne/year of capacity in China’s Jilin Province was shut down on technical grounds.

But “this is likely a short and transient surge, and limited to sentiment only”, a regional trader said.

Substantive impact on market supply may be quite “manageable”, the same trader noted, as the Jilin plant had been shut for much of 2018, and only operated for a couple of weeks late in the year before it had to be turned off again.

“Supply from this plant has not been sufficiently entrenched yet for it to shift market supply-demand fundamentals substantially,” another China-based trader conceded.

Hence, the consensus view among market players remained that demand may be in the longer run, be the bigger determinant for PO pricing trend.

And it seems increasingly unlikely that downstream demand, especially from the key application of polyols, could recover in the near term, as long as the US-China trade spats continue to simmer.

PO is a key feedstock for polyether polyols.

The flexible slabstock polyols grade, when combined with toluene di-isocyanate (TDI), finds outlets in PU foam for mattresses, furniture and automotive seats.
Rigid polyols, when combined with polymeric methyl diphenylene isocyanate (PMDI) is used in refrigerators as well as insulation in the construction sector.

The US is hitherto a major outlet for China-origin PU products like car seats and refrigerators, and these are the same items, among many other related products, that the US had slapped with a 10% punitive import tariffs beginning August/September 2018.

The tariffs were scheduled to rise to 25% in January 2019, but is now put on hold until March 2019 following a 90-day truce agreement reached between Presidents Donald Trump and Xi Jinping at the fringe of the November 2018 G20 Summit in Argentina.

But the initial euphoria surrounding the truce agreement has fizzled out, as US-China tensions seem to renew on the December arrest in Canada of a senior executive from the Chinese telecoms major Huawei, purportedly for reasons linked to US probe on possible violations of sanctions against Iran.

As long as apprehensions continue to linger about the eventual escalation of US punitive import tariffs on PU products, regional foam and appliance makers “will go slow on their production, which means that off-take for polyols will not improve”, a polyols maker in China conceded.

Polyols prices have indeed slipped substantially in 2018 in southeast Asia, and may continue to trend down in 2019 on poor demand.

According to ICIS data, flexible slabstock cargoes traded at $1,600/tonne CFR southeast Asia in December 2018, $250/tonne below its year-peak seen in May.

Middle East is not spared either - import prices for Asia-origin polymer polyols with 10-13% polymer content have also fallen in line during 2018, settling at an average of $1,750/tonne CFR Middle East in early December, down from a high of $2,125/tonne CFR Middle East seen in April/May.

Despite the lower asking prices, POP sellers said that they are still finding it hard to find takers, suggesting that end-user foam makers in Middle East believe prices could drop further in 2019 and want to hold out for longer before committing on fresh purchases.

“I will stretch my current inventories as much as possible,” one Dubai-based import said.

“It is a vicious cycle,” another regional trader said, adding that “if polyols stays under fire, PO will suffer alongside”.

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The tariffs implemented on appliances made in China for exports to the US has heightened uncertainty among ABS users, which adopted a wait-and-see stance on the market.

Output cuts among producers in Asia in the fourth quarter could not stem the decline in ABS prices as demand was lacklustre.

Buying momentum among Chinese end-users tapered off considerably after the third-quarter manufacturing-for-export season in China ended in October.

ABS resins are used for appliances, consumer electronics, toys, and have applications in the automotive and construction sectors.
In the SAN market, demand in China was just as weak with buyers hesitant to commit, especially to large cargoes, in view of the weekly decline in prices.

Traders also kept lean stocks as they did not want to be saddled with high-priced resins in a slumping market.

SAN resins are used for cigarette lighters, toothbrush holders, fan blades, fridge trays and host of consumer items.

Despite the pause in the trade war, a number of market players expect only a modest improvement in demand.

After all, the trade war truce is only temporary while tensions might escalate again after the 90-day cooling period.

End-users have low stocks after weeks of slow purchases, and some might decide to pick up some parcels if the price downtrend ends.

“Some end-users may replenish stocks in January, especially if prices stabilize amid the trade war truce,” a China-based trader said.

However, demand in Asia on the whole is expected to be soft with the Lunar New Year holidays kicking off across the region in early February.

Most of northeast and southeast Asia celebrate the Lunar New Year.

Manufacturing activities typically sees a low ebb in the first quarter before notching higher in the second.

“Demand hinges on the outcome, if any, of the trade war,” said a producer in Taiwan.
BY HELEN YAN  JANUARY 2019

Asia’s styrene butadiene rubber (SBR) prices are likely to be stable or soft in the first quarter of 2019 if tensions in the US-China trade war failed to ease.

- Spot appetite muted on market uncertainty
- US-China trade tensions weigh on demand
- Weak regional currencies dampen imports

Market players were cautious amid uncertainties following the 90-day trade war truce announced on 1 December between the two economic giants, which will prevent the anticipated spike in US tariffs on $200bn worth of Chinese imports to 25% from the current 10%.

SBR trades are expected to slow down and remain subdued in the first quarter although activities or spot interest may pick up in January ahead of the Lunar New Year, which falls on 5 February in 2019.

Trading usually picks up speed prior to the holidays as buyers or importers re-stock inventories at this time.

The Lunar New Year is celebrated in several countries in Asia, including key SBR market China, as well as South Korea, Taiwan, Indonesia, Singapore, Malaysia and Vietnam.

However, 2019 may see a departure from this annual trend as market players are likely to retreat and adopt a wait-and-see stance in view of ongoing tensions between the world’s two largest economies.

The US-China trade war has roiled equities and commodities markets for most of 2018.

Spot prices for non-oil grade 1502 SBR are likely to remain flat in January or soft at around or below $1,500/tonne CIF (cost, freight and insurance) China, given the weak market sentiment.

On 19 December, non-oil grade 1502 SBR were assessed at $1,400-1,500/tonne CIF China, down by about 18% since early September due to prevailing sluggish demand and weak market sentiment, according to ICIS data.

Non-oil grade 1502 SBR prices had declined since early September, when prices hit $1,750/tonne CIF (cost, freight and insurance) China, ICIS data showed.

AUTOMOTIVE SALES SLOW IN CHINA

China is a major production hub for regional and international tyre manufacturers, but a slowing Chinese economy and declining vehicle sales have weighed on demand for SBR, which is used in the production of tyres for the automotive industry.

The country is the world’s largest automotive market, but demand growth is expected to decline in 2018, the first time in more than two decades.

In January-November, China’s total vehicles sales were down 1.7% year on year at 25.4m units, while production fell 2.6% over the same period to 25.32m units, according to the China Association of Automobile Manufacturers (CAAM).

November vehicle sales slumped 13.9% year on year to 2.55m units, falling for the fifth consecutive month; while production stood at 2.50m units, down 18.9% over the same period, according to CAAM.

On the macroeconomic level, China’s economy has also been slowing down.

In November, China’s official manufacturing purchasing managers’ index (PMI) fell by 0.2 points from October to 50.0, the third decline in a row and the lowest since August 2016, according to the National Bureau of Statistics (NBS).
A reading of 50.0 represents neutral, neither expansion nor contraction.

A slowing Chinese economy and the ongoing US-China trade war tensions are likely to continue to weigh on sentiment in Southeast Asia and India.

**WEAK SE ASIA, INDIA CURRENCIES WEIGH ON MARKET**
Spot trades in both southeast Asia and India are expected to be muted in light of the uncertain market outlook as procurement managers adopt a cautious stance. Buyers will likely opt for smaller purchases on a need-to-basis and hold back large purchases.

Weak currencies against the US dollar, including the Indonesian rupiah and Indian rupee, are also likely to continue to curtail spot appetite for US dollar-denominated SBR import cargoes.

An upcoming general election in India in April in 2019 will also dampen buying sentiment in the sub-continent as market players stay on the sidelines to wait for a clearer picture.

India’s production of passenger vehicles in November declined 20.9% year on year to 279,333 units, with sales down 3.4% at 266,000 units, according to data from the Society of Indian Automobile Manufacturers (SIAM).

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ASIA’S ACETONE SENTIMENT SOFT IN FIRST HALF 2019 ON SUPPLY DELUGE

BY ANGELINE SOH  JANUARY 2019

Asia’s acetone market is likely to remain weak in the first half of 2019 as a result of supply deluge while demand may not see any improvement.

More phenol/acetone volumes were added from the recent restarts at China-based plants from maintenance to an already-ample market.

On 21 December 2018, acetone prices on a cost and freight rate (CFR) China Main Port (CMP) basis were at their lowest levels since 26 February 2016, at $400-420/tonne CFR CMP, according to ICIS data.

Despite a series of turnarounds scheduled in the last three months, acetone supply remained high.

This was due to high operating rates in China, motivated by strong margins of co-product, phenol.

The average run rate at phenol plants in China stood at more than 80% in 2018 whereas average operating rate in the country was 70% in 2015, 71% in 2016 and 76% in 2017.

In addition, more acetone is produced than phenol, as one tonne of benzene produces one tonne of acetone and only 0.6-0.62 tonnes of phenol.

The acetone prices in 2018 were curbed by the high import volumes.

From January to November, China’s acetone imports were at 622,000 tonnes, as compared with 454,000 tonnes recorded in January-November 2017, according to customs data.

The average port volume on a monthly basis was less than 24,000 tonnes in 2017.
In 2018, this figure was at more than 34,000 tonnes.

Meanwhile, the supply is set to increase when Zhejiang Petrochemical’s 250,000 tonne/year acetone unit starts in the second quarter, according to market participants.

Changshu Changchun would expand their Changshu-based plant in China to 240,000 tonnes/year from 180,000 tonnes/year.

Although these plants will have downstream units, such consumption will not completely utilize the additional capacities.

The additional volumes will be sold to the open market.

As most of the projects are slated to happen in the second half of 2019, acetone volumes are likely to be under-utilized in the first half, with prices anticipated to be curbed.

“We are definitely more optimistic about prices in second-half 2019,” a northeast Asia-based producer said.

“It may not be so bleak in the first-half [2019], since there are a few turnarounds scheduled,” a southeast Asia-based distributor said.

### 2019 MAINTENANCE SCHEDULE

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
<th>Phenol ('000 tonnes/year)</th>
<th>Acetone ('000 tonnes/year)</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPCC</td>
<td>Linyuan, Kaohsiung county, Taiwan</td>
<td>360</td>
<td>220</td>
<td>20 December 2018 – Early Jan 2019</td>
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<tr>
<td>LG Chem</td>
<td>Daesan, South Korea</td>
<td>300</td>
<td>180</td>
<td>March-April 2019</td>
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<tr>
<td>Kumho P&amp;B No 3</td>
<td>Yeosu, South Korea</td>
<td>250</td>
<td>150</td>
<td>May 2019</td>
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<tr>
<td>Kumho P&amp;B No 4</td>
<td>Yeosu, South Korea</td>
<td>300</td>
<td>180</td>
<td>May 2019</td>
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<tr>
<td>Formosa Chemicals &amp; Fibre Corp (FCFC)</td>
<td>Mailiao, Taiwan</td>
<td>440</td>
<td>250</td>
<td>H1 2019</td>
</tr>
<tr>
<td>Mitsui Chemicals</td>
<td>Osaka, Japan</td>
<td>200</td>
<td>120</td>
<td>End-June to end-July</td>
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<tr>
<td>Mitsui Chemicals</td>
<td>Ichihara, Japan</td>
<td>190</td>
<td>114</td>
<td>End-October to mid-November</td>
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### Producer List

<table>
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<tr>
<th>Producer</th>
<th>Region</th>
<th>Country</th>
<th>Acetone ('000 tonnes/year)</th>
<th>BPA</th>
<th>MMA</th>
<th>IPA</th>
<th>MIBK</th>
<th>Start-up</th>
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<td>Zhejiang</td>
<td>China</td>
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<td>China</td>
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<td>135</td>
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<td>Q2 2019</td>
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<td>2019-2020</td>
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<td>Shanghai</td>
<td>China</td>
<td>200</td>
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<tr>
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<td>120</td>
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<td>Restart in early 2019</td>
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<td>2020</td>
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<td>2020</td>
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<td>Pasir Gudang</td>
<td>Malaysia</td>
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<td>No start-up date heard</td>
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</tbody>
</table>
Asia bisphenol A (BPA) markets are poised to see limited fluctuations amid expectations of demand to stabilise at best in early 2019.

Spot prices of BPA in key China markets have slumped in the fourth quarter of 2018, dragged down by dwindling downstream demand, particularly in polycarbonate (PC) and epoxy resin applications.

The largely bearish market was exacerbated by a persistently weak Chinese yuan (CNY) currency to the US dollar, depressed by the China-US trade war, making imports uneconomical.

On a CFR (cost and freight) China basis, spot prices have tumbled to $1,250/tonne as of 21 December, marking a 23% decline from the same period a year ago and lows not seen since October 2017, according to ICIS data.

Chinese domestic prices of BPA have nosedived through most of the fourth quarter and were at CNY 10,700/tonne EXWH as of 21 December.

This was down by 20% from the same period a year earlier, ICIS data showed.

The bearish sentiment might spill over to the first quarter of 2019, amid a slowdown just before the Chinese Lunar New Year festival from 5 February 2019.

“There might be some [BPA] demand in January in China, but February will be quiet … March is uncertain although scheduled plant turnarounds should limit supply,” said a northeast Asia-based market source.
The spread between BPA and raw material phenol in China has also been squeezed from $557/tonne at the start of the third quarter of 2018, to just around $160/tonne towards the end of the fourth quarter.

This has prompted several BPA producers to reduce plant operating rates as part of efforts to combat squeezed margins.

By and large, “February [markets] should be quiet because of the Lunar New Year holiday”, said a northeast Asia-based market source.

Depending on the US-China trade war and crude oil’s price direction, spot BPA prices are not expected to see a significant rebound, according to market participants.

Crude oil prices have weakened considerably in the fourth quarter of 2018, on the back of oversupply concerns and a global economic slowdown.

Several key petrochemicals have also fallen to multi-year lows in the fourth quarter.

China’s manufacturing activity measured by the Caixin China General Purchasing Managers’ Index (PMI) was 50.2 for November, hovering at just above the 50 level.

A PMI reading of 50 or higher indicates an expansion, while a number below that denotes a contraction. The PMI reading was at 50.1 in October.
SOLVENTS

GLYCOL ETHER

ASIA’S BG CONTINUES TO FACE AMPLE SUPPLY, WEAK CHINESE DEMAND

BY LI LI CHNG  JANUARY 2019

Butyl glycol spot prices in Asia may continue a trend of decline going into the first quarter of 2019, as the market would be inundated with Middle East flows and growing exports from other Asian producers.

Demand wise, weakness would persist as China, a key buyer, faces shrinking economic growth.

Signs of weakness were already apparent in the last three months of this year when fundamentals were bearish, and the outlook for next year is little changed.

In the week ended 19 December, spot BG prices in China on zero antidumping duty (ADD) but subject to import duty basis, were assessed stable at an average of $930/tonne CFR (cost & freight), according to ICIS data.

The levels were the lowest since September 2016.

Spot BG prices in southeast Asia were assessed at $1,010/tonne CFR southeast Asia, down by $10/tonne week on week; prices declined to their weakest level since July 2017.

While supply from producers of various origins were readily available, demand from the downstream sectors was lukewarm and would remain unchanged going forward.

A CHANGING SUPPLY LANDSCAPE

China is the biggest import market in Asia, importing 151,403 tonnes of BG/butyl dy-glycol (BDG) between January to October 2018, while the total imports in 2017 were 156,141 tonnes. (please see interactive below)

The market has gone through a phase of change in trade flow since China imposed an increase in antidumping duties for cargoes of deep-sea origin earlier in the year.

On 12 April 2018, BG/BDG originating from the US is subject to 37.5-75.5% ADD rates, up from 10.6-14.1% previously.

Cargoes from the EU is subject to ADDs of 10.8-43.5%, up from 9.3-18.8% previously. There was also an increase in supply in 2018.

For origins not subjected to China’s ADD, the BG/BDG plant of Taiwan’s Oriental Union Chemical Corp (OUCC) -- with a combined annual capacity of 30,000-40,000 tonnes -- started commercial operations in early 2018.

In addition, volumes from Sadara Chemical Company, which is a joint venture (JV) between US Dow Chemical and Saudi Aramco, became stable and cargoes are regularly exported to Asia from early 2018.
Sadara’s BG/BDG plant with a capacity of 200,000 tonnes/year, started commercial runs in mid-2017.

As the hefty hike in ADDs of US and EU cargoes hampered the sales of deep-sea material to China, Middle Eastern and other Asian producers became the key suppliers for China.

Some of these deep-sea cargoes were then diverted to the wider Asia region where there is no ADD concern.

Together with the increased capacity, Asia is awash with ample supply and intense competition from suppliers of various origins.

This situation would persist in 2019 and some market consolidation could happen.

South Korea’s Lotte Chemical has been running on reduced operation rate at above 50% from November 2018 amid slow market conditions with no certainty when operation will resume to normalcy.

While Sadara plans to undergo a turnaround in end January for around three weeks, it is unlikely to result in any supply tightness as the turnaround coincides with the Lunar New Year period.

China and many Asian markets will be celebrating the Lunar New Year that begins in early February, traditionally celebrated for fifteen days.

Businesses are expected to be slow around half a month before and after the holiday.

**WEAK SENTIMENT, SLOW DEMAND**

The market has been plagued with weak sentiment and slow demand for most part of 2018.

China's industrial firms reported 1.8% decrease in profits to CNY594.8bn ($86bn) in November comparing with one-year ago, the first contraction since May 2015, data from the National Bureau of Statistics (NBS) showed.

Slowing growth in sales and factory prices, combined with rising cost, led to the profits decline last month, the NBS said.

The November’s figure also marked the seventh consecutive drop.

Downstream demand had been hit amid dismal business conditions largely attributed to the US-China trade war and China's stringent environmental protection measures that affected downstream plant operation.

Moving forward, the outlook remains uncertain. Even as market players take a breather during the 90-Day trade truce between US and China, existing tariffs continue to be in place.

Market players are largely uncertain if any concrete and positive outcome could be reached after the 90-Day truce. In the near team, demand from downstream paint and coating sectors would likely remain in a lull, amid a slowdown of the building industry during winter.

Feedstock n-butanol and higher upstream ethylene have been largely on a downtrend in the fourth quarter of 2018 and may provide limited support to BG prices in January.

BG, derived from ethylene oxide (EO) and n-butanol (NBA), is also known as ethylene glycol ethers (EGE).

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Asia’s isopropanol (IPA) and methyl ethyl ketone (MEK) may see a light at the end of the tunnel, with a demand recovery foreseeable in the earlier part of 2019 and that could set the trend of a balanced market for the year amidst a steady flow of supply.

Demand is likely to emerge as soon as early 2019 after the year-end holidays as buyers are likely to stock up inventories. In the near term, demand for MEK is likely to pick up a little as buyers prepare some stocks before the Lunar New Year in early February.

However, with the volatility of feedstock naphtha values, MEK demand in 2019 may be weaker than previous years.
Market sentiment traditionally improves after the Lunar New Year holidays, when most of the market would come back in full force to restock their depleting inventories and prepare for the year ahead.

Supply of MEK, on the other hand, is not expected to be disrupted in 2019 after the biennial turnaround of Japanese plants in 2018.

Similarly, in the near term, IPA demand may pick up on restocking activities in most parts of southeast Asia after the year-end holidays and before the Lunar New Year.

Supply may re-balance or lengthen when propylene-based IPA plants come back onstream.

A longer IPA supply situation is likely in the near term with support from other plants which would have resumed full operations after scheduled turnarounds by the end of 2018.

These may exert further downward pressure on IPA prices.

In both of these markets, there will be sufficient supply to meet demand at least in the first quarter of 2019.

This will moderate expectations of any price hikes amid the ongoing trade row between the world’s top two economies.

2018 had found both IPA and MEK markets on a steady decline after peaking in the first quarter, owing to a re-balancing of markets after the arbitrage windows that opened in the second half of 2017 to Europe and the US closed.

The IPA market declined steadily after peaking at $1,052.50/tonne CFR (cost & freight) SE (southeast) Asia on 23 February – according to ICIS data – because of softening feedstock acetone costs on abundant supply and weak downstream demand.

Another major IPA feedstock, propylene, was on the rise during the better part of 2018, hitting a new high on the back of tight supply on 12 October.

Spot prices were assessed at $1,187.50/tonne CFR NE (northeast) Asia, ICIS data showed.

This resulted in even tighter margins for propylene-based IPA producers.

Most of the propylene-based IPA plants in China were forced to shut on loss of margins.

Japanese propylene-based IPA suppliers were under immense pressure to sell at competitive prices to their regular customers.

Coupled with several plant troubles during the course of the year, Japanese supply was limited.

As such, their exports during this troubling time were few and far in between. Demand for acetone-based IPA was higher as a result.

However, IPA prices fell due to weak downstream demand and the ongoing Asian currency depreciation against the US dollar.
MEK had been on a downward trend for the better part of 2018, as the market rebalanced following the arbitrage to Europe and the US in 2017.

MEK prices in Asia fell to a four-month low, tracking weakness in the Chinese domestic market.

On 30 November 2018, prices in Asia were assessed at $1,050/tonne CFR (cost & freight) NE (northeast) Asia; $1,070/tonne CFR SE (southeast) Asia; and $1,085/tonne CFR India, according to ICIS data.

Prices were down about 34.8-36.5% from their peaks hit on 5 January 2018, ICIS data showed.

2018 was a heavy turnaround year for Japanese and Taiwanese producers, whose export availability was severely limited in addition to unforeseen facility or upstream issues.

Also, in light of weak Chinese domestic demand and the ongoing US-China trade war, Chinese supply was considered long in 2018.

In an effort to offload their cargoes, China offered at competitive prices to the rest of Asia, which buyers found to be attractive.

However, most of the market stood on the sideline, buying hand-to-mouth, in an eventful year which saw crude prices rise and fall dramatically on geopolitical factors such as the trade war between US and China and the expected global economic slowdown in 2019.
SOLVENTS

METHYL TERTIARY BUTYL ETHER (MTBE)

ASIA’S MTBE MAY FACE A SUPPLY DELUGE FROM NEW PLANTS

BY KEVEN ZHANG  JANUARY 2019

Asia’s methyl tertiary butyl ether (MTBE) is likely to face a supply glut in 2019, owing to the onset of new plants while sluggish demand would prevail.

In 2019, increasing supply availability will change the regional balance.

The key plants in China are the mega-sized integrated refinery-petrochemical projects, including Hengli Petrochemical in Dalian and Zhejiang Petrochemical in Zhoushan.

In addition, all eyes fall on Malaysia’s Petronas Refinery and Petrochemical Integrated Development (RAPID) and the upgrade of Taiwan’s Formosa Petrochemical Corp (FPCC).

Chinese import volumes had fallen year on year owing to ample local supply, after the 740,000 tonne/year Sinopec Jinling-Huntsman MTBE plant started in the second half of 2017.

China saw its first export MTBE to India from Sinopec Jinling-Huntsman, and the export volumes to Singapore and South Korea increased.

Meanwhile, South Korea will become a net MTBE exporting country.

S-Oil commissioned a high-severity residue fluid catalytic cracker (HS-RFCC) at Onsan in September 2018.

In October 2018, Korea’s MTBE imports fell by 58.4% to 5,402 tonnes from 12,979 tonnes in September 2018.

On the export side, the volume saw an explosive growth from 34 tonnes in September to 10,004 tonnes, indicating a net export of nearly 5,000 tonnes.

As northeast Asia becomes self-sufficient, the excess supply is poised to flow into the southeast Asia market, which is traditionally dominated by the Middle-East producers.

MTBE of Middle East origin including Saudi Arabia, United Arab Emirates and Qatar, accounts for more than 90% of Singapore import market.

A steady number of Middle Eastern origin cargoes continue to flow to Asia throughout 2018. For 2019, several term Middle East contracts were concluded at lower levels than last year.

“The [term contract negotiation] process were more difficult than [it was in 2018],” said a northeast Asian producer.

In response to rising supply, producers may cut operating rates of the less profitable plant units, or convert MTBE units into alkylate ones.

<table>
<thead>
<tr>
<th>MTBE Capacity ('000 tonne)</th>
<th>Estimated Start Up (as of Nov '18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petronas, Malaysia</td>
<td>390</td>
</tr>
<tr>
<td>FPCC, Taiwan</td>
<td>350</td>
</tr>
<tr>
<td>Hengli Petrochemical, China</td>
<td>840</td>
</tr>
<tr>
<td>Zhejiang Petrochemical, China</td>
<td>180</td>
</tr>
</tbody>
</table>
Chinese MTBE consumption will be dampened as China's planned implementation of Ethanol-10 (E10) gasoline draws near, and following recent hikes in domestic fuel prices.

Eleven provinces in the country have started trial usage of E10 gasoline this year, with Beijing and Tianjin expected to follow suit, before the expected full implementation in 2020. E10 refers to the fuel with a 10% ethanol blend.

Ethanol, which is a chemical derived from food material, can replace MTBE as octane-boosting additive for gasoline in China. Elsewhere in Asia, demand is driven by gasoline blending in Singapore and prices of other blending stocks such as aromatics products.

The consumption of MTBE became weak since October 2018 because of a gasoline supply glut.

Asia’s gasoline cracks over Brent crude oil weakened to below $1/bbl since November 2018.

Downstream gasoline will remain well supplied as several refinery capacity will be further added in 2019, including China’s mega refinery project, Malaysia’s RAPID and Adnoc’s Ruwais plant restart.

However, other downstream applications of MTBE would see a growth in capacity, supporting demand for the product.

China’s Wanhua Chemical 50,000 tonne/year MMA plant will start up in the first quarter of 2019, and Singapore’s Sumitomo Chemical will restart MMA Line 2 in the fourth quarter of 2019. Both plants use MTBE as sole feedstock.

### Basis

<table>
<thead>
<tr>
<th></th>
<th>Floating price premium for 2019 ($/tonne)</th>
<th>Floating price premium for 2018 ($/tonne)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFR Singapore</td>
<td>FOB Singapore + 17</td>
<td>FOB Singapore + 22</td>
</tr>
<tr>
<td>FOB NE Asia</td>
<td>FOB Singapore + 0 to -1</td>
<td>FOB Singapore +3 to +5</td>
</tr>
<tr>
<td>CFR NE Asia</td>
<td>FOB Singapore +20</td>
<td>FOB Singapore + 25</td>
</tr>
</tbody>
</table>

Basis

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SOLVENTS

PHENOL

ASIA PHENOL H1 SENTIMENT SEEN SLUGGISH ON PLANT RESTARTS

BY ANGELINE SOH  JANUARY 2019

The sentiment in the Asian phenol market is expected to be sluggish in the first half of 2019, weighed by ample supply following the restarts at China-based plants from maintenance.

On 2 November 2018, prices on a cost and freight rate (CFR) China Main Port (CMP) basis were at their highest levels since 24 October 2014, at $1,430-1,490/tonne CFR CMP, according to ICIS data.

The benzene-phenol spread also reached a historical high of more than $720/tonne as of end-October; the average spread is typically set at $150/tonne.

The strong margins led to high average operating rates in China. The average run rate at phenol plants in China stood at more than 80% as of mid-December. China’s average operating rate was 70% in 2015, 71% in 2016 and 76% in 2017.

From 2 November 2018 to 14 December, prices dropped by $350/tonne, with levels assessed at $1,050-1,150/tonne on the latter date. Prices on 14 December fell by $350/tonne from 2 November to $1,050-1,150/tonne on bearish sentiment following the restart at several domestic units. By January 2019, all domestic phenol plants in China are expected to be in operation. Moreover, trades were further hindered by the upcoming announcement of the preliminary anti-dumping duty (ADD).

On 26 March, China started anti-dumping investigations on phenol imports from the US, European Union, South Korea, Japan and Thailand.

The investigations were undertaken in response to requests from representative domestic producers, including PetroChina Jilin Petrochemical, Changshu Changchun, CEPSA Shanghai, Sinopec Mitsui Chemicals, Bluestar Harbin Petrochemical, Yangzhou Shiyou and Huizhou Zhongxin.

The preliminary results of the investigation was expected in late September, typically six months after the launch. However, as of mid-December, the results had not been announced.

Market players explained that it was first delayed after the trade war between China and the US commenced. US-origin phenol bound for China was slapped with a 10% import duty in late August, when the second volley of shots were fired in the trade war between the two economic giants.

Subsequently, another delay occurred due to the G20 leaders’ summit in Argentina, where there was a truce in new import tariffs between China and the US.

There was much caution noted during the contractual negotiations for 2019, with some players expecting about 10% of ADD for several Asia-based producers and more than 10% for the US-origin cargoes.
“We don’t expect to see much US cargoes from 2019 onwards, unless there is a major surprise from the trade-war,” a China-based trader said.

According to data from China Customs, phenol imports hit a record low at 172,900 tonnes in 2015, down by 20.4% from 217,200 tonnes in 2014, but then increased significantly in 2016.

In 2016 the US was the leading exporter of phenol to China, contributing nearly 30% of total imports compared to the second largest exporter, Taiwan, at 25%, and the third largest, Japan, at 15%. Import volumes went up further in 2017, up by 47.2% year on year to 365,500 tonnes, with cargoes from the US, EU, South Korea, Japan and Thailand amounting to 330,000 tonnes and occupying 90% of the total.

However, in 2018, there was minimal spot volumes of US-origin cargoes heard following the ADD investigation.

On the supply front in the US, availability of the material has fallen after Shell idled its Phenol 3 plant at its Deer Park facility in Texas in mid-January 2018; the plant produced about 240,000 tonnes of phenol per year, representing about 40% of the company’s total capacity.

“After the ADD, origins not slapped with the duty will be in high demand. This means buyers will be keen in the Saudi- and India-origin cargoes,” another China-based trader said.

Meanwhile, Saudi Arabia’s Petro Rabigh started up its 470,000 tonnes/year plant at the start of 2018 while Deepak Phenolics started up its 200,000 tonnes/year plant in August 2018.

On the other hand, domestic demand could be met with higher local supply, with Zhejiang Petrochemicals’ 470,000 tonne/year plant expected to start in H1 2019. Despite expectations of longer domestic supply from China, other Asia-based sellers hoped prices in H1 could be bolstered with the regional turnaround schedule.

Prices could also be bolstered by downstream expansions:
- CPDC China is set to start its 150,000 tonnes/year cyclohexanone plant in Rudong, Jiangsu province in April 2019.
- Chang Chun Plastics is set to start its 135,000 tonnes/year bis-phenol (BPA) in Jiangsu province in June or July 2019.
- Lihuayi is set to start its 120,000 tonnes/year BPA plant in Shandong in Q4 2019.
- Covestro is set to expand its BPA capacity in Shanghai in Q4. The exact capacity could not be immediately verified.

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