Introduction
China’s 13 February revision of its methodology for counting coronavirus cases set the cat among the market pigeons, reversing global stock markets gains made since the previous weekend and denting crude and other markets’ apparently building confidence that the worst effects of the outbreak were over. Yet by 14 February crude futures markets had rebounded, with front-month Ice Brent pushing back over $57/bl. Why?

Analysis of infection rates in China and elsewhere suggests that the seemingly alarming “jump” in cases largely in fact restored the case count to the trend seen before a first, possibly misguided revision to the country’s diagnosis methodology over the weekend of 9 February, in which a decision was taken not to count asymptomatic cases of infection.

The so-called R-zero rate for the virus — the number of people infected by each carrier of the virus over the life span of their infection — has in fact barely changed, and continues its general downward trend, expected by epidemiologists ultimately to pan out at around 2-2.5.

But from a commodities markets perspective, it is arguable that the economic damage is already done and quantifiable. The IEA has cut its forecast for 2020 global refinery crude throughput by 600,000 b/d to 82.7mn b/d, with the heaviest downward revisions – as much as 1mn b/d – in the first quarter, of which China accounts for half the drop. The agency’s previous projection was for a 300,000 b/d year-on-year increase over the period.

Argus Consulting group is projecting a more modest 380,000 b/d oil demand drop over the course of this year, based on a hit to the global economy of 0.3pc of GDP (see chart below). On the face of it, such a reduction is within the scope of markets and producers to absorb. But additions to global refining capacity now look likely to outweigh demand growth until at least 2023. And it is highly unlikely that the virus has finished springing its surprises — both psychological and real — for oil or the wider commodity markets. In this white paper, Argus highlights some of the key areas where disruption or changes in trading patterns resulting from the virus may strike hardest.

Argus White Paper:
The Coronavirus Impact

The outbreak of the coronavirus epidemic in China — the world’s second-largest economy, responsible for almost a fifth of global GDP — is having a significant impact on commodity markets, as trading patterns are disrupted and economic growth forecasts are revised lower. In this white paper, Argus assesses the immediate fallout from the virus on multiple commodities and the potential impact for the rest of this year.
China's oil market

China is cutting crude runs savagely this month to bring ballooning product stocks under control. But some refiners see crude buying opportunities.

As much as 1mn b/d of crude distillation capacity is shutting this month and refiners will drastically cut throughputs at plants still running, Argus surveys indicate (see chart below). These measures are likely to take refinery throughputs to their lowest in five and a half years, or 9.68mn b/d. This would mean that runs have fallen by 4.1mn b/d from the last figure published for national crude throughputs by China's National Bureau of Statistics.

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Argus’ sum-of-the-parts estimate for Chinese refinery runs this month is far lower than the IEA’s forecast, which is derived from GDP-based modelling of oil consumption. But Chinese refiners are under severe pressure to reduce their stocks of refined products, and will adjust for the implied shortfall in fuel supply by running down product inventories. Crude storage tanks in ports are filling up fast and refiners will struggle to absorb all of the crude that is still due to discharge in the first quarter unless they create inventory space downstream.

Oil companies, especially Sinopec which dominates downstream fuel markets in the worst-hit areas of south, central and east China, are curbing crude purchases. Sinopec began trying to resell cargoes of March-loading Angolan crude early this month. But run cuts on this scale, and weighted towards central and east China, will hit demand for Saudi crude hard. Sinopec’s 460,000 b/d Zhenhai refinery, which has shut in 120,000 b/d of crude unit capacity this month and 280,000 b/d next month, runs mainly Saudi grades. Zhenhai replaced Iranian crude with Saudi supply last year in response to US sanctions on Iran.

Sinopec, the world’s largest refiner, will cut runs by 1.1mn b/d this month, while PetroChina will reduce runs by 500,000 b/d. So far, China’s new mega-refineries — 400,000 b/d integrated refining and petrochemical facilities operated by private sector Rongsheng and Hengli — are cutting relatively little. Both emerged as major buyers of Saudi crude last year.

Chinese independent refiners, clustered mainly around Dongying in Shandong province, are cutting nearly 1.8mn b/d from January runs, to an estimated 1.4mn b/d. Few independents have marketing and retail arms, and must sell their products to integrated oil giants such as Sinopec. But the latter has halted third-party purchases as it seeks to control rising inventories.

Lacking export rights, Shandong’s independent refiners are the source of marginal fuel supply to the Chinese market. They tend to cut crude runs first and hardest. While demand from Shandong’s neighbouring markets — Henan and Hebei provinces — remains relatively robust, North China accounts for only 5pc of coronavirus cases.

But some spot a buying opportunity. Spot premiums for crude traded on a delivered ex-ship (des) Shandong basis have collapsed by around 80pc since mid-January (see graph above). And Ice Brent futures, the underlying price, have fallen by nearly $5/bl since the Chinese market closed for lunar new year, when most crude buying halted.

Gasoline demand remains extremely weak, with few prepared to travel by road. Authorities in Hubei, the epicentre of the coronavirus outbreak, on 16 February barred all motor vehicle traffic in the province’s urban areas indefinitely. The only exceptions are emergency and official vehicles. Fuel sales in Hubei are likely to have fallen by around 80pc as a result of the coronavirus outbreak and government quarantine measures, according to Argus estimates.

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sel demand. Spot diesel prices stopped falling in Shandong province earlier this month.

Crude’s weakness, combined with the emergence of diesel stockpiling in north China, has lured a handful of refinery’s back to the market since 6 February. They have bought 11.2mn bl of crude for delivery in April so far — mainly Brazilian Lula, Russian ESPO Blend and Norway’s Johan Sverdrup (see chart p3).

China’s coal market
China’s decision to extend the lunar new year holiday curbed industrial activity and overall power demand, but efforts to contain the spread of the coronavirus have simultaneously hit domestic mining operations and boosted Chinese demand for seaborne coal. International coal prices may continue to draw strength from domestic supply tightness in China if the virus continues to hamper local production.

China has reopened almost two-thirds of its coal production capacity, after many mines were closed during the extended lunar new year holiday. But smaller and privately-run mines have further delayed restarts owing to the migrant workers they mostly hire. Local governments in major coal-producing regions have imposed 14-day quarantine periods for returning workers to minimise the risk of the coronavirus spreading.

Coal production in Inner Mongolia, which makes up around a third of the country’s overall coal production, recovered to 1.76mn t on 11 February, rising by 17pc since 1 February, according to coal marketing association CCTD. But this level of daily production remains well below the region’s average output of 2.41mn t/d in February 2019, and implies that regional coal production might fall by more than 30pc this month compared with a year earlier. A similar annual decline in other coal-producing regions would lead to a 70mn t drop in China’s coal output this month, Argus estimates.

Coal prices in the domestic market have strengthened as a result of supply concerns, widening the price advantage of imported coal over domestic supply. Front-month contracts on Zhengzhou coal futures have increased by around 3pc since 20 January. As a result, Chinese demand for seaborne coal remains firm. At least three shipments of high-ash Australian coal changed hands last week. And total coal shipments to the country in the first half of this month grew by around 2mn t on the year, exceeding 10.11mn t, shipping data show.

But domestic prices showed signs of stabilising by 14 February, owing to falling demand from coastal utilities. Most factories and businesses remained closed because of the virus, dampening power use. Coal stockpiles at major coastal power utilities reached a two-month high this week, as their coal consumption fell to a one-year low.

Wider Asia-Pacific markets

Fertilizers
The Chinese government is pushing producers, local agriculture agencies and transportation providers to maintain fertilizer supplies and crop planting during the spring season. Curbs on transportation have been eased in some areas, with early indications that domestic fertilizer sales are starting to rise.

But the impact is spilling over to China’s major trading partners. Curbs on movement have halted agricultural imports from Vietnam and Myanmar (Burma) since early February, leaving containers of fruit rotting at the border. Melons from Myanmar, dragon fruit from Vietnam and durians from Thailand are among the worst affected products. China is a significant export market for harvested fruit, and a lengthy halt to trade could hit farm incomes in the two countries and hurt their domestic demand for fertilizers such as NPKs.

Crude
Spot differentials for physical crude cargoes from Russia, the Mideast Gulf and southeast Asia have fallen significantly this month, as regional refiners slash bids on the prospect of ample supply amid Chinese run cuts. Dubai forward-month March-April intermonth swaps moved into contango last week for the first time since January last year. Physical crude prices remain vulnerable to further declines as the extent of demand weakness and refinery run cuts in China becomes clearer.

LPG
China’s residential demand for LPG has fallen by 40-70pc from typical levels at this time of year, forcing refiners and import terminals to slash domestic prices to clear inventories and free up storage space. Waning domestic consumption has pressured import prices, with propane premiums for cfr deliveries to south and east China down by 20pc since the end of January. China imports most of its LPG from the Middle East.

But the impact has yet to be felt in the region’s major pricing indicator — the monthly contract price (CP) set by state-owned Saudi Aramco. CP swap values have climbed by 23pc from 4 February to $404/t, reflecting the prospect of tighter supply because of Opec oil production cuts.

LNG
Spot prices for Asia-Pacific LNG deliveries have fallen to an all-time low, dropping by around 22pc since the start of February to below $3/mn Btu. Rising spot supply has sent the market into contango, rather than its more typical winter backwardation. Worker shortages, quarantine measures and high stocks are causing delays to cargo unloading and slowing sendout of regasified LNG. A force majeure declaration by China’s biggest LNG buyer, state-owned CNOOC, may affect 20-30 February-March cargoes, worsening oversupply.
Unexpected vessel availability has pressured charter rates for LNG carriers. But delays to scheduled deliveries are adding to buyers’ costs through demurrage fees, which could send prices of term cargoes to an even bigger premium to spot supplies at a time when buyers are struggling with weak downstream demand. India is stepping into the market to take advantage of falling spot prices, substantially narrowing the discount of Indian prices to northeast Asia.

Oil products
Asia-Pacific gasoline margins have shrugged off weakness in other products markets to reach a multi-month high at $9.39/bl in Singapore on 10 February. Cuts to fluid catalytic cracker run rates as new sulphur curbs for marine fuel reshape product markets are supporting gasoline margins globally.

China is a major gasoline supplier to Singapore, accounting for around half of exports to the city-state, or about 150,000-200,000 b/d, according to data from oil analytics firm Vortexa. Any fall in gasoline exports because of refinery run cuts could boost margins further. But the arbitrage is viable and a surplus is building in China as fuel demand slumps, suggesting the market may come under pressure.

Bitumen
The coronavirus outbreak has halted road construction activity across China, hitting demand at a time when buyers typically build stocks ahead of the second-quarter construction season. Domestic production is also coming under pressure as refineries cut run rates on lower fuel demand.

The coronavirus outbreak has come at a bad time for the bitumen market — China is entering the final year of its 13th five-year plan, when road building typically peaks as construction firms rush to hit targets. Export prices from Singapore and South Korea, the major suppliers to China, are down by 8-10pc since the start of the lunar new year holiday last month.

Biofuels
China’s waste-based biodiesel market has come to a nearstandstill as a result of the quarantine measures and transportation restrictions. Restaurants have closed as people shy away from social contact, curbing supplies of used cooking oil (UCO). And even if UCO is available, transportation curbs and worker shortages mean it is going uncollected. It may take weeks to replenish stocks even when activity resumes, meaning disruptions could extend into March, and perhaps even the second quarter.

China’s UCO is exported to Europe, where it is used as a raw material for biodiesel. China is the biggest single supplier of UCO to the EU, accounting for 30pc of all imports to the region in January-November last year. European buyers have turned to alternative suppliers in southeast Asia and the Middle East for feedstock supplies, meaning the China supply curbs have yet to have a big impact on prices.

In the palm oil market, southeast Asian export prices have fallen to their weakest in two months, despite record low output and inventories in Malaysia. Prices reached a three-month high of 3,111 ringgit/t ($750/t) in January, but have fallen back as the coronavirus outbreak has curbed demand in China, the world’s second-largest buyer behind India.

International jet fuel market
The impact of the coronavirus on oil product demand has been keenly felt in the jet fuel market, with Chinese international air traffic falling by an estimated 70pc and domestic traffic by 50pc since the outbreak of the virus. The IEA has reduced its forecast for Chinese jet fuel demand by 125,000 b/d, or 14pc, from its previous forecast for the first quarter, and by 140,000 b/d, or 15pc, for the second quarter.

Northwest European jet fuel cargo premiums fell by $3.50/t on 13 February. But paradoxically jet fuel stocks held inde-
pendently in storage in the Amsterdam-Rotterdam-Antwerp (ARA) area also fell, by 4pc to 465,000t, their lowest since March 2015. Refinery turnarounds in Europe and the Middle East, perhaps brought forward by the Corona “opportunity”, may actually be resulting in a jet shortage in some areas, which combined with uncertainty over demand is more likely to introduce a period of price volatility than a straightforward price slide.

The sustained spread of the coronavirus is likely to continue to erode European jet fuel demand, as European airlines continue to suspend flights to China, and are extending these suspensions on a weekly basis.

Scandinavian airlines SAS, Finnish airline Finnair and German carrier Lufthansa on 14 February extended all flight suspensions to Shanghai and Beijing until the end of March. The three carriers are still operating flights to Hong Kong, but have reduced capacity on this route owing to a “temporary decline in air travel demand”, Finnair said.

“Due to the current demand situation for flights to and from Hong Kong, slight capacity adjustments will be made: for Lufthansa, some flights will be cancelled. SWISS will be using smaller aircraft on its flights to and from Hong Kong in March,” Lufthansa said.

The extensions add to the growing list of suspensions of flights to China by most other European airlines — including Air France-KLM, Turkish Airlines, British Airways, Virgin Atlantic and Iberia — until the end of March.

Additionally, countries such as the Czech Republic and Italy have placed an outright ban on direct flights to and from China.

And travel restrictions put in place after the spread of the virus for countries such as the US, India, Israel and a few Caribbean islands, prohibiting visitors to enter who have travelled to China in the last two weeks, adds to the downward pressure on air travel demand.

It is likely that European travel to Asia-Pacific across the first and second quarters might weaken even after the flight suspensions have been lifted, as passengers previously booked on those routes might have chosen not to rebook the flight in the near term.

At the beginning of the virus outbreak, European jet fuel margins to North Sea Dated crude fell to a more than seven-month low of $11.91/bl on expectations of rising jet fuel availability from Asia-Pacific and lower demand globally.

Jet cargo premiums to the Ice March gasoil contract fell to an 11-month low on 13 February at $26.25/t, with the front-month swap dropping to $26.50/t, its lowest since October 2017. The second-month swap dropped to $24/t — its lowest since August 2016.

But margins have since recovered on signs of tighter supplies from Asia-Pacific as the outbreak has prompted Chinese refiners to slash crude runs. But as noted, this demand slowdown has been offset by tighter supply conditions resulting from heavy refinery maintenance in Europe and at significant jet production units at refineries in the Middle East.

European jet fuel production is already restricted by the shutdown of crude distillation units at Italy’s 235,000 b/d Milazzo refinery and France’s 222,000 b/d Donges refinery. And Total was scheduled to take its 105,000 b/d Feyzin refinery in France off line for seven weeks beginning on 14 February.

Whether other refiners choose to cut runs, or to advance previously planned maintenance works remains to be seen. It is equally possible that refineries currently undergoing maintenance may choose to extend shutdowns until margins recover sufficiently. Gunvor took the decision to take a crude unit off line at its 88,000 b/d Europort refinery in November last year, on the basis that it was uneconomical to run.

Meanwhile, heavy refinery turnaround schedules in the Middle East Gulf, including shutdowns in Saudi Arabia and the UAE, are further tightening middle distillate supplies. The 460,000 b/d Jubail refinery in Saudi Arabia, operated by Saudi Aramco and Total joint venture Satorp, began a partial turnaround in the middle of January. And three other Saudi refineries are expected to begin maintenance in March, on the basis that it was uneconomical to run.

Just over 600,000t of jet fuel is arriving in Europe from outside the region in February, compared with around 1.6mn t in the same period last year, data from oil analytics firm Vortexa and Argus ship-tracking show.
Russian export markets

Crude
Falling demand from Chinese refineries as they implement runs cuts has weighed on prices for Russian seaborne crude in Asia-Pacific. Light sour Sokol is trading at a $2.95/bl cfr Yosu premium to Mideast Gulf benchmark Dubai, down from a $6.30/bl premium in early February. Light sweet ESPO Blend values are also expected to fall after the first April cargoes are offered this month. Traders see them declining to a $2.50/bl fob Kozmino premium to Dubai, down from an average of $5.89/bl for March supplies.

The interest in exporting Urals Suezmax cargoes from Novorossyisk to Asia-Pacific has also diminished on declining demand. But there has been no indication that Russian pipeline crude shipments to China under an intergovernmental agreement will be reduced.

Marine fuel
Prices for very-low sulphur fuel oil at Russia’s far eastern ports have declined by $155/t since early January, to $470-510/t dob Primorsky krai in mid-February, on weaker regional bunker demand. The dramatic drop in prices at Asia-Pacific ports in January-February prompted Russian bunkering companies to offer wide discounts.

The outbreak of the coronavirus has reduced shipping activity to and from China. Some big container lines have reduced their activity at Russian far eastern ports or suspended their operations in the region.

LPG
LPG deliveries by truck from Russia to China were halted from 1 February. Rail supplies continue, but they are no more than 1,000 t/month.

Coal
Russian coal exports to China through overland border crossing fell notably in the first half of February as throughputs at rail terminals were limited by a lack of personnel at Chinese border sites. Russian coal shipments through far eastern border crossings from 1-12 February fell by two-thirds from a year earlier to 6,700 t/d.

Russian state-owned rail operator RZD has banned all coal supplies to the Grodekovo-Suifenhe border crossing since 1 February, and may keep this limitation in place until the end of the month. The rail operator also banned coal shipments to the Zabaikalsk-Manzhouli border crossing from 1-11 February. Only the Kamyshovaya-Hunchun overland border crossing has continued to accept coal deliveries normally. Russian coal shipments to China through overland border crossings fell by 4pc from a year earlier to 593,000t in January.

US oil markets

Virus may prompt Cushing, USGC storage options
Crude demand disruption from the Chinese coronavirus outbreak has helped bring down prices globally and is leaving those cargoes normally taken by China available for other markets that are traditionally served by US crudes that flow through the Cushing, Oklahoma, storage hub. This means those US crudes will need to find another home — most likely storage while they wait out the virus. This growing pressure on prompt US crude supplies relative to forward months has pushed US marker Nymex WTI to a level of contango that, if it deepens further, could make storage positions economical in Cushing, Oklahoma, and even lead to floating storage being utilised at the US Gulf coast.

The intermonth spread from March through to May for Nymex light sweet futures contracts is roughly 20-25¢/bl, around the level at which traders are seeing spot prices for Cushing storage — so it is not quite economical to lease new storage. But some potential storage play participants that have already leased capacity in Cushing may consider storing more crude at a lower level of contango, viewing the storage costs as sunk. Commercial crude stocks at Cushing were up by 1.67mn bl in the week ending 7 February to 38.38mn bl, or about 42pc of Cushing shell storage capacity.

And with the new contango market there was increased interest earlier in February in a monthly Cushing storage auction held by Matrix Markets on behalf of American Midstream. All 1.15mn bl offered in physical storage agreements were sold for March through to June at prices ranging from 10-12¢/bl. This contrasts with the prior auction held in January when no space was sold. The next auction will be held on 3 March.

An even deeper contango could lead to crude being stored on the water. There have already been some requests for 30-90 day floating storage options on US Gulf coast-Asia very large crude carrier cargoes.

Metals markets
Production plants closures and supply chain bottlenecks caused by the coronavirus outbreak have unleashed price volatility across the steel and industrial metal markets, reflecting their high exposure to China and their sensitivity to changes in the global economic growth outlook.

Steel, iron ore and copper prices fell sharply in the early stages of the outbreak but have since stabilised. And prices for specialist metals and alloys are now rising owing to extended production plant shutdowns as travel restrictions prevent workers from returning to industrial regions.
The duration of the outbreak and its impact on global economic growth will determine whether the coronavirus has fundamentally altered the course of metals markets, which started this year in cautiously bullish mood, as prices firmed on tentative signs of a recovery in global manufacturing and on China’s efforts to stimulate its economy.

But metals demand in China, the world’s biggest consumer, has faltered as output from key sectors such as automotive and construction have dropped sharply. Even if the virus is contained in the near term and Chinese industry starts returning, the rapid build-up of metal inventories across sections of the supply chain means markets will struggle to normalise by the summer, regardless of the pace of global growth.

Steel
The partial paralysis of China’s economy has forced the country’s steelmakers to look to export markets. Domestic Chinese steel demand may not pick up until April, one month later than the typical spring ramp-up. This has led to a surge in inventories held by steel mills to historical highs for the time of year.

One Chinese mill that rarely exports steel recently sold 100,000t of hot-rolled coil (HRC) to Vietnam at prices well below levels seen in the wider market. The benchmark Argus China HRC export price has fallen by 8pc since late January.

Any big rise in Chinese steel exports would reverse a trend of recent declines and could reignite global trade tensions as it puts pressure on prices. China’s steel production has been blamed for global oversupply, and steel was one of the first products targeted by US president Donald Trump’s tariff policy.

Non-ferrous metals
The coronavirus outbreak has driven prices for many non-ferrous metals and alloys sharply higher in China, and is expected to provide potential for further gains in the next 1-2 months as production plants are slow to return to operations. And concerns over the availability of imports from China have pushed up prices in the European and US markets following delays to shipments caused by quarantine measures at many Chinese ports. Prices for metals such as tungsten, which is used in automotive, construction and defence applications, have been rising in recent days.

Swathes of the Chinese non-ferrous metal smelting and processing industries remain offline. A limited number of producers have resumed operations recently but operating rates are lower than usual because of a lack of workers and logistical issues affecting feedstocks. General run rates in the rare earths industry, for example, are estimated to be as low as 20pc.

The production closures and cuts are expected to continue in the next few weeks, with many smelters unlikely to resume production until the end of February or early March. China has put more than 80 cities under quarantine and millions of workers are unable to return to their factories. Logistics firms are struggling to raise capacity owing to transport restrictions.

Stalling automotive demand
While supply is constrained, metals demand from key sectors such as automotive has dropped sharply. Chinese auto production is down by about a quarter compared with a year earlier, with domestic auto sales forecast to fall by more than a quarter in January-February from a year earlier. The automotive supply chain has stalled as many component suppliers are located in Hubei, the epicentre of the outbreak, hitting demand for multiple metals including aluminium alloys and copper.

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