PILBARA QUARTERLY **ECONOMIC UPDATE**

ISSUE No 5 **JULY 2020**

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Key Messages

Investment and construction activity in the Pilbara have increased further in the resources sector in the June quarter, apart from oil and gas, and the medium to long term future continues to look promising. Diversification within the sector is on the rise with increased exploration and investments in gold, manganese, copper and fertiliser.

In line with much of Australia, **tourism, retail and wholesale operations have suffered** from the advent of the coronavirus and the increasing on-line buying of products. However, with the easing of restrictions these sectors are starting to see a degree of recovery, though loss of employment and small business closures remain a concern.

The rising costs of housing accommodation and the impact of travel restrictions on out-of-state FIFO workers are issues, which will be reviewed in more detail by these economic updates over the coming quarters.

WA is likely to outperform the national economy during the coronavirus pandemic, due in part to the **expanding value of the resources sector in the Pilbara.** The contribution of iron ore is increasing with export volumes rising to 866 million tonnes in 2019/20, 893 million in 2020/21 and a projected 912 million tonnes for 2021/22[1].

Earnings from exports of resources and energy in Australia as a whole will reach a record $293 billion in the current fiscal year[2] primarily driven by iron ore and coal. However, exports are forecast to fall to $263 billion in the 2020/21 fiscal year, largely due to decreasing values of oil and natural gas exports and the global recession.

The main risks to the Pilbara economy are the possibility of a deepening recession in key global markets and rising geo-political tensions between Australia and China leading to trade disruptions.

1 *Bloomberg June 2020*

2 *Department of Industry, Science, Energy and Resources June 2020*

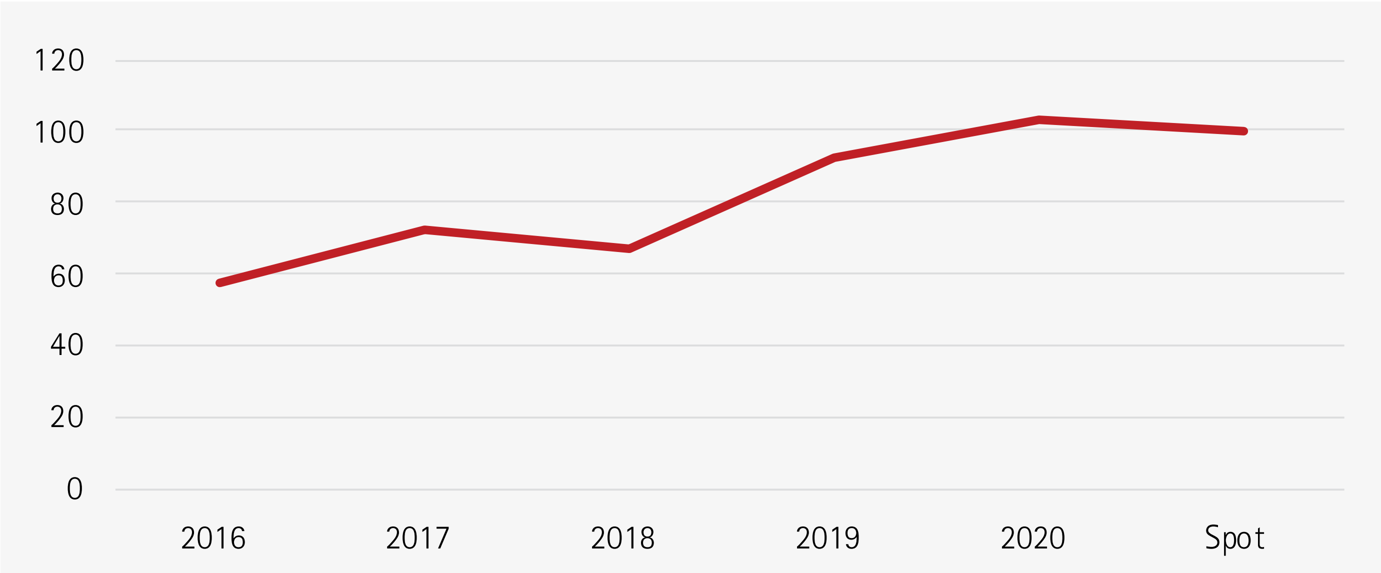
Summary of Sector Developments

- **Iron ore has benefitted from strong price rises,** due in part to reductions in output from Vale in Brazil and strong demand from China, as the economy recovers from the pandemic. Although prices are expected to decline, they are likely to remain attractive, with no impact on levels of investment or production. Pilbara iron ore miners shipped a record 82 million tonnes (Mt) in June, from the ports of Port Hedland, Dampier and Cape Lambert eclipsing a previous monthly record of 80 million tonnes achieved in December 2019. Data indicates that Fortescue Metals Group (FMG) shipped 178Mt for the full-year, which exceeds its stated annual guidance of 175-177Mt, BHP shipped 283Mt for the year, which is towards the upper end of its guidance of 273-286Mt and Rio Tinto shipped 334Mt for the financial year. Employment remains steady in the sector.
- **Oil and natural gas prices have fallen significantly,** due largely to the impact of the pandemic on global demand, resulting in the **postponement of capital expenditure on new LNG projects in the Pilbara.** Although prices have rebounded strongly in May and June, as economies in China, South East Asia, the USA and Europe have partially reopened and large-scale output cuts have come into play, further price rises may be limited by the effect of the global recession and travel restrictions worldwide. Both Woodside and Chevron have laid off workers.
- **Gold prices have risen strongly** and are likely to remain elevated. Exploration for gold has been at very high levels for several years in the Pilbara and is now starting to pay off, with **new mines opening over the next year** and a pipeline of possible projects in the works. The gold sector is likely to play a stronger role in the economy of the Pilbara in the future, including employment.
- **Lithium prices remain depressed** and production activity has been curtailed. However, the **global "green" energy movement** is continuing, and prices are likely to stabilise in the medium term and to rise in the long term, with a resumption of increased levels of production and employment over time.
- **Copper prices have started to recover** and exploration in the Pilbara looks promising, particularly in Paterson Province in the north of the region.
- **Beef prices were very strong** and s**upportive of the industry** until recently, when the live cattle trade was impacted by the pandemic and China's trade disruptions, however, the prospects for the industry remain bright.
- **A significant ($4.5 billion) investment in the production of urea fertiliser** is about to start, with large scale employment benefits.
- **The construction of a new manganese mine** by Element 25, south of Newman, appears to be likely. Manganese prices are expected to increase in the medium term.
- **Development of renewable energy sources is gaining traction,** with progress being made on legislative approval of the Asian Renewable Energy Hub at a capital cost of $22 billion.

Commodity Prices and Resource Sector Investments

Iron Ore

IRON ORE PRICE: 2016 to June 2020 (US$ DMT 62% fines)



SOURCE: WORLD BANK AND BUSINESS INSIDER

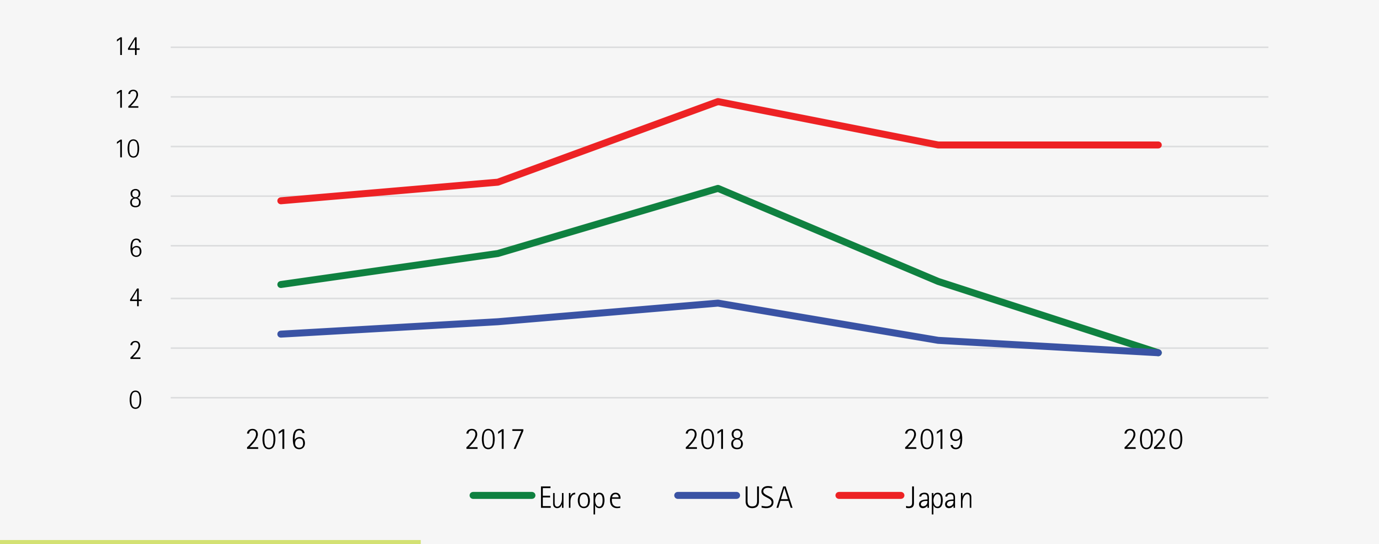
Relatively high prices continue, investments in replacement mines and some new production

- **The iron ore price has increased during the quarter to levels above $100/t,** due to supply disruptions from Brazil and strong demand from China. **Supply side estimates are supportive of prices,** with Brazilian giant Vale revealing a 24% decline in production in the first quarter of 2020. It has also cut full-year guidance to 310-330Mt from 340-355Mt.
- With the **resumption of production by Vale** in Brazil prices have fallen slightly below these levels, however, rising coronavirus cases may limit future production in Brazil. Analysts have predicted the price will remain at US$75/t or higher for the next three years, which will help to underpin the economies of WA and the Pilbara.
- Even if prices do moderate as expected the **very low costs of production of Pilbara producers** means that healthy profit margins should remain for mining companies. The last set of results[3] from the major Australian iron ore producers showed BHP Group's unit costs were US$13 a tonne, Rio Tinto's was between US$14 and US$15 a tonne and FMG's was just under US$13 a tonne.
- The strength of the iron ore market and Pilbara producers is reflected in the **high level of ongoing and planned investments and production targets** of the major players. Australia is expected to break a $100 billion iron ore export record in 2019/20.

3 *Financial Review 3rd July 2020*

- **Investment and production developments in the Pilbara include:**
  - **BHP is exploring options to increase its licensed iron ore export capacity from Port Hedland** to beyond 290Mt a year. As noted by BHP "Any increase in our production has the potential to deliver flow-on benefits for local jobs, local businesses and additional royalty revenues for the state". BHP also plans to invest $300 million over the next five years to improve air quality and dust emissions across its Pilbara operations, ensuring its long-term future in the region is sustainable.
  - **FMG** shipped 42.3Mt in the March quarter, 10% higher than the previous year, and achieved record year-to-date shipments of 130.9Mt.
  - **Rio Tinto has maintained full-year guidance** from its Pilbara iron ore operations at 324-334Mt, up 5% on the previous corresponding period. Rio's Pilbara expansion projects include Koodaideri, Western Turner Syncline Phase 2 and Robe River.

LNG PRICES: Europe, USA, Japan – 2016 to June 2020 (US$MMBtu)



SOURCE: WORLD BANK AND SPOT PRICES

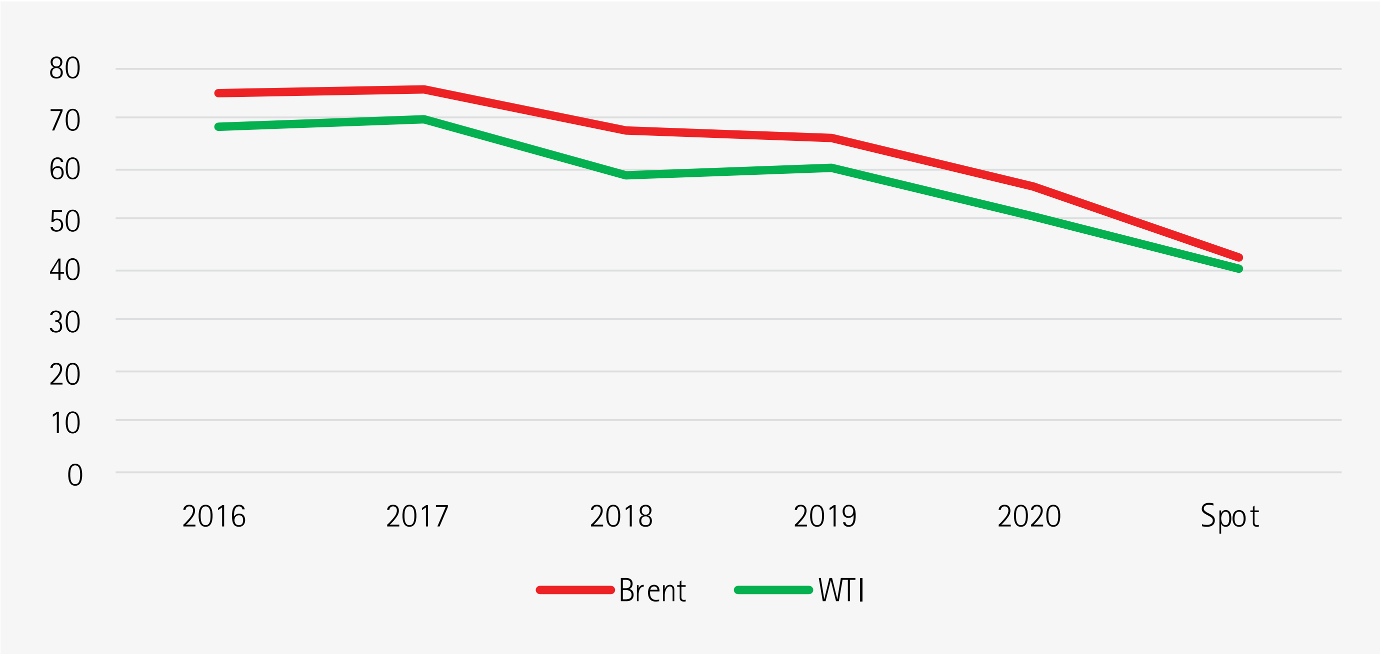
Very low prices short term in Europe and the USA, a degree of price recovery medium to long term, large-scale investments delayed but not abandoned

- **The LNG landscape has deteriorated** markedly in the short-term, with abundant supplies and very weak demand in all global markets, leading to layoffs and postponement of capital expenditure in the Pilbara and globally.
- **Spot market prices remain low** in all markets around the globe as demand has collapsed, due mainly to the impact of the pandemic. This situation will persist for some time, as recovery from the economic fallout is unlikely to be rapid. The industry is seeing reduced downstream demand, low prices, high storage levels, increased concerns over the viability of projects and supply cuts.
- **Asian spot LNG prices have remained below US$3** per million British thermal units (mmBtu) during the June quarter despite increased demand as Asian economies such as China and Japan start to recover.
- **A significant development on the demand side is the acceleration of imports by China,** which is close to overtaking Japan as the world's largest LNG importer, with new projections suggesting it will surpass Japan in 2022. Ultralow prices are seen by China as an opportunity to expand the country's strategic oil and gas reserves. For Australia and the Pilbara in particular this development increases the potential for increased sales, however, political and trade tensions may influence whom China chooses as its suppliers.
- **Australia's LNG export earnings look set to fall by as much as $20 billion** in the 2020/21 financial year to $30 billion from a near record of about $50 billion expected for 2019/20. The major oil companies have reported significant cutbacks in upstream investment, averaging more than 25% compared to last year.

- **Developments in the Pilbara regarding investments** include:
  - **Chevron has placed its stake in the North West Shelf gas project up for sale** following "a number of unsolicited approaches from a range of credible buyers". The proposed sale coincides with the move of the project to become an open-access, third-party tolling facility, as reserves from its existing fields become depleted.
  - **Shell has cut the value of its assets by between $15 and $22 billion globally.** This write down is mostly related to Australian LNG assets, including its Prelude project, a floating LNG vessel, which exceeded its budget and is now underutilised in a weak LNG market.
  - BHP's Nickel West has struck a deal with Chevron for the **delivery of natural gas from its Wheatstone domestic gas facility.**
- **Delays in LNG investments may have an impact on WA domestic gas supplies** as soon as 2025 according to EnergyQuest, which has noted that more than $60 billion worth of new and expansion projects were effectively in limbo.
- **The downturn in the sector** has led to major producers **reducing staff numbers or cutting contractor requirements.**
- Although it may take some time for the global market to return to normality, in the medium term the prospects for further investment in the Pilbara remain reasonably positive and most of the corporate arrangements, technical options and the processes required for successful implementation of the Pilbara projects are already in place. For example, a long-awaited processing deal between the partners in the Browse project is closer and processing arrangements for Scarborough are more or less finalised.

Oil

OIL PRICES: 2016 to June 2020 (US$/bbl.)



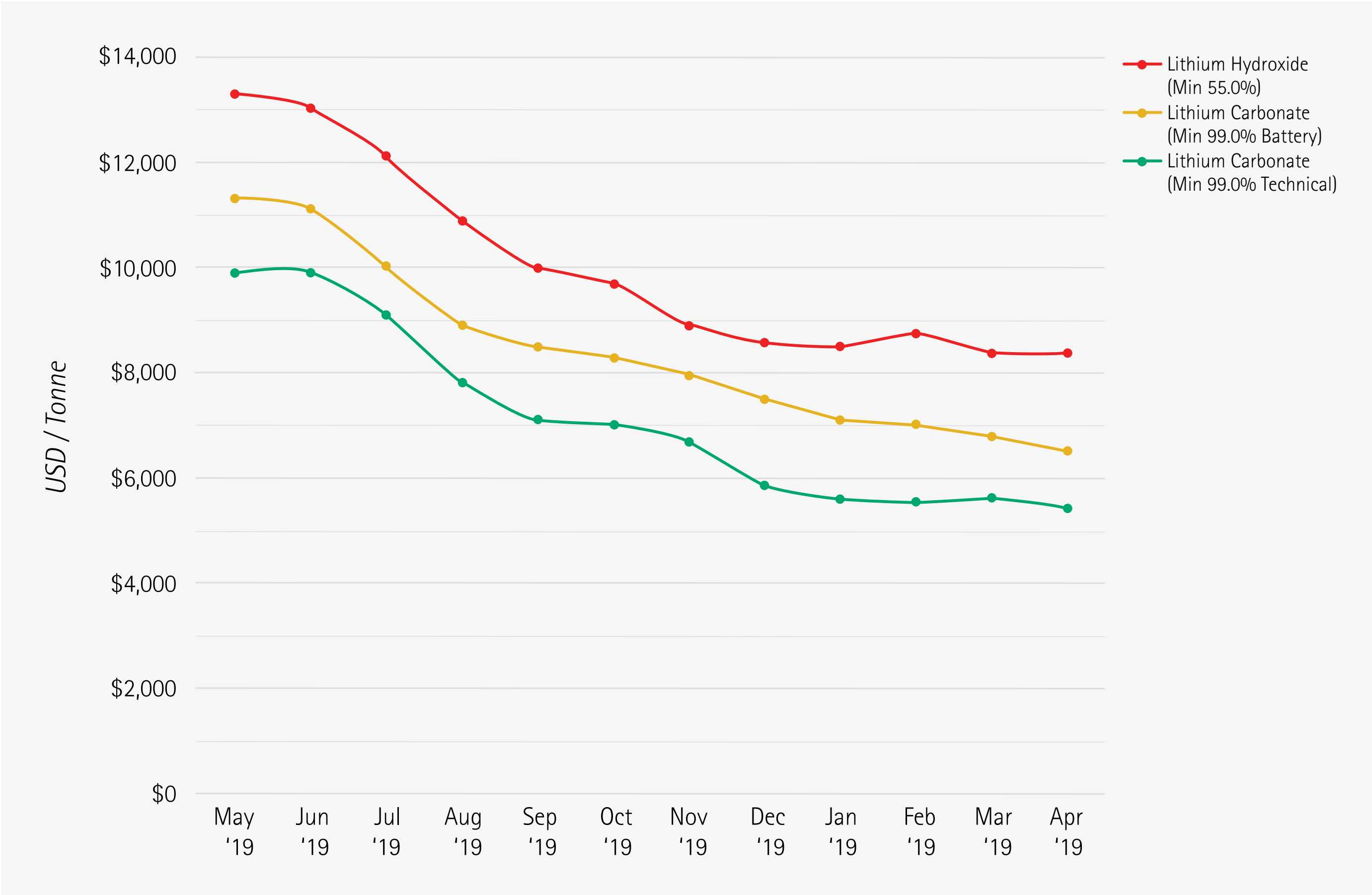
SOURCE: WORLD BANK AND OIL PRICE NOW

Fall in prices arrested to an extent, medium term prices may increase, write downs of capital values and large-scale reductions in investments

- **The short-term outlook for oil remains weak,** despite a partial recovery in prices in the latter part of the June quarter, however, due to lack of investment in supplies the **medium-term outlook may well strengthen.**
- The impact of the pandemic has continued to result in **severe stress for oil producers.** The dynamics of the energy industry remain fluid and predicting the future of the oil market is difficult. Recently Shell reduced its Brent oil prices forecast from $60 per barrel to $35 for this year and lowered its 2021 and 2022 forecasts to $40 and $50 per barrel, respectively, down from $60 previously.
- Information on **reductions in the value of oil assets by major players** gives an indication of the extent of the **declining value of the industry.** The majors are acknowledging that a substantial portion of their oil and gas reserves may be left in the ground.

Lithium

LITHIUM PRICE: May 2019 – April 2020 (US$/tonne)



SOURCE: MINING.COM

Short term prices are soft, long term increase in demand & prices still anticipated, increased investment medium term

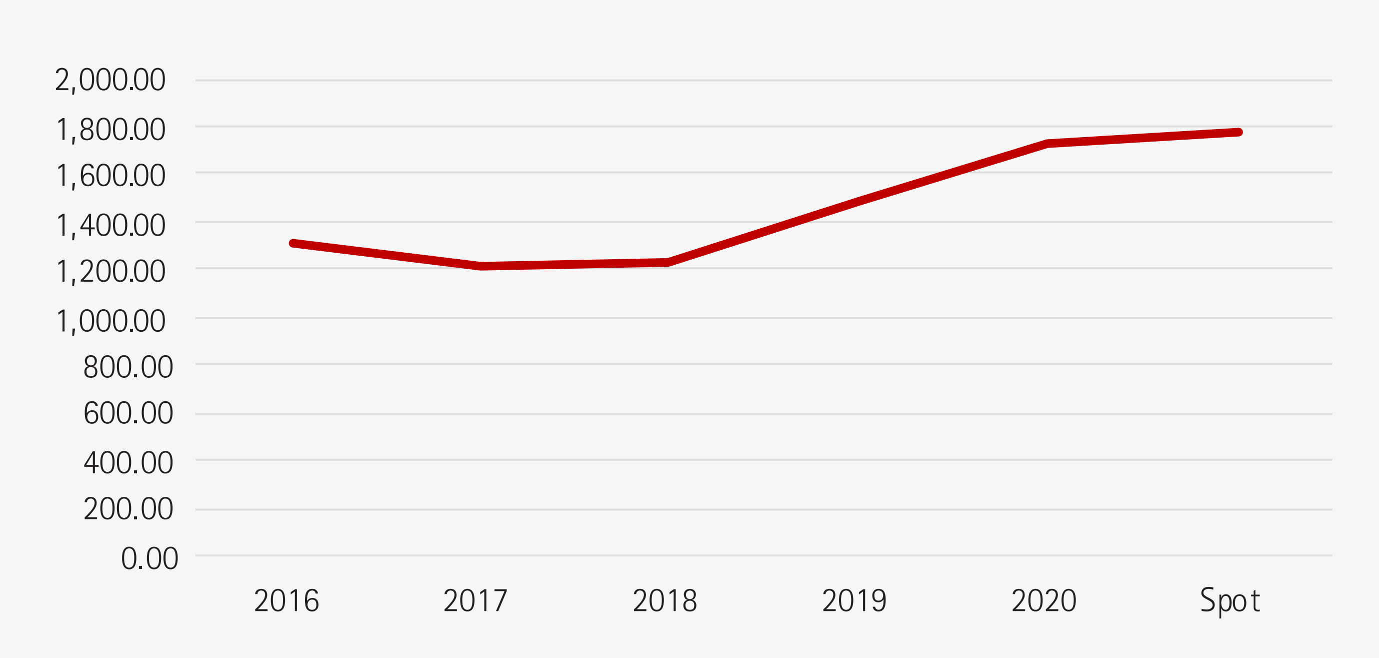
- **Lithium prices remained soft** in the June quarter, due to the impact of the pandemic, b**ut price falls are flattening out.** Sales of electric vehicles in China decreased by 54% at the height of the pandemic and lithium extraction companies have continued with their cautious approach in the short term.
- However, the prospects for lithium prices to increase are intact, as electric vehicle (EV) sales are expected to rise quite sharply in line with green economy plans, such as those of the European Union (EU)[4]. **Governments will play a key role in driving demand** for EVs. In this regard, Germany and France are planning to raise their EV subsidies to support more purchases.

4 *Oil Price Now – June 2020*

- By 2022, according to analysts from Citi, the **price of lithium carbonate,** the compound used in EV batteries, **could soar by as much as 42%, to $7,200 per ton,** despite the fact that even with subsidies, EVs are expensive. Car manufacturers, which have poured billions into electric powertrain production platforms, will start to ramp up production in response to greater demand.
- Moreover, a new report by Roskill predicts that **lithium-ion battery demand is expected to increase more than ten-fold by 2029,** reaching in excess of 1,800GWh capacity at over 145 facilities globally.
- **Investment and production developments in Australia and the Pilbara include:**
  - Lithium Australia is finalising an agreement to produce 1,200 tonnes of lithium ferro phosphate cathode powders, initially in China, to supply battery manufacturers in the Chinese electric vehicle market.
  - Altura Mining has secured a supplier contract and multi-year offtake agreement with China's Hunan Yongshan Lithium, which is a global lithium leader. The company has completed a strategic review of its Western Australian lithium agreement with Sayona Mining in the Pilbara region. As part of the agreement, Sayona and Altura have joined forces to explore tenements together and following the review, Sayona has retained tenements located close to the existing Altura lithium mine.
  - Pilbara Minerals believes it is in good stead for a market recovery after its Pilgangoora lithium project faced no material operational impact in the March quarter. The company has also secured a 75,000 tonne per annum offtake agreement with Yibin Tianyi, with the first shipment of spodumene concentrate completed in March 2020.
  - Australia has signed an agreement with India to supply critical minerals needed for the new energy economy. It focuses on avenues to increase trade, investment and research and development between the two countries, according to Australia's Resources Minister. **Lithium exports to India** are expected to be worth $3 billion in 2024/2025.

Gold

GOLD PRICE: 2016 to June 2020 (US$/oz)



SOURCE: WORLD BANK

Sharp increase in prices continues, increased investment and employment

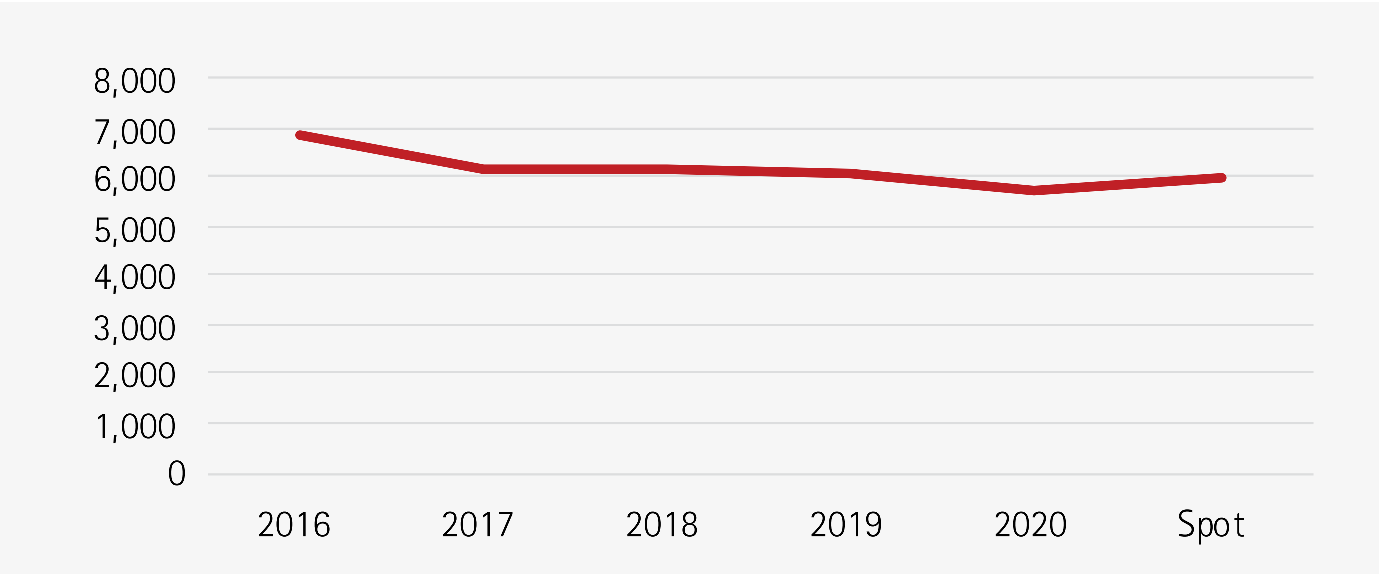
- **Gold prices have continued to increase** sharply in the June quarter. Bank of America has raised its gold price forecast to US$3,000 an ounce over the next 18 months in a report entitled, 'The Fed can't Print Gold'.
- Positive price trends have continued to **encourage additional activity in the Pilbara** with promising results:
  - Calidus Resources is moving towards gold production in the Pilbara, calling for major contract tenders for the planned $116m mine development and appointing an exclusive debt adviser. The company is to finish a definitive feasibility study this quarter and is targeting first gold production about 10 months after the start of construction in the first quarter of next year. EPA approval has been secured for its Warrawoona gold project and final project approval now rests with the Minister for Environment. Drilling has started at its flagship Klondyke deposit.
  - The De Grey Mining Hemi gold discovery 60km south of Port Hedland could be the biggest gold find in Australia in 10 years.
  - Novo Resources has added to its gold projects in the Pilbara, by entering into an option agreement to acquire the Bellary Dome project. The Bellary Dome tenure is located immediately north of Paraburdoo. The project also adjoins Novo's existing tenure in the region with the company now having a 13,000km2. land package throughout the Pilbara conglomerate gold region.

- Newcrest has qualified for a 40% interest in the Havieron gold-copper project in the Paterson region of the Pilbara. This was achieved by spending US$65 million and completing several exploration and development milestones over a six-year period.
- Canadian billionaire investor Eric Sprott will maintain his 10% stake in Kairos Minerals as part of a $4.2 million capital raising by the Pilbara operator. Kairos Minerals has a large-scale exploration programme across the Pilbara as it looks to replicate DeGrey Mining's Hemi gold discovery nearby.
- Capricorn Metals has reported a 35% increase in ore reserves at the Karlawinda gold project 70km south-east of Newman, adding three years to its mine life. Capricorn now expects to produce 105,000–120,000 ounces of gold a year.
- Northern Star Minerals has divested its Mt Olympus project, part of the Ashburton gold project, to Kalamazoo Resources for $17.5 million.
- Junior gold players are taking advantage of the seven-year high gold price that has allowed them to raise cash and expand drilling programmes.

Cu

Copper

COPPER PRICE: 2016 to June 2020 (US$/mt)



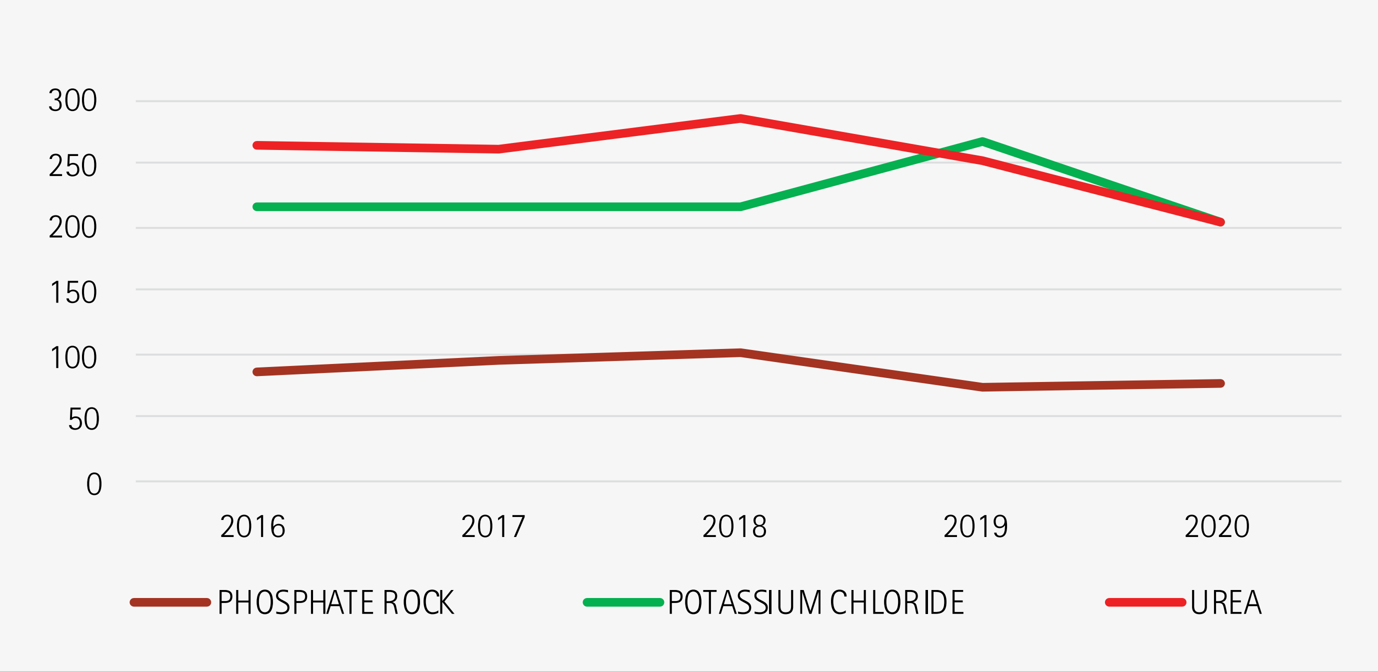
SOURCE: WORLD BANK

Prices recovering and likely to rise further, large scale investments possible

- Copper prices fell sharply until a recent recovery. **Prices are now rising** and over the medium-term prices are expected to increase with demand outstripping supply.
- **New developments in the Pilbara include:**
  - Rio Tinto is increasing exploration this year on the Citadel project, near to its Winu copper-gold discovery in the East Pilbara. Rio took a 51% stake in Citadel after spending $11m on the project since the original joint venture agreement was struck in 2015. The company has lifted its exploration spend to $9.2m, with a 13,000m drilling programme and a programme of surveying, data processing and drill target generation expected to begin this quarter.
  - St George Mining has reported strong exploration results from its Paterson province project. These discoveries are similar to those that are known to host major precious metals and base metals discoveries in the region and raises the prospects of a greenfield discovery.
  - Venturex Resources will switch diesel for gas and front end the more favourable ore from its Sulphur Springs copper-zinc project in the Pilbara to save $60m in costs over the first 10 years of mine life. Final environmental approval from the EPA is expected soon. The company has increased its expected capex requirements from $169m to $211.6m.

Fertiliser

FERTILISER PRICES: 2016 to June 2020 (US$/mt b)



SOURCE: WORLD BANK

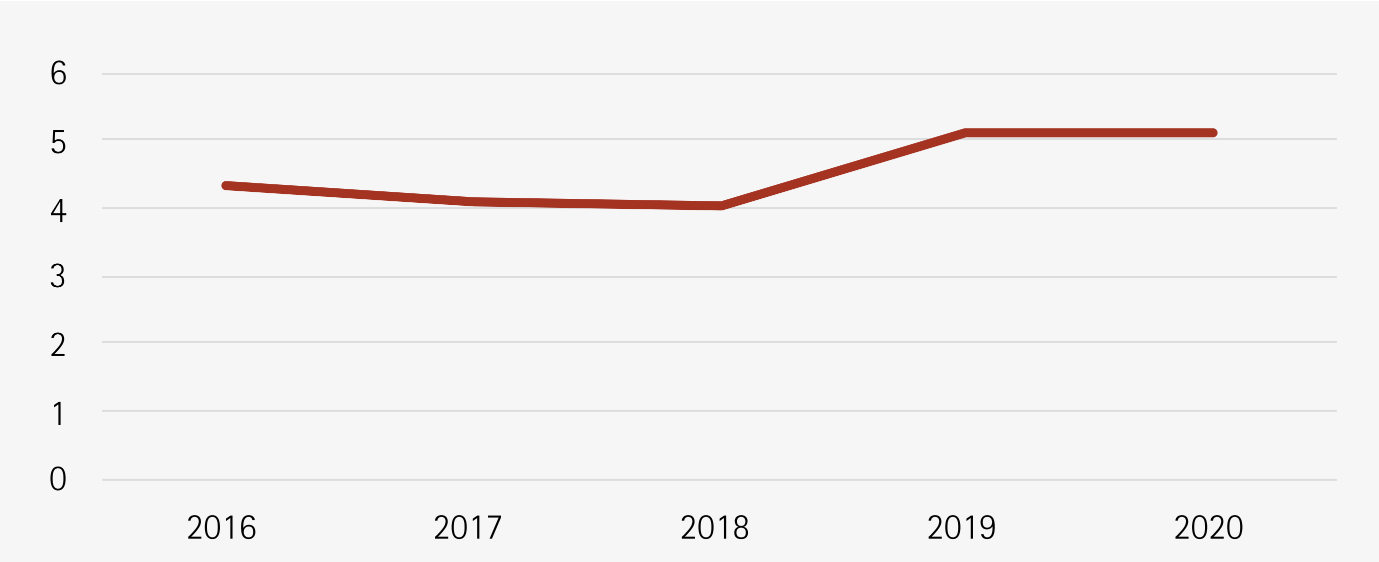
Urea and Phosphate Prices falling, but large-scale investments likely in the short to medium-term

- The prospects for further investments in urea and potash projects remain positive in the Pilbara, despite declining prices for urea and potassium.
- **Investment in the Perdaman Industries $4.5 billion Pilbara urea plant** is moving ahead with the appointment of construction contractors, with a mid-2021 final investment decision to be made. The fertiliser will be shipped from the Pilbara to local markets and Asia. The plant is expected to generate 2,000 jobs during the three years of construction. About 200 permanent workers will be needed in Karratha when the plant reaches full production. The facility will produce two million tonnes of urea per annum and will generate more than $850 million per annum in export earnings for WA.
- **Kalium Lakes** is set to accelerate the development of its **Beyondie sulphate of potash** (SOP) project 160km southeast of Newman, by mobilising contract works in the coming weeks. This includes pond construction earthworks, gas pipeline installation and purification plant engineering, procurement and construction work. This follows a capital raising of $48.8m.
- **Agrimin Limited has been granted major project status[5] for its Mackay Potash Project,** located near the East Pilbara town of Kiwirrkurra 1,200km east of Port Hedland. The project is expected to create 300 direct jobs during construction and 200 jobs during operations. Through the production of 426,000 tonnes of premium sulphate of potash fertiliser a year, the project will facilitate WA becoming one of the largest global suppliers of SOP fertiliser, generating estimated annual sales revenue of $315 million.

5 *West Australian June 2020*

Beef

BEEF PRICE: 2016 to June 2020 (US$/kg)



Prices fluctuating at reasonable levels, with recent increase

- **Beef prices** on the global market continued to **support the industry** in the second quarter of 2020 up until May, after which prices started **to decline**, albeit from a very high base. The Australian and Pilbara beef industries have been **negatively impacted by the impact of the pandemic on international markets.**
- WA's **live cattle industry** has been faced with prices falling by a third as a result of COVID-19 impacting demand from Indonesia. Live cattle exports to Indonesia, Australia's most important market, were down 41% on March last year. Moreover, a report by Meat and Livestock Australia (MLA) has said that a shutdown of food service outlets, reduced consumer spending and nationwide restrictive measures had caused a demand shock.
- **China halted meat imports from four of Australia's biggest abattoirs** in May, citing labelling and health certification issues. Chinese commodities traders have warned that they may be forced to secure beef from US suppliers if Beijing does not lift bans on four of the country's biggest abattoirs in the next few months.
- **To counteract falling exports, premium wagyu** beef is being sold into WA households at wholesale prices after pandemic-fuelled shutdowns impacted traditional markets. MLA has identified Australia as an untapped market for wagyu.

Renewables

- **The decades long aim of "switching to green" energy sources are gathering pace.** Over time renewable energy is likely to make further headway in replacing fossil fuels, with implications for the Pilbara.
- **International developments include:**
  - **The International Monetary Fund (IMF) and International Energy Agency (IEA)** have both indicated their support for macroeconomic recovery bearing climate change in mind. In order to achieve its goals, **the plan would need a global investment of around US$1 trillion annually over the next three years.** According to IEA and IMF's analysis, the plan could boost global economic growth by 1.1 percentage points each year over the next three years and save or create nine million jobs globally. The plan addresses policies in six sectors – electricity, transport, industry, buildings, fuels, and emerging low-carbon technologies.
  - On May 27, the **European Commission unveiled details on its "Green Deal" strategy,** which incorporates a green economic recovery package to foster the EU's aim to reach net zero emissions by 2050. Specifically, the plan will propose a "recovery instrument" worth half-a-trillion Euros (€).
  - **Dozens of countries have started committing billions of dollars, especially to green hydrogen,** in a bid to combat climate change. For example, Germany recently committed to invest €9 billion in hydrogen technology over the next two decades. Other countries with large hydrogen commitments include Australia, China, France, Norway, South Korea, and the UK, among others.
- **In the Pilbara** the most significant development is **WA's environmental regulator's approval of the huge wind and solar energy Asian Renewable Energy Hub,** with a capital cost of $22 billion. The private-owned project is centred on a site about 220km east of Port Hedland and would encompass up to 1,743 wind turbines, each measuring up to 260m in height, and 2,000 megawatts of solar photovoltaic capacity. It would provide energy to the Pilbara as well as exports to customers in Asia via subsea cables. The hub is being promoted by a consortium led by Intercontinental Energy, Vestas and CWP Energy Asia. A final investment decision is due in 2025.
- **FMG** has given itself just 20 years to achieve **net zero operational emissions across its Pilbara projects.** The Chichester solar gas hybrid project and its US$700 million investment in the Pilbara Energy Connect programme will deliver 25% to 30% of its stationary energy requirements from solar power by 2040. The plant, to be built and owned by Alinta, is due to be completed in mid-2021.

Manganese

- Manganese is extensively used in metallurgy. By tonnage the metal is the fourth most common, after iron, aluminium and copper. **Prices are expected to rise** over the next decade.
- Currently the main manganese mine in the Pilbara is Consmin's wholly owned subsidiary, **Pilbara Manganese,** that owns and operates the Woodie Woodie manganese mine, located approximately 400km southeast of Port Hedland. The mine is recognised internationally as a reliable independent supplier of high-grade, low-impurity manganese to global markets.
- Now another mine may move into production. **Element 25** is apparently on track to meet its development schedule at its Butcherbird manganese project south of Newman, with a drilling programme now underway. Its solid ore reserve is currently 5.21Mt of contained concentrate grading 10.3% manganese. Phase two aims to build a large West Australian high purity manganese production hub. Element 25 has a first non-binding off-take Memorandum of Understanding with OM Materials.

Legislation

- **The Minerals Council of Australia (MCA) is pushing the Federal government to introduce reforms** to protect the minerals industry and fast track Australia's post-COVID-19 economic recovery. The MCA suggests Australia could be looking at a **$100 billion investment pipeline** of coal, iron ore, base metal, critical mineral and gold projects, which will keep the industry afloat.
- **WA business leaders have welcomed the Federal Government's plan to fast-track** 15 national priority infrastructure projects worth almost $72 billion "under a bilateral model" between federal, state and territory governments. The so-called "single touch" process will slash approval times in half for major projects, from 3.5 years to 21-months, to create 66,000 jobs. The plan has set a 30-day target for project approvals under the Environment Protection and Biodiversity Conservation Act, which took 90 days on average last year.
- The Western Australian Environmental Protection Authority (EPA) has **published its greenhouse gas (GHG) emissions guidance,** following an industry backlash against its draft last year. The newly published guidance reflects the same intent, requiring large emitters of GHG to publish their emission reduction targets to meet Western Australia's net zero target. Changes to the 2019 guidance include clarifications regarding the basis for the net zero by 2050 target and other types of offsets recognised by the EPA.

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