

## Week Ahead Economic Preview

- Flash PMI survey data for the US, Eurozone, Japan, UK and Australia
- ECB, Bank of Canada rate setting meetings
- UK labour market and retail sales updates

Interest rate decisions are scheduled at central banks in the eurozone, Canada, Indonesia and Russia in a week which also sees the publication of flash PMI surveys covering more than half of the world's economic output.

Other notable releases include industrial production, trade and inflation numbers for Japan, UK labour market, retail sales, state borrowing and inflation statistics, plus Eurozone bank lending and confidence surveys. The US sees jobless claims and homes sales updates.

Early indicators of economic performance at the start of the second quarter are provided by April's flash PMIs, covering both manufacturing and services. [The March data](#) showed the US outperforming among the largest developed economies, though growth bounced back in the UK and Eurozone leaving only Japan in decline. The strength of the European PMIs surpassed all economists' expectations, according to polls, as business activity surged in response to brightening outlooks. However, growth disparities reflected differing COVID-19 containment measures, notably hitting service sector growth in Japan, as well vaccine roll-out progress. The latter has lifted confidence most notably in the US and the UK, though it's clear that stimulus measures are also playing a key role in the US.

A more worrying feature of the PMIs is [the recent spike in prices](#). Prices globally have been rising at the sharpest rate for over a decade, linked to a combination of [near-record supply delays](#) and surging demand as economies reopen, pushing bond yields higher.

The PMI survey data follow Wednesday's ECB rate setting meeting. No further action is anticipated until at least June after policymakers stepped up the pace of asset purchasing at their last meeting in response to rising bond yields, especially as the minutes showed disagreement on the action. But some policymakers have also grown concerned over the slow vaccine roll-out and the reliance on government support schemes.

The Bank of Canada meanwhile meets amid signs not only that the recovery heating up, [the PMI having hit a record high](#), but so too is the housing market. However, no change in policy is expected anytime soon.

### Special Reports

**Global Electronics: Semiconductors Supply Chain Disruptions Trigger White House Summit:** How rising concerns about the vulnerability of semiconductors supply chains resulted in President Biden convening a White House Summit ([page 3](#))

### Upcoming PMI releases

23<sup>rd</sup> April: Flash PMIs (US, Eurozone, UK, Japan, Australia)

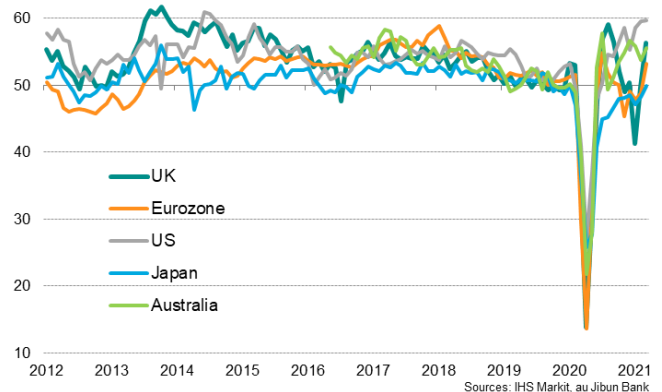
30<sup>th</sup> April-5<sup>th</sup> May: Final Worldwide Manufacturing PMIs

5-6<sup>th</sup> May: Final Worldwide Services PMIs

7<sup>th</sup> May: Detailed Sector PMIs

### COVID-19 containment, vaccine progress and stimulus have all led to divergences in flash PMI data...

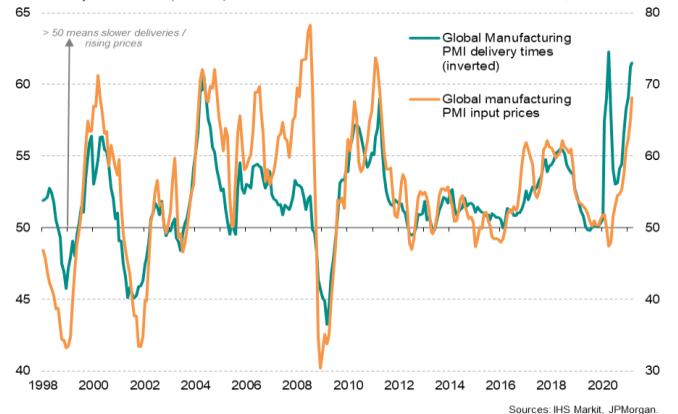
Composite PMI Output/Business Activity Index



### ...though the global recovery is also marred by supply shortages and rising prices

PMI Delivery Times Index (inverted)

PMI Input Prices Index



### Chris Williamson

Chief Business Economist, IHS Markit

Email: [chris.williamson@ihsmarkit.com](mailto:chris.williamson@ihsmarkit.com)

## Key diary events

### Monday 19 April

Japan trade balance (Mar)  
Japan industrial production (Mar)  
EU current account (Feb)  
EU/eurozone construction output (Feb)  
EU new car registrations (Mar)

### Tuesday 20 April

Indonesia interest rate decision  
Australia RBA meeting minutes  
UK labour market report, incl. unemployment, employment, vacancies and wages (Feb-Mar)  
Germany producer prices (Mar)  
Eurozone ECB Bank Lending Survey

### Wednesday 21 April

Australia retail sales (Mar)  
UK consumer price inflation (Mar)  
UK producer prices (Mar)  
UK DCLG house prices (Feb)  
Canada consumer price inflation (Mar)  
Canada BoC interest rate decision

### Thursday 22 April

Taiwan trade balance (Mar)  
Switzerland trade balance (Mar)  
Taiwan unemployment (Mar)  
Hong Kong unemployment (Mar)  
Italy industrial orders (Mar)  
ECB interest rate decision  
US weekly jobless claims  
US Chicago Feb National Activity Index  
US existing home sales (Mar)  
US Kansas Fed manufacturing survey (Apr)  
Eurozone consumer confidence (Apr)  
UK consumer confidence (Apr)

### Friday 23 April

Australia IHS Markit flash PMI, manufacturing & services  
Japan au Jibun Bank flash PMI, manufacturing & services  
UK CIPS/IHS Markit flash PMI, manufacturing & services  
Germany IHS Markit flash PMI, manufacturing & services  
France IHS Markit flash PMI, manufacturing & services  
Eurozone IHS Markit flash PMI, manufacturing & services  
US IHS Markit flash PMI, manufacturing & services  
Japan consumer price inflation (Mar)  
UK government borrowing (Mar)  
UK retail sales (Mar)  
US new homes sales (Mar)  
Russia interest rate decision

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## Global Electronics Special Focus

### Semiconductors supply chain disruptions trigger White House summit

**Rajiv Biswas**

**Asia Pacific Chief Economist, IHS Markit**

Email: [Rajiv.biswas@ihsmarkit.com](mailto:Rajiv.biswas@ihsmarkit.com)

*World electronics demand has continued to surge in the first quarter of 2021, contributing to intensifying semiconductors shortages for some manufacturing industries, notably the global automotive sector. Supply chain disruptions to semiconductors production have also impacted on the situation. There are also new concerns about the potential impact of water shortages on Taiwan's semiconductor production, as it faces its worst drought in 56 years.*

*Rising concerns about the vulnerability of semiconductors supply chains resulted in President Biden convening a White House Summit with 19 leaders of major technology and manufacturing firms on 12<sup>th</sup> April, to discuss strategies to reduce the future vulnerability of the US economy to such supply chain disruptions. A key risk is excessive global vulnerability to semiconductors supply from South Korea and Taiwan, which are major electronics production hubs but also potential geopolitical flashpoints in the Asia-Pacific region. Military tensions in the Taiwan Strait and South China Sea have escalated in early 2021, highlighting these vulnerabilities.*

### APAC electronics sector exports rebound

Asian electronics production suffered severe supply disruptions and slumping global demand due to the pandemic and lockdowns, impacting on industrial production and consumer expenditure in the first half of 2020. However, the IHS Markit Global Electronics Purchasing Managers' Index has signalled a strong rebound since mid-2020 as global lockdowns have eased and consumer spending has rebounded in many major economies.

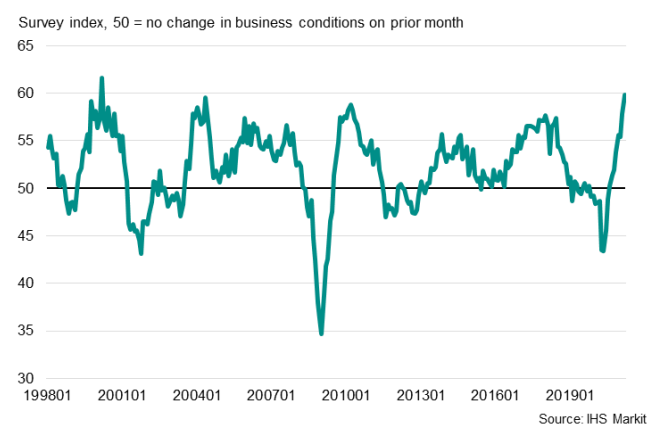
The electronics sector rebound is making an important contribution to the recovery of manufacturing exports and industrial production in many East Asian industrial economies. The electronics manufacturing industry is an important part of the manufacturing export sector for many Asian economies, including South Korea, China,

Japan, Malaysia, Singapore, Philippines, Taiwan, Thailand and Vietnam. Furthermore, the electronics supply chain is highly integrated across different economies in East Asia.

Underscoring the strength of the recent upturn, the headline IHS Markit Global Electronics PMI rose to 59.9 in March, up from 57.8 in February. The latest reading was the highest for 21 years, with new order growth accelerating sharply.

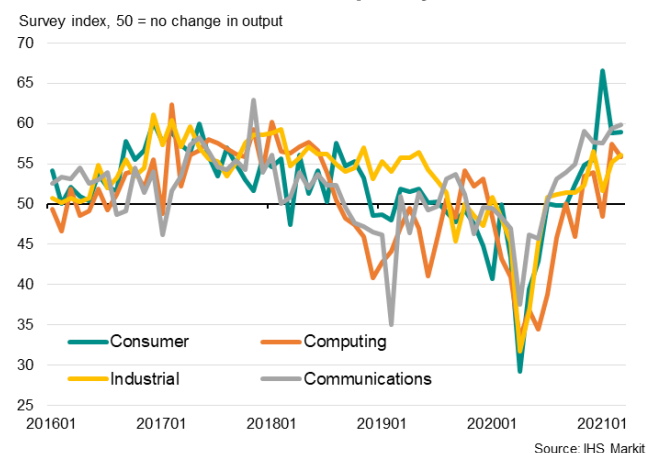
The new orders index from the PMI survey rose from a low of 35.0 in May 2020 to a level of 59.7 in March 2021, its highest since November 2013.

### IHS Markit Global Electronics PMI



The new orders growth has driven a broad-based expansion across the sector. The health of all four monitored sub-sectors of the electronics industry improved markedly in March according to the survey, with the upturn led by the communications segment.

### Global electronics PMI, output by sector



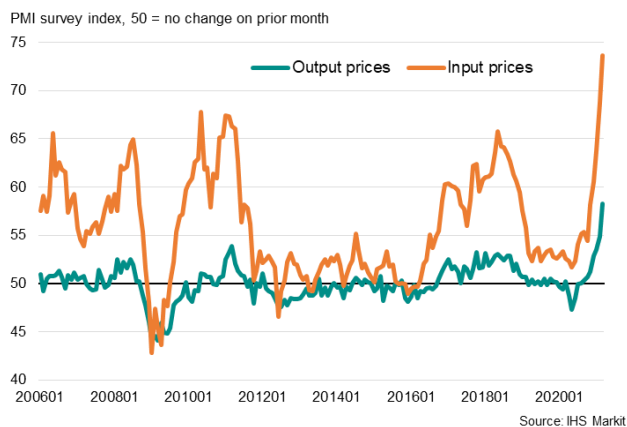
However, the rapid rise in electronics production has also triggered a sharp upturn in raw material input prices for electronics firms in recent months. The IHS Markit Global Electronics PMI Input Prices Index has surged to 73.6 in March, rising significantly higher from the 68.5

level recorded in February 2021. Notably, the rate of input price inflation for electronics firms was the quickest since data collection began in January 1998.

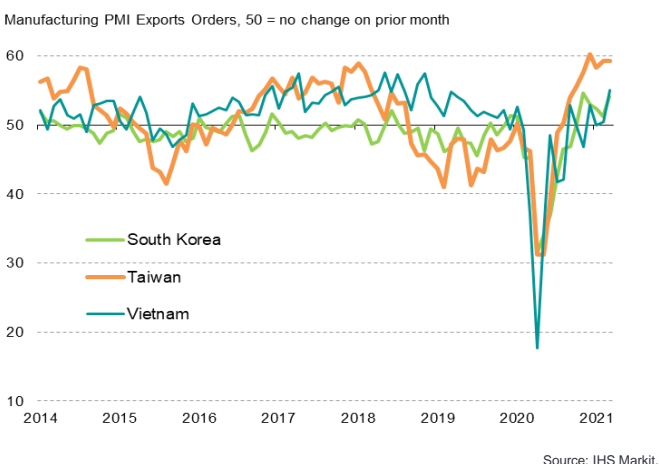
The near-term pricing outlook for the remainder of 2021, according to IHS Markit Pricing & Purchasing analysis for semiconductors and components generally, is that supply shortages are likely to continue to translate into price escalation. Printed circuit board assemblies are the most severely affected, but semiconductors, bare printed circuit boards, resistors, capacitors and connectors will all see price pressure. (See “Prices: Pricing Analysis – Semiconductors”, by IHS Markit Pricing & Purchasing, 1<sup>st</sup> April 2021.)

In 2022, according to IHS Markit Pricing & Purchasing, moderating demand for electronic components and improving semiconductors production is expected to bring supply and demand closer to balance and lead to some price relief. Specific categories will show some resilience in pricing given the changing demand landscape. For example, the expansion of electronics in light vehicles will keep pressure on certain commodity electronic components.

## IHS Markit Global Electronics Input and Output Prices Index



## East Asian Manufacturing PMI new export orders rebound



Due to the importance of electronics in the manufacturing industries of many East Asian economies, the rebound in global electronics demand has been reflected in the recent industrial production and exports data for many economies, including mainland China, South Korea, Vietnam and Taiwan.

## Mainland China’s electronics exports surge

China’s exports for the combined January-February 2021 period soared by 60.6% y/y according to trade data from China’s General Administration of Customs. China’s surging exports in the first two months of 2021 reflect low base year effects due to the pandemic-related shutdown of China’s industrial production for most of February 2020 as well as strong demand for electronics and PPE equipment in early 2021.

China’s electronics exports were up 54.1% y/y in the January-February 2021 period, as global electronics demand has risen strongly due to the global shift to remote working and online shopping, which has resulted in surging demand for consumer electronics products such as laptops, mobile phones and wearables.

## Buoyant South Korean electronics exports

The South Korean Ministry of Trade, Industry and Energy announced on 14<sup>th</sup> April that South Korea’s total exports of information and communications technology (ICT) goods in March increased 8.9% y/y to USD 17.4 billion.

This rapid export growth was helped by exports of semiconductors which rose by 7.9% y/y in March, with exports of memory chips up 8.2% y/y while exports of system chips rose by 9.3% y/y.

Exports of displays also showed growth of 2.9% y/y, helped by the recovery in the global smartphone market. Exports of mobile phones and parts rose 8.7% y/y, helped by new global model launches.

South Korea’s Ministry of Trade, Industry and Energy has projected that South Korean semiconductors exports in 2021 will rise by around 10% to USD 109 billion, due to buoyant global demand for electronics products.

With significant shortages of semiconductors having become evident during early 2021, this is expected to further boost South Korean semiconductors exports during 2021.



## Taiwan faces semiconductors shortages as demand soars

Taiwan's exports of electronics products have surged in the first quarter of 2021, rising by 24.5% y/y in March. This reflects strong global demand for computers, TVs and auto electronics, contributing to a severe shortage of semiconductor chips that has developed in recent months.

Chip stockpiling during 2020 due to US government sanctions on certain Chinese technology companies have also contributed to the shortages. The US Department of Commerce added seven Chinese supercomputing firms to its entity list in early April 2021.

Global auto manufacturers as well as smartphone producers are among the industry segments that have been impacted by semiconductors shortages. According to IHS Markit Automotive research, vehicle manufacturers are finding increased disruption to the supply of systems using semiconductors in the first four months of 2021. Many automakers worldwide have reported disruptions to production due to shortages of semiconductors, including Ford, VW Group, GM, Honda and Mazda. (IHS Markit Automotive, 12<sup>th</sup> April 2021, "Semiconductor Supply Issue: Light Vehicle Production Tracker").

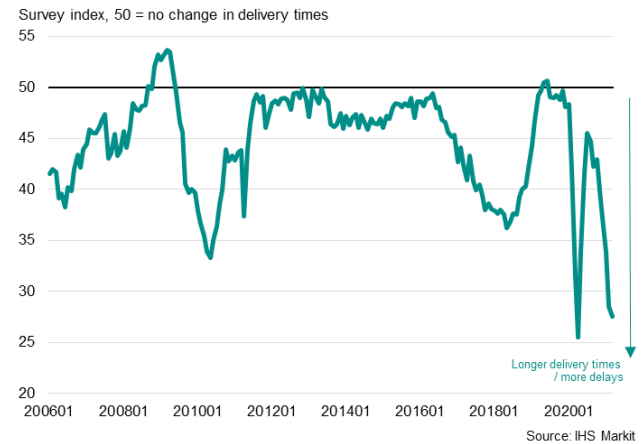
Global semiconductors shortages have also been impacted by temporary supply disruptions to semiconductors production in Texas due to power outages in February as a result of severe weather, as well production disruptions in Japan due to a fire in a Renesas Electronics semiconductors plant in mid-March.

The shortage of semiconductors has driven up capital expenditure plans, with Taiwan's TSMC, the world's largest chipmaker, having announced plans to increase capital spending on production and development of advanced chips to a range of USD 25 billion to USD 28 billion in 2021, a 60% increase on 2020. Taiwan's USMC, which also manufactures chips, plans to lift spending on new capital equipment by around 50% in 2021.

A key risk to the near-term semiconductors production outlook in Taiwan is from the severe drought that is impacting on the economy. Drought conditions are estimated to be the worst for 56 years, and have resulted in water restrictions in some areas, including in a region that is a key hub for semiconductors manufacturing. Semiconductors plants have very high water consumption requirements, and although most plants have some water storage facilities, there is a risk of water supply shortages that could disrupt production

if significant rainfall does not occur by May/June with the usual start of the rainy season.

## Global electronics PMI, supplier lead times



## ASEAN electronics exports revive

Singapore's domestically manufactured electronics exports rose by 7.4% y/y in February 2021, following an increase of 13.5% y/y in January. In February, electronics exports to South Korea were up 103% y/y, while electronics exports to mainland China were up by 14% y/y.

In Vietnam, exports of computers, electrical equipment and parts rose by 34% y/y in February 2021, as global demand for computer equipment surged due to the pandemic and the shift towards remote working by workers worldwide. Exports of these products to the US were buoyant, rising by 44% y/y in February. Exports of mobile phones and other telephone equipment soared by 29% y/y, with exports of mobile phones and components to China rising by 103% y/y.

In Malaysia, exports of electrical and electronic products, which accounted for 36% of total merchandise exports, were up 24.4% y/y in February 2021.

## Strategic response by US and EU

The extent of the shortages of semiconductors has become so severe during the first quarter of 2021 that high level consultations have been held with Taiwan involving key industry bodies as well as government officials from major industrial economies including the US and Germany. On 24<sup>th</sup> February, US President Biden signed an executive order for a US government review of US supply chain vulnerability for critical materials, including for semiconductors.

On 12<sup>th</sup> April, President Biden also held a White House Summit on semiconductors shortages with 19 technology firms, including Taiwan's TSMC and South

Korea's Samsung Electronics. The Biden Administration plans to increase domestic semiconductors capacity, with spending measures contained in the proposed USD 2 trillion infrastructure plan to boost domestic semiconductors manufacturing and R&D.

In 2020, Taiwan's TSMC announced plans to invest USD 12 billion in a large new semiconductors plant to be built in Arizona for making advanced 5-nanometer fab. Construction is expected to start in 2021 while production of semiconductors is expected by 2024. Intel also announced plans in March 2021 to spend USD 20 billion to build two new semiconductors plants in Arizona. These major announcements signal that US semiconductors output will rise significantly over the medium-term, helping to address supply chain vulnerabilities.

In the European Union (EU), the European Commission has set a goal to double semiconductors production within the EU from 10% of world production in 2020 to a projected 20% of world production by 2030, as part of the 2030 Digital Compass Plan.

Meanwhile mainland China, whose manufacturing sector is still heavily reliant on imported semiconductors, is also trying to strengthen its own domestic semiconductors manufacturing capabilities. Mainland China imported USD 350 billion of semiconductors in 2020, up 14.6%/y. Boosting domestic manufacturing capacity for semiconductors is an important policy priority for the Chinese Government's 14<sup>th</sup> Five-Year Plan that runs for the 2021-2025 period.

## APAC electronics sector outlook

In the first quarter of 2021, global electronics demand rebounded significantly from the lows of the first half of 2020, when lockdowns disrupted production and consumer spending. With an improving global economic recovery expected during the course of 2021 as Covid-19 vaccines are progressively rolled out, global demand for electronics products is expected to be strong during 2021.

The impact of the pandemic has accelerated the pace of digital transformation due to the global shift to working remotely, which has boosted demand for electronic devices such as computers, printers and mobile phones. The easing of lockdowns in many countries has also triggered a rebound in consumer spending, helping to boost demand for a wide range of consumer electronics. Spending on consumer electronics has also been boosted by fiscal stimulus measures in many OECD countries that have provided significant pandemic relief payments to support households in many large economies, including the US, UK, Japan and Australia. Meanwhile auto demand has also shown a rebound after slumping during the first half of 2020, which is boosting demand for auto electronics, albeit contributing to intensifying supply-side problems related to semiconductors shortages.

The medium-term economic outlook is also supportive for the electronics industry, with sustained strong world economic growth forecast over 2022-2024.

With shortages of semiconductors disrupting manufacturing supply chains in early 2021, the importance of having domestic electronics production capacity for critical electronics components has become a national priority for major industrial nations, including the US, EU and China. For the US and EU, reducing reliance on Asian semiconductors production has become a key strategic priority over the next decade.

The outlook for electronics demand is also supported by major technological developments, including 5G rollout over the next five years, which will drive demand for 5G mobile phones. Demand for industrial electronics is also expected to grow rapidly over the medium term, helped by Industry 4.0, as industrial automation and the Internet of Things boosts rapidly growth in demand for industrial electronics.

Competition amongst leading technology nations in strategic electronics production has also intensified. Consequently strategic global competition amongst the world's leading high-technology nations is also likely to play a greater role in reshaping the global electronics industry landscape over the next decade.