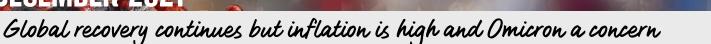
EMBARGOED UNTIL: 11.30AM THURSDAY 16 DECEMBER 2021

DECEMBER



- Financial market confidence was shaken in late November, due to the emergence of the Omicron variant of COVID-19 along with expectations that monetary policy may tighten faster than previously expected. At the time of writing, it appears that the Omicron variant is more contagious than earlier variants, but whether it constitutes a major impediment to the outlook will depend on the combination of transmissibility/virulence and vaccine effectiveness (and how this affects health system capacity), which still remains unclear.
- We have revised our forecasts for the US Fed, with three rate rises expected next year, starting in Q2 2022. In contrast, the People's Bank of China recently eased policy through a cut to its Reserve Requirement Ratio.
- Inflationary pressures have continued to increase in recent months. Producer prices among the big advanced economies are near peaks last seen in the early 1980s.
- Advanced economy growth was robust overall in Q3, and a similar outcome is expected in Q4 albeit with a shift in the source of growth away from Europe towards the US and Japan, partly reflecting the timing of recent COVID waves. Auto sector production appears to have turned the corner which boosts the growth outlook, although a full recovery in the sector is a way off and, more broadly, supply constraints remain evident, including in labour markets. The JP Morgan global composite PMI remained at a robust level in November, but underlying conditions are disparate across the globe – with stronger readings among advanced economies than emerging markets.
- Overall, our forecast for global economic growth in 2021 is marginally weaker expanding by 5.6% (from 5.7% previously), the equal strongest increase since 1973. There are modest changes to the out-year forecasts, with 2022 marginally lower at 4.4% (4.5% previously), while 2023 is marginally stronger at 3.6% (from 3.5% – the global long term average growth rate).

Global Growth Forecasts

(% change)

(/o change)					
	2019	2020	2021	2022	2023
US	2.3	-3.4	5.7	3.8	2.1
Euro-zone	1.6	-6.5	5.1	3.9	2.4
Japan	-0.2	-4.5	1.8	3.4	1.2
UK	1.7	-9.7	6.9	4.7	2.1
Canada	1.9	-5.2	4.6	4.1	2.9
China	6.0	2.3	8.0	6.0	5.7
India	4.8	-7.0	8.0	6.8	5.6
Latin America	0.1	-6.6	6.1	1.9	1.7
Other East Asia	3.5	-2.9	3.9	4.3	4.8
Australia	2.0	-2.2	4.2	3.5	2.9
NZ	2.4	-2.1	4.9	4.8	1.6
Global	2.8	-3.2	5.6	4.4	3.6

Producer price inflation rising by its fastest pace since the start of the 1980s



CONTENTS

Charts of the month	2
<u>Financial and</u> commodity markets	3
Advanced economies	4
<u>Emerging market</u> economies	5
<u>Global forecasts and</u> policies	6

CONTACT

Alan Oster, Group Chief Economist +61 (0)414 444 652

Gerard Burg, Senior Economist -International, +61 (0)477 723 768

Tony Kelly, Senior Economist +61 (0)477 746 237



Gerard Burg & Tony Kelly

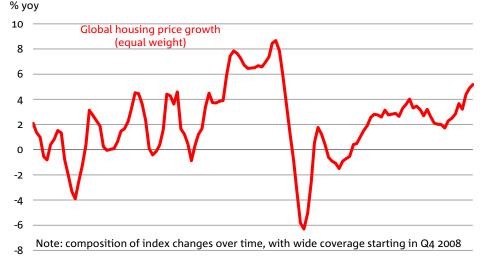


Bank

CHARTS OF THE MONTH

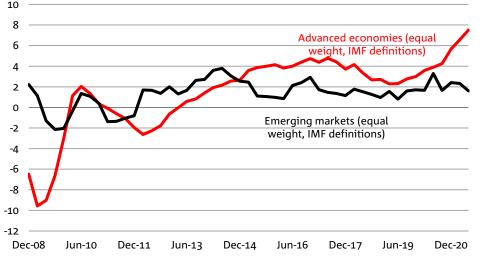
Policy rates at extremely low levels – particularly in advanced economies – along with fiscal support has contributed to global house price growth – running at its fastest pace mid-year since the period ahead of the Global Financial Crisis Global housing prices grew at their fastest pace since New Zealand recorded the strongest growth rate in Q2, with

the pre-GFC period...



Mar-90 Mar-93 Mar-96 Mar-99 Mar-02 Mar-05 Mar-08 Mar-11 Mar-14 Mar-17 Mar-20

...with prices surging in advanced economies (where central bank policy rates are extremely low) % yoy

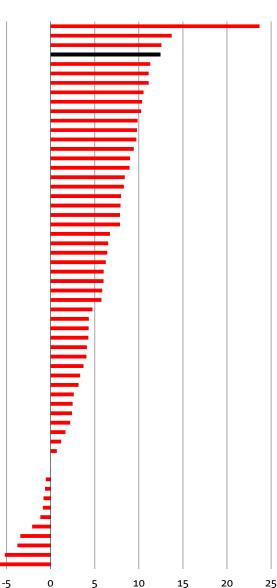


Australia in fourth



-15

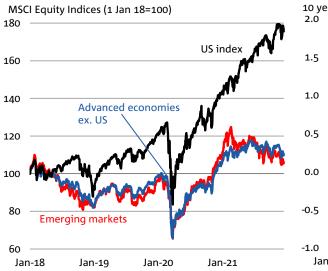
-10



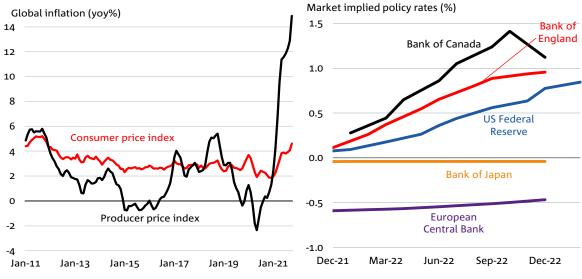
FINANCIAL AND COMMODITY MARKETS

Markets rattled by Omicron's emergence; central banks view of inflation starting to shift

Equity markets and bond yields slightly weaker from late November • on Omicron fears and evolving monetary policy expectations







10 year government bond yields (%) 2.0 1.5 1.0 0.5 0.0 -0.5 US US US US US Canada Japan Japan Eurozone

Jan-20 Apr-20 Aug-20 Dec-20 Apr-21 Aug-21 Market pricing rate rises from several major central banks in '22

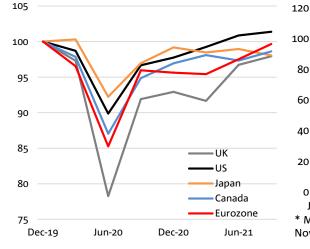
- Confidence in financial markets was shaken in late November, as details about the Omicron variant of COVID-19 started to emerge along with expectations that monetary policy may tighten faster than previously expected. While the severity of the new variant is unclear at the time of writing, it appears to be more contagious than earlier variants, having already spread to more than 40 countries.
- In response, global equity markets retreated, the VIX volatility index rose and government bond yields fell – in part reflecting concerns that vaccines could have reduced efficacy against the Omicron variant, increasing the risk of economically damaging restrictions being reintroduced in many regions (with this already starting in parts of Europe in late November-early December due to rising cases).
- Inflationary pressures have continued to increase in recent months particularly in measures of global producer prices, which rose by an estimated 14.9% yoy in October. Among the big advanced economies, producer prices are near peaks last seen in the early 1980s, following the second oil crisis.
- A range of factors have contributed to the surge in producer prices, including the ongoing impact of COVID-19 and health policy responses, rising commodity prices (albeit indices have retreated since late November as the fears around the Omicron variant emerged), persistent shortages of various key inputs (most notably semi-conductors), labour shortages and disputes and disruptions to global shipping.
- Compared with the increase in producer prices, consumer price inflation has been relatively modest – albeit global prices increased by around 4.6% yoy in October, the fastest rate of growth since late 2011. Guidance from major central banks appears to be moving away from the earlier description of inflationary pressures as "transitory".
- This week the US Fed announced that it was speeding up the tapering of QE. We have revised our forecasts for the US federal funds rate, with three rate rises expected next year, starting in Q2. This could add pressure on emerging market central banks, as higher US rates could drive capital outflows from these countries. Several emerging market banks have already started to lift rates most notably Brazil, Russia and Mexico. Although the People's Bank of China recently eased policy through a cut to its Reserve Requirement Ratio, increasing the pool of funds for banks to lend, Fed rate rises may constrain its ability to policy rates as it seeks to address slowing domestic economic conditions.

ADVANCED ECONOMIES

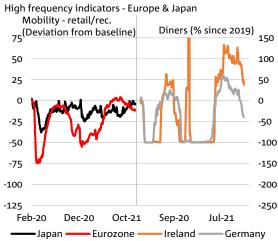
AE growth robust overall in Q3; expect similar in Q4 but with a rotation from Europe to Japan/US

AE recovery continued in Q3 except in Japan

Major AE GDP (Q4 2019 = 100, dashed line indicates forecast)

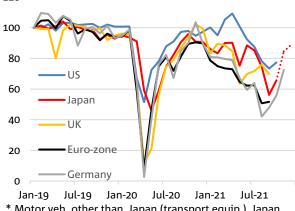


COVID-19 — a drag on Euro-zone but Japan bouncing back



Auto production lifting signalling easing supply constraints

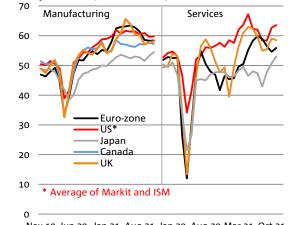
Motor vehicle/transport production (Jan 19 =100)*



* Motor veh. other than Japan (transport equip.). Japan Nov/Dec

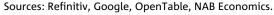
Business surveys still strong – Japan catching up

Major AE PMIs (Breakeven = 50)



Nov-19 Jun-20 Jan-21 Aug-21 Jan-20 Aug-20 Mar-21 Oct-21

- Q3 GDP data are now available for all the major advanced economies (AEs). In aggregate, major AE GDP continued to recover despite headwinds from COVID-19 waves in the US and Japan, and ongoing supply bottlenecks holding back production even where demand was strong. This combination resulted in a fall in Japan's GDP in the quarter. In contrast, the Euro-zone enjoyed its second consecutive quarter of over 2% quarterly growth, as it continued to benefit from the easing of restrictions early in the year.
- The same pattern of mixed country trends but robust overall growth is likely to repeat in Q4. Again COVID is a factor, particularly in Japan with the State of Emergency lifted and new cases at very low levels. In contrast, there has been a large increase in cases in Europe in Q4 (although numbers may be stabilising as the countries worst hit initially such as Germany are starting to see cases decline). In the US cases are also down from their Q3 levels, but they have started to rise again. This may be more a factor for Q1 2022 growth, with available data pointing to a very strong Q4.
- The rise in cases in Europe has seen a mixed policy reaction, including lockdowns (e.g. Austria), masking requirements, closure (or limits on opening times) of some hospitality businesses and events, work from home requirements and restrictions on unvaccinated people. While retail sales posted a small rise in October, higher frequency data point to a weakening in household activity in COVID sensitive sectors through the quarter.
- We are still pencilling some growth in Euro-zone GDP in Q4 as not all of the restrictions will have a large impact. Moreover, there are signs that constraints from supply bottlenecks have at least stabilised if not improved which will benefit all the major AEs. In particular, the hard hit auto sector is starting to see a lift in output.
- Business survey readings across the major AEs also generally remain at robust levels, including for the Euro-zone. Japan's PMIs have lagged the other major AEs but have rebounded recently, consistent with our expectation for much stronger growth this quarter.
- COVID-19 remains a key risk to the outlook; recent waves suggest even highly vaccinated countries are not immune from further disruptions. That said, generally each wave seems to have a smaller economic impact and acts more to delay, rather than up-end, the recovery. Whether the Omicron variant has materially shifted COVID risks up is not clear.

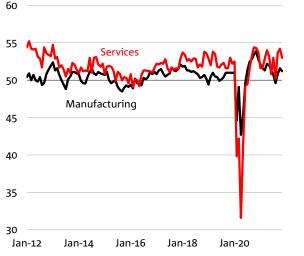


EMERGING MARKET ECONOMIES

Typically lower vax rates a risk for EMs as Omicron emerges

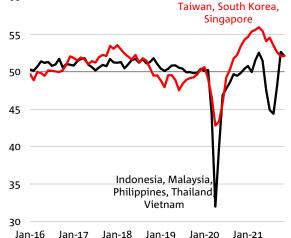
EM PMIs somewhat weaker; mfg has been trending down

Emerging market PMI (Breakeven = 50)

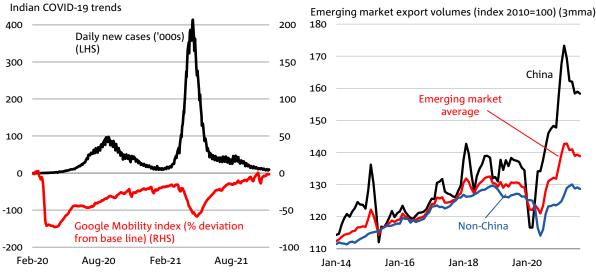


Previous divergence between East Asian manufacturers has eroded

East Asian manufacturing PMIs (Breakeven = 50) 60



Indian activity has recovered from mid-year COVID-19 shutdown EM export volumes remain soft following early year spike



- Aggregate emerging market purchasing manager indices were somewhat weaker for both manufacturing and services in November. Given generally lower vaccination rates and weaker healthcare systems than advanced economies, the Omicron variant presents a significant risk for emerging markets.
- The EM manufacturing PMI eased to 51.2 points (compared with 51.4 points in October). Among the largest of these economies, weaker readings for China, Brazil and Indonesia were partially offset by stronger conditions in India. Recent months have seen the previously wide gap between stronger performing high tech and lower value add manufacturers in Asia close, as the latter economies recovered.
- China's two manufacturing PMI surveys converged to neutral levels in November, suggesting that easing power shortages were providing some relief for hard hit heavy industry. That said, power shortages remain a risk over the peak of the northern winter, with the potential to further disrupt already heavily impacted global supply chains.
- The EM services PMI was also weaker down to 53.0 points in November (compared with 54.2 points previously). A softer reading for China was the primary driver – with respondents noting rising input costs and the impact of new COVID-19 cases on sales.
- India's economy grew by 8.4% yoy in Q3 2021 weaker than initially anticipated, as a result of disruptions associated with the mid-year COVID-19 shutdown. Google Mobility data point to a substantial recovery in activity since this time, however COVID-19 remains a substantial risk to India's growth, given that only around 35% of its population was fully vaccinated in early December.
- Export volumes from emerging markets grew strongly from lows in May 2020 to a peak in April 2021 – benefiting from pandemic related demand for medical supplies and electronics & furniture to support the increasing trend of working from home. In addition, demand was boosted by the shift away from services towards goods consumption in many countries – however this trend could reverse going forward.
- China was the overwhelming beneficiary of this trend with non-Chinese EM export volumes only recovering to the pre-COVID-19 and pre-US-China trade war peak, before easing. That said, China's export volumes have fallen significantly from the peak across January and February 2021.



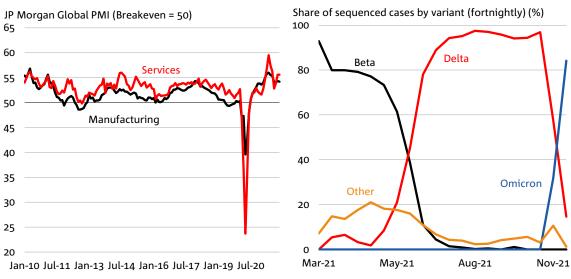
GLOBAL FORECASTS, POLICIES AND RISKS

Global conditions remain divergent, while the risks around Omicron remain unclear

Omicron has rapidly become the

dominant new variant in S Africa

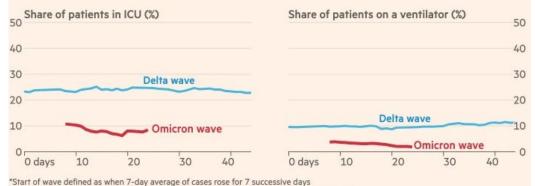
Global PMI marginally stronger in November



Early data suggest that Omicron may be less virulent than earlier variants, potentially offsetting greater transmissibility

The share of Covid-positive hospital patients in Gauteng that require intensive care is much lower than at the same stage of the Delta wave

Share of Covid-positive patients requiring different levels of care, by days since each wave began



"Start of wave defined as when 7-day average of cases rose for 7 successive days Source: FT analysis of data from South Africa's National Institute for Communicable Diseases FT graphic by John Burn-Murdoch / @jburnmurdoch

6 Sources: Refinitiv, IHS Markit, Our World in Data, Financial Times, NAB Economics

- At a high level, the JP Morgan global composite PMI was marginally stronger in November – edging up to 54.8 points (from 54.5 points in October). This result was driven by an increase in manufacturing output, with the services PMI unchanged (albeit the services measure has been stronger than manufacturing in recent months).
- Underlying conditions are disparate across the globe with stronger readings among advanced economies than emerging markets. This reflects a wide range of factors, including differing stages in the recovery from (including the resurgence of) COVID-19, the impacts of supply chain disruptions and differing fiscal and monetary policy responses.
- Although India's economic growth was a little weaker than expected in Q3, there is potential for additional catch-up growth in Q4 meaning that we have left our full year forecast unchanged at 8.0% before easing to 6.8% in 2022. We have trimmed our forecast for China's full year growth to 8.0% (from 8.3% previously) with 2022 and 2023 unchanged.
- COVID-19 remains the key risk to our global economic outlook. At present, the Delta strain remains the dominant variant worldwide, however the emergence of Omicron has raised fears in recent weeks, primarily due to it appearing more contagious than earlier variants. In addition, there are concerns that existing vaccines may provide less protection against Omicron. That said, early stage analysis suggests that Omicron may be less virulent than Delta. A comparison of Delta and Omicron waves in South Africa's Gauteng province shows a much more rapid increase in case numbers for Omicron, however the share of patients requiring intensive care and ventilation (indicative of more severe cases) has been considerably lower than in the Delta wave.
- Other risks to global growth persist most notably the various constraints on global supply chains, from shortages in inputs and labour to transportation constraints, which while temporary are taking a long time to unwind. In addition, political tensions have increased, with many countries deciding not to send diplomatic representatives to the Beijing Winter Olympics in early 2022, along with fresh border tensions between Ukraine and Russia.
- Overall, our forecast for global economic growth in 2021 is marginally weaker expanding by 5.6% (previously 5.7%), the equal strongest increase since 1973. There are modest changes to the out-year forecasts, with 2022 marginally lower at 4.4% (4.5% previously), while 2023 is marginally stronger at 3.6% (from 3.5% the long term average growth rate for the global economy).



Group Economics

Alan Oster Group Chief Economist +(61 0) 414 444 652

Jacqui Brand Personal Assistant +(61 0) 477 716 540

Dean Pearson Head of Behavioural & Industry Economics +(61 0) 457 517 342

Australian Economics and

Commodities

Gareth Spence Senior Economist – Australia +(61 0) 436 606 175

Brody Viney Senior Economist +(61 0) 452 673 400

Phin Ziebell Economist – Agribusiness +(61 0) 475 940 662

Behavioural & Industry Economics

Robert De Iure Senior Economist – Behavioural & Industry Economics +(61 0) 477 723 769

Brien McDonald Senior Economist – Behavioural & Industry Economics +(61 0) 455 052 520

Steven Wu Economist – Behavioural & Industry Economics +(61 0) 472 808 952

International Economics

Tony Kelly Senior Economist +61 (0) 477 746 237

Gerard Burg Senior Economist – International +(61 0) 477 723 768

Global Markets Research

Ivan Colhoun Global Head of Research +61 2 9293 7168

Important Notice

This document has been prepared by National Australia Bank Limited ABN 12 004 044 937 AFSL 230686 ("NAB"). Any advice contained in this document has been prepared without taking into account your objectives, financial situation or needs. Before acting on any advice in this document, NAB recommends that you consider whether the advice is appropriate for your circumstances. NAB recommends that you obtain and consider the relevant Product Disclosure Statement or other disclosure document, before making any decision about a product including whether to acquire or to continue to hold it. Please click <u>here</u> to view our disclaimer and terms of use.

