

WESTPAC MARKET OUTLOOK DECEMBER 2021 & JANUARY 2022.

AUSTRALIA AND
THE GLOBAL ECONOMY

WESTPAC INSTITUTIONAL BANK



Australia

Australian markets: RBA board holds policy steady.	4
Australian economy: GDP to surge by 6.4% in 2022	6

The world

Year in Review: Pandemic rebound	8
Commodities: Price cycle looks to have peaked in 2021	10
Global FX: Safe-haven flows to aid USD	12
New Zealand: Outlook for demand remains firm	14
United States: Risks for US have tilted up	16
China: Ready to perform in 2022	18
Europe: Solid recovery through 2021	20

Summary forecast tables

Australia – financial	22
Australia – economic	23
New Zealand	24
Commodity prices	25
United States	26
Europe	27
Asia – financial	28
Summary of world output	29



Start receiving your usual Westpac research and strategy reports from **Westpac IQ**.
<https://wibiq.westpac.com.au/Subscribe>

Westpac Market Outlook is a monthly publication produced by Westpac Economics

Internet: www.westpac.com.au
 Email: economics@westpac.com.au

This issue was finalised on 8 December 2021.

Corporate directory

Westpac Economics

Sydney

Level 2, 275 Kent Street
 Sydney NSW 2000
 Australia
 Telephone (61-2) 8254 8372
 Facsimile (61-2) 8254 6907

Bill Evans

Chief Economist
 Global Head of
 Economics & Research

Elliot Clarke, CFA

Senior Economist

Andrew Hanlan

Senior Economist

Matthew Hassan

Senior Economist

Justin Smirk

Senior Economist

Ryan Wells

Economist

New Zealand Economics

Auckland

Takutai on the Square
 Level 8, 16 Takutai Square
 Auckland, New Zealand
 Telephone (64-9) 336 5671
 Facsimile (64-9) 336 5672

Michael Gordon

Acting Chief Economist

Satish Ranchhod

Senior Economist

Paul Clark

Industry Economist

Nathan Penny

Senior Agri Economist

Gregorius Steven

Economist

London

Camomile Court,
 23 Camomile St,
 London EC3A 7LL
 United Kingdom

Singapore

12 Marina View
 #27-00,
 Asia Square Tower 2
 Singapore, 018961

New York

39th Floor
 575 Fifth Avenue
 New York, 10017 USA

Our final report for 2021 takes a look back on what has mostly been a year of stabilisation and healing for a world hit hard by the COVID pandemic. Twelve months ago we expressed hope that “a rapid vaccine rollout could see the Coronavirus effectively defeated by this time next year”. Twelve months on, that looks to be more or less the case. While progress has been far from smooth, the move to high vaccination rates has allowed for a return to more normal operations.

The main questions for economies and markets heading into year end are around what exactly this new normal looks like. It clearly does not mean a complete end to virus issues. With the delta variant continuing to pose challenges in countries with advanced vaccine programs, and the newly-minted omicron now in the mix, virus risks remain live. Barring worst case scenarios of ‘vaccine escape’ most countries should no longer need to resort to heavy-handed and economically damaging lockdowns. However, more lower-level disruptions remain possible and further bouts of uncertainty almost inevitable.

The new post-COVID normal is also throwing up some new economic challenges. In particular, disrupted supply chains are struggling to keep pace with rapidly rebounding demand, while at the same time labour markets also became tight in some jurisdictions, most notably the US. With these and other factors feeding into a significant lift in inflation, there is clearly a major question around the extent to which these are transitional issues for a reopening global economy or a longer lasting feature of the post-pandemic environment.

On the whole though, 2022 looks set to be another welcome year of ‘pandemic healing’. Certainly the challenges ahead look much less daunting than the ones we have come through.

Australia: We have lifted our forecasts for the growth path of GDP through to December 2022 relative to what we expected both pre Covid and pre-Delta – with substantial policy support the decisive factor. We now expect the economy to expand by 6.4% in 2022, after a Delta-interrupted 2.8% rise in 2021. Household spending is forecast to surge by 9.4% in 2022, in part funded by a moderation in the saving rate, down from a very elevated 19.8% during the Delta lockdown. The economy is then likely to lose momentum in 2023 as the RBA begins lifting interest rates, with growth slowing to a forecast 2.7%. The 2024 year will potentially be an even more challenging one, as the RBA interest rate tightening cycle continues.

Commodities: High prices are often a cure of high prices as they spur on production and reductions in demand, even more so when technological changes increase demand elasticity. Iron ore is set to continue its drift down to US\$75/t by end 2022 while the weather induced shocks to Australian coal exports will be short lived with coal prices set to fall between 24% and 33%.

Global FX markets: The events of the past month have required us to re-evaluate our US dollar forecast to end-2023. Because of sentiment at least as much as relative policy and growth, the US dollar is now expected to move higher through to September 2022. Once the FOMC’s hiking cycle commences and COVID-19 risks recede, the US dollar is expected to fall back to be below current spot in 2023.

New Zealand: Despite the Delta outbreak, the New Zealand economy as a whole remains in good health, and we expect a return to firm levels of activity in 2022. But behind the scenes, policy settings are shifting. Notably, interest rates are on the rise, and we expect that the Reserve Bank of New Zealand will need to take the cash rate into ‘tight’ territory to rein inflation back in.

United States: At their December meeting, we expect the FOMC to accelerate the taper process initiated in November. A March completion will allow for three rate hikes in 2022, from June to December, to be followed by another three hikes to June 2024. For the FOMC, risks will remain front of mind over the forecast period. A pause to assess conditions will aid confidence and manage uncertainty.

China: China’s recovery from the nadir of the pandemic is remarkable, but the outturn their authorities seek is even more impressive. Instead of stimulus and debt, growth in their domestic and international product markets will drive expansion and development. The dividend from trade is only the first-round benefit, with the consumption and investment afforded to bring additional lasting gains.

Europe: Economic growth and labour market outcomes have improved considerably since March. However, persistent inflationary pressures and rising infection rates have hurt confidence in the near-term outlook. The ECB must look to continue asset purchases materially above the APP’s €20bn per month upon the conclusion of PEPP in order to support Europe’s long-term recovery.

Summary of world GDP growth (year average)

Real GDP %ann*	2017	2018	2019	2020	2021f	2022f	2023f
United States	2.3	3.0	2.2	-3.5	5.7	4.3	2.7
China	6.9	6.7	5.8	2.3	8.5	5.7	5.6
Japan	1.7	0.6	0.3	-4.8	2.3	2.7	1.5
India	6.8	6.5	4.0	-8.0	9.0	8.0	7.0
Other East Asia	4.7	4.4	3.7	-2.4	3.8	4.8	5.0
Europe	2.6	1.9	1.3	-6.6	4.9	4.4	2.5
Australia	2.4	2.8	2.0	-2.2	4.3	5.5	3.5
New Zealand	3.1	3.2	2.4	-2.1	3.8	4.8	4.3
World	3.8	3.6	2.8	-3.3	5.4	4.6	3.6

Sources: IMF, Westpac Economics. Aggregates weighted using purchasing power parity exchange rates.
*Year average growth estimates, the profile of which can differ from that of the ‘growth pulse’.

Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

RBA Board holds policy steady ...

No change in December ...

The RBA Board held policy steady at its December meeting while the Governor confirmed that the decision on the bond purchase program in February would be based on three criteria: 1) the actions of other central banks; 2) how the Australian bond market is functioning; and 3) expected progress towards the full employment and inflation goals. In effect the decision will be impacted by the economic forecasts, which are set to be reviewed before the February Board meeting. We expect the Bank to strike a 'middle ground' position on its bond program, scaling back purchases from \$4bn to \$2bn a week. The program would be phased out by the May Board meeting.

The Governor's decision statement reiterated that a pick-up in wages growth is "expected to be gradual" while "a further, but only gradual, pick up in underlying inflation is expected." The inflation outlook is unchanged from November but there is more colour around the wages discussion: "Job advertisements are at an historically high level and there are reports of firms finding it difficult to hire workers."

... but rebound prospects tracking better than RBA expected ...

The Bank will need to change its growth forecasts at least for 2021 following the September quarter GDP report. We assess that the Bank expected the economy to have contracted by 2.5% compared to the reported contraction of 'only' 1.9%. With the smaller than expected decline and, presumably, no offsetting reduction in the speed of the recovery the economy would be expected to return to its pre-Delta path somewhat earlier. The economy had previously been assessed to return to its pre-Delta path by the second half of 2022 whereas the Governor now notes: "The economy is expected to return to its pre-Delta path in the first half of 2022".

... pointing to a likely upward revisions to its growth forecasts.

As discussed on page 6 we expect GDP growth of 6.4% in 2022 compared to the RBA's current forecast of 5.5%. We expect GDP to be 6.6% higher in December 2022 than in June 2021 compared to the 5.5% we forecast pre-Delta. We expect GDP to be 4.4% higher in June 2022 than in June 2021 whereas pre-Delta we expected an increase of 4.2%. Consequently the RBA's views on the economy returning to the pre-Delta path by the first half of 2022 accord with our own views

Policy guidance less specific on timing.

The concluding paragraphs of the decision statement, setting out the policy outlook, are entirely consistent with the messages in previous statements although the Governor does exclude any reference to a date for the likely first rate increase. Until November that date was 2024; in November he referred to end 2023; and now no date at all. Markets will be somewhat encouraged by this change.

February looms large ...

All eyes will now switch to February which has recently been a month for some bold action by the Governor. In addition to the usual Board meeting, where a new set of forecasts will be reviewed, he gives a speech to the National Press Club, usually titled "The Year Ahead", with the February Statement on Monetary Policy released at the end of the week.

... but shift in rhetoric ...

His 'gradual' rhetoric on wages and inflation will be impacted by the revised forecasts which in turn will have the benefit of another CPI report and two employment reports. He may strengthen his rhetoric on the inflation and wages outlook consistent with a lift in the forecasts - currently a very conservative 2.5% for wages growth and 2.25% for core inflation compared to Westpac's 2.75% for wages and 2.8% for inflation.

... likely to be slow.

But we expect that he will need more time before he signals a retreat from the very dovish stance we have seen this year. We remain comfortable with the view we have held since June 18 that the first rate hike will be at the February Board meeting in 2023.

Changed FOMC view ...

Our revised profile for FOMC policy (page 16) has important implications for our views on the AUD. Readers will have noted that we expect to see the USD peaking around the time of the first rate increase from the FOMC, broadly coinciding with the expected low point in the AUD/USD.

... puts AUD on back foot ...

Market pricing is bringing forward the timing of FOMC hikes even further, a move that was taken toll on the AUD which tumbled from USD0.75 to USD 0.715 over the last month. That 4.5% fall is partly due to USD strength (up 3.2% against Euro and in DXY terms) and particular market negativity around the AUD, specifically in the wake of the ultra-dovish stance being signalled by the RBA Governor in his most recent speech. That said, market pricing continues to anticipate 3-4 rate hikes by the RBA in 2022 - well ahead of our forecast timing. Through the first half of 2022 we expect markets to adjust to a much later beginning to the RBA's tightening cycle, triggering some further downward pressure on the AUD.

However, readers will note our view that the USD is likely to reach its high point by June 2022 as growth prospects in Europe and Asia improve relative to the US and as a strengthening global recovery weighs against 'safe haven' currencies like the USD. Other factors that will provide some support for the AUD will be: Australia's outperformance in terms of vaccination rates; strong growth in Australia in 2022; and stimulatory policy in China.

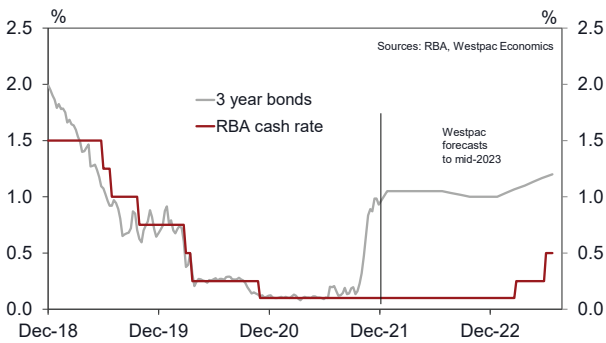
... a low of USD0.70 now seen in June.

We now see the low point in the AUD at USD0.70 by June lifting to USD 0.73 by end 2022 and sustaining that upswing in 2023 to USD0.76.

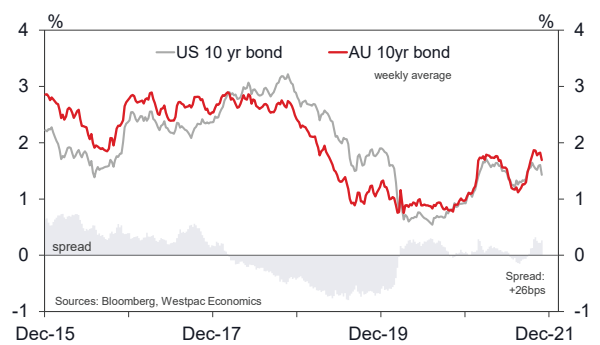
Bill Evans, Chief Economist

... brings forward timing of return to pre-Delta growth path

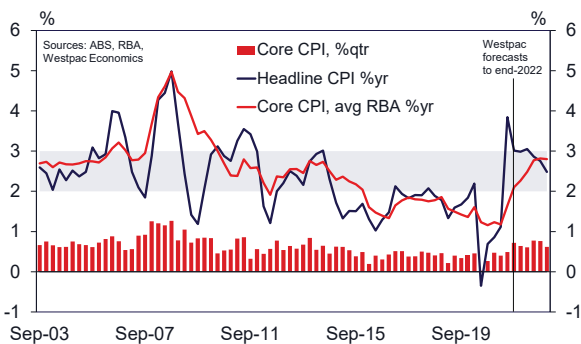
RBA cash rate and 3 year bonds



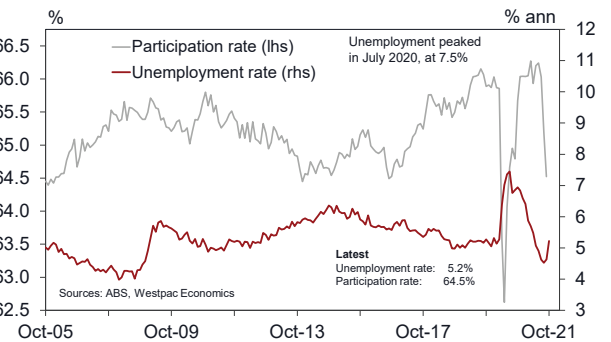
10 year bonds yields move higher



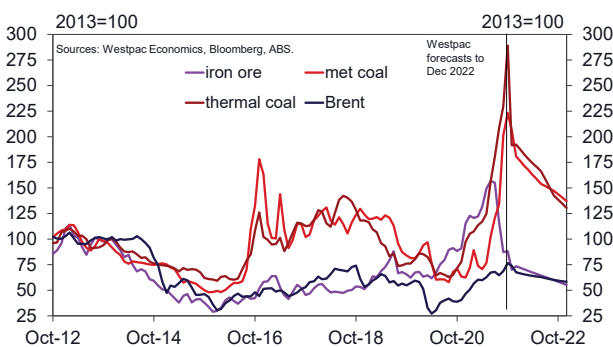
CPI inflation



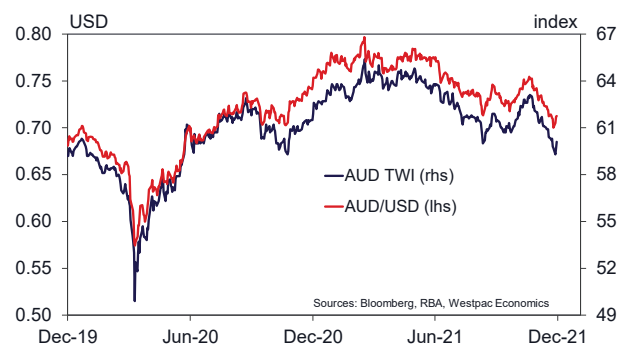
Unemployment: cycling the 'delta' shock



Australian commodities



AUD/USD & AUD TWI



Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

GDP to surge by 6.4% in 2022 ...

We have lifted the expected GDP growth profile ...

We have lifted our forecasts for the growth path of GDP through to December 2022 relative to what we expected both pre Covid and pre-Delta. That has important implications for our growth forecasts for the December quarter 2021 and for 2022.

... relative to that anticipated pre-Covid and pre-Delta.

Prior to the emergence of Covid (in December 2019) we forecast that GDP would grow by 7.8% between December 2019 and December 2022. We have now lifted that to 8.5%. In the same way, prior to the emergence of Delta (in June 2021) we forecast that GDP would lift by 5.5% between the June quarter 2021 and the December quarter 2022. We have now lifted that to 6.6%.

Substantial policy support is the decisive factor boosting the growth profile.

With the Covid cycle covering extraordinary periods of extreme contraction and stunning recovery we think it is best to look through those fluctuations and judge how the underlying growth path will play out.

Relative to those pre Covid and pre-Delta forecasts, government support has played the differentiating role. If we consider the economy from the supply side, which is determined by growth in the workforce and productivity, the lower path of immigration in the Covid period weighs on the outlook. On the other hand, the economy has benefited from extraordinary policy support through government payments and subsidies and near zero interest rates. These forces boost demand. In turn strong demand can stimulate supply and boost productivity. A good example of the ingenuity of business was the September quarter where hours worked fell by 5.2% while output was only down by 1.9%.

The key theme revolves around the interaction of strong demand supported by rising productivity but constrained by the supply shock from low population growth and other, largely global, supply restrictions evident in this cycle. Such dynamics point to rising inflationary and wage pressures.

Forecast GDP growth for 2022 is a brisk 6.4% ...

Overall, as indicated by our forecast revisions, we see the government support policies more than offsetting the supply constraints to yield a net increase in output relative to the pre-Covid and pre-Delta forecasts. Our revised forecasts have settled on a lift in GDP in the December quarter of 2.3% to be followed by growth of 6.4% in 2022.

... centred on a 9.4% surge in consumer spending ...

The National Accounts reported that the economy contracted by 1.9% in the September quarter with household consumption down by 4.8% while the household savings rate spiked from 11.8% to 19.8%. The sharp rise in the savings rate resulted from the 4.6% lift in household disposable income (the strongest since 2008) while household spending contracted by 4.5%. Of course, the lift in household incomes, at a time when wages grew by 0.6%, partly reflected the \$24bn in emergency support to households and business which the state and federal governments provided NSW; Victoria; and ACT during their lockdowns over the July-October period.

... as households begin to moderate the pace of new savings.

The savings rate is a flow concept, representing the portion of income left unspent. The year 2021 is going to be the second year when household saving have been exceptionally high – the last eight quarters being: 23.6%; 20.3%; 14.2%; 13.7%; 11.3%; and now and 19.3% in the September of 2021. Between September 2013 and December 2019, the household savings rate ranged between 4.5% and 7.9%. That is what we would describe as the historical norm. With savings rates consistently above 10% in 2020 and 2021 the household sector has built a formidable financial buffer.

Business investment and public demand will also be growth drivers in 2022.

In effect a surprisingly high proportion of the government support over the Covid period remains on the balance sheets of households and business. The profile of the drawdown in these funds will determine the growth outlook for 2022 and beyond. We expect that the household savings rate will settle back to around 9% by the December quarter 2022, with some caution about lingering COVID risks. Household spending will also be supported by income growth where prospects are positive. With these dynamics in mind, we expect household spending to lift by 9.4% in 2022.

Then, in 2023 and in 2024, as the RBA raises rates ...

Business investment is also set for a year of strength in 2022, up a forecast 8.5%, responding to brisk consumer spending and supported by generous tax cuts. Public demand will continue to be a growth engine, with state governments committed to a wave of new transport infrastructure projects. Net exports will subtract from growth, as imports respond to brisk domestic demand.

Looking ahead to 2023, we expect output growth to slow to 2.7% as policy support diminishes. We expect the RBA to begin raising the cash rate in February 2023, in response to rising inflation and increasing wage pressures. The dynamics around the interaction of strong demand and constrained supply discussed above set the scene for these rising prices.

... the economy is set to slow, led by consumers and housing.

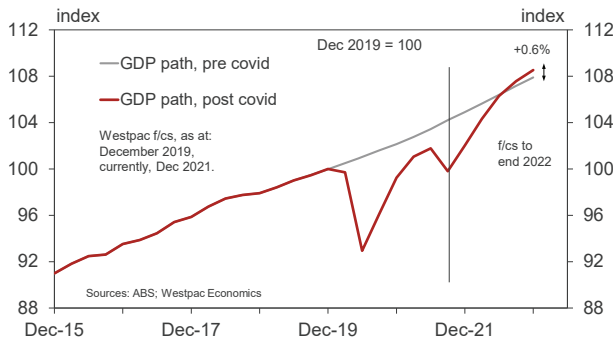
In an environment of rising interest rates, declining house prices and a deterioration in confidence, we expect household spending growth to slow in 2023 – albeit to a still above trend pace of 3.2%. Consumer spending will be cushioned by a further moderation in the savings rate, back to the historic norm of 6%, and the Stage 3 tax cuts, to commence from July 2023. Dwelling investment and business investment growth will slow in 2023, on rising rates and softer consumer demand.

With rate hikes extending into 2024; the savings rate having settled back; further falls in house prices, 2024 appears to be a much more difficult year.

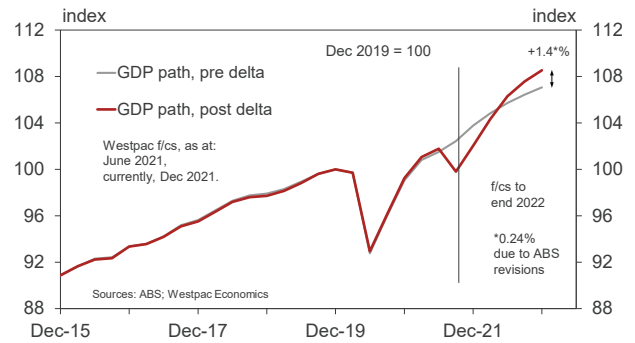
Bill Evans, Chief Economist

... as households boost their spending

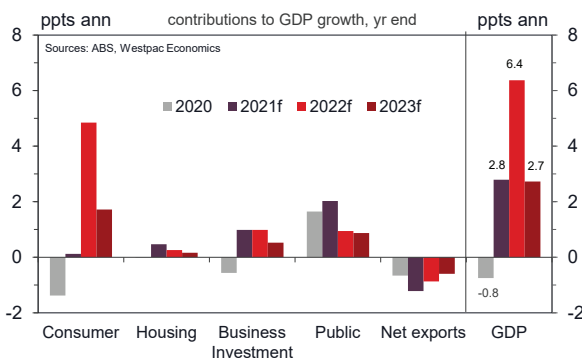
GDP profile: pre & post covid



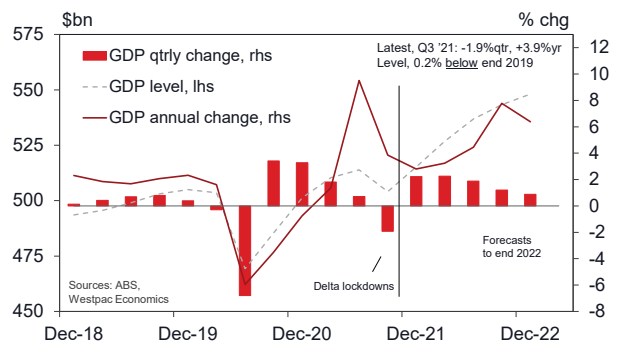
GDP profile: pre & post delta



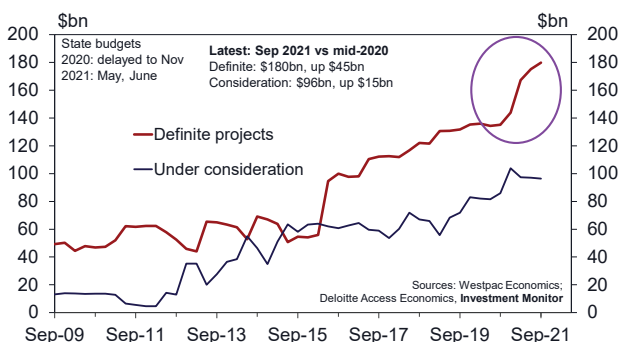
Australia: the growth mix



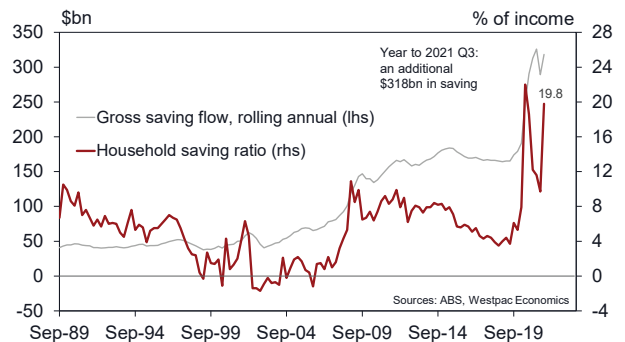
Australia: volatile path navigating covid



Transport projects: boosted in state budgets



Household saving ratio and gross saving flow



Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

Pandemic rebound, not quite smooth sailing ...

Vaccine game-changer ...

It's been another challenging twelve months. Our 19th review looks back on a year that got off to a very turbulent start with the extraordinary scenes of Trump supporters storming the US Capitol and another devastating northern winter for COVID. Thankfully that gave way to a more settled political backdrop and a mostly improved situation on the virus front. Indeed, as we flagged this time last year, vaccines have proven to be a major game-changer for the pandemic, rapid roll-outs allowing most economies to return to more normal operations over the course of 2021. That said the post-COVID environment has brought new challenges most notably for the economy in the form of rising inflation. And the virus itself is far from gone – the emergence of the new omicron variant in recent weeks highlighting the need for continued vigilance and how some 'bad luck' on mutations could quickly see gains reverse.

Recapping the lead in to 2021, the preceding decade looks blissfully benign compared to the 2020s. Growth was fitful at times, weighed down initially by legacies from the GFC and the European debt crisis, and later by a material increase in volatility and political uncertainty, particularly around US-China trade relations. However, momentum was sufficiently well-sustained for the FOMC to embark on a moderate policy tightening in the second half of the decade, a peak coming in 2018-19 as the US economy entered a mild slowdown. Notably, growth in the EU and Japan never proved convincing enough for the ECB and BoJ to exit their zero rate settings.

... brings last year's unprecedented pandemic upheaval ...

The turn of the decade marked the start of a period of almost unprecedented upheaval as the emergence of COVID-19 hit the world hard. The rapidly spreading virus quickly overwhelmed health systems in several jurisdictions leading most countries to shut borders and institute tough restrictions on internal movement. Remarkably, over half of the world's population were in some form of lockdown by early April. Despite this, the virus continued to spread and move at an alarming pace. Both COVID and lockdown responses exacted a heavy toll, the global economy recording epic contractions in the first half, world GDP finishing down 3.3% for the full year despite a notably strong rebound in China. Both monetary and fiscal authorities moved to provide extraordinary support: central banks cut policy rates to their effective lower bounds and embarked on a variety of additional stimulus measures; and governments used fiscal policy to roll out large discretionary support, totalling 9% of GDP across the major developed economies.

... largely to an end ...

The situation started to show more promising signs of a turn towards the end of the year with the emergence of multiple effective vaccines. In fact, the main takeaway from 2021 should really be how mass rollouts of these vaccines have averted what would otherwise have been a far worse calamity – if the COVID pandemic had progressed the way it did in 2020 we would likely be facing ten to fifteen times the number of cases and fatalities we are seeing globally right now.

... albeit not quickly enough to prevent more disruptions.

Good as that is, 2021 has hardly been plain sailing. Vaccine rollouts took time and were not enough to avert several large waves of virus outbreaks and renewed restrictions, particularly early on in the year. Even in jurisdictions with advanced programs and relatively high coverage, health systems have come under renewed strain, particularly with the rapid spread of the more transmissible delta variant. The latest omicron variant potentially raises the bar on transmission again, the abiding concern being the emergence of a new strain that evades vaccine protection.

Post-COVID demand already running ahead of capacity ...

Even for countries moving out of their COVID health emergencies, there have been challenges. For economies this has mainly come from resurgent demand – particularly for goods, where demand was already strong due to a switch from services during the pandemic – putting intense strains on production, distribution and labour market capacity which in most cases is still recovering from virus-related disruptions. Structural post-pandemic changes such as the 'Great Resignation' are exacerbating the situation although the magnitude and permanence of some of these shifts is unclear. Either way, the upshot has been widespread shortages and delays, with a key by-product being a lift in prices.

... ushering in new problems including a notable rise in inflation ...

The pick-up in inflation and its implications for central banks became the dominant concern for financial markets through the second half of the year with a distinctly hawkish, bearish and risk averse tone heading into year end. That said, to date, authorities remain decidedly less alarmed. How this particular tension resolves will be key to outcomes in 2022.

Stepping away from health and economic concerns, the year has had many other sub-plots, as our 'event calendar' attests. Some of last year's 'cancelled plans' came good. The Tokyo Olympics finally went ahead, albeit with empty stadiums. The delayed COP26 meeting in Glasgow also got away, refocusing the world's attention on climate change. In politics, the calmer tone promised by the Biden administration was clear in the US although tensions with China and Russia continued to bubble away.

...much nicer problems to have

Our annual review always provides some useful perspective but this year even more so given the torrid events of the pandemic. While the post-COVID world is clearly bringing new challenges, they are far 'nicer' ones to be dealing with than the problems being confronted a year ago.

Matthew Hassan, Senior Economist, with contributions from the global team

... post-COVID normal bringing new challenges

January	February	March
<p>Trump supporters storm US Capitol. US Democrats secure majority in Senate. Twitter and Facebook permanently suspend President Trump's accounts. Vaccine rollouts begin across the globe. COVID lockdowns in Brisbane and Sydney's Northern Beaches end. Aus and Chinese F1 Grand Prix postponed. Gamestop spikes 300% on 'short squeeze'. Single worst month in the COVID pandemic with 19m new cases and 412k deaths. UK and most of Europe remains in heavy, extended lockdowns. Equities, commodities and USD lows for the year. Crypto market cap tops US\$1trn.</p>	<p>Vaccinated population surpasses COVID infected population in US. Tampa Bay Buccaneers win Super Bowl LV. US officially rejoins Paris Agreement. UK reports 9.9%yr drop in GDP, largest annual economic contraction since 1709. Facebook briefly bans Australian news posts to protest a proposed code requiring payment to content providers. NASA's <i>Perseverance</i> rover lands on Mars. Israel becomes first country to have vaccinated over half of its population. Crude prices surge 17% to US\$65/bbl, Baltic Dry records low for 2021. AUD's reaches 2021 high of US0.797.</p>	<p>US Senate passes President Biden's US\$1.9trn relief package for economy. <i>Ever Given</i> container ship runs aground and obstructs the Suez Canal. Global COVID vaccinations top 500m but AstraZeneca safety concerns emerge. Cases and hospitalisations start to show clear impact from vaccine roll-out in Israel. NZ successfully defends America's cup. Floods hit SE Qld and NSW including parts of western Sydney. US 10yr bond jumps to 1.74% on rising growth, inflation outlook, +83bps vs Dec and highest read for the year.</p>
April	May	June
<p>European Super League announced, abandoned two days later amid protests. EU records 'double-dip' recession in Q1. S&P500 records first close above 4000. Prince Philip, Duke of Edinburgh dies. US govt imposes sanctions on Russia in response to <i>Solarwinds</i> cyberattack. NASA's <i>Perseverance</i> rover successfully synthesizes breathable oxygen on Mars. COVID surge sees India record 400k new cases and 3.5k deaths in a single day. China beings crackdown on crypto mining - global share drops from 66% to zero.</p>	<p>Iron ore hits US\$233/t, all time high. China 'indefinitely' suspends China-Australia Strategic Economic Dialogue. Ransomware cyberattack halts operations at major US oil pipeline system. Israel-Palestine conflict flares up in Gaza. China lands Zhurong rover on Mars. G7 agrees to stop international financing of coal projects by end of 2021. China announces move from two to three-child policy, to counter ageing population. EU and UK ease COVID restrictions and move towards 'vaccine passport' systems.</p>	<p>NZ defeats India in ICC World Test Cricket Championship. G7 agrees on a global minimum corporate tax rate of 15%. Israeli PM Netanyahu voted out of office. Australia's 'delta' outbreak seeds, pushing 'Bondi' delta outbreak sees progressive move into extended lockdowns in NSW. Global COVID vaccinations top 3bn. Australian govt stops recommending AstraZeneca vaccine to those aged <60. EIU ranks Auckland #1 as most liveable city. El Salvador makes Bitcoin legal tender.</p>
July	August	September
<p>Surge in 'delta' cases overwhelms half a dozen US states with low vaccination cover. Record high temp of 18.3°C in Antarctica. Italy defeats England to win the (postponed) UEFA Euro 2020. Eiffel Tower reopens to tourism after nine month closure. Brisbane named host of 2032 Olympics. Delayed Tokyo Summer Olympics goes ahead with no spectators due to COVID. US CPI inflation hits 5.4%yr.</p>	<p>NZ delta outbreak, restrictions imposed. Vic & ACT join NSW in lockdowns, covering over half of Australia's population. US withdraws troops from Afghanistan. ASX hits 7628, 2021 high. Total COVID cases globally tops 200m. Heatwaves see temperature records broken across much of Europe and North Africa. Researchers calculate π to 62.8trn digits. Fed Chair Powell confirms QE taper likely by year end.</p>	<p>Terrorist attack at NZ supermarket. China's <i>Evergrande</i> misses debt payment. China bans crypto-currency transactions. Australian govt scraps \$90bn subs deal with France in favour of nuclear powered subs from US under new AUKUS pact. COVID protests in Melbourne. Demons win AFL Grand Final in Perth; Post-COVID 'Great Resignation' sees sharply higher quit rates in US and Europe. Coking coal spikes to US\$352/t.</p>
October	November	December
<p>Penrith win NRL Grand Final in Brisbane. RBNZ begins to remove COVID support stimulus, hikes OCR 25bps to 0.25% NZ-UK free trade deal announced. Gas prices spike in Europe after Russian pipeline supplies drop sharply. NSW Premier Berejiklian steps down amid corruption investigation. EU issues €12bn climate bond. Supplier delivery times and shipping costs blow out - Baltic Dry hits 2021 high, crude oil hits US\$85.50/bbl. Vaccination coverage hits 80%, easing in lockdown restrictions begins in NSW, Vic and ACT.</p>	<p>Australia reopens international borders. Climate-change-related coral bleaching affected 98% of Great Barrier Reef. Researchers Chinese govt outlines plan to eliminate crypto mining. US and China announce agreement on combating climate change at COP26 Conference in Glasgow. China tests hypersonic 'glide' missile. New omicron COVID variant emerges. President Biden nominates Powell for a second term as Fed Chair. US \$1.2trn infrastructure act passed. Russian troop build-up on Ukraine border.</p>	<p>NZ moves to 'traffic light' system for living with COVID in the community. Aus economy records milder than expected 1.9% contraction in Q3. <u>Still to come:</u> US Supreme Court to decide case that may overturn precedents from <i>Roe v Wade</i>. Angela Merkel to step down as German Chancellor after record 16yr term. <u>Year to date:</u> S&P500 +20%; ASX +10%; gold -5.5%; crude oil +45%; US 10yr +43bps; Aus 10yr +64bps; AUD/USD -8%; USD TWI +7%. COVID: 261m cases, 5.2m deaths</p>

Price cycle looks to have peaked in 2021

In commodities markets high prices are often the cure for high prices ...

There is an old rule in commodities markets that high prices are a cure for high prices. The current market has significant potential for a strong supply response to combine with demand becoming more sensitive to higher prices (i.e. higher demand elasticity) due to rapid technological advances and ongoing demographic shifts. At US\$70/bbl Brent is now less than half of its 2008 peak (US\$147/bbl) and is down almost 20% from the 2021 peak of US\$86/bbl. At around US\$9,500/t copper is where it was a decade ago, close to 10% down from the 2021 peak of US\$10,500. At US\$101/t iron ore more than halved from its 2021 peak of US\$234/t (a record high) while met coal has fallen 22% from its 2021 peak of US\$346/t and thermal coal is down 37% from the US\$257/t peak this year (also a record high). The record high for met coal was US\$370/t in early 2011.

... as they spur on supply ...

In 2021 commodities prices jumped well above production costs, a meaningful incentive to lift output thus starting a fundamental correction to high prices. Looking into 2022, demographic parameters become less favourable as the population ages and Chinese growth shifts away from production towards consumption and services resulting in a slower pace of growth. With the US dollar resuming its upward trajectory as the Fed starts to taper its bond purchases, the unfolding commodity price correction will continue through 2022.

... and reduce demand even more with technological change shifting elasticities.

Our forecasts have **iron ore drifting down to US\$75/t by end 2022**. You could put together a stronger argument for iron ore based on demand finding a base, PBoC stimulus backing up the administration's call for an expansion of domestic demand including "pushing forward social housing construction". In addition, ore supply has been trimmed with Vale, Rio, Anglo and Mineral Resources all reducing guidance in recent weeks. However, we feel it is too early to call a base with port inventories building rapidly and prices holding above cost. While we think most of the price correction has already occurred there is still significant downside risk before there is meaningful cost support/supply discipline from the majors. The iron ore port inventories build through recent weeks is a bearish signal and they are expected to continue to lift over the next 2-3 months as pig iron production is not likely to pick up until after the Winter Olympics. This should keep pressure on iron ore prices near term. Pig iron production is down 17% in the year to October – comparable to the 16% fall recorded during the GFC. Crude steel production has gone further still, collapsing 23% in the year to October compared to a 16%yr fall during the GFC. In the last week there has been a positive sign in falling steel inventories by trader and steel mills. This may signal a marginal improvement in downstream demand. However, with current inventory levels at a five year high it has a long way to go before it signals a tight market.

Iron ore is set to drift toward US\$75/t by end 2022 ...

Our **Brent forecasts ease back from US\$70/bbl to US\$63/bbl by end 2022**. Next year is going to be a significant test for the mantra that "high prices are a cure for high prices" particularly for energy. For Brent to have a strong sustained rally to the 2014 high of US\$86/bbl there would have to be some combination of declining production and a lift in consumption. As we see it, the situation is moving in the opposite direction. The potential for unprecedented sustained discipline from OPEC is low while technological advances have resulted in remarkable shift in energy demand price elasticities. Once we are past the short-run mismatch of the surge in demand as the economy bounced back from the Covid lock down, as well as recent supply disruptions, the path for demand growth will under-perform economic growth while supply will be supported by the robust prices and a lack of discipline from OPEC+.

... while weather-induced Australian supply shocks will be short lived ...

Met coal prices are forecast to fall to US\$205/t by end 2022 while thermal coal is expected to ease to US\$110/t. However, recent severe rainfall across Australia has affected both thermal and met coal miners in Qld and NSW with many shippers declaring *force majeure*, tightening supply and reducing exports. There have been reports of widespread disruptions with many mines isolated as tracks were flooded. This should be supportive of prices and benchmark Newcastle prices have already seen a sharp up-tick with the NEX up to \$167/t FOB, basis 6,300 kc GAR. In late November the Bureau of Meteorology declared a La Niña was underway meaning summer is likely to be wetter than average with an increased risk of tropical cyclones, heavy rainfall and widespread flooding. Associated supply shocks could easily result in significant, but short-lived, lifts in coal prices over the summer period. Though 2022 steel production and exports are also likely to be muted with Beijing continuing to exercise tight controls on emissions from energy intensive sectors. Chinese steel demand from the property sector will be tepid. Exports are likely contract as steel output from the rest of the world lifts while demand from Chinese infrastructure investment is likely to be flat. High near term prices will incentivise Australian miners to clear production blockages and lift output as fast as they can.

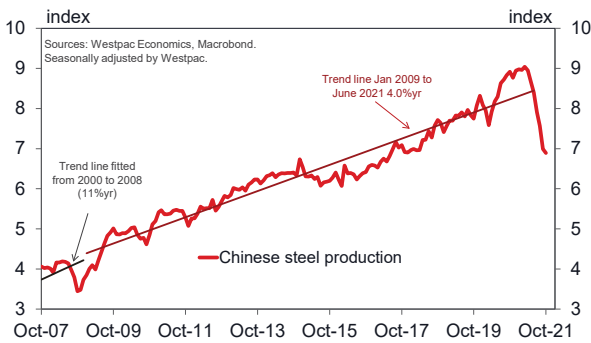
... seeing coal prices fall back between 24% and 33%.

The Base Metals Index is forecast to fall around 10% to 202 by end 2022. China has been a primary source of demand for base metals since 2003 but we think this trend has started to come to an end. With the decline of investment and production as key growth drivers, this will see diminishing incremental economic growth and a reduction in materials demand as a share of output just as a declining required reserve ratio and ongoing property issues portend a peak.

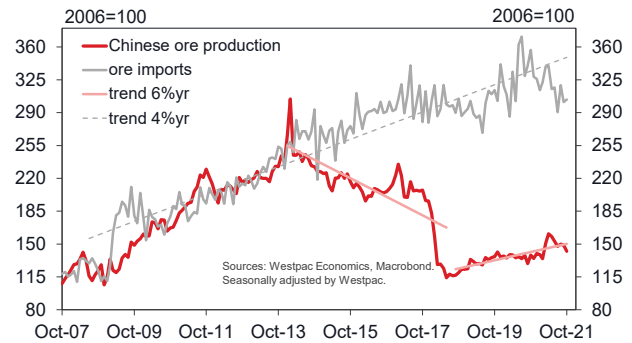
Justin Smirk, Senior Economist

A fundamental correction in 2022

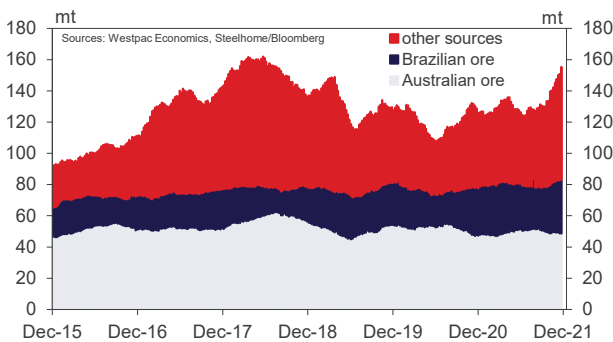
Chinese steel production collapses



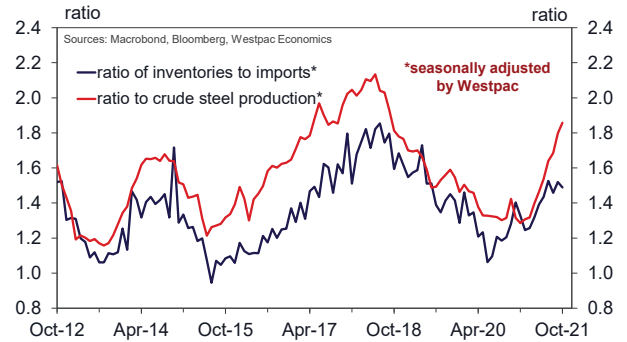
Iron ore imports trending down since June 2020



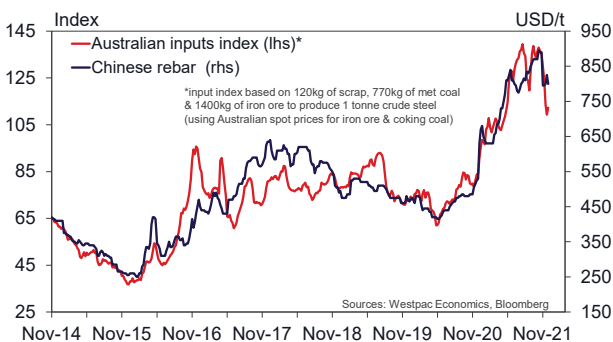
Chinese iron ore port inventories



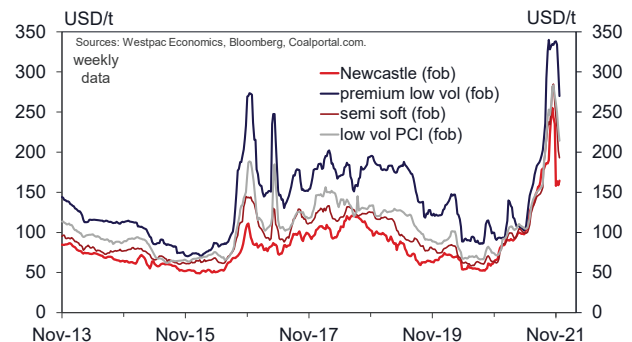
Chinese ore inventories at ports



Chinese rebar & input costs



Thermal moving higher with PCI



Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

Safe-haven flows to aid USD ...

Sentiment and policy dynamics favour USD ...

Developments over the past month have required us to reset our global FX views heading into 2022. The change is necessary because of market sentiment as much as it is shifts in policy and growth.

At the centre of these revisions is the US dollar and its role as a safe-haven in times of distress. As delta continues to permeate through the global economy, including in the US, and with the omicron strain now also looming as a threat, the US dollar has received a strong bid from market participants, taking it through the top of the range seen year-to-date of 94.5 to as high as 96.9 in late-November. Currently, the index trades at 96.3.

... a trend expected to persist to September 2022.

Both strains of COVID-19 certainly have the capacity to cause material disruption to economic growth, particularly in parts of the world where vaccination rates are low such as emerging markets. However, presently it seems that the bigger risk playing on market participants' minds is that these strains will cause yet more supply disruptions and stronger, more-persistent inflation the world over. For an economy such as the US where the commencement of rate hikes was already probable within 12 months, these developments have seen an aggressive bring-forward of rate expectations such that two and a half 25bp hikes are now priced by December 2022.

Risks to inflation from COVID-19 are proving more persistent ...

It is important to recognise at this juncture that it is not only the threat to prices from COVID-19 that has been supportive of rate expectations but also domestic labour market developments. Recent prints for US unemployment and underemployment point to little available slack, both benchmarks now within a percentage point of their pre-pandemic levels. Meanwhile momentum in employment growth and the outright level of job openings remains elevated. The consequence has been a strong bid for wages, albeit spread unequally across the economy.

... impacting both market pricing and our own view on rates.

As outlined on page 2, Westpac's rate view is broadly in line with market pricing for 2022 as we are forecasting three hikes from June to December 2022. Further, we subsequently expect US rate hikes to continue in 2023 and 2024 in six-month increments to 1.625%. Growth at or above trend and meaningful inflation risks should meanwhile keep the 10-year above the fed funds rate over the forecast horizon. And both rates are seen above other comparable benchmarks in DXY constituents over the period, from Japan to the UK/Europe and Canada.

Still, once the FOMC begins its tightening cycle

That said, we believe the beginning of the US rate hike cycle will prove the end of the US dollar's new uptrend. From 98.6 at September 2022, it is expected to fall back to around 95.9 at the end of 2023. Why is this the case? Simply it is because the bid the US dollar has received as a safe-haven will abate as risks related to COVID-19 recede. In risk's absence, attention will turn to growth opportunities which are to be found sustainably in developing markets and the industry that supports them -- the latter opportunity is more concentrated in Europe and Canada.

.... and risks related to COVID-19 dissipate ...

We look for EUR/USD to rise from a low of USD1.08 in 2022 to USD1.14 at end-2023. Having received benefit from their central banks going with, or ahead of the US FOMC, the UK's Sterling and Canada's dollar are unlikely to receive an additional bid over the period, but are expected to hold at a robust level, offering the US dollar little offset against Euro gains. Specifically, from USD1.38 at September 2022, GBP/USD is only forecast to fall to USD1.35 come end-2023. Meanwhile USD/CAD is expected to see little change over the period.

.... participants will look to growth opportunities elsewhere in the world.

As the US dollar has gained during the past month on safe-haven flows, Asia has held strong. Presently both China's Renminbi and Singapore's dollar are only marginally weaker against the US dollar than we forecast for end-2021 before recent developments -- those respective levels being CNY6.35 and SGD1.35. This resilience is impressive given the shift in sentiment brought on by delta and omicron, providing us with strong conviction in the growth opportunities ahead for Asia and that a structural uptrend for Asia FX will be seen, at least to end-2023.

Asia remains the leading light for the global economy ...

We do however have to be mindful of competitiveness pressures and the desire of authorities to provide a steadying hand in uncertain times, particularly in China. Consequently, we anticipate that USD/CNY will hold near its current level until June 2022, then only slowly fall to CNY6.25 end-2022 and 6.10 end-2023, a 4% cumulative change. India's economic and financial outlook also holds considerable promise despite a series of shocks -- we see USD/INR declining on a similar trajectory but by a greater degree, from INR75 currently to INR70 end-2023, +7%. Arguably, given recent developments, risks for the Renminbi are to the upside, but are against the Rupee.

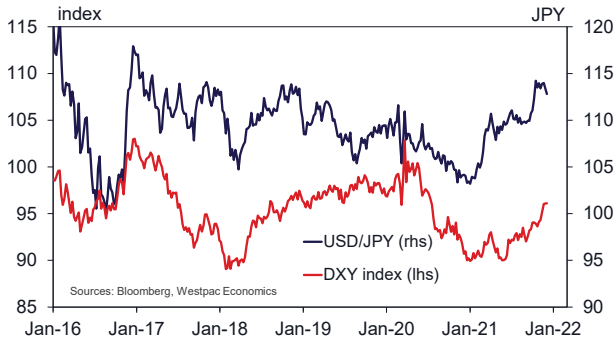
... although economic and FX outcomes will vary.

The appreciation of Singapore's dollar and other key currencies across the region are expected to be more modest given supply constraints, vaccination deficiencies, and delays in fully re-opening their service industries, particularly tourism. Still, USD/SGD is expected to fall from SGD1.35 at June 2022 to SGD1.33 end-2022 and SGD1.31 end-2023, a robust 3% appreciation overall.

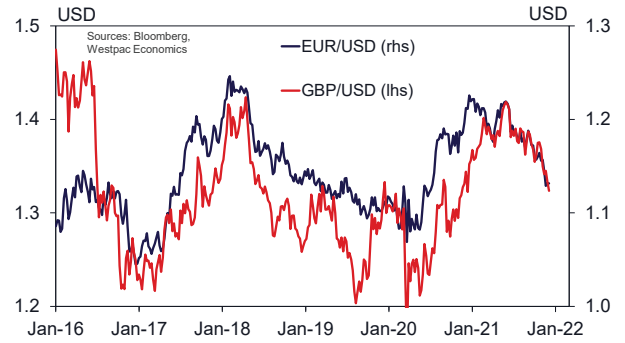
Elliot Clarke, CFA, Senior Economist

... until growth counters risks

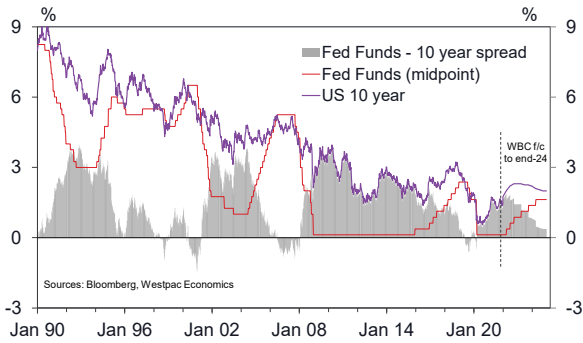
US gains about more than COVID-19



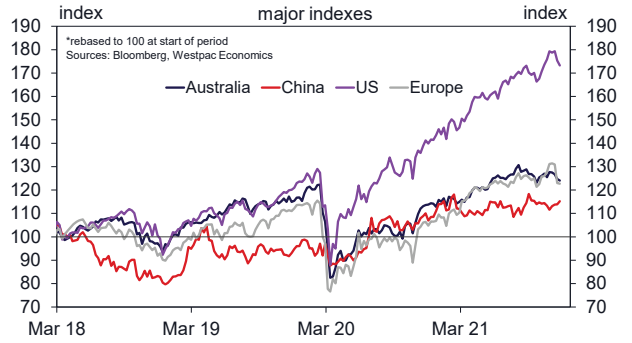
EUR & GBP: COVID-19 and rates a heavy burden



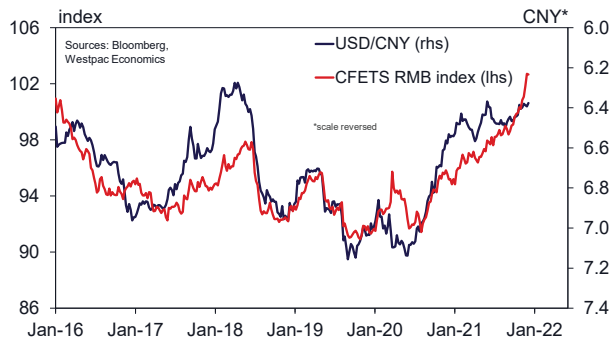
US rates to rise, but remain low versus history



Higher rates will test sentiment and recovery



China to lead Asia's development & FX gains



Rest of Asia also set to outperform USD trend



Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

Outlook for demand remains firm ...

Despite ongoing Delta headwinds ...

As 2021 draws to a close, New Zealand is continuing to grapple with the impacts of August's outbreak of the Delta variant. We estimate that GDP fell by 6% in the September quarter. And although alert levels have been gradually dialled down over the past few months, health restrictions have continued to weigh on activity in some parts of the economy.

... underlying economic conditions remain robust ...

While the Delta outbreak has been a significant shock, underlying economic conditions have actually remained resilient. In fact, through the September quarter, when restrictions were at their most prohibitive, employment levels rose by 2% and the unemployment rate fell to just 3.4% – equal to the lowest level on record. We have also seen firmness in household demand, with retail spending levels in areas outside of Auckland now running around 10% above the levels we saw prior to this latest outbreak.

... and firm demand expected over the coming year.

Looking to 2022, the economic signs remain positive. There is a large amount of construction work planned across the country with a record 47,000 new dwellings consented over the past year. Similarly, feedback from businesses in the manufacturing sector indicates that demand has remained firm. And prices for our key agricultural exports have hit record highs.

Economy wrestling with a number of challenges ...

With resilience in the underlying economy, we expect that unemployment will remain low over the coming months and economic activity will rise back to firm levels as health restrictions are eased. However, that does not mean it will be smooth sailing for the economy. With infection numbers continuing to rise, health restrictions are likely to be wound back only gradually, and there may still be periods when restrictions are tightened. Accordingly, we do not expect economic output to retrace to its pre-Delta levels until mid-2022.

... including strong inflation pressures ...

Despite Delta disruptions, there has been no relief from the strong inflation pressures that have been bubbling away, with consumer price inflation rising to a ten year high of 4.9% in the year to September. The rise is partly due to domestic and imported cost pressures, many of which will be temporary, or at least non-repeating. However, much of the strength in inflation is also a result of strong domestic demand. That has been underpinned by increases in fiscal spending, a strong labour market, rapid house price growth and – most importantly – very low interest rates. The boost from these factors has meant that demand has outstripped supply in some key sectors of the economy, like the construction sector. And combined with rising input costs, that has resulted in some significant increases in output prices.

... that are passing through to the labour market.

Recent months have also seen measures of inflation expectations (including the RBNZ's own survey of medium-term expectations) pushing above the 2% inflation target. That is a major concern for the RBNZ as if this passes through into wage and price setting behaviour, even a temporary spike in inflation could result in a period of ongoing price increases. And on this front, we are already seeing growing demands for cost-of-living adjustments to wages.

With inflation set to remain elevated for an extended period ...

Combined, the above conditions have left the RBNZ with a worrying cocktail of strong inflation pressures, and there is a very real risk that New Zealand will see a protracted period of elevated domestic inflation over the next few years.

... the RBNZ has already lifted the cash rate twice ...

The RBNZ has already increased the cash rate twice, taking it to a level of 0.75%. We are forecasting a series of rapid OCR increases over the coming years, with the cash rate to peak at 3% in the third quarter of 2023. That would take the cash rate above neutral and into 'tight' territory. That sort of profile is broadly in line with the RBNZ's own forecasts, which also signalled a series of frontloaded rate hikes over the coming years. The RBNZ are currently factoring in a lower peak in the cash rate of 2.6%. However, that is not a big difference at this stage of the economic cycle.

... and we expect they will raise it into tight territory ...

The expected increases in borrowing costs will reverberate through all parts of the economy, with the current strong economic conditions set to give way to a period of modest economic growth through 2023 and 2024. Mortgage fixing will blunt the impact of rate rises on household balance sheets for a time. Even so, we estimate that spending on debt servicing is likely to rise from just under 8% of households' disposable incomes currently to around 11% in 2023. That would more than offset the increase in households' spending power seen over the past year, and the resulting squeeze on discretionary incomes will dampen both household demand and economic growth more generally over the coming years.

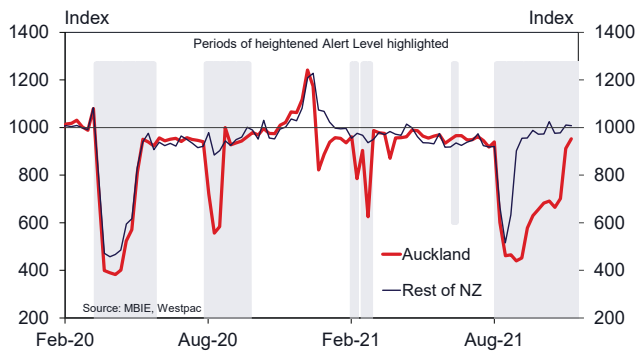
... dampening the housing market and household spending.

As mortgage rates rise, we expect a substantial slowing in house price growth over the coming months, turning to modest price declines by the second half of 2022. However, while we expect an easing in house prices over the coming years, recent increases in prices have been very large. The expected price declines would only reverse a small portion of the gains seen in recent years, taking price back to the levels we saw at the start of 2021.

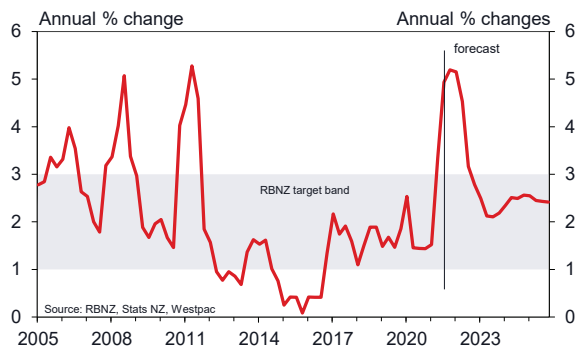
Satish Ranchhod, Senior Economist

... and interest rates are on the rise

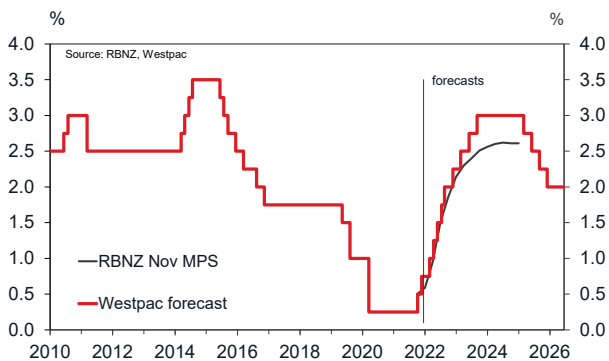
Weekly retail spending



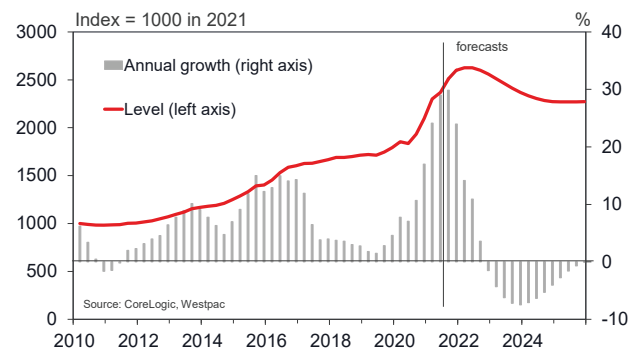
Consumer price inflation



Official Cash Rate



House price forecasts



Monthly data	2020		2021									
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
REINZ house sales %mth	6.0	8.4	-21.2	15.2	-1.6	-3.9	-5.7	-0.2	-4.2	-14.5	-9.7	17.5
Residential building consents %mth	0.8	5.4	2.4	-19.1	19.5	5.1	-2.4	4.0	2.1	3.7	-2.0	-1.9
Electronic card transactions %mth	-0.3	-0.4	-1.1	-3.3	2.0	4.7	2.1	1.3	1.0	-22.0	1.6	9.5
Private sector credit %yr	3.0	3.4	3.5	3.6	3.8	4.8	5.4	6.4	7.0	7.0	7.3	7.6
Commodity prices %mth	0.9	1.8	4.2	3.3	6.1	2.2	2.1	0.9	-1.7	-1.6	1.5	2.1
Trade balance \$m	470	-144	-611	-133	-590	-217	-414	-66	-451	-1002	-895	-928

Quarterly data	Q4:19	Q1:20	Q2:20	Q3:20	Q4:20	Q1:21	Q2:21	Q3:21
Westpac McDermott Miller Consumer Confidence	109.9	104.2	97.2	95.1	106.0	105.2	107.1	102.7
Quarterly Survey of Business Opinion	-11	-10	-39	1	0	1	26	29
Unemployment rate %	4.0	4.2	4.1	5.3	4.8	4.6	4.0	3.4
CPI %yr	1.9	2.5	1.5	1.4	1.4	1.5	3.3	4.9
Real GDP %yr	2.4	1.7	-1.3	-1.6	-2.1	-1.4	5.1	-
Current account balance % of GDP	-2.9	-2.4	-1.5	-0.7	-0.8	-2.5	-3.3	-

Sources: ANZ, Statistics NZ, REINZ, RBNZ, NZIER, Westpac Economics.

Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

Risks for US have tilted up ...

Two big changes have been seen in the US of late.

The US economy has experienced two significant changes in the past two months: the momentum lost in the September quarter because of delta has been regained; and the scale, breadth and expectation of inflation have all risen to multi-decade highs.

We consequently expect a material shift in the FOMC's approach to policy at the December 14-15 meeting, with the pace of tapering to double, concluding purchases in March 2022, three months earlier than currently planned. Doing so will make room for three 25bp rate hikes in 2022, at the June, September and December meetings.

It is important to highlight that this policy change is not simply a response to market pricing. Instead, it is the result of a careful assessment of the spectrum of risks the US economy faces.

The labour market is now on a strong footing ...

With respect to activity, the threat from delta looks to be subsiding, with rebounding consumption and robust investment pointing to growth at a multiple of potential in Q4 as well as the first half of 2022. Further, the run of weak readings for employment through Q3 have largely been revised away, and current job creation is more than enough to see the economy tend towards full employment in late-2022. Corroborating this view, the just-released November employment report announced an unemployment rate of 4.2% and nonfarm payroll growth of 405k on average over the past four months.

... and inflation the key risk.

The prime risk for activity in the first half of 2022 is arguably that labour demand runs too far ahead of supply while participation remains weak, creating wage gains at odds with productivity growth as well as additional fuel for already-elevated inflation expectations. These are circumstances that could turn a 'transitory' period of high inflation into a persistent force difficult to control without a material cost to the economy.

While the market has moved to price in a first hike just a month after the currently planned end of the taper in June 2022 (i.e. July 2022), we do not believe such a quick turn is likely given tapering is not tightening and the economic threshold for tightening (i.e. raising rates) is much higher.

Following an accelerated taper, a series of rate hikes will be seen...

A three month pause for policy from March to June 2022 is most likely, to be followed by two further 25bp increases in September and December as the US economy continues to grow above trend and rising participation allows maximum employment to converge with full employment.

... but only as the data and risks justify.

From June 2023 to June 2024, we see one rate hike every six months to a peak federal funds rate of 1.625%, unchanged from our prior call. This unchanged end point highlights our belief that, while inflation risks are presently rife, prudent policy and the passage of time will see them abate. Our belief that economic growth can settle at trend with full employment is also behind our view that the US 10-year yield will hold above the federal funds rate over the forecast period, only retreating from a peak of 2.30% at September 2022 to 2.20% end-2023 and 2.00% end-2024 as inflation and hence rate risks abate.

USD should respond to both the FOMC's actions and the confidence they bring.

This dynamic, risk-aware policy making by the FOMC is also expected to keep the US dollar in a tight range on a DXY basis over the forecast period. While divergent rate expectations and risks related to COVID-19 are set to weaken the Euro to June 2022, once the first hike is delivered by the FOMC and prospects for Europe and the global economy strengthen, the US dollar DXY index is forecast to ease back 1% from mid to late-2022 and another 2.5% by end-2024.

Underlying this result is not only the market's confidence in the FOMC's ability to deliver GDP growth sustainably at trend without undue inflation risks, but also a view that the global recovery will continue to strengthen over the period, reducing the US dollar's value as a safe haven. Full detail on the outlook for the US dollar and global FX markets can be found on page 12.

Delta and Omicron pose material risks to activity ...

To the above view, the ongoing spread of delta in the US and the nascent (and largely unknown) threat of Omicron are pressing risks. If either variant destabilises US growth prospects, the Committee can delay any move to accelerate the taper and/or increase interest rates.

Currently though, at least the first step seems unlikely, with Chair Powell and a number of other FOMC members calling for at least a discussion on accelerating the taper at the December FOMC meeting while making clear they are more concerned about the persistence of inflation than they were at the time of the November meeting.

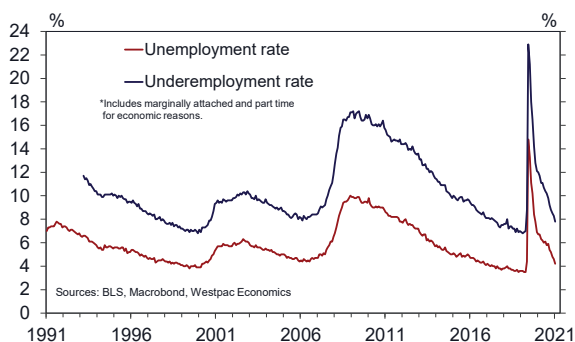
... but also for inflation.

On inflation, we must recognise that the spread of either variant could easily worsen the supply issues currently pressuring US inflation and real incomes. Absent a material hit to growth, such an outcome would provide further justification to move away from current emergency policy settings to better match short-term demand and supply and maximise the cumulative return from this growth cycle. The FOMC can and will continue to adjust policy to suit current and anticipated conditions, giving confidence to markets and the global economy.

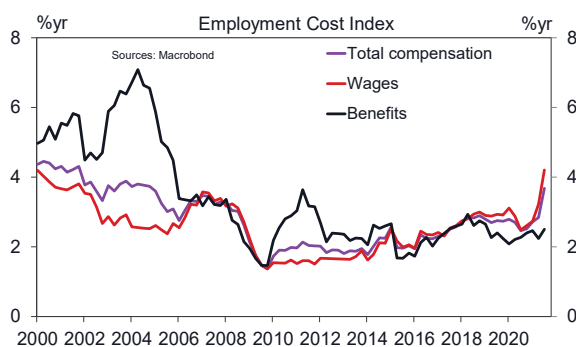
Elliot Clarke, CFA, Senior Economist

... justifying higher rates

US 'maximum employment' near



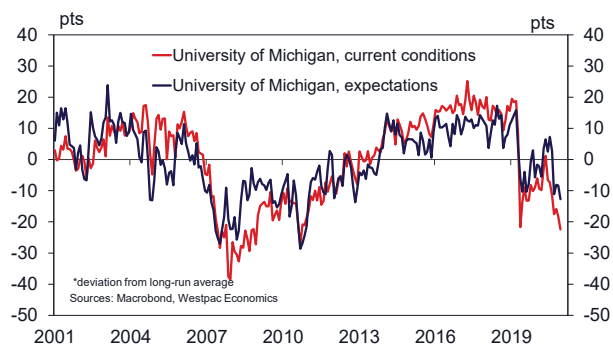
Wage growth must be sustainable



Unrestrained inflation risks real incomes



Weak consumer sentiment highlights this risk



	2020		2021									
Monthly data	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
PCE deflator %yr	1.3	1.4	1.6	2.5	3.6	4.0	4.0	4.1	4.2	4.4	5.0	-
Unemployment rate %	6.7	6.3	6.2	6.0	6.1	5.8	5.9	5.4	5.2	4.8	4.6	4.2
Non-farm payrolls chg '000	-306	233	536	785	269	614	962	1091	483	379	546	210
House prices* %yr	10.1	11.2	12.1	13.5	15.2	17.3	19.2	20.0	19.7	19.1	-	-
Durables orders core 3mth %saar	18.5	16.8	9.3	9.8	17.2	21.5	18.7	7.8	7.4	9.0	10.7	-
ISM manufacturing composite	60.5	58.7	60.8	64.7	60.7	61.2	60.6	59.5	59.9	61.1	60.8	61.1
ISM non-manufacturing composite	57.7	58.7	55.3	63.7	62.7	64.0	60.1	64.1	61.7	61.9	66.7	69.1
Personal spending 3mth %saar	-2.5	8.9	6.6	33.2	22.1	27.6	9.2	4.9	9.3	7.1	12.9	-
UoM Consumer Sentiment	80.7	79.0	76.8	84.9	88.3	82.9	85.5	81.2	70.3	72.8	71.7	67.4
Trade balance USDbn	-65.8	-65.7	-68.2	-72.2	-66.7	-68.5	-73.2	-70.3	-72.8	-80.9	-	-
Quarterly data	Sep-20	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21f						
Real GDP % saar	33.8	4.5	6.3	6.7	2.0	8.0						
Current account USDbn	-172.4	-175.1	-189.4	-190.3	-	-						

Sources: Government agencies, Bloomberg, *S&P Case-Shiller 20-city measure.

Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

China ready to perform in 2022 ...

A stellar run over the past 18 months ...

The past two years have been an unbelievable period for China. After suffering a 10% contraction in the three months to March 2020 as the pandemic began, its economy immediately bounced back 11% in the June quarter and subsequently grew at an annualised pace of almost 13% over the second half of 2020 — more than twice China's potential growth rate.

... has positioned China's economy to thrive in 2022 and in the long run.

Despite authorities' heavy-handed response to COVID-19 scares during 2021, the economy has continued to show strong underlying momentum. On our calculations, as at September the economy was 2ppts larger than it would have been had the pandemic not occurred and the economy had instead grown in line with potential. This differential is seen growing to 7ppts by end-2022.

What makes this performance even more exceptional is that, in both 2020 and 2021, significant regulatory change was implemented to reduce leverage and speculation in old-growth sectors of the economy such as residential construction and infrastructure investment. New risks to discretionary household income were also headed off — the best example being the halting of the burgeoning arms race in school tutoring, the sector made not-for-profit with immediate effect.

The economy stands to benefit from domestic demand.

While disruptive in the short-term, there is no doubt that skewing investment towards long-term, income-rich opportunities and minimising rent seeking will provide a material dividend for China.

'Dual circulation' is the policy that best represents the new income opportunities before China both in 2022 and the long term. Specifically, it champions and seeks to grow the nation's capacity to benefit from producing for both local and international markets.

The obvious near-term opportunity is in services, particularly tourism and education. In short, these industries will continue to grow rapidly while international borders remain closed.

Looking to the medium to long-term however, the better examples are found in the goods sector. Simply, from apparel to technology, there is a burgeoning belief amongst China's households that local brands are as good, and potentially better, than their western counterparts, aiding both the volume of sales and pricing power.

The knowledge gained from growing domestic markets ...

Success in promoting and selling these goods to a large, heterogeneous consumer group within the country will provide the know-how and confidence to subsequently expand overseas. This is particularly true for markets across Asia where economic development and the rise of the middle-class has strong foundations and there are parallels to China's own development. Obviously, some sub-sets of industry will prove better placed than others to achieve. Still, across technology, industrial goods and some business services, China's opportunities appear large and sustainable.

... will also serve industry well in the long-run as offshore markets are developed.

As we have highlighted on a number of occasions this year, growth in trade receipts is only the first step on this development journey. Every dollar of income from trade will, through wages and return on investment, find its way to households, to spend and invest, or to the capital base of industry to fund further expansion.

The growth that occurs in private business investment in pursuit of income will therefore, in time, also support additional investment in the old guard industries of residential and infrastructure construction as consumers expand their lifestyles and cities develop to accommodate. To be clear, this construction pipeline will have longevity, being founded on recurring income from trade as opposed to speculative borrowing by local government authorities and households. Growth of 5.5-6.0% is therefore certainly achievable beyond our forecast horizon.

Elliot Clarke, CFA, Senior Economist

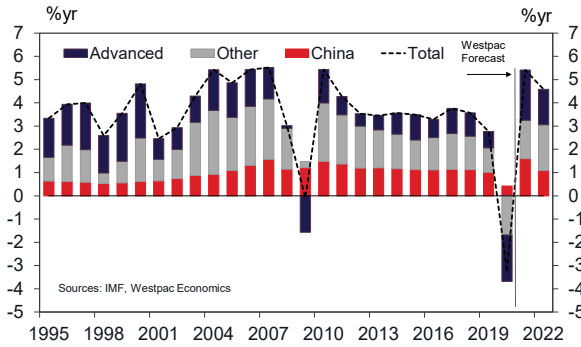
Monthly data %yr	2020		2021									
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Consumer prices - headline	0.2	-0.3	-0.2	0.4	0.9	1.3	1.1	1.0	0.8	0.7	1.5	-
Money supply M2	10.1	9.4	10.1	9.4	8.1	8.3	8.6	8.3	8.2	8.3	8.7	-
Manufacturing PMI (official)	51.9	51.3	50.6	51.9	51.1	51.0	50.9	50.4	50.1	49.6	49.2	50.1
Fixed asset investment %ytd	2.9	2.9	35.0	25.6	19.9	15.4	12.6	10.3	8.9	7.3	6.1	-
Industrial production (IVA)	7.3	7.3	35.1	14.1	9.8	8.8	8.3	6.4	5.3	3.1	3.5	-
Exports	18.0	24.6	154.7	30.5	32.2	27.8	32.2	19.3	25.6	28.2	27.1	22.0
Imports	7.6	28.7	18.9	39.1	44.0	52.0	37.1	28.3	33.1	17.6	20.6	31.7
Trade balance USDbn	75.8	61.8	35.5	11.9	41.1	43.7	50.8	56.2	58.3	66.8	84.5	71.7

Quarterly data	Q2:20	Q3:20	Q4:20	Q1:21	Q2:21	Q3:21
Real GDP %yr	3.2	4.9	6.5	18.3	7.9	4.9
Nominal GDP %yr	3.1	5.5	7.0	21.2	13.6	9.8

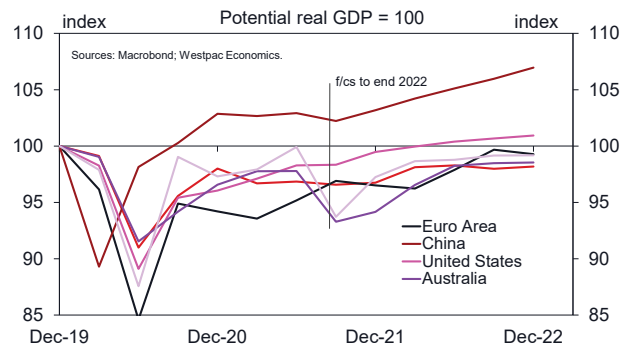
Sources: Government agencies, Bloomberg, Macrobond, Westpac Economics. Some data omitted from certain series due to Lunar New Year distortions. *4qma

... and in the long run

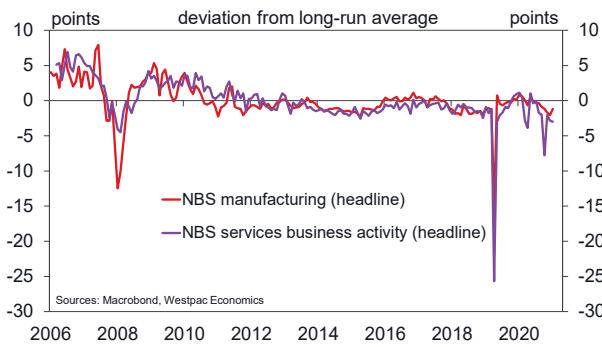
World growth recovery: China is key



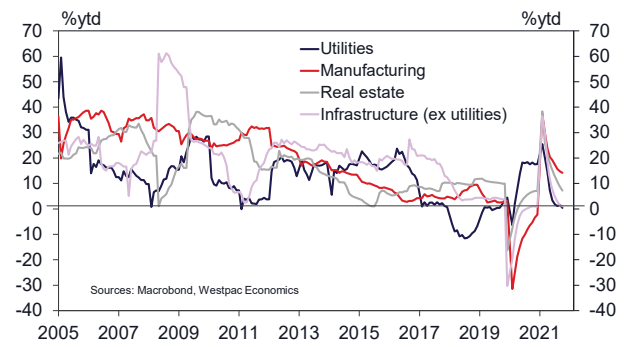
China's economic development unmatched



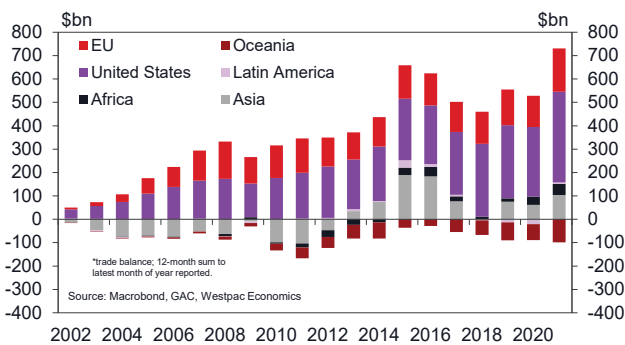
PMIs imply latest delta wave had little effect



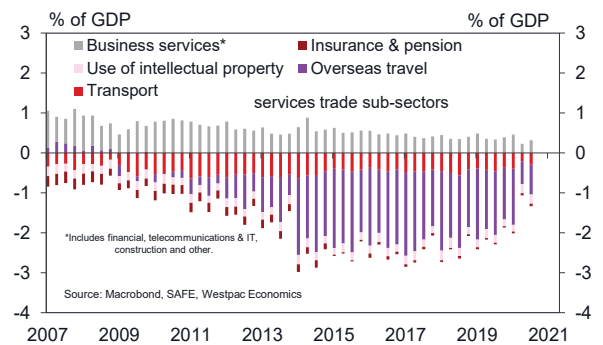
Capacity & income the focus for investment



Promise abounds for China's exporters



China services also likely to aid trade surplus



Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

Solid recovery through 2021...

Better handling of delta outbreaks saw a strong consumer rebound ...

At end-2021, Europe finds itself at a challenging point in their pandemic recovery. In this Market Outlook, we look back at progress made to date and ahead to assess the risks the region faces.

After experiencing a second pandemic recession in 12 months, economic activity has rebounded strongly since April. The implementation of health restrictions and the vaccine roll-out saw infection rates for COVID-19 fall markedly over Q2, facilitating a rapid and broad-based reopening. In Q2 and Q3, GDP consequently grew 2.2%. Household spending played a vital role in the recovery from delta, having contributed around 2ppts to GDP growth in both quarters.

... support growth and labour markets over Q2 and Q3.

Labour markets across the region have also improved considerably, with employment gaining 0.9% over the three months to September, lifting annual growth to a fresh two-decade high of 2.0%yr. The unemployment rate has steadily declined over six consecutive months. Sitting at 7.4% in September, it is comfortably below the 8.6% peak of the same month last year, near the pre-pandemic low of 7.1%. There is still substantial slack in the labour market, with approximately half a million jobs still left to replace. Combined with the slow return of some past workers to the labour force, this remaining slack is likely to see wages grow at a robust, but not strong, pace.

Near term risks have moderated confidence ...

Turning to confidence, both the ZEW and Sentix surveys advanced over the first half of the year, printing towards the top of their historic ranges around June. However, recent outcomes point to a reversal, and softer confidence already looks to be affecting activity. Notably, the ECB's Bank Lending Survey has recently signalled a reluctance on the part of firms to borrow to invest in new capacity, while lending standards for home purchase tightened over the September quarter. Additional risks to the outlook are now building, putting sentiment at greater risk.

... with persistent inflationary pressures ...

Price pressures associated with supply chain disruptions and soaring European energy prices pushed headline inflation to 4.9%yr at November – the highest rate since the Euro's introduction. Core inflation has also lifted to 2.6%yr, comfortably above the ECB's medium-term target. Arguably, the chief risk stemming from this development is not the threat of a rate hike but rather the loss of real purchasing power amongst consumers and consequently a deterioration in demand.

... and renewed COVID-19 concerns to the fore.

An additional risk for demand into early-2022 is COVID-19. Average daily cases have tripled in Europe since early October and the region's largest economies continue to report rising case numbers despite high vaccination rates. The responses of authorities to date range from restrictions on the unvaccinated to nationwide lockdowns. To mitigate the effect of restrictions on activity, clearly there is a pressing need to further improve vaccine coverage.

Further policy support required to facilitate long-term growth post recovery.

All told, Europe's recovery has underlying strength, but faces a number of significant headwinds. To our mind, there is a need for the Governing Council to provide extraordinary accommodation past March 2022 when the Pandemic Emergency Purchase Programme (PEPP) concludes.

Dropping back to 'only' €20bn of purchases per month under the Asset Purchase Program seems fraught with risk, with respect to confidence and demand as well as the functioning of the financial system. To secure a pace of recovery above trend through 2022 and 2023, we look for the Council to decide in December to add additional purchases from April to at least September 2022.

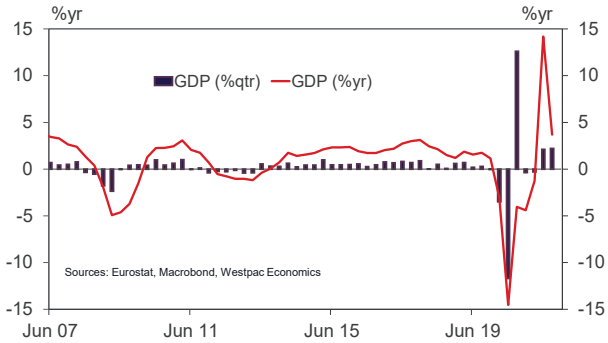
Ryan Wells, Economist

	2020	2021										
Europe	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Eur consumer prices %yr	-0.3	0.9	0.9	1.3	1.6	2.0	1.9	2.2	3.0	3.4	4.1	4.9
Eur unemployment rate %	8.1	8.2	8.1	8.0	8.1	8.0	7.8	7.6	7.5	7.4	7.3	-
Eur industrial production %yr	-0.1	0.5	-1.6	12.0	39.6	20.6	10.6	7.8	4.9	5.2	-	-
Eur retail sales volumes %yr	1.5	-4.8	-1.2	13.7	23.7	8.8	5.7	3.3	1.3	2.6	-	-
Eur consumer confidence	-13.8	-15.5	-14.8	-10.8	-8.1	-5.1	-3.3	-4.4	-5.3	-4.0	-4.8	-6.8
Eur current account balance €bn	34.3	46.1	35.5	23.9	17.6	18.2	29.9	22.3	17.1	18.7	-	-
United Kingdom												
UK Consumer price index %yr	0.6	0.7	0.4	0.7	1.5	2.1	2.5	2.0	3.2	3.1	4.2	-
UK unemployment rate %(ILO)	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	-	-	-
UK industrial production %yr	-2.6	-3.9	-3.4	3.4	29.9	23.3	10.3	4.5	4.0	2.9	-	-
UK retail sales volumes %yr	2.7	-5.7	-3.2	7.1	42.2	24.5	8.9	1.9	0.4	-0.6	-1.3	-
UK consumer confidence	-26	-28	-23	-16	-15	-9	-9	-7	-8	-13	-17	-14
Quarterly data	Q1:20	Q2:20	Q3:20	Q4:20	Q1:21	Q2:21	Q3:21					
Eur GDP %qtr/%yr	-3.5/-3.0	-11.7/-14.5	12.6/-4	-0.4/-4.4	-0.2/-1.1	2.2/14.4	2.2/3.9					
UK GDP %qtr/%yr	-2.7/-2.2	-19.6/-21.4	17.4/-8.1	1.1/-7.1	-1.4/-5.8	5.5/23.6	1.3/6.6					
UK current account balance £bn	-14.9	-6.2	-9.5	-25.3	-8.9	-8.6	-					

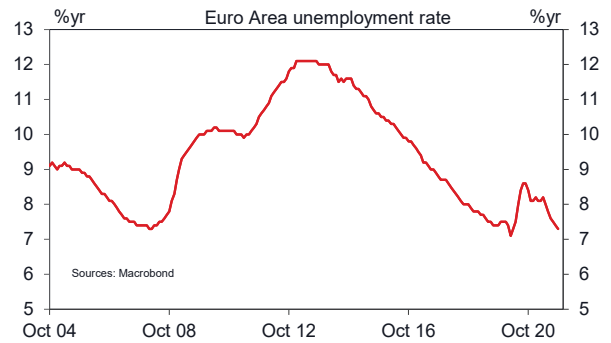
Source: Official agencies.

... risks to near-term outlook

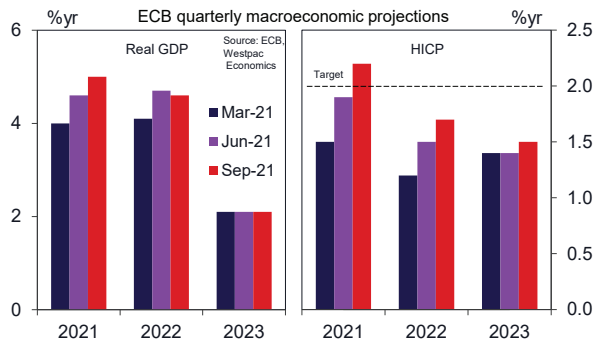
Euro Area has rebounded strongly from delta



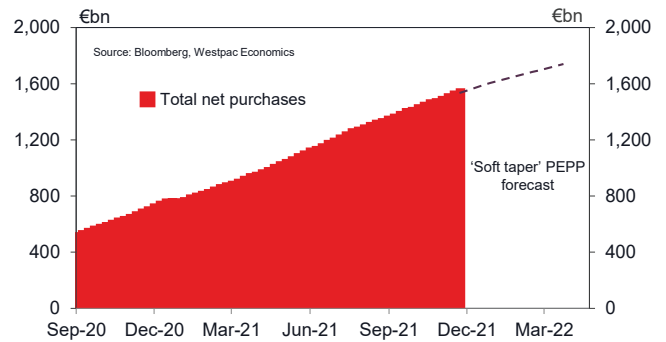
Policy has kept labour market in good shape



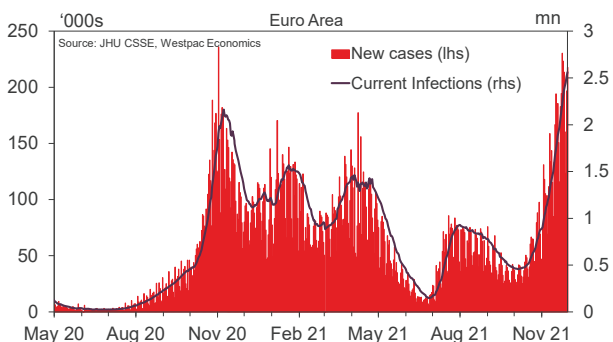
Long-term inflation outlook remains weak



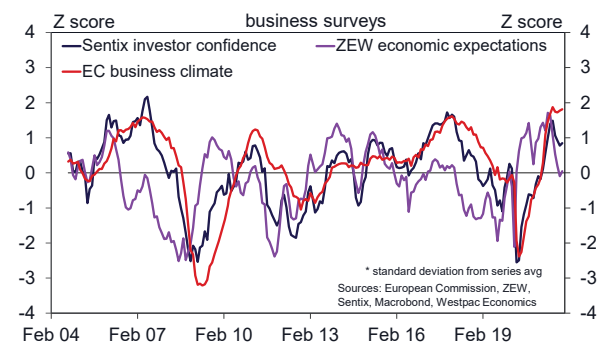
ECB will continue APP for foreseeable future



Cases have continued to rise



Sentiment more broadly also requires support



Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

Australia

Interest rate forecasts

	Latest (8 Dec)	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
Cash	0.10	0.10	0.10	0.10	0.10	0.25	0.50	0.50	0.75
90 Day BBSW	0.06	0.10	0.15	0.20	0.40	0.65	0.70	0.95	0.95
3 Year Swap	1.40	1.30	1.25	1.20	1.20	1.30	1.40	1.45	1.50
3 Year Bond	1.03	1.05	1.05	1.00	1.00	1.10	1.20	1.25	1.30
10 Year Bond	1.69	2.15	2.30	2.30	2.30	2.30	2.25	2.25	2.20
10 Year Spread to US (bps)	22	15	10	0	0	0	0	0	0

Sources: Bloomberg, Westpac Economics.

Currency forecasts

	Latest (8 Dec)	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
AUD vs									
USD	0.7114	0.71	0.70	0.71	0.73	0.75	0.76	0.77	0.78
JPY	80.82	82.4	81.2	83.1	85.4	88.5	89.7	91.6	92.8
EUR	0.6319	0.65	0.65	0.65	0.66	0.68	0.68	0.68	0.68
NZD	1.0494	1.06	1.06	1.06	1.06	1.07	1.07	1.07	1.08
CAD	0.9002	0.89	0.87	0.88	0.90	0.92	0.94	0.95	0.97
GBP	0.5374	0.52	0.51	0.51	0.53	0.55	0.55	0.57	0.58
CHF	0.6579	0.67	0.67	0.67	0.69	0.70	0.71	0.72	0.73
DKK	4.6989	4.80	4.82	4.84	4.93	5.02	5.05	5.07	5.09
SEK	6.4879	6.63	6.65	6.69	6.81	6.94	6.97	7.00	7.03
NOK	6.4258	6.56	6.59	6.62	6.75	6.87	6.90	6.93	6.96
ZAR	11.30	11.3	11.4	11.5	11.6	11.8	11.9	12.0	12.0
SGD	0.9721	0.96	0.95	0.95	0.97	0.99	1.00	1.01	1.02
HKD	5.5468	5.50	5.43	5.50	5.66	5.81	5.89	5.97	6.05
PHP	35.74	35.1	34.3	34.4	34.7	34.9	35.3	35.8	36.2
THB	23.92	23.4	22.8	22.7	23.0	22.9	23.2	23.5	23.8
MYR	3.0034	2.95	2.88	2.90	2.96	3.02	3.06	3.10	3.14
CNY	4.5293	4.51	4.45	4.47	4.56	4.65	4.67	4.74	4.76
IDR	10214	10118	9940	10011	10257	10500	10640	10773	10913
TWD	19.75	19.5	19.2	19.5	20.0	20.5	20.7	21.0	21.3
KRW	839	824	805	809	825	840	851	862	873
INR	53.53	52.5	51.5	51.8	52.9	53.6	54.0	54.3	54.6

Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

Australia

Activity forecasts*

%qtr / yr avg	2021			2022				Calendar years			
	Q2	Q3	Q4f	Q1f	Q2f	Q3f	Q4f	2020	2021f	2022f	2023f
Private consumption	1.0	-4.8	3.0	4.0	2.7	1.5	0.9	-5.8	4.0	7.0	4.2
Dwelling investment	0.6	0.1	1.9	1.8	1.0	1.0	1.0	-5.6	10.2	5.0	3.5
Business investment*	2.7	-1.1	2.7	2.6	2.8	1.4	1.5	-4.5	6.0	8.0	5.3
Private demand *	1.5	-3.6	2.9	3.5	2.5	1.4	1.0	-5.3	5.5	7.1	4.3
Public demand *	2.0	3.3	1.4	1.0	0.8	0.7	0.8	6.0	6.5	5.4	3.2
Domestic demand	1.6	-1.8	2.5	2.8	2.0	1.2	0.9	-2.5	5.8	6.7	4.2
Stock contribution	-0.1	-1.3	0.6	0.2	0.0	0.0	0.0	0.0	0.4	0.0	0.0
GNE	1.5	-3.1	3.1	3.0	2.0	1.2	0.9	-2.5	6.2	6.6	4.0
Exports	-3.4	1.2	1.0	1.7	2.2	2.4	2.2	-9.8	-1.0	5.7	7.6
Imports	1.1	-4.0	5.5	5.5	2.9	2.5	2.4	-13.1	6.7	12.3	10.0
Net exports contribution	-1.0	1.0	-0.8	-0.7	-0.1	0.0	0.0	0.4	-1.5	-1.2	-0.4
Real GDP %qtr / yr avg	0.7	-1.9	2.2	2.3	1.9	1.2	0.9	-2.2	4.3	5.5	3.5
%yr end	9.5	3.9	2.8	3.2	4.5	7.8	6.4	-0.8	2.8	6.4	2.7
Nominal GDP %qtr	3.3	-0.6	2.4	2.1	2.3	1.0	0.6				
%yr end	16.6	11.2	9.0	7.3	6.3	8.0	6.0	0.8	9.0	6.0	2.6

Other macroeconomic variables

% change	2021			2022				Calendar years			
	Q2	Q3	Q4f	Q1f	Q2f	Q3f	Q4f	2020	2021f	2022f	2023f
Employment (2)	1.0	-0.6	-0.2	2.5	1.2	0.5	0.5	-	-	-	-
%yr	6.5	3.7	1.4	2.6	2.8	4.0	4.8	-1.0	1.4	4.8	1.1
Unemployment rate % (2)	5.1	4.6	5.3	4.9	4.3	4.1	3.8	6.8	5.3	3.8	3.8
Wages (WPI) (2)	0.4	0.6	0.6	0.7	0.6	0.8	0.7	-	-	-	-
%yr	1.7	2.2	2.2	2.3	2.5	2.7	2.8	1.4	2.2	2.8	3.1
CPI Headline (2)	0.8	0.8	0.8	0.7	0.6	0.7	0.6	-	-	-	-
%yr	3.8	3.0	3.0	3.1	2.9	2.8	2.5	0.9	3.0	2.5	2.6
Core inflation trimmed mean	0.5	0.7	0.6	0.6	0.8	0.7	0.7	-	-	-	-
%yr (2)	1.6	2.1	2.3	2.5	2.7	2.8	2.8	1.1	2.3	2.8	2.8
Current account AUDbn	22.9	23.9	17.0	10.0	8.0	4.0	-2.0	51.6	84.0	20.0	-53.0
% of GDP	4.2	4.4	3.1	1.8	1.4	0.7	-0.3	2.6	3.9	0.9	-2.2
Terms of trade annual chg (1)	24.0	23.1	14.4	2.4	-5.8	-9.4	-10.7	-0.2	19.0	-6.0	-11.3

Calendar year changes are (1) period average for GDP, terms of trade, unless otherwise stated (2) through the year for inflation, wages and employment. Unemployment is year end.

* GDP & component forecasts are reviewed following the release of quarterly national accounts.

** Business investment and government spending adjusted to exclude the effect of private sector purchases of public sector assets.

Macroeconomic variables - recent history

Monthly data	2021											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Employment '000 chg	29	81	75	-30	117	28	3	-146	-141	-46	-	
Unemployment rate %	6.4	5.9	5.7	5.5	5.1	4.9	4.6	4.5	4.6	5.2	-	
Westpac-MI Consumer Sentiment	107.0	109.1	111.8	118.8	113.1	107.2	108.8	104.1	106.2	104.6	105.3	
Retail trade %mth	0.3	-0.8	1.3	1.1	0.4	-1.8	-2.7	-1.7	1.3	4.9	-	
Dwelling approvals %mth	-11.2	19.2	16.3	-6.4	-6.9	-5.3	-9.4	7.9	-3.9	-12.9	-	
Credit, private sector %yr	1.7	1.6	1.0	1.3	1.9	3.1	4.0	4.7	5.3	5.7	-	
Trade balance AUDbn	10.2	8.4	6.8	9.3	10.2	11.7	13.5	14.0	11.8	11.2	-	

Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

New Zealand

Interest rate forecasts

	Latest (8 Dec)	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
Cash	0.75	1.00	1.50	2.00	2.25	2.50	2.75	3.00	3.00
90 Day Bill	0.88	1.40	1.90	2.20	2.45	2.70	2.95	3.10	3.10
2 Year Swap	2.30	2.55	2.75	2.90	2.95	3.00	3.00	2.95	2.90
10 Year Bond	2.46	2.80	2.85	2.90	3.00	3.00	3.00	3.00	2.95
10 Year Spread to US	99	80	65	60	70	70	75	75	75
10 Year Spread to Aust	77	65	55	60	70	70	75	75	75

Sources: Bloomberg, Westpac Economics.

Currency forecasts

	Latest (8 Dec)	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
NZD vs									
USD	0.6779	0.67	0.66	0.67	0.69	0.70	0.71	0.72	0.72
JPY	77.01	77.7	76.6	78.4	80.7	82.6	83.8	85.7	85.7
EUR	0.6022	0.61	0.61	0.61	0.63	0.63	0.63	0.64	0.63
AUD	0.9530	0.94	0.94	0.94	0.95	0.93	0.93	0.94	0.92
CAD	0.8578	0.84	0.82	0.83	0.85	0.86	0.88	0.89	0.90
GBP	0.5121	0.49	0.48	0.49	0.50	0.51	0.52	0.53	0.53
CNY	4.3161	4.25	4.19	4.22	4.31	4.34	4.37	4.43	4.39

^ Approximate market forward price for NZD/USD, not a forecast. Sources: Bloomberg, Westpac Economics.

Activity forecasts*

% change	2021			2022				Calendar years			
	Q2f	Q3f	Q4f	Q1f	Q2f	Q3f	Q4f	2020f	2021f	2022f	2023f
Private consumption	7.1	6.7	7.0	5.4	1.7	3.9	4.4	-1.3	7.0	4.4	2.0
Government consumption	6.8	7.5	7.6	6.7	5.2	3.5	2.2	6.3	7.6	2.2	2.1
Residential investment	17.7	12.8	10.1	6.9	-0.8	7.1	9.4	-4.1	10.1	9.4	1.5
Business investment	3.1	4.7	7.5	6.5	2.9	4.8	7.0	-8.4	7.5	7.0	6.0
Stocks (ppt contribution)	0.5	0.9	1.1	0.3	0.0	-0.1	-0.2	-0.8	1.1	-0.2	0.0
GNE	7.7	7.9	8.5	6.0	2.2	3.8	4.4	-2.0	8.5	4.4	2.7
Exports	-11.4	-7.9	-4.1	4.9	2.4	4.0	7.5	-12.6	-4.1	7.5	10.9
Imports	-4.8	6.7	15.5	19.5	15.7	11.3	8.3	-16.0	15.5	8.3	3.8
GDP (production)	5.1	3.9	3.8	3.5	-0.3	2.6	4.6	-2.1	3.8	4.6	4.3
Employment annual %	1.6	4.3	3.5	3.2	2.3	0.5	0.6	0.6	3.5	0.6	1.2
Unemployment rate % s.a.	4.0	3.4	3.8	3.7	3.6	3.5	3.5	4.8	3.8	3.5	3.6
Labour cost index, all sect incl o/t, ann %	2.1	2.4	2.7	2.8	2.6	2.4	2.3	1.6	2.7	2.3	2.8
CPI annual %	3.3	4.9	5.2	5.1	4.5	3.2	2.8	1.4	5.2	2.8	2.2
Current account balance % of GDP	-3.3	-4.5	-5.5	-5.7	-6.6	-6.6	-6.3	-0.8	-5.5	-6.3	-4.6
Terms of trade annual %	-0.1	5.6	5.9	4.6	-0.4	-2.8	-4.4	-1.6	5.9	-4.4	2.4

Sources: Statistics NZ, Westpac Economics.

Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

Commodity prices

End of period	Latest (8 Dec)***	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24
Australian commodities index#	295	289	277	259	246	233	226	216	209	204	200
Bulk commodities index#	450	406	385	357	319	291	281	270	256	273	278
iron ore fines TSI @ 62% US\$/t	101	94	88	81	75	69	66	63	60	62	64
Qld coking coal index (US\$/t)	271	250	230	220	205	180	180	172	163	174	184
Newcastle spot thermal coal (US\$/t)	164	150	140	120	110	100	100	96	94	90	86
crude oil (US\$/bbl) Brent ICE	70	70	68	65	63	62	60	57	55	52	50
LNG in Japan US\$mmbtu	11.90	11.5	10.9	10.4	9.8	9.3	9.0	8.6	8.0	7.6	7.0
gold (US\$/oz)	1,779	1,790	1,790	1,703	1,645	1,617	1,559	1,474	1,417	1,332	1,275
Base metals index#	222	221	216	210	202	199	193	183	176	167	161
copper (US\$/t)	9,477	9,500	9,400	9,089	8,879	8,774	8,561	8,240	8,023	7,695	7,473
aluminium (US\$/t)	2,623	2,600	2,500	2,500	2,400	2,350	2,252	2,106	2,009	1,867	1,795
nickel (US\$/t)	20,103	20,200	20,000	18,853	18,099	17,812	17,237	16,375	15,801	14,939	14,364
zinc (US\$/t)	3,168	3,100	3,000	2,854	2,758	2,710	2,613	2,470	2,374	2,232	2,150
lead (US\$/t)	2,226	2,240	2,220	2,107	2,033	1,996	1,922	1,811	1,738	1,629	1,566
Rural commodities index#	161	152	146	142	142	140	136	129	125	119	114
NZ commodities index ##	360	368	353	338	330	322	319	317	315	314	315
dairy price index ^^	322	339	322	306	291	286	284	282	280	282	282
whole milk powder US\$/t	3,987	3,903	3,728	3,560	3,400	3,375	3,350	3,325	3,300	3,325	3,350
skim milk powder US\$/t	3,676	3,506	3,310	3,125	2,950	2,925	2,900	2,875	2,850	2,871	2,893
lamb leg UKp/lb	667	634	610	589	573	562	555	549	543	538	535
bull beef US\$/lb	309	303	288	266	251	245	243	242	241	241	241
log price index ##	185	166	164	162	161	160	160	160	160	160	160
strong wool US\$/kg	189	200	200	200	200	200	200	200	200	200	200

Annual averages	levels				% change			
	2020	2021(e)	2022(f)	2023(f)	2020	2021(f)	2022(f)	2023(f)
Australian commodities index#	214	303	272	224	-2.0	41.5	-10.3	-17.6
Bulk commodities index#	347	542	423	327	0.8	56.4	-22.0	-22.6
iron ore fines @ 62% USD/t	108	162	86	66	16.6	49.1	-46.5	-24.0
LNG in Japan \$mmbtu	7.8	9.5	10.8	9	-28.0	21.1	13.5	-17.8
ave coking coal price (US\$/t)	108	172	228	176	-30.9	60.2	32.5	-23.0
ave thermal price (US\$/t)	57	112	133	98	-24.1	97.7	18.2	-26.5
iron ore fines contracts (US\$/t)	138	237	156	128	11.7	71.6	-34.1	-18.0
coal coking contracts (US\$/t)	90	154	102	83	11.7	71.6	-34.1	-18.0
crude oil (US\$/bbl) Brent ICE	44	70	67	59	-31.2	59.8	-3.8	-12.1
gold (US\$/oz)	1,779	1,802	1,744	1,536	27.3	1.3	-3.2	-12.0
Base metals index#	151	212	215	191	-2.6	40.5	1.2	-11.0
copper (US\$/t)	6,191	9,295	9,269	8,471	2.8	50.1	-0.3	-8.6
aluminium (US\$/t)	1,721	2,462	2,525	2,212	-4.7	43.1	2.6	-12.4
nickel (US\$/t)	13,837	18,447	19,480	16,998	-0.6	33.3	5.6	-12.7
zinc (US\$/t)	2,276	2,983	2,965	2,574	-9.9	31.1	-0.6	-13.2
lead (US\$/t)	1,832	2,188	2,168	1,891	-8.6	19.5	-0.9	-12.8
Rural commodities index#	117	151	150	133	-7.8	28.3	-0.5	-11.4
NZ commodities index ##	289	350	351	318	-3.4	21.4	0.1	-9.3
dairy price index ##	257	322	320	284	-2.8	25.1	-0.7	-11.2
whole milk powder US\$/t	2,975	3,855	3,719	3,348	-4.6	29.6	-3.5	-10.0
skim milk powder US\$/t	2,717	3,328	3,301	2,898	5.8	22.5	-0.8	-12.2
lamb leg UKp/lb	506	645	608	554	-1.4	27.5	-5.6	-8.9
bull beef US\$/lb	234	300	282	243	-3.0	28.1	-5.9	-13.8
log price index ##	156	180	164	160	-5.2	15.2	-8.8	-2.3
strong wool US\$/kg	144	198	200	200	-30.2	37.5	1.0	0.1

Chain weighted index: weights are Australian export shares. * Australian export prices fob - ABS 5432.0 Merchandise Trade Exports. ** WCFI - Westpac commodities futures index. *** Weekly averages except for the Bulks Index. ^ AWEX market prices. Sources for all tables: Westpac Economics, Bloomberg ##ANZ NZ commodity price index ^^ GlobalDairyTrade

Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

United States

Interest rate forecasts

	Latest (8 Dec)	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
Fed Funds*	0.125	0.125	0.375	0.625	0.875	0.875	1.125	1.125	1.375
10 Year Bond	1.47	2.00	2.20	2.30	2.30	2.30	2.25	2.25	2.20

Sources: Bloomberg, Westpac Economics. * +12.5bps from the Fed Funds lower bound (overnight reverse repo rate).

Currency forecasts

	Latest (8 Dec)	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
USD vs									
DXY index	96.38	97.7	98.6	98.1	97.5	97.1	96.6	96.3	95.9
JPY	113.61	116	116	117	117	118	118	119	119
EUR	1.1258	1.10	1.08	1.09	1.10	1.11	1.12	1.13	1.14
AUD	0.7114	0.71	0.70	0.71	0.73	0.75	0.76	0.77	0.78
NZD	0.6779	0.67	0.66	0.67	0.69	0.70	0.71	0.72	0.72
CAD	1.2655	1.25	1.24	1.24	1.23	1.23	1.24	1.24	1.25
GBP	1.3238	1.36	1.37	1.38	1.38	1.37	1.37	1.36	1.35
CHF	0.9249	0.94	0.95	0.95	0.94	0.93	0.93	0.93	0.93
ZAR	15.89	15.9	16.3	16.2	15.9	15.7	15.6	15.5	15.4
SGD	1.3665	1.35	1.35	1.34	1.33	1.32	1.32	1.31	1.31
HKD	7.7973	7.75	7.75	7.75	7.75	7.75	7.75	7.75	7.75
PHP	50.38	49.5	49.0	48.5	47.5	46.5	46.5	46.5	46.5
THB	33.63	33.0	32.5	32.0	31.5	30.5	30.5	30.5	30.5
MYR	4.2319	4.15	4.12	4.09	4.06	4.03	4.03	4.03	4.03
CNY	6.3662	6.35	6.35	6.30	6.25	6.20	6.15	6.15	6.10
IDR	14357	14250	14200	14100	14050	14000	14000	13990	13990
TWD	27.76	27.5	27.5	27.4	27.4	27.3	27.3	27.3	27.3
KRW	1178	1160	1150	1140	1130	1120	1120	1119	1119
INR	75.43	74.0	73.5	73.0	72.5	71.5	71.0	70.5	70.0

Activity forecasts*

% annualised, s/adj	2021				2022				Calendar years			
	Q1	Q2	Q3	Q4f	Q1f	Q2f	Q3f	2020	2021f	2022f	2023f	
Private consumption	11.4	12.0	1.6	5.8	3.6	2.9	2.8	-3.8	8.0	3.9	2.5	
Dwelling investment	13.3	-11.7	-7.7	6.1	6.1	5.3	5.3	6.8	9.5	2.8	4.2	
Business investment	12.9	9.2	1.8	11.3	4.9	4.6	4.6	-5.2	8.6	5.9	4.7	
Public demand	4.2	-2.0	0.8	2.0	0.8	0.8	1.2	2.5	0.8	0.9	1.2	
Domestic final demand	10.5	8.3	1.1	5.9	3.4	2.9	2.9	-2.6	6.9	3.7	2.7	
Inventories contribution ppt	-3.8	-1.7	1.9	2.0	0.4	0.7	0.2	-0.6	-0.2	0.8	0.8	
Net exports contribution ppt	-2.0	-0.4	-1.4	-0.5	-0.3	-0.2	-0.2	-0.2	-1.8	-0.5	-0.2	
GDP	6.3	6.7	2.0	8.0	3.7	3.6	3.1	-3.4	5.7	4.3	2.7	
%yr annual chg	0.5	12.2	4.9	5.7	5.1	4.3	4.6	-	-	-	-	

Other macroeconomic variables

Non-farm payrolls mth avg	245	567	795	500	450	400	375	-760	527	394	263
Unemployment rate %	6.2	5.9	5.1	4.5	4.3	4.2	4.1	8.1	5.4	4.2	3.8
CPI headline %yr	1.4	1.3	2.6	5.3	5.4	6.8	6.8	1.2	5.0	3.1	2.3
PCE deflator, core %yr	2.0	3.6	3.7	3.8	3.5	2.3	1.9	1.5	3.3	2.9	2.1
Current account %GDP	-2.5	-2.5	-2.5	-2.6	-2.6	-2.5	-2.5	-2.5	-2.4	-2.4	-2.4

Sources: Official agencies, Factset, Westpac Economics

Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

Europe & the United Kingdom

Interest rate forecasts

	Latest (8 Dec)	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
Euro area									
10 Year Bund	-0.38	0.25	0.50	0.65	0.70	0.75	0.75	0.80	0.80
10 Year Spread to US	-185	-175	-170	-165	-160	-155	-150	-145	-140
United Kingdom									
10 Year Gilt	0.73	1.40	1.65	1.80	1.80	1.85	1.85	1.85	1.80
10 Year Spread to US	-74	-60	-55	-50	-50	-45	-40	-40	-40

Sources: Bloomberg, Westpac Economics.

Currency forecasts

	Latest (8 Dec)	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
euro vs									
USD	1.1258	1.10	1.08	1.09	1.10	1.11	1.12	1.13	1.14
JPY	127.89	128	125	128	129	131	132	134	136
GBP	0.8504	0.81	0.79	0.79	0.80	0.81	0.82	0.83	0.84
CHF	1.0412	1.03	1.03	1.04	1.03	1.03	1.04	1.05	1.06
DKK	7.4360	7.44	7.44	7.44	7.44	7.44	7.44	7.44	7.44
SEK	10.2673	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3
NOK	10.1692	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
sterling vs									
USD	1.3238	1.36	1.37	1.38	1.38	1.37	1.37	1.36	1.35
JPY	150.39	158	159	161	161	162	162	162	161
CHF	1.2244	1.28	1.30	1.31	1.30	1.27	1.27	1.26	1.26
AUD	0.5373	0.52	0.51	0.51	0.53	0.55	0.55	0.57	0.58

Source: Bloomberg, Westpac Economics.

Activity forecasts*

Annual average % chg	2018	2019	2020	2021f	2022f	2023f
Eurozone GDP	1.9	1.3	-6.6	4.9	4.4	2.5
private consumption	1.5	1.3	-8.0	3.4	5.3	2.5
fixed investment	3.2	5.7	-8.4	5.0	5.0	3.0
government consumption	1.2	1.8	1.4	3.4	2.0	1.8
net exports contribution ppt	0.4	-0.5	-0.7	1.0	1.0	0.5
Germany GDP	1.6	0.6	-5.5	2.8	4.4	4.5
France GDP	1.8	1.5	-8.5	6.3	4.0	4.0
Italy GDP	0.8	0.3	-9.0	5.9	4.1	4.1
Spain GDP	2.4	2.0	-11.0	5.2	6.0	6.0
Netherlands GDP	2.4	1.7	-4.5	3.8	3.2	3.2
<i>memo: United Kingdom GDP</i>	1.3	1.4	-9.9	6.7	5.2	3.0

Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

Asia

China

Calendar years	2017	2018	2019	2020	2021f	2022f	2023f
Real GDP	6.9	6.7	6.0	2.3	8.5	5.7	5.6
Consumer prices	1.8	1.9	4.5	0.2	1.2	2.2	2.5
Producer prices	4.9	0.9	-0.5	-0.4	7.5	3.5	2.0
Industrial production (IVA)	6.6	6.2	5.7	2.8	10.0	5.7	5.4
Retail sales	10.2	9.0	8.0	-3.9	14.0	8.0	8.0
Money supply M2	8.2	8.1	8.7	10.1	8.7	8.8	8.5
Fixed asset investment	7.2	5.9	5.4	2.9	6.0	6.0	5.7
Exports	12.7	-4.4	6.3	13.5	23.0	6.0	6.0
Imports	8.7	-7.6	11.8	2.4	26.0	6.0	5.0
Trade balance USDbn	420	351	421	535	596	632	698

Source: Macrobond.

Chinese interest rates & monetary policy

	Latest (8 Dec)	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
Required reserve ratio %*	11.50	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
Loan Prime Rate, 1-year	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85

* For major banks.

Japanese interest rates & monetary policy

	Latest (8 Dec)	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
Basic balance deposit rate*	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Policy-rate balance deposit rate*	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
10 Year JGB	0.06	0.10	0.15	0.15	0.20	0.20	0.25	0.30	0.35

* The Bank of Japan introduced a three-tier interest rate structure for bank deposits in January 2016.

Currency forecasts

	Latest (8 Dec)	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
JPY	113.61	116	116	117	117	118	118	119	119
SGD	1.3665	1.35	1.35	1.34	1.33	1.32	1.32	1.31	1.31
HKD	7.7973	7.75	7.75	7.75	7.75	7.75	7.75	7.75	7.75
PHP	50.38	49.5	49.0	48.5	47.5	46.5	46.5	46.5	46.5
THB	33.63	33.0	32.5	32.0	31.5	30.5	30.5	30.5	30.5
MYR	4.2319	4.15	4.12	4.09	4.06	4.03	4.03	4.03	4.03
CNY	6.3662	6.35	6.35	6.30	6.25	6.20	6.15	6.15	6.10
IDR	14357	14250	14200	14100	14050	14000	14000	13990	13990
TWD	27.76	27.5	27.5	27.4	27.4	27.3	27.3	27.3	27.3
KRW	1178	1160	1150	1140	1130	1120	1120	1119	1119
INR	75.43	74.0	73.5	73.0	72.5	71.5	71.0	70.5	70.0

Source: Bloomberg, Westpac Economics.

Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

Economic growth forecasts (year average)

Real GDP %ann	2017	2018	2019	2020	2021f	2022f	2023f
World	3.8	3.6	2.8	-3.3	5.4	4.6	3.6
United States	2.3	3.0	2.2	-3.5	5.7	4.3	2.7
Japan	1.7	0.6	0.3	-4.8	2.3	2.7	1.5
Euro zone	2.6	1.9	1.3	-6.6	4.9	4.4	2.5
Group of 3	2.4	2.3	1.6	-4.8	5.0	4.1	2.5
United Kingdom	1.7	1.3	1.4	-9.9	6.7	5.2	3.0
Canada	3.0	2.4	1.9	-5.4	5.1	4.1	2.5
Australia	2.4	2.8	2.0	-2.2	4.3	5.5	3.5
New Zealand	3.1	3.2	2.4	-2.1	3.8	4.8	4.3
OECD total	2.4	2.3	-0.8	-1.8	3.9	3.3	2.6
China	6.9	6.7	5.8	2.3	8.5	5.7	5.6
Korea	3.2	2.9	2.0	-1.0	4.2	3.3	3.1
Taiwan	3.3	2.8	3.0	3.1	6.0	3.5	3.4
Hong Kong	3.8	2.8	-1.2	-6.1	6.4	3.2	2.5
Singapore	4.5	3.5	1.3	-5.4	6.6	4.5	4.5
Indonesia	5.1	5.2	5.0	-2.1	3.3	5.2	5.5
Thailand	4.2	4.2	2.3	-6.1	1.0	4.0	5.0
Malaysia	5.8	4.8	4.3	-5.6	3.9	5.8	5.7
Philippines	6.9	6.3	6.0	-9.5	4.4	6.8	7.2
Vietnam	6.9	7.1	7.0	2.9	2.0	7.5	7.5
East Asia	6.1	5.9	5.1	0.7	7.0	5.4	5.4
East Asia ex China	4.7	4.4	3.7	-2.4	3.8	4.8	5.0
NIEs*	3.4	2.9	1.9	-0.8	5.2	3.5	3.3
India	6.8	6.5	4.0	-8.0	9.0	8.0	7.0
Russia	1.8	2.8	2.0	-3.1	4.0	3.5	2.5
Brazil	1.3	1.8	1.4	-4.1	5.0	2.5	2.0
South Africa	1.4	0.8	0.2	-7.0	3.1	1.8	1.2
Mexico	2.1	2.2	-0.1	-8.2	4.5	3.0	2.9
Argentina	2.8	-2.6	-2.1	-10.0	5.8	2.5	2.4
Chile	1.2	3.7	1.0	-5.8	6.2	3.8	3.6
CIS^	-5.8	2.7	1.2	-1.9	4.3	0.5	0.5
Middle East	1.8	1.4	1.3	3.2	2.8	2.8	2.7
C & E Europe	-0.6	0.1	-1.3	-8.9	4.5	3.8	2.0
Africa	3.1	3.2	3.2	-1.9	3.4	4.0	4.0
Emerging ex-East Asia	2.6	2.9	1.9	-3.6	5.1	4.2	3.7
Other countries	12.7	5.6	5.0	0.4	2.2	5.7	1.5
World	3.8	3.6	2.8	-3.3	5.4	4.6	3.6

#Regional and global groupings are weighted using PPP exchange rates updated to reflect ICP 2011 benchmark revisions.* "NIEs" signifies "Newly Industrialised Economies" as defined by the IMF, viz; Republic of Korea, Hong Kong SAR, Taiwan Province of China, and Singapore. ^ CIS is the Commonwealth of Independent States, including Mongolia. Sources: IMF, Westpac Economics.

Past performance is not a reliable indicator of future performance. The forecasts given above are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The results ultimately achieved may differ substantially from these forecasts.

© Copyright 2021 Westpac Banking Corporation

Things you should know.

Westpac Institutional Bank is a division of Westpac Banking Corporation ABN 33 007 457 141 ('Westpac').

Disclaimer

This material contains general commentary only and is not intended to constitute or be relied upon as personal financial advice. To the extent that this material contains any general advice, it has been prepared without taking into account your objectives, financial situation or needs, and because of this, you should, before acting on it, consider the appropriateness of the advice, having regard to your objectives, financial situation and needs, and, the disclosure documents (including any product disclosure statement) of any financial product you may consider. Certain types of transactions, including those involving futures, options and high yield securities give rise to substantial risk and are not suitable for all investors. We recommend that you seek your own independent legal or financial advice before proceeding with any investment decision. This material may contain material provided by third parties. While such material is published with the necessary permission none of Westpac or its related entities accepts any responsibility for the accuracy or completeness of any such material. Although we have made every effort to ensure the information is free from error, none of Westpac or its related entities warrants the accuracy, adequacy or completeness of the information, or otherwise endorses it in any way. Except where contrary to law, Westpac and its related entities intend by this notice to exclude liability for the information. The information is subject to change without notice and none of Westpac or its related entities is under any obligation to update the information or correct any inaccuracy which may become apparent at a later date. The information contained in this material does not constitute an offer, a solicitation of an offer, or an inducement to subscribe for, purchase or sell any financial instrument or to enter a legally binding contract. Past performance is not a reliable indicator of future performance. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The ultimate outcomes may differ substantially from these forecasts.

Country disclosures

Australia: Westpac holds an Australian Financial Services Licence (No. 233714). This material is provided to you solely for your own use and in your capacity as a client of Westpac.

For XYLO Foreign Exchange clients: This information is provided to you solely for your own use and is not to be distributed to any third parties. XYLO Foreign Exchange is a division of Westpac Banking Corporation ABN 33 007 457 141 and Australian credit licence 233714. Information is current as at date shown on the publication. This information has been prepared without taking account of your objectives, financial situation or needs. Because of this you should, before acting on this information, consider its appropriateness, having regard to your objectives, financial situation or needs. XYLO Foreign Exchange's combined Financial Services Guide and Product Disclosure Statement can be obtained by calling XYLO Foreign Exchange on 1300 995 639, or by emailing customer@XYLO.com.au.

New Zealand: In New Zealand, Westpac Institutional Bank refers to the brand under which products and services are provided by either Westpac or Westpac New Zealand Limited ("WNZL"). Any product or service made available by WNZL does not represent an offer from Westpac or any of its subsidiaries (other than WNZL). Neither Westpac nor its other subsidiaries guarantee or otherwise support the performance of WNZL in respect of any such product. The current disclosure statements for the New Zealand branch of Westpac and WNZL can be obtained at the internet address www.westpac.co.nz. For further information please refer to the Product Disclosure Statement (available from your Relationship Manager) for any product for which a Product Disclosure Statement is required, or applicable customer agreement. Download the Westpac NZ QFE Group Financial Advisers Act 2008 Disclosure Statement at www.westpac.co.nz.

China, Hong Kong, Singapore and India: This material has been prepared and issued for distribution in Singapore to institutional investors, accredited investors and expert investors (as defined in the applicable Singapore laws and regulations) only. Recipients in Singapore of this material should contact Westpac Singapore Branch in respect of any matters arising from, or in connection with, this material. Westpac Singapore Branch holds a wholesale banking licence and is subject to supervision by the Monetary Authority of Singapore. Westpac Hong Kong Branch holds a banking license and is subject to supervision by the Hong Kong Monetary Authority. Westpac Hong Kong branch also holds a license issued by the Hong Kong Securities and Futures Commission (SFC) for Type 1 and Type 4 regulated activities. This material is intended only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance. Westpac Shanghai and Beijing Branches hold banking licenses and are subject to supervision by the China Banking and Insurance Regulatory Commission (CBIRC). Westpac Mumbai Branch holds a banking license from Reserve Bank of India (RBI) and subject to regulation and supervision by the RBI.

UK: The contents of this communication, which have been prepared by and are the sole responsibility of Westpac Banking Corporation London and Westpac Europe Limited. Westpac (a) has its principal place of business in the United Kingdom at Camomile Court, 23 Camomile Street, London EC3A 7LL, and is registered at Cardiff in the UK (as Branch No. BR00106), and (b) authorised and regulated by the Australian Prudential Regulation Authority in Australia. Westpac is authorised in the United Kingdom by the Prudential Regulation Authority. Westpac is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. Westpac Europe Limited is a company registered in England (number 05660023) and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority.

This communication is being made only to and is directed at (a) persons who have professional experience in matters relating to investments who fall within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order") or (b) high net worth entities, and other persons to whom it may otherwise lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). Any person who is not a relevant person should not act or rely on this communication or any of its contents.

Disclaimer continued overleaf

Disclaimer continued

The investments to which this communication relates are only available to and any invitation, offer or agreement to subscribe, purchase or otherwise acquire such investments will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely upon this communication or any of its contents. In the same way, the information contained in this communication is intended for “eligible counterparties” and “professional clients” as defined by the rules of the Financial Conduct Authority and is not intended for “retail clients”. With this in mind, Westpac expressly prohibits you from passing on the information in this communication to any third party. In particular this communication and, in each case, any copies thereof may not be taken, transmitted or distributed, directly or indirectly into any restricted jurisdiction. This communication is made in compliance with the Market Abuse Regulation (Regulation(EU) 596/2014).

Investment Recommendations Disclosure

The material may contain investment recommendations, including information recommending an investment strategy. Reasonable steps have been taken to ensure that the material is presented in a clear, accurate and objective manner. Investment Recommendations for Financial Instruments covered by MAR are made in compliance with Article 20 MAR. Westpac does not apply MAR Investment Recommendation requirements to Spot Foreign Exchange which is out of scope for MAR.

Unless otherwise indicated, there are no planned updates to this Investment Recommendation at the time of publication. Westpac has no obligation to update, modify or amend this Investment Recommendation or to notify the recipients of this Investment Recommendation should any information, including opinion, forecast or estimate set out in this Investment Recommendation change or subsequently become inaccurate.

Westpac will from time to time dispose of and acquire financial instruments of companies covered in this Investment Recommendation as principal and act as a market maker or liquidity provider in such financial instruments.

Westpac does not have any proprietary positions in equity shares of issuers that are the subject of an investment recommendation.

Westpac may have provided investment banking services to the issuer in the course of the past 12 months.

Westpac does not permit any issuer to see or comment on any investment recommendation prior to its completion and distribution.

Individuals who produce investment recommendations are not permitted to undertake any transactions in any financial instruments or derivatives in relation to the issuers covered by the investment recommendations they produce.

Westpac has implemented policies and procedures, which are designed to ensure conflicts of interests are managed consistently and appropriately, and to treat clients fairly.

The following arrangements have been adopted for the avoidance and prevention of conflicts in interests associated with the provision of investment recommendations.

- I. Chinese Wall/Cell arrangements;
- II. physical separation of various Business/Support Units;
- III. Strict and well defined wall/cell crossing procedures;
- IV. a “need to know” policy;
- V. documented and well defined procedures for dealing with conflicts of interest;
- VI. reasonable steps by Compliance to ensure that the Chinese Wall/Cell arrangements remain effective and that such arrangements are adequately monitored.

U.S.: Westpac operates in the United States of America as a federally licensed branch, regulated by the Office of the Comptroller of the Currency. Westpac is also registered with the US Commodity Futures Trading Commission (“CFTC”) as a Swap Dealer, but is neither registered as, or affiliated with, a Futures Commission Merchant registered with the US CFTC. Westpac Capital Markets, LLC (“WCM”), a wholly-owned subsidiary of Westpac, is a broker-dealer registered under the U.S. Securities Exchange Act of 1934 (“the Exchange Act”) and member of the Financial Industry Regulatory Authority (“FINRA”). This communication is provided for distribution to U.S. institutional investors in reliance on the exemption from registration provided by Rule 15a-6 under the Exchange Act and is not subject to all of the independence and disclosure standards applicable to debt research reports prepared for retail investors in the United States. WCM is the U.S. distributor of this communication and accepts responsibility for the contents of this communication. All disclaimers set out with respect to Westpac apply equally to WCM. If you would like to speak to someone regarding any security mentioned herein, please contact WCM on +1 212 389 1269. All disclaimers set out with respect to Westpac apply equally to WCM.

Investing in any non-U.S. securities or related financial instruments mentioned in this communication may present certain risks. The securities of non-U.S. issuers may not be registered with, or be subject to the regulations of, the SEC in the United States. Information on such non-U.S. securities or related financial instruments may be limited. Non-U.S. companies may not be subject to audit and reporting standards and regulatory requirements comparable to those in effect in the United States. The value of any investment or income from any securities or related derivative instruments denominated in a currency other than U.S. dollars is subject to exchange rate fluctuations that may have a positive or adverse effect on the value of or income from such securities or related derivative instruments.

The author of this communication is employed by Westpac and is not registered or qualified as a research analyst, representative, or associated person under the rules of FINRA, any other U.S. self-regulatory organisation, or the laws, rules or regulations of any State. Unless otherwise specifically stated, the views expressed herein are solely those of the author and may differ from the information, views or analysis expressed by Westpac and/or its affiliates.

