

ECONOMIC OVERVIEW

Pushing through.

August 2022



Michael Gordon
Acting Chief Economist
+64 9 336 5670

Satish Ranchhod
Senior Economist
+64 9 336 5668

Nathan Penny
Senior Agri Economist
+64 9 348 9114

Paul Clark
Industry Economist
+64 9 336 5656

New Zealand economy	01
Global economy	04
Inflation and the RBNZ	06
Agricultural outlook	08
Exchange rates	09
Special topic: Migration	10
Economic and financial forecasts	11
The economy in six charts	12



Note from Michael

Our forecasts are increasingly pointing to some lean growth in the years ahead. An overstimulated economy in the wake of the Covid shock has led to the most serious bout of inflation in decades, and demand now needs to be reined back in.

The most significant adjustment is going to have to come through consumer spending, which makes up the lion's share of GDP. We've already seen signs that things are coming off, as household budgets have been squeezed by rising living costs and higher mortgage rates. The latter is now really getting underway, as borrowers refix their mortgages at much higher rates than one or two years ago.

As tough as it may get, the economy will need to push through that pain barrier for a while, because the end results will be worth it. Inflation is undeniably ugly right now, but the combination of softening demand, along with the non-repetition of some price shocks, should be enough to see inflation back towards the Reserve Bank's target over the next few years.

There's also some light at the end of the tunnel in terms of the forces that have restrained the economy during the pandemic. Spending patterns around the world have begun to swing back towards services and away from physical goods, which is taking the pressure off global supply chains. Tourists are starting to return to New Zealand – faster than our admittedly conservative assumption – which means we're getting more value out of our natural assets. And the resumption of migration will help to address skill shortages in some areas, if not economy-wide.

There is a widespread view that the border reopening will lead to an exodus of young New Zealanders. But as our *Special topic* notes, this is only one of the legs that makes up the migration balance, and not the most important one. Arrivals of foreign migrants will be the swing factor in the years ahead.

A handwritten signature in black ink, appearing to read 'Michael Gordon'.

Michael Gordon
Acting Chief Economist

NEW ZEALAND ECONOMY

From 'squeeze' to 'crush'.

The New Zealand economy is at a turning point. The impact of higher interest rates is becoming increasingly evident, and economic growth is set to shift down a gear. We're not forecasting a recession. However, growth is set to remain subdued for some time until the level of demand comes back into line with the economy's productive capacity.

For the past two years domestic demand has been running hot, buoyed by extraordinary levels of policy stimulus, including the very low level of the Official Cash Rate (OCR). That stimulus helped offset much of the drag on activity that resulted from the pandemic, such as the loss of international tourist dollars and the downturn in population growth. And although conditions have been uneven across sectors and regions, overall economic activity has been strong, with unemployment having fallen to just 3.3%.

However, the economy isn't just running hot, it's overheating. Strong demand has compounded the pressure on businesses' operating costs, pushing inflation to a 32-year high of 7.3%. That's squeezing households' spending power. At the same time, the large and continued increases in operating costs has seen businesses' profit margins shrinking, even in sectors where demand has been strong.

To offset the rise in inflation, the Reserve Bank has already reversed the interest rate reductions that followed the initial Covid outbreak, and the OCR is now moving into tight territory.

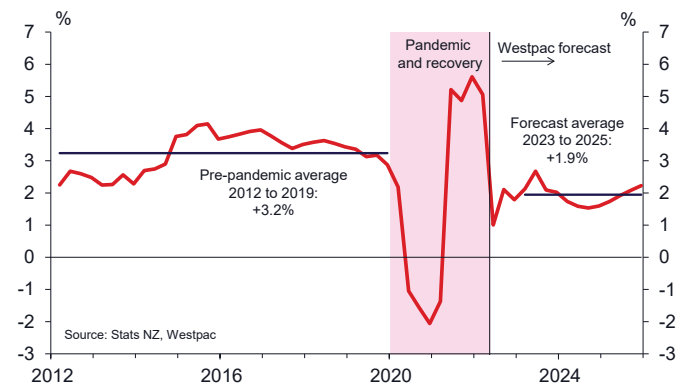
Signs that demand is cooling have become increasingly evident in recent months. House sales and prices have continued to drop. Consumer sentiment has fallen to the lowest level on record. And some businesses, including builders and retailers, have reported a drop-off in forward orders.

We expect that the slowdown in demand will become increasingly stark over the coming months as the rise in interest rates continues to ripple through the economy. We're now forecasting that GDP growth will slow to around 2% by the end of next year. That would be a sizeable step down from the rates of 3% to 4% per annum that we saw prior to the pandemic.

But while the New Zealand economy is likely to lose some steam over the coming year, we're not forecasting a crash or a recession. Rather, we expect the economy will experience a soft landing, with a relatively modest rise in unemployment to around 4.3%. The economy is entering the slowdown from a strong position. In addition to a strong labour market, prices for our key commodity exports remain firm despite recent falls, our tourism sector is opening up again, and household balance sheets have come through the pandemic in good shape. Those conditions mean that as a nation we are better positioned to deal with the drag from higher interest rates and the softening

in demand. Even so, the impacts of the coming slowdown are expected to be varied across the economy.

Figure 1: Economic growth (annual average)



It's just a little crush.

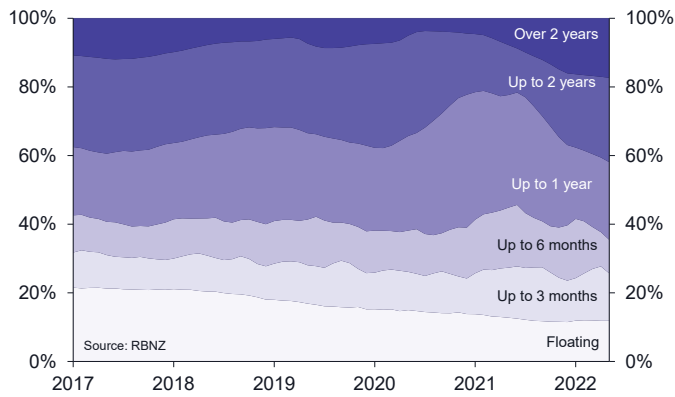
Households' budgets are coming under increasing pressure and we're expecting a slowdown in spending over the coming year. The pressure on households' financial positions is coming on several big fronts.

First is the rise in consumer prices which is eroding households' spending power. Price pressures are boiling over in every corner of the economy, and the past year has seen particularly large increases in the prices of necessities, like food (up 7%), petrol (up 33%) and housing costs (up 9%). Those cost increases are being felt by every family across the country, and the pressure on household budgets has been more intense for those households on lower incomes (who tend to spend a larger share of their earnings on necessities). Wages have also been increasing with average hourly earnings rising by 6.4% over the past year. Even so, for most households income growth still hasn't kept pace with the rise in living costs, meaning the actual amount of goods they can afford has gone backwards.

Adding to the pressure on household budgets has been an increase in debt servicing costs, with mortgage interest rates rising sharply over the past year. Ninety percent of New Zealand mortgages are on fixed rates. And with record low fixed rates on offer over the past year or so, the majority of households have actually been shielded from the impact

of interest rate increases to date. However, that picture will change dramatically over the coming months. Around 24% of mortgages will come up for re-pricing by the end of this year, and a further 23% by mid-2023. In many cases, those borrowers will face refinancing at substantially higher interest rates. For example, borrowers who fixed for two years in 2020 may have secured a rate in the 2.5% to 3% range. Those same borrowers are now looking at a two-year rate that's 2 to 3 percentage points above what it was back then.

Figure 2: Share of mortgages by time to refinancing



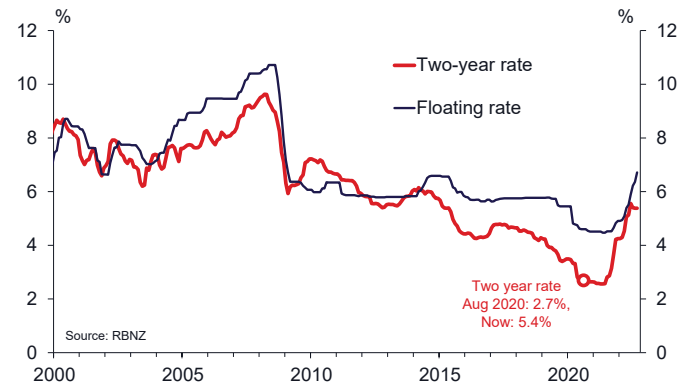
For the average household, the rise in mortgage interest costs will drain around \$3,000 out of their wallets per annum. That'll take a much larger bite out of their spending than the combined increases in the prices of food and fuel. However, the impact of interest rate increases will feel very different for households across the country – many households will have no mortgage, while others may have very high levels of debt.

Mortgage rate fixing has blunted the impact of interest rate rises to date. However, over the coming months many households will face substantial increases in their mortgage payments.

Even accounting for the above headwinds, we expect the resulting slowdown in spending across the economy as a whole will be manageable. While mortgage rates have been climbing, that has been an increase from very low levels. In addition, that rise has taken mortgage interest rates back around the averages that we saw over the past decade, rather than pushing them to elevated levels. Furthermore, the low interest rates over the past few years were a windfall for many households. The related increase in savings levels is providing many households with a buffer from the other factors that are now squeezing their spending power.

The dampening impact of higher borrowing costs is also being felt through the housing market and related hit to households' balance sheets. Since the rise in mortgage rates began last year, nationwide house prices have fallen 8%, with particularly large falls in Wellington and Auckland. Sales have also dropped and are now running at their lowest level in more than a decade (barring the lockdown period in 2020).

Figure 3: Mortgage rates

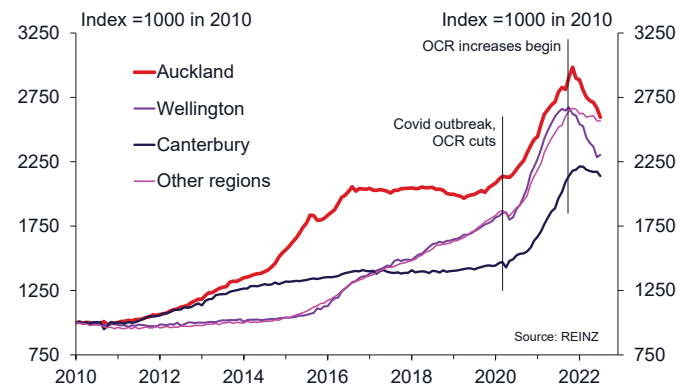


We expect a further cooling in the housing market over the coming months. We're forecasting house prices to fall by a total of 10% over 2022 and have pencilled in a further 5% drop in 2023. Those forecasts are unchanged from our last update in May.

The housing market is a key influence on households' wealth and confidence. And just as the rapid house price gains in recent years boosted spending appetites, the slowdown now in train signals a period of softer spending growth over the next few years.

Even though we are forecasting a sizeable drop in house prices, that follows very large increases in previous years and would only take prices back to the levels we saw at the start of 2021. That also means that housing affordability is set to remain stretched relative to incomes in many parts of the country.

Figure 4: House prices by region



Inspecting the foundations.

The construction sector has been a key driver of employment and economic growth in recent years, and there is a large pipeline of planned projects. However, conditions in the construction sector have changed, and a peak in the cycle is fast approaching, if it's not already here.

The biggest change for the industry has been the erosion of financial incentives for developers. In addition to increases in borrowing costs, house prices are falling and prospective buyers are increasingly hesitant about purchasing homes off the plan. At the same time, build costs have skyrocketed, with ongoing difficulties sourcing staff even as the earlier shortages of materials have begun to abate. The resulting squeeze on

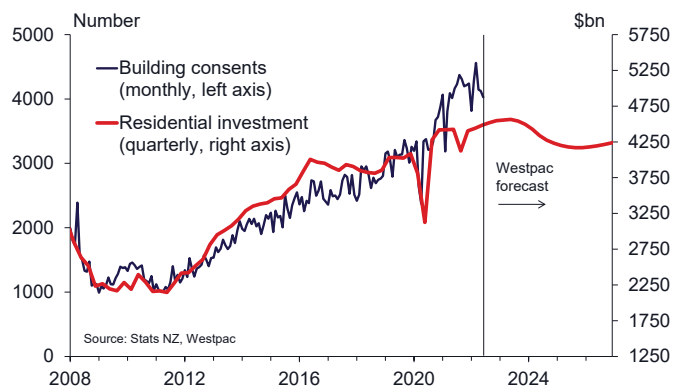
profit margins has meant that developers are increasingly nervous about bringing new projects to market.

The financial incentives for developers have been eroded, and a peak in the construction cycle is fast approaching, if it's not already here.

There has also been a big change in population trends compared to pre-pandemic levels. As discussed in our *Special topic*, net migration has plummeted since 2020 and it's set to remain low for some time yet. With a downturn in population growth at the same time that home building has charged higher, the shortage of homes that developed in recent years is now being rapidly eroded. Furthermore, even allowing for a lift in migration over the coming years, consent issuance is now running well ahead of what's needed to keep up with population changes.

With financial conditions becoming increasingly tight, we expect the coming years will see a sizeable pullback in construction activity of around 10%. However, that will be a decline from the very elevated levels in recent years. Furthermore, with a significant pipeline of projects already in train, this is likely to be an easing back over the next few years, rather than a sudden collapse.

Figure 5: Dwelling consents and residential construction



There's more where that came from (for now).

Large increases in government spending were a key factor that underpinned the economy's resilience through the worst of the pandemic. Now, as our approach to managing Covid has evolved and the need for that earlier 'emergency' support has faded, increases in fiscal spending are set to moderate over the coming years.

Nevertheless, we expect that the Government will ultimately spend more than it flagged in the May Budget. Upward pressure on wages and other operating costs means that the Government will have to increase its spending allowances in order to maintain its spending and investment in high priority policy areas, such as health, education and housing.

The Government's finances did come through the pandemic in better-than-expected shape. Even so, with the above pressures in mind, we expect that the Government will continue to run operating deficits through 2026, with net debt tracking higher than assumed in the May Budget. That may put the Government's financial position at odds with the new fiscal rules it announced earlier this year. It also means that as a nation we will be confronted with some tough policy choices over the coming years: future Governments will need to look at potentially unpalatable options such as reducing spending, increasing taxes, or both.

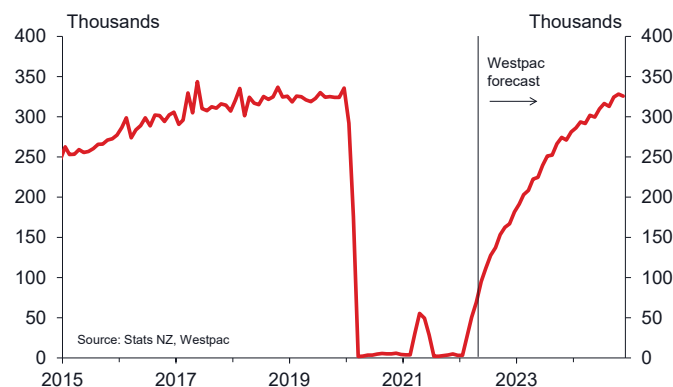
Future Governments will need to look at potentially unpalatable options such as reducing spending, increasing taxes, or both.

Now boarding.

Providing some offset to the softening in domestic demand is the reopening of our borders and related recovery in tourism exports that's now in train. International visitor numbers have been climbing rapidly since the border with Australia reopened earlier this year. That's been a particularly welcome development for our hospitality sector, with businesses in tourist hotspots like Queenstown reporting a strong lift in bookings. However, like other parts of the economy, the hospitality sector is struggling with shortages of staff. Consequently, many service providers in the sector are still being forced to operate below pre-pandemic levels, even as demand has picked up.

It will take some time for tourist numbers to fully retrace their pre-pandemic highs, especially as visitors from the high spending Chinese market are unlikely to return until around mid-2023. Even so, we expect to see tourism exports continuing to rise over the coming months as increasing numbers of visitors from other nations return to our shores.

Figure 6: Monthly visitor arrivals, seasonally adjusted

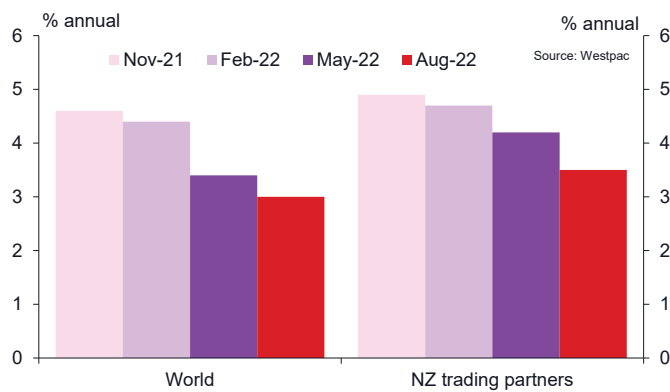


GLOBAL ECONOMY

Slash, but not burn.

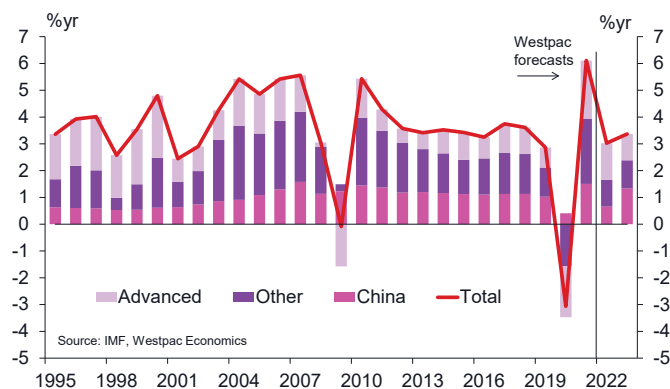
With global central banks hiking interest rates aggressively to counter inflation, we have slashed our global growth forecasts. For now, we assume that central banks get the balance right, and global growth, while lower, does not slump. Nonetheless, the risks to our global growth outlook are on the downside. Meanwhile, for New Zealand, we expect that the slowdown in global growth will have a more muted impact on our export sector than it usually does.

Figure 7: Evolution of 2022 GDP growth forecasts



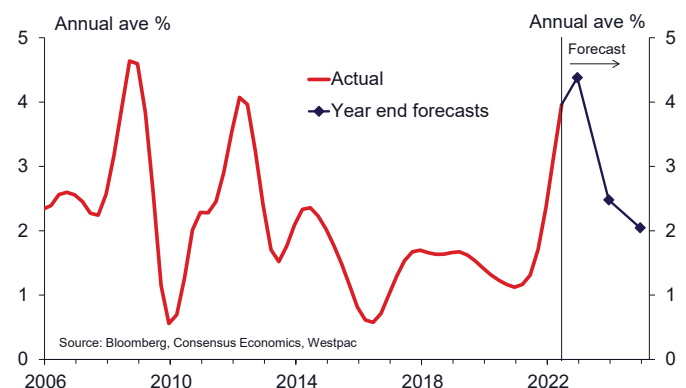
The global economic outlook has deteriorated rapidly. As a result, we have slashed our global growth forecasts. We now expect that the world economy will grow by an anaemic 3.0% over 2022, followed by a relatively modest rebound to 3.4% over 2023. Our 2022 forecast is down 0.4 percentage points from our May *Economic Overview* and down a whopping 1.7 percentage points from a year ago. It's a similar picture when we look at New Zealand's main trading partners – we expect subdued 3.5% growth over 2022, followed by a modest pickup to 4.1% over 2023.

Figure 8: Global GDP growth



The slowing US economy is central to this view and reflective of the broader global inflation-growth malaise. In the first instance, signs of overheating abound with the labour market tight as a drum and inflation steaming ahead in June. Indeed, annual inflation breached 8% in March before eventually hitting 9.1% in June, the steepest rise since 1981.

Figure 9: Global inflation



We have slashed our global growth forecasts and expect that the world economy will grow by an anaemic 3.0% over 2022.

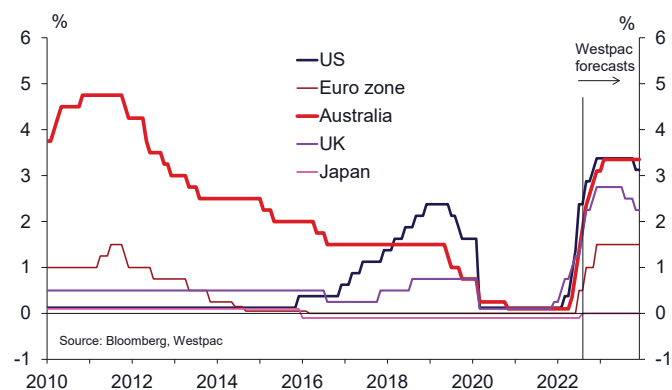
On the back of these huge prints, the US Federal Reserve has moved aggressively over recent months to clamp down on inflation. After starting its hiking cycle tentatively back in March, the Federal Reserve has upped the ante, hiking by a whopping 75 basis points in both June and July. These moves have seen the policy rate hit 2.375%. And at this point, we expect a 50 basis point hike at the September meeting, followed by two 25 basis point hikes. All up, we expect the policy rate to end the year at 3.375%, taking it from the ultra-accommodative levels seen in recent years back to moderately restrictive levels.

The US Federal Reserve has moved aggressively over recent months to clamp down on inflation.

While we expect these moves to have the desired dampening effect on inflation, they are also tightening the vice on US growth. The trick of course will be not to tighten so as to strangle growth, but to slow enough to crush inflation, or in the Federal Reserve's words: "just the right amount of tightening". We expect the Federal Reserve to walk that particular tightrope, with annual growth falling to 1.7% over 2022 and a low, but still positive, 0.6% over 2023. At the same time, we expect US inflation will fall to 5.7% by the end of 2022 and to a close-to-target 2.4% by the middle of 2023.

It's a similar balancing act elsewhere. In Australia, for example, the Reserve Bank (RBA) has started to tighten policy aggressively. After being somewhat of a late starter, the RBA has hiked four times for a total of 175 basis points to 1.85%. From here, we expect a further 150 basis points of tightening, with the cash rate reaching 3.35% by early 2023.

Figure 10: Global central bank policy rates



On the growth front, the Australian economy still has momentum. As a result, we expect a relatively strong result of 4.9% annual growth over calendar 2022. But as inflation and higher interest rates bite, we expect growth to decelerate to 2.1% over 2023. Reflecting the later start to the RBA's hiking cycle, we expect inflation to peak at 7.6% in the December quarter, before it dips to 3.1% by the end of 2023.

Meanwhile, the Chinese economy is on a different trajectory. There, the Omicron wave and associated Covid restrictions have curtailed growth over the first half of the year. Indeed, the Chinese economy grew by a miserly 0.4% in annual terms over the June quarter. Following this disappointment, we have revised down our growth forecast for 2022 to 3.5% - that's well short of the Government's earlier target of 5.5%.

The second half of the year is shaping up better for the Chinese economy. Covid restrictions have eased, and manufacturing activity is getting back closer to normal. Importantly for New Zealand, the household sector is already on a firm footing, with retail sales showing positive signs. This turnaround should translate into improved demand for New Zealand's food exports as we head into the end of the year.

That's not to say that the overall slowdown in global demand, including from China, hasn't impacted demand for New Zealand exports. Indeed, as we discuss in the *Agricultural outlook* section, New Zealand's commodity prices are well past their peaks, with the catalyst for the price retreat clearly on the demand side. However, as we also note, the impact of very tight global supply is partially offsetting the weakness in global demand, so prices are set to stay higher than we would normally expect.

We also expect our tourism exports to delink temporarily from global economic growth. This delinking reflects the pent-up tourism demand over the Covid years. And now that our borders are open, tourists are flocking in, regardless of the state of the global economy. In fact, we have revised our tourism arrivals forecast higher since the last *Economic Overview* based on better-than-expected arrivals to date and the strength of forward bookings heading into our peak tourist season over summer.

Our forecasts assume that global central banks "get it right" and global economic growth holds up at lower, but still reasonable levels.

Turning to the risks around our global growth forecasts, these clearly lie to the downside. Our forecasts assume that global central banks largely "get it right" and global economic growth holds up at lower, but still reasonable levels. For example, we don't expect unemployment rates to spike over 2022 and 2023. Indeed, central banks face a delicate balancing act, and there is no guarantee that all things do go to plan.

On that front, global financial markets have their doubts. Indeed, the risk of a US recession or global slowdown has been priced into interest rate and exchange rate markets. As we note in the *Exchange rates* section, the New Zealand dollar has been weighed down by these moves, with the NZD/USD trading as low as US\$0.61 over recent months. Although we note that with the New Zealand dollar at this level, New Zealand's export sector has been further insulated from the hit it might have otherwise taken from slowing global export demand.

Global financial markets are also focused on geopolitical risks. The Russia-Ukraine war is ongoing, with little resolution in sight, while China-Taiwan-US relations have deteriorated following Nancy Pelosi's visit to Taiwan. All up, these and the previously mentioned risks make for a complicated and uncertain global growth picture, with the outlook delicately balanced.

INFLATION AND THE RBNZ

Light at the end of the tunnel.

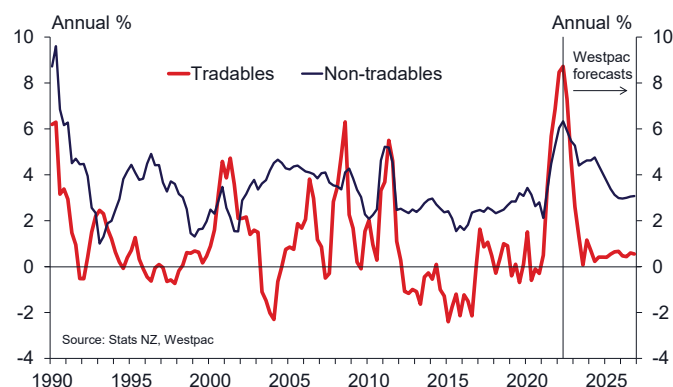
We now expect the Official Cash Rate to peak at 4%, most likely by the end of this year. The Reserve Bank will need to keep the cash rate at restrictive levels for some time yet. But there are signs that higher interest rates are having the desired results on the economy. Coupled with signs that some of the recent price shocks are receding, inflation is on track to return to target in the coming years without requiring shock therapy.

The current inflation picture can only be described as grim. Consumer prices rose 7.3% in the year to June, another record high in the inflation-targeting era. Businesses are widely reporting that their costs are rising and that they intend to pass these on to customers. Importantly, labour costs are now also rising rapidly, a source of inflationary pressure that has the potential to become persistent.

However, there is reason to believe that the rate of inflation has peaked and is on the path to something more tolerable. Some of the previous price spikes that drove last year's rapid rise in import prices have flattened off or, in some cases such as oil, have started to reverse. And locally, the Reserve Bank is now well down the path of tightening monetary policy in order to bring the level of demand back into line with the economy's productive capacity.

We expect inflation to drop to a still uncomfortably high 5.1% by the end of this year, and to remain above 3% through most of next year. Only by 2024 do we expect inflation to be sustainably back within the Reserve Bank's 1-3% target range, and even then taking some time longer to return to the 2% midpoint.

Figure 11: Breakdown of consumer price inflation



To understand how that drop in inflation occurs, we can separate it into globally-driven (or 'tradables') and locally-driven (or 'non-tradables') components. Much of the surge in inflation over the past year has been due to global factors: Covid disruptions to supply chains, soaring shipping costs, and

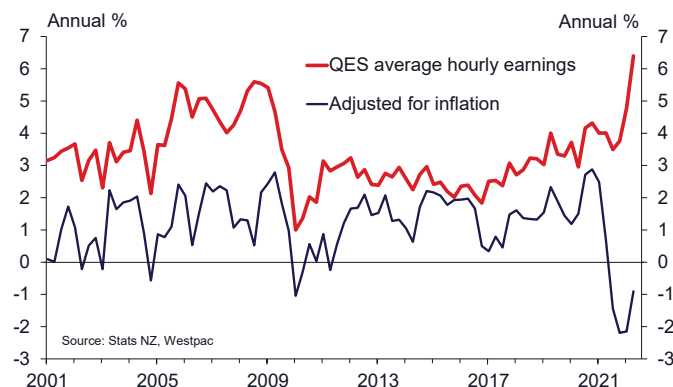
a surge in oil and other commodity prices. These kinds of price rises are typically non-repeating by nature.

We are now seeing some of those forces work in the opposite direction. Supply chain disruptions, while still present, are lessening as the world adjusts to living with Covid. Similarly, as borders have reopened, consumer spending patterns are switching back towards services and away from physical goods. This has taken the pressure off the global transport industry, with shipping container rates now down 40% on a year ago. And after the initial chaos from Russia's invasion of Ukraine, commodity prices have eased off in many cases.

We expect that by the end of next year tradables inflation will have receded to close to zero – essentially its long-run average. It's possible that this could even turn negative for a while if some of these price rises unwind faster than expected. However, we would regard that as just as 'transitory' on the way down as it was on the way up.

While the global component of inflation is set to ease, the domestically-driven component has further to go. To a large extent, price pressures in this category reflect the tightness of the labour market. On that front, wage growth, often a lagging feature of the economic cycle, is now gaining some real momentum. Average hourly earnings rose 6.4% in the year to June, the fastest pace since 1990.

Figure 12: Nominal and real wage growth



Wage growth is still falling short of consumer price inflation. But the gap has narrowed to a greater degree than we expected. Over the year ahead, we expect real wage growth to turn positive again, though it probably won't claw back the losses of the last year.

The one, rather large, exception to the strength in non-tradables inflation is new home prices. Strong demand for new builds, limited responsiveness in supply, and cost shocks for local and imported materials have seen new build prices rise by a massive 18% over the last year. However, there are anecdotes that the rise in prices has now reached a pain point for buyers. At the same time, the pressure on materials prices is coming off as plans are delayed or cancelled. For these reasons we think that non-tradables inflation as a whole has also peaked, but outside of housing will remain very strong.

Globally-driven inflation is likely to recede, but homegrown inflation pressures remain strong.

The task ahead for the Reserve Bank is to bring inflation back to the target range, within a reasonable period of time, and ideally without driving the economy into recession. That will require two things. First, it needs to bring demand back into line with the economy's capacity. Second, it needs to ensure that people's price and wage expectations remain well anchored to the inflation target.

When Covid first hit, policymakers assumed that this shock would look like previous recessions – that is, a sharp drop in demand, which would have to be propped up through government spending and lower interest rates. In time, though, it became apparent that Covid was largely a supply-side shock, increasing costs and weighing on productivity.

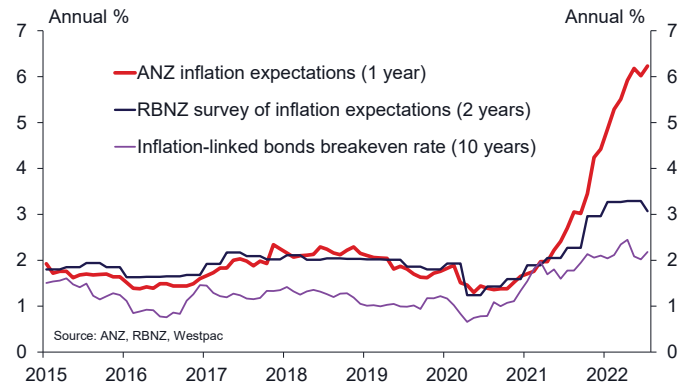
That combination of weaker supply and unprecedented demand stimulus was a double-whammy for inflation. To correct this, policymakers – and specifically monetary policy – have needed to bring demand back into line with supply. That doesn't necessarily mean that the RBNZ needs to push the economy into outright recession, as it also depends on how the supply side adjusts over time. Covid disruptions will linger but won't necessarily be permanent, and the reopening of the border will help to rebalance the economy in some respects.

However, aligning demand and supply won't be enough on its own if high inflation becomes embedded in people's expectations. This was the crucial element of the 'stagflation' of the 1970s (and why we haven't seen a similar incident since). Inflation rose steadily through the 1960s, and people were given no reason to believe that the government would take the necessary steps to bring inflation down again. As a result, large increases became baked into wage claims and business costs, and by the 1970s high inflation was almost a self-fulfilling prophecy.

Fortunately, the RBNZ is faring much better on this count today. Inflation is expected to remain painfully high in the near term, but longer-term expectations remain closer to the inflation target and in fact have eased back in the last few months. This

should greatly reassure the RBNZ that high inflation hasn't become embedded in the economy, and won't require the kind of shock treatment that we saw in the 1970s (or well into the 1980s in New Zealand's case).

Figure 13: Measures of inflation expectations



With the above in mind, we expect the RBNZ to stay the course it has previously outlined. Specifically, we expect the RBNZ to lift the Official Cash Rate to reach a peak of 4% for this cycle. More critically, interest rates will need to remain high for some time, in order to have the required braking effect on the economy. We don't expect a reduction in the OCR until the second half of 2024.

In contrast, financial markets have been quick to try and anticipate the next phase of monetary policy, and are pricing in OCR cuts as early as the second half of 2023. That pricing has in turn flowed through into a drop in mortgage rates from their highs in recent weeks. However, we think that drop has been too hasty. The RBNZ will be reluctant to encourage a further move lower in borrowing rates while it's still in the thick of its inflation battle.

Interest rates will need to remain high for some time, in order to have the required braking effect on the economy.

Financial market forecasts (end of quarter)

	CPI inflation	OCR	90-day bill	2 year swap	5 year swap
Sep-22	6.4	3.00	3.70	3.90	3.70
Dec-22	5.1	4.00	4.10	3.90	3.70
Mar-23	4.2	4.00	4.10	3.80	3.60
Jun-23	3.1	4.00	4.10	3.70	3.50
Sep-23	2.7	4.00	4.10	3.50	3.35
Dec-23	3.2	4.00	4.10	3.30	3.20
Mar-24	3.0	4.00	4.10	3.10	3.05
Jun-24	2.9	4.00	3.80	2.80	2.90
Sep-24	2.8	3.50	3.30	2.60	2.80
Dec-24	2.6	3.00	3.00	2.40	2.70

AGRICULTURAL OUTLOOK

The high plateau.

New Zealand's commodity prices and input prices are past their peaks. But we expect the falls to prove moderate and for prices to stabilise at high levels. Accordingly, prices are likely to remain at these new levels over 2022 and well into 2023. In other words, prices have simply moved from the peaks to a high plateau.

New Zealand's commodity prices are past their peak, with prices down over 8% in world terms. Notably, within that broader fall, dairy auction prices have fallen by 27%.

The catalysts for the price falls mainly relate to weaker global demand. For example, China has been battling its Omicron wave, with Covid restrictions leading to lower demand. We now expect the Chinese economy to grow just 3.5% this year, well short of the Government's earlier target of 5.5%. Similarly, the economic outlook has weakened in other key markets as high inflation and rising interest rates combine to squeeze household budgets, thus crimping demand for our exports.

But the global meat and dairy price outlook is still firm on the back of very weak global supply. For example, we expect dairy production in all three key exporting regions – New Zealand, the EU and the US – to fall in 2022. Indeed, all three regions posting production falls is very rare.

Other factors are giving farmgate prices an additional leg up. Firstly, the New Zealand dollar is at a low and highly supportive level. Secondly, shipping rates are falling, providing a shot in the arm for all exporters. Thirdly, for sheep and beef farmers, processing capacity is returning closer to normal. All up, this means that more of the strength in export prices is making it into farmers' pockets.

The horticultural price outlook is also healthy. Kiwifruit export prices are back a touch, but the weak New Zealand dollar means that orchard gate prices are tracking above last season. Meanwhile, apple export prices are firm, although that's on the back of labour shortages and a subsequently small apple crop.

The clear exception to the trend is forestry. Prices have fallen on weak Chinese demand as the Chinese economy has slowed. In addition, structural reform of the Chinese construction sector means that the red-hot pace of construction over recent years is unlikely to repeat. As a result, we expect export prices to lift only modestly from their current lows over the coming years, even as the Chinese economy rebounds.

Countering the strong commodity price outlook is a similarly strong outlook for agricultural input prices. March quarter farm input inflation was running at over 10% annually, and we expect little, if any, reprieve in June. Over the rest of 2022 and into 2023, we expect input prices to moderate but to remain high. Prices for some inputs like fuel have already turned lower, while fertiliser prices have also peaked. In contrast, wages and feed prices are set to remain high for some time.

In that sense, both New Zealand's commodity prices and agricultural input prices may have peaked. But these declines are moderate and, with that in mind, we expect prices on most fronts to remain structurally high over 2022 and well into 2023.

Commodity price monitor

Sector	Trend	Current level ¹	Next 6 months
Dairy	We see downside risks to our 2022/23 farmgate milk price forecast of \$9.25/kg. However, with global dairy supply very weak, Chinese dairy demand set to rebound, and the added support of a weak NZD/USD, we still expect a healthy milk price this season.	High	→
Beef	We expect farmgate beef prices to crack the \$7.00/kg mark this spring as meat processing capacity normalises, shipping rates ease and the NZD/USD remains supportive.	Average	↑
Lamb/Mutton	We expect farmgate lamb prices to crack the \$10.00/kg mark this spring as meat processing capacity normalises, shipping rates ease and the NZD/USD remains supportive.	High	↗
Forestry	With soft activity in China's construction sector, we expect forestry export prices to remain low. Prices may improve modestly late in 2022 as Chinese growth rebounds on the back of easing Covid restrictions.	Low	→
Horticulture	The weak NZD/USD has kept kiwifruit orchard gate prices at or above last season's levels. Apple prices are also up on last season's levels, although that's on the back of a disappointingly small crop as well as the weak NZD/USD.	Above average	→

¹ New Zealand dollar prices adjusted for inflation, deviation from 10 year average.

EXCHANGE RATES

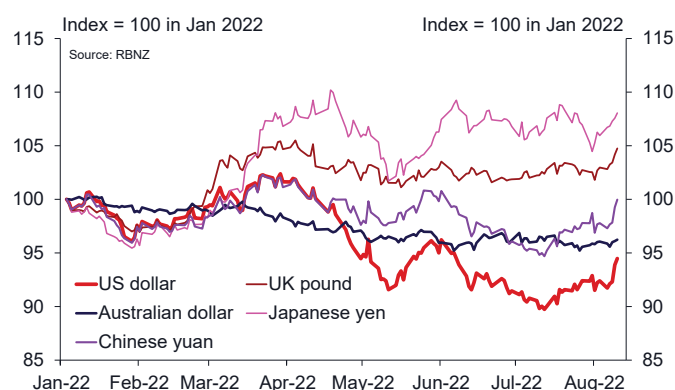
Ride the wave.

Financial markets have been volatile in recent months, with nervousness about inflation and global growth boosting demand for the US dollar. We expect that safe-haven demand will give way to a period of US dollar weakness over the year ahead, with a related rise in the New Zealand dollar and other commodity currencies. However, the potential for gains relative to the Australian dollar look limited, with the NZD/AUD set to hold around current levels.

Since our last update in May, the New Zealand dollar has been tossed about by swings in global risk appetite. The Kiwi initially found support after the RBNZ's 50bp hike in May, rising to over 65 cents against the US dollar. However, that rise was short-lived.

More recently, financial markets have grown increasingly concerned about the lift in inflation and related recession risks as central banks around the globe have tightened policy. The resulting safe-haven demand has boosted the US dollar, while weighing on commodity currencies like the New Zealand dollar. Combined with worries about a hard landing domestically and a fall in prices for some of our key exports, that nervousness saw the Kiwi sinking to 61 cents in July. The NZD/USD has since regained some ground, and at the time of writing was trading around 64 cents.

Figure 14: New Zealand dollar exchange rate vs major currencies



Sentiment in currency markets remains fragile with a risk of continued volatility in the near term. Financial markets remain acutely focused on the risks for growth. And with data continuing to deliver mixed signals on the strength of economic conditions, pricing for monetary policy is continuing to swing about both here and in other regions.

Further ahead, we expect that the recent period of safe-haven demand will give way to US dollar weakness, with a sharp slowdown in US consumption and investment spending expected over 2023. Consistent with that, we expect to see the US dollar trending down over the coming year.

Underpinned by weakness in the US dollar, we expect the New Zealand dollar will rise to 66 cents by year's end, with a further lift on the cards through 2023. While we are forecasting a cooling in domestic activity, that slowdown is expected to be relatively moderate compared to other economies like the US. We also expect to see prices for New Zealand's key commodity exports firming again as the Chinese economy recovers from its recent Covid lockdowns.

Relative to its Australian counterpart, the New Zealand dollar is currently trading around 90 cents. We expect the pair will remain around this level through 2023, with limited scope for a break to the upside despite the prospect of a sharper deceleration in growth for Australia. In part, that reflects differing expectations for monetary policy: New Zealand's tightening cycle is well advanced, while rate hikes in Australia are likely to continue for longer. In addition, strong demand for industrial commodities means that Australia is now running trade surpluses (in contrast to New Zealand's ongoing deficits).

The New Zealand dollar is expected to remain rangebound relative to most other major currencies over the year ahead, including the euro and the pound. However, the dollar is expected to continue rising relative to the yen due to the Bank of Japan's more accommodative policy stance.

Exchange rate forecasts (end of quarter)

	NZD/USD	NZD/AUD	NZD/EUR	NZD/GBP	NZD/JPY	TWI
Sep-22	0.64	0.90	0.61	0.52	84.5	71.6
Dec-22	0.66	0.90	0.61	0.52	87.1	72.5
Mar-23	0.68	0.91	0.61	0.53	88.4	73.6
Jun-23	0.69	0.91	0.61	0.53	87.6	73.7
Sep-23	0.70	0.91	0.61	0.53	87.5	73.9
Dec-23	0.71	0.91	0.62	0.53	87.3	74.2
Mar-24	0.71	0.91	0.61	0.53	85.9	73.9
Jun-24	0.71	0.91	0.60	0.52	84.5	73.4
Sep-24	0.71	0.90	0.60	0.52	83.2	72.9
Dec-24	0.70	0.90	0.60	0.52	81.9	72.3

SPECIAL TOPIC

Migration: Hello, goodbye.

With New Zealand now reopening to the world, there have been many predictions of a sharp outflow of New Zealanders, reflecting a pent-up demand to live and work overseas. But this is only one of the four legs that make up the net migration balance. And in many cases, we have already seen substantial movements of people even during the border ‘closure’. We expect foreign arrivals to be the swing factor in the year ahead, driving a return to positive net migration.

After more than two years of Covid restrictions, New Zealand has been gradually reopening its borders to both short-term visitors and longer-term migrants since March. It’s still early days, and any prospect of a return to ‘normal’ could be some years away. But with a few months of data now under our belts, we can form a clearer picture of how this might play out in the next year or so.

Before the pandemic, New Zealand saw a net inflow of around 50,000 migrants a year. These figures spiked higher just before the border closure, which was partly due to New Zealanders rushing to return home, but was mostly a quirk of the data – many travellers found themselves stuck in New Zealand for longer than intended and became classified as migrants.

With foreign arrivals largely cut off after March 2020, the balance of migrant flows soon turned negative. Current data suggests that the net outflow peaked at around 15,000 people in the year to February 2022. However, these figures can be revised significantly as more data becomes available. We think that the peak outflow could prove closer to 25,000 people in the final results. This would effectively mean that New Zealand had zero population growth in the last year.

But while the recent track record has probably been worse than recognised, we argue that the worst is now past us. That may seem to go against the many predictions of an exodus of people as the border reopens, based on a pent-up demand for the ‘overseas experience’. We don’t dispute that this will be a factor. But outflows of New Zealanders are only one of the four legs that make up the migration balance.

Moreover, it’s easy to overstate the potential outflows involved. Firstly, the importance of the OE has greatly diminished over time. In the years before Covid, the typical departing Kiwi was not a young person going to London, but a family going to Australia. Second, outflows are more a function of other countries’ border rules than our own. New Zealanders have been able to enter Australia since October 2020, and many have done so – at times, outflows of New Zealanders have been close to the pre-Covid pace. This suggests there is less pent-up demand to travel than is often stated.

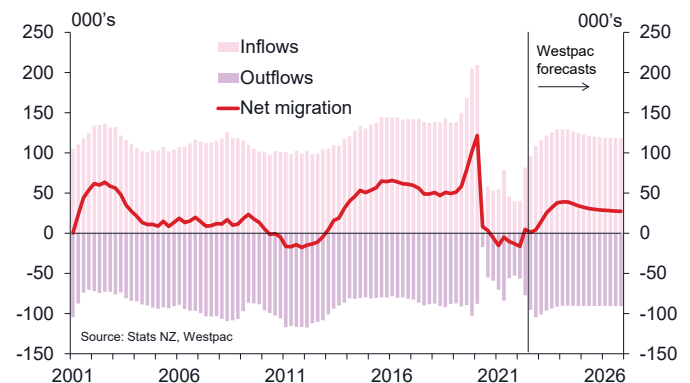
That last point is also true of some of the other legs that make up the balance of migration. New Zealanders have been

returning from overseas at a solid pace over the last two years, subject to the availability of MIQ facilities (the most restricted period being the second half of 2021). Meanwhile, departures of non-New Zealanders have continued at a steady pace, as people have returned to be with family or as their visas have expired. Indeed, the pool of people in the country on temporary visas has been depleted to the point that outflows are likely to be lower than normal for some years to come.

With this in mind, the swing factor in the migration balance is likely to be foreign arrivals, which remained very low during the border closure. How quickly these flows pick up is highly uncertain, especially with the Government’s reset of migration policy during the pandemic. Even so, we expect these inflows to drive a return to positive net migration over the next couple of years. In the longer term, we expect the balance to settle at 25-30,000 people per year – lower than in the pre-Covid years, but close to the average of the last two decades.

We expect that the return of migrants will do little to alleviate the overall labour shortages in the New Zealand economy. Migrants add to the supply of labour, but they also add to the demand for goods and services. So while migrants will certainly help to address skill shortages in certain sectors, they could add to the pressure on other sectors. Rebalancing supply and demand ultimately has to be done at the macroeconomic level, specifically through monetary policy.

Figure 15: Quarterly net migration, annualised



ECONOMIC AND FINANCIAL FORECASTS

New Zealand forecasts

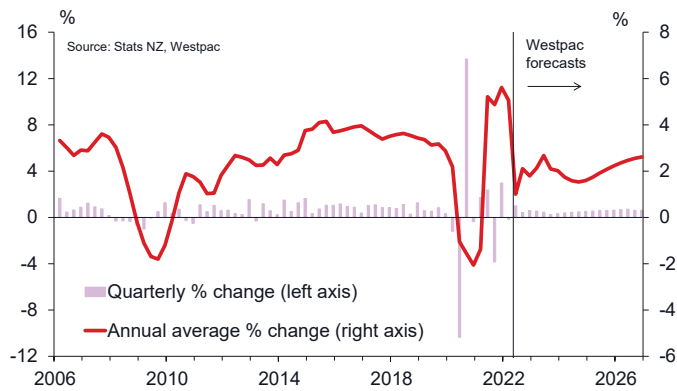
GDP components	Quarterly % change				Annual average % change			
	Jun-22	Sep-22	Dec-22	Mar-23	2021	2022	2023	2024
GDP (production)	1.0	0.4	0.6	0.6	5.6	1.8	2.0	1.6
Private consumption	-2.9	0.1	-0.1	0.0	6.1	2.3	-0.3	2.2
Government consumption	2.0	-0.7	-0.7	-0.7	10.1	7.6	-2.4	-1.6
Residential investment	1.0	0.8	0.6	0.2	10.9	3.5	0.9	-4.9
Business Investment	-2.1	0.8	1.7	1.3	9.4	7.3	3.2	1.4
Exports	17.0	6.2	3.9	3.0	-3.6	1.2	16.3	6.3
Imports	1.5	2.4	2.0	1.0	15.0	4.6	5.5	3.2
Economic indicators	Quarterly % change				Annual % change			
	Jun-22	Sep-22	Dec-22	Mar-23	2021	2022	2023	2024
Consumer price index	1.7	1.4	0.2	0.9	5.9	5.1	3.2	2.6
Employment change	0.0	0.1	0.1	0.1	3.4	0.2	0.8	0.9
Unemployment rate	3.3	3.3	3.4	3.5	3.2	3.4	3.8	4.2
Labour cost index (all sectors)	1.1	0.9	1.0	1.0	2.6	3.9	4.3	3.3
Current account balance (% of GDP)	-7.6	-7.8	-7.4	-6.4	-5.8	-7.4	-4.6	-3.1
Terms of trade	-3.8	4.4	0.0	0.8	2.8	1.1	2.3	2.5
House price index	-4.6	-2.3	-1.4	-1.5	27.2	-10.0	-5.0	1.0
Financial forecasts	End of quarter				End of year			
	Jun-22	Sep-22	Dec-22	Mar-23	2021	2022	2023	2024
90 day bank bill	1.85	3.70	4.10	4.10	0.69	4.10	4.10	3.00
2 year swap	3.83	3.90	3.90	3.80	2.08	3.90	3.30	2.40
5 year swap	3.92	3.70	3.70	3.60	2.46	3.70	3.20	2.70
10 year bond	3.70	3.40	3.50	3.40	2.39	3.50	3.00	2.80
TWI	72.2	71.6	72.5	73.6	74.3	72.5	74.2	72.3
NZD/USD	0.65	0.64	0.66	0.68	0.69	0.66	0.71	0.70
NZD/AUD	0.91	0.90	0.90	0.91	0.95	0.90	0.91	0.90
NZD/EUR	0.61	0.61	0.61	0.61	0.61	0.61	0.62	0.60
NZD/GBP	0.52	0.52	0.52	0.53	0.52	0.52	0.53	0.52

International economic forecasts

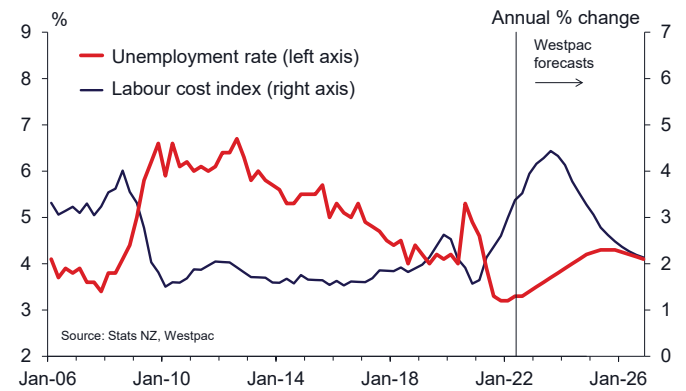
Real GDP (calendar years)	Annual average % change					
	2018	2019	2020	2021	2022f	2023f
Australia	2.8	2.0	-2.1	4.8	4.9	2.1
China	6.8	6.0	2.2	8.1	3.5	7.0
United States	2.9	2.3	-3.4	5.7	1.7	0.6
Japan	0.6	-0.2	-4.5	1.6	1.7	1.7
East Asia ex China	4.5	3.8	-2.3	4.1	4.5	4.6
India	6.5	3.7	-6.6	8.9	7.5	6.5
Euro Zone	1.8	1.6	-6.4	5.3	2.2	1.5
United Kingdom	1.7	1.7	-9.3	7.4	3.3	-1.0
NZ trading partners	4.1	3.5	-1.6	5.9	3.5	4.1
World	3.6	2.9	-3.1	6.1	3.0	3.4

THE ECONOMY IN SIX CHARTS

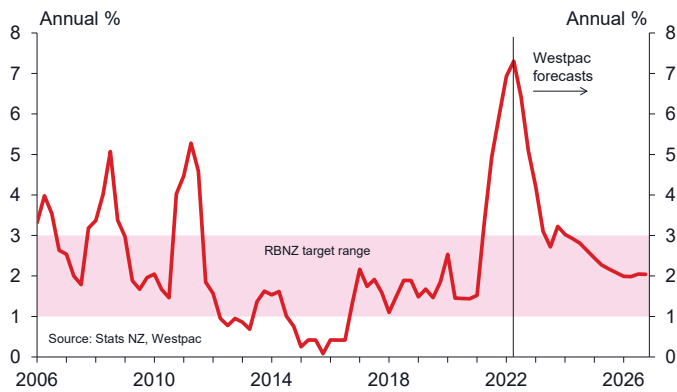
GDP growth



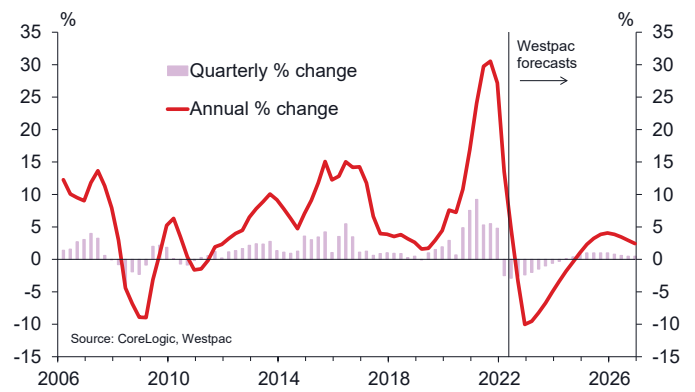
Employment and wage growth



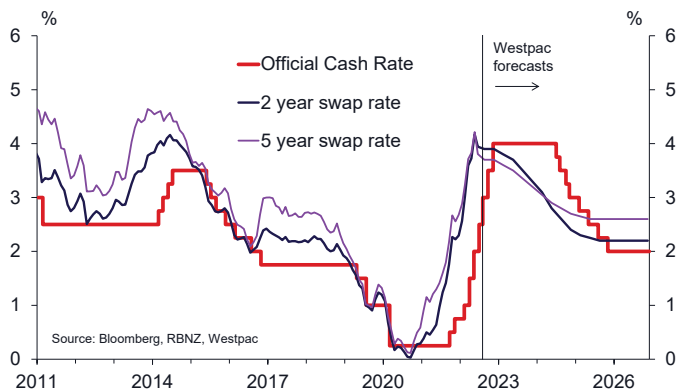
Consumer price inflation



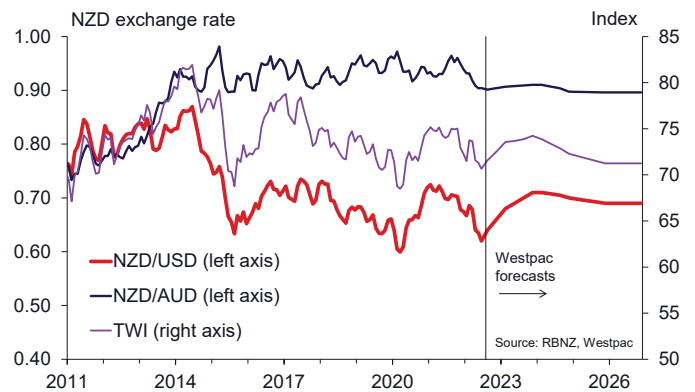
House prices



Official Cash Rate, 2 year swap and 5 year swap rates



Exchange rates



Contact the Westpac economics team

Michael Gordon, Acting Chief Economist

+64 9 336 5670

Satish Ranchhod, Senior Economist

+64 9 336 5668

Nathan Penny, Senior Agri Economist

+64 9 348 9114

Paul Clark, Industry Economist

+64 9 336 5656

Any questions email:

✉ economics@westpac.co.nz

Disclaimer

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, and market colour. The material does not constitute investment advice. 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 information has been prepared without taking account of your objectives, financial situation or needs. 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 wholesale client of Westpac.

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.

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 licence 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. 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) 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) 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.

Past performance is not a reliable indicator of future performance. The forecasts given in this document 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 ultimate outcomes may differ substantially from these forecasts.

