

WESTPAC WEEKLY ECONOMIC COMMENTARY

The shifting outlook for homebuilding.

5 September 2022



Harakeke/flax

Westpac Economics Team

✉ economics@westpac.co.nz

🌐 westpac.co.nz/economics



New Zealand is building new homes at a rapid pace. However, conditions in the construction sector are changing and a slowdown in building activity (rather than a crash) is on the cards over the coming years. At the same time, slower population growth means that the shortages that developed over the past decade are now being rapidly eroded. Even so, we don't think that the country is at risk of having an 'oversupply' of housing.

Construction activity, especially new home building, has been a key driver of economic growth and employment in recent years. In addition, there is a large pipeline of planned projects, with over 50,000 new dwelling consents issued over the past year. However, the ground has shifted under the construction sector with changes on several big fronts.

First are the skyrocketing costs of building, with operating costs in the residential construction sector rising by more than 10% over the past year alone. Those increases are in part due to earlier shortages of materials which have now started to ease. However, the sector is also grappling with an ongoing shortage of skilled staff, which has seen labour costs rising rapidly and widespread poaching.

Compounding the financial headwinds for the construction sector has been the rise in interest rates. Like other central banks around the globe, the RBNZ has been hiking the cash rate at a rapid pace, and further sharp increases are on the cards before the end of this year. We're forecasting 50bp increases at the next two policy meetings which would take the OCR to 4.00%.

In addition to those increases in operating costs, house prices have been tumbling. Prices have already fallen 8% from their peak, and we think that there are further declines yet to come. We're forecasting that house prices will fall by a total of 15% over 2022 and 2023 combined.

Those seismic changes in the economic landscape have meant that prospective purchasers are increasingly hesitant about buying off the plan. At the same time, developers have become more cautious about bringing new projects to market.

Consistent with those trends, consent issuance has flattened off and has effectively been tracking sideways for a year now (albeit at very high levels). We expect to see consent issuance easing back over the coming months, with that decline to extend into the new year.

But while consent issuance is set to trend down, the slowdown in actual building activity is set to be more moderate. In fact, we expect that building activity will remain elevated through the back part of this year and early part of 2023. While consent issuance has charged higher over the past few years, building

activity has not kept pace. Earlier shortages of materials and staff have seen completion times stretching out. That means there is still a large backlog of projects in the works.

Over time, building levels are set to ease back, as existing orders are filled and fewer new projects come to market. But that will be an easing from very high levels. Furthermore, with a large number of planned projects, we expect any softening will be gradual (rather than a sharp fall) at least over the coming year.

The other big change for the building sector has been the fall in population growth. At the same time as homebuilding activity has been charging higher, net migration has plummeted. And even with the reopening of our borders, we expect that migration will remain well below pre-pandemic levels for the foreseeable future.

Combined, the downturn in net migration and current rapid pace of homebuilding means we're now building much faster than is needed to keep up with population growth. As a result, the housing shortages that developed in recent years are being rapidly eroded. Furthermore, home building is set to continue outpacing population growth for some time, even assuming a slowdown in construction.

This has raised questions about whether we're at risk of an oversupply situation developing in the housing market. We don't think that's the case. But it's worth looking at what's happening across regions to understand why.

In areas outside of Auckland, migration plays less of a role in driving population changes. That means housing shortages in areas outside of Auckland are being eroded more gradually. In fact, the high levels of building that we're now seeing are actually what is needed to take the number of homes per head of population back to the sorts of levels we saw in the middle of last decade (just before the start of the recent period of very strong net migration).

It's a more nuanced picture in Auckland, where the downturn in migration has seen population growth grinding to a halt. Combined with the sharp rise in home building, that's meant much of the underbuilding of houses over the past decade has already been reversed. And given the current rapid pace of building, we expect that shortfall will be completely eliminated over the next year or so.

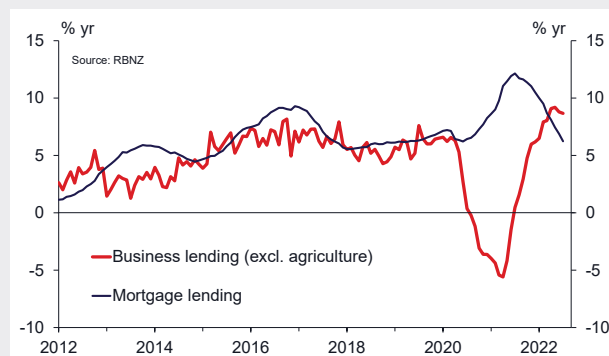
But even with a massive number of new homes still being built in Auckland, we don't think that we'll see an 'excess' of supply. Housing pressures in Auckland mean that we typically see an outflow of its residents to other parts of the country. An abundant supply of housing would help to stem the exodus of Aucklanders, bringing demand and supply back towards balance.

The other way to look at this issue is in terms of housing availability. Per head of population, there are far fewer homes in Auckland than there are in other regions. And even with rapid home building and low population growth, that's set to remain the case.

Chart of the week

As the economy has cooled, credit growth has been slowing. There's been a particularly sharp slowdown in mortgage lending growth as house sales and prices have fallen. Borrowing by businesses has been more resilient. However, much of this has been related to working capital needs as businesses grapple with rising operating costs and ongoing inventory disruptions. Borrowing for capital expenditure remains limited.

Economy wide lending

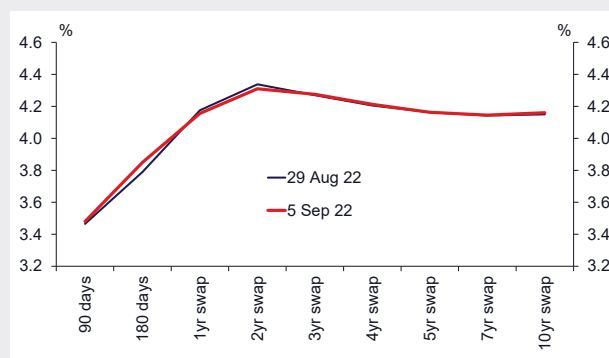


Fixed vs floating for mortgages

We expect the Reserve Bank to lift the Official Cash Rate to 4% and to hold it there for the next couple of years, before reducing it to a more sustainable level in the following years. In contrast, wholesale interest rate markets are priced for a sustained higher level of the OCR for many years to come.

As a result, we believe that there is value in fixing for terms of up to two years. We would regard fixing for terms longer than this as expensive, but this option may suit those who want more certainty in their repayments.

NZ interest rates



Satish Ranchhod, Senior Economist

+64 9 336 5668

satish.ranchhod@westpac.co.nz

The week ahead

NZ Q2 building work put in place

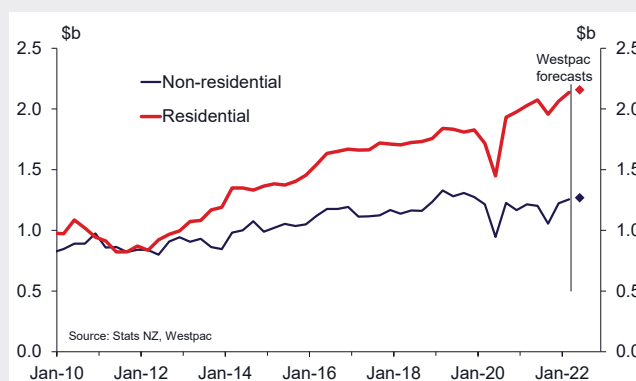
Sep 5, Last: +3.2%, Westpac: +1.0%

Total construction activity rose by 3.2% in the March quarter. Underlying that increase was a 3.2% lift in residential work, as well as a 2.7% increase in non-residential construction.

We're forecasting a further 1% rise in construction activity in the June quarter with modest gains in both residential and non-residential activity. While there is a large amount of work in the pipeline, shortages of materials and labour have been a handbrake on the pace of building.

We expect that construction activity will remain elevated for some time yet, with a large number of planned projects and stretched capacity. However, the financial conditions in the building sector are changing, and activity is set to moderate over the year ahead.

NZ real building work put in place



NZ GlobalDairyTrade auction, whole milk powder prices

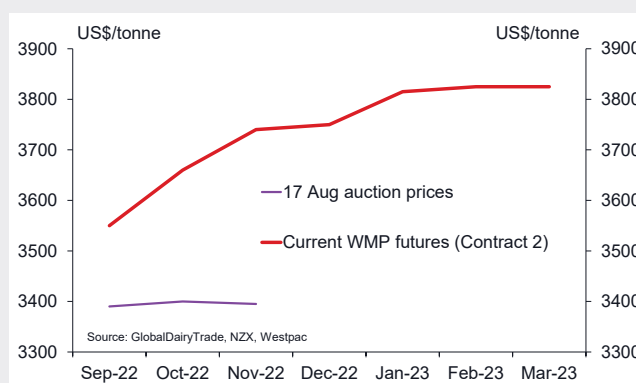
Sep 7, Last: -3.5%, Westpac: +2%

We expect whole milk powder prices (WMP) to lift by around 2% at the upcoming auction. This follows a 3.5% price slide at the previous auction.

Our pick is slightly lower than the circa 3% lift that the futures market is pointing to.

Following the weakness in recent months, we expect global dairy prices to regain strength on very weak global dairy supply and recovering Chinese demand.

Whole milk powder prices



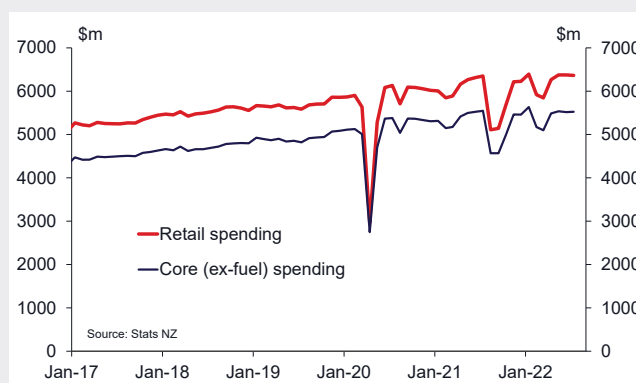
NZ Aug retail card spending

Sep 9, Last: -0.2% Westpac: -0.2%

Retail spending fell by 0.2% in July. That followed similarly muted gains in recent months, with nominal retail spending effectively remaining flat through mid-2022. That's despite large increases in retail prices, meaning that the volume of goods we've been purchasing has actually been going backwards.

We're forecasting another small fall in nominal spending in August of 0.2%. That's mainly due to the sharp fall in petrol prices over the month. However, the reduction in fuel prices is helping to support spending in other areas, with spending in core (excl. fuel) categories expected to be up 0.5%. That's in part related to increased spending in bars and on dining out. We're also seeing a lift in tourist spending (albeit from low levels) following the relaxation of border restrictions.

NZ retail card spending



The week ahead

Aus Q2 inventories

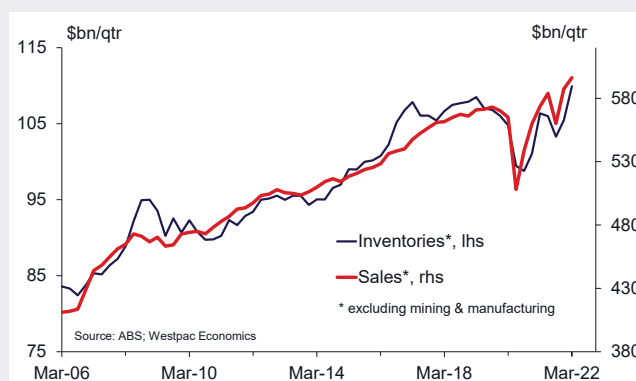
Sep 5, Last: 3.2%, WBC f/c: 1.6% (-0.5pts impact)
Mkt f/c: 1.5%, Range: 0.0% to 3.1%

Sales, production and inventories have been volatile quarter to quarter as the economy navigates the pandemic. Inventory levels weakened during lockdowns and were rebuilt during the reopening periods. A rebuild occurred over 2020Q4-2021Q1 and then, following delta, again over 2021Q4-2022Q1.

Since the end of 2019, prior to the pandemic, the increase in inventory levels is not greatly different from that for sales, at 3.7% and 4.6%, respectively. This calculation excludes mining and manufacturing, which tend to have their own dynamics.

For the June quarter 2022, fewer disruptions facilitated a burst of spending and a sharp lift in output - with hours worked up by 4.6%. We've factored in a 1.6% rise in inventories - a well above par result but one that points to the need for a further rebuild ahead. Such an outcome would see inventories subtract 0.5pts from activity in Q2.

Aus inventories and sales



Aus Q2 current account, \$bn

Sep 6, Last: 7.5, WBC f/c: 19.0
Mkt f/c: 22.0, Range: 11.0 to 24.0

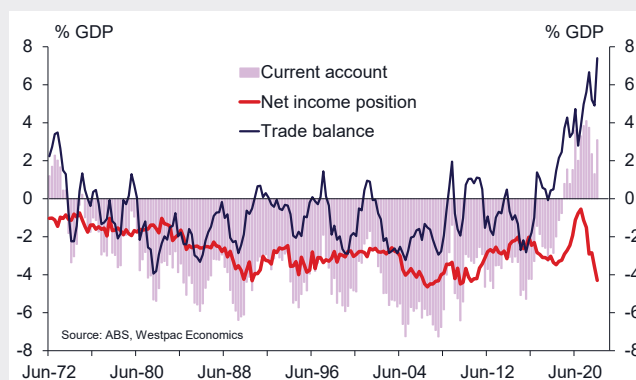
Australia's current account surplus, having narrowed briefly in the March quarter, returned to a very sizeable level in the June quarter.

We anticipate that the current account climbed to \$19bn in Q2, around 3.1% of GDP, up from \$7.5bn in Q1, and not greatly different in dollar terms from the \$21bn average for the initial 3 quarters of 2021.

The trade position improved sharply in the June quarter, surging to \$45bn, representing 7.4% of GDP - a fresh record high. That was up from \$28.2bn in Q1 (as reported in the BoP). Export earnings grew by a stellar 14.7% on higher prices and increased shipments. The terms of trade increased by around 4.3%, we estimate.

The net income deficit (NID) widened by almost \$5bn to \$20.7bn in Q1 and we've allowed for this trend to extend into Q2, factoring in a NID in the order of \$26bn.

Aus current account



Aus Q2 net exports, ppts cont'n

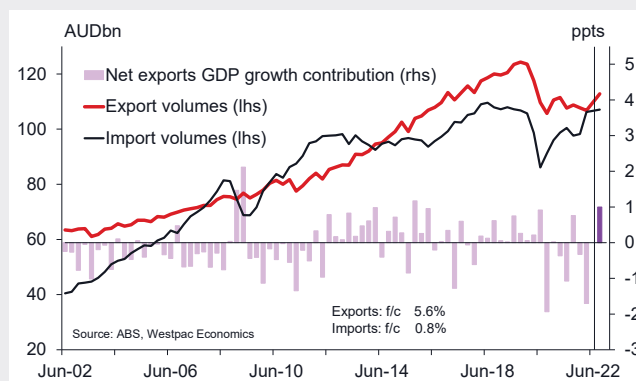
Sep 6, Last: -1.7, WBC f/c: 1.0
Mkt f/c: 1.0, Range: 0.2 to 1.4

The June quarter 2022 will see net exports make a sizeable positive contribution to growth, of about 1ppt. This represents only a partial reversal of a 2ppts drag over the past year and would still have net exports subtracting 2.4ppts from growth since the end of 2019.

Export volumes expanded by 5.6% in the June quarter, including +4.4% for goods (led by resources and rural) and +13.5% for services (the national border reopening boosting education and tourism).

Import volumes, following an 8% surge in Q1 (inflated by a spike in covid vaccine supplies), grew by an estimated 0.8%, including -0.8% for goods and +12.3% for services (with Aussies flocking back to overseas travel).

Aus net exports



The week ahead

Aus RBA policy decision

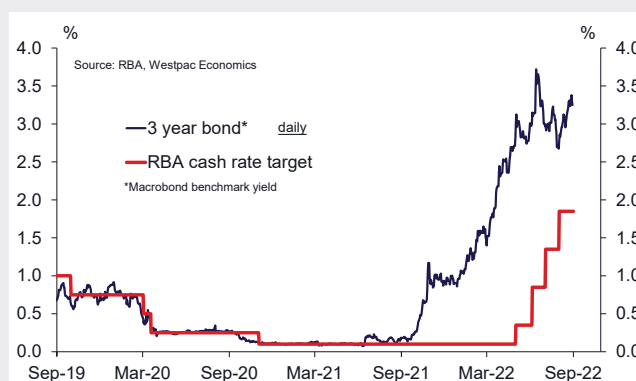
Sep 6, Last: 1.85%, WBC f/c: 2.35%
Mkt f/c: 2.35%, Range: 2.10% to 2.35%

At the September Board meeting, we anticipate that the RBA will lift the cash rate by 50bps - the fourth consecutive move of 50bps. That will take the cash rate to 2.35%, to be in the “neutral zone”. Moves beyond this point are likely to be more measured.

Globally and domestically, the inflation outlook is challenging, with risks that inflation expectations ratchet higher. In Australia, headline inflation is expected to climb to over 7% by year end, the labour market is the tightest in 50 years, and wages growth is accelerating, albeit from modest levels.

It is in this environment that the RBA is removing ultra easy monetary conditions and will shift to a contractionary stance. Westpac anticipates that the cash rate will rise to 3.10% by year end and then peak at 3.35% in February 2023 - with moves of 25bps each meeting from October to February.

RBA cash rate and 3 year bonds



Aus Q2 GDP

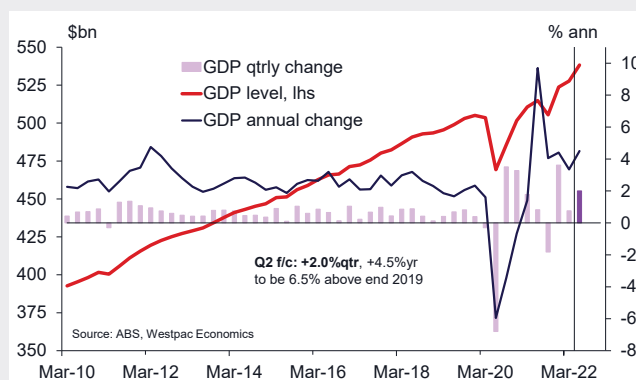
Sep 7, Last: 0.8%, WBC f/c: 2.0%
Mkt f/c: 1.1%, Range: 0.7% to 2.0%

Output growth expanded by a forecast 2% in the June quarter, an improvement on the 0.8% increase reported the quarter prior.

The arithmetic of our Q2 GDP forecast is: domestic demand +1.6%; net exports +1.0ppt and total inventories -0.7ppt, with +0.1ppt from the statistical discrepancy.

Consumer spending, particularly on hospitality and travel, led the way, enabled by fewer covid restrictions, up a forecast 2.8% (after a +1.5%). The key uncertainty is scaling the acceleration in services spending. Other domestic demand detail appears to have weakened in Q2: housing -4% after a -1%; business investment +0.6% after a +1.4%; and public demand +1% after a well above par +2.6%.

Aus GDP



Aus Apr trade balance, \$bn

Sep 8, Last: 17.7, WBC f/c: 13.5
Mkt f/c: 14.5, Range: 10.5 to 17.0

Australia’s trade surplus ballooned to new record highs in May and June, of \$15.0bn and \$17.7bn respectively, up from \$12.3bn in April.

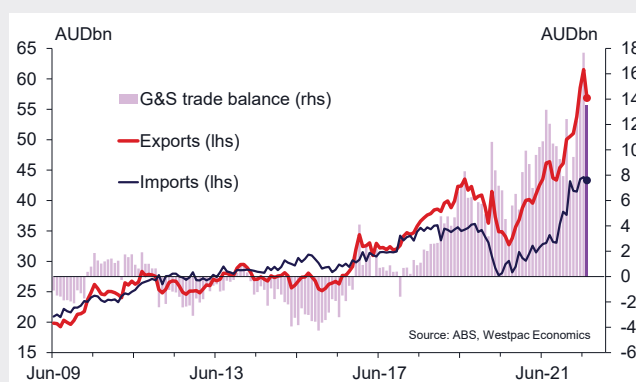
That is probably as good as it gets, with the surplus forecast to retreat to a still elevated \$13.5bn in July - a narrowing of \$4.2bn.

Exports had a remarkable 3 months to June, up 20.6%, +\$10.5bn - on higher prices (in part due to the Ukraine war) and on higher volumes. Roll forward to July, global recession concerns jolted commodity prices lower. Coinciding with this, Australian export shipments were mixed - with coal volumes hard hit by flooding.

Export earnings are forecast to fall by -7.5% in July, down \$4.7bn with falls led by coal and iron ore.

Imports are anticipated to decline, down by -1.2%, -\$0.5bn, led by sharply lower global fuel prices.

Aus trade balance

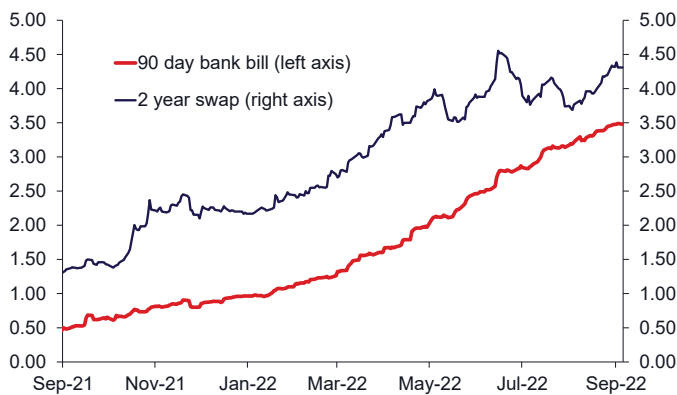


New Zealand forecasts

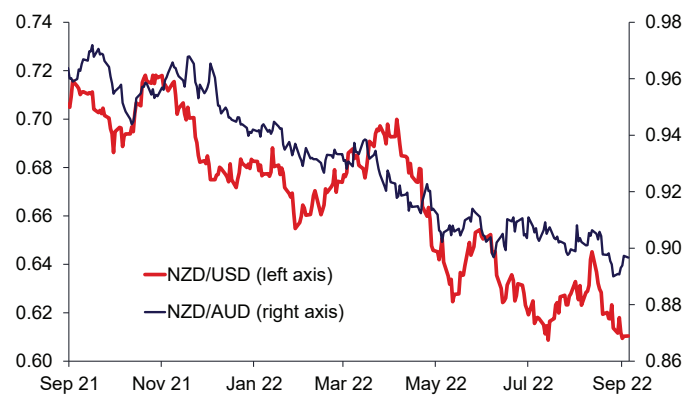
Economic forecasts	Quarterly				Annual			
	2022				2020	2021	2022f	2023f
% change	Mar (a)	Jun	Sep	Dec				
GDP (Production)	-0.2	1.0	0.4	0.6	-2.1	5.6	1.8	2.0
Employment	0.0	0.0	0.1	0.1	0.6	3.4	0.2	0.8
Unemployment Rate % s.a.	3.2	3.3	3.3	3.4	4.9	3.2	3.4	3.8
CPI	1.8	1.7	1.4	0.2	1.4	5.9	5.1	3.2
Current Account Balance % of GDP	-6.5	-7.6	-7.8	-7.4	-0.8	-5.8	-7.4	-4.6

Financial forecasts	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24
Cash	4.00	4.00	4.00	4.00	4.00	4.00	4.00
90 Day bill	4.10	4.10	4.10	4.10	4.10	4.10	3.80
2 Year Swap	3.90	3.80	3.70	3.50	3.30	3.10	2.80
5 Year Swap	3.70	3.60	3.50	3.35	3.20	3.05	2.90
10 Year Bond	3.50	3.40	3.30	3.15	3.00	2.95	2.90
NZD/USD	0.66	0.68	0.69	0.70	0.71	0.71	0.71
NZD/AUD	0.90	0.91	0.91	0.91	0.91	0.91	0.91
NZD/JPY	87.1	88.4	87.6	87.5	87.3	85.9	84.5
NZD/EUR	0.61	0.61	0.61	0.61	0.62	0.61	0.60
NZD/GBP	0.52	0.53	0.53	0.53	0.53	0.53	0.52
TWI	72.5	73.6	73.7	73.9	74.2	73.9	73.4

2 year swap and 90 day bank bills



NZD/USD and NZD/AUD



NZ interest rates as at market open on 5 September 2022

Interest rates	Current	Two weeks ago	One month ago
Cash	3.00%	3.00%	2.50%
30 Days	3.08%	3.04%	2.94%
60 Days	3.28%	3.21%	3.12%
90 Days	3.48%	3.39%	3.30%
2 Year Swap	4.31%	4.09%	3.83%
5 Year Swap	4.16%	3.94%	3.56%

NZ foreign currency mid-rates as at 5 September 2022

Exchange rates	Current	Two weeks ago	One month ago
NZD/USD	0.6104	0.6201	0.6284
NZD/EUR	0.6142	0.6195	0.6166
NZD/GBP	0.5323	0.5253	0.5192
NZD/JPY	85.53	84.97	84.75
NZD/AUD	0.8967	0.8976	0.9010
TWI	70.74	71.21	71.40

Data calendar

		Last	Market median	Westpac forecast	Risk/Comment
Mon 05					
NZ	Q2 building work put in place	3.2%	-	1.0%	Modest gains, capacity pressures remain a handbrake.
	Aug ANZ commodity prices	-2.2%	-	-	Dairy prices fell significantly over August.
Aus	Q2 company profits	10.2%	4.5%	4.5%	Another strong showing, particularly mining.
	Q2 inventories	3.2%	1.5%	1.6%	Above par inventory built, but down from record Q1 pace.
	Aug MI inflation gauge %yr	5.4%	-	-	Inflation well above the RBA's target band.
	Aug ANZ job ads	-1.1%	-	-	Still at a very high level.
Chn	Aug Caixin services PMI	55.5	54.0	-	Hainan and other COVID-19 flare ups a headwind.
Eur	Aug S&P Global services PMI	50.2	-	-	Final estimate.
	Sep Sentix investor confidence	-25.2	-	-	Confidence seems to be stabilising; but uncertainty high.
	Jul retail sales	-1.2%	-	-	Negative so far this year, highlighting pressure on HH's.
UK	Aug S&P Global services PMI	52.5	52.5	-	Final estimate.
US	Labor Day	-	-	-	Public holiday; markets closed.
Tue 06					
Aus	Q2 current account balance, \$bn	7.5	22.0	19.0	Lifts substantially, driven by a record trade surplus of \$45bn.
	Q2 net exports, ppts cont'n	-1.7	1.0	1.0	Swings back to a positive, on a burst of exports.
	Q2 public demand	2.6%	-	1.0%	Coming off a very strong Q1 (a spike in covid vaccine supplies).
	RBA policy decision	1.85%	2.35%	2.35%	A 4th consecutive 50bp hike - in a return to "neutral".
US	Aug S&P Global services PMI	44.1	44.2	-	S&P Global has been providing a more cautious read...
	Aug ISM non-manufacturing	56.7	55.2	-	... on state of services sector; clear downside risks for sector.
Wed 07					
NZ	GlobalDairyTrade auction - WMP	-3.5%	-	2.0%	Dairy prices regaining strength on very weak global supply.
	RBNZ speech	-	-	-	Asst. Gov Silk on the policy framework.
Aus	Q2 GDP	0.8%	1.1%	2.0%	Consumers lift spending on services, covid disruptions eased.
Chn	Aug foreign reserves US\$bn	3,104	3,078	-	Authorities focused on stability on trade-weighted basis.
	Aug trade balance US\$bn	101.26	91.30	-	Weaker global economy a risk for trade into year end.
Eur	Q2 GDP, final	0.6%	0.6%	-	Component detail with final estimate.
US	Jul trade balance US\$bn	-79.6	-70.1	-	Decline in domestic demand weighing on imports.
	Federal Reserve's Beige book	-	-	-	Conditions across the regions -- increasingly mixed.
	Fedspeak	-	-	-	Brainard and Barr.
Thu 08					
Aus	Jul trade balance \$bn	17.7	14.5	13.5	Still elevated but down from June record high.
	RBA Governor Lowe	-	-	-	Inflation and the Monetary Policy Framework, Sydney.
Eur	ECB policy decision, refi rate	0.50%	-	1.25%	Market priced for 75bps; fear of inflation also supportive.
US	Initial jobless claims	232k	-	-	Likely to remain at low levels for time being.
	Jul consumer credit	40.154	32.500	-	High rates to weigh over coming year.
	Fed Chair Powell	-	-	-	Speaking at policy conference in Washington.
Fri 09					
NZ	Aug card spending	-0.2%	-	-0.2%	Lower fuel prices a drag, core spending has flattened off.
Chn	Aug PPI %yr	4.2%	3.2%	-	Upstream price pressures decelerating...
	Aug CPI %yr	2.7%	2.8%	- and consumer inflation remains relatively benign.
	Aug new loans, CNYbn	679.0	1500.0	-	Further strength in credit likely...
	Aug M2 money supply %yr	12.0%	12.3%	-	... into year end on authorities' encouragement.
US	Jul wholesale inventories	0.8%	0.8%	-	Uncertain time for retailers and those that supply them.
	Fedspeak	-	-	-	Waller.

International forecasts

Economic Forecasts (Calendar Years)	2018	2019	2020	2021	2022f	2023f
Australia						
Real GDP %oyr	2.8	2.0	-2.1	4.8	4.9	2.1
CPI inflation %oyr	1.8	1.8	0.9	3.5	7.6	3.1
Unemployment rate %	5.0	5.2	6.8	4.7	3.0	4.2
Current account % of GDP	-2.1	0.7	2.6	3.5	1.6	-1.0
United States						
Real GDP %oyr	2.9	2.3	-3.4	5.7	1.7	0.6
CPI inflation %oyr	2.4	1.9	1.2	5.1	7.1	2.5
Unemployment rate %	3.9	3.7	8.1	5.4	3.7	4.1
Current account % of GDP	-2.3	-2.6	-2.5	-2.4	-2.4	-2.4
Japan						
Real GDP %oyr	0.6	-0.2	-4.5	1.6	1.7	1.7
Euro zone						
Real GDP %oyr	1.8	1.6	-6.4	5.3	2.2	1.5
United Kingdom						
Real GDP %oyr	1.7	1.7	-9.3	7.4	3.3	-1.0
China						
Real GDP %oyr	6.8	6.0	2.2	8.1	3.5	7.0
East Asia ex China						
Real GDP %oyr	4.5	3.8	-2.3	4.1	4.5	4.6
World						
Real GDP %oyr	3.6	2.9	-3.1	6.1	3.0	3.4

Forecasts finalised 5 August 2022

Interest rate forecasts	Latest	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24
Australia							
Cash	1.85	3.10	3.35	3.35	3.35	3.35	3.10
90 Day BBSW	2.49	3.55	3.55	3.55	3.55	3.38	3.13
10 Year Bond	3.69	3.40	3.30	3.10	2.90	2.65	2.50
International							
Fed Funds	2.375	3.375	3.375	3.375	3.375	3.125	2.875
US 10 Year Bond	3.26	3.00	2.90	2.70	2.50	2.30	2.20

Exchange rate forecasts	Latest	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24
AUD/USD	0.6792	0.73	0.75	0.76	0.77	0.78	0.78
USD/JPY	140.13	132	130	127	125	123	121
EUR/USD	0.9962	1.09	1.11	1.13	1.14	1.15	1.16
GBP/USD	1.1549	1.26	1.28	1.30	1.32	1.34	1.35
USD/CNY	6.9018	6.60	6.50	6.40	6.30	6.20	6.15
AUD/NZD	1.1194	1.11	1.10	1.10	1.10	1.10	1.10

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.