

NZ Insight: Labour market capacity indicators

29 November 2023



This is not personal advice nor financial advice about any product or service. It does not take into account your financial situation or goals. Please refer to the Important Notice.



Contact

Henry Russell or Sharon Zollner for more details.

Confused by acronyms or jargon? See a glossary [here](#).

Labour market capacity indicators

- Our suite of labour market capacity indicators suggests that the labour market is no longer in an inflationary state, despite the unemployment rate still sitting below our estimate of the non-accelerating inflation rate of unemployment (NAIRU).
- While transitioning the labour market back to maximum sustainable employment is an important milestone for the RBNZ in its inflation fight, ultimately a sustained period of slack in the labour market is required to generate the necessary downward pressure on domestic inflation. In other words, the cold hard reality is that further softening in the labour market will be the cost of achieving lower and stable CPI inflation over the medium term, and the loosening we're now seeing in the capacity suite data is part of the RBNZ's plan.
- We will continue to monitor the suite of labour market indicators closely to assess whether monetary conditions are appropriate.

On track

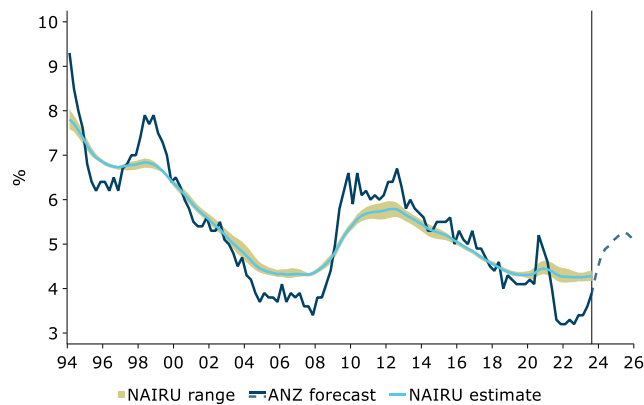
The labour market is a key driver of domestic inflation, and up until recently it has been in an unprecedented state of tightness. That has now changed, with the labour market having loosened considerably over the past year. The ongoing labour supply lift due to the record surge in net migration has been a key driver, although there is also evidence that monetary policy is gaining traction in reducing labour demand.

While the unemployment rate remains relatively low at 3.9%, and below our estimate of the non-accelerating inflation rate of unemployment (NAIRU), it is only one indicator of capacity pressure in the labour market. And because it tends to be a lagging indicator (ie one of the last labour market indicators to respond to changes in the business cycle), policy makers are aware that any assessment of labour market slack based on the unemployment rate alone is analogous to driving a car while looking only in the rear-view mirror. To provide a timelier estimate of labour market conditions, it is necessary to draw on a wider range of indicators.

In this note, we provide an update on labour market capacity pressures, which we think suggest the labour market is no longer in an inflationary state (as incorporated into [our latest forecast](#)). Indeed, the Q3 labour market release suggested the imbalance between supply and demand in the labour market is resolving a little faster than previously anticipated. That, combined with a downgrade to our [near-term CPI forecast](#), and the softening across many capacity indicators (including those outlined in this note), has led us to confine our previous expectation for another OCR hike this cycle [to the 'risks' basket](#).

But importantly, the recent run of data marks only the first milestone towards what's required. The trend in the indicators presented in this note (alongside a broad swathe of other data and developments) needs to continue for a time before the RBNZ will consider sticky domestic CPI inflation risks appropriately contained and cuts can be considered. That's the case whether maximum sustainable employment is an explicit monetary policy objective or not.

Figure 1. Unemployment rate vs NAIRU¹



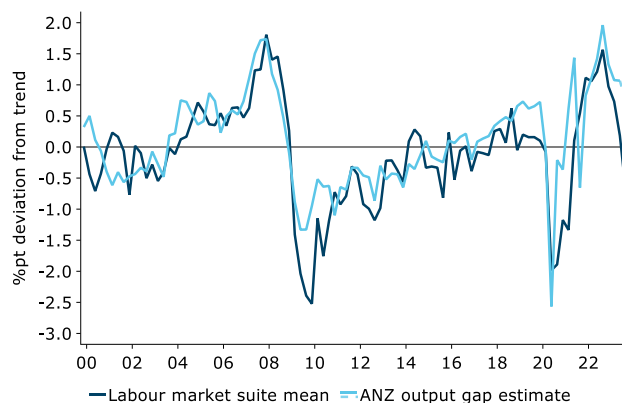
Source: Stats NZ, Macrobond, ANZ Research

Labour market pressures have faded

We estimate labour market capacity pressures using the 14 indicators that the RBNZ uses to monitor maximum sustainable employment (MSE), covering unemployment, underemployment, underutilisation, employment, surveyed measures of labour market capacity pressures, average hours worked, job vacancies, and job finding and job separation rates (see pages 5 and 6 for these indicators). To estimate capacity pressures, we estimate the deviation relative to each indicator's long-run trend or equilibrium level and scale these indicators to our output gap estimate.

Our output gap estimate is calibrated to our estimate of the unemployment rate gap (the difference between the unemployment rate and NAIRU), and the deviation of GDP from an underlying trend using filtering methods. We also draw on various business survey measures of capacity stretch to inform our judgements. Hence, the maximum sustainable employment suite provides a further indication of capacity pressures in the labour market, and indeed the economy more broadly, by including indicators that typically lead the cycle. It currently suggests that labour market capacity pressures have faded and that a small degree of slack is emerging. Of the 14 indicators, only three are still signalling capacity stretch: the headline unemployment rate, HLFS employment and monthly filled jobs. We think this reflects the lagged response of employment and unemployment to changes in labour market conditions, rather than a conflicting signal (rear-view mirror).

Figure 2. Capacity indicators



Source: Stats NZ, NZIER, RBNZ, Macrobond, ANZ Research

¹ We estimate the NAIRU using three similar models. The range shown here is the range provided by these models, not an uncertainty band, which would be much wider as the NAIRU is unobservable and subject to revision at the end point.

Looking at past slowdowns in the jobs market, the unemployment rate has tended to be the last variable to respond, as is the case now. In previous slowdowns, the variables that first reflected spare capacity in the labour market tended to be business survey measures such as difficulty finding skilled and unskilled labour and labour as a limiting factor, as well as job vacancies and average hours worked. That same pattern is currently evident, which should give the RBNZ confidence that the labour market transition to a disinflationary state has occurred or at least is imminent.

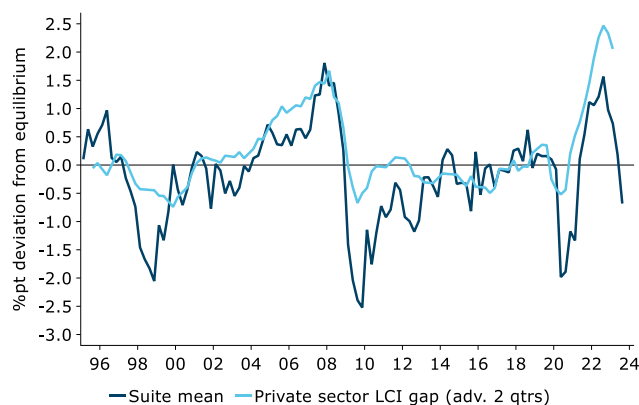
Of course, while a lead is a useful thing in an economic indicator, the match to what you're trying to predict is an important attribute too. Prior to the pandemic, the RBNZ found that the MSE indicators that were most useful for explaining wage and non-tradable inflation (note: not necessarily the most leading indicators) were the Māori and youth unemployment rates, along with the underutilisation and underemployment rates. These variables tend to capture the groups most affected by changes in the business cycle. All four of these indicators are suggesting that a degree of slack has already emerged in the labour market.

Wage pressures should continue to moderate

A necessary condition for inflation to return to target is a normalisation in wage inflation, which is closely tied to capacity pressures in the labour market. Annual growth in the private sector Labour Cost Index (productivity adjusted) reached a record high earlier this year, driven by the intense capacity pressures in the labour market and the resulting competition for workers. With capacity pressures having faded, wage inflation is now slowing a little more rapidly than either we or the Reserve Bank had anticipated.

Annual growth in the private sector Labour Cost Index (LCI) of 2% is generally considered to be consistent with inflation at target, and the gap between the LCI and this level closely aligns with the labour market capacity indicators. Given the lagged response of wages, we're yet to see the full extent of wage disinflation, but the sharp normalisation in capacity pressures suggests it's coming (figure 3). However, the RBNZ needs to see a sustained period of labour market slack, particularly given still-elevated inflation expectations could keep a degree of upwards pressure on wages relative to previous experience. So, while the labour market is no longer in inflationary territory, it isn't yet in "job done" territory (insofar as CPI inflation is concerned). But the recent trajectory is undeniable: monetary tightening is working.

Figure 3. Capacity pressures and wage inflation



Source: Stats NZ, NZIER, RBNZ, Macrobond, ANZ Research

Where to from here?

With the labour market now at, or near, maximum sustainable employment, it is unlikely to be adding to inflationary pressure. That's great news, but as noted, the RBNZ needs more than that: a period of sustained slack in the labour market is required to bring domestic inflation sustainably lower. And according to our forecast they'll get it. We expect the labour market to continue softening, with the unemployment rate lifting to 5.3% in 2025, taking the heat out of wage pressures along the way and returning domestic inflation to sustainably lower levels.

But there are risks on both sides – risks that we intend to continue weighing up as we monitor the broad suite of labour market indicators outlined on pages 5 and 6.

On the one hand, a loosening trajectory doesn't necessarily mean surprises will necessarily continue to be to the downside. We could be surprised on the relatively robust side of expectations. Indeed, while net migration inflows have played a significant role in easing capacity pressures this year, we are yet to see the full extent of the demand impulse associated with the surge in migration. It's still possible that economic activity and labour market conditions could stabilise at levels inconsistent with the degree of slack required to return inflation to target in an appropriate time frame. In that scenario, rate cuts are a very distant prospect, and indeed the RBNZ could even be brought back to the hiking table, though that is more of a slow-burn story than a near-term risk.

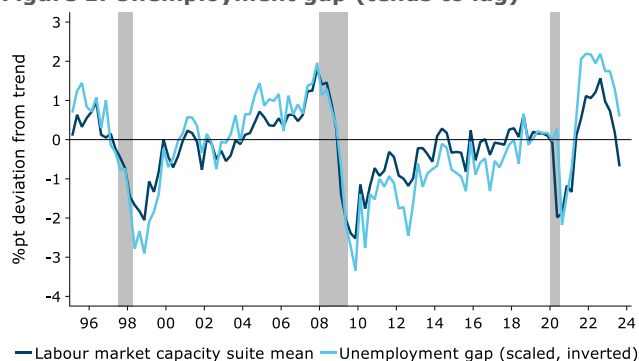
On the other hand, if labour market conditions do deteriorate more (or more rapidly) than expected, to the point where a degree of slack emerges that raises the risk that inflation undershoots the 2% midpoint, that would bring forward the timing of OCR cuts. In our forecasts, we see the labour market reaching sufficiently disinflationary levels in early 2025, in line with when we expect the RBNZ to begin easing. But all forecasts that far out carry with them enormous uncertainty.

For now, the RBNZ absolutely can feel confident that things are currently on track, but that isn't the same thing as complacency that they'll stay that way. A lot needs to continue to go right for some time before the RBNZ can be confident that inflation is back in its box to stay, and the RBNZ will remain alert, surveying incoming data to ensure ongoing disinflation remains a high probability. And the labour capacity suite will be close to the top of the must-watch list through that process.

And lastly, while the new Government has [signalled](#) that supporting support maximum sustainable employment will be removed from the RBNZ's economic objectives, we don't think this will impact monetary policy decision making. And we view the broader suite of labour market indicators as valuable for assessing capacity pressures in the economy. It may change the RBNZ's communications a little, but there's no getting away from the fact that the labour market and domestic inflation are wedded in holy matrimony for all of eternity. But to the extent that as unemployment rises there could be a perceived tension between "supporting maximum sustainable employment" and fighting inflation, removing it does arguably slightly smooth the path for holding rates high for longer if the RBNZ deems it appropriate.

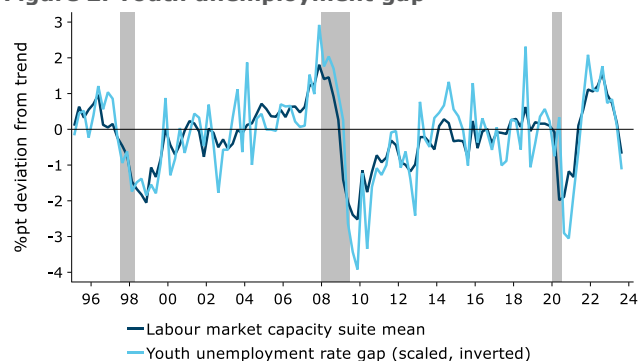
Labour market capacity indicators (grey shading indicates recessions)

Figure 1. Unemployment gap (tends to lag)



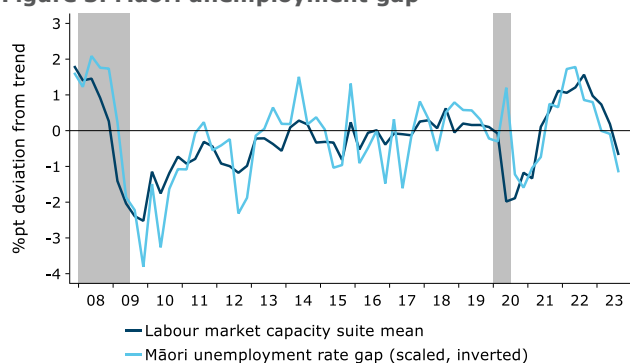
Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

Figure 2. Youth unemployment gap*



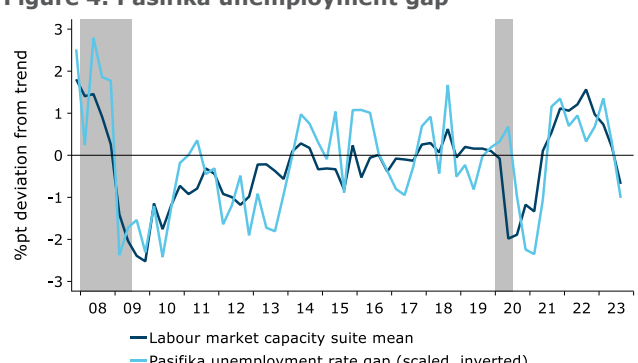
Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

Figure 3. Māori unemployment gap*



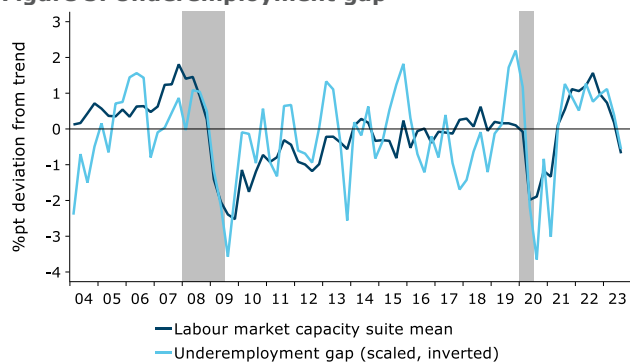
Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

Figure 4. Pasifika unemployment gap



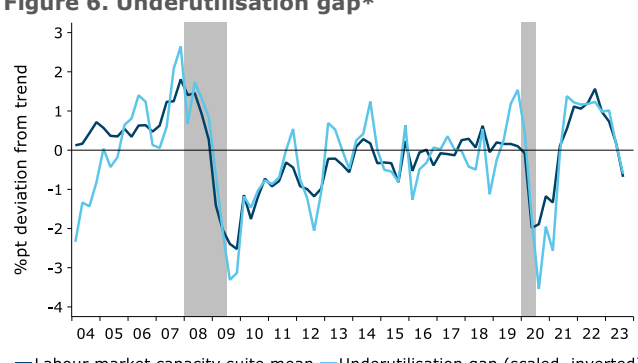
Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

Figure 5. Underemployment gap*



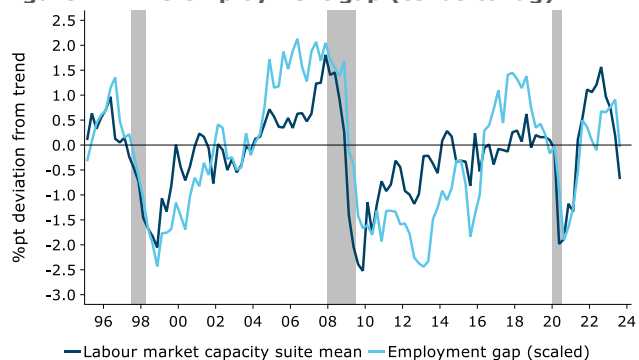
Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

Figure 6. Underutilisation gap*



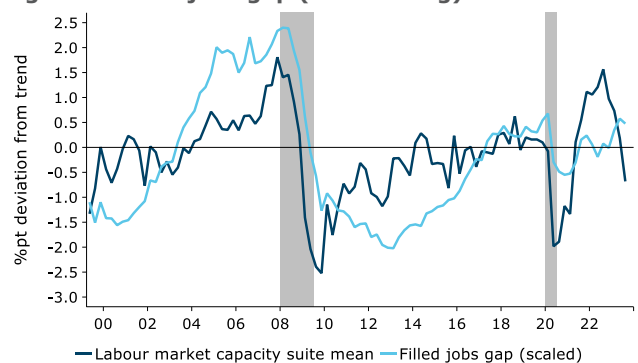
Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

Figure 7. HLFS employment gap (tends to lag)



Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

Figure 8. Filled jobs gap (tends to lag)

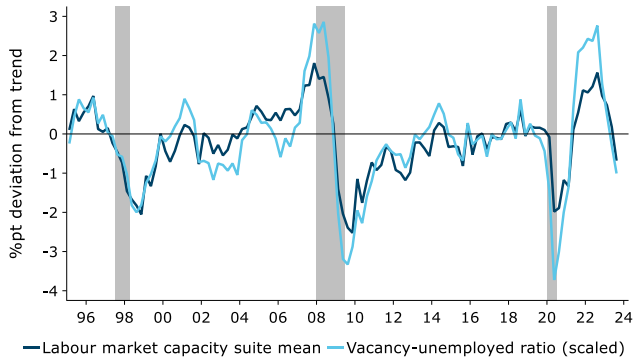


Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

* The RBNZ's own research has shown that these series tend to have the greatest explanatory power for domestic inflation and wage growth.

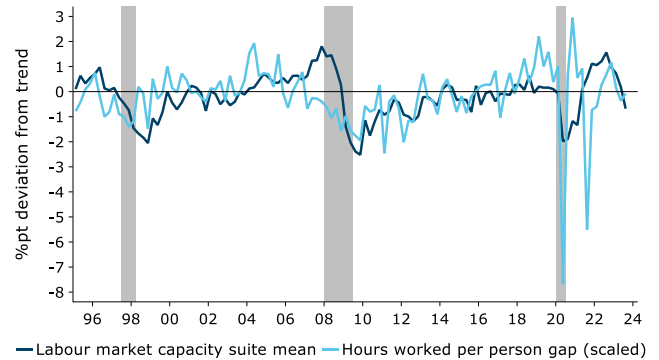
Labour market capacity indicators (grey shading indicates recessions)

Figure 9. Vacancy-unemployed ratio gap (leads)



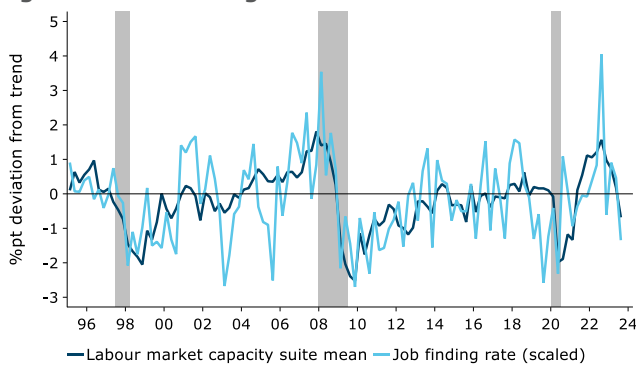
Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

Figure 10. Hours worked per person gap (leads)



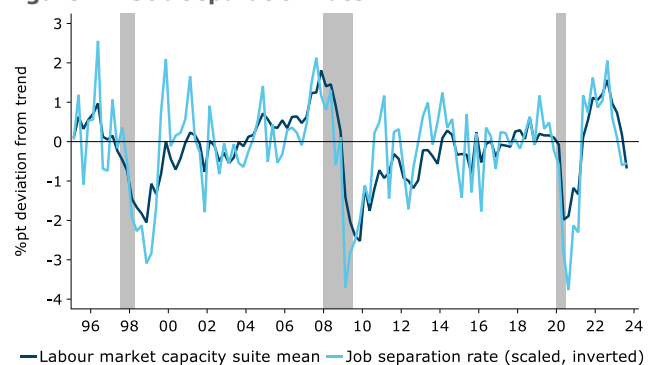
Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

Figure 11. Job finding rate



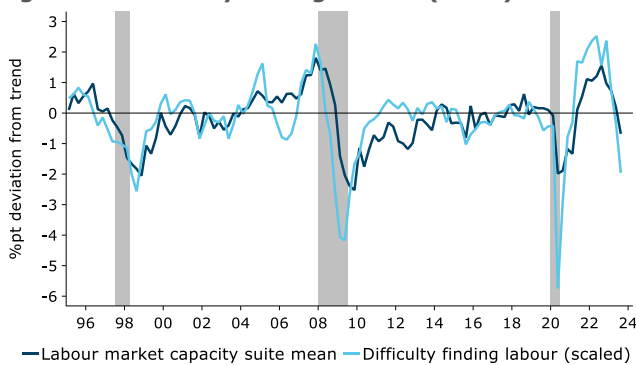
Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

Figure 12. Job separation rate



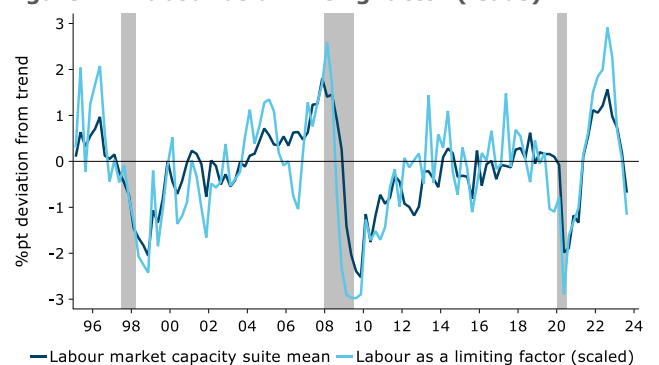
Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

Figure 13. Difficulty finding labour² (leads)



Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

Figure 14. Labour as a limiting factor (leads)



Source: Stats NZ, NZIER, ANZ, RBNZ, Macrobond, ANZ Research

² Average of difficulty finding skilled and unskilled labour.



Contact us

Meet the team

We welcome your questions and feedback. Click [here](#) for more information about our team.



Sharon Zollner
Chief Economist

Follow Sharon on Twitter
@sharon_zollner

Telephone: +64 9 357 4094
Email: sharon.zollner@anz.com

General enquiries:
research@anz.com

Follow ANZ Research
@ANZ_Research (global)



David Croy
Senior Strategist

Market developments, interest rates, FX, unconventional monetary policy, liaison with market participants.

Telephone: +64 4 576 1022
Email: david.croy@anz.com



Susan Kilsby
Agricultural Economist

Primary industry developments and outlook, structural change and regulation, liaison with industry.

Telephone: +64 21 633 469
Email: susan.kilsby@anz.com



Miles Workman
Senior Economist

Macroeconomic forecast co-ordinator, economic developments, GDP and activity dynamics, fiscal and monetary policy.

Telephone: +64 21 661 792
Email: miles.workman@anz.com



Henry Russell
Economist

Macroeconomic forecasting, economic developments, labour market dynamics, inflation and monetary policy.

Telephone: +64 21 629 553
Email: henry.russell@anz.com



Andre Castaing
Economist

Macroeconomic forecasting, economic developments, housing and monetary policy.

Telephone: +64 21 199 8718
Email: andre.castaing@anz.com



Kyle Uerata
Economic Statistician

Economic statistics, ANZ proprietary data (including ANZ Business Outlook), data capability and infrastructure.

Telephone: +64 21 633 894
Email: kyle.uerata@anz.com



Natalie Denne
PA / Desktop Publisher

Business management, general enquiries, mailing lists, publications, chief economist's diary.

Telephone: +64 21 253 6808
Email: natalie.denne@anz.com

Important notice

Last updated: 18 April 2023

The opinions and research contained in this document (which may be in the form of text, image, video or audio) are (a) not personal financial advice nor financial advice about any product or service; (b) provided for information only; and (c) intended to be general in nature and do not take into account your financial situation or goals.

This document may be restricted by law in certain jurisdictions. Persons who receive this document must inform themselves about and observe all relevant restrictions.

Disclaimer for all jurisdictions: This document is prepared by ANZ Bank New Zealand Limited (ANZ Centre, 23-29 Albert Street, Auckland 1010, New Zealand). This document is distributed in your country/region by Australia and New Zealand Banking Group Limited (ABN11 005 357 522) (**ANZ**), a company incorporated in Australia or (if otherwise stated), by its subsidiary or branch (herein collectively referred to as **ANZ Group**). The views expressed in this document are those of ANZ Economics and Markets Research, an independent research team of ANZ Bank New Zealand Limited.

This document is distributed on the basis that it is only for the information of the specified recipient or permitted user of the relevant website (**recipients**).

This document is solely for informational purposes and nothing contained within is intended to be an invitation, solicitation or offer by ANZ Group to sell, or buy, receive or provide any product or service, or to participate in a particular trading strategy.

Distribution of this document to you is only as may be permissible by the laws of your jurisdiction, and is not directed to or intended for distribution or use by recipients resident or located in jurisdictions where its use or distribution would be contrary to those laws or regulations, or in jurisdictions where ANZ Group would be subject to additional licensing or registration requirements. Further, any products and services mentioned in this document may not be available in all countries.

ANZ Group in no way provides any personal financial, legal, taxation or investment advice to you in connection with any product or service discussed in this document. Before making any investment decision, recipients should seek independent financial, legal, tax and other relevant advice having regard to their particular circumstances.

Whilst care has been taken in the preparation of this document and the information contained within is believed to be accurate, ANZ Group does not represent or warrant the accuracy or completeness of the information, except with respect to information concerning ANZ Group. Further, ANZ Group does not accept any responsibility to inform you of any matter that subsequently comes to its notice, which may affect the accuracy of the information in this document.

Preparation of this document and the opinions expressed in it may involve material elements of subjective judgement and analysis. Unless specifically stated otherwise: they are current on the date of this document and are subject to change without notice; and, all price information is indicative only. Any opinions expressed in this document are subject to change at any time without notice.

ANZ Group does not guarantee the performance of any product mentioned in this document. All investments entail a risk and may result in both profits and losses. Past performance is not necessarily an indicator of future performance. Any products and services described in this document may not be suitable for all investors, and transacting in these products or services may be considered risky.

ANZ Group expressly disclaims any responsibility and shall not be liable for any loss, damage, claim, liability, proceedings, cost or expense (**Liability**) arising directly or indirectly and whether in tort (including negligence), contract, equity or otherwise out of or in connection with this document to the extent permissible under relevant law. Please note, the contents of this document have not been reviewed by any regulatory body or authority in any jurisdiction.

ANZ Group may have an interest in the subject matter of this document. They may receive fees from customers for dealing in any products or services described in this document, and their staff and introducers of business may share in such fees or remuneration that may be influenced by total sales, at all times received and/or apportioned in accordance with local regulatory requirements. Further, they or their customers may have or have had interests or long or short positions in any products or services described in this document, and may at any time make purchases and/or sales in them as principal or agent, as well as act (or have acted) as a market maker in such products. This document is published in accordance with ANZ Group's policies on conflicts of interest and ANZ Group maintains appropriate information barriers to control the flow of information between businesses within the group.

Your ANZ Group point of contact can assist with any questions about this document including for further information on these disclosures of interest.

Australia. ANZ holds an Australian Financial Services licence no. 234527. For a copy of ANZ's Financial Services Guide please [click here](#) or request from your ANZ point of contact.

Brazil. This document is distributed on a cross border basis and only following request by the recipient. No securities are being offered or sold in Brazil under this document, and no securities have been and will not be registered with the Securities Commission - CVM.

Brunei, Japan, Kuwait, Malaysia, Switzerland, Taiwan. This document is distributed in each of these jurisdictions by ANZ on a cross-border basis.

Cambodia. The information contained in this document is confidential and is provided solely for your use upon your request. This does not constitute or form part of an offer or solicitation of any offer to engage services, nor should it or any part of it form the basis of, or be relied in any connection with, any contract or commitment whatsoever. ANZ does not have a licence to undertake banking operations or securities business or similar business, in Cambodia. By requesting financial services from ANZ, you agree, represent and warrant that you are engaging our services wholly outside of Cambodia and subject to the laws of the contract governing the terms of our engagement.

Canada. This document is general information only, is intended for institutional use only – not retail, and is not meant to be tailored to the needs and circumstances of any recipient. In addition, this document is not intended to be an offer or solicitation to purchase or sell any security or other financial instrument or to employ a specific investment strategy.

Chile. You understand and agree that ANZ is not regulated by Chilean Authorities and that the provision of this document is not subject to any Chilean supervision and is not guaranteed by any regulatory or governmental agency in Chile.

Fiji. For Fiji regulatory purposes, this document and any views and recommendations are not to be deemed as investment advice. Fiji investors must seek licensed professional advice should they wish to make any investment in relation to this document.

Hong Kong. This document is issued or distributed in Hong Kong by the Hong Kong branch of ANZ, which is registered at the Hong Kong Monetary Authority to conduct Type 1 (dealing in securities), Type 4 (advising on securities) and Type 6 (advising on corporate finance) regulated activities. The contents of this document have not been reviewed by any regulatory authority in Hong Kong. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice.

India. If this document is received in India, only you (the specified recipient) may print it provided that before doing so, you specify on it your name and place of printing.

Israel. ANZ is not a holder of a licence granted in Israel pursuant to the Regulation of Investment Advising, Investment Marketing and Portfolio Management Law, 1995 ("Investment Advice Law") and does not hold the insurance coverage required of a licensee pursuant to the Investment Advice Law. This publication has been prepared exclusively for Qualified Clients as such term is defined in the First Schedule to the Investment Advice Law. As a prerequisite to the receipt of a copy of this publication a recipient will be required to provide confirmation and evidence that it is a Qualified Client. Nothing in this publication should be considered Investment Advice or Investment Marketing as defined in the Investment Advice Law. Recipients are encouraged to seek competent investment advice from a locally licensed investment adviser prior to making any investment.

Macau. Click [here](#) to read the disclaimer for all jurisdictions in Mandarin. 澳门。点击[此处](#)阅读所有司法管辖区的免责声明的中文版。

Myanmar. This document is intended to be general and part of ANZ's customer service and marketing activities when implementing its functions as a licensed bank. This document is not Securities Investment Advice (as that term is defined in the Myanmar Securities Transaction Law 2013).

Important notice

New Zealand. This document is distributed in New Zealand by ANZ Bank New Zealand Limited. The material is for information purposes only and is not financial advice about any product or service. We recommend you seek advice about your financial situation and goals before acquiring or disposing of (or not acquiring or disposing of) a financial product.

Oman. ANZ neither has a registered business presence nor a representative office in Oman and does not undertake banking business or provide financial services in Oman. Consequently ANZ is not regulated by either the Central Bank of Oman (**CBO**) or Oman's Capital Market Authority (**CMA**). The information contained in this document is for discussion purposes only and neither constitutes an offer of securities in Oman as contemplated by the Commercial Companies Law of Oman (Royal Decree 4/74) or the Capital Market Law of Oman (Royal Decree 80/98), nor does it constitute an offer to sell, or the solicitation of any offer to buy non-Omani securities in Oman as contemplated by Article 139 of the Executive Regulations to the Capital Market Law (issued vide CMA Decision 1/2009). ANZ does not solicit business in Oman and the only circumstances in which ANZ sends information or material describing financial products or financial services to recipients in Oman, is where such information or material has been requested from ANZ and the recipient understands, acknowledges and agrees that this document has not been approved by the CBO, the CMA or any other regulatory body or authority in Oman. ANZ does not market, offer, sell or distribute any financial or investment products or services in Oman and no subscription to any securities, products or financial services may or will be consummated within Oman. Nothing contained in this document is intended to constitute Omani investment, legal, tax, accounting or other professional advice.

People's Republic of China (PRC). This document may be distributed by either ANZ or Australia and New Zealand Bank (China) Company Limited (**ANZ China**). Recipients must comply with all applicable laws and regulations of PRC, including any prohibitions on speculative transactions and CNY/CNH arbitrage trading. If this document is distributed by ANZ or an Affiliate (other than ANZ China), the following statement and the text below is applicable: No action has been taken by ANZ or any affiliate which would permit a public offering of any products or services of such an entity or distribution or re-distribution of this document in the PRC. So, the products and services of such entities are not being offered or sold within the PRC by means of this document or any other document. This document may not be distributed, re-distributed or published in the PRC, except under circumstances that will result in compliance with any applicable laws and regulations. If and when the material accompanying this document relates to the products and/or services of ANZ China, the following statement and the text below is applicable: This document is distributed by ANZ China in the Mainland of the PRC.

Peru. The information contained in this document has not been, and will not be, registered with or approved by the Peruvian Superintendency of the Securities Market (Superintendencia del Mercado de Valores, **SMV**) or the Lima Stock Exchange (Bolsa de Valores de Lima, **BVL**) or under the Peruvian Securities Market Law (Legislative Decree 6 861), and will not be subject to Peruvian laws applicable to public offerings in Peru. To the extent this information refers to any securities or interests, it should be noted the securities or interests may not be offered or sold in Peru, except if (i) such securities or interests were previously registered with the Peruvian Superintendency of the Securities Market, or (ii) such offering is considered a private offering in Peru under the securities laws and regulation of Peru.

Qatar. This document has not been, and will not be:

- lodged or registered with, or reviewed or approved by, the Qatar Central Bank (**QCB**), the Qatar Financial Centre (**QFC**) Authority, QFC Regulatory Authority or any other authority in the State of Qatar (**Qatar**); or
- authorised or licensed for distribution in Qatar, and the information contained in this document does not, and is not intended to, constitute a public offer or other invitation in respect of securities in Qatar or the QFC.

The financial products or services described in this document have not been, and will not be:

- registered with the QCB, QFC Authority, QFC Regulatory Authority or any other governmental authority in Qatar; or
- authorised or licensed for offering, marketing, issue or sale, directly or indirectly, in Qatar.

Accordingly, the financial products or services described in this document are not being, and will not be, offered, issued or sold in Qatar, and this document is not being, and will not be, distributed in Qatar. The offering, marketing, issue and sale of the financial products or services described in this document and distribution of this document is being made in, and is subject to the laws, regulations and rules of, jurisdictions outside of Qatar and the QFC. Recipients of this document must abide by this restriction and not distribute this document in breach of this restriction. This document is being sent/issued to a limited number of institutional and/or sophisticated investors (i) upon their request and confirmation that they understand the statements above; and (ii) on the condition that it will not be provided to any person other than the original recipient, and is not for general circulation and may not be reproduced or used for any other purpose.

Singapore. To the extent that this document contains any statements of opinion and/or recommendations related to an investment product or class of investment product (as defined in the Financial Advisers Act 2001), this document is distributed in Singapore by ANZ solely for the information of "accredited investors", "expert investors" or (as the case may be) "institutional investors" (each term as defined in the Securities and Futures Act 2001 of Singapore). ANZ is licensed in Singapore under the Banking Act 1970 of Singapore and is exempted from holding a financial adviser's licence under Section 23(1)(a) of the Financial Advisers Act 2001 of Singapore. In respect of any matters arising from, or in connection with, the distribution of this document in Singapore, please speak to your usual ANZ contact in Singapore.

United Arab Emirates (UAE). This document is distributed in the UAE or the Dubai International Financial Centre (**DIFC**) (as applicable) by ANZ. This document does not, and is not intended to constitute: (a) an offer of securities anywhere in the UAE; (b) the carrying on or engagement in banking, financial and/or investment consultation business in the UAE under the rules and regulations made by the Central Bank of the UAE, the Emirates Securities and Commodities Authority or the UAE Ministry of Economy; (c) an offer of securities within the meaning of the Dubai International Financial Centre Markets Law (**DIFCML**) No. 12 of 2004; and (d) a financial promotion, as defined under the DIFCML No. 1 of 200. ANZ DIFC Branch is regulated by the Dubai Financial Services Authority (**DFSA**). The financial products or services described in this document are only available to persons who qualify as "Professional Clients" or "Market Counterparty" in accordance with the provisions of the DFSA rules.

United Kingdom. This document is distributed in the United Kingdom by Australia and New Zealand Banking Group Limited (**ANZ**) solely for the information of persons who would come within the Financial Conduct Authority (**FCA**) definition of "eligible counterparty" or "professional client". It is not intended for and must not be distributed to any person who would come within the FCA definition of "retail client". Nothing here excludes or restricts any duty or liability to a customer which ANZ may have under the UK Financial Services and Markets Act 2000 or under the regulatory system as defined in the Rules of the Prudential Regulation Authority (**PRA**) and the FCA. ANZ considers this document to constitute an Acceptable Minor Non-Monetary Benefits (**AMNMB**) under the relevant inducement rules of the FCA. ANZ is authorised in the United Kingdom by the PRA and is subject to regulation by the FCA and limited regulation by the PRA. Details about the extent of our regulation by the PRA are available from us on request.

United States. Except where this is a FX-related document, this document is distributed in the United States by ANZ Securities, Inc. (**ANZ SI**) which is a member of the Financial Regulatory Authority (**FINRA**) (www.finra.org) and registered with the SEC. ANZSI's address is 277 Park Avenue, 31st Floor, New York, NY 10172, USA (Tel: +1 212 801 9160 Fax: +1 212 801 9163). ANZSI accepts responsibility for its content. Information on any securities referred to in this document may be obtained from ANZSI upon request. This document or material is intended for institutional use only – not retail. If you are an institutional customer wishing to effect transactions in any securities referred to in this document you must contact ANZSI, not its affiliates. ANZSI is authorised as a broker-dealer only for institutional customers, not for US Persons (as "US person" is defined in Regulation S under the US Securities Act of 1933, as amended) who are individuals. If you have registered to use our website or have otherwise received this document and are a US Person who is an individual: to avoid loss, you should cease to use our website by unsubscribing or should notify the sender and you should not act on the contents of this document in any way. Non-U.S. analysts may not be associated persons of ANZSI and therefore may not be subject to FINRA Rule 2242 restrictions on communications with the subject company, public appearances and trading securities held by the analysts. Where this is a FX-related document, it is distributed in the United States by ANZ's New York Branch, which is also located at 277 Park Avenue, 31st Floor, New York, NY 10172, USA (Tel: +1 212 801 916 0 Fax: +1 212 801 9163).

Vietnam. This document is distributed in Vietnam by ANZ or ANZ Bank (Vietnam) Limited, a subsidiary of ANZ.