ANZ Research

NZ Insight: 2020 Hindsight

5 September 2022

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

Finn Robinson or Sharon Zollner for more details.

2020 Hindsight

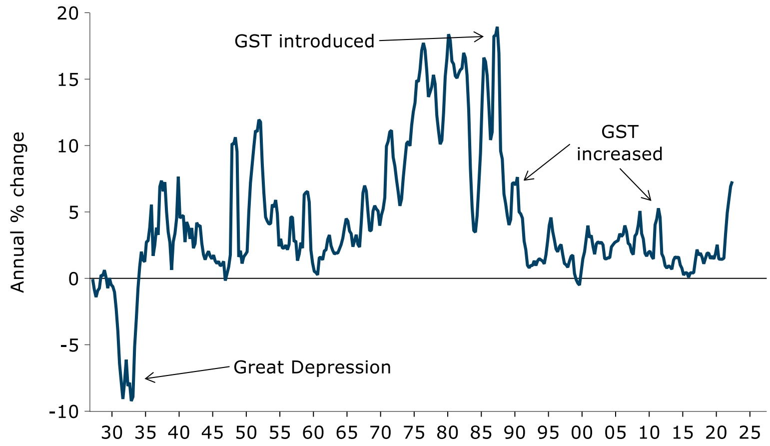
Summary

- Inflation in New Zealand is running hot (hitting 7.3% y/y in Q2 this year). In this insight note we take a detailed look at why.
- In over-simplified terms, we've been hit by a perfect storm of supply-side constraints largely relating to the pandemic, while demand has been overstimulated by what in hindsight was an overly powerful policy response.
- Russia's invasion of Ukraine has only added fuel to the inflation inferno, though New Zealand is less exposed than other countries, particularly Europe.
- In our next Insight, we will outline our inflation forecasts and where we see the balance of risks from here.

How did we get here?

Annual CPI inflation reached 7.3% in the June quarter 2022, ending three decades of being relatively low and stable. That's far above the Monetary Policy Committee's objective to "keep future annual inflation between 1 and 3 percent over the medium term, with a focus on keeping future inflation near the 2 percent midpoint." Excluding the GST hike in July 1989, CPI inflation is now the highest it's been since 1988 (figure 1).

Figure 1. CPI inflation

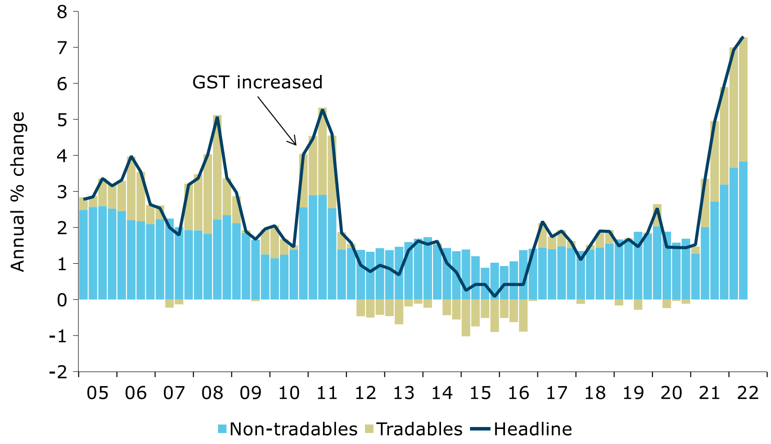


Source: Stats NZ, Macrobond, ANZ Research

So how did we get here?

Not surprisingly, there are many competing explanations for high inflation, including COVID, global supply disruptions, geopolitical tensions, high government spending, tight labour markets (partly related to the closed border), and central bank policy stimulus. All of these explanations have a part to play, and there is no one single factor that can explain the inflation that we now see. Indeed, figure 2 shows just over half of the inflation we're seeing is non-tradables (ie primarily "made in NZ", reflecting the state of the NZ economy), and just under half is tradables (imported goods – or those that could be – more reflective of global inflation pressures). So there's a lot to unpack.

Figure 2. Contributions to CPI inflation



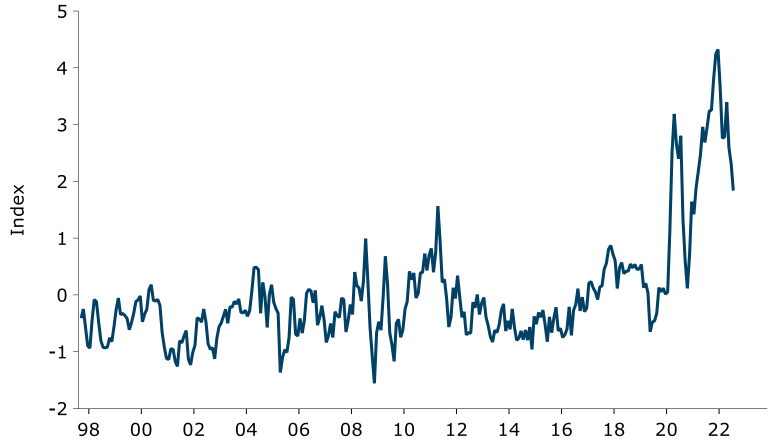
Source: Stats NZ, Macrobond, ANZ Research

Global factors and COVID

As inflation started to pick up in early 2021, it very much seemed to reflect global supply chain issues and ongoing disruption from COVID-19. There were a few key pressures here.

First, lockdowns and ongoing social-distancing requirements contributed to big backlogs in ports. Moving goods within and between countries became an expensive and time-consuming process. The Federal Reserve Bank of New York's Global Supply Chain Pressure Index shows just how disrupted things became (figure 3). Supply chain pressures are now easing as we head into the second half of 2022, but they are still far from normal. As China perseveres with its zero-COVID policy and geopolitical tensions continue to rumble, a sudden easing in supply chain pressure back to levels seen in the 2010s seems unlikely.

Figure 3. Global supply chain pressure index

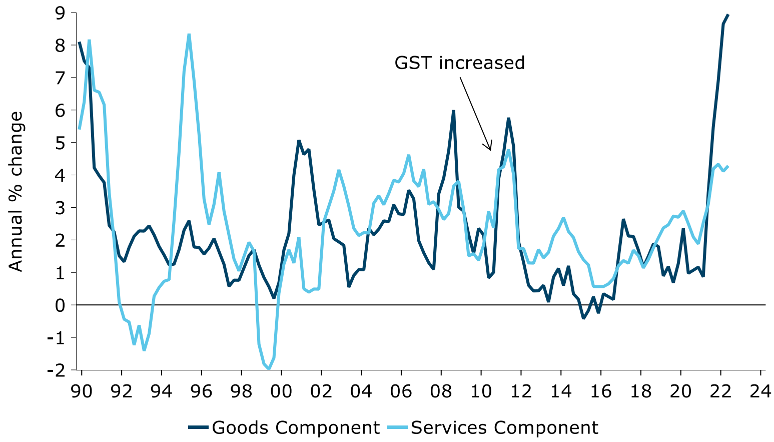


Source: FRBNY, Macrobond, ANZ Research

A second pressure point was that household consumption baskets shifted significantly towards goods and away from services. International travel and many face-to-face services were either prohibited or significantly disrupted, but consumers were flush with cash due to the significant fiscal responses seen around the world (more on this later). That saw a global surge in demand for 'things', which put further pressure on already-disrupted supply chains. And that's not to mention the huge increase in working from home, which put pressure on the global supply of semiconductors, driving up prices for electronics, cars, and pretty much anything with some form of electronic brain.

Given these global pressures, it's not surprising that the biggest price increases we've seen so far in New Zealand have been for goods, up 8.9% y/y in Q2 2022 (figure 4).

Figure 4. Goods and services inflation



Source: Stats NZ, Macrobond, ANZ Research

At the time, these inflation pressures appeared to be driven by transitory factors, and therefore something to which central banks shouldn't necessarily respond. The thinking was, inflation would fall by itself as COVID disruption eased, supply chains adjusted, and the chip shortage worked itself out. One of the wonders of capitalism is meant to be that high prices beget a supply response, hence the saying, "the best cure for high prices is high prices."

So even though inflation was rising sharply in 2021, central banks were slow to respond, insisting the pressures were "transitory". With the immense benefit of hindsight, it's clear that it was optimistic to expect inflation to just go away. An underappreciated reason the supply side was struggling to keep up was that demand had been severely over-stimulated by fiscal and monetary policy. At the time, given unprecedented data volatility and lots of moving parts, that wasn't as obvious as it is now.

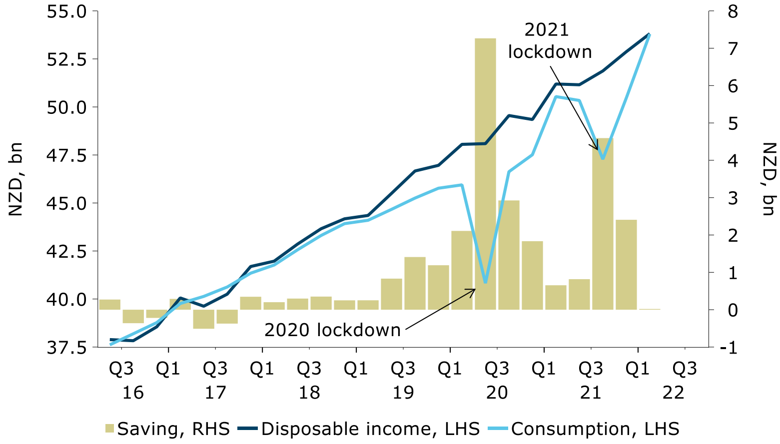
Ongoing waves of COVID have drawn out the supply disruption over several years, while the strong demand has contributed to a broadening of inflation pressures into the domestic side of many economies, including here in New Zealand. The Russian invasion of Ukraine, and ongoing adverse climatic events around the world have only added to the inflation pressure.

Domestic factors

The domestic policy response to COVID in New Zealand was large. On the health front, lockdowns enabled us to initially eliminate the virus, allowing the domestic economy to operate more freely than in other countries (albeit completely lacking our biggest export – international tourism). Policymakers, very understandably, threw everything they had at the economy in 2020, fearing a deep and protracted recession. And the economic policy response, most importantly the wage subsidy, was critical in allowing the economy to bounce back from lockdown in 2020. The Ministry of Social Development estimates that "62% of jobs (excluding sole traders) were supported by at least one wage subsidy" up to September 2020. The RBNZ rolled out plenty of monetary policy stimulus as well, cutting the OCR 75bps to 0.25%, announcing quantitative easing, easing housing lending restrictions, and implementing the funding for lending program over the course of 2020.

The upshot of all this was that unemployment didn't increase anywhere near as much as was feared (peaking at 5.3% in Q3 2020 before turning around, versus the RBNZ's May 2020 MPS baseline scenario of a 9.0% peak). While GDP fell just over 10% in Q2 2020, household disposable incomes barely budged (figure 5). Consumption spending took a big hit during both the 2020 and 2021 lockdowns, because shops were shut, but household balance sheets made it through in very good shape, with huge increases in saving over the past few years (at the expense of fiscal dis-saving).

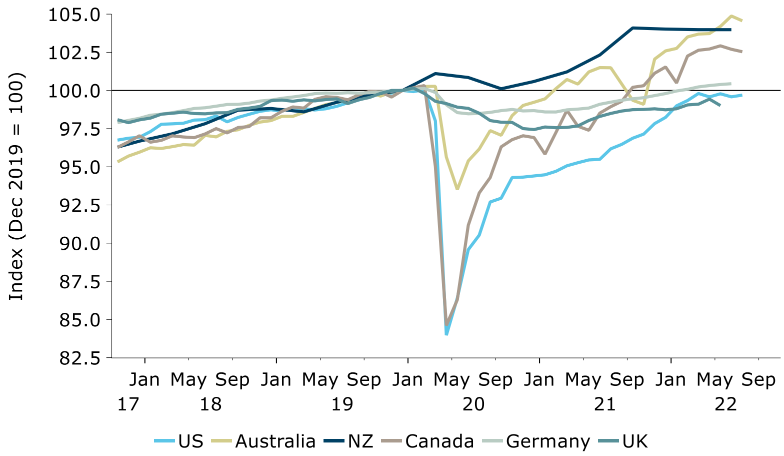
Figure 5. Household disposable income, consumption, and savings



Source: Stats NZ, Macrobond, ANZ Research

Employment in New Zealand also came through relatively unscathed, especially compared with the experiences other countries (figure 6). Employment fell modestly over 2020, but because the wage subsidy kept most employment relationships intact, the labour market took much less of a hit than feared, and bounced back much faster. Employment is now significantly higher than before the pandemic, while unemployment reached a new record low of 3.2% at the end of 2021 (and remains very low).

Figure 6. Employment levels



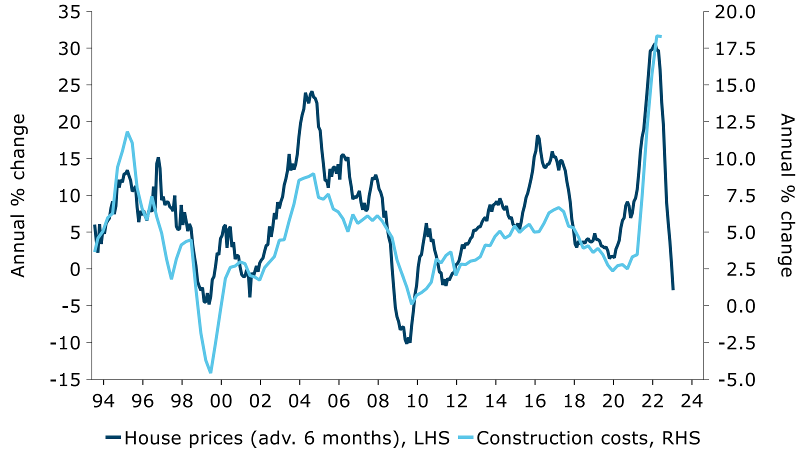
Source: BLS, ABS, Stats NZ, StatCan, DESTATIS, ONS, Macrobond, ANZ Research

So domestically, we came out of 2020 in far better shape than anyone expected heading into the pandemic. But it also meant that the policy response ended up being too powerful, in hindsight. That's a much better problem to have than double-digit unemployment, but it's still a problem. With household incomes intact, savings high, the labour market rapidly tightening, but the supply side of the economy still hobbled by supply chain and COVID disruption, it became increasingly clear over 2021 that demand in the economy was looking overheated relative to now-diminished supply.

The first place where we really started to see this play out was in the housing market. Turns out, lowering interest rates to record lows and suspending LVR restrictions was a pretty potent mix for house prices. Despite a massive surge in house building (and a dramatic drop in population growth thanks to the border closure), 2021 saw house prices soar, peaking 45% above their 2019 levels in November 2021.

The construction sector also bounced back rapidly, with building activity leading the economy out of the 2020 recession. Given an unprecedented rate of house-building and the resulting difficulty in finding materials and workers, it's no surprise that construction costs surged, up over 18% in the year to June 2022 (figure 7). In Q2, the housing and household utilities CPI group (which includes construction costs, rents, rates, property services, and household energy) added 2.6ppts to the 7.3% CPI inflation print. Indeed, it explained two thirds of annual domestic inflation in the June quarter.

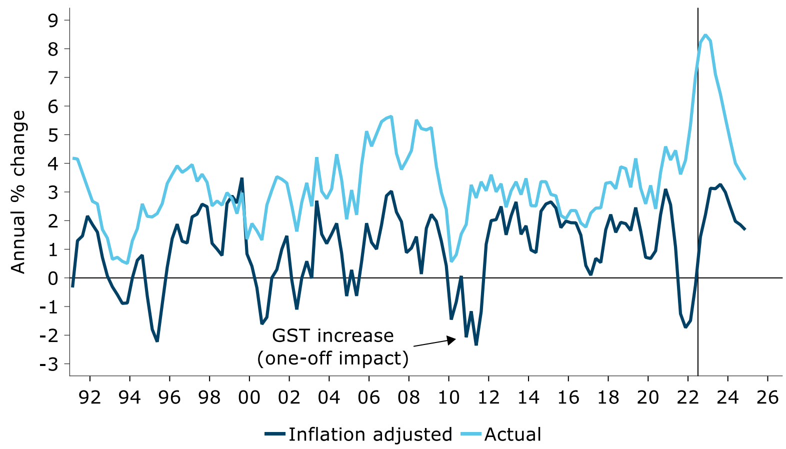
Figure 7. Housing market and construction cost inflation



Source: REINZ, Stats NZ, Macrobond, ANZ Research

It's not just construction costs though. Inflation pressures have now spread into every nook and cranny of this overheated economy, including the labour market. Private sector wage growth hit 7.0% y/y in Q2, with extremely low unemployment, overstimulated demand, and the rising cost of living creating the perfect backdrop for a potential wage price spiral. Wage growth is expected to exceed inflation imminently, sending real wage growth back into positive territory (figure 8).

Figure 8. Wage growth forecast (actual and inflation adjusted)



Source: Stats NZ, Macrobond, ANZ Research

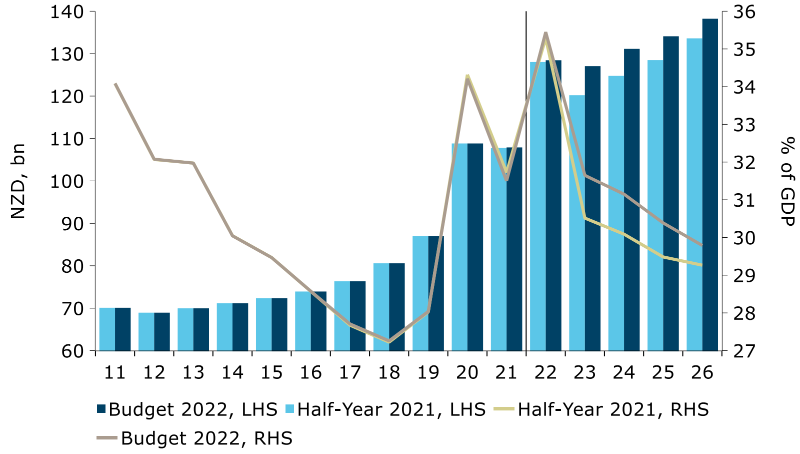
Rising wages are not inflationary if they reflect rising productivity. But the challenge for businesses is that while they're paying much higher labour costs (and other input cost as well), on balance COVID has been a negative productivity shock, for example due to worker illness or social distancing and cleaning requirements. So firms are paying more for workers and other inputs to production, but are not getting a commensurate increase in output (similar to the productivity impacts of climate change). And that means that at some point those higher costs have to be passed on to consumers (ie generating more inflation).

This cycle of high inflation driving high wages driving high inflation can be hard to break, particularly as firms and workers realise which way the wind is blowing in a tight labour market and change their behaviour accordingly. This results in things like indexation of wages to previous years' inflation, which might seem only fair and reasonable, but which builds more persistence ('stickiness') into the inflation process. If that kind of dynamic gets entrenched, beating inflation will likely require a sustained period of higher interest rates and slower economic growth.

A final domestic point to note is that the stance of fiscal policy has been, and remains, very expansionary. The initial response to COVID-19, including the wage subsidy, was necessary and extremely effective in keeping workers attached to their employers. But with the domestic economy becoming increasingly capacity constrained, there are limits to how much we can increase government spending without crowding out private sector activity and making the inflation problem worse.

Core Crown expenses remain very elevated relative to pre-COVID levels, and planned expenditure was revised upwards at Budget 2022 (figure 9). Adding demand into an already overheated economy risks higher interest rates being needed to realign supply and demand, and thereby bring inflation down.

Figure 9. Core Crown expenses



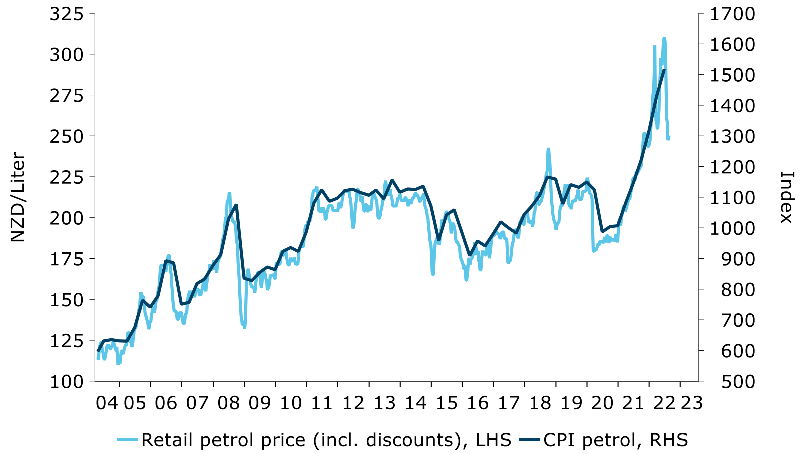
Source: New Zealand Treasury, Macrobond, ANZ Research

Geopolitics and war

The Russian invasion of Ukraine has had tragic consequences in terms of loss of life, mass displacement of people, and physical destruction. It has also sent shockwaves through the global economy. Europe has striven to rapidly reduce its reliance on Russian gas, sending energy prices skyrocketing. Oil prices traded at around USD100/barrel for much of the June quarter. And while prices have dropped to closer to USD90/barrel over the past few months, they remain elevated compared with the recent past. That's been felt by Kiwi consumers, with petrol prices briefly rising above

NZD3/litre, even with the Government temporarily reducing the fuel excise tax (figure 10). It's worth noting that without the reduction in the fuel excise tax, headline inflation would likely have peaked closer to 8% in Q2.

Figure 10. Petrol prices



Source: MBIE, Stats NZ, Macrobond, ANZ Research

Ukraine is also a key food-producing nation, which contributed to food commodity prices surging in the initial months of the invasion. Combine war-related price surges and disruption with the destructive heatwaves and flooding seen across large areas of the globe, and food security has become another pressing issue. New Zealand's food prices have also been rising steeply, reflecting a combination of strong global prices, domestic cost pressures, and weather-related disruption. In the year to July 2022, domestic food prices were up 7.6%. Global food price indexes are now starting to retreat, but the rise has been very painful for low-income households. And given wage pressure across the food producing, distribution and retailing chain, it's not clear when any meaningful relief may come.

Adding to imported cost pressures, the New Zealand dollar has also weakened significantly in recent months against key trading partner currencies, including the USD and AUD. This makes the high global prices even dearer in New Zealand dollar terms, further increasing the inflation that we're importing from overseas.

To try to summarise all these moving parts, the economy has been hit by a sequence of extraordinary supply shocks (COVID, war, and ongoing intensification of climate change impacts), while demand has been overstimulated by a policy response to COVID that (with 20/20 hindsight), was too powerful. That's an incredibly inflationary mix of factors.

In our next Insight, we will outline our inflation forecasts and where we see the balance of risks from here.

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 27 664 3554
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, fiscal policy, economic risk assessment and credit developments.

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

Finn Robinson
Economist

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

Telephone: +64 21 629 553
Email: finn.robinson@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: 1 September 2022

This document (which may be in the form of text, image, video or audio) is intended for ANZ's Institutional, Markets and Private Banking clients. It should not be forwarded, copied or distributed. The opinions and research contained in this document are (a) not personal advice nor financial advice about any product or service; (b) provided for information only; and (c) intended to be general in nature and does 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 and distributed in your country/region by either: Australia and New Zealand Banking Group Limited (ABN11 005 357 522) (**ANZ**); or its relevant subsidiary or branch (each, an **Affiliate**), as appropriate or as set out below.

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 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 would be subject to additional licensing or registration requirements. Further, the products and services mentioned in this document may not be available in all countries.

ANZ in no way provides any 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 does not represent or warrant the accuracy or completeness of the information Further, ANZ 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 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. The 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 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 and its Affiliates may have an interest in the subject matter of this document. They may receive fees from customers for dealing in the 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 the 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's policies on conflicts of interest and ANZ maintains appropriate information barriers to control the flow of information between businesses within it and its Affiliates.

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

Country/region specific information: Unless stated otherwise, this document is distributed by Australia and New Zealand Banking Group Limited (**ANZ**).

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 Banking Group Limited 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 material is for information purposes only and is not financial advice about any product or service. We recommend seeking financial 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. 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 Cap. 289 of Singapore). ANZ is licensed in Singapore under the Banking Act Cap. 19 of Singapore and is exempted from holding a financial adviser's licence under Section 23(1)(a) of the Financial Advisers Act Cap. 100 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**) 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.

This document has been prepared by ANZ Bank New Zealand Limited, Level 26, 23-29 Albert Street, Auckland 1010, New Zealand, Ph 64-9-357 4094, e-mail nzeconomics@anz.com, http://www.anz.co.nz