ANZ Research

NZ Insight: Terms of trade: risks and opportunities

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Contact

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*With many thanks to **Saeyavan Sitsabesan** for his work on this topic during his time in ANZ Research*

On good terms

Summary

Copious amounts of monetary and fiscal stimulus have bolstered global demand at a time when household consumption has become more concentrated in goods as the pandemic limits spending on services such as international travel. Add reduced supply capacity into the mix and it's relatively simple to explain why global inflation is on a tear (ah, the benefit of hindsight).

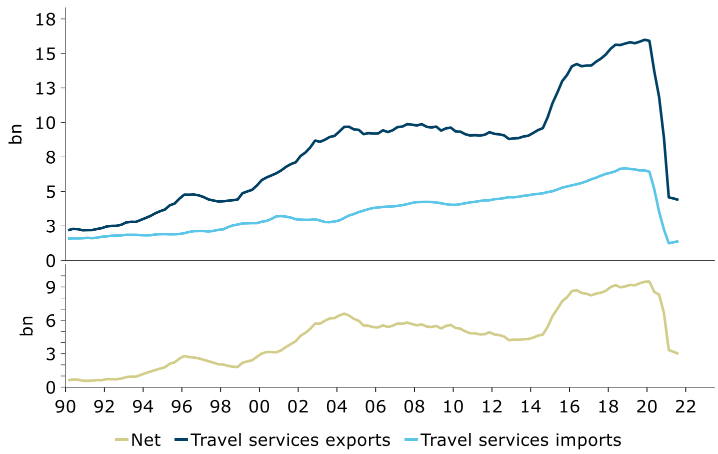
The terms of trade (the ratio of export prices to import prices) is a key link in the chain of transmission regarding how global economic forces and price pressures influence economic outcomes in New Zealand. New Zealand is a small, open economy with a relatively high trade density. That means we can't hide from global shocks.

In this note, we look at the pre-pandemic evolution of NZ's goods terms of trade, and discuss how the subsequent mismatch in supply and demand, and other changes (possibly more structural than cyclical) may influence the outlook.

But before we dive in, some perspective.

This note focuses on trade in goods. But services trade is extremely important to the economy too. Closed borders have seen services trade fall significantly from its pre-pandemic level, particularly travel services (eg international tourism) which was once a larger export earner than dairy. Overall, total services imports have held up better than our relatively travel-reliant exports, and that's seen NZ's annual services trade balance deteriorate from a surplus of $3.8bn as at Q4 2019 (pre pandemic) to a deficit of $4.25bn as at Q3 2021 – an $8bn deterioration. That's a mighty big hole to fill, and household and Government debt accumulation can't fill it forever! NZ needs open borders to alleviate pressure in the labour market and to generate national income. There is now a clear pathway towards reopening. But COVID is a tricky foe, and it's foiled the Government's border plans before.

Figure 1. Travel services trade



Source: Stats NZ, Macrobond, ANZ Research

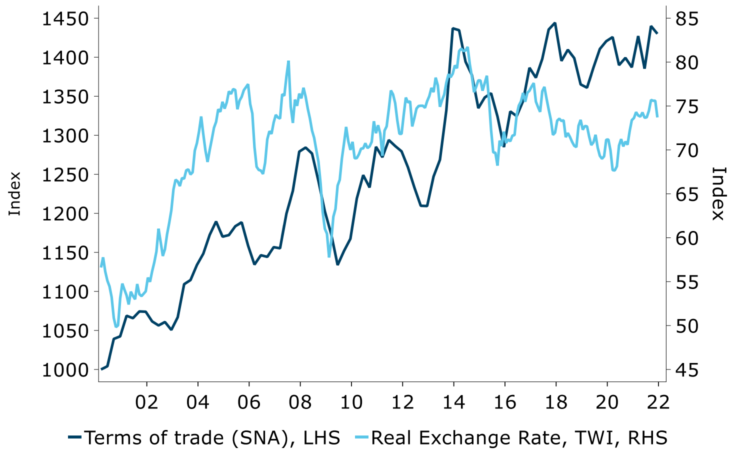
The terms of trade matter for NZ…

The terms of trade is the ratio of export prices to import prices, and is effectively a measure of a country's international purchasing power. For example, if the price of milk powder (an export) increases, and the price of a smartphone (an import) is stable, then the associated increase in the terms of trade captures that a given quantity of milk powder exported will be able to fund more smartphones than previously. And while dairy farmers aren't in the business of buying up smartphones in bulk, they are in the business of investing and employing. That activity contributes to the income of others, and can therefore indirectly fund the occasional smartphone purchase.

There are multiple channels though which a change in the terms of trade impact the wider economy.

- Higher export prices mean higher incomes for exporters, with flow-on impacts throughout the economy.
- The export sector might respond to a higher export price by increasing production. That means more investment and/or employment. Changes in import prices are an important signal for domestic business decisions too, signalling to would-be producers whether or not it is worthwhile producing a good in NZ (based on scale and the local cost of production etc). Thus, the terms of trade, through the underlying price signals, can determine how economic resources are used and ultimately which goods and services get produced here.
- For the consumer, a fall in the price of an imported good means they can afford more of it, or have more income left over after buying it to spend on other things. (Or with rising oil prices, the opposite).
- Further, because the terms of trade also tends to be positively correlated with the real exchange rate (figure 2), higher terms of trade can lift consumers international purchasing power – even if driven by a single export good – say higher dairy prices [1].

Figure 2. NZ's Terms of Trade and Real Exchange rate



Source: Stats NZ, RBNZ, Macrobond, ANZ Research

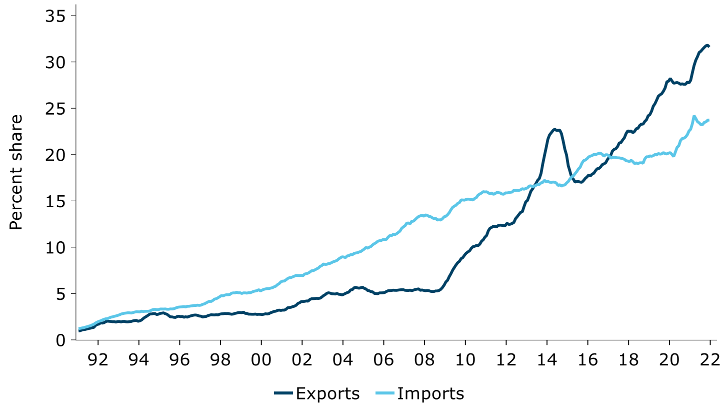
All up, the channels through which the terms of trade impact economic outcomes are various, and in some cases difficult to quantify, due to being indirect. But higher terms of trade are a positive from a national income perspective. Movements in the exchange rate will then determine how the spoils are divided between exporters and those who buy imported goods.

[1] See Benigno and Thoenissen (2003) for a theoretical framework linking the real exchange rate to the terms of trade [http://fmwww.bc.edu/repec/mmfc03/Thoenissen.pdf]

…and China matters for our terms of trade

The share of our exports going to China has increased significantly over the past decade or so (figure 3). Import shares have lifted significantly too.

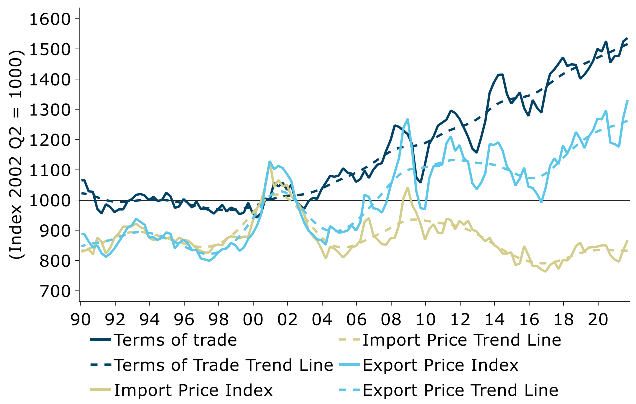
Figure 3. NZ trade share with China



Source: Stats NZ, Macrobond, ANZ Research

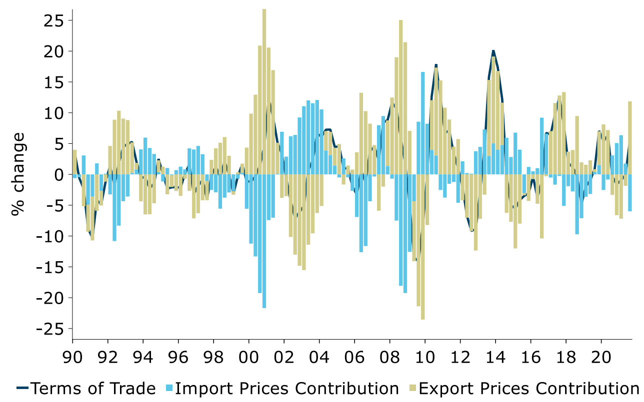
China's lifting share of trade with NZ has coincided with a trend increase in our terms of trade (figure 4). Figure 5 shows the contributions that changes in export and import prices have made to the evolution of the terms of trade. As at Q3 2021, the almost-55% increase in the terms of trade since 2000 has been driven by a 33% lift in export prices and a 13% fall in import prices.

Figure 4. NZ terms of trade and export and import prices



Source: Stats NZ, RBNZ, Macrobond, ANZ Research

Figure 5. Contributions to changes in the terms of trade

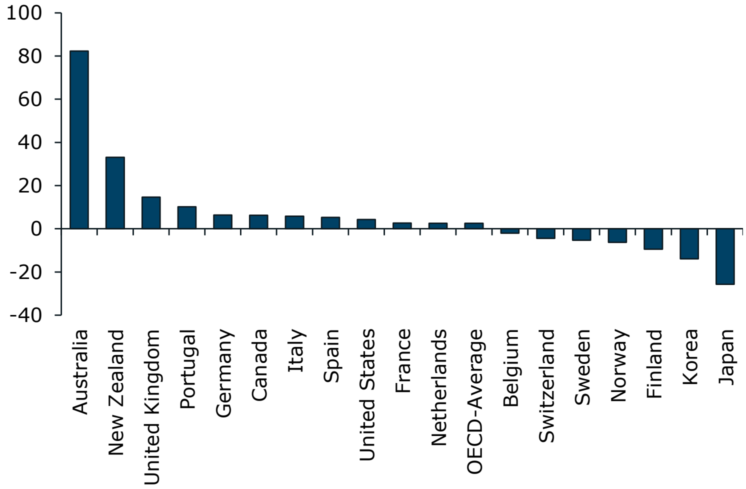


Source: Stats NZ, Macrobond, ANZ Research

Comparisons against our OECD peers (figure 6) shows NZ's terms of trade performance is second only to Australia's. Australia has also benefited from China's insatiable demand, but unlike NZ, which exports primarily soft commodities, it's been hard commodities such as iron ore and energy leading the charge.

While rising terms of trade are very much a good news story, it's important to note that that commodity-exporting economies such as New Zealand and Australia are largely price takers and particularly vulnerable to fluctuations in demand and supply, and therefore tend to face greater volatility in their terms of trade. This can contribute to greater swings in output and employment.

Figure 6. Change in terms of trade by country (since 2000)

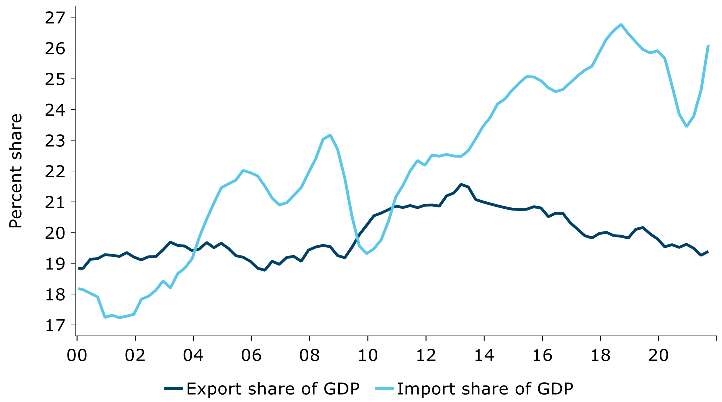


Source: Stats NZ

What's been the impact?

Looking at NZ's impressive terms of trade performance, you'd be forgiven for assuming this must have translated into a larger export sector. While it has in an absolute (level) terms, as a share of the economy, exports have actually declined over the past decade. This has coincided with the end of the white gold rush (dairy conversions) era. In other words, NZ hasn't seen export-led growth for a while now. Rather, the domestic economy has been at the forefront, and that's reflected in the import share trending higher.

Figure 7. Annual real exports and imports



Source: Stats NZ, Macrobond, ANZ Research

A few factors might help explain the export sector's relative under-performance in recent years.

- The real exchange rate, while volatile, has been elevated, and that has encouraged more imports while at the same time eroding NZ's export competitiveness.
- NZ's export basket is heavily weighted towards raw-form goods, such as whole milk powder, meaning there is limited value added to this product (domestically at least). The NZ Productivity Commission has this to say: "Exporting specialised, distinctive products at scale is the best way to build world-leading firms" (read more here).
- With agricultural exports, it's no simple matter to ramp up production. On top of weather impacts, agricultural production is determined by land use, fertiliser, stocking rates, technological advancements, use of supplementary feed, genetic gains, and management ability. In recent

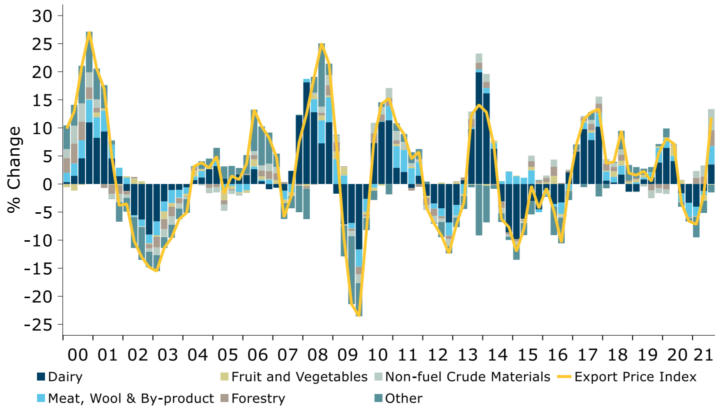
years, environmental regulations, including the focus on improving water quality and reducing greenhouse gas emissions, mean farmers are investing in ways to mitigate their environmental impact, rather than increasing production. This means more economic resource than otherwise is going into the production of our key exports for a given level of output. That's not to say these actions aren't necessary or desirable. Climate change mitigation and reversing environmental degradation is very much needed. But it helps explain why export volume growth has been limited.

Is it all about dairy?

Figure 8 shows that while dairy has been the key contributor to the change in export prices in the past couple of decades, it's not the only one. Meat has also been a consistent driver of growth since 2015. Fruit & vegetables have also made a small but positive contribution since 2010. Horticultural output growth has largely been driven by gold kiwifruit, with annual exports now sitting around $1.9 billion, accounting for 47% of all fruit exports. Non-food manufactured goods and aluminium are also a significant driver. The remaining export components make relatively modest contributions, averaging around 0.1-0.2% points.

All up, dairy is and will likely remain NZ's top goods export. With the days of volume-led growth (dairy conversions) in the rear view mirror and environmental and climate policy a significant headwind to production growth, the sector will need to rely on price growth to keep its spot as #1 export earner. Global demand for protein is expected to continue to lift over the long run, which, combined with global supply constraints, means the price outlook remains good. It's certainly shaping up to be a good couple of seasons for NZ dairy farmers on a returns basis.

Figure 8. Contribution to changes in export prices



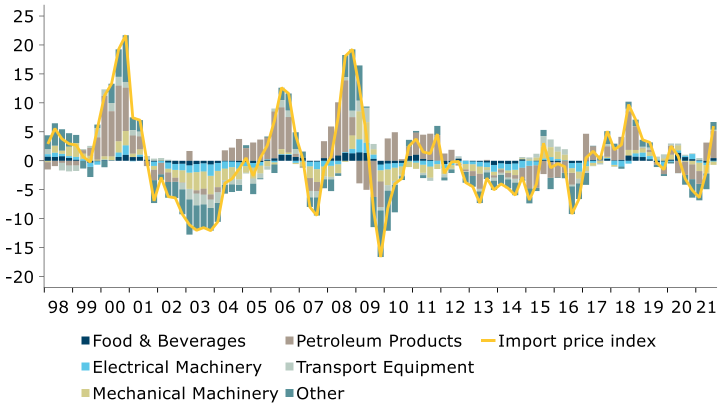
Source: Stats NZ, Macrobond, ANZ Research

On the import side, while there's been plenty of volatility over the years, the biggest driver of import price decreases over the past couple of decades has been non-food manufactured goods, electrical machinery, and mechanical machinery. There are a couple of key factors behind this:

- The rise of China as the world's manufacturer of choice has suppressed the price for manufactured goods as scale and relatively cheap labour and other production costs boosted China's competitiveness.
- Measured prices are weighed down by quality adjustments. That is, if the latest smartphone is better than the previous model (a technological improvement) but its price is unchanged, then quality adjusting for the latest bells and whistles will result in a lower measured price. And that's how it should be – you're getting more for your money.

- Petroleum and petroleum products are a key swing price, as the result of relatively volatile world oil prices (figure 9).

Figure 9. Contribution to changes in import prices



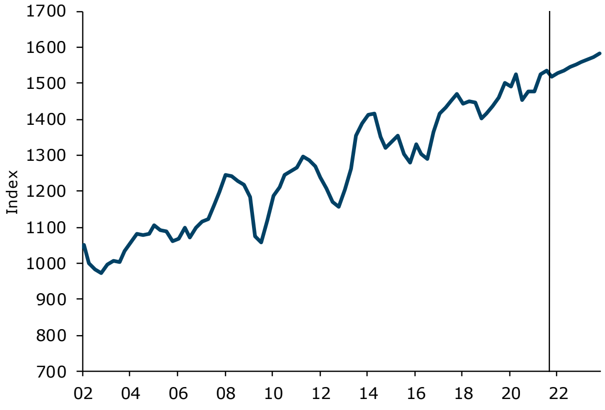
Source: Stats NZ, Macrobond, ANZ Research

High inflation and terms of trade

So how will the current highly inflationary global economic conditions impact NZ's terms of trade? The short answer is that this should see both import and export prices grow faster than otherwise. While volatility is the only certainty, we're comfortable maintaining our expectation that NZ's terms of trade will hold a loose positive correlation with activity among our key trading partners. In other words, unless the wheels fall off the global economy (and China in particular), NZ's terms of trade should remain supported.

Climate change should also support New Zealand's terms of trade. Food production around the world is highly weather dependent, and disruptions from extreme weather events are increasing by the year. New Zealand won't be immune, but most modelling seems to suggest that the reduction in New Zealand's food-producing capacity will be smaller than in many other countries, including Australia. In that context, the relative price of food seems likely to continue to increase. Indeed, it needs to, to change consumer behaviour and enable the investment required for a sharper focus on sustainability as opposed to production maximisation. That speaks to a need for fiscal policy to soften the blow for low-income households for whom food is a very significant proportion of the consumption basket. Rising terms of trade will help fund that.

Figure 10. Terms of trade forecast



Source: Stats NZ, ANZ Research

What could derail our expectation for a continued uptrend in our terms of trade?

- As highlighted, **China** is NZ’s largest goods trading partner, so naturally what happens there is going to matter for NZ. In the near term they have challenges with Omicron and issues in their property sector. But in the longer-term, China’s demographic advantage of relatively cheap labour is unwinding as the population is aging and shrinking. That will likely alter labour costs, possibly making imports from China more expensive than otherwise. China’s **climate change** mitigation strategy (and that of the rest of the world for that matter) is going to add to the cost of production. China is already water poor, limiting their ability to scale up food production. Overall, the disinflationary tailwind of China’s opening up to the world as a key global production house may soon stop blowing altogether. That would imply an end to the falls in imported goods prices that have weighed down CPI inflation this past decade or so. While that effectively means less real purchasing power than otherwise, it’s hard to argue that ever-cheaper imported manufactured goods haven’t incurred a hefty environmental toll.
- **Technological improvements** make imports cheaper, and have for some time now suppressed the price of goods such as computers, and telecommunication equipment. But could the rate of technological improvement be slowing? Take the current global semi-conductor shortage. How long this lasts is anyone’s guess. On the export side, while technological improvements are occurring in agriculture and horticulture, the low-hanging fruit appears to have been picked, as it were. Relative productivity gains in exports and imports can also influence the terms of trade.
- **Global asset price correction/financial risks.** With key central banks (such as the US Fed) about to embark on a tightening cycle, global financial markets have a potentially bumpy road ahead. There are risks that higher policy rates could drive a significant correction in asset prices and sentiment. It’s hard to know just how NZ’s terms of trade would fare in such an event, but it could weigh on demand for NZ exports. And if that coincided with still-high oil prices, then NZ’s terms of trade could easily slip.
- **COVID-induced structural change.** COVID-19 has, by and large, proven to be a significant net supply shock, with scarcity of inputs (labour and materials) possibly presenting a persistent threat to the world’s ‘just-in-time’ production mantra, which has suppressed production costs. Permanently larger inventories as just-in-time gives way to just-in-case could be a lingering theme that will keep costs of both imported and exported goods elevated. How this would impact our terms of trade depends on whether import and export goods are impacted in a similar manner.

Summary

New Zealand’s terms of trade have been on an upward trend in recent decades. Whether reflected in export shares of GDP or not, it’s made us better off. Will it continue?

- Climate change and the challenges that presents for food production are front and centre in determining the long-run trend for the relative price of food.
- On the import side, a new focus on robustness in supply chains after the experience of the last couple of years, and the demographically and politically determined end of the cost declines enabled by the entrance of China’s workforce onto the global scene, suggests higher costs and prices ahead. On top of these trends, COVID is inflating the price of everything.
- Finally, New Zealand’s export prices tend to follow the global business cycle, and that’s still holding up okay. There are downside risks out there of course (China’s property market and, related to that, the financial wellbeing of China’s consumers, the impacts of the US hiking cycle on frothy asset valuations) but if, when and how these materialise is impossible to forecast.

Like everything else, there’s plenty of uncertainty around the evolution of our terms of trade. But on balance, we’re optimistic our economy is well positioned for the global challenges and opportunities ahead.

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