

➤ Market and Economic Update – February 2025



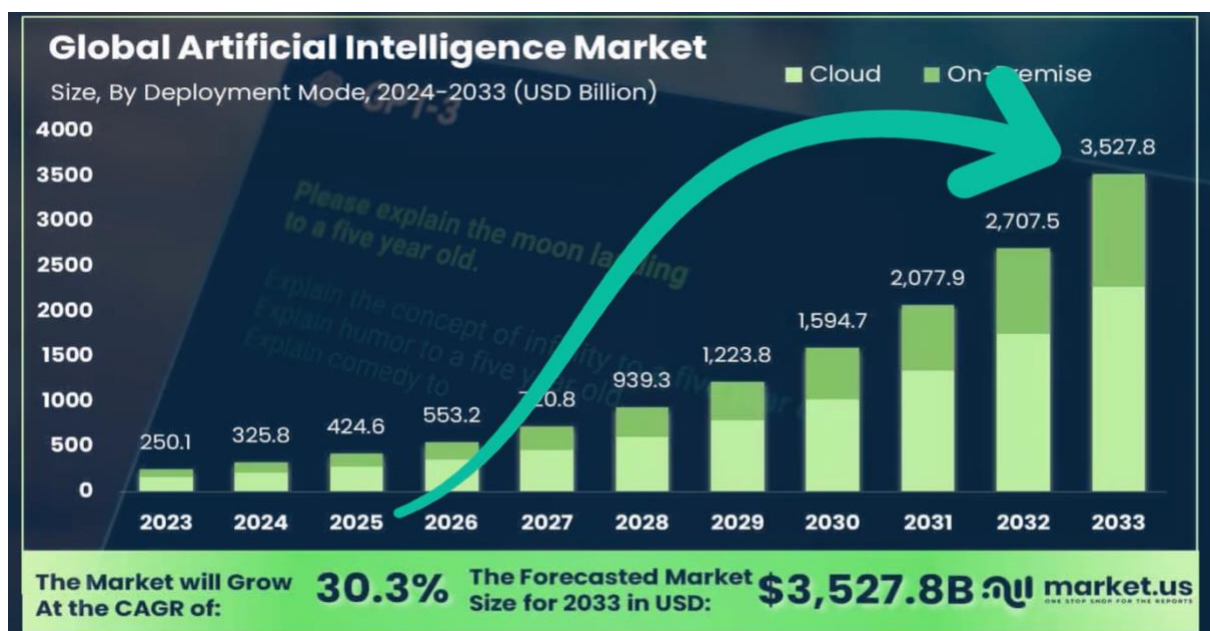
Peter Flannery CFP, FA

"People calculate too much and think too little."

-Charlie Munger

The Markets

DeepSeek disruption - upset or opportunity?



The graph above shows the potential growth in the global artificial intelligence market.

DeepSeek developed a disruptive AI system that delivers similar results to well-known US companies (e.g. Open AI, ChatGPT), but at what appears to be a fraction of the cost of US-based large language models.

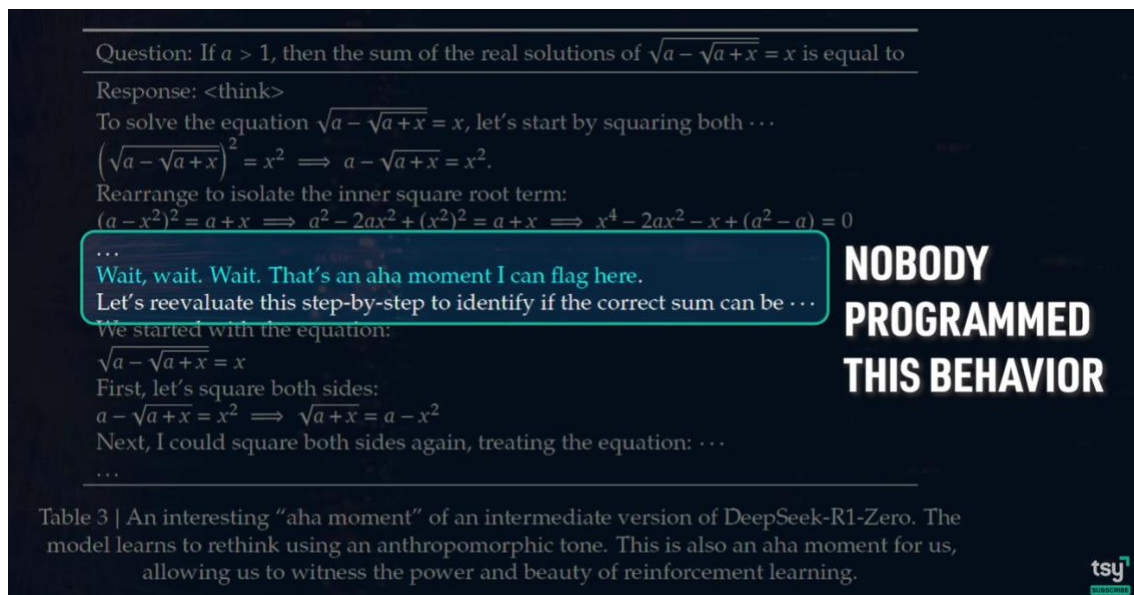
The engineering behind DeepSeek looks advanced compared to US systems, meaning that DeepSeek/China currently might have the lead in the AI race.

WISEplanning are not programmers or engineers. However, the engineering behind tech companies is important to understand (know what you are investing in). Some quick examples of the recently improved technology:

- **DeepSeek is using FP8 (8-bit numbers)** instead of FP32 (32-bit numbers) whilst retaining good accuracy. The key point is that this development can use 8-bit numbers, only switching

to 32-bit numbers when needed – much more efficient and cost-effective - fewer GPUs (graphics processing units) needed.

- **Token predicting** (e.g. predicting the next word in a sequence of words). Most large language models predict the next token, one token at a time. DeepSeek can predict multiple tokens at a time whilst remaining 85%-90% accurate compared to other models.
- **Multihead latent attention (MLA)**. Think about compressing an image (getting rid of some of the unnecessary data) so that it still looks good but saves on the need for memory and computing power. DeepSeek prioritises compressing tokens first, which means a lot less memory is required, and then trains/learns on the compressed data. Tokens traditionally are stored and take up a lot of space. So, this MLA system is much more efficient, resulting in the need for a lot fewer GPUs overall.
 - The second advantage is that compressing the data first means the system is only learning on the most important bits of the data – the ‘noisy bits’ have been removed from this part of the process. Computational capacity, therefore, is not wasted on superfluous data. This means a significant boost to the model’s performance as well as being more efficient.
- **Advanced reasoning**. The DeepSeek developers gave the system a set of problems and then told it what a well-thought-out answer might look like. But DeepSeek taught itself to ‘reason’ in a way that *it* came to the answers (not the human developers).



Question: If $a > 1$, then the sum of the real solutions of $\sqrt{a - \sqrt{a+x}} = x$ is equal to

Response: <think>

To solve the equation $\sqrt{a - \sqrt{a+x}} = x$, let's start by squaring both ...

$$(\sqrt{a - \sqrt{a+x}})^2 = x^2 \implies a - \sqrt{a+x} = x^2.$$

Rearrange to isolate the inner square root term:

$$(a - x^2)^2 = a + x \implies a^2 - 2ax^2 + (x^2)^2 = a + x \implies x^4 - 2ax^2 - x + (a^2 - a) = 0$$

...

Wait, wait. Wait. That's an aha moment I can flag here.

Let's reevaluate this step-by-step to identify if the correct sum can be ...

We started with the equation:

$$\sqrt{a - \sqrt{a+x}} = x$$

First, let's square both sides:

$$a - \sqrt{a+x} = x^2 \implies \sqrt{a+x} = a - x^2$$

Next, I could square both sides again, treating the equation: ...

...

NOBODY PROGRAMMED THIS BEHAVIOR

Table 3 | An interesting “aha moment” of an intermediate version of DeepSeek-R1-Zero. The model learns to rethink using an anthropomorphic tone. This is also an aha moment for us, allowing us to witness the power and beauty of reinforcement learning.

tsy

The 3 ways to scale AI models

AI continues to develop and scale. There are now three ways to scale:

1. Pre-training scaling
2. Post-training scaling
3. Test-time scaling (the DeepSeek advantage). Talked about previously by Jensen Wong, the President of Nvidia last year and is now proven by DeepSeek.

So what?

The question is whether DeepSeek will mean that some US-based companies (e.g. Nvidia) are now well overpriced or even under serious threat. Does the significantly improved efficiency of computer and data processing mean that the need for computer chips and related services will decline sharply? What does it mean for these companies' future revenue and earnings?

We will see how it plays out; however, US-based companies will likely adapt.

Jevons paradox

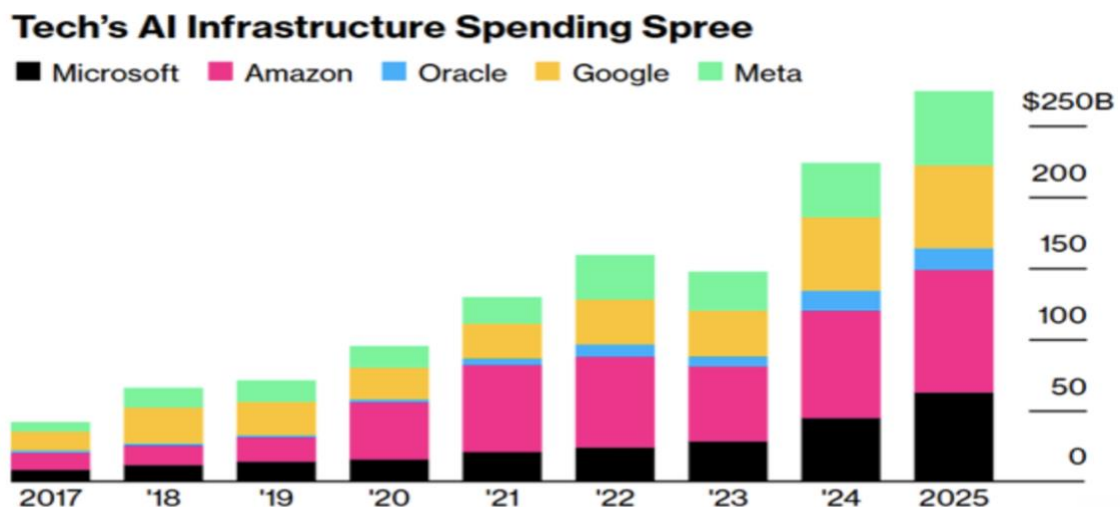
Then there is Jevons Paradox for us to think about.

Basically, it suggests that as AI becomes more efficient and accessible, we may see its use significantly increase, turning into more of a commodity that we can't get enough of.

For example, think about the everyday motor car. Back in the day, in the beginning, only the privileged few owned one. As Henry Ford developed the production line, costs declined, and faraway places became much closer for everyday Americans as the transition from horses and wagons took hold.

Think iPhones, computers and as the cost went down, everybody got one.

The key point here is that demand increases and so does total spending.



Source: Bloomberg

The graph above shows the growing total spend of 'Big Tech' since 2017

It looks as though tech companies can now expect much more from their investment in AI development. Indeed, investors might now be asking these companies how they can justify the proposed billions of dollars of investment in AI development and what shareholders will get for their money!?

Investing

OK - so, at WISEplanning, we have maintained our investing efforts generally to well-established 'big tech' (as distinct from targeting computer chip companies).

We may have missed out on some gains recently in computer chip companies, although we are doing fine anyway, comfortable.

FUN FACT: *Berkshire Hathaway was never the best-performing company on the US stock market, but generally outperformed overall for decades, until recently, due to their now significant size (difficult to 'move the needle' with small investments). Warren Buffett has been the richest person in the world in the past (but again, was never the best performer in any single year).*

Chasing rising prices can be seductive. It can work, too, for a while...

Anyway, it looks too early yet to know that DeepSeek will significantly damage US companies that we all know (e.g. the likes of Alphabet, Apple, Adobe, Microsoft, Amazon, ServiceNow and Nvidia).

Meantime, [the fourth industrial revolution](#) continues to progress...

Steady as we go.

Market conditions

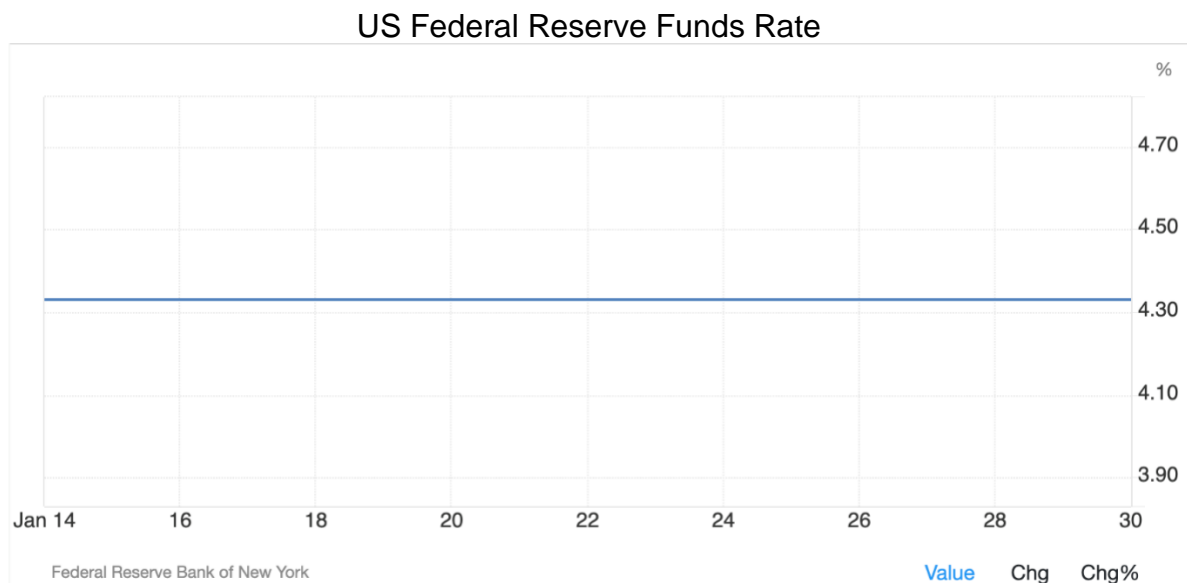
Donald Trump v2 is now installed as president of the United States of America.

He just confirmed the 25% tariffs on Canada and Mexico as well as 10% on China (effective 1 February 2025, but then placed the tariffs for Canada and Mexico on hold (04/02/2025)). He is also considering tariffs on Europe and emerging market countries.

In short, Trump can behave like a 'blunt instrument', but he is pro-business and pro-America. That is generally positive for investors.

His behaviour can be unsettling to some; however, he is neither the US nor the global economy. He can impact markets and trading prices short term, but he has limited impact on the intrinsic value of good businesses long term.

At WISEplanning, we do not play the markets. We invest in good businesses long-term.



The graph shows the no change in the Fed Funds rate from their latest meeting.

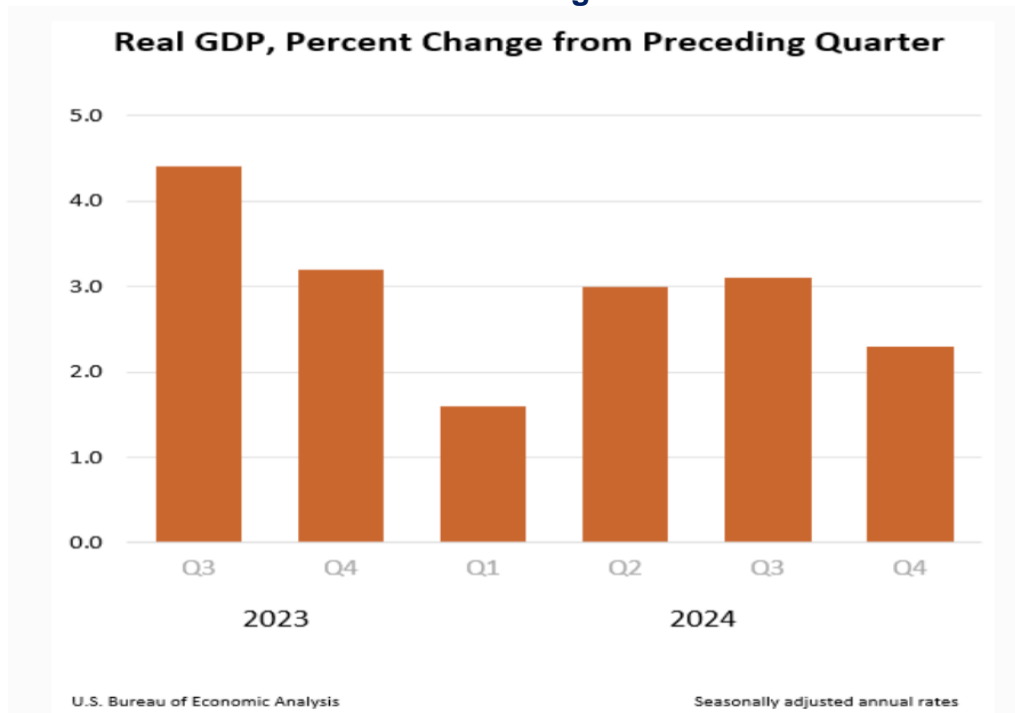
The US Fed held the Fed Funds Rate in their recent January meeting as expected. No surprises which is what the market likes, so minimal reaction.

The real action from the market to watch for is any unexpected reversal in interest rates or when the time comes for the Fed to first mention that tightening might be 'in the cards' as it were. Inflation is a good indicator to watch, specifically The PCE (personal consumption expenditure) Index.

Recession is on the mind of the market from time to time. For example, when unemployment spikes upward, the market can read this as a signal for an upcoming recession. Just 'by the way', weekly initial jobless claims reported the week ending January 25, 2025, were 207,000, below the consensus of 221,000.

The latest economic growth number came in a bit below expectations but still shows the resilience of the US economy.

US economic growth



The graph above tracks US economic growth, quarter by quarter

So, whilst US economic growth was a bit lighter than expected, growth continues. Recession is nowhere to be seen – still.

The US Share Market (Dow Jones) February 2024 – January 2025

Market Summary > Dow Jones Industrial Average

44,882.13

+6,731.83 (17.65%) ↑ past year

30 Jan, 4:55 pm GMT-5 • Disclaimer

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



| | | | | | |
|------|-----------|------------|-----------|------------|-----------|
| Open | 44,548.69 | Low | 44,548.69 | 52-wk high | 45,073.63 |
| High | 45,008.75 | Prev close | 44,713.52 | 52-wk low | 37,611.56 |

The above graph tracks the movement in the Dow Jones over the last 12 months.

The graph above is still green for the year 😊 The all-time high of 45,014 was reached on December 04, 2024. By the end of December, the Dow Jones Industrial Index had drifted back to 42,544 – a good thing, keeping trading prices from becoming excessively overpriced.

Expect ongoing volatility over 2025.

The US Share Market (Nasdaq) February 2024 – January 2025

Market Summary > Nasdaq Composite

19,681.75

+4,517.74 (29.79%) ↑ past year

30 Jan, 5:15 pm GMT-5 • Disclaimer



The above graph tracks the movement in the Nasdaq over the last 12 months.

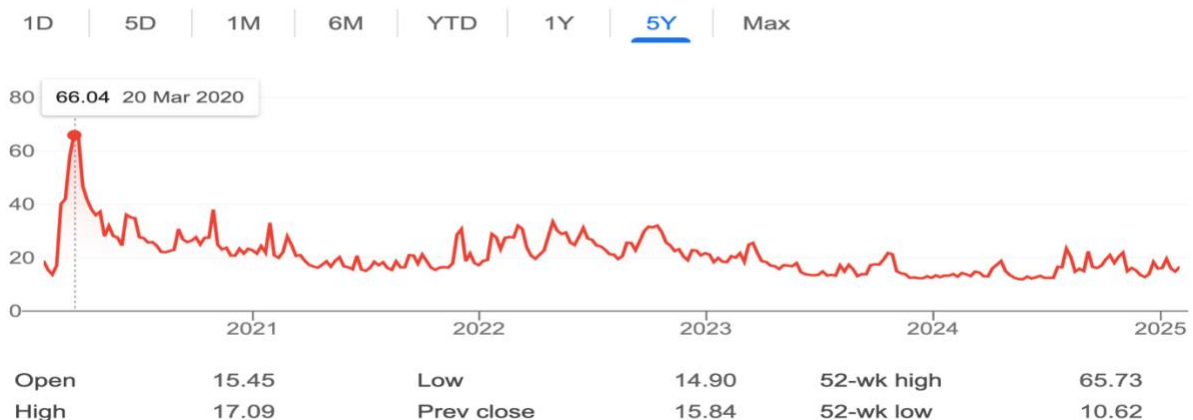
The Nasdaq is a share market index of over 2500 listed companies and is weighted in technology stocks both across the US and internationally. Although modest by comparison to other events, the volatility driven by the DeepSeek disruption was sharp, raising questions about the sustainability of data processing and related companies.

The VIX index

16.43

-2.41 (-12.79%) ↓ past 5 years

31 Jan, 3:15 pm GMT-6 • Disclaimer



The graph above tracks share market volatility.

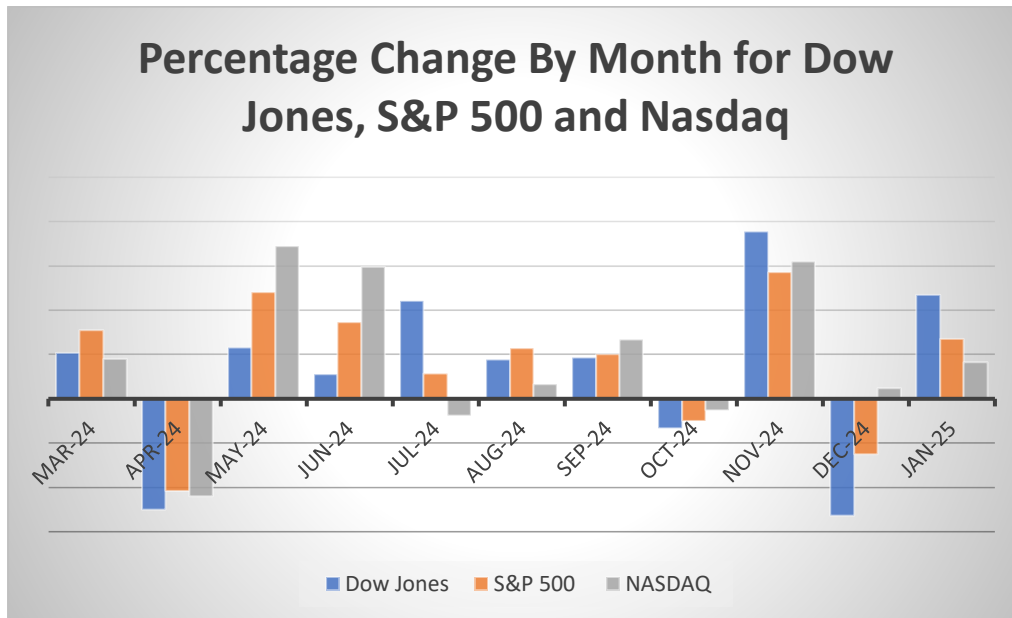
The recent DeepSeek volatility was sharp, but the level of volatility was modest compared to some other notable events (see the left side of the graph above). As I have mentioned elsewhere, we might see a somewhat elevated level of market volatility over 2025 as markets digest what Trump-driven policies mean, as they are implemented.

Share market index movement – USA.

The volatility over January 2025.

This was how it went for the 1st month of 2025:

- The Dow Jones finished the month + 4.70%
- The S&P500 by + 2.70%
- The Nasdaq by + 1.64%

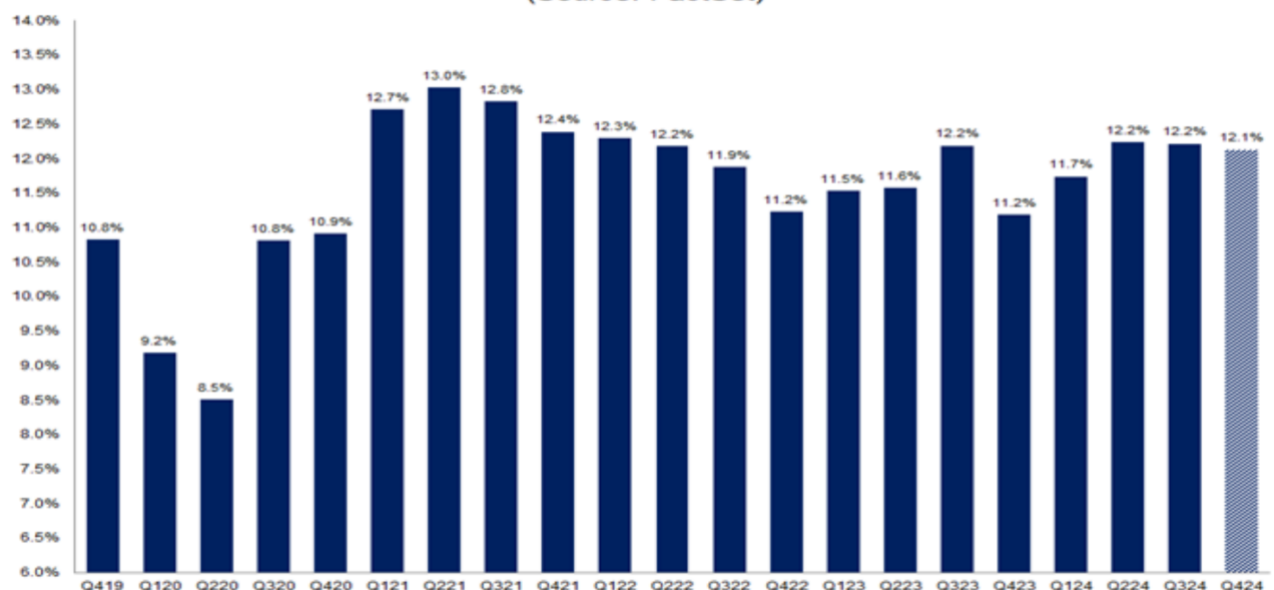


The graph above tracks market mood and the resulting movement across The Dow Jones, The S&P 500 and The Nasdaq.

Markets remain in a buoyant mood generally because of supportive market conditions.

S&P Earnings – quarterly net profit margin changes

S&P 500 Net Profit Margin: Q420 - Q424
(Source: FactSet)



The graph above shows the change in profit margins for the S&P 500 companies since Q4 2019

Profit margins were squeezed over 2020 because of COVID.

Profit margins for the S&P 500 for Q4 2024 were 12.1%. That's slightly below the previous quarter's net profit margin but above the net profit margin 1-year ago and above the 5-year average (11.6%).

This result is the 3rd consecutive quarter that the S&P 500 is reporting a net profit margin above 12%. The last time the index reported three straight quarters of net profit margins above 12% was Q4 2021 – Q2 2022.

Where to next?

US interest rate cuts are slowing (the four rate cuts over 2025 are now reduced to two), economic growth ok, no recession in sight currently, earnings ok, but mixed.

Unemployment is currently mostly under control.

The DeepSeek disruption is still unfolding but mainly affected data processing and related stock prices.

Nvidia is being watched very closely by the markets for any hint that the DeepSeek disruption might damage future revenue, earnings growth and/or profit margins.

Inflation looks stable, although geopolitical risk is elevated, more so now that US tariffs are becoming a reality. Markets are now navigating Donald Trump as president. Tariffs are first off the rank. We await further information from the White House.

Meantime, as tariffs, immigration and other Trump-driven policies are implemented, we might expect a more unsettled market day to day. That would mean possibly more volatility along the way as these initiatives are rolled out. In the medium term, though, the outlook, once these policies are in place for a time, looks generally positive.



The graphs above compare average market movement to where markets actually were since January 2023.

The three graphs above suggest that the year following two previous years of strong bull share price rises may not be as strong. Makes sense when you think about it.

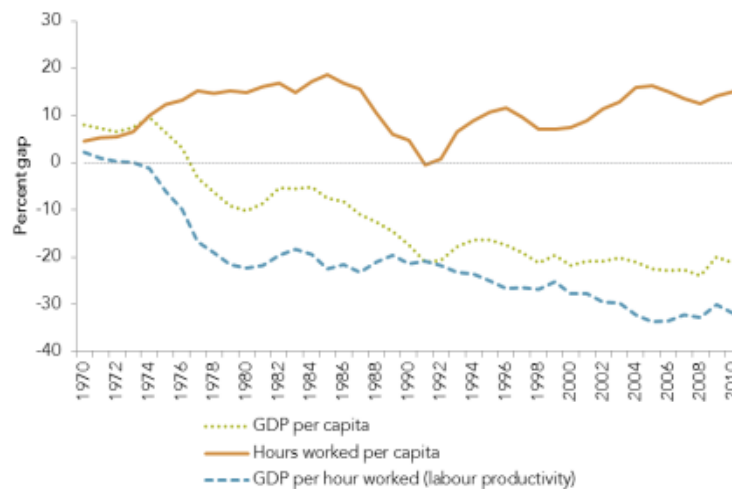
All things equal, it looks like markets are rising at a slower pace and more volatility along the way, as we focus on our investing opportunity, regardless. Indeed, the more volatility, the better!

The Global Economy

By Morgan Edwards – [brief bio](#)

Productivity - New Zealand

A: The source of economy-wide differences in GDP per capita
Gap expressed as % of the average of selected OECD countries



Source: OECD; authors' calculations.

Notes:

1. Based on OECD countries with the necessary data from 1970 to 2010, namely: Australia, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Japan, Netherlands, NZ, Norway, Spain, Sweden, Switzerland, Turkey, UK and USA.
2. To facilitate international comparison, labour productivity is measured on an economy-wide basis.

¹ The Productivity Hub is a cross-agency initiative that combines the productivity research efforts of a number of government agencies including: the Ministry of Business, Innovation and Employment; Statistics New Zealand; the Treasury; the Reserve Bank of New Zealand; the Ministry of Primary Industries; the Ministry of Foreign Affairs and Trade and the Productivity Commission.

For more on the Productivity Hub, see: www.productivity.govt.nz/research/productivity-hub

The graph above shows that Kiwis are working roughly comparable hours (actually a bit more) to others in other countries, however, our productivity is materially lower.

Introduction – Going for Growth?

'Going for growth' has been (and likely will continue to be) the catchphrase of the Government this year. On the back of dismal GDP figures for the past few months, what else are they to do?

Focus on increasing low-wage workers and low-productivity industries is the answer, apparently. Let's get more tourists in, while infrastructure is already struggling to cope with the current population. Unfortunately, this has been the story of New Zealand's economic history for the past 30 years.

This focus has been drawn from New Zealand policymakers' adherence to standard macroeconomics – like they were taught in university.

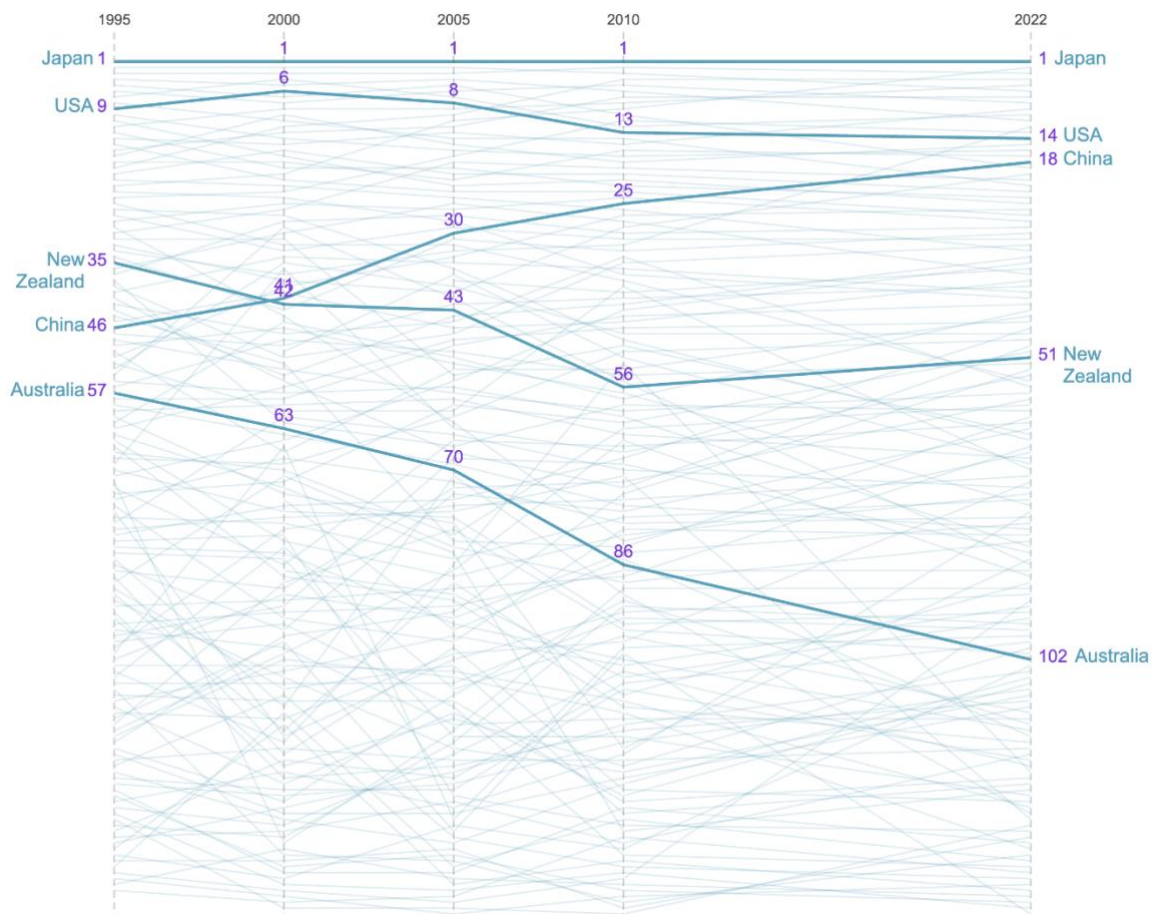
A key part of standard macroeconomics education is international trade. In international trade classes, students are taught about comparative advantage. Essentially, countries should produce what they are comparatively good at making.

New Zealand policymakers accept this without question.

However, like all economics education, the reality tells us otherwise.

Harvard's Atlas of Economic Complexity (AEC) demonstrates to us that if you want to have a successful, productive economy, you have to diversify your production of highly valued products. As described by the AEC themselves, 'Countries that are home to a great diversity of productive know-how, particularly complex specialized know-how, can produce a great diversity of sophisticated products'.

This is measured through the Economic Complexity Index (ECI). Countries that rank highly on the ECI demonstrate a high diversity of high-value products and complexity. The top three countries are Japan, South Korea and Switzerland.



The graph above shows various countries' ECI rankings from 1995 to the present day.

As you can see from the graph, New Zealand does not rank highly in the ECI. New Zealand declined from 35th in 1995 to 51st today. We rank above Greece but below Costa Rica.

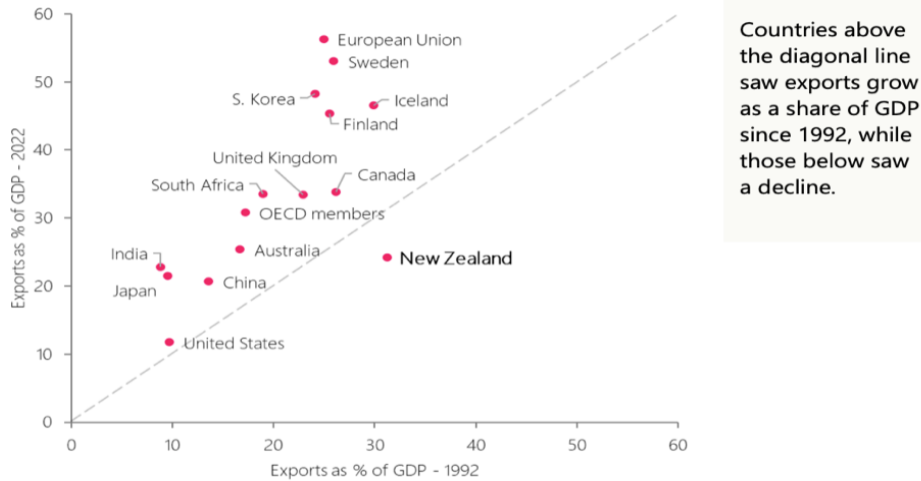
The relevance of this to 'going for growth' is that if we want to grow our economy and increase wages, etc, then we must think *differently*.

Rather than relying on tourism and agriculture, however important these are to New Zealand's economy now, New Zealand's trade and economic development policy must focus on establishing and growing high-value industries.

On January 31, Paul Conway (Chief Economist at the RBNZ) delivered a speech on growth and interest rates in the long run. This speech was a brilliant dive into New Zealand's economic history over the past 40 years.

Importantly, Conway highlighted some examples of how New Zealand has lagged over the past few decades. One observation is that exports as a percentage of GDP have declined between 1992 and 2022.

Figure 8 – New Zealand's exports have fallen as a share of GDP (1992 to 2022)



Note: Each point represents a country's goods and services exports as a proportion of GDP in 1992 and 2022.
Source: World Bank.

This graph shows exports as a percentage of GDP in 1992 (graphed on the bottom axis), and exports as a percentage of GDP in 2022 (graphed along the side).

Alongside this declining export growth as a percentage of GDP, New Zealand's capital formation (that is, the amount of new businesses, etc) has been stagnant since the late 1980s/early 1990s.

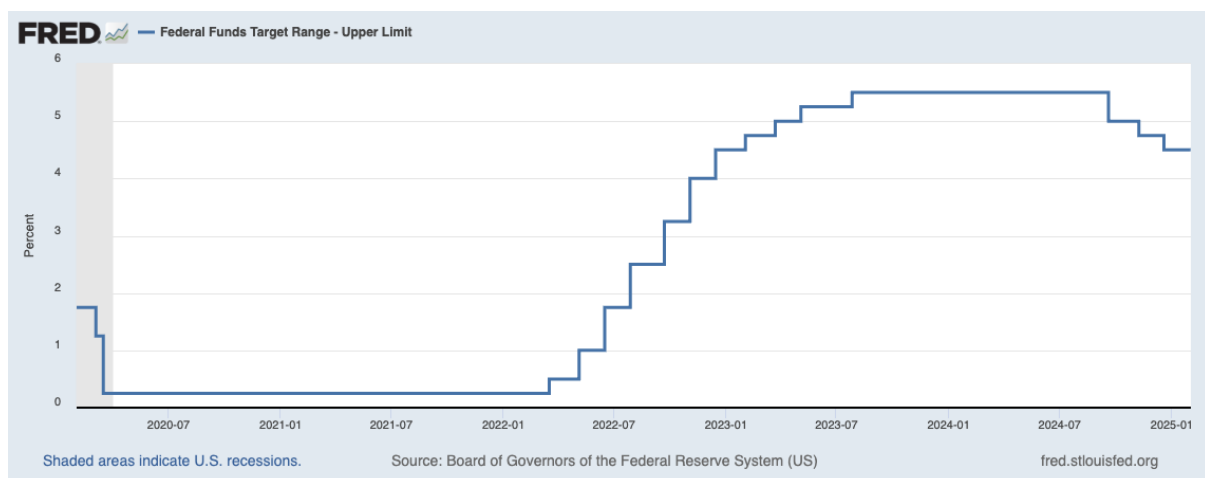
Although it's easier said than done, New Zealand policy needs to shift from a focus on tourism to a high-value industry. This is especially true in the current international context, which is (and will continue to prove) highly uncertain.

Without it, the long-run growth and investment prospects for New Zealand won't get any higher.

With that, let's move on to our monthly tour of the international economy.

United States

The Federal Open Market Committee (FOMC) – the Monetary Policy Committee of the United States – voted unanimously to keep interest rates steady at its meeting on January 29. The Fed seems pretty confident that interest rates will be here for a while as they assess what impact the Trump Tariffs will have on the domestic economy of the United States.

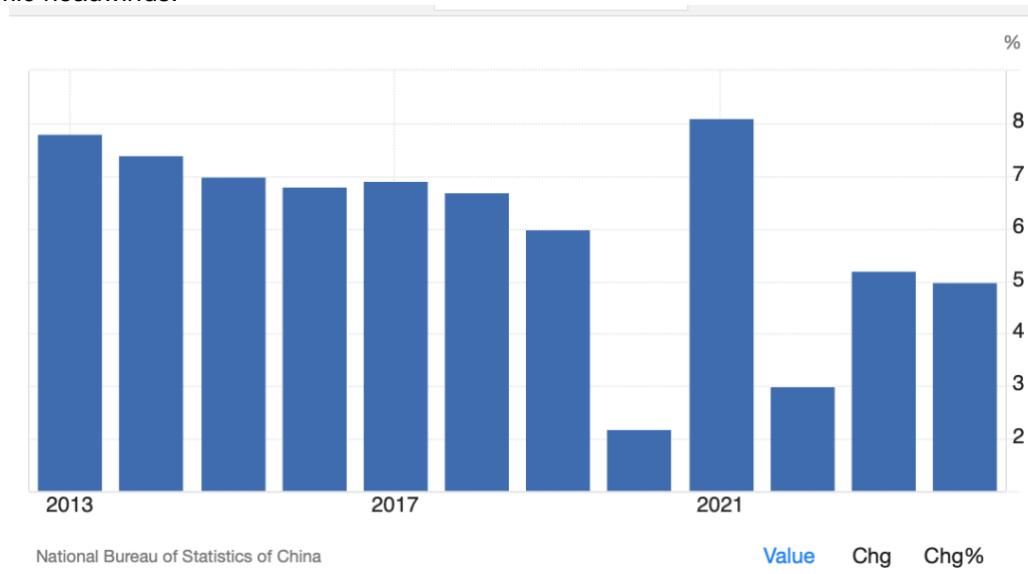


The graph above depicts the upper bound (the number that you always hear with Fed announcements) of the Federal Funds Rate.

Relatedly, this interest rate decision attracted the ire of now-President Trump, who has called for lower interest rates and the potential for interest rate setting to become a political decision.

China

China has met its annual GDP growth target of 5%. While lower than last year's growth, the fiscal and monetary stimulus covered in previous months has shored up China's economy in the face of strong economic headwinds.



The graph above, from Trading Economics, shows China's GDP growth since 2013.

With the first wave of the Trump Tariffs now in force, the headwinds facing China may have become stronger.

Euro Area

The European Central Bank (ECB) released the results of its bank lending survey (BLS).

In the survey, banks reported that credit standards are 'tightening' for firms and households seeking consumer credit during the fourth quarter of 2024. While demand for credit increased across the board, demand was higher for households purchasing homes but weaker in loans to enterprises. There was a slight increase in demand for consumer credit.

These survey findings are paired with the ECB cutting their key interest rate from 3% to 2.75% on January 31.

ECB Data Portal, 2 February 2025, 15:47 CET

Deposit facility - date of changes (raw data) - Level, Euro area, Daily - businessweek



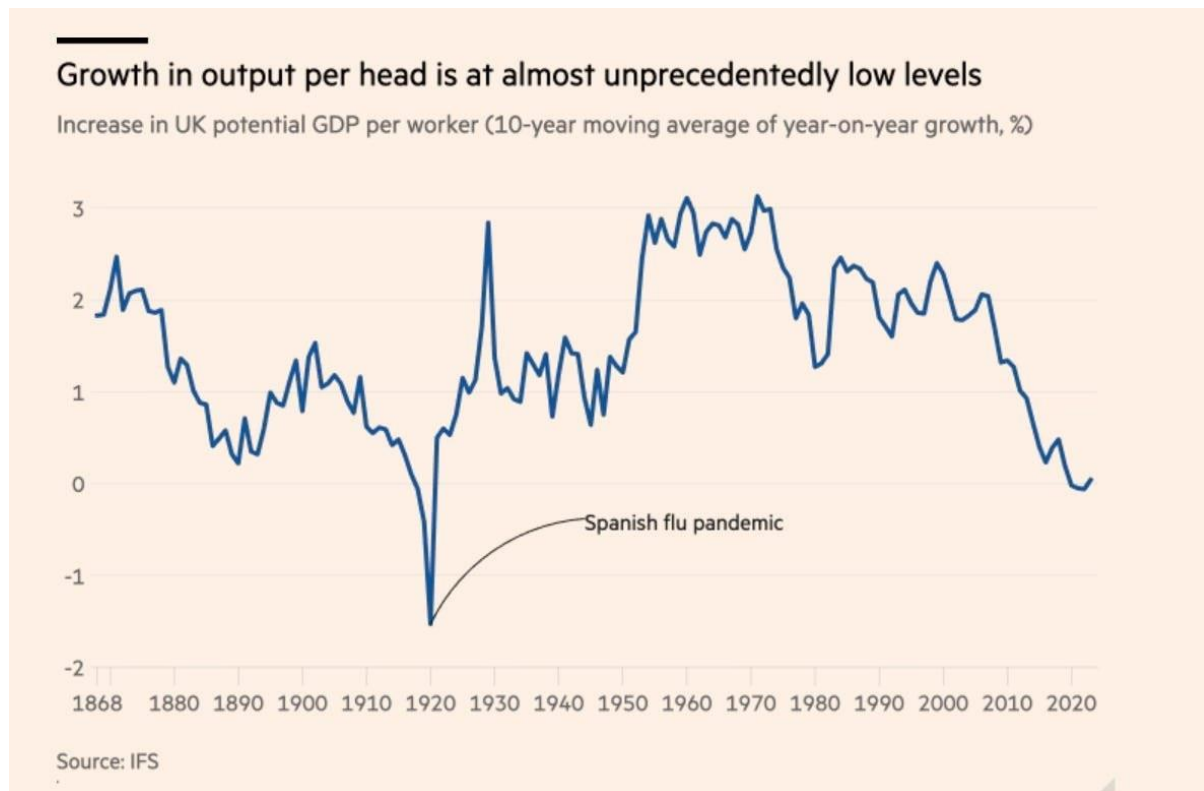
Source: FINANCIAL PROVIDERS

The graph above shows the ECB's deposit facility rate (their key interest rate) from April 2020 to the present day.

With these two bits of news, it's unsurprising that the Governing Council of the ECB warned that economic conditions are likely to remain uncertain for some time. However, they do expect inflation to stick to their target in the medium term.

United Kingdom

While politicians quibble about adding another runway to Heathrow, the reality is that GDP growth per capita is the lowest it has been since the 1920s. It is clear that investment in capital is long overdue in the UK.



The graph above shows potential GDP per worker in the UK from 1868 to the present day.

This data also makes clear that the liberalisation of the financial system (i.e. deregulation) and reconfiguration of government (i.e. lower spending and surpluses) has not helped.

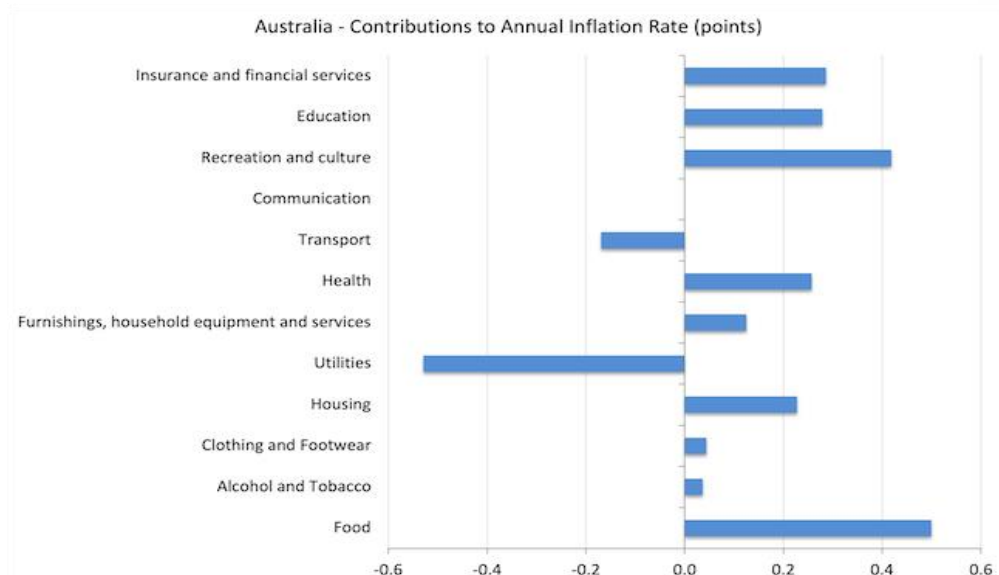
Australia

The Australian Bureau of Statistics released its latest Labour Force Survey on January 16. Australian unemployment rose by 0.1% to 4%.

Despite the slight uptick in unemployment, we can see that the number of employed people is also growing, rising by 56,300 people.

However, the majority of people in this group are employed only part-time. There are now more Australians wanting to work more hours who can't. This is referred to as labour underutilisation.

Meanwhile, inflation continues to be below 3% in Australia. The latest data indicates that inflation rose 0.2% to give an annual inflation rate of 2.4%.



This graph, from Bill Mitchell, shows the factors that have contributed to the annual changes in Australian inflation.

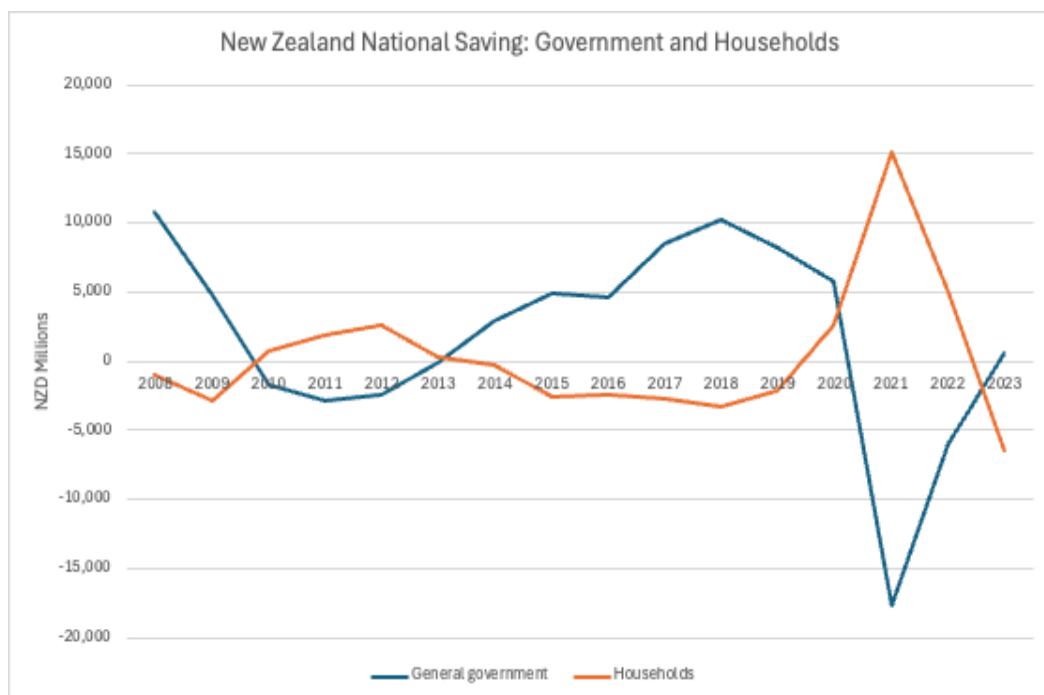
As I've noted for months, the Reserve Bank of Australia's aversion to dropping interest rates is purely ideological.

Moreover, we know that this latest inflationary episode has not been 'fixed' by rising interest rates. If anything, rising interest rates have triggered increases for interest rate-sensitive things such as insurance and, of course, debt.

If you can figure out a direct link to how higher rates of overnight interest on commercial bank deposits at the RBA can grow more fruit and vegetables and stop adverse weather events, then please send an email.

New Zealand

New Zealand bookends this month's economic update. Here, we look at national accounts data.



The graph above shows government and household saving from 1987 to 2023.

The data indicates that as the government has moved to 'save', households have had to fill the spending gaps by 'dissaving'.

It is also worth noting that business saving rates have increased slightly, adding a further squeeze to spending in the economy.

Conclusion

This month marks the relative calm before the storm.

Further uncertainty in the international economic system, coupled with the desire to return government to 'surplus' – implying lower investment – implies choppy weather ahead.

Of course, no one can know for sure what will happen, but expect choppy sideways to return in force during the year.



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