PAPUA NEW GUINEA IN THE WORLD ECNONOMY

PRESENTATION TO THE 2022 PAPUA NEW GUINEA INVESTMENT CONFERENCE

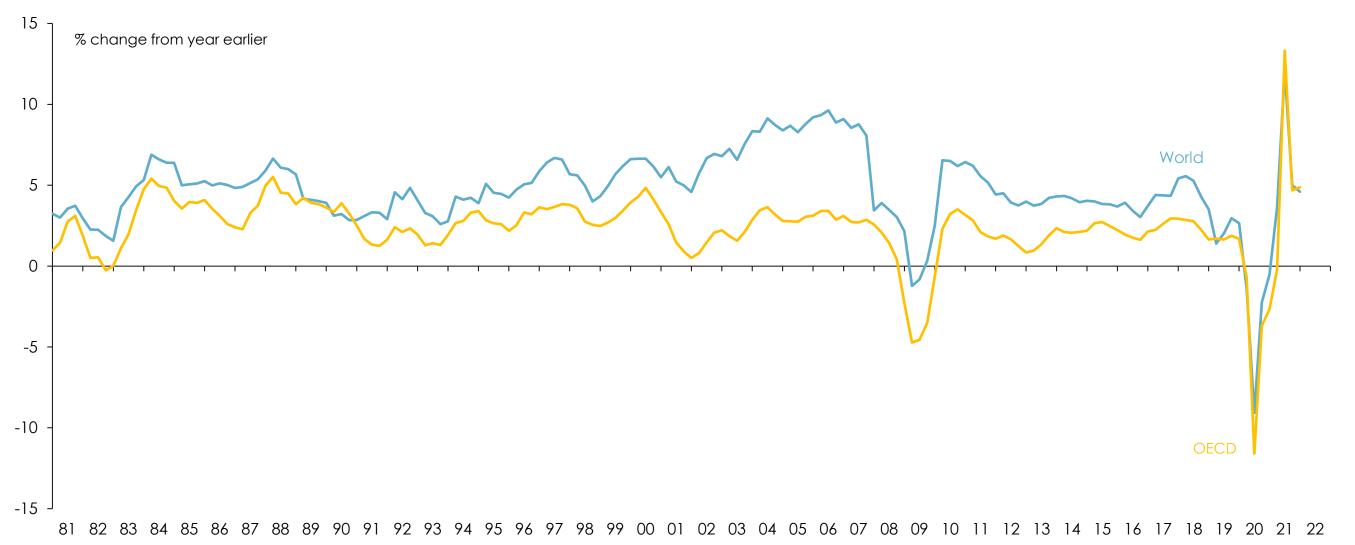
> BRISBANE CONVENTION & EXHIBITION CENTRE 15TH SEPTEMBER 2022

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The world economy

Covid-19 threw the world economy into its deepest recession since the 1930s, from which it has recovered quite quickly over the past 18 months

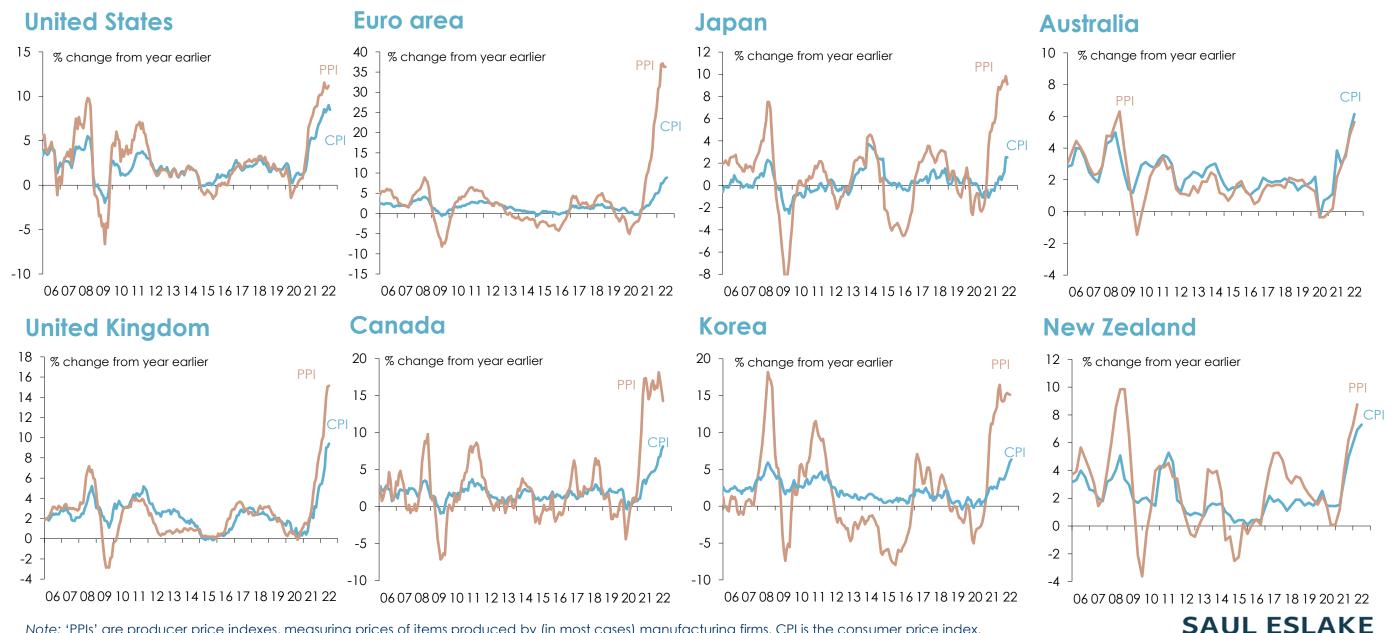
World and OECD area real GDP growth



Note: Estimates of global GDP growth compiled by Corinna using data for 100 countries accounting for 94% of 2019 world GDP as measured by the IMF, weighted in accordance with each country's share of global GDP at purchasing power parities in 2019; excludes constituents of the former USSR before 1993, the former Czechoslovakia before 1995, and the former Yugoslavia before 1998. Sources: national statistical agencies and central banks; Eurostat; <u>OECD</u>; IMF; Corinna.

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Almost all developed economies are now confronting the highest inflation they've experienced in decades

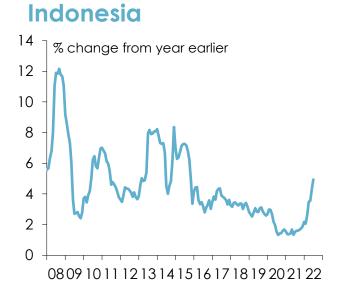


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Note: 'PPIs' are producer price indexes, measuring prices of items produced by (in most cases) manufacturing firms. CPI is the consumer price index. Sources: <u>US Bureau of Labor Statistics</u>; <u>UK Office for National Statistics</u>; <u>Eurostat</u>; <u>Statistics Canada</u>; <u>Statistics Bureau of Japan</u>; <u>Statistics Korea</u>; <u>Australian Bureau of Statistics</u>; <u>Statistics New Zealand</u>.

Most 'emerging and developing' economies – including PNG – are also experiencing higher inflation



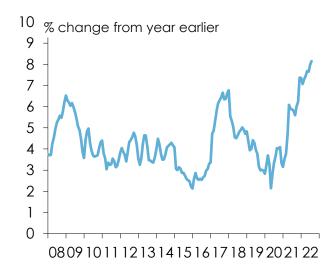
Thailand



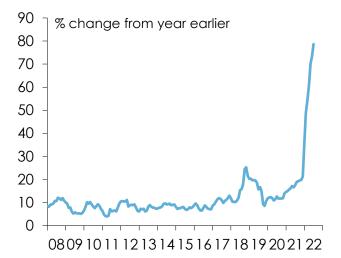
Brazil



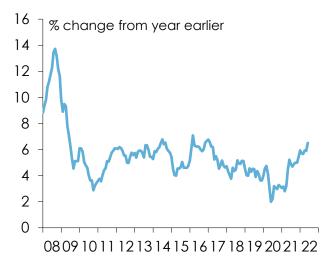
Mexico



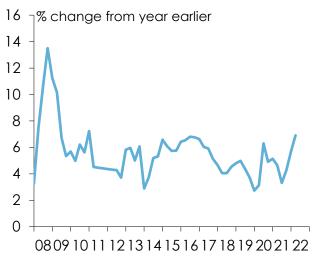
Turkey



South Africa



Papua New Guinea



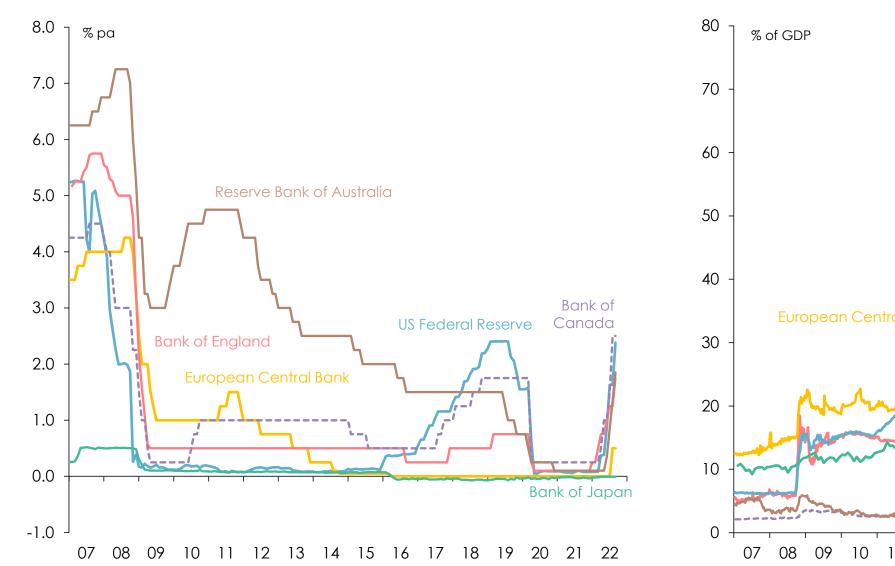
China % change from year earlier 8 -6 -4 -2 -0 --2 -

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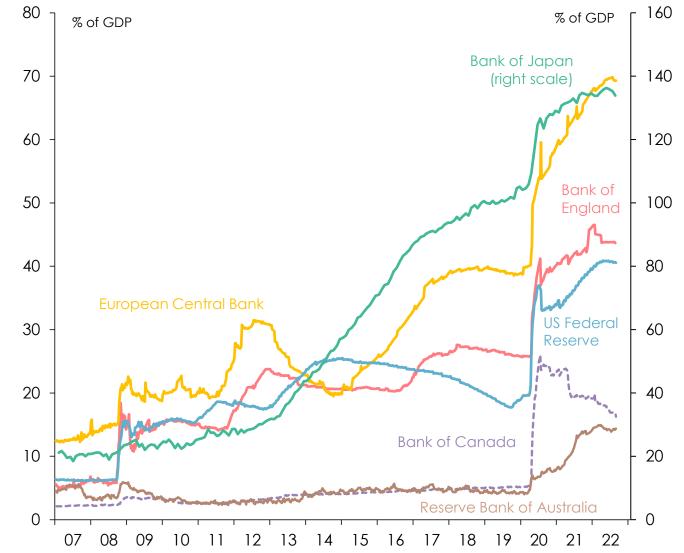
Sources: Statistics Indonesia; Thailand Bureau of Trade and Economic Indices; Instituto Brasileiro de Geografia e Estatística; Instituto Nacional de Estadística y Geografía; Turkstat; Statistics South Africa; Bank of Papua New Guinea; China National Bureau of Statistics

Every major 'advanced' economy central bank, apart from Japan's, is now tightening monetary policy



Major central bank policy interest rates

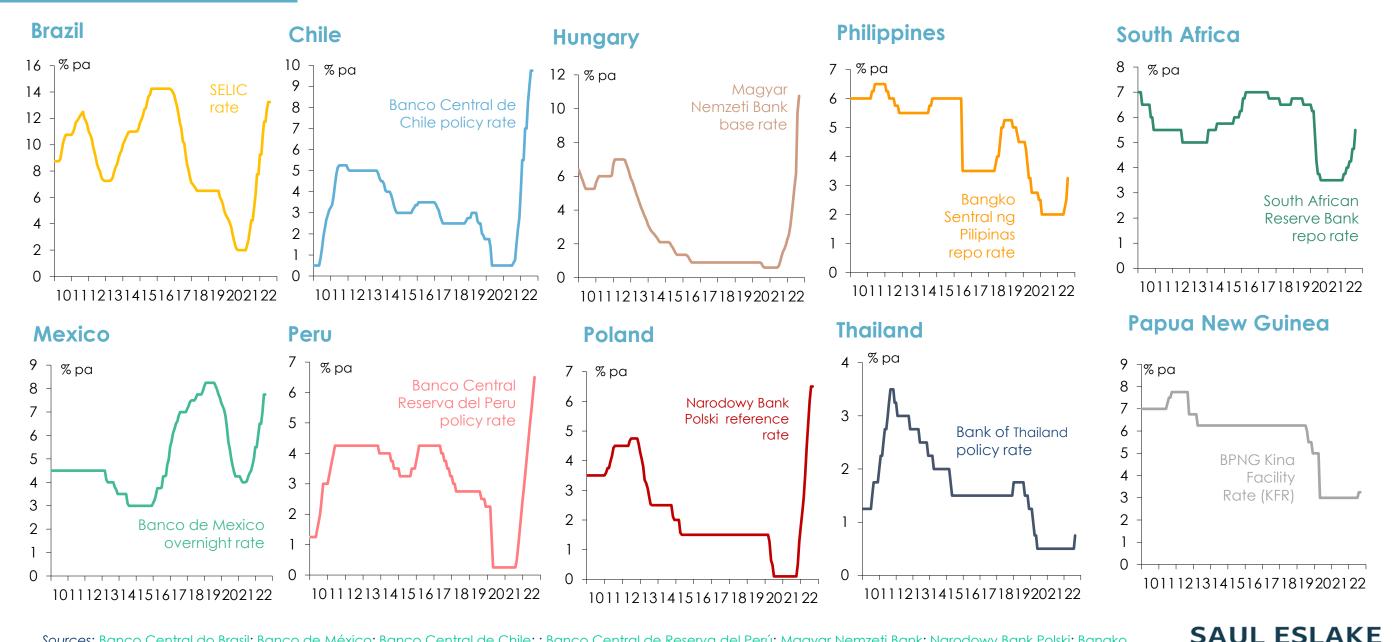
Major central bank balance sheets



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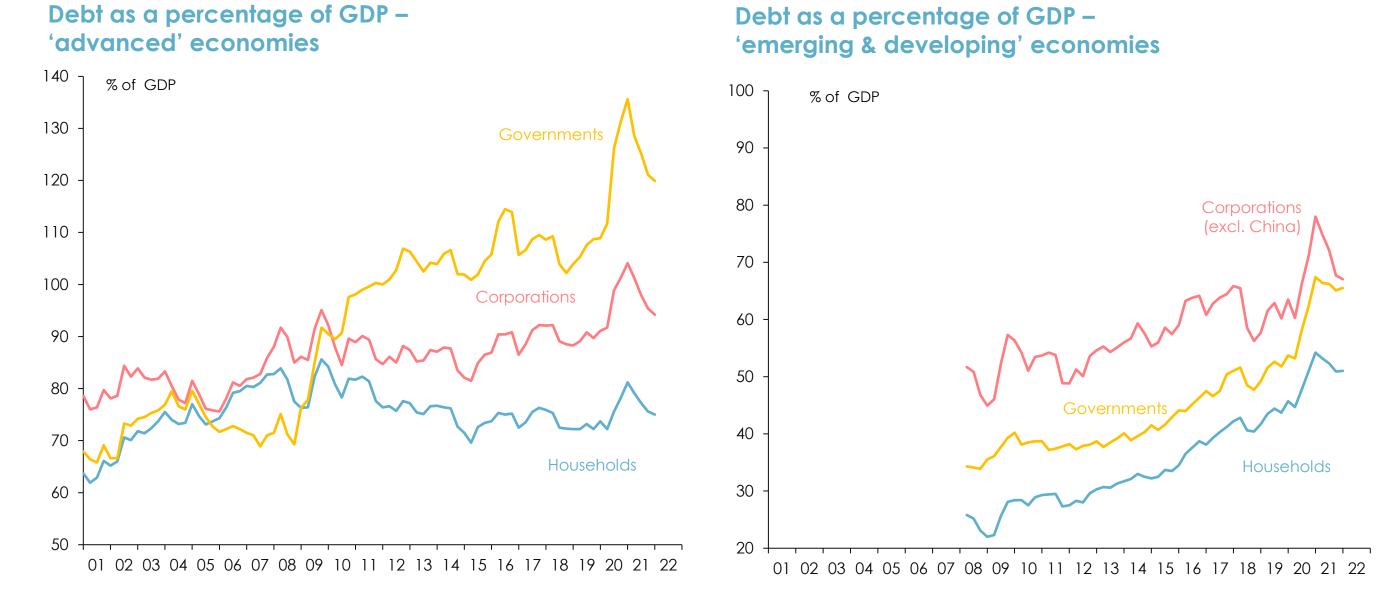
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Many 'emerging market' central banks have also been raising interest rates – in some cases quite aggressively – and BPNG started last month



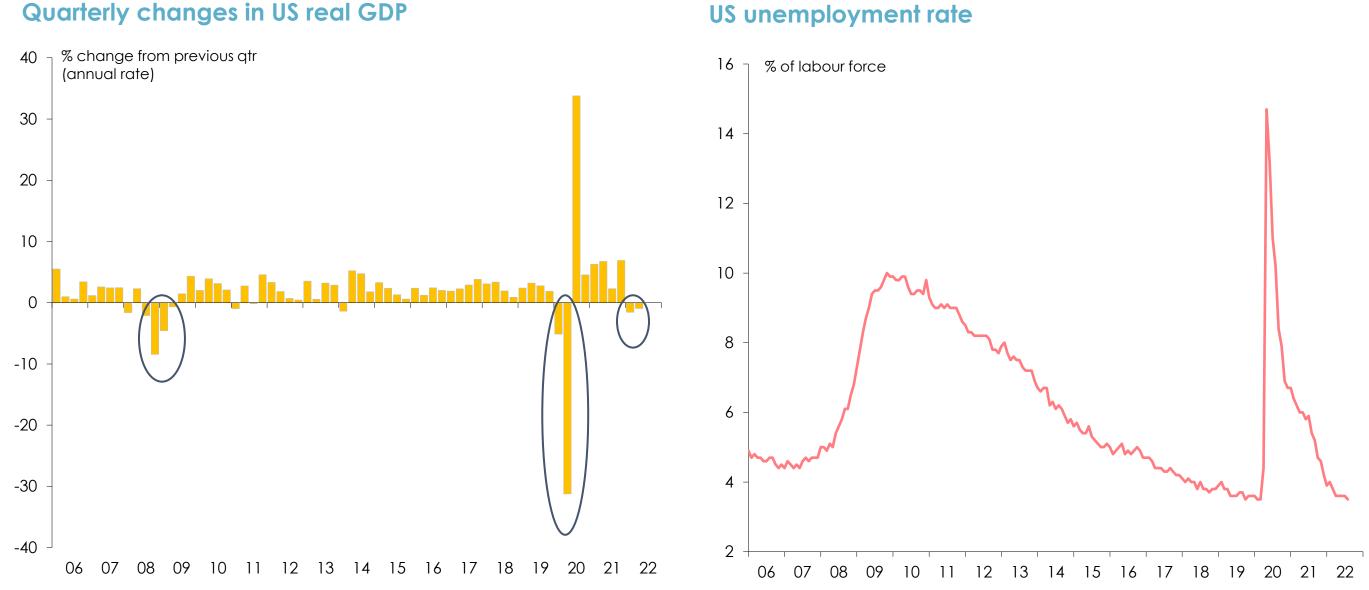
Sources: Banco Central do Brasil; Banco de México; Banco Central de Chile; ; Banco Central de Reserva del Perú; Magyar Nemzeti Bank; Narodowy Bank Polski; Bangko Sentral ng Pilipinas; Bank of Thailand; South African Reserve Bank; Bank of Papua New Guinea.

There's a lot more debt outstanding now than during the last time interest rates were going up a lot



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The US economy isn't in recession now, despite having had two consecutive quarters of 'negative growth'

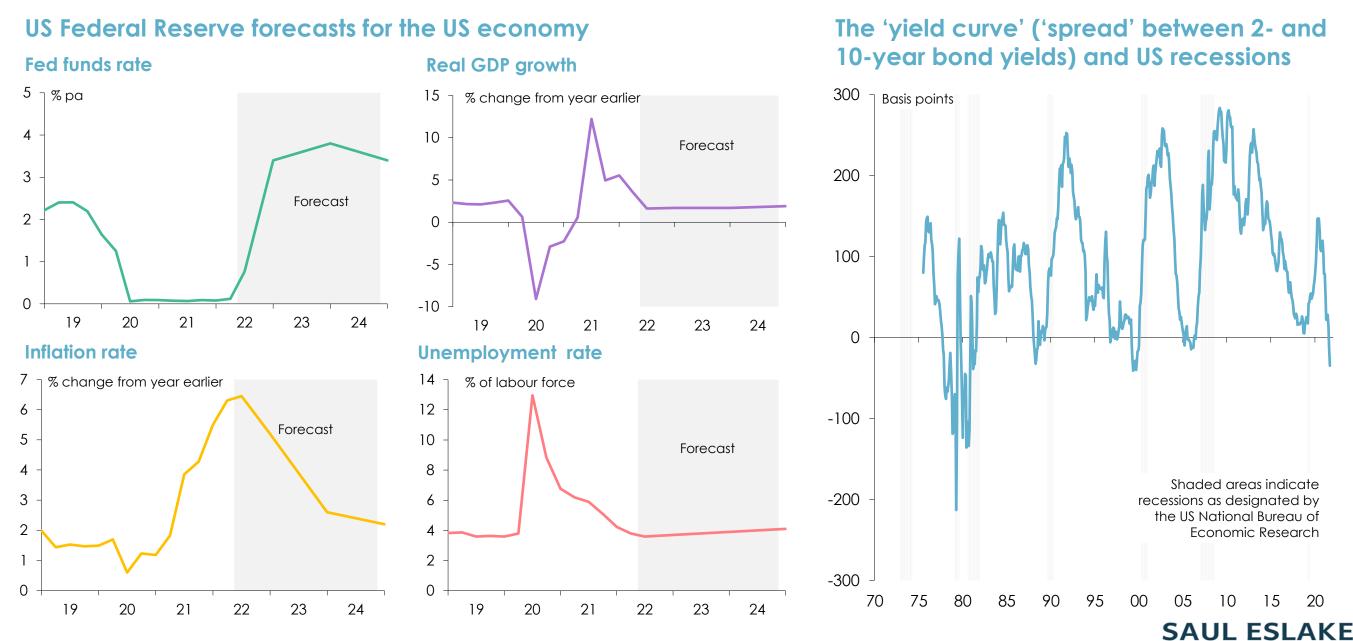


US unemployment rate



Sources: US Bureau of Economic Analysis; US Bureau of Labor Statistics.

The Fed is confident it can bring US inflation back down to 2% by 2024 without causing a recession – but financial markets aren't so sure



Note: 'Forecasts' are the median projections of Federal Reserve Board members and regional Federal Reserve Bank presidents. 'Inflation' is as measured by the implicit price deflator of personal consumption expenditures. Sources: <u>US Bureau of Economic Analysis</u>; <u>US Bureau of Labor Statistics</u>; <u>US Federal Reserve Board</u>.

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By contrast the Bank of England acknowledges that if interest rates rise in line with market pricing, the UK economy will fall into a recession

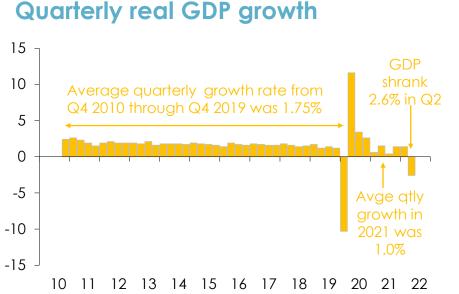
Bank rate Real GDP growth ∃%pa % change from year earlier Assumption Forecast -5 -10 (Based on financial market pricing) -15 -20 -25 **Unemployment rate** Inflation rate % change from year earlier % of labour force Forecast Forecast SAUL ESLAKE

Sources: UK Office for National Statistics; Bank of Enaland.

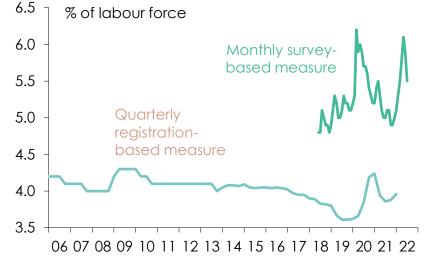
Bank of England forecasts for the UK economy

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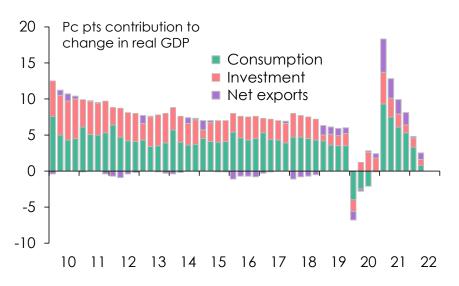
China's economy is facing both short-term challenges ...



Urban unemployment rate



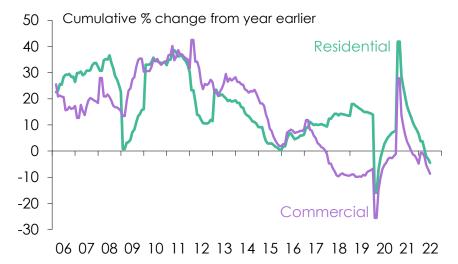
Sources of real GDP growth



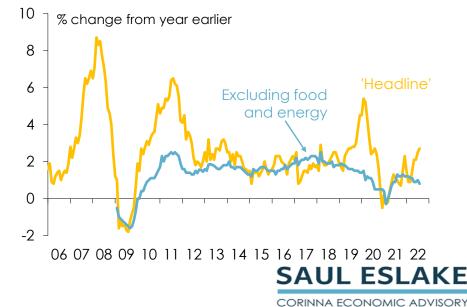
Consumer sentiment



Real estate investment

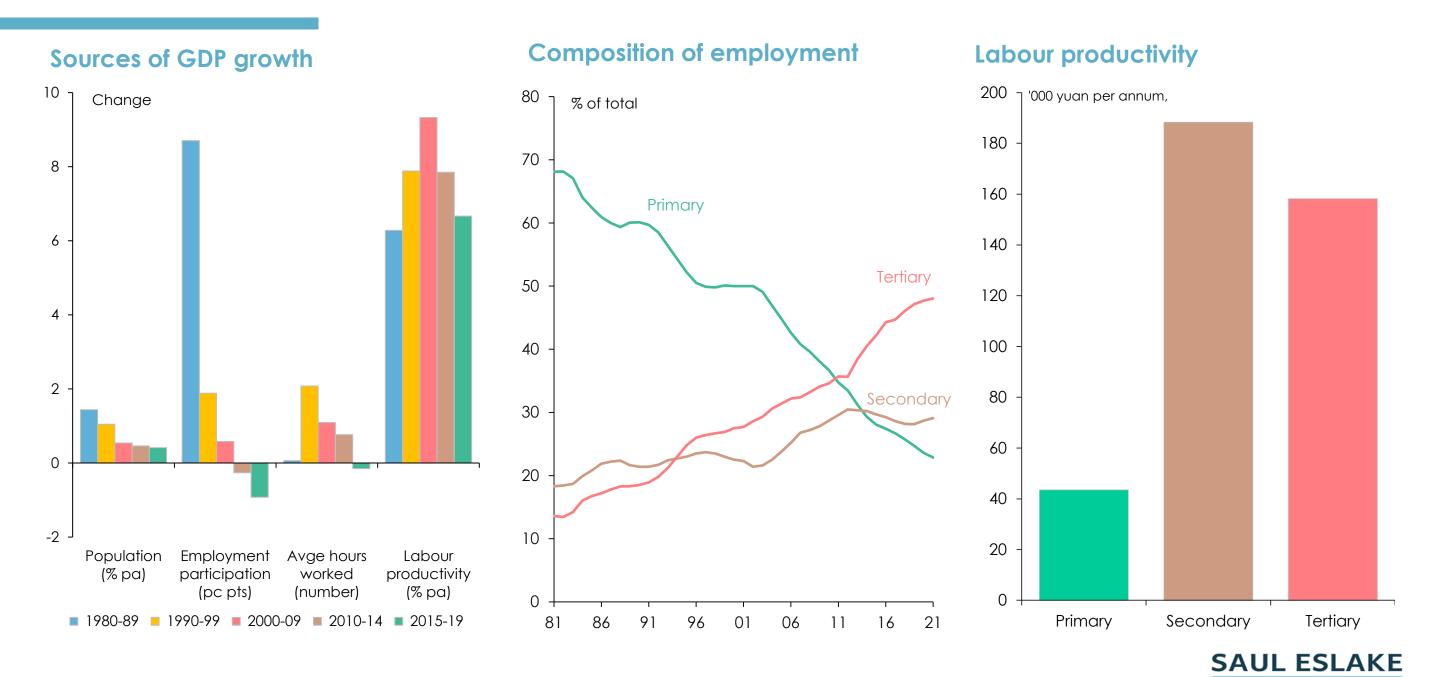


Inflation



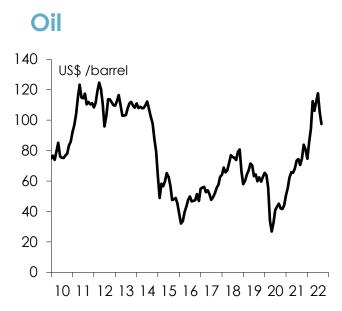
12 Sources: <u>China National Bureau of Statistics</u>.

... and some longer-term demographic and structural ones



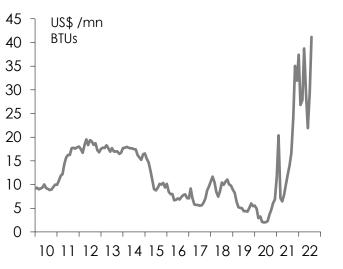
13 Sources: <u>China National Bureau of Statistics</u>.

Unless the conflict in Ukraine deepens or broadens, slower world growth means commodity prices will likely continue falling through most of 2023





Natural gas



Source: International Monetary Fund

Copper



140 US¢ / pound 120 -100 -80 -60 -40 -20 -

0 + 10 11 12 13 14 15 16 17 18 19 20 21 22

Palm oil

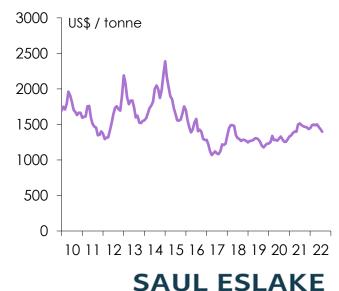
Coffee



Logs



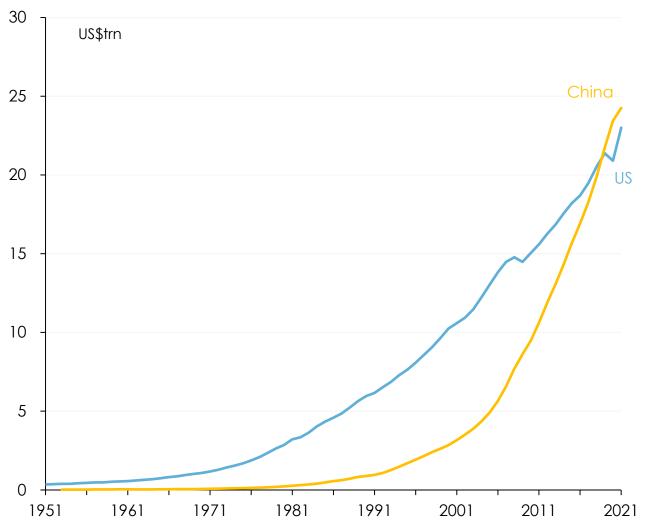
Fishmeal



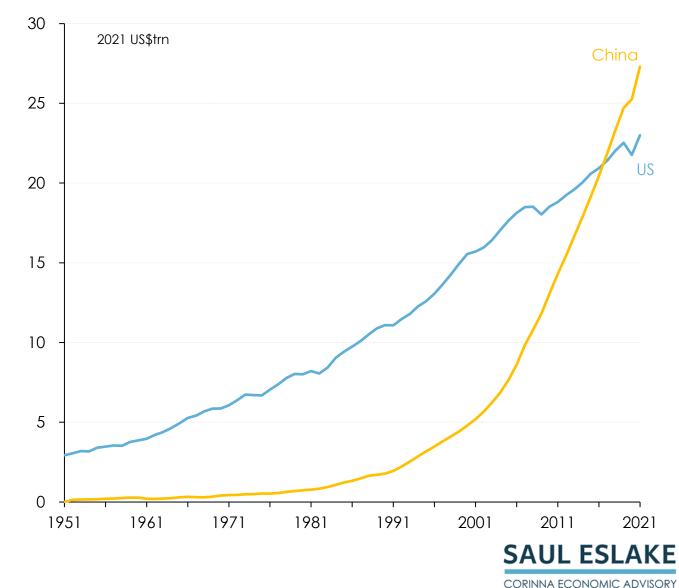
The changing international 'pecking order' and its implications for PNG

The international economic pecking order is going through its most profound change in a century ...

GDP at current market prices and exchange rates

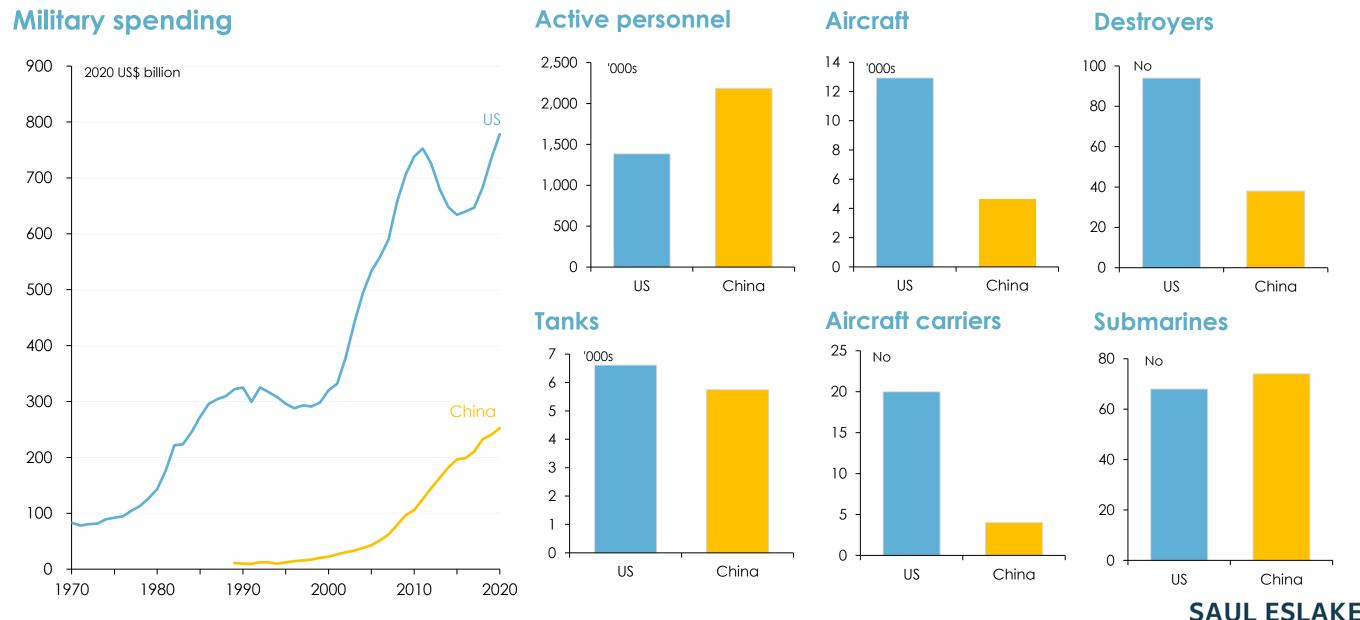


GDP at constant (2021) prices and 'purchasing power parity' exchange rates



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Inevitably, this rivalry between the world's two largest economies with very different ideologies has a strategic or military dimension ...

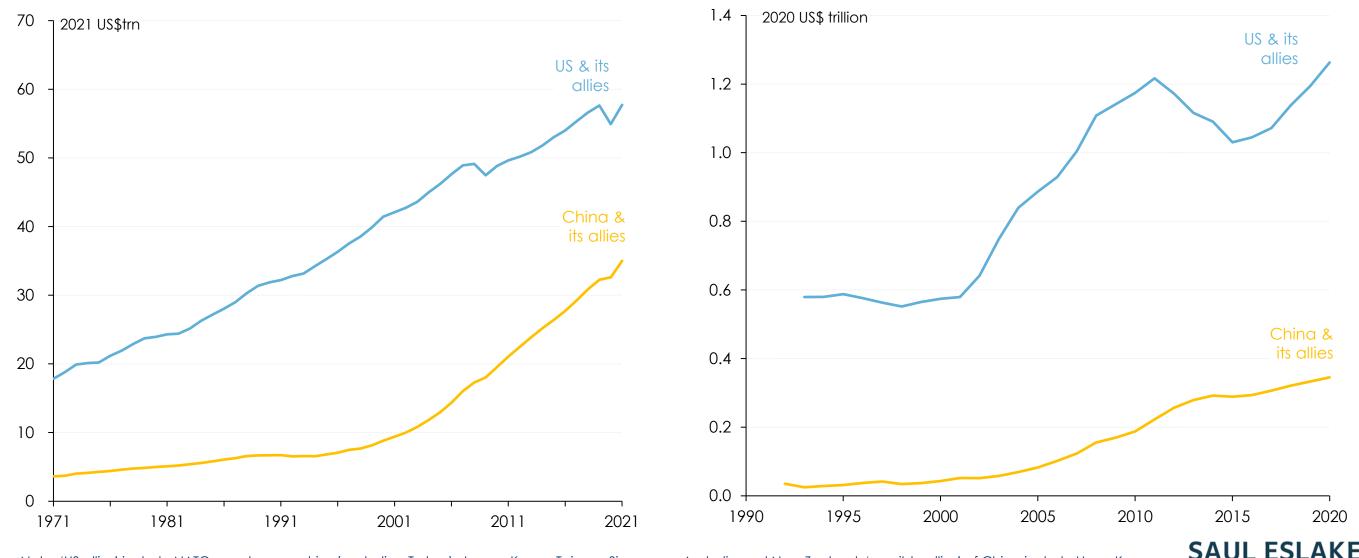


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... although China doesn't have many 'friends', and when allies are factored in the US still appears to have a decisive strategic advantage

GDP of the US and its allies vs GDP of China and its (possible) allies

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Note: 'US allies' include NATO member countries (excluding Turkey), Japan, Korea, Taiwan, Singapore, Australia and New Zealand; 'possible allies' of China include Hong Kong, Russia, Belarus, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Pakistan, Iran and Venezuela. Sources: The Conference Board, <u>Total Economy Database</u>, 2021; Stockholm International Peace Research Institute, <u>SIPRI Military Expenditure Database</u>

Military spending by the US and its allies vs that by China and its (possible) allies

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'Military might' isn't the only way in which 'great powers' exert power and influence – it can be done through investment flows

Foreign investment assets 4 US\$ trillion 35 US\$ trillion China US 2 30 0 25 -2 -4 20 -6 15 -8 -10 10 China -12 5 -14 US -16 0 2020 1990 1995 2000 2005 2010 2015 1990 1995 2000 2005 2010 2015 2020 SAUL ESLAKE

Net international investment position

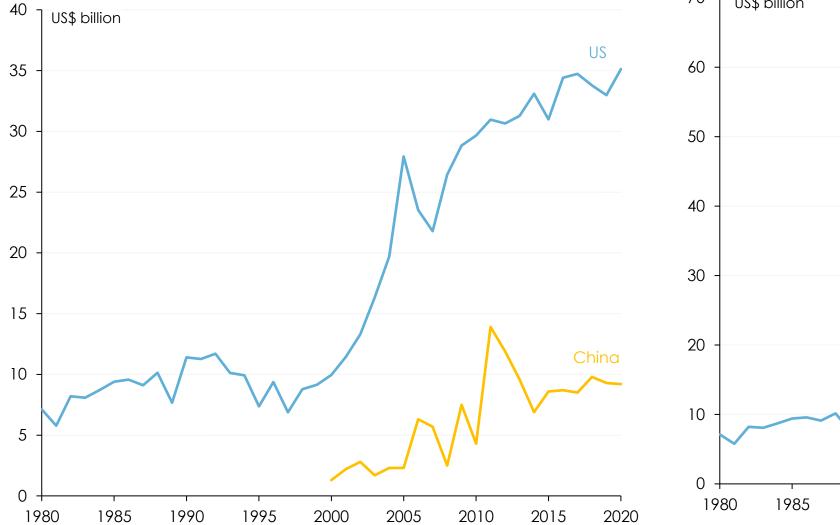
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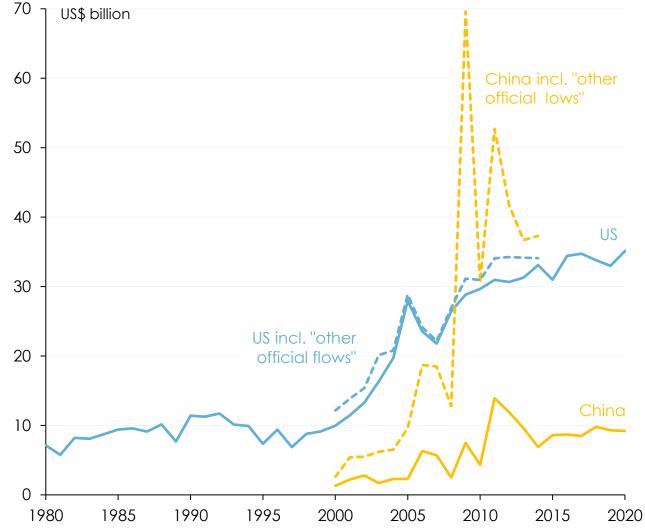
Note: There is a 'series break' between 2004 and 2005 as a result of changes in definitions of some components of balance of payments statistics. Source: International Monetary Fund, Balance of Payments and International Investment Position Statistics.

... and through 'aid'

'Official development assistance'



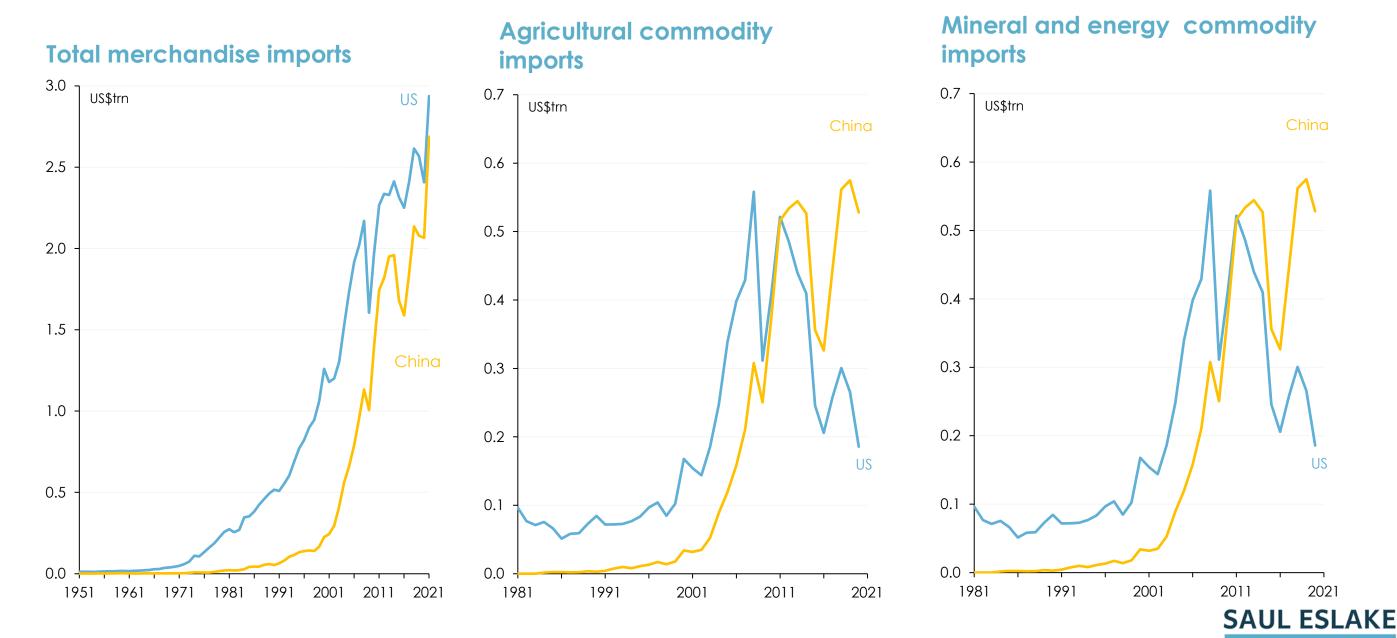
ODA plus 'other official flows'



Note: Other official flows include payments which have a less than 25% grant element and/or which are primarily for commercial or representational purposes. Sources: OECD, <u>Development finance data</u>; AidData, <u>China's Global Development Footprint</u>, William & Mary University; Naohiro Kitano and Yumiki Miyabayashi, <u>Estimating China's Foreign Aid</u>: 2019-2020 Preliminary Figures, JICA Ogata Sadako Research Institute for Peace and Development. SAUL ESLAKE CORINNA ECONOMIC ADVISORY INDEPENDENT ECONOMICS

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China has become a much more important market for commodity exporters



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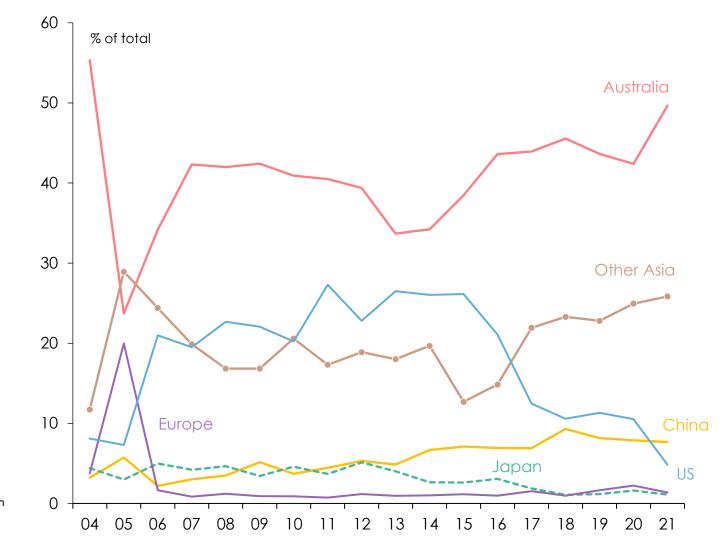
Source: World Trade Organization, Data Portal.

China is becoming a more important trading partner for PNG – but so are other Asian economies, and Australia also remains an important partner

50 % of total Australia 45 40 35 30 Other Asia Japan 25 20 15 China Europe 10 5 US 0 05 06 07 80 09 10 12 13 14 15 16 17 18 19 20 21 04 11

Destination of PNG exports

Origin of PNG imports



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What does all this mean for Papua New Guinea?

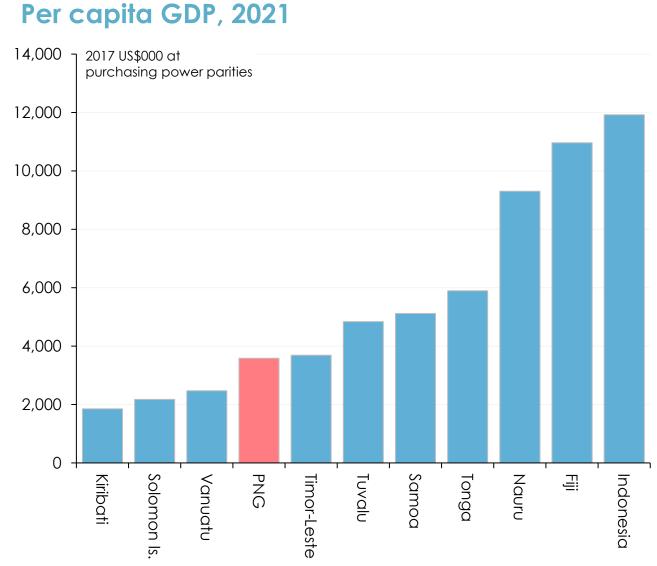
- □ PNG occupies a very strategically important location in the increasingly contested 'Indo-Pacific' region
 - China is likely to continue to seek to pull PNG more 'into its orbit' (as it is with other developing economies, particularly in the Pacific)
 - while 'the West' will conversely want to keep PNG in its 'camp'
- Tensions between China and the US are likely to remain elevated in the wake of US House Speaker Nancy Pelosi's visit to Taiwan, and China's reactions to io
- □ Foreign interests are likely to be keenly interested in PNG's strategic resources
- □ PNG needs to develop a clear sense of where its own strategic interests lie
 - preferably one which is widely shared so that it will survive changes of government and that other countries will respect PNG's intention and ability to look after its own interests
 - ideally, PNG will seek (and be able) to remain on 'good terms' with all its neighbours, and with 'major powers' in the region
- □ In such a contested region it will be important for PNG to strengthen its 'state capability'
 - that is, the capacity of 'the state' (broadly defined) to 'look after' its people (keeping people safe, providing them with opportunities to improve their lives and that of their children, and providing the goods and services that individuals can't provide for themselves)
 - the resilience of its political and legal framework
 - and the respect and loyalty which the people have for their country and its institutions

There may be opportunities for PNG to benefit from the 'contest for influence' between the competing 'great powers'

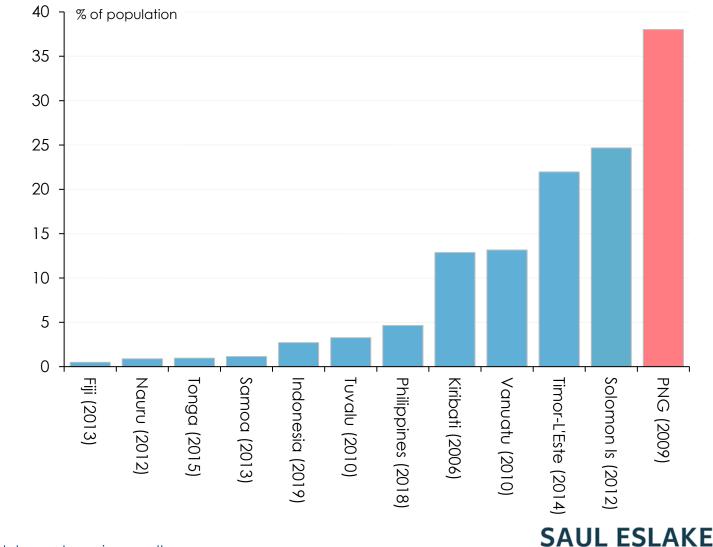
but in so doing PNG needs to avoid giving the impression that the country can be 'bought'



With such rich resources, Papua New Guinea shouldn't be one of the poorest countries in the Asia-Pacific region



Pc of population living below World Bank 'extreme poverty line' of US\$1.90 per day

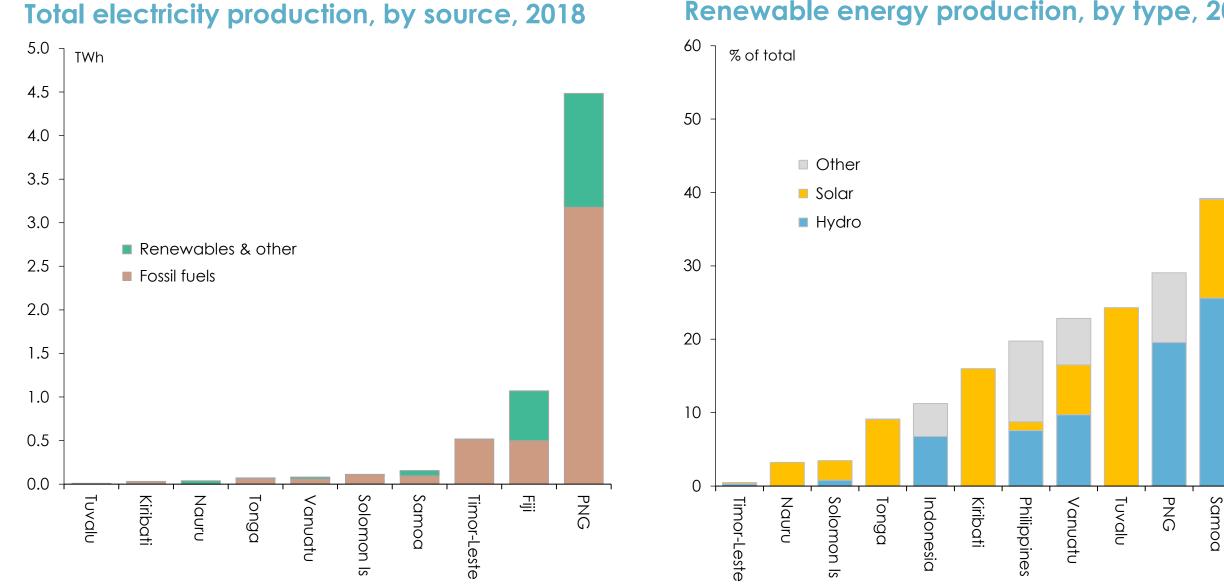


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Note: The World Bank extreme poverty line is expressed in 2011 US dollars. Years to which figures relate are shown in parentheses. Sources: International Monetary Fund, <u>World Economic Outlook database</u>, April 2022; The World Bank, <u>PovcalNet</u>. Climate change and PNG

PNG could be a much more significant producer of renewable energy – including (potentially) geo-thermal – and either use it, or export it



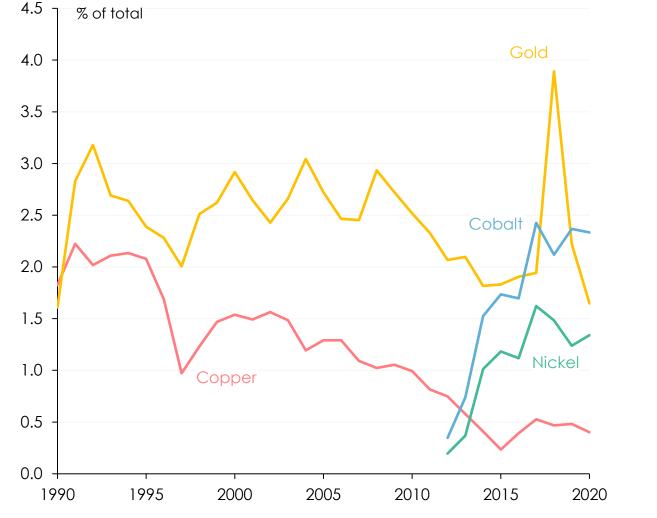
Renewable energy production, by type, 2018

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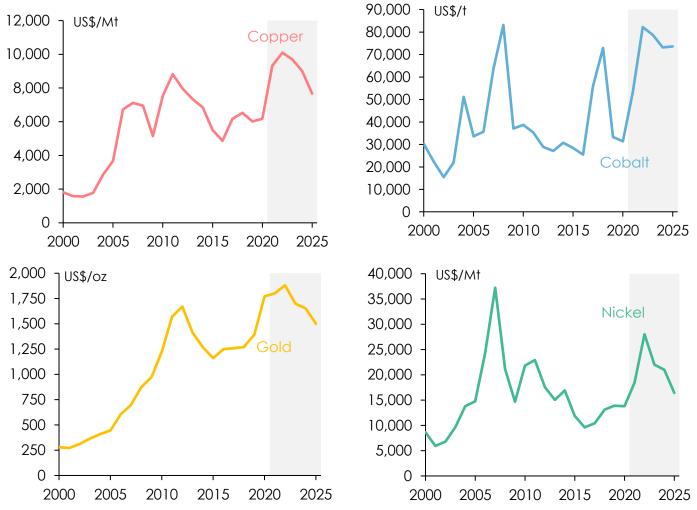
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Three of PNG's four principal mineral exports are likely to be major beneficiaries of global efforts to reduce CO₂ emissions

PNG's production of its four major minerals as a pc of world total



Price outlook for PNG's four major mineral export commodities



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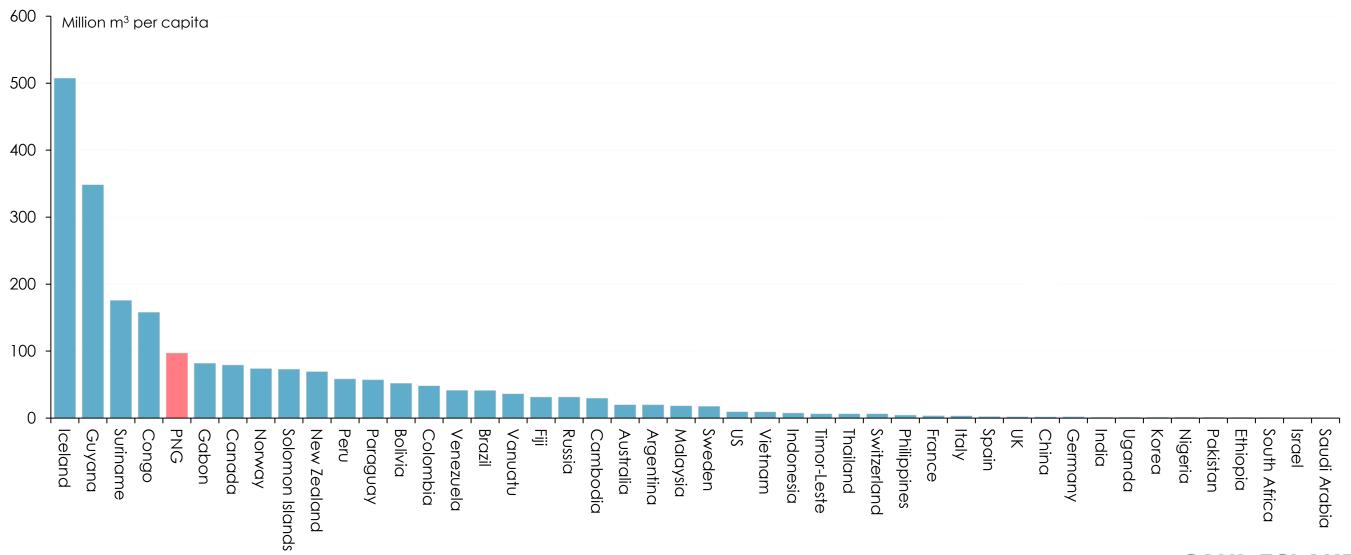
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Note: for context, Papua New Guinea accounts for about 0.025% of world GDP. Sources: British Geological Survey, <u>World Mineral Statistics data</u>; The World Bank, <u>Commodity Markets Outlook</u>, 26th April 2022; and Morgan Leighton, <u>The Ultimate Guide to the Cobalt Market: 2022</u>, Crux Investor, 14th June 2022.

Opportunities in agriculture and fishing

One very significant potential advantage for Papua New Guinea is its renewable water resources – the fifth highest per capita in the world



Renewable water resources per head of population, 2020

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Papua New Guinea once was, and ought to be, a much bigger rice producer than it is now

1,000 0.0008 2,500 % '000 tonnes '000 tonnes 900 0.0007 800 2,000 Average production, 2015-2019 700 0.0006 600 0.0005 1,500 500 400 0.0004 300 1,000 0.0003 200 100 0.0002 500 0 Togo (8.5) Belize Fiji (0.9) Sierra Leone Burkina Faso (21.6) Haiti (11.6) PNG Parguay (7.2 mn) Nicaragua (6.7) Panama (4.4) Mauritania (4.8) Surinam (0.6) Rwanda (13.3) Bhutan (0.8) Solomon Is (0.7) Brunei (0.4) Timor-L'este (1.3 Honduras (10.1) Zimbabwe (15.1) Eswatini (1.2) 0.0001 (9.1) (0.4) 0.0000 0 1970 1980 1990 2000 2010 2020 (8.2) PNG rice production (left scale) — PNG share of global total (right scale) SAUL ESLAKE

Rice production – selected 'developing' countries

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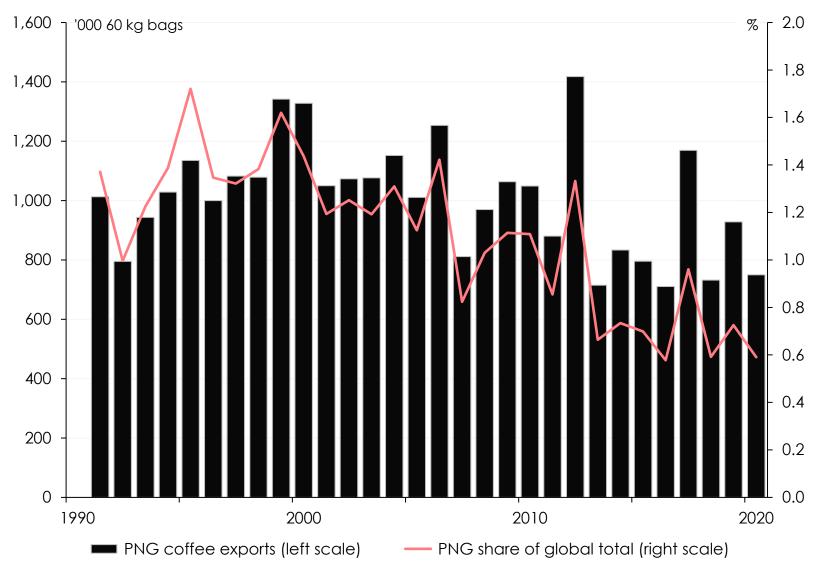
Note: rice production is measured as paddy rice. Source: Food and Agricultural Organization (FAO), Crops and livestock products.

PNG's rice production

Coffee is one area of agriculture of considerable potential opportunity for Papua New Guinea

PNG's coffee exports

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When I talk about agriculture, I look at greater Asia. There's three billion people that need to drink a cup of coffee a day. There's three billion people that need to eat a plate of rice a day ... Someone needs to grow the rice and someone needs to grow the coffee and someone needs to plant the food to supply the Asian people ... In 2025 and beyond, I don't want PNG to be known as an oil and gas country. I want PNG to be known as a country that is the food basket of Asia ... That is where the greatest strength of PNG is: our fish and agriculture.

> - Hon. James Marape MP, Prime Minister of PNG, 25th July 2019

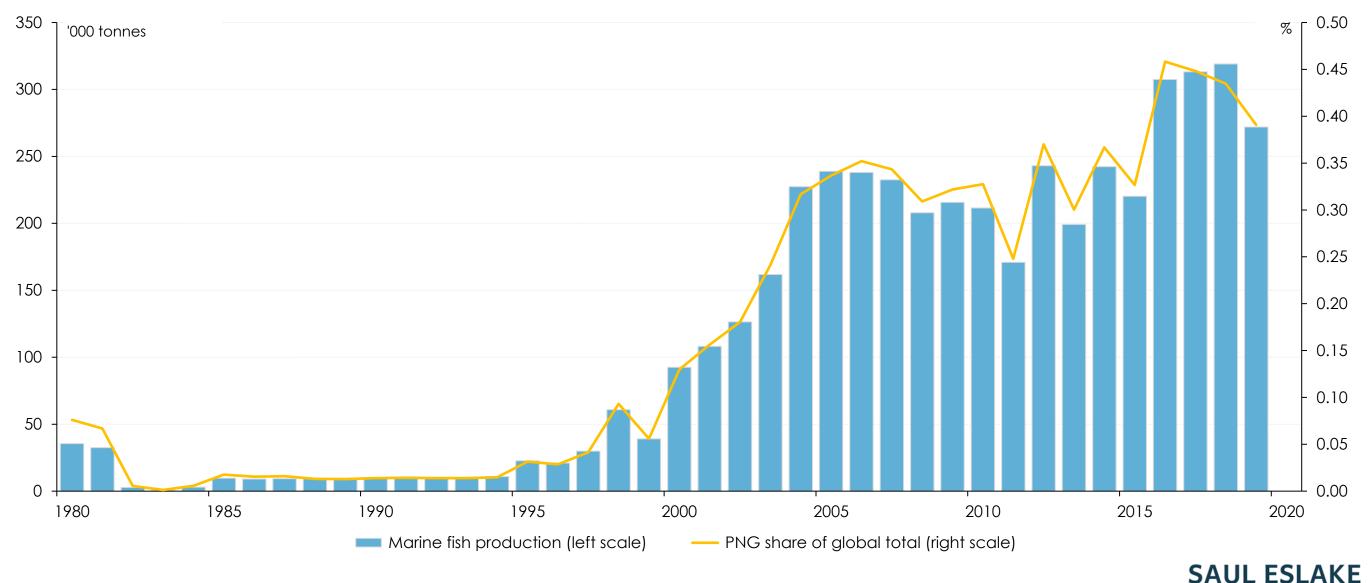


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Marine fisheries is another area where PNG has enormous potential for growth

PNG's marine fish production





Conclusions

□ The year ahead is likely to be a challenging one for Papua New Guinea

- global inflationary pressures are likely to remain intense for at least the rest of this year, and PNG won't be immune from those
- interest rates will rise further, potentially to levels that risk inducing recessions in some of the world's largest 'advanced' and 'developing' economies – and again PNG can't be immune from that
- even if central banks in major economies do manage to pull off 'soft landings', global growth will slow
- and that will result in lower prices for most commodities, including PNG's major export commodities

□ Geo-political tensions are likely to remain elevated, and could rise further

- the Asia-Pacific region and in particular the south-western Pacific in which PNG is the most populous nation and the largest economy – will see increased rivalry between the US (and its allies) and China
- if Donald Trump (or someone like him) were to win the 2024 US Presidential election, countries large and small in the region will face some potentially very difficult choices
- Papua New Guinea has enormous potential to increase its production and exports of strategic minerals, energy and food products
 - but achieving that potential will require a stable political environment, coherent foreign investment and taxation policies, and increased investment in education & training, and in infrastructure



Q & A