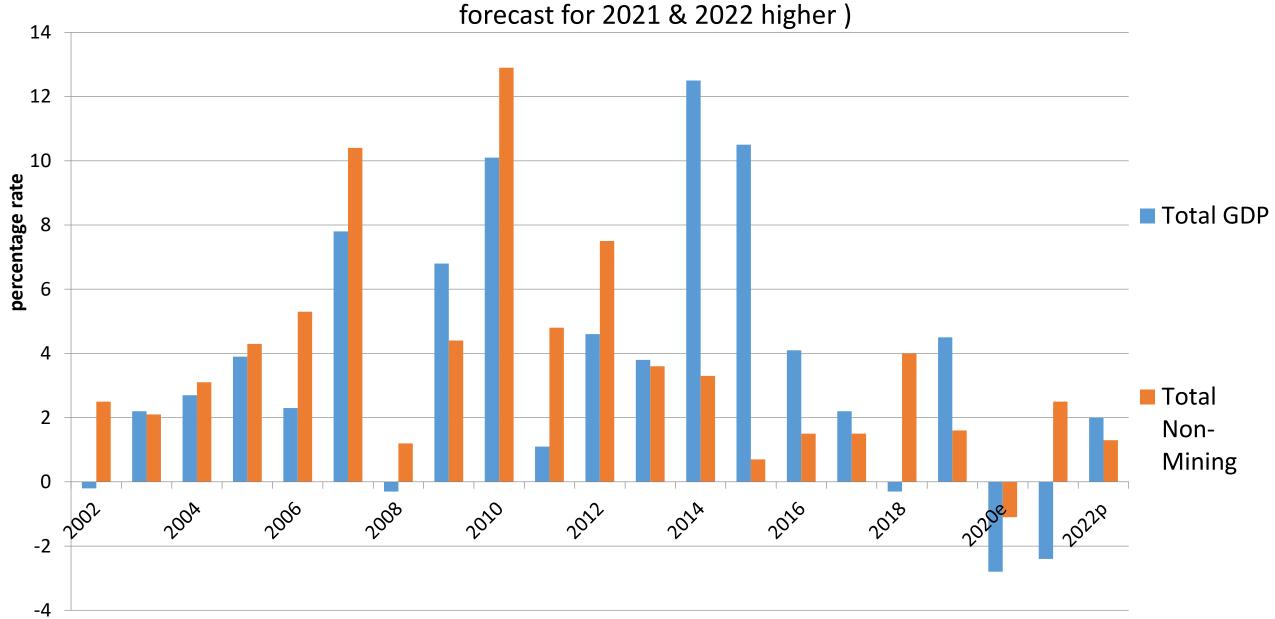


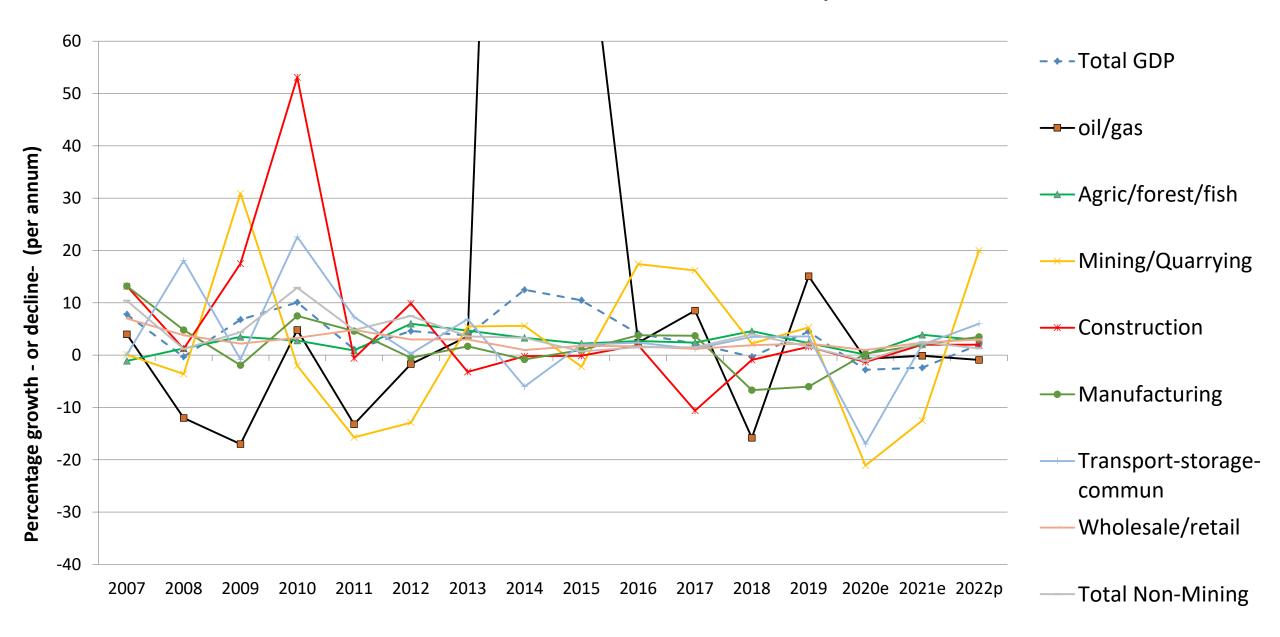
- PNG has experienced relatively low economic growth rates, since 2015, (ie since the conclusion of the construction phase of PNG LNG and initial production)
- It has had even lower growth rates for most years in the critical non-mining sector, which generates most jobs
- GDP is a measure of overall economic activity, but it is a fairly crude measure
 for the proceeds of that activity, or benefits accruing to the country, and
 that's particularly the case for PNG, with its major largely overseas owned
 extractive industries; it and GDP per capita, are also a deficient measure for
 local welfare gain or distribution of those benefits; which require other
 measures
- Although having a more economically diverse economy than some of its smaller island neighbours, PNG's economic performance is substantially determined by external factors, such as commodity prices for the products exported and the goods and services imported; and with a high proportion of

GDP Real Growth Rates, Total and Non-Mining 2002-2022 (NSO to 2019, and BPNG estimates to 2021 and projection 2022, note: Treasury and ADB estimates and



- After a decade of relative economic stability and sound growth during the 2000s, albeit on the back of stronger commodity prices, the decade from 2012-2022 was more reminiscent of the economic volatility of the 1990s (as per the next chart)
- This resulted partially from major commodity price volatility, but particularly from the crash in energy prices from 2014, followed by some other commodities like copper and some agricultural crops. It was followed by partial recovery in 2018-19, but then the major price falls (except for gold) since the start of 2000, notably as a result of the Covid-19 pandemic and the associated restrictions on trade and business applied
- Then from February 2022, with the invasion of Ukraine and sanctions on Russia, energy and staple food supplies were severely disrupted, driving up prices and inflationary pressures globally, undermining the economic recovery around the world, that had been picking up swing from the 2nd half of 2021, as Covid-19 restrictions were progressively lifted in most countries, apart from parts of China

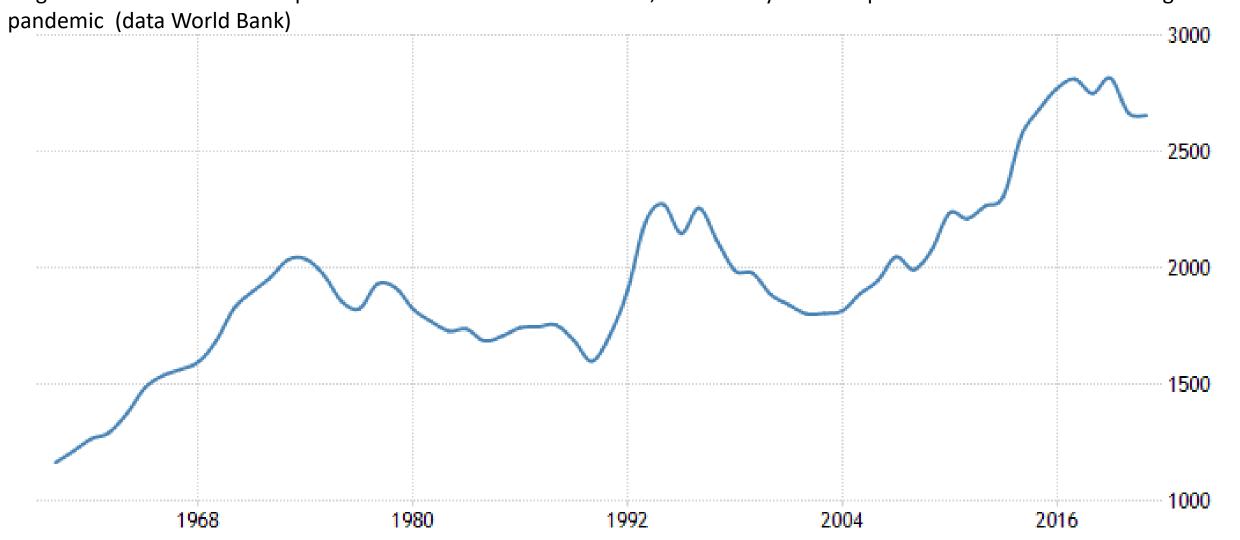
Growth Rates (GDP) by Sector (NSO to 2019, Treasury est. 2020,2021, and projections 2022, and BPNG Totals)



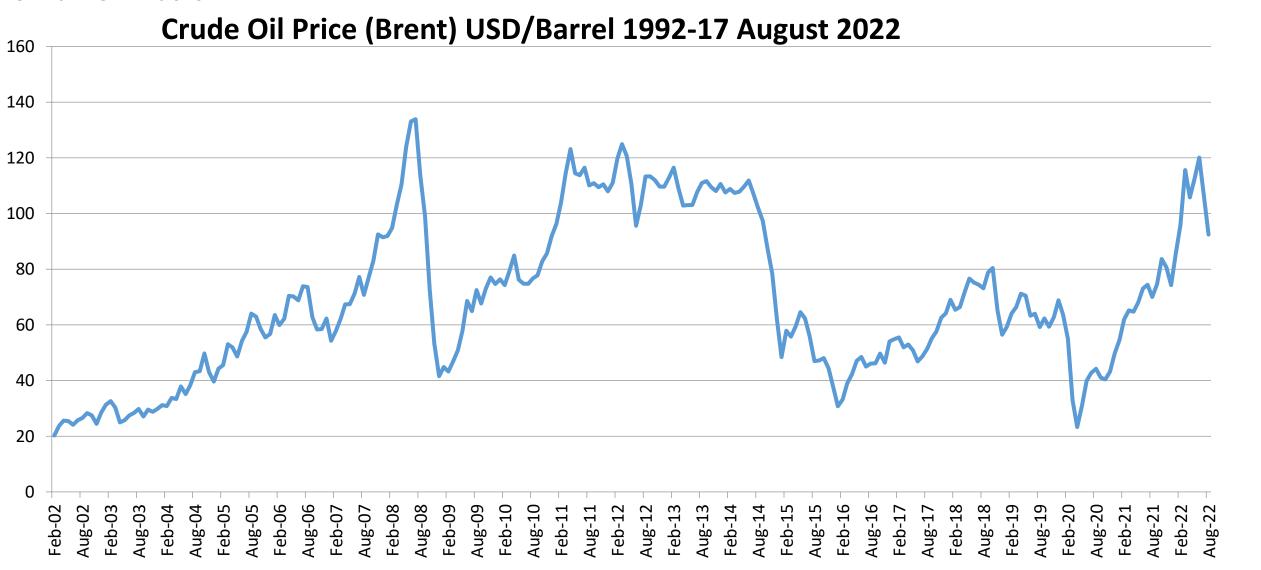
GDP per Capita 2012-2020 in US Dollars per head using economic data combined with best estimates of data on the growing population (data World Bank)



Similarly GDP per Capita 1960-2021 in US Dollars per head using economic data combined with best estimates of data on the growing population; showing the declines in the early 1980s with lower commodity prices and major drop coinciding with the closures of the Bougainville copper mine and low commodity prices at the end of the 1980s, and followed by the jump with the Kutubu oil and several new mines at the start of the 2000s; then the economic and fiscal crises of the remainder of the 1990s, the reforms and the recovery in the 2000s, and construction phase and production from PNGLNG, and the reversion to relatively stagnant investment and low prices for the remained of the 2010s, followed by the disruption and fall in demand during pandemic (data World Bank)

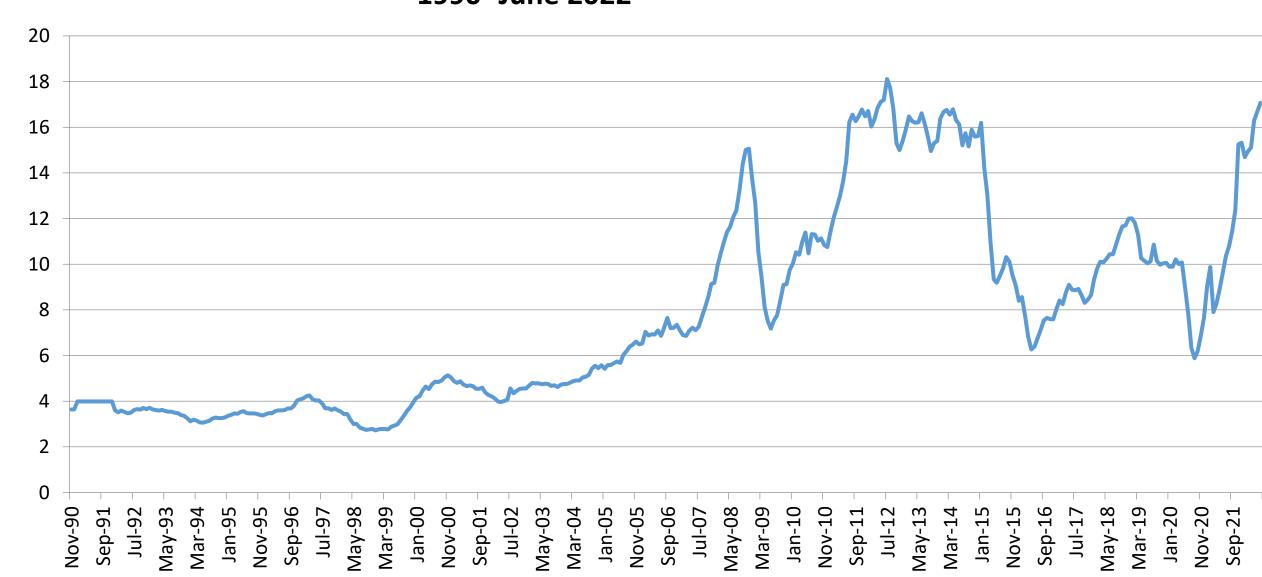


Some of the determining factors behind PNG's own market and economic volatility, including imported inflation: with the oil crashes with the GFC -2008/9, 2014/15, early 2020 with the collapse in demand with the pandemic, and the recovery and then leap from Feb 2022 with the Ukraine invasion



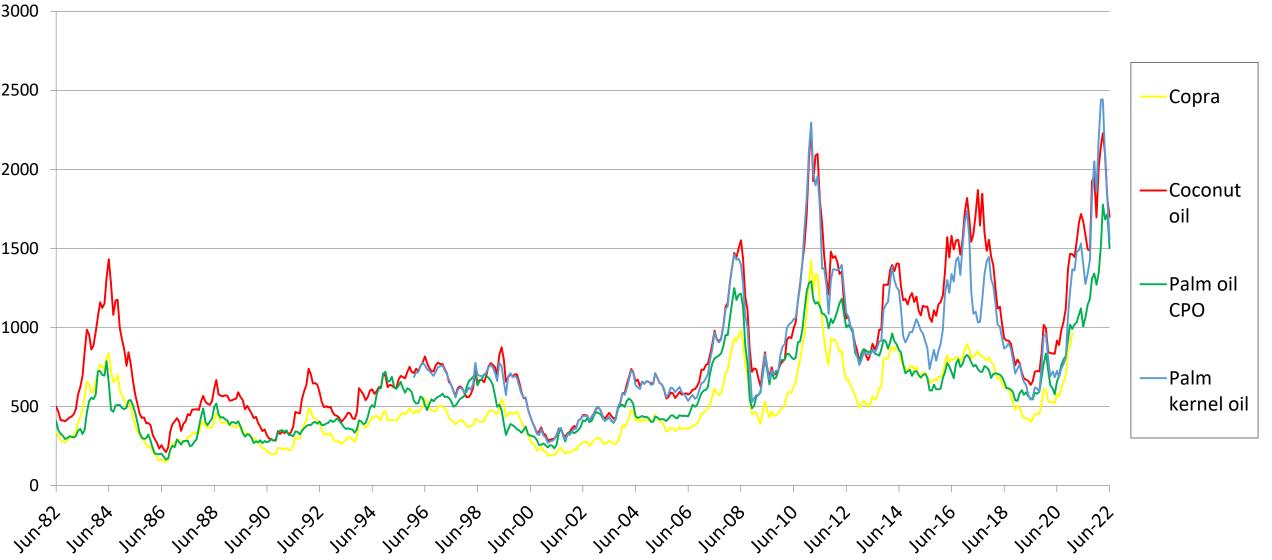
With LNG prices roughly tracking those of oil: -

LNG Prices USD/mill metric BTUs (Indonesia -Shell) 1990- June 2022

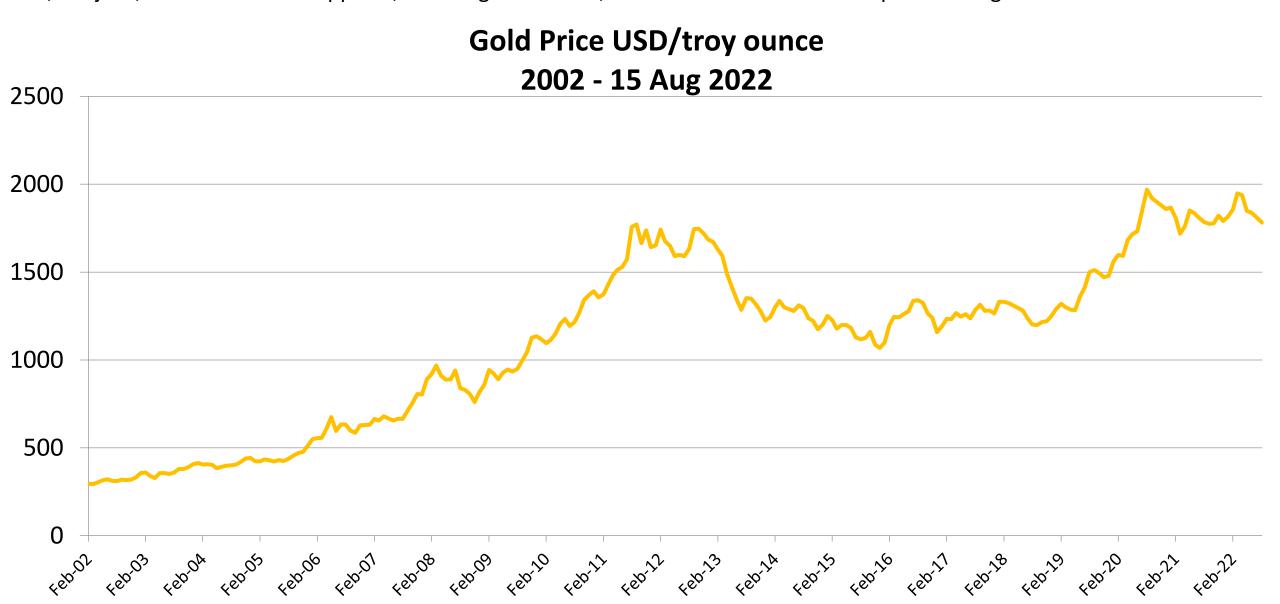


With the onset of vegetable oils also being used as biofuel, their prices increasingly mirrored mineral oil prices, adding to disruption at times either for producers when prices are low and consumers and living costs when they leap up, as they have in 2022





Running almost inversely to other commodity prices, as a reserve currency or hedging investment, gold was also the mainstay (along with agriculture) for the economy during the pandemic period, remaining strong, while most had dropped away; this economic and fiscal insurance was undermined by the misjudged closure in April 2020 of the Porgera Gold mine, and loss of up to 3,500 jobs, contractors and suppliers; meaning livelihoods, needed tax revenue and export earnings

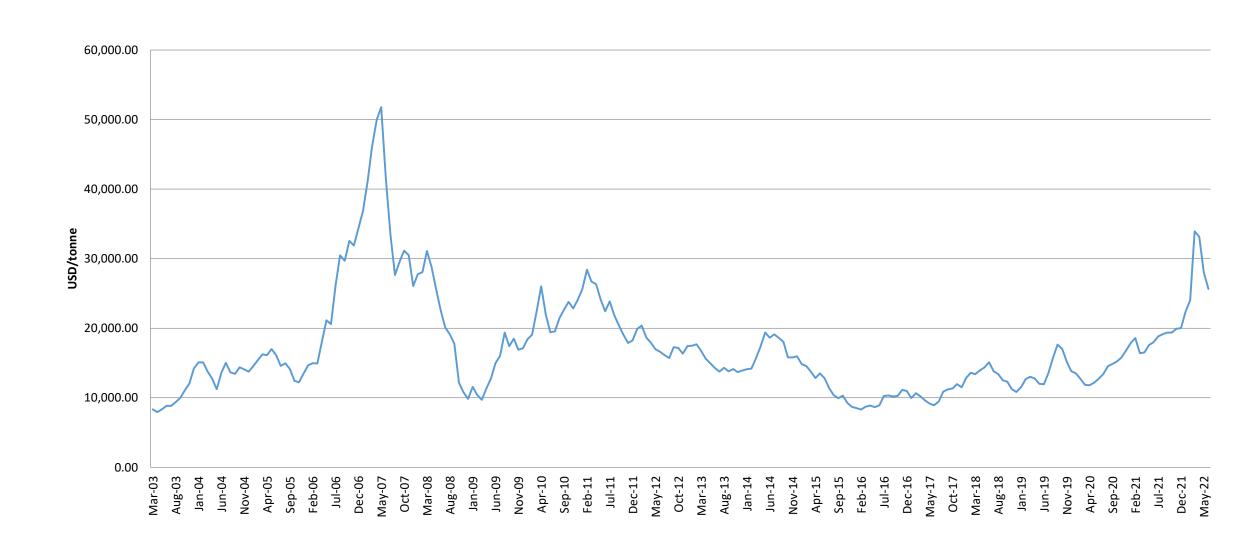


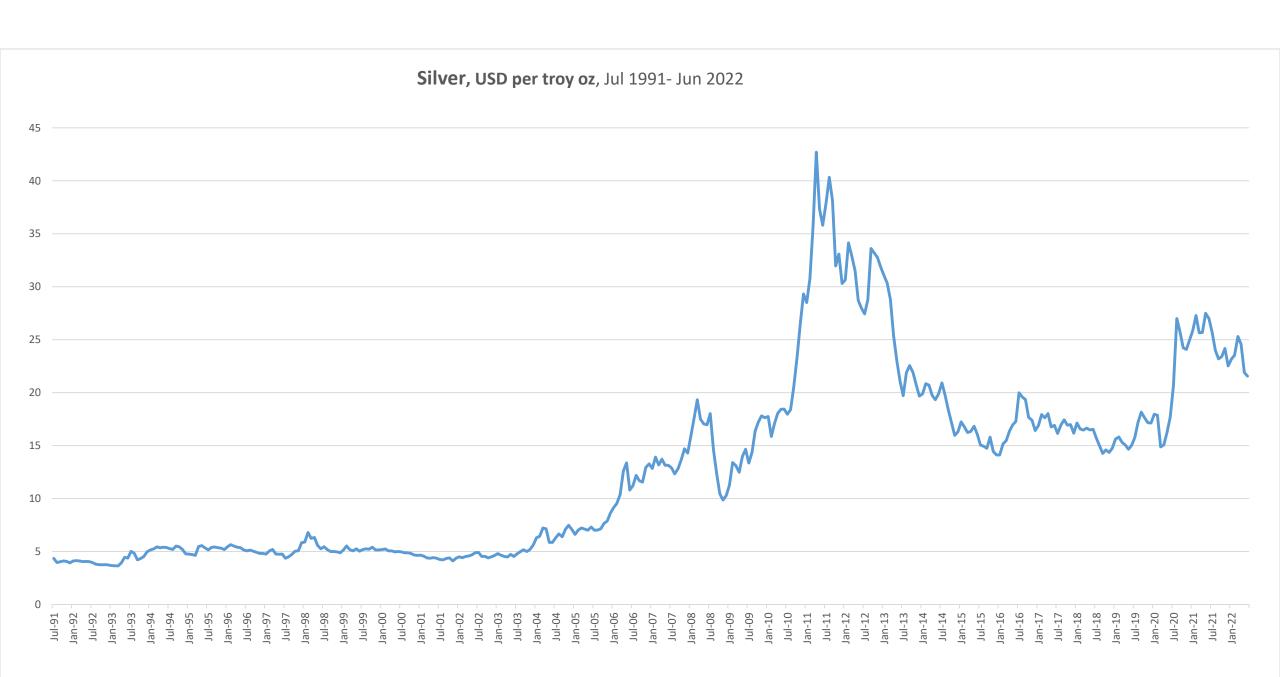
Copper prices progressively slid through the 2010s, started to pick up, slumped again at the start of the pandemic, but then picked up strong under global markets declined after the Ukraine invasion and a sharper downturn in the Chinese market and economy. Copper gains some support as one of the renewable resource transitional commodities



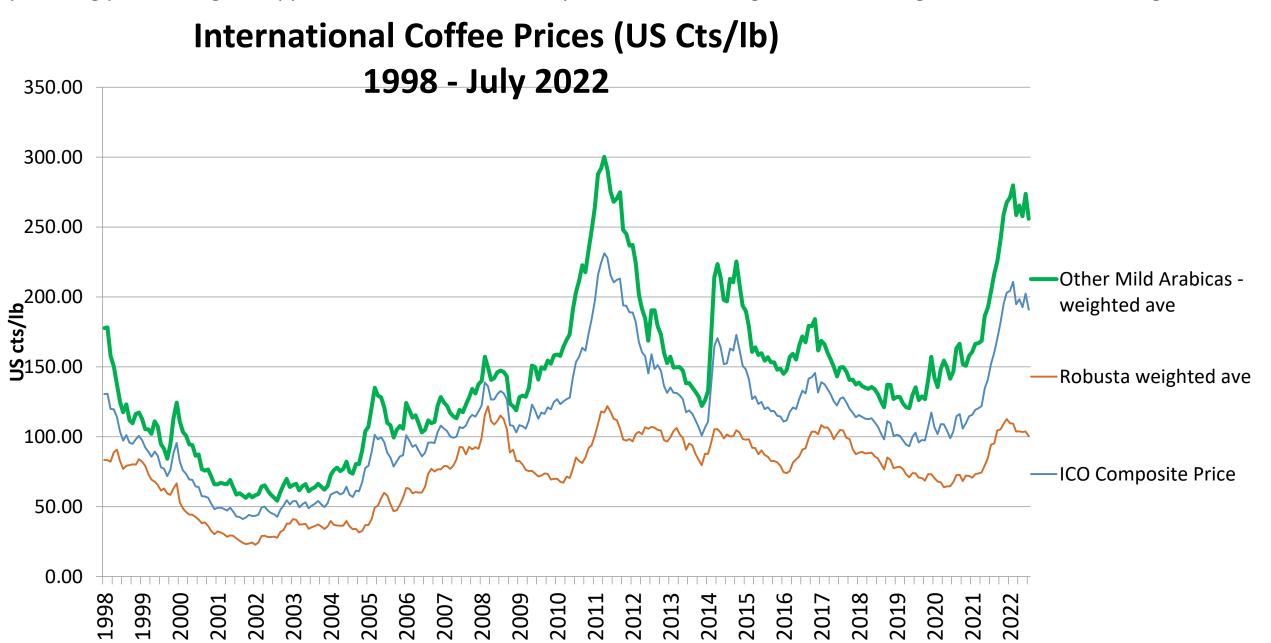


Nickel, melting grade, LME spot price, CIF European ports, US Dollars/Tonne, Mar 2002- Jun 2022

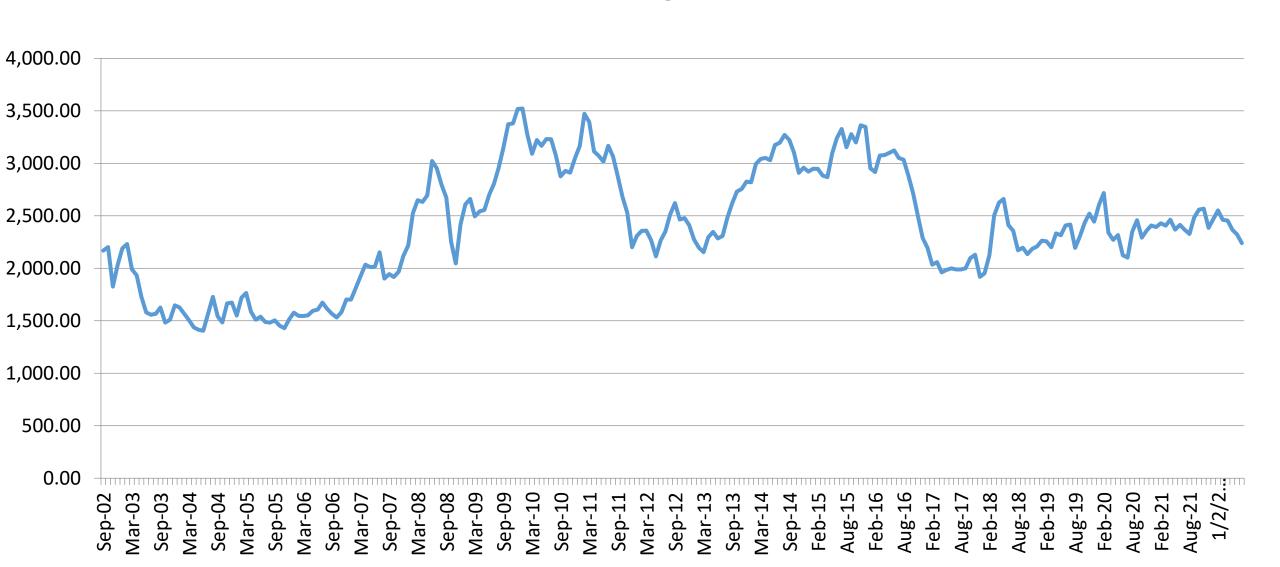




Some agricultural prices, like coffee, have risen firmly in 2021, partly owing to supply constraints combined with strong demand, providing producers good opportunities...albeit that this year's downturn in global economic growth has taken the edge off

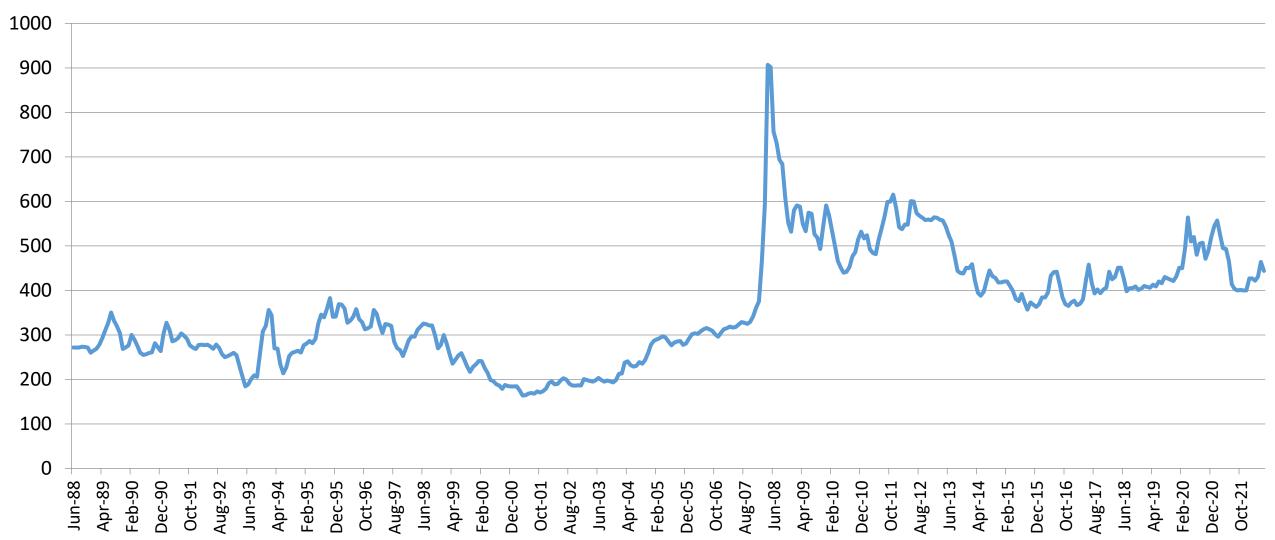


International Cocoa Price (ICCO) USD/tonne Jan 2002 - Aug 2022



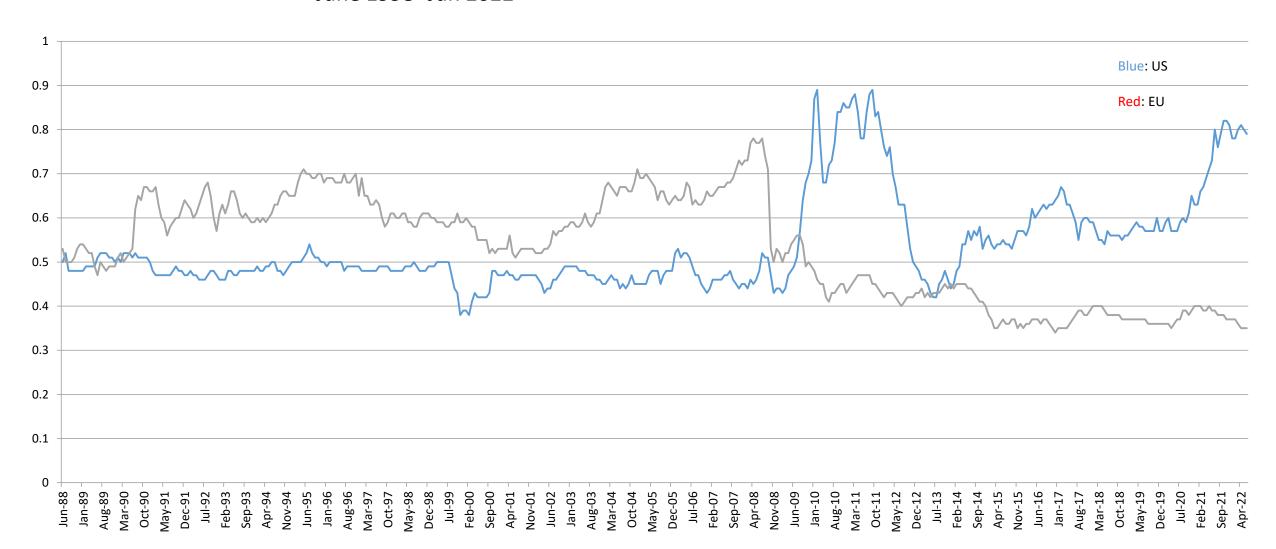
There's been upward pressure on stable food prices this year, especially grains like wheat and barley, but less so on rice, but the high prices of oil and fertilisers is adding production costs on farmers and traders, and ultimately driving up prices to consumers of various agricultural crops

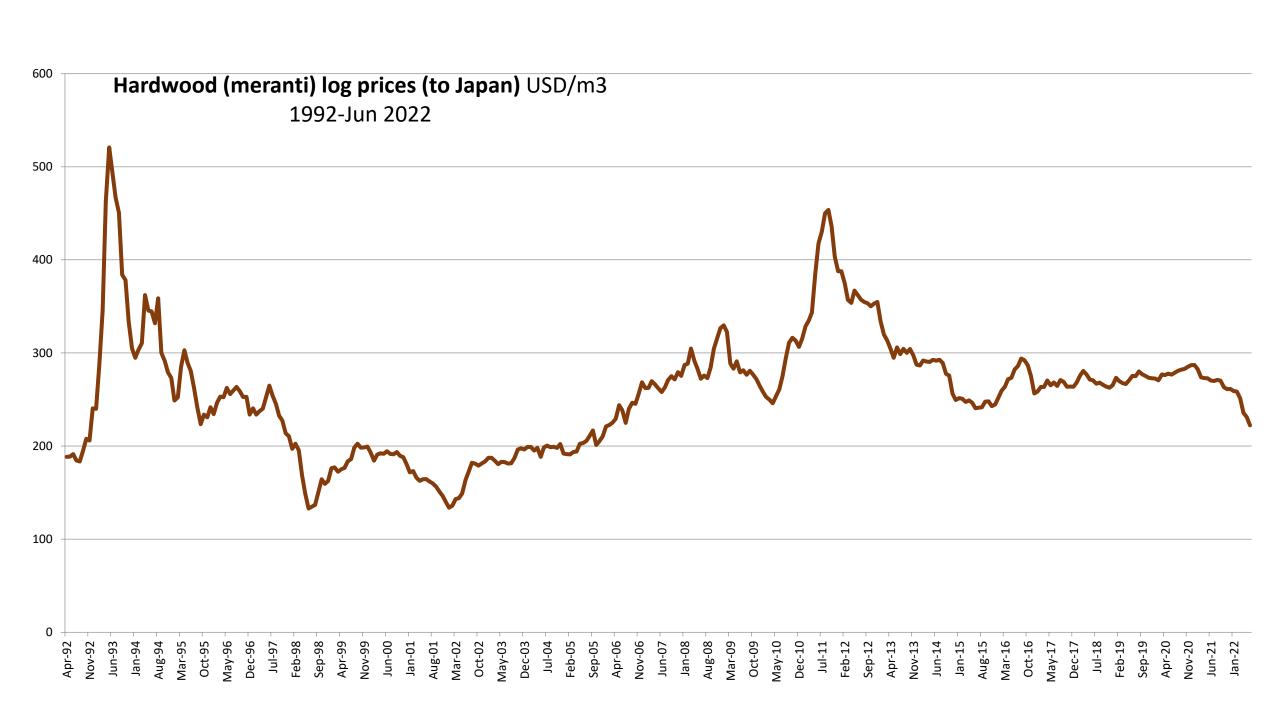
Rice (Milled White) USD per tonne Dec 1991- Jun 2022 (Thailand -quote)



Sugar US \$/kg (European and US Import Price)

June 1998- Jun 2022





Presentation covering: • Global growth projected by IME to fall from 6.1% in 2021 to 3.2%, but could be down to 2.6% in 2022, and

- Global growth projected by IMF to fall from 6.1% in 2021 to 3.2%, but could be down to 2.6% in 2022, and from 6.8% to 3.6% in developing countries, and 7.3-4.6% in Asian developing countries
- Growth in 2022 for PNG was looking potentially firmer, but uncertainty based on slowdown of global growth following Ukraine inflation; BPNG in at the end of March indicated an increase from -2.4% for 2021 to 2% for 2022, while ADB a projecte indicated a rise from 1.3% in 2021 to 3.4% in 2022
- But PNG has also benefited from the stronger prices of oil, gas, vegetable oils etc partly as a consequence of the energy uncertainty: increased export earnings, economic activity, revenue and faster repayment of resource debt
- Various commodity prices have fallen this year in the face of weaker global demand, but prices of other goods and services have been subject to inflationary pressures, passing through most supply chains from the higher energy costs
- Global Inflation expected by IMF to reach 6.6% in developed countries in 2022 (much higher in some) and 9.5% in emerging/developing economies, although the duration of the current inflationary trend is partly dependent on the duration of the Ukraine war; in PNG inflation is expected to rise from % in 2021 to % in 2022
- Challenges for inflation management: reining in demand by raising interest rates risks undermining growth and employment growth, and triggering recessionary ...with the inflationary pressures very much imported into PNG, and interest rates having little impact on investment and the money supply in PNG (with the low levels of domestic lending by the banks) and largely impacting the costs of State borrowing there are fewer monetary management tools available in PNG
- Major resource projects expected to recommence n 2022, and new projects, notably Papua LNG expected to commence in early 2024, depending upon market and stable domestic investment conditions
- Issues of benefit sharing/returns from resource sector/employment generation & multiplier
- Investment conditions/equity and the role of the state
- Employment trends and constraints skills development
- Dutch disease and exchange rates
- Role of the Sovereign Wealth Fund vs Kumul Petroleium/Kumul Mining for budgetary/econ stabilization, investment and future

- Economic diversification –agriculture, fisheries, value adding, including downstream processing forest products
- Balance of Payments
- Fiscal situation: income and expenditure scenario, ongoing deficits and growing debt and cost of debt servicing
- Impact/Cost of Climate Change vs cost of Climate Change Mitigation and Adaptation measures
- Role of emission reductions/carbon taxes-charges, carbon offsetting –forest planting and safeguarding, protected areas
- Energy policy, energy transition and renewables & transport, sustainable marine management
- Looking forward...role of the State, private sector and wider community including role of governance in steering outcomes

