

PwC Indonesia Economic Update

Brace for Impact?

First Quarter 2023



Foreword

Back in early 2020, we saw global supply and demand slump as the pandemic hindered mobility and crippled many economic activities. Later on, as vaccines became available at the end of 2020, demand started to recover. However, during 2021, scattered production networks could not keep up with the rising demand. This caused a hike in prices, driving the world into a high inflationary period that had not been seen for decades. In 2022, supply chain pressure was significantly eased. However, the Russia-Ukraine war fuelled inflation further as the conflict cut the supply of crucial energy and food commodities. By the end of 2022, the world was on the brink of a cost-of-living crisis.

Entering 2023, we expect three things to dominate global economic dynamics. First, the fight against commodity price increases. Second, the prolonged Russia-Ukraine war. Third, aggressive monetary tightening to combat inflation by central banks around the globe. The situation is even more complicated because countries face significant debt burdens, leaving only limited choices for action.

Looking at domestic economic dynamics, we have seen the Indonesian economy thriving and recovering after the pandemic, with strong economic growth of 5.31% and an inflation rate of 4.4% in 2022. The combination of pragmatic social distancing measures, various subsidies, economic relaxation, and social assistance was crucial to Indonesia's success in escaping the turmoil of the pandemic. Nevertheless, the efforts were costly, with Indonesia's total public debt-to-GDP ratio increasing from around 30% before the pandemic to over 40% after the pandemic.

We expect Indonesia's economy to grow by 4.8% in 2023 and inflation to decrease to 4.0%. These numbers undoubtedly reflect a global economic slowdown, although they still put Indonesia among the fastest-growing large economies globally and ensure it will remain an engine of growth for the Southeast Asia region. Consumption, which contributes to more than 50% of Indonesia's total GDP, is expected to stay strong and become a significant source of growth. In addition, high commodity prices have significantly boosted Indonesia's state budget since more than a third of Indonesia's exports are commodities and significant revenue contributors for the government. The potential sources of the slowdown are expected to primarily be external factors such as the weakening of investment and trade.

This report is the first PwC Indonesia Economic Update. This edition focuses on recent global economic developments, especially significant sources of global uncertainties, and provides broad coverage of Indonesia's recent economic developments. We also give special attention to Indonesia's green transition and decarbonisation efforts. Specific updates regarding poverty, health, education and governance are also discussed.

We hope that this report brings significant value to readers and serves as a guide to those interested in Indonesia's economy.



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Key Points

Global Economic Update

- 1 Global trends over the past three years have been marred by the rise of and recovery from the COVID-19 pandemic, escalated tensions among major economic partners, supply chain disruptions and high commodity prices. We expect the fight against commodity price increases, the prolonged war in the Ukraine and rising interest rates to be the key economic stories of 2023.

Indonesia Macro Highlights

- 2 Economic recovery and growth were gaining traction throughout 2022, supported by strong export, investment and household spending growth. However, downside risks, such as weak global demand, capital outflow, currency pressures and tight global financial conditions could potentially hinder growth momentum over the next four years.
- 3 Indonesia's economy is expected to experience a mild slowdown in 2023. Growth is projected to be 4.8% in 2023. Nevertheless, the figure is encouraging considering that the world's economies are expected to experience a major 'slowbalisation' in 2023 as the battle against inflation continues.
- 4 The increases in subsidised petrol and global commodity prices pushed up annual inflation in 2022. Inflation has since cooled down as Bank Indonesia has been switching to a more aggressive monetary policy stance. However, inflation is expected to stay above Bank Indonesia's target of 2-4% in 2023.

Trade

- 5 Indonesia has revived its international trade activities while strengthening trade partnerships with other economies. Such measures are expected to provide a cushion against the economic uncertainty of 2023.
- 6 Potentially low export growth could arise from slowing global growth, but Indonesia's core commodity exports (i.e. coal, palm oil, and nickel products) would remain in strong demand as long as the Ukraine war drags on.

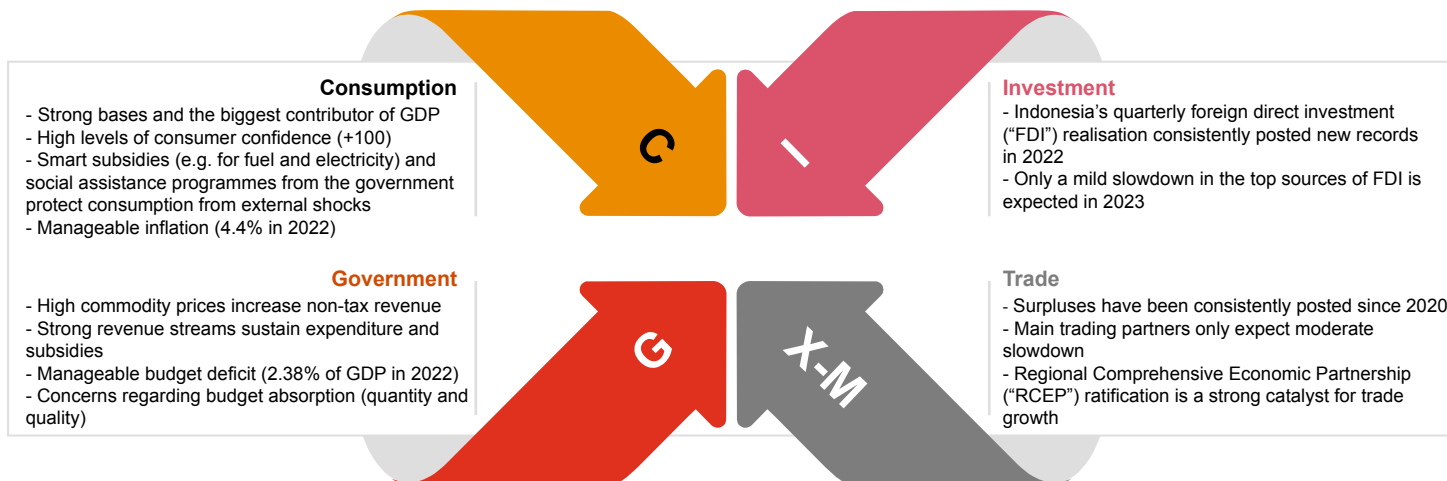
Investment

- 7 Indonesia's foreign and domestic investments reached their all-time high in 2022. The Job Creation Law, which harmonises government policies from the regional to central levels, has improved the attractiveness of investing in Indonesia. Sustainable investment, which seeks to balance financial returns with Environmental, Social, and Governance ("ESG") aspects, is the key area to focus on over the next ten years.

Government and Development

- 8 The Government of Indonesia has made efforts to mitigate the potential adverse effects of economic uncertainty, focusing on shielding purchasing power and nurturing investment opportunities while still making strides towards a green transition.
- 9 The Government of Indonesia's efforts to improve living standards are constrained by its budget capacity, and the government needs to increase coverage and quality infrastructure. More focus on Eastern Indonesia is expected considering the uneven development that disproportionately affects the region.
- 10 The Government of Indonesia's current priority is to maintain purchasing power through smart subsidies and concurrently keep its budget deficits below 3% of Indonesia's GDP. It seeks to do this primarily by increasing tax and non-tax revenue and improving spending efficiency.

What makes Indonesia's economy safe (and not)?



C-I-G-X-M at Glance

The projections for the global economy as a whole are gloomy, but emerging Asian economies are the exception. We expect Indonesia to experience only a mild slowdown. To understand why, we would like to use the basic GDP formula, which comprises consumption (**C**), investment (**I**), government spending (**G**), exports (**X**), and imports (**M**). The overall projection for each of these five components looks promising, although some slowdowns are expected, especially for components that rely heavily on external factors (investment and trade).

Consumption remains the most significant contributor to Indonesia's economy, having contributed more than 50% of GDP over at least the last ten years. The share remains stable at around 55% from 2010 to 2022. Consumer confidence was maintained at an optimistic level (>100) in 2022, as reported by Bank Indonesia. In addition, the Government of Indonesia ("GoI") was relatively successful in shielding consumption from global inflationary pressure with various subsidies such as those for fuel, electricity and social assistance. Combined with accommodative monetary policy, such initiatives resulted in a manageable 4.4% inflation level in 2022. With inflation peaking globally and central banks worldwide remaining cautious, we expect Indonesia's domestic consumption to remain strong. The coordinated effort between fiscal and monetary policies is essential to maintaining purchasing power.

Investment became the second largest contributor to Indonesia's GDP, with a 32.1% contribution in 2022. During 2022, the quarterly FDI realisation figures kept hitting new records. Based on 2021 data, the top five FDI contributors are Singapore (expected growth in 2023 of +2.3%), China (+4.5%), Japan (+1.2%), Hong Kong (+3.9%) and Malaysia (+4.0%). These countries are expected to experience a mild slowdown in 2023 but comfortably avoid recession, in contrast to advanced Europe economies. The easing of zero-COVID restrictions in China means that the country now expects accelerated growth and investment in 2023. From the sectoral perspective, based on Indonesia's FDI realisation in 2022, the top sectors are base metal and metals manufacturing, mining, chemicals and pharmaceuticals, transportation, and telecommunications.

The government budget is essential to maintaining Indonesia's economic growth. Although the GoI is still struggling to achieve the 15% tax-to-GDP ratio target, its budget's role remains to be an important source of national growth. High commodity prices always have a dichotomous impact on Indonesia's fiscal budget. High energy prices, especially for oil and fuels, have a negative impact as the GoI needs to pay more for subsidies. However, high commodity prices for commodities such as coal, gas and palm oil bring a significant windfall to government revenue, mainly due to the tax and royalties from these commodities. Total government revenue in 2022 increased by 30.58% YoY. We therefore expect there to be sufficient budget for subsidies to shield consumption and manage inflation. However, there are concerns on absorption capacity, both in terms of quantity and quality.

Lastly, from the **trade** perspective, Indonesia has been performing strongly and has been consistently posting trade surpluses since 2020. We expect this trend to continue, considering Indonesia's primary trading partners will only experience a mild slowdown, and Indonesia's top export commodity prices remain strong. The top five Indonesian export destinations, along with their growth projections in 2023, are China (+4.7%), USA (+0.2%), Japan (1.2%), India (+5.4%) and Malaysia (+4.4%).

How did we arrive here?

Global trends over the past three years have been marred by the rise of and recovery from the COVID-19 pandemic, escalated tensions among major economic partners, supply chain disruptions, unprecedented degrees of inflation and increases in commodity prices.

Global Economic Overview

The timeline below provides a brief geopolitical and economic overview of the events that occurred in the years 2020, 2021 and 2022.

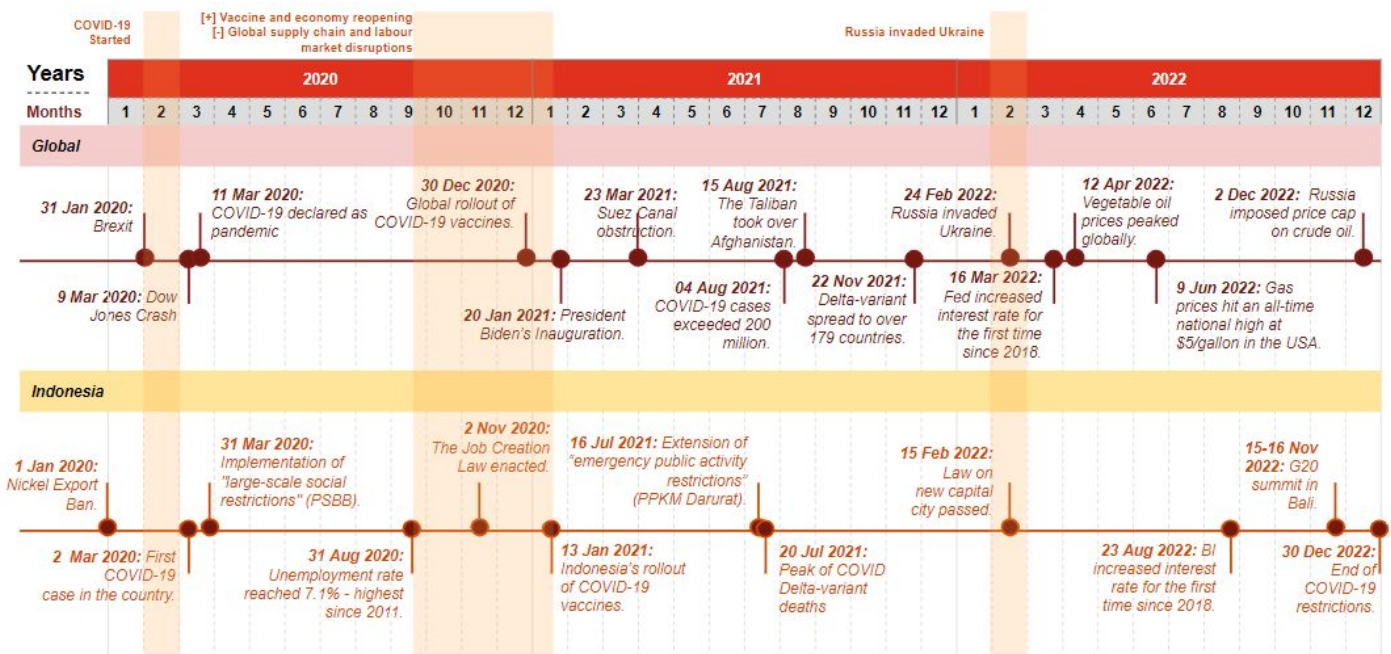
Global

- On 31 January 2020, Britain left the European Union and entered a one-year transition period as it settled into its newfound position in the world.
- On Black Monday – 9 March 2020 – the Dow Jones Industrial Average (“DJIA”) fell by nearly 3,000 points due to panic buying, which caused banks and reserves to cut interest rates and provide stimulus cheques to help keep economies afloat.
- On 4 August 2021, COVID-19 had infected more than 200 million people, although many developed countries started to reopen their economies.
- Between 15-16 November 2022, world leaders gathered in Bali for the G20 Summit to discuss significant issues concerning the world economy, including green transition, recent development of the COVID-19 pandemic and Russia's war on Ukraine, while repledging commitments to keep the peace and ensure productivity.

Indonesia

- On 1 January 2020, Indonesia implemented a nickel export ban to protect domestic production and sustainably create more value-added nickel products in the future.
- On 15 February 2022, Indonesia passed a bill to relocate its capital city to Nusantara (*Ibu Kota Negara* “IKN”) in the Eastern Kalimantan province.
- On 30 December 2022, Indonesia lifted its COVID-19-related restrictions to enter the *endemic* period.

Figure 1. Key economic, financial and political events between 2020-2022



How did we arrive here?

Detailed geopolitical and economic events that happened in the years 2020, 2021 and 2022:

2020: The beginning of the COVID-19 pandemic.

- 1 This unprecedented global phenomenon posed challenges to ways of working and connectivity, changing the lives of millions of people worldwide.
- 2 Many were unprepared for the severity and contagiousness of the virus. When the World Health Organisation ("WHO") declared a pandemic in March 2020 and casualties began to increase at an alarming rate, there was widespread panic. This led to countries shutting down borders to protect domestic interests.
- 3 Cost-cutting mechanisms affected many sectors and led to many workers becoming unemployed. Consumers also altered their purchasing behaviour, with many buying only necessities. As a result, many emerging countries dependent on labour, trade and tourism were heavily affected.
- 4 In March 2020, Indonesia implemented large-scale social restrictions (*Pembatasan Sosial Berskala Besar*/"PSBB") and reached an all-time high unemployment rate of 7.1% in August 2020. In addition, the controversial Job Creation Law signed in November 2020 was met with public outrage for being too pro-foreign-investment and debilitating the existing conditions of domestic workers and the environment.

2021: Mass vaccination and reopening of economies tempered by supply chain and labour market disruption.

- 1 Global vaccine deployment offered a new path out of the pandemic in 2021. Nations slowly opened up their borders and resumed halted activities in what came to be known as "the new normal".
- 2 The vaccination reach differed from country to country. Each was faced with its own specific challenges regarding economic and social recovery.
- 3 President Joe Biden's inauguration at the start of 2021 promised USD 1.9 trillion in economic relief, which was estimated to increase US GDP growth by 6%. The bill was later signed in March 2021.
- 4 The unexpected recovery in the demand for goods and services was at a crossroads due to a shortage of workers and manufacturing facilities being strained at maximum capacity. When a container ship blocked the Suez Canal in March 2021, many fleets bringing cargoes of raw materials, equipment and numerous other goods faced delays in reaching their destinations. This incident created a daily total loss of USD 10 billion and resulted in many industries having to rely on existing inventories in response to shortages, which contributed to the increase in global inflation to 3.4%.
- 5 Supply chains and labour markets were put into further disarray when the more deadly and contagious COVID-19 variant – Delta – appeared. Despite Indonesia's extension of its public activities restrictions, enforcement of mask mandates and provision of vaccinations to persons aged 18 and above throughout the year, Indonesia still reached a peak of more than 30,000 deaths in July 2021.
- 6 In August 2021, the total number of infected cases exceeded 200 million worldwide. By November 2021, the Delta variant had spread to 179 countries and was closely followed by the Omicron variant.

2022: Economic impact of Russia's invasion of Ukraine.

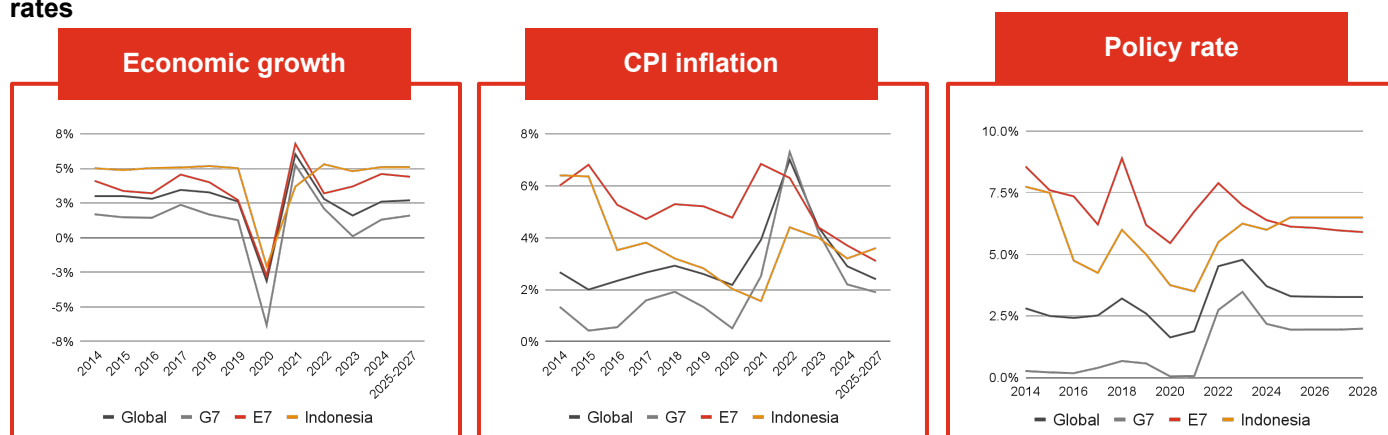
- 1 The effects of President Vladimir Putin's so-called "special military operation" in Ukraine added another layer of disruption to financial, human and commercial links around the world. Such disruption was most evident in Europe, Asia and Africa.
- 2 Hit with international sanctions from the G7 and other countries, Russia's trade activity stagnated.
- 3 A crisis in commodity prices erupted. Food (e.g. wheat, cooking oil) and energy (e.g. petrol, gas) were the hardest hit. In April 2022, vegetable oil prices peaked globally (prices increased by 23%), which affected household spending and industries reliant on oil. Gas prices also hit an all-time national high of USD 5 per litre in June. To remedy some of its fallen revenue, Russia retaliated to the price caps on its oil and other products by announcing export bans aimed at the G7 and other countries complying with the caps. Such bans were announced in December 2022 and will take effect in early 2023.
- 4 The widespread increase in prices led to inflationary pressures and the slowing down of many economies. In response, central banks increased their national interest rates. The Fed increased its interest rates to 0.4% (marking the first increase since 2018) in March 2022 and Bank Indonesia similarly increased its interest rates to 3-4.5% (again marking the first increase since 2018) in August 2022.

1. Global Economic Update

The fight against commodity price increases, the prolonged war in the Ukraine and rising interest rates are expected to be the key economic stories in 2023. Despite such challenges, as we enter 2023, the global economic outlook appears to be more optimistic than expected as the probability of recession has reduced.

1.1. Global Economic Overview

Figure 2. Global, G7, E7 and Indonesian economic growth, Consumer Price Index (“CPI”) inflation and policy rates



Economic growth	2018	2023f	2028f
Global	3.27%	1.85%	2.75%
G7	1.67%	-0.16%	1.31%
E7	4.00%	2.24%	3.57%
Indonesia	5.17%	4.80%	4.96%

CPI Inflation	2018	2023f	2028f
Global	2.92%	5.17%	2.69%
G7	1.92%	4.51%	1.92%
E7	5.29%	10.72%	4.24%
Indonesia	3.20%	4.00%	4.04%

Policy rate	2018	2023f	2028f
Global	3.21%	4.78%	3.27%
G7	0.67%	3.48%	1.98%
E7	8.90%	6.99%	5.91%
Indonesia	6.00%	6.25%	6.50%

Threat of stagflation (i.e. low growth with high inflation) accompanied by contractionary monetary policies. Global GDP is projected to grow by around 1.6% in 2023. US economic growth is estimated to slow down to 0.2%, which will represent a mild downturn rather than a technical recession. On the other hand, the economic outlook in the Eurozone is bleaker, likely due to the reduced supply and higher prices of natural gas. In the case of E7 countries, India is predicted to be the fastest growing G20 economy, while Indonesia's economy is estimated to experience the highest growth in Southeast Asia. China's GDP is expected to expand by 4.7%, subject to how the country shifts away from its zero-COVID policy.

Inflation rates are expected to fall by at least a quarter in around half of the Organization for Economic Co-operation and Development (“OECD”) economies due to a combination of tighter monetary policy and slowing global demand; such factors should put downward pressure on prices in 2023. Having a high starting point, Turkey is projected to experience the sharpest fall in inflation from 73% in 2022 to around 42% in 2023. China might become one of the few countries that sees its inflation rate rise in 2023; this could occur due to its insulation from inflationary pressures in 2022. Overall, despite the general fall in inflation rates that has been predicted, annual inflation is expected to remain above target in 2023 in almost all the countries that experienced high inflation in 2022.

Sources: PwC Global Economy Watch (2023); World Bank (2023); IHS Markit (2023); PwC Analysis (2023).
Notes: G7 countries consist of the United Kingdom, Germany, France, Italy, Japan, United States, and Canada.
E7 countries consist of the People's Republic of China, Russia, Indonesia, India, Mexico, Brazil, and Turkey.

1. Global Economic Update

1.2. Global Inflation

Global inflation was at a three-decade high in 2022, which prompted rapid monetary tightening by many central banks around the world. The yearly increase in global Consumer Price Index (“CPI”) surged to a three-decade high of 7.0% in 2022. The inflationary pressure was mainly driven by fuel, food and energy prices. Among G7 countries, the UK had the highest inflation rate of 9.0% in 2022. This was followed by Italy and Germany, which had inflation rates of 8.5% and 8.2%, respectively.

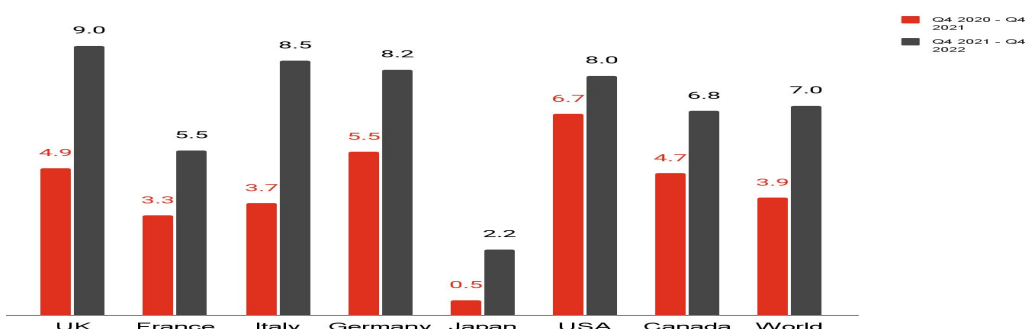
Rising inflation rates worldwide have caused central banks to raise benchmark rates faster than expected, especially in the United States and the Euro area. The rapid increase in interest rates triggered an appreciation of the US Dollar against currencies in emerging markets, including Indonesia.

Table 1. Interest Rates of Leading Central Banks

Bank	Interest Rate (August 2022)		Current Interest Rate (1 Jan 2023)	Expectation in 2023
Federal reserves	2.25 - 2.50%	↑	4.25 - 4.50%	Rising to between 4.5% and 5.0%
Bank of England	1.75%	↑	3.50%	
ECB	0.50%	↑	2.50%	

Source PwC Global Economy Watch (2023)

Figure 3. Historical Inflation in G7 Countries (%YoY)



Notes: 1) Headline inflation is a measure of the total inflation within an economy and includes commodities such as food and energy prices, which tend to be much more volatile and prone to inflationary spikes.

In most developed countries, consumers have suffered the most from the inflationary pressure.

The limits placed on Russia’s exports and the disruption in the global supply chain were the main causes of rising energy and commodity prices worldwide, especially in the EU. Russia accounts for around 10% of global oil production and around 40% of the EU’s natural gas imports. In addition, Russia and Ukraine are key global producers of several foods and raw materials, including wheat, sunflower oil and fertilisers. Cost pressures in industries that are reliant on Russian commodities led to inflationary pressure in all G7 countries throughout 2022.

Headline inflation worldwide eased in the fourth quarter of 2022, following the steep increase in previous quarters. Rapid monetary policy tightening, cooling demand and supply chain resilience started to ease inflationary pressure worldwide at the end of 2022. The global inflation rate of 7.0% in Q4 2022 was lower than the global inflation rate of 8.3% in Q3 2022.

Global inflation is expected to continue to cool down in 2023. Inflation is expected to have declined by the end of 2023 assuming that the impact of the Russia-Ukraine war fades and disruption in global supply chains eases. However, further shocks to energy and food prices could potentially keep headline inflation¹ higher for longer. As energy prices are and will remain particularly sensitive to geopolitical tensions, households and businesses will need to brace for further price increases if the tension in Ukraine persists.

The impact of high inflation rates is expected to be felt more in countries where disposable income is more sensitive to energy and food prices and where a relatively large share of the population is at risk of poverty. This will put continued pressure on governments to provide more support for low-income households.

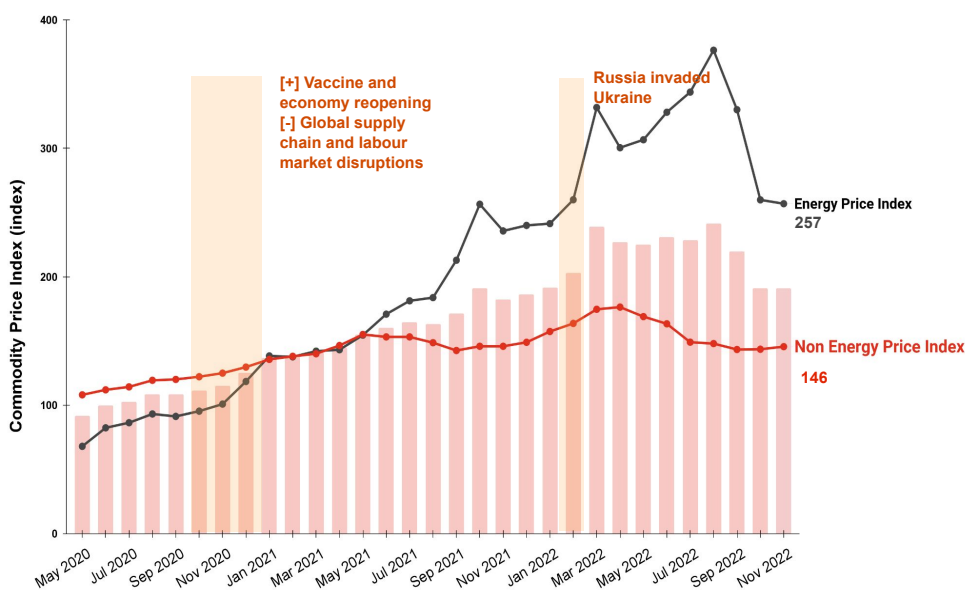
1. Global Economic Update

1.3. Global Commodity Prices

The increase in wholesale energy prices globally pushed overall commodity price indexes in 2021 and 2022. Commodity price indexes started to increase in early 2021 in the wake of the COVID-19 pandemic and growing international demand. During the pandemic, many suppliers had to restrict production and limit labour work hours, which led to global supply chain disruption. The disruption has caused commodity prices to diverge, with energy prices increasing more than non-energy prices.

The Russian-Ukraine conflict pushed up the prices of commodities further in 2022. Commodity prices increased in Q1 2022, reflecting the effects on the global economy of the trade sanctions imposed by the EU, the UK and the US. The increases in prices were more significant for commodities where Ukraine and Russia are large exporters such as natural gas, crude and refined petroleum, coal, nickel, fertilisers, wheat and sunflower oil.

Figure 4. Commodity price, 2020-2022 (index)¹



Source: International Monetary Fund ("IMF") (2023), Primary Commodity Market (2023)

Both energy and non-energy commodity prices declined in Q4 2022 as global economic growth slowed down. Energy prices have begun to retreat, although the prices of several commodities remain relatively high. Coal prices, for instance, remain high as demand is still relatively high in comparison to other commodities; many developed countries have turned to coal as an alternative to natural gas imported from Russia. As a result, coal prices were relatively high at the end of 2022.

Non-energy prices also declined in Q4 2022. Metal prices declined the most among non-energy commodities between Q3 and Q4 2022, reflecting weak demand globally due to China's slow economic recovery from the pandemic. Food and raw materials prices have also declined as the threats of food shortages that arose in early 2022 have diminished.

Note: 1) Equally weighted average crude oil spot price of West Texas Intermediate ("WTI"), Brent, and Dubai

Commodity Price Growth (Q4 2021-Q4 2022)

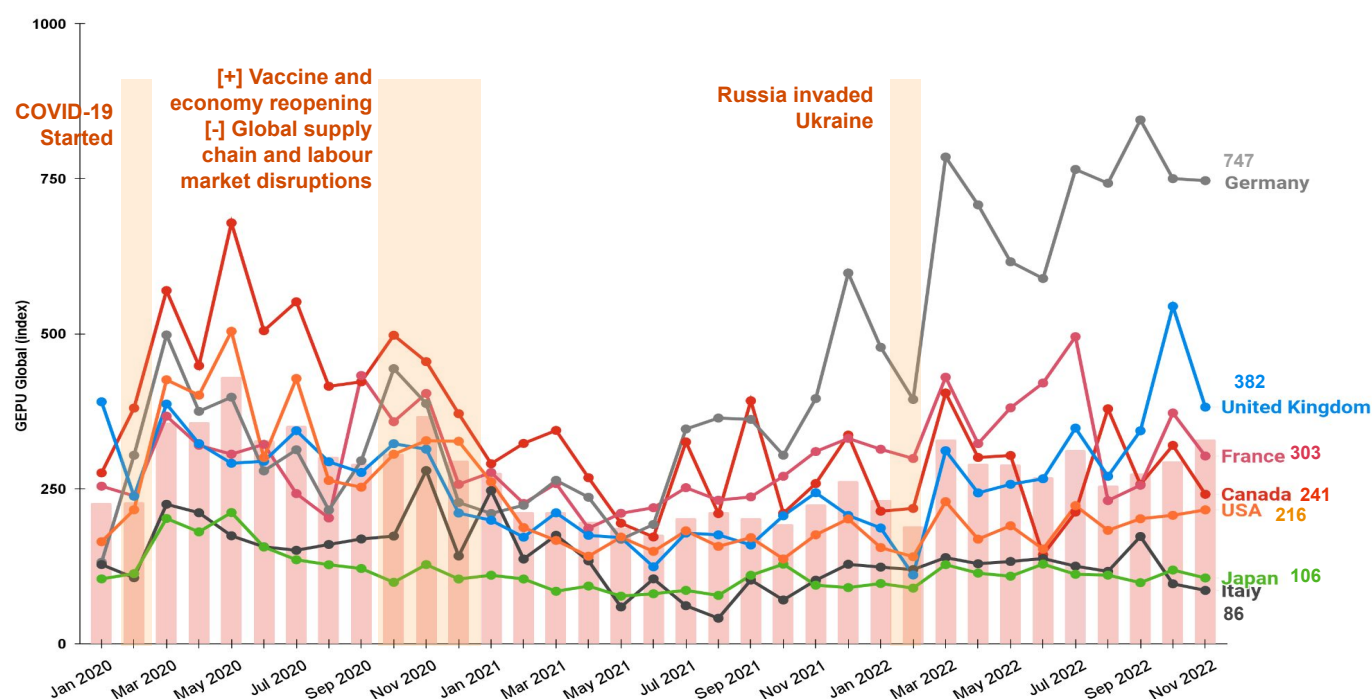
Energy and Metals	Foods and Raw Materials
+23% Average crude oil spot	-21% Palm oil
+183% Australia Coal	+28% Rubber
+69% South Africa Coal	-4% Rice
+38% Nickel	+28% Wheat
-4% Gold	+4% Soy
+78% Natural Gas – Europe Title Transfer Facility ("TTF")	

1. Global Economic Update

1.4. Economic Policy Uncertainty

The **Global Economic Policy Uncertainty (“GEPU”) index peaked at the onset of the economic crisis triggered by COVID-19**. During the early stage of the COVID-19 pandemic, the global index surged in all G7 countries, reflecting the risks and uncertainties affecting government policies and regulatory frameworks. The index remained stable in 2021 as the global economy began to recover from the pandemic, but rose again in 2022 due to the Ukraine war.

Figure 5. GEPU index, 2020-2022 (monthly index)¹



Source: Baker, Scott, Bloom, and Davis (2016), *Measuring Economic Policy Uncertainty* (accessed in 2022)

The GEPU index increased throughout 2022. The GEPU index reached its annual peak in the first quarter of the year. The index has reached levels close to what was seen around the September 11 attacks in the United States in 2001 and the United Kingdom’s 2016 vote to leave the European Union. However, the global index was lower in Q1 2022 than in the early stage of the COVID-19 pandemic, at which time the index reached the highest level seen in the past three years. Some of the main triggers for rising uncertainty in 2022 included high inflationary pressures, the appreciation of the US Dollar against other currencies, interest rates hikes, and supply chain disruptions.

Countries in Europe ranked higher than the rest of the world in terms of economic policy uncertainty. Countries that have a significant economic relationship with Russia, including Germany, the UK and France, had the highest uncertainty index in Q4 2022, indicating the pronounced impact the Ukraine war has had on Russia’s trade partners. Germany, with the steepest increase of 133% from Q3 2021 to Q3 2022, was the most affected by the war. A high uncertainty index in a given country may be reflective of the lack of clear direction in the country’s policy making, which can lead to prolonged delays in spending and investment by households and businesses.

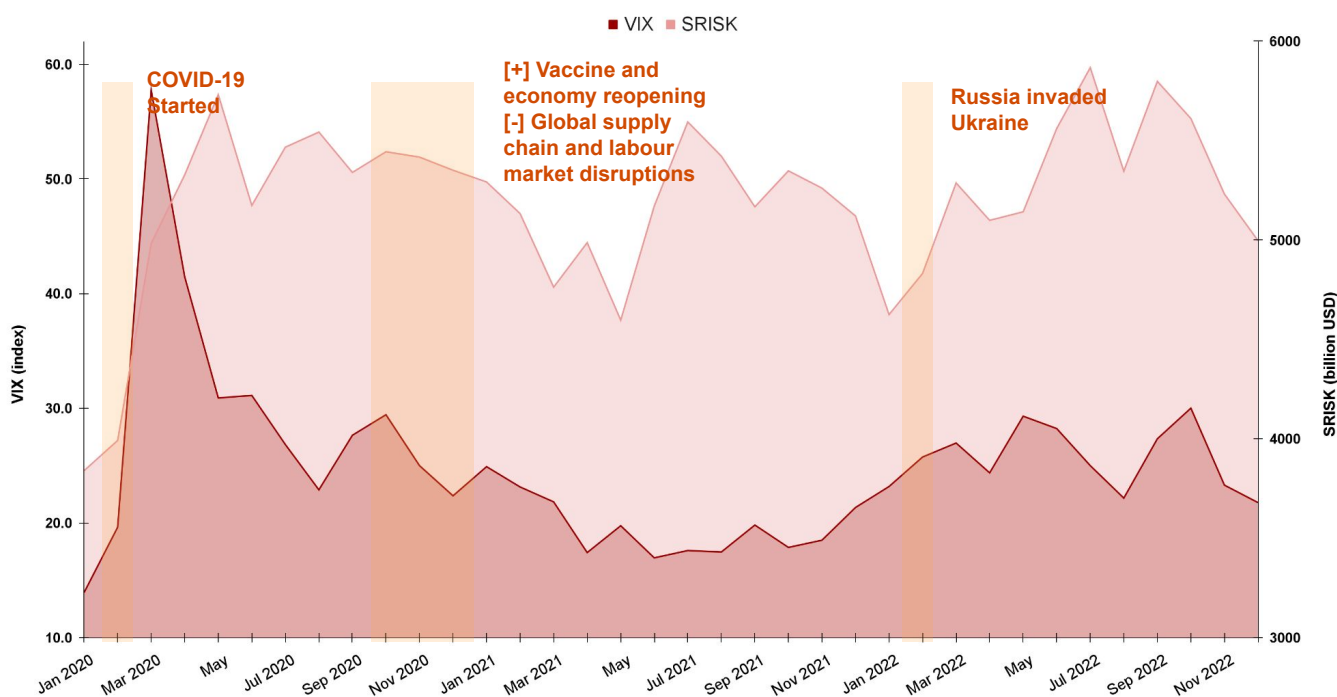
Notes: 1) GEPU is an index constructed based on newspaper articles regarding policy uncertainty from leading newspapers. It counts the number of newspaper articles containing the terms “uncertain” or “uncertainty”, “economic” or “economy”, and one or more policy-relevant terms.

1. Global Economic Update

1.5. Financial Market Volatility

The global financial market remained relatively stable amid recession fears over the past three years. Global financial market volatility, which is measured by the Volatility Index (“VIX”)¹ and systemic risk (“SRISK”)², has not exhibited a sudden increase or decline, except for during the onset of the COVID-19 pandemic in Q1 2020. Volatility declined as economies started to recover from the pandemic in Q1 2021, but rose again in Q1 2022 due to the Ukraine war. Both the VIX and SRISK declined in December 2022, reaching their lowest levels in more than three months. The decline was likely to be due to investors' increased bullishness about the stock market's future prospects in Q4 2022 as compared to Q3 2022.

Figure 6. Global Volatility Index (monthly index)



Sources: V-Lab (2023), Chicago Board Options Exchange (2023)

Throughout 2022, the VIX was continuously increasing. The growth remained stable and did not increase above the level that was reached in Q1 2022 during the pandemic. The escalating Russia-Ukraine conflict, combined with ongoing inflation and rate-hike concerns, drove the VIX to its highest 2022 levels, which occurred in May and October

The VIX declined in Q4 2022. The lower VIX in Q4 2022 reflects the reduced uncertainty, risk and investor fears in relation to financial markets in response to the easing of inflationary pressures.

SRISK also declined in Q4 2022. The Ukraine war increased the systemic vulnerabilities of the global financial system in 2022, which led to an increase in the SRISK index during the year. Following the VIX, SRISK also declined in Q4 2022 as the impact of the war on financial markets began to ease. The lower SRISK in Q4 2022 implies that financial institutions were required to raise less capital in order to function normally in the face of economies vulnerable to recessions.

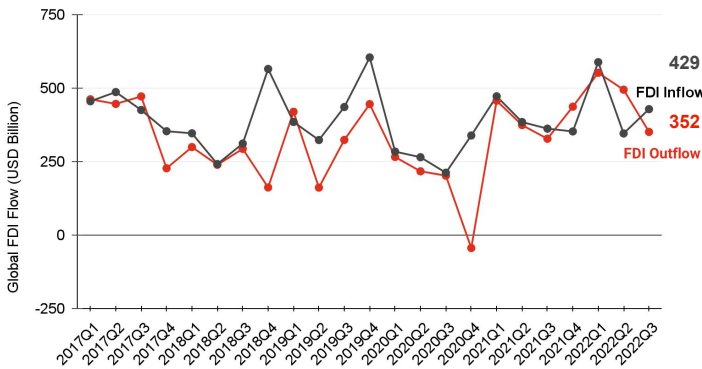
Notes: 1) The VIX measures the expected volatility of the US stock market over the coming 30 days. 2) SRISK measures the capital shortfall of a firm (and can be aggregated to country level) conditional on a severe market decline.

1. Global Economic Update

1.6. Global Foreign Direct Investment

FDI remained in fluctuation in 2022, although to a lesser extent than what had been observed in the prior few years. When compared year on year (“YoY”), global FDI outflow and inflow in Q3 2022 grew by 7.1% and 18.3%, respectively. In 2021, the US made and received the highest amount of FDI at 23.6% and 23.2% of total global FDI, respectively. If the US maintains or increases its interest rate in 2023, higher FDI inflow may be potentially induced in 2023 as the higher return on investment may attract more foreign investors.

Figure 7. Global Foreign Direct Investment Flow, 2017-2022 (USD billion)



Source: OECD (2023)

Figure 8. Global Top 5 FDI Flows (2021)

FDI Outflow				
USA	Germany	Japan	China	UK
\$403.1B (23.6%)	\$151.7B (8.9%)	\$146.8B (8.6%)	\$145.2B (8.5%)	\$107.7B (6.3%)
FDI Inflow				
USA	China	Hongkong	Singapore	Canada
\$367.4B (23.2%)	\$181.0B (11.4%)	\$140.7B (8.9%)	\$99.1B (6.3%)	\$59.7B (3.8%)

Source: UNCTAD (2023)

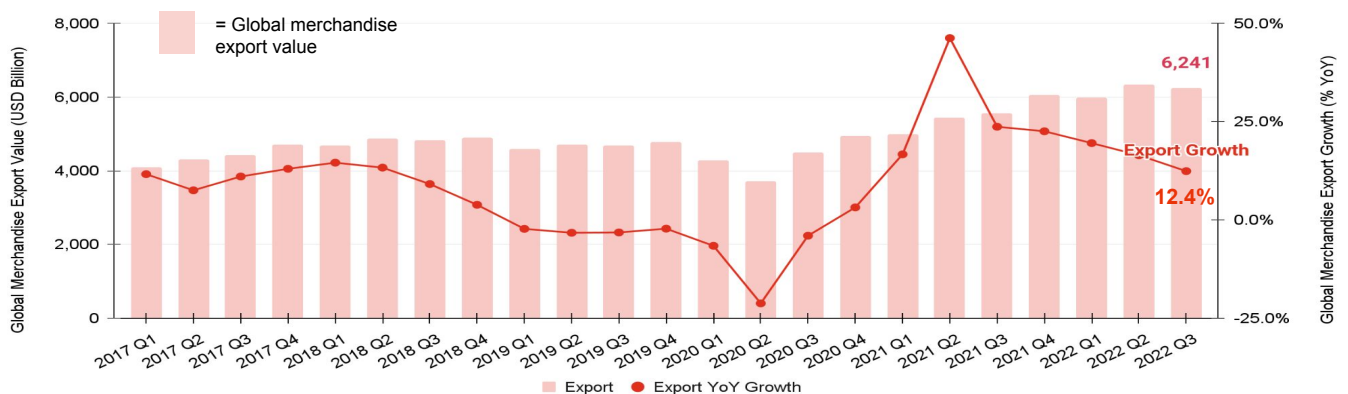
1.7. Global Trade

Slower global export growth in merchandise has been observed recently. Export merchandise YoY growth experienced a steep increase from Q2 2020 to Q2 2021 as border restrictions that were put in place at the beginning of the COVID-19 pandemic were relaxed and economies adjusted themselves to function alongside the pandemic.

However, export merchandise YoY growth started to decline after its peak in Q2 2021 at 46.3%; by Q3 2022 it had reduced to 12.4% with a trade value of USD 6,241 billion. The decline in 2022 occurred as the growth in export value was measured relative to the value in 2021 when global trade was already in recovery. Growth peaked in 2021 as the growth in export value was measured relative to the value in 2020 when global trade was hit the most by the pandemic.

International institutions such as the OECD expect slower growth in 2023. This is derived from the forecasted lower import demand due to the anticipated economic downturn of major economies and the prolongation of the Russia-Ukraine war.

Figure 9. Global Merchandise Export Value and Growth, 2017-2022 Q3 (USD billion and %YoY)



Sources: World Trade Organization (2023), OECD (2022)

2. Key Highlights in Indonesia

The Government of Indonesia has made efforts to mitigate the potential adverse effects of economic uncertainty, prioritising shielding purchasing power and nurturing investment opportunities

2.1 Perppu UUCK was ratified in the hope of providing reassurance for investors in the midst of global uncertainty

The Gol ratified the Government Regulation in Lieu of Law No. 2/2022 for the Job Creation Law (*Peraturan Pemerintah Pengganti Undang-Undang Cipta Kerja* “Perppu UUCK”) on 30 December 2022. This overrides the Supreme Court decision in 2021 that declared the Job Creation Law (*Undang-Undang Cipta Kerja* “UUCK”) to be conditionally unconstitutional.

The Gol argued that Perppu UUCK was necessary due to the looming threat of global economic downturns. Through this regulation, the Gol expects that it will be able to provide the necessary legal assurance for investors to mitigate the potential negative impacts.

Something to note is that the contents of Perppu UUCK related to investment are relatively unchanged compared to the original UUCK. As of now, the main difference can be found in the labour section, specifically in the provisions related to the minimum wage and outsourcing.

However, it remains to be seen whether there will be implementing regulations from Perppu UUCK that could affect the investment provisions that were previously established by the original UUCK.

Figure 10. Comparison between UUCK and Perppu UUCK regarding labour regulations

Identified potential changes so far

Minimum wage

UUCK

The minimum wage formula is based on economic growth and inflation.

Note: Under GR 36/2021¹, the minimum wage is also calculated based on:

1. Average consumption
2. Average number of household members
3. Average number of working household members

Perppu UUCK

The minimum wage formula is based on economic growth, inflation, and **certain indices**.

Note: Further provisions, especially those pertaining to the indices that will be used, are subject to implementing regulations that have not been formulated.

Outsourcing

UUCK

The removed article initially stipulated under Law 13/2003 that a company *might* subcontract part of its work and included provisions regarding the kind of work that could be outsourced.

Perppu UUCK

The regulation reinstated the provision that a company *may* subcontract part of its work, although provisions regarding the kind of work that can be outsourced are subject to implementing regulations that have not been formulated.

Sources: Indonesian Legal Brief (2022); PwC Analysis (2023).
Note: 1) GR 36/2021 is one of implementing regulations under UUCK

2. Key Highlights in Indonesia

2.2 Nusantara, Indonesia’s new capital city, is envisioned to be a “Global City for All”

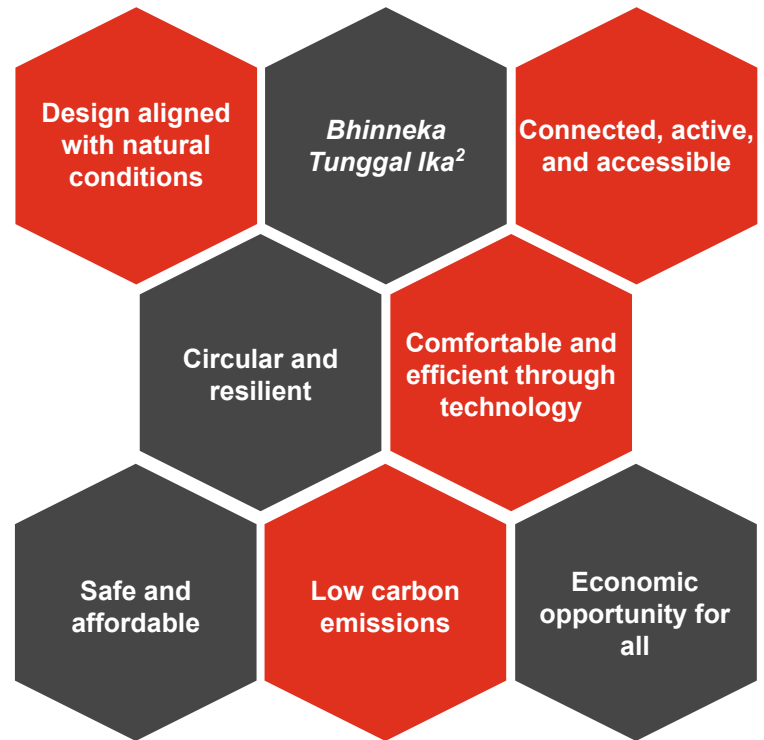
The Indonesian Government is set relocate the new capital city to East Kalimantan. The move would see the Government’s administrative functions moved away from Jakarta. The rationale of the relocation includes:

- **Decentralisation:** Minimise the income disparity and uneven focus of infrastructure development between Java and the rest of Indonesia.
- **Water shortage in Jakarta:** Jakarta does not pipe in enough drinkable water, therefore most households have been relying heavily on wells, which leads to the the land above collapsing.
- **Minimise overpopulation in Jakarta:** Reduces the cost of high population density in Jakarta, including traffic congestion and pollution.
- **Economic Diversification:** The establishment of the new capital will be followed with development of digital and sustainable-oriented economic sectors.

Jakarta is still expected to be Indonesia’s financial and commercial center, where the majority of its population is still expected to stay.

The development of the new capital city has entered the first stage of its development. This is targeted to reach completion by 2024, which includes the president moving to the new presidential palace to celebrate Indonesia’s 79th Independence Day.

Figure 11. Eight Key Principles of Nusantara



One of the ultimate visions of Nusantara is to become a “Global City for All”, a city that abides by inclusive and accessible urban development, as outlined by its eight key principles (See Figure 11). It also has three special KPIs as part of its goal of becoming a world-class city, namely:

1. 10-minute walkable city
2. 75% forest coverage within the city
3. Included in top 10 livable cities in the world

Figure 12. Nusantara Development Stages

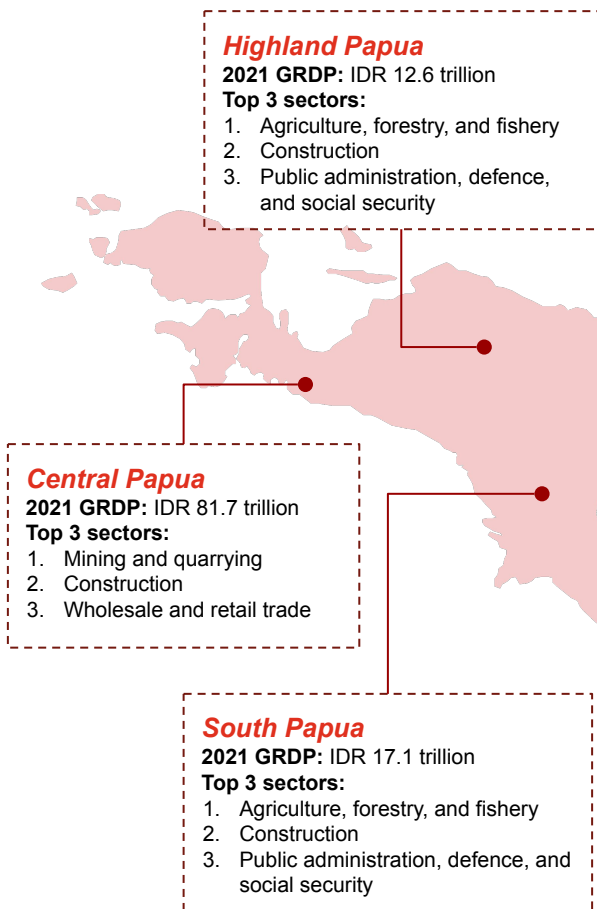


Notes: 1) The three cities refer to Nusantara, Samarinda, and Balikpapan. 2) Bhinneka Tunggal Ika is the official national motto of Indonesia, inscribed in the National emblem of Indonesia, translated as “Unity in Diversity”.
Sources: Bappenas (2023); PwC Analysis (2023)

2. Key Highlights in Indonesia

2.3 Indonesia split Papua into three new provinces: Highland Papua¹, Central Papua, and South Papua.

Figure 13. Papua's new provinces and their respective economic potential



On the 25 July 2022, Indonesia formed three new provinces in Papua. Their establishment was stipulated under Law Nos. 14, 15 and 16/2022. With this expansion, Indonesia now has 37 provinces.

The GoI expects that this decision could potentially help spur growth within these regions, as the process that must be followed to gain access to funds from the central government has become less bureaucratic.

As of 2021, Central Papua generated the highest GRDP (IDR 81.7 trillion), with its mining and quarry sector contributing IDR 63 trillion.

2.4 Indonesia is gearing up towards the 2024 general election

Figure 14. 2024 general election indicative timeline

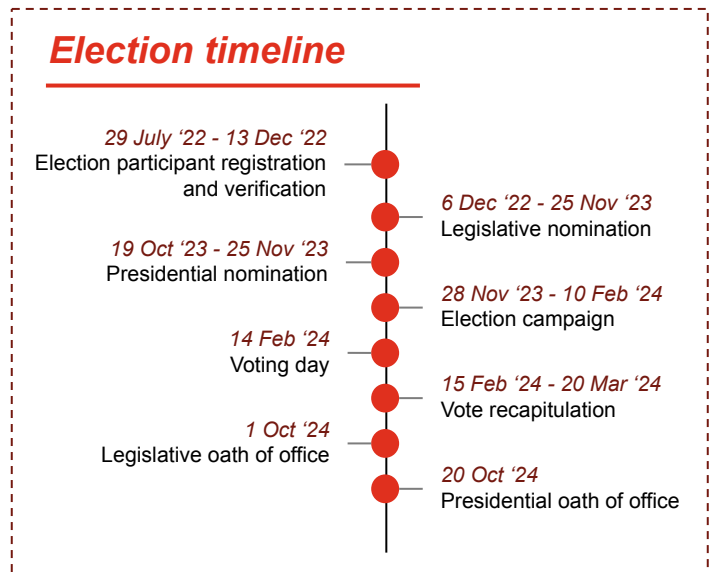
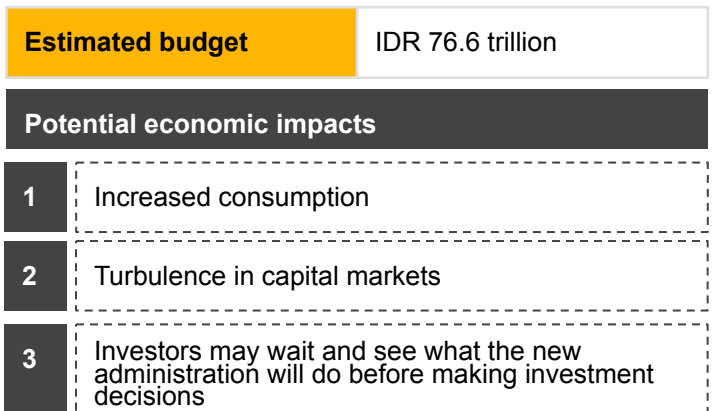


Figure 15. 2024 general election estimated budget and potential economic impacts



The general election would potentially increase national consumption. Political activities, which are likely to increase throughout 2023, would potentially affect household consumption. Household consumption would increase due to public tendency to shop and prepare for the elections.

Political uncertainty is an important factor that could affect stock market performance. The stock market performance is also influenced by political and government activities, including the adoption of new economic policies by recently elected political parties. Investors are likely to become more risk averse during the political year as compared to non-political years.

Note: 1) In Bahasa Indonesia, this is referred to as Papua Pegunungan
 Sources: Cabinet Secretariat of the Republic of Indonesia (2022); Badan Pusat Statistik (2023); General Election Commissions (Komisi Pemilihan Umum) (2022); Bialkowski, Gottschalk, Wisniewski (2008); Ebeke and Ölçer (2013), PwC Analysis (2023)

3. Green Economy

Indonesia's 2030 emission reduction target

First NDC
29% Unconditional commitment
 41% conditional commitment



Enhanced NDC
31.89% Unconditional commitment
 43.2% conditional commitment

In 2022, Indonesia renewed its Nationally Determined Contribution (“NDC”) into Enhanced NDC, whereby it increased its carbon emission reduction commitment from 29% to 31.89% for its unconditional commitment and 41% to 43.2% for its conditional commitment, given international support.

Indonesia has taken several measures in realizing its NDC. For example, it released the Low Carbon Development Indonesia (“LCDI”) by the National Development Planning Agency (“Bappenas”) in October 2017. It is an initiative that aims to preserve economic and social growth through low carbon development and minimization of natural resource exploitation.

LCDI consists of policy recommendations with their respective indicators and targets for in various sectors. It can generally be grouped into: 1) Commitment on forest protection; 2) Commitment on renewable energy; 3) Measures for increased land productivity; and 4) Energy efficiency and waste production.

Several pilot LCDI projects have been implemented with stakeholders from the central and local government and private sectors. One of them is a project to utilise a former mining land as a mangrove tourism park in efforts to rehabilitate ecosystems and carbon sequestration. It was located in Bangka Island and involved Yayasan Terumbu Karang Indonesia (“Terangi”) as the implementing partner. This project was able to reduce emissions by 220,200 tCO₂/year, and on top of that, members of the forest community received IDR 2,000,000 per household per month in additional income.

Indonesia's more recent milestones include the multinational coalition of public and private institutions that have pledged USD 20 billion to support Indonesia's energy transition under the umbrella of the Just Energy Transition Partnership (“JETP”).

Looking ahead, there are several key drivers that are pertinent to Indonesia's green economy development (See Figure 16), which will be explained in the following sections of this chapter.

Figure 16. Indonesia's future green development

Key drivers of Indonesia's green economy development

- 1 National Energy Grand Strategy (“GSEN”) to replace General National Energy Plan (“RUEN”)
- 2 Carbon cap-and-tax and carbon cap-and-trade to begin implementation in the power sector
- 3 Pilot Coal-fired Power Plant (“CFPP”) early retirement
- 4 Incentives to replace internal combustion engine (“ICE”) vehicles with electric vehicles (“EVs”)
- 5 Hydrogen development in addition to development of other renewables

3.1 RUEN and GSEN Progress

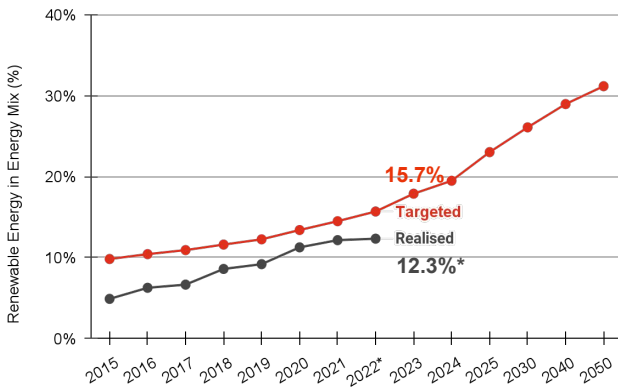
Indonesia has shown a growing trend in renewable energy usage since 2015. The share of renewable energy in the national energy mix had increased from 4.9% in 2015 to 12.3% in 2022.

The GoI developed RUEN in 2017, which set targets for the renewable energy share of the national energy mix for 2015-2050. Under RUEN, Indonesia's renewable energy share is targeted to get to 23% by 2025 and 31% by 2050.

However, for all years up to and including 2022, Indonesia has been unable to reach its renewable energy targets (See Figure 17). As of 2022, it was about 3.4 percentage points behind its target for the year (12.3% instead of 15.7%).

3. Green Economy

Figure 17. Targeted and Realised Renewable Energy Share in National Energy Mix (%)



Source: Ministry of Energy and Mineral Resources (2023)

During the 2022 G20 Summit, Indonesia announced its commitment to reach Net Zero Emission by 2060 at the latest. To reflect this new commitment, the GoI has announced the GSEN, which will replace the RUEN. The GSEN is said to target 100% of renewable energy share in the national energy mix by 2060 with 587 Gigawatt (“GW”) capacity.

3.2 Carbon Cap-and-Tax and Cap-and-Trade

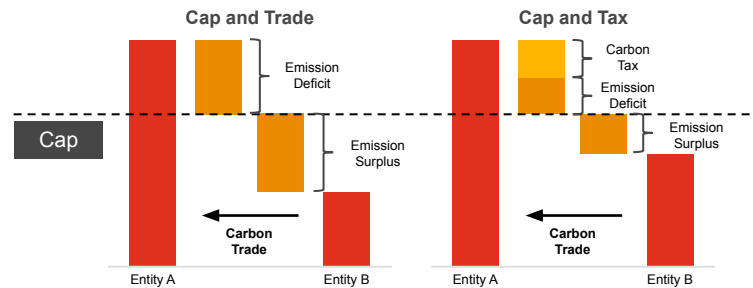
Indonesia’s hybrid carbon cap and trade and cap and tax policy is back on track. Initially, this policy was supposed to began implementation in July 2022, but it was then postponed to 2025 due to global uncertainty. However, during the same year, the Ministry of Environment and Forestry (“MoEF”) issued Ministerial Regulation No 21/2022 that detailed general provisions pertaining to carbon trading, carbon offsetting, carbon cap, and carbon tax.

In essence, relevant ministries would develop a sectoral carbon cap (i.e. “*Persetujuan Teknis Batas Atas Emisi*” - “PTBAE”) that will be used as the baseline of determining the carbon cap for individual entities (i.e. PTBAE *Pelaku Usaha* - “PTBAE-PU”). To meet the limits set by the carbon cap, entities can engage in trading carbon allowances with other entities in the same sector and/or carbon offsetting activities that are certified by MoEF. Remaining discrepancies between an entity’s carbon allowances and offset certifications with the carbon cap would then be charged with carbon tax (See Figure 18).

Note: * Provisional data for 2022

Sources: National Energy Council (2022), Ministry of Environment and Forestry (2022), Ministry of Energy and Mineral Resources (2022)

Figure 18. Illustration of the hybrid cap-and-tax and cap-and-trade policy



The Minister of Energy and Mineral Resources (“MoEMR”) have also issued Ministerial Regulation No. 16/2022, which details the provisions of how these initiatives are to be implemented in the power sector. This is planned to be broken down into three phases, with phase one set for 2023-2024, starting with coal-fired power plants (“CFPP”).

The regulation also specifies the sectoral carbon cap for the power sector, which is broken down into several levels based on size and type of CFPP (See Figure 19).

Figure 19. CFPP Carbon Cap by type and size

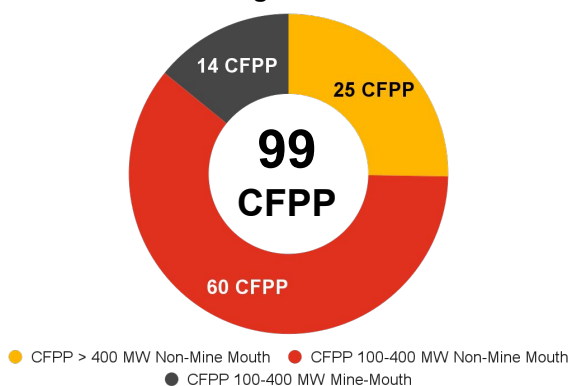
CFPP Non-MM / MM 25 MW to ≤ 100 MW	1.29 tCO ₂ /MWh
CFPP MM 25 > 100 MW	1.09 tCO ₂ /MWh
CFPP non-MM 100 to ≤ 400 MW	1.09 tCO ₂ /MWh
CFPP non-MM > 400 MW	0.9 tCO ₂ /MWh

In regards to carbon tax, the Harmonisation of Tax Regulations Law (i.e. “*Harmonisasi Peraturan Perpajakan*” or “the HPP Law”) stated that the carbon tax rate will be set equivalent or higher than the market rate of carbon price, with USD 2 per tCO₂ being the price floor. Further details on this matter is subject to ministerial regulations from the Ministry of Finance that is still being developed.

3. Green Economy

In February 2023, the government officially launched carbon trading in the power sector. 99 CFPPs are expected to participate, which represents 33.6 GW installed CFPP capacity (86%). Figure 20 provides the breakdown of the target participants by type and installed capacity.

Figure 20. Potential CFPPs to partake in power sector carbon trading in 2023



3.3 Pilot CFPP Early Retirement Plan

Indonesia will no longer add more CFPPs beyond 2030. This is part of Indonesia’s broader efforts to decarbonise its economy. Currently, Indonesia has begun exploring opportunities for the early retirement of its existing CFPPs.

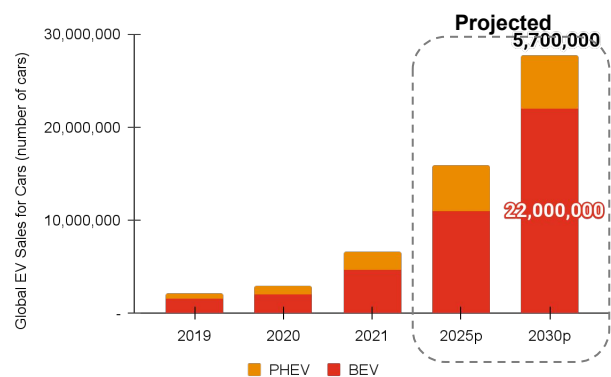
MoEMR had listed 33 CFPPs for early retirement starting in 2030. During the COP 27 conference, PLN, Indonesia’s state-owned energy corporation, announced this early retirement plan as part of their commitments to realise Indonesia’s Net Zero Emission agenda. As of November 2022, 3 out of the 33 CFPPs had been identified for the early retirement list, namely: PLTU Cirebon-1, PLTU Pelabuhan Ratu, PLTU Paiton. All of these three CFPPs are located in the Java Island.

PLN and PT Bukit Asam (“**PTBA**”) had signed a Principle Framework Agreement for PLTU Pelabuhan Ratu’s early retirement. The plan was to have PLTU Pelabuhan Ratu acquired by PTBA from PLN. Afterwards, the operational period of the PLTU will be shortened to 15 years, compared to the original period of 24 years. However, as per 17 February 2023, the acquisition of PLTU Pelabuhan Ratu had not yet occurred, as PTBA was still undergoing its due diligence for the acquisition.

3.4 EV Industry Development

The GoI seeks to capitalise on the growing popularity of EVs. EV sales are expected to grow rapidly over the next few years, which is driven by its growing global popularity. This is expected for both plug-in electric hybrid vehicles (“**PEHVs**”) and battery electric vehicles (“**BEVs**”). Within four years, global EV sales for cars are projected to be 2.5 times greater than in 2021, which would be equivalent to 140% growth.

Figure 21. Global EV Sales Projection for Cars



The progress towards the integration of EV usage into Indonesia’s transportation sector can be seen by the increasing number of EVs among ride-hailing services. As of July 2022, Grab Indonesia claimed that they have 8,500 EVs operating in eight Indonesian provinces. Gojek Indonesia targeted 5,000 EVs to be operational in 2022.

The GoI had already developed several policies to support the EV purchases. For instance, the GoI is planning to provide IDR 7 million worth of subsidies for EV motorcycle purchases, as well as a 10% tax reduction for EV car purchases. These policies are set to be effective starting March 2023.

On the infrastructure end, as of December 2022, PLN had developed 570 EV charging stations (*Stasiun Pengisian Kendaraan Listrik Umum* “**SPKLU**”). 88% of them are located in Java-Bali island, followed by 5.6% in Sumatra, and the rest spread across other islands.

Aside from being a demonstration of Indonesia’s commitment in reducing global carbon emissions, these incentive policies also aim to support demand for Indonesia’s abundant nickel deposit - an integral component for EV batteries, reduce fiscal burdens from fuel subsidy, and induce EV producers to accelerate their investment realization in Indonesia.

Sources: PLN (2022), CNBC Indonesia (2023), International Energy Agency (2022), Tempo (2022), IDX Channel (2022), Kompas (2023), Ministry of Industry (2022)

3. Green Economy

3.5 Hydrogen Potential

Hydrogen has a wide range of applications, from refining oil to petrochemicals to steel manufacturing. Hydrogen in its purest form can be used as a raw material for industrial processes. Hydrogen can also be combined with other inputs to produce hydrogen-based fuels and feedstocks, primarily feedstock for the chemical and refining industries. In the chemical industry, hydrogen is mostly used as feedstock to produce ammonia and methanol, while in a refinery, hydrogen is used to process crude oil.

Hydrogen can be a feasible energy alternative for large-scale transportation such as long-distance trucks and aviation, as opposed to batteries in EVs that are more suited for small-scale transportation. Hydrogen can also be used to partially substitute natural gas to provide heat for industrial processes, including those of the steel industry. Hydrogen's use cases in different industries will continue to evolve.

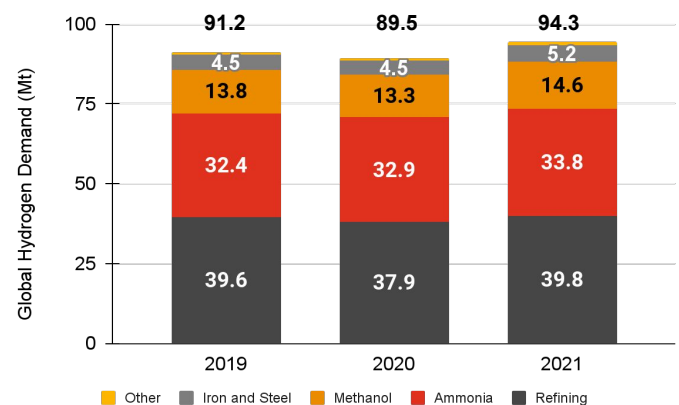
There are three main ways to generate hydrogen, represented by the colors gray, blue, and green.

- **Grey:** The most common process to produce hydrogen is to use either natural gas or coal as feedstock that reacts with steam at high temperatures and pressures to produce synthesis gas, which consists primarily of hydrogen and carbon monoxide
- **Blue:** The second-most-common process, blue hydrogen, relies on the same basic processes as gray hydrogen, but it traps up to 90% of the greenhouse gas emissions through carbon-capture technology.
- **Green:** green hydrogen, uses renewable energy to power the electrolysis that splits water molecules into hydrogen and oxygen. Electrolysis requires energy, which would come from lower-cost renewable sources to make this form of hydrogen "green."

Advances in electrolysis technology and the falling cost of renewable energy are enabling the mass production of green hydrogen globally.

Globally, oil refineries are the largest users of hydrogen. The demand for hydrogen in refineries may increase as pollutant regulations continue to tighten (e.g., as the permitted amount of sulphur in oil products continues to decrease). Global demand for ammonia and methanol is expected to grow by up to four times due to their increasing use as fuels and economic growth in developing countries (through growing agriculture demand). As seen in the figure below, the ammonia and methanol sectors together account for almost half of the demand for hydrogen for the period from 2019 to 2021.

Figure 22. Global Hydrogen Demand by Sector (Million tonnes)



Source: IEA (2019-2021), Global hydrogen demand by sector in the Net Zero Scenario, 2019-2030

PLN and Mitsubishi Heavy Industries ("MHI") has signed a Memorandum of Understanding ("MoU") in November 2022 to begin three feasibility studies on co-firing power plants.¹ The first feasibility study is a technical and economic assessment of co-firing power plant with 100% biomass at Suralaya CFPP unit 1-4 in Cilegon, Banten. Stages from the biomass supply chain, handling, storage, transport and boiler modification will be assessed in the study.

The second feasibility study will assess co-firing power plant with ammonia and take place at Suralaya CFPP unit 5-7. It will assess the potential of blue ammonia supply chain in production and transportation from the ammonia plant, along with the co-firing technology application.

The third feasibility study will assess hydrogen co-firing power plant in an M701F gas turbine managed by PT PLN Indonesia Power. It is located in Tanjung Priok gas turbine combined cycle ("GTCC") facility in Jakarta.

Note: 1) Co-firing refers to the incorporation of a second material to partially substitute for coal during the combustion process of energy production. The reduction of coal usage in the co-firing power plants can reduce the GHG emitted, as compared to coal-firing power plants. Sources: International Energy Agency (2022), Institute for Essential Services Reform (2022), Mitsubishi Heavy Industries (2022), Ministry of Energy and Mineral Resources (2022), Tempo (2022)

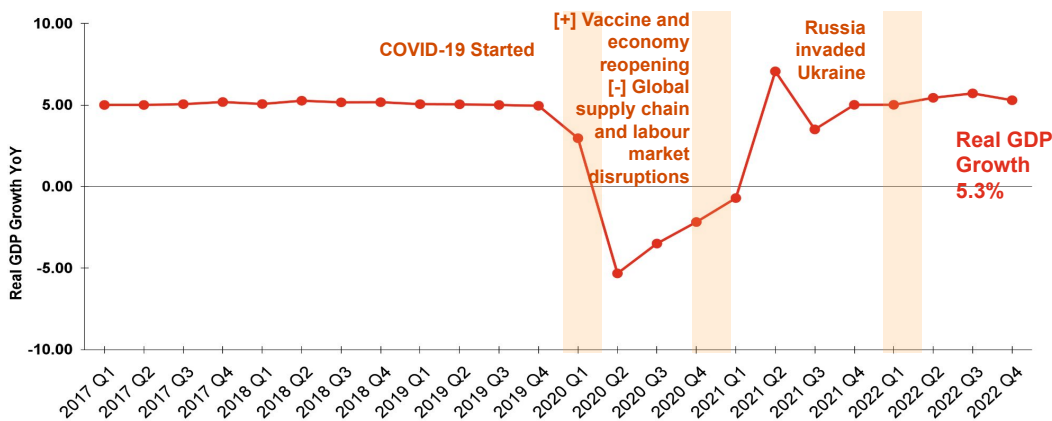
4. Gross Domestic Product

Economic recovery and growth were gaining traction throughout 2022, supported by strong export, investment and household spending growth. However, downside risks such as weak global demand, capital outflow, currency pressures and tight global financial conditions could potentially hinder growth momentum over the next four years.

4.1. Indonesia's Economic Growth

Amid global uncertainty, the Indonesian economy continued to grow above a 5% rate throughout 2022. The Indonesian economy has expanded in 2022, after two years of fluctuations due to the pandemic and supply chain disruption. Real GDP growth has recovered from 3.7% in 2021 to 5.3% in 2022. The growth in 2022 has recovered to the pre-pandemic level of 5%.

Figure 23. Indonesia's Historical Real GDP Growth (%YoY)¹



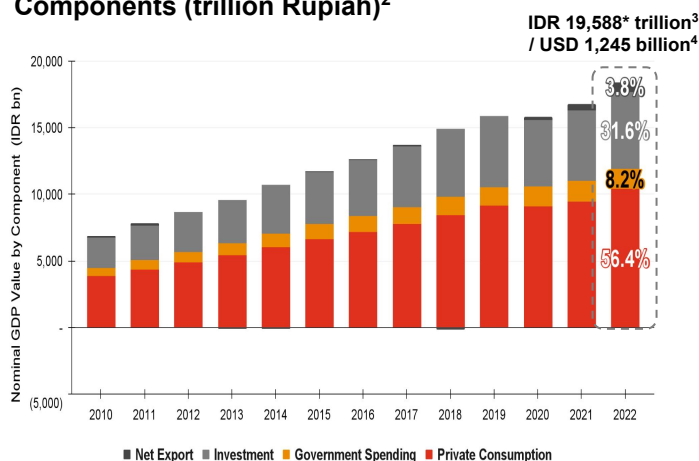
Net export contributed **4.3%** to national GDP in Q4 2022, in nominal terms²

Net exports grew by **+72%** in nominal terms from Q4 2021 to Q4 2022²

Source: PwC Global Economy Watch (2023)

In nominal terms, Indonesia's GDP is still dominated by private consumption. The share has remained consistent throughout the last 12 years. Private consumption, government spending, investment and net exports contributed 56.4%, 8.2%, 31.6% and 3.8% of total GDP, respectively, in nominal terms in 2022.

Figure 24. Breakdown of Indonesia's Nominal GDP Components (trillion Rupiah)²



The economic expansion in 2022 was supported by strong export, investment and household spending growth. In nominal terms, private consumption, government spending, investment, and net exports have grown by 10.0%, -3.3%, 9.1% and 53.6%, respectively, in 2022. Net exports contributed the most to economic growth in 2022. The sudden increase in commodity prices that resulted from the Ukraine war has increased the value of Indonesia's palm oil and coal exports, thereby strengthening the country's current account balance. In addition, the drop in COVID-19 cases and successful vaccination programme throughout 2022 have lifted the mobility restrictions in Indonesia. As a result, household consumption steadily increased throughout 2022.

Notes: 1) Real GDP is seasonally adjusted., 2) Household expenditure and expenditure of non-profit organisations serving households are combined to become the private consumption component, while gross fixed capital formation and inventory changes are combined to become the investment component, 3) Total GDP value included the statistical discrepancy between GDP value by expenditure approach and by income approach, 4) Conversion to USD uses the Bank Indonesia middle exchange rate listed on 30 December, 2022 of IDR 15,731/USD.

Source: Badan Pusat Statistik (2023)

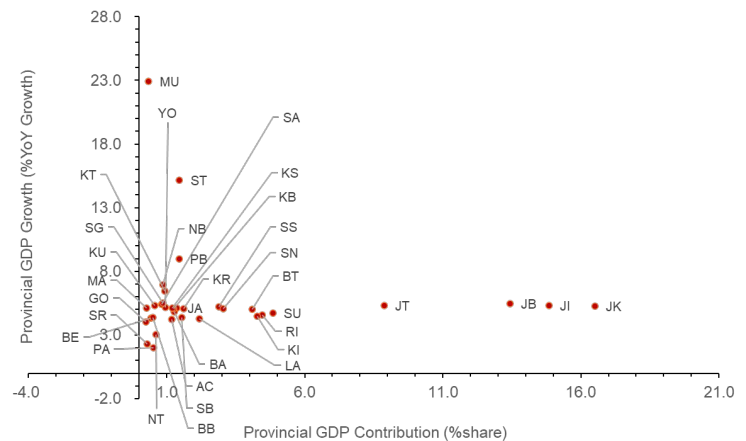
4. Gross Domestic Product

4.2 Gross Regional Domestic Product ("GRDP")

Disparity between regions remains a concern to address. Java Island contributed the most to the Indonesian economy; The total GDP combined for all Javanese provinces accounted for 57% of national GDP in 2022. At the provincial level, Jakarta remained the largest contributor to the Indonesian economy; it accounted for 16% of national GDP in 2022, followed by East Java (15%), and West Java (13%). Meanwhile, North Maluku grew the most, with a yearly growth of 23% in 2022, reflecting the significant impact of the rebound from the pandemic.

Labels: AC = Aceh, SU = North Sumatera, SB = West Sumatera, RI = Riau, JA = Jambi, SS = South Sumatera, BE = Bengkulu, LA = Lampung, BB = Bangka Belitung Island, KR = Riau Island, JK = DKI Jakarta, JB = West Java, JT = Central Java, YO = Yogyakarta, JI = East Java, BT = Banten, BA = Bali, NB = West Nusa Tenggara, NT = East Nusa Tenggara, KB = West Kalimantan, KT = Central Kalimantan, KS = South Kalimantan, KI = East Kalimantan, KU = North Kalimantan, SA = North Sulawesi, ST = Central Sulawesi, SN = South Sulawesi, SG = Southeast Sulawesi, GO = Gorontalo, SR = West Sulawesi, MA = Maluku, MU = North Maluku, PA = West Papua, PB = Papua

Figure 25. Regional Real GDP Contribution vs Regional Real GDP YoY Growth in Q4 2022 (%)

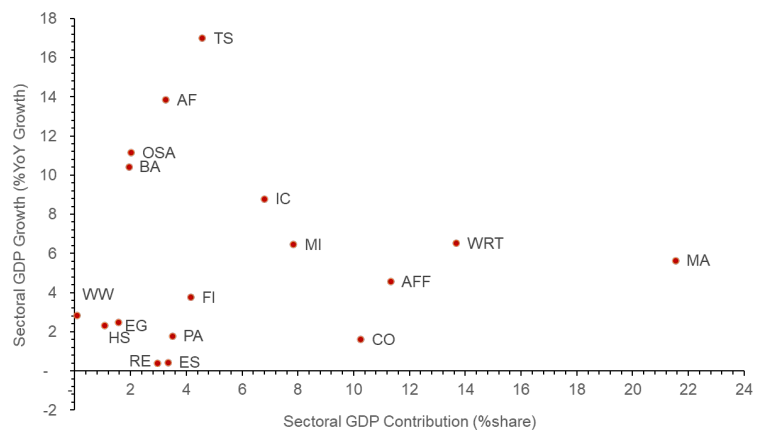


Source: Badan Pusat Statistik (2023)

4.3 Sectoral GDP

All leading sectors, including manufacturing, mining, agriculture, and retail and construction, continued their recovery trend. All sectors grew except for health services, which contracted after the pandemic. The business fields with the highest growth in Q4 2022 were transportation, warehousing, accommodation, and food and beverages. The growth of these fields was driven by increasing mobility and visits by foreign tourists. Key constraints to accelerated growth in these sectors in 2023 include a potentially slow recovery in China of demand for international travel and high airfare costs for long-distance travel.

Figure 26. Sectoral Real GDP Contribution vs Sectoral Real GDP YoY Growth in Q4 2022 (%)



Source: Badan Pusat Statistik (2023)

Labels: AF = Accommodation and Foods & Beverages ("F&Bs"), AFF = Agriculture, Forestry and Fisheries, BA = Business Activities, CO = Construction, ES = Education Services, EG = Electricity and Gas, FI = Finance and Insurance, HS = Health Services, IC = Information and Communication, MA = Manufacturing, MI = Mining, OSA = Other Services Activities, PA = Public Administration, RE = Real Estate, TS = Transportation and Storage, WW = Water and Waste, WRT = Wholesale and Retail Trade

4.4 Short-term growth outlook

Economic growth in 2023 is projected to decline compared to 2022 as inflationary pressure is expected to persist. The Indonesian economy is projected to experience lower growth - from 5.3% in 2022 to 4.8% in 2023. High inflation expectation and aggressive monetary policy tightening, both of which are expected in 2023, would potentially reduce household consumption and erode businesses profitability in 2023. Slowing export growth could potentially arise from slowing global growth, but Indonesia's core commodity exports (i.e. coal, palm oil, and nickel products) would remain in strong demand as long as the Ukraine war drags on. The Indonesian economy is also projected to grow at a 5.1% rate from 2024 and onwards. Downside risks such as weak global demand, capital outflow, currency pressures and tight global financial conditions could potentially hinder growth momentum from 2025 onwards.

Source: PwC Global Economy Watch (2022).

**Indonesia's
short-term
growth
projection**

2023f: 4.8%
2024f: 5.1%
2025-2027f: 5.1%

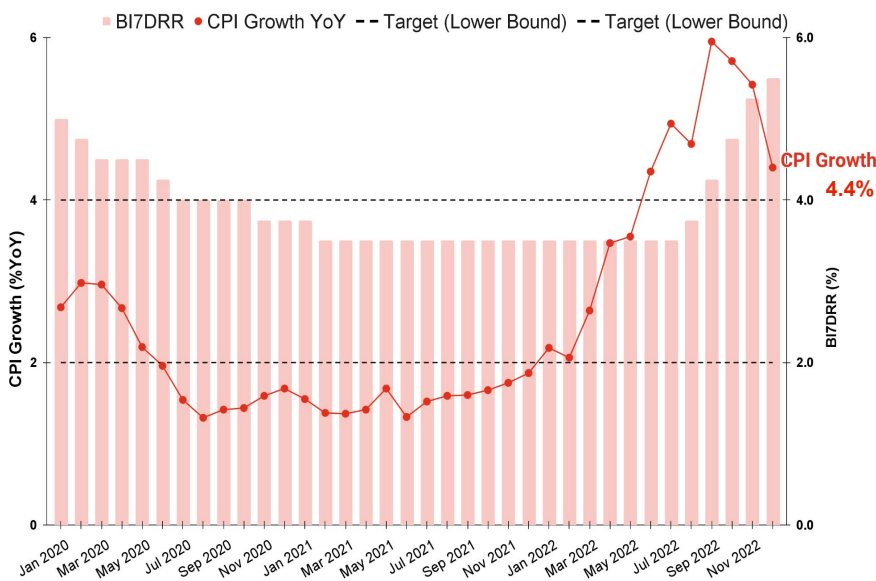
5. Monetary and Financial System

Inflation remained low throughout the pandemic. However, the increases in subsidised petrol and global commodity prices pushed annual inflation up in Q3 2022. Inflation has since cooled down as Bank Indonesia has been switching to a more aggressive monetary policy stance.

5.1 Inflation

Inflation picked up significantly in 2022 after a relatively modest rate in 2020 and 2021. The strong increases in price levels in 2022 were caused by surges in global food and energy prices, post-pandemic growth in domestic consumption and increases in domestic subsidised fuel prices. Indonesia's consumer price index peaked at 6% in September 2022. The administered¹ price component of inflation contributed the most to the price increase, with an estimated increase of 13.3% between Q4 2021 and Q4 2022. Inflation cooled down in Q4 2022 following Bank Indonesia's aggressive monetary policy stance and the slowdown in food inflation. However, inflation remained elevated at 4.4% at the end of 2022; Bank Indonesia failed to meet its target of 2-4%.

Figure 27. Indonesia's Consumer Price Index ("CPI") Growth (%YoY) vs BI Seven Days Repo Rate ("BI7DRR")



Price Component	Q4 2020 - Q4 2021	Q4 2021 - Q4 2022
Core	+1.56	+3.4%
Volatile Food	+3.20%	+5.6%
Administered	+1.79%	+13.3%

Sources: Badan Pusat Statistik (2022), Bank Indonesia (2022)

Bank Indonesia has been switching to a more front-loaded and aggressive policy stance. While many central banks around the world, including the Fed, switched to an aggressive monetary policy stance at the beginning of 2022, Bank Indonesia refrained from raising the policy interest rate until August 2022. Bank Indonesia initially raised the reserve-requirement ratio ("RRR") for commercial banks in the first half of 2022, but eventually increased its policy rate by 25 basis points in September to cope with the inflationary pressure.

Inflation is expected to hold at the upper limit of Bank Indonesia's target of 2-4% in 2023. Inflation is projected to remain elevated in 2023 at 4.0%, irrespective of Bank Indonesia's stance on interest rates. The uncertainty caused by the Ukraine war could make fuel prices unpredictable in 2023 and keep inflation higher for longer.

Indonesia's short-term inflation projection

2023f: 4.0%
2024f: 3.2%
2025-2027f: 3.6%

Note: 1) Administered price component refers to goods which prices are controlled by the government.

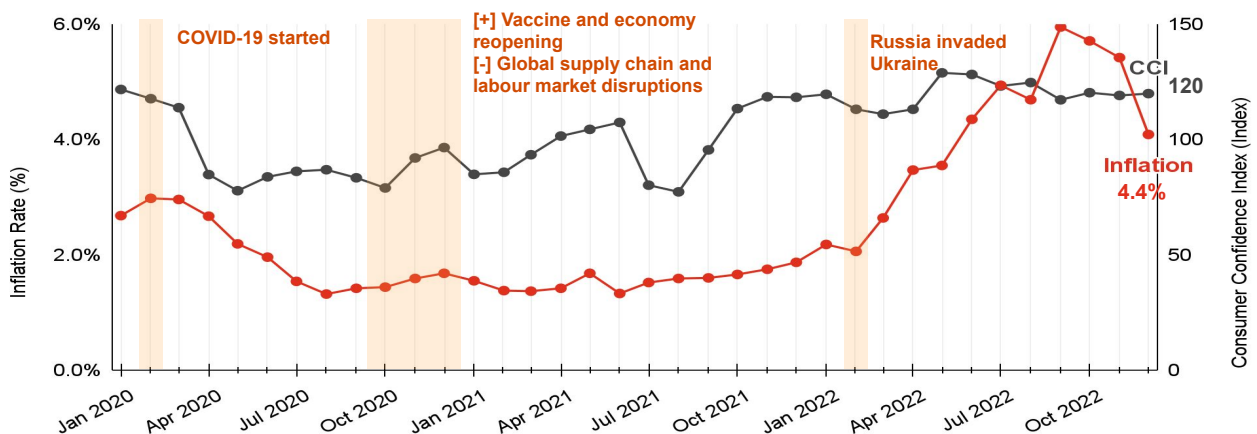
5. Monetary and Financial System

5.2 Consumer Confidence

Consumer confidence in Indonesia has remained stable despite rising inflation. The Consumer Confidence Index (“CCI”) has followed a relatively stable trend with a compound annual growth rate (“CAGR”) of 0.02% throughout 2022, in contrast to the spike in inflation in 2022 and the rate of 4.4% seen at the year end.

Furthermore, consumer confidence remained optimistic in 2022 with a CCI value of more than 100 each month and a value of 120 at the year end. This was a turning point from the peak period of Delta-variant COVID-19 cases in July and August 2021 in Indonesia, which caused the CCI to fall under 100, which could be read as pessimistic. The optimism in 2022 may have arisen from the relaxation of restrictions related to COVID-19 as the pandemic became more controllable.

Figure 28. Consumer Confidence Index vs Inflation (%)



Sources: Bank Indonesia (2023), PwC Global Economy Watch (2023)

The stability in CCI. This stability could partially be attributed to the introduction of the BI Seven Day Repo Rate by Bank Indonesia, in 2016, which replaced the more conventional BI Rate. This monetary transmission mechanism can affect money supply within one week, rather than a year as previously. BI has also proactively managed inflation fluctuations by establishing inflation control task forces, both at the national and regional levels, that act based on four pillars. Each task force has the authority to initiate intervention measures based on each region’s inflation drivers. The four pillars for inflation control taskforce are as follows:

- 1) **Price affordability:** Ensuring price stability on both producer and consumer levels, lowering exchange rate volatility, and demand diversification.
- 2) **Supply availability:** Empowering domestic producers (especially food), ensuring export and import flexibility, as well as reinforcing institutions.
- 3) **Smoothness of distribution:** Encouraging interregional trade cooperation and improving trade infrastructures that improves direct and virtual connectivity.
- 4) **Effective communication:** Repairing data quality and strengthening central and regional coordination.

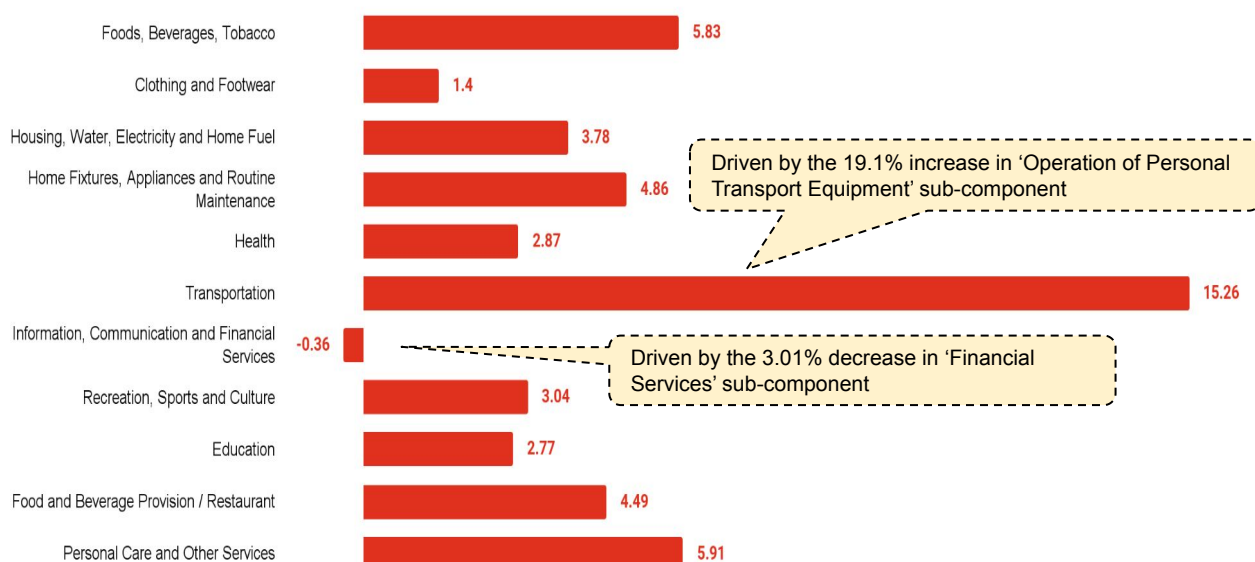
5. Monetary and Financial System

5.3 Inflation Components

The consumer price increase in transportation has surpassed that of primary needs components. This is shown by the 15.3% YoY growth of the Consumer Price Index (“CPI”) for transportation in December 2022, as compared to those for; 1) Food, Beverages, Tobacco, 2) Clothing and Footwear, and 3) Housing, Water, Electricity and Home Fuel with 5.8%, 1.4% and 3.8% YoY increase respectively.

The relatively high growth in CPI for transportation was driven by the 19.1% CPI increase in its subcomponent of ‘Operation of Personal Transport Equipment’. This was influenced by the hikes in Indonesia’s fuel prices as the government reduced some of the subsidies in September 2022, causing the subsidised fuel price to increase by 30.7%¹. This policy was taken as a response to the surge in global energy prices during the first half of 2022.

Figure 39. Consumer Price Index Component Growth in December 2022 (%YoY)



Sources: *Badan Pusat Statistik Indonesia (2023)*

Notes: [1] The price of Pertamina 92, Peralite and Solar (subsidised fuels) increased from Rp. 12,500/litre to Rp. 14,500/litre, from Rp. 7,650/litre to Rp. 10,000/litre and from Rp. 5,150/litre to Rp. 6,800/litre on 3 September 2022, respectively (Pertamina, 2022).

5. Monetary and Financial System

5.4 Loans and Credits

The steady growth of Indonesia's commercial bank loans was hampered by the pandemic. Despite Bank Indonesia's accommodative monetary policy, bank lending activity shrank in 2020 amid the growing uncertainty during the pandemic, which reduced demand for both household and businesses loans. Bank Indonesia and the Financial Service Authority (*Otoritas Jasa Keuangan*/"OJK") intervened in 2020 by giving a stimulus and relaxation on credit (e.g. giving borrower a chance to restructure and/or delay payment). The number of loans has recovered post-pandemic, despite the slow start in 2021.

The number of total loans to households and businesses had increased as of September 2022. Total loans from commercial banks increased by 11% from September 2021 to 2022, reflecting the recovery in consumer confidence in 2022. Household and business loans increased by 9% and 11%, respectively, indicating restored consumption and investment activities in 2022.

Figure 30. Commercial Bank Loans by Segment (IDR trillion, %YoY)

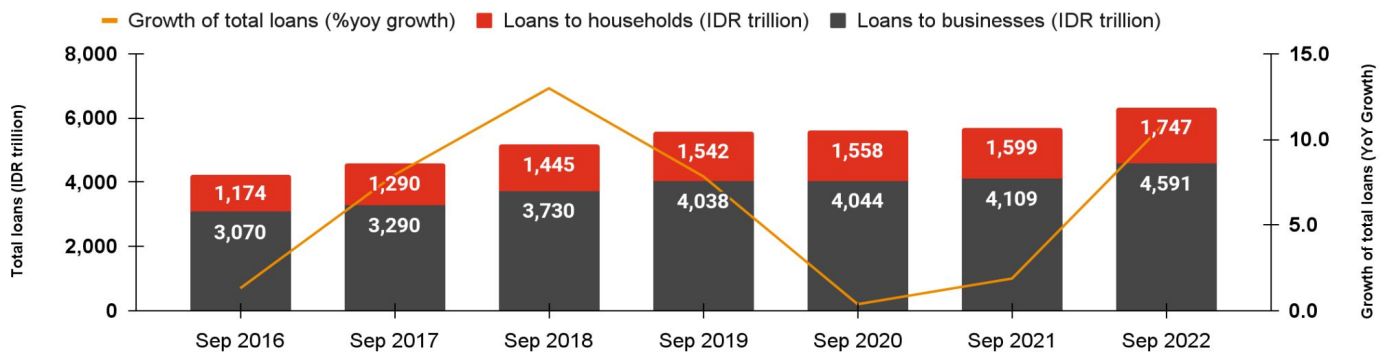
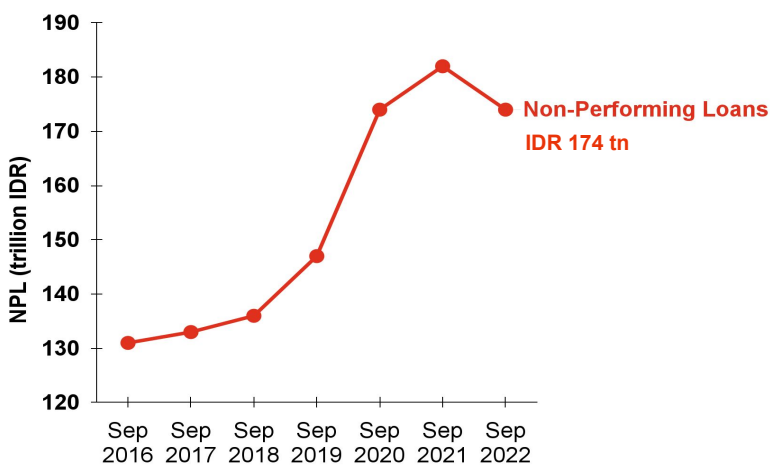


Figure 31. Indonesia's Gross Non-Performing Loans ("NPL") Value (trillion IDR)



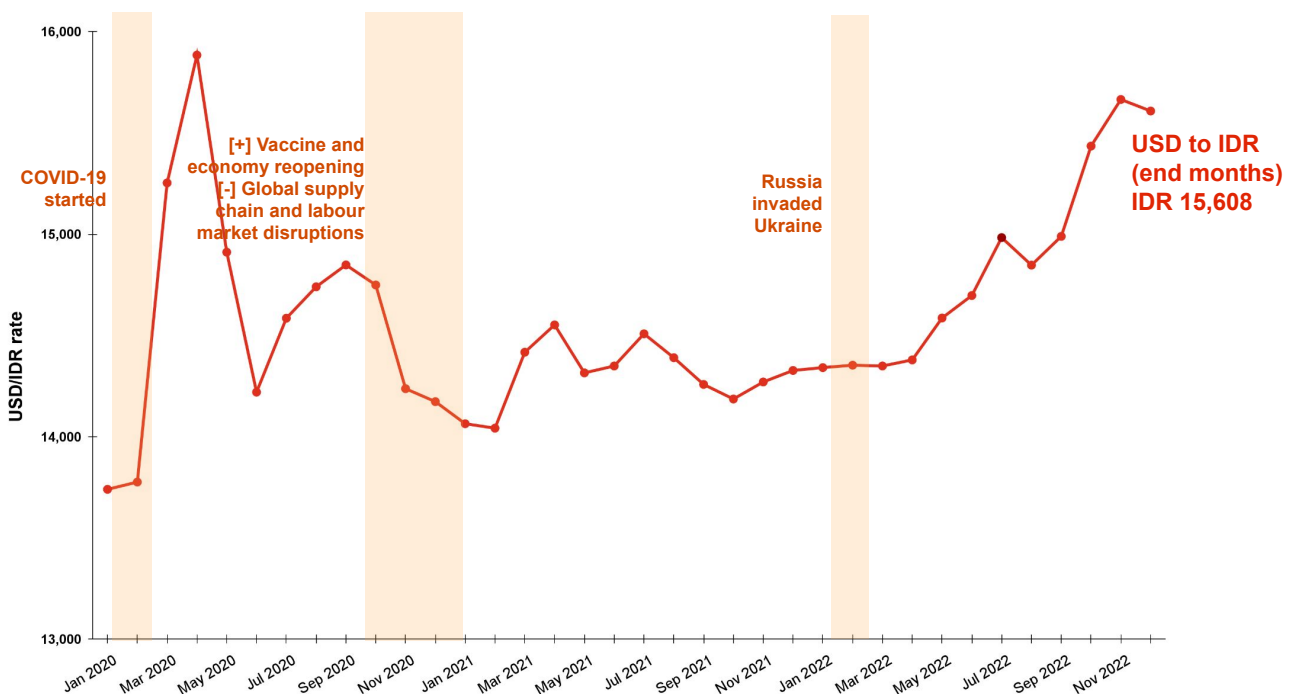
In the midst of the COVID-19 pandemic, the OJK provided a loan restructuring programme for businesses. Although the programme provided relief for borrowers, non-performing loans remained high and continued to grow during the year following the implementation of the programme. The OJK extended its credit restructuring period to March 2024 due to the persistently high non-performing loan figure. Non-performing loans had become more manageable by September 2022, as indicated by the decline in the figure.

5. Monetary and Financial System

5.5 Exchange Rate

The Rupiah depreciated against the US Dollar following the announcement of the first case of COVID-19 in Indonesia, reaching 15,884 USD/IDR in March 2020. At the end of 2020 and throughout 2021, the Rupiah stabilised with the easing of global financial conditions and with support from Bank Indonesia's bonds issuance programme. However, the Ukraine war and ensuing political uncertainty have again triggered the depreciation of the Rupiah as investors have become increasingly risk-averse.

Figure 32. Rupiah Fluctuation Against US Dollar (USD/IDR)



Sources: Badan Pusat Statistik (2023), PwC Global Economy Watch (2023).

The Rupiah began to stabilise against the US Dollar in Q4 2022. In response to improved investor risk sentiment, the pace of the Rupiah's depreciation slowed as of late 2022. The Rupiah has stabilised in the past month, supported by improvements in investors' risk appetites around the world. The rupiah is projected to depreciate in early 2023, conditional on the gradual recovery of the Chinese economy and the stabilisation of global conditions, but the magnitude of the global shock may keep investors away until late 2023 or later.

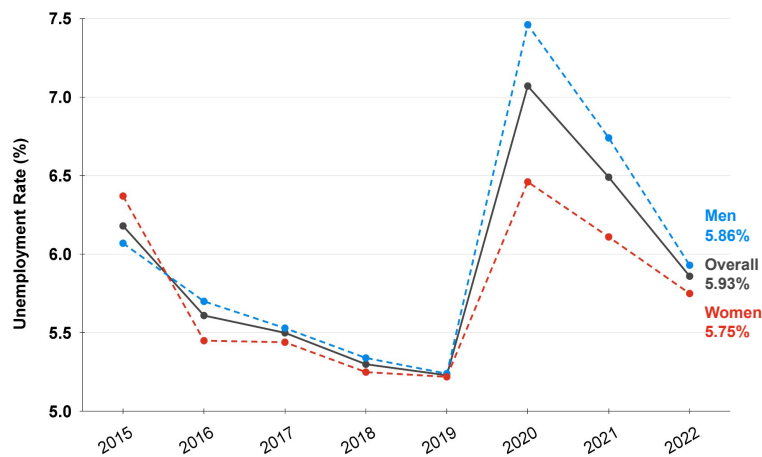
The volatility of financial markets, caused by the growing risk of a deeper global recession, could potentially trigger capital outflows from Indonesia and drive a sharp depreciation of the Rupiah in the long term. These risks include significant monetary policy tightening by major central banks that Bank Indonesia would be unable to match, which would further depress investors' confidence. In either case, Bank Indonesia would have limited room for monetary policy maneuvering to curb inflation.

5. Monetary and Financial System

5.6 Unemployment

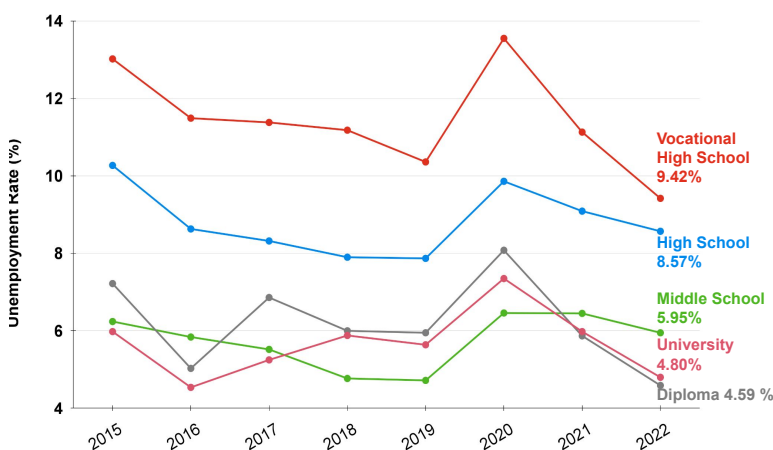
Prior to the spread of COVID-19 in February 2020, Indonesia's unemployment rate¹ had been declining – the national unemployment rate declined from 6.2% in 2015 to 5.2% in 2019. The unemployment rate then steeply increased to 7.0% in 2020, following the large number of jobs that were lost during the early phase of the pandemic.

Figure 33. Indonesia's Unemployment Rate by Gender (%)



Source: Survei Angkatan Kerja Nasional/"Sakernas" (2022)

Figure 34. Indonesia's Unemployment Rate by Education Level (%)



Source: Survei Angkatan Kerja Nasional/"Sakernas" (2022)

The Indonesian labour market began to recover from the pandemic throughout 2021 and 2022. The unemployment rate peaked in 2020 and has been declining ever since. The unemployment rate decreased to 5.9% in 2022 and has not been adversely affected by the Ukraine war. However, the unemployment rate has yet to return to the pre-pandemic level despite the sharp recovery.

The increase in unemployment during the pandemic was more pronounced for male workers. During the pandemic, the unemployment rate surged to 7.4% and 6.4% for men and women, respectively. The rate for each gender has since declined following the overall unemployment trend.

Although workers of all education levels faced unemployment during 2020, the impacts of the pandemic were greater on the less educated, with the increase in unemployment being the most pronounced for vocational high school graduates. Workers with lower levels of education are more often employed in labour-intensive sectors such as manufacturing and construction, where many workers had to stop working during the pandemic due to social restrictions.

The effect of a prolonged shock to the labour market could extend into the long term for unemployed workers. Although the pandemic was initially considered a temporary shock, experts have begun to assess the permanent economic damage (scarring) from this crisis. Workers who have been unemployed for a long time with skills obtained prior to the pandemic may find themselves no longer relevant in the labour market. Alternatively, their skillset may remain relevant but their abilities may have eroded over time. In either case, the chance of the worker securing employment in the future would be reduced.

While the unemployment rate came down quickly over the last two years, the rate will potentially tick up in 2023. With economic growth expected to decline from 5.3% in 2022 to 4.8% in 2023, the labour market is expected to tighten, thereby potentially increasing the unemployment rate.

Notes: 1) Unemployment is a situation where a person is actively looking for a job but is unable to find work. The unemployment rate is estimated by determining the share of the labour force that is unemployed as a percentage of the total number of people in the labour force.

6. Trade

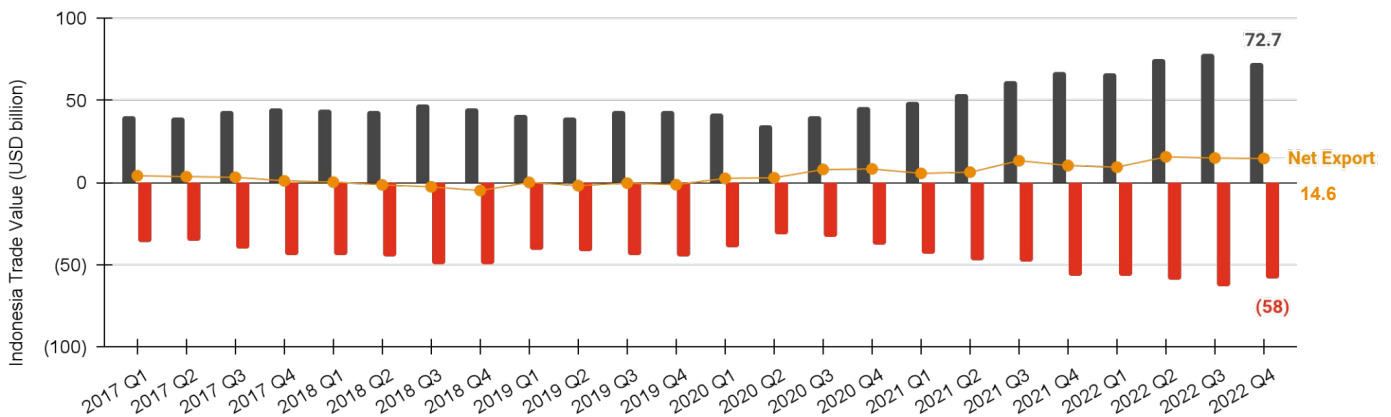
Indonesia has revived its international trade activities while strengthening trade partnerships with other economies. Such measures are expected to provide a cushion against economic uncertainty in 2023.

6.1 Indonesia's International Trade Balance

Indonesia's trade balance was at its peak in 2022 after the trade deficit in 2019. Indonesia has returned to being a net exporter since 2020 and posted a trade surplus of USD 54.5 billion in 2022, standing as the highest trade surplus achieved for several years. It experienced a 41.6% YoY net export or trade surplus growth in Q4 2022. Furthermore, Indonesia had greater total trade value in 2022 as its total trade (export and import) value surpassed the pre-pandemic value; there was a 56.2% increase in nominal value in 2022 from the 2019 level. Indonesia's Ministry of Trade projected a trade surplus of USD 38.3 to 38.5 billion in 2023, which represents a 29.4% to 29.7% decrease to the 2022 trade surplus.

The projected slowdown in trade growth is likely to be induced by the global economic uncertainty and weaker demand expected in 2023. The United States ("US") was Indonesia's second-largest export market in 2022. Given the low economic growth projection of the US in 2023, Indonesia's international trade may potentially be impacted through lower net exports to the US.

Figure 35. Indonesia Trade Value (USD billion)



Source: Badan Pusat Statistik Indonesia (2023)

Figure 36. Indonesia Top 5 Trade Partners (2022)

Export				
China \$65.92B (22.6%)	USA \$28.20B (9.7%)	Japan \$24.85B (8.5%)	India \$23.38B (8.0%)	Malaysia \$15.45B (5.3%)
Import				
China \$67.72B (28.5%)	Singapore \$19.41B (8.2%)	Japan \$17.18B (7.2%)	Malaysia \$12.48B (5.3%)	South Korea \$11.72B (4.9%)

Source: Ministry of Trade (2023), PwC Analysis (2023).

6. Trade

6.2 International Trade Partnership

Indonesia is strengthening its trade partnerships with multiple economies. Among many trade agreements, the Regional Comprehensive Economic Partnership (“RCEP”) has been one of the most highly anticipated agreements. It officially entered into force in Indonesia on 2 January 2023.

RCEP is expected to strengthen the trade partnership between Association of Southeast Asian Nations (“ASEAN”) members, China, South Korea, Japan, Australia and New Zealand. The agreement has several aspects such as tariff elimination for goods, preferential market access for certain goods, simplified customs procedures, and many others. As per 20 December 2022, Indonesia was participating in the following trade agreements, discussions and explorations:

Figure 37. Indonesia’s Existing and Potential Trade Partnerships



Sources: Ministry of Trade (2022), ASEAN (2023)

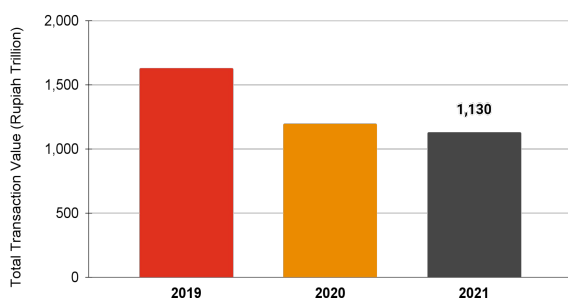
6. Trade

6.3 Indonesia's Regional Trade¹

Indonesia's domestic regional trade transaction value in 2021 did not return to its pre-COVID value from 2019. There was a declining trend in the total transaction value for regional trade in the period from 2019 to 2021 due to the 16.7% CAGR contraction. The total transaction value in 2021 amounted to IDR 1,130 trillion, equivalent to 69.4% of the value in 2019.

The data for regional trade transaction value in 2022 was not yet available as of the date of this report. However, given that private spending in real value reached its highest level at IDR 1,550 trillion in Q2 2022 and decreased only slightly to IDR 1,545 trillion in Q3 2022, it may be possible to see an increasing trend in total transaction value for regional trade in 2022.

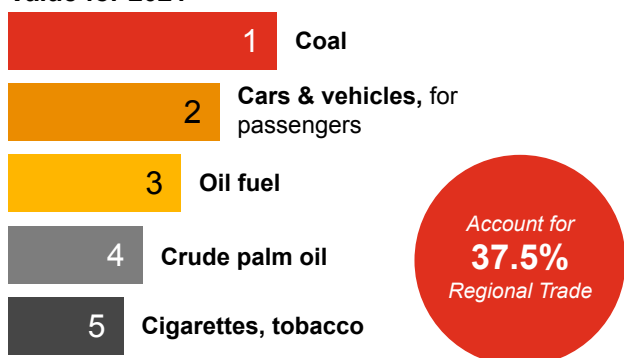
Figure 38. Total Transaction Value in Regional Trade (IDR Trillion)



Source: Badan Pusat Statistik Indonesia (2023)

The top five trade commodities in terms of regional trade value in 2021 were coal (non-agglomerated), cars and vehicles, oil fuel, crude palm oil, and cigarettes and tobacco, which together accounted for 37.5% of the total national transaction value in 2021. The transaction value for coal (non-agglomerated) alone amounted to IDR 227.24 trillion, equivalent to 20.1% of the total regional trade transaction value in 2021.

Figure 39. Top 5 Regional Trade Commodities in Value for 2021



Source: Badan Pusat Statistik Indonesia (2022), PwC Analysis (2023).
 Note: 1) region is defined as either municipalities or regencies in Indonesia.
 This section refers to domestic regional trade / "Perdagangan Antar Wilayah".

The provinces with the top spending and selling values for regional trade in 2021 were predominantly Java provinces. DKI Jakarta was the province with both the highest spending and selling values; they accounted for 18.6% and 23.0% of the total regional trade transaction value, respectively.

Among the top three provinces with the top spending and selling values in 2021, East Kalimantan was the only non-Java province. Its selling value accounted for 18.7% of the total national trade transaction value. Its largest commodity sold in terms of value was coal (non-agglomerated). It was also the province with the highest regional trade surplus value in 2021; this surplus was valued at IDR 187.46 trillion.

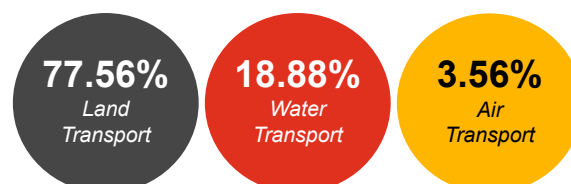
The IKN located in East Kalimantan is currently under development and is expected to welcome its first citizens in 2024. The city might have the potential to induce more inter-regional trade activities in East Kalimantan in the future, especially on the spending side.

Figure 40. Top 3 Spending and Selling Provinces in Regional Trade in 2021

Spending		
DKI Jakarta 210.22 Trillion Rupiah (18.6%)	Central Java 148.21 Trillion Rupiah (13.1%)	East Java 134.54 Trillion Rupiah (11.9%)
Selling		
DKI Jakarta 260.17 Trillion Rupiah (23.0%)	East Kalimantan 211.14 Trillion Rupiah (18.7%)	West Java 136.35 Trillion Rupiah (12.1%)

The majority of regional trade in 2021 was distributed via land transportation. This is supported by data showing that DKI Jakarta, as the top selling province in 2021, made its biggest sales to West Java, Central Java, and East Java, which are all accessible by land transportation.

Figure 41. Regional Trade Transportation Modes in 2021



7. Investment

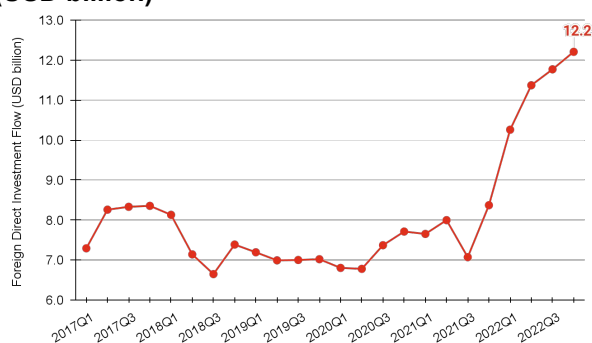
Indonesia's foreign and domestic investments reached their all-time high in 2022. The Job Creation Law, which harmonises government policies from the regional to central levels, might have improved the attractiveness of investing in Indonesia. Sustainable investment, which seeks to balance financial returns with Environmental, Social, and Governance ("ESG") factors, will be the key area to focus on over the next ten years.

7.1 Foreign Direct Investment ("FDI")

FDI flow in Indonesia reached its highest level in Q4 2022, which was mainly investment into downstream industry development in the mining and petrochemical sectors. FDI has been increasing sharply since Q4 2021 and reached its peak in Q4 2022 at USD 12.2 billion with a 45.8% YoY growth rate. The Job Creation Law was signed in 2020 with implementing regulations made in 2021. The implementation period was the same period as the sharp increase in FDI.

The Job Creation Law was developed with the objective of attracting investment and thus may have potentially contributed to the FDI increase. However, given the law's relatively recent implementation, investors might still be in the transition phase. Hence, the optimum outcome in investment may not be reflected yet; such an outcome will only be seen when investors have fully adjusted to the new regulation.

Figure 42. Indonesia Foreign Direct Investment Flow (USD billion)



Source: Ministry of Investment (2023)

In 2022, the Base Metals and Metal Goods Industry was the top FDI sector in terms of value, with 24% of total FDI value. This finding further continues the trend of manufacturing as Indonesia's pioneering sector for foreign investment.

Figure 43. Top FDI Sectors by Value in Indonesia and Their Value Contributions (2022)



Source: Ministry of Investment (2023), PwC Analysis (2023), Straits Times (2022)

This increasing trend may potentially be emphasised by the export ban of nickel ore that has been enforced since January 2020 as part of the Gol's attempts to drive investment to the downstream domestic nickel industry.

Indonesia received the highest FDI flow from Singapore. This flow totalled USD 13.3 billion, equivalent to 29.1% of Indonesia's total FDI value in 2022. Singapore has regularly been among the top FDI sources in Indonesia over the past years. Singapore and Indonesia signed an MoU on energy cooperation and an MoU on bilateral partnership on green and circular economy development in January 2022. These agreements were expected to strengthen their partnership in infrastructure financing for low-carbon energy and electricity trading. Globally, sustainable investment has been a highlight and shows positive prospects, as seen by the 165% annual growth of international project finance deals (in terms of value) for renewable energy in developing economies in 2021.

Figure 44. Top 5 FDI Sources in Indonesia (2022)

FDI				
Singapore	China	Hongkong	Japan	Malaysia
\$13.28B	\$8.23B	\$5.51B	\$3.56B	\$3.34B
(29.1%)	(18.0%)	(12.1%)	(7.8%)	(7.3%)

Central Sulawesi received the highest FDI value in 2022 at USD 7.49 billion, equivalent to 16.4% of Indonesia's total FDI value. This was primarily driven by strong investment to Base Metals and Metal Goods smelters in Central Sulawesi.

Figure 45. Top 5 Provinces as FDI Receivers in Indonesia (2022)

FDI				
Central Sulawesi	West Java	North Maluku	DKI Jakarta	Banten
\$7.49B	\$6.53B	\$4.49B	\$3.74B	\$3.41B
(16.4%)	(14.3%)	(9.8%)	(8.2%)	(7.5%)

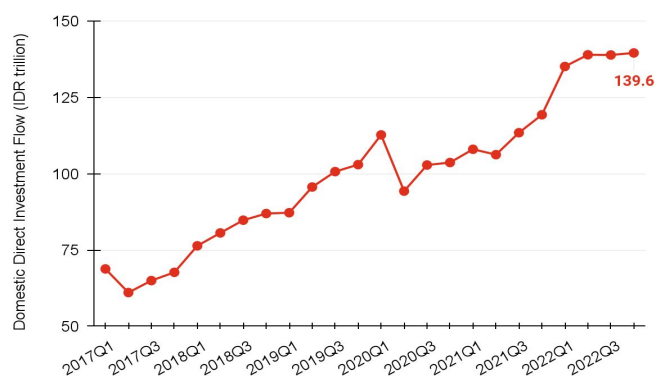
7. Investment

7.2 Domestic Direct Investment (“DDI”)

DDI remained relatively stable throughout 2022 compared to the years before. The trend of DDI reached a plateau in 2022 following its steady increase in 2021. It reached its peak in 2022 Q4 at IDR 139.6 trillion with a 17.0% YoY growth rate.

As was the case with FDI, the Job Creation Law may have potentially contributed to the increase throughout 2021 and 2022. The Job Creation Law was developed to attract both foreign and domestic investment by easing business licensing procedures, relaxing investment restrictions and empowering micro, small and medium enterprises (“MSMEs”), and eased a backlog in licensing applications, among many other initiatives.

Figure 46. Indonesia Domestic Direct Investment Flow (IDR trillion)



Source: Ministry of Investment (2023)

Transportation, Warehousing and Telecommunications was the sector that received the highest value of DDI flow in 2022 at IDR 75.1 trillion, which was equivalent to 13.6% of the total DDI flow value in 2022. When Indonesia was under the national and regional physical mobility restrictions as part of attempts to control the COVID-19 pandemic, the telecommunications sector became one of the most thriving sectors.

Figure 47. Top DDI Sectors by Value in Indonesia and Their Value Contributions (2022)



Source: Ministry of Investment (2023), PwC Analysis (2023).

The mobility restrictions meant that many people resorted to online interactions, both for work and social purposes. Despite the easing of mobility restrictions, reliance on technology and telecommunications was still strong in Indonesia in 2022. Several businesses adopted flexible working arrangements for their employees in 2022, allowing them to work from anywhere with proper technology and telecommunications support. The flexible working arrangements are likely to continue after the pandemic ends.

In addition, the transportation sector improved in 2022, especially for air transport passengers. This was driven by increased mobility in 2022 as travelling restrictions in many destination areas were relaxed, both internationally and domestically.

DKI Jakarta was the province with the highest value of DDI received in 2022 at IDR 89.2 trillion, which was equivalent to 16.1% of total DDI value. The construction sector had the highest DDI value in Jakarta; it was equivalent to 21% of DKI Jakarta’s total DDI in 2022. This position is expected to be maintained in the near future as DKI Jakarta will remain Indonesia’s central commercial and business hub even after the capital city moves to IKN.

Figure 48. Top 5 Provinces as DDI Receivers in Indonesia (2022)

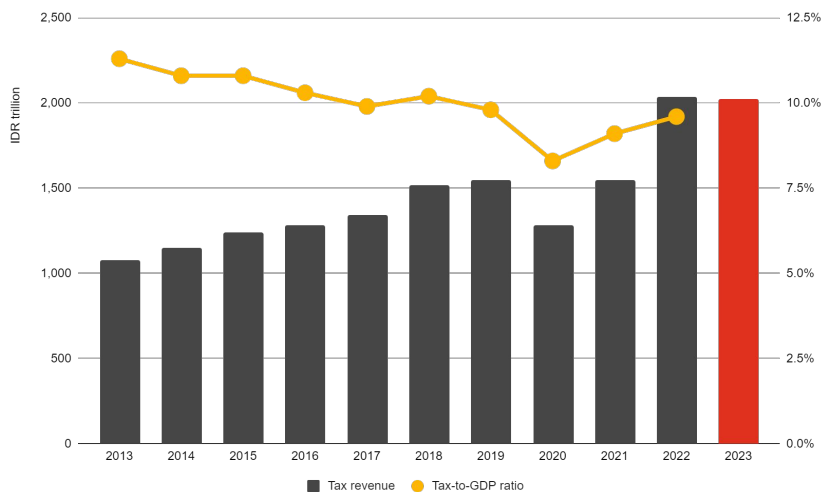


8. Government

The Government of Indonesia's current priority is to maintain purchasing power through smart subsidies and concurrently keep its budget deficits below 3% of GDP. It seeks to do this primarily by increasing tax and non-tax revenue and improving spending efficiency.

8.1 Indonesia's tax-to-GDP ratio still underperforms compared to its ASEAN-5 peers

Figure 49. Government Revenue, 2019-2023, IDR trillion¹



Over the past decade, Indonesia has consistently had the lowest tax-to-GDP ratio among its ASEAN-5 peers (Singapore, Malaysia, Thailand and the Philippines). Indonesia's tax-to-GDP ratio fell from 9.8% in 2019 to 8.3% in 2020. However, in 2022 it was able to rise above pre-pandemic levels to 10.4%.

The Gol was able to collect IDR 1,717 trillion in 2022, the highest revenue in the last four years. Income taxes (38%) and VAT (26%) make up the majority of this achievement, followed by non-tax revenue from natural resources (10.2%) and excise (8.7%).

The Harmonisation of Tax Regulations Law introduced new revenue potential for the government. For example, the adjustment of VAT rate from 10% to 11% that has been effective since April 2022. This has facilitated a 13.7% growth between 2021-2022 on top of the commodity price hikes and Indonesia's economic recovery during that time.

Another noteworthy achievement is that as of 30 June 2022, the voluntary disclosure programme (i.e. Tax Amnesty Volume II) was able to rack up IDR 61 trillion in taxes from the disclosure of IDR 595 trillion worth of net wealth. Through the recently introduced tax on transactions in the digital economy, the Gol was also able to collect IDR 10 trillion from trade through electronic services and IDR 246 billion and IDR 210 billion from crypto transactions and fintech and peer-to-peer lending transactions, respectively.

Government revenue (realised), 2022, IDR trillion

Income Tax IDR 998 tn (38.01%)	VAT IDR 688 tn (26.18%)
Excise IDR 227 tn (8.64%)	Customs IDR 91 tn (3.46%)
Natural resources IDR 269 tn (10.23%)	Public services IDR 83 tn (3.15%)

Sources: Ministry of Finance (2022), World Bank (accessed 2023), PwC Analysis (2023).

Notes: [1] The 2019-2022 figures are based on realised revenue, whereas the 2023 figure is based on the planned budget.

8. Government

8.2 The Government can leverage 2022's budget surplus ("Sisa Lebih Perhitungan Anggaran" - SiLPA) to support 2023's deficit spending

Indonesia's budget deficit has returned to below 3%. To support pandemic recovery efforts, Indonesia's budget deficit-to-GDP ratio widened from 2.2% in 2019 to 6.14% in 2020 (See Figure 44), above the 3% threshold as determined under Law No 17 2003. Since then, Indonesia has been able to lower it to 4.57% in 2021, and subsequently 2.38%. For the 2023 state budget, the government has set the budget deficit at IDR 598.2 trillion or 2.84% of the GDP based on the Ministry of Finance's assumption that the economy would grow by 5.3% in 2023.

Figure 50. Budget Deficit and Deficit-to-GDP Ratio, 2019-2023 (IDR trillion)¹

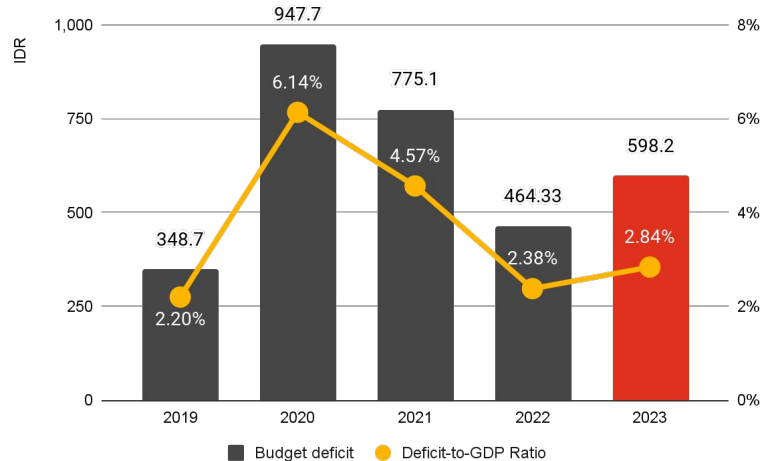
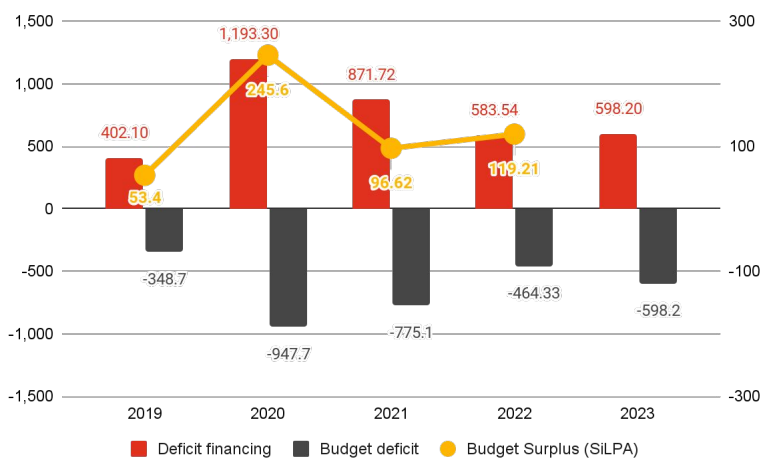


Figure 51. Deficit Financing, Budget Deficit, and Budget Surplus (SiLPA), 2019-2023 (IDR trillion)¹



2022's budget surplus ("Sisa Lebih Perhitungan Anggaran" - SiLPA) could support the government in weathering the uncertainties of 2023. The budget deficit in 2022 was lower than anticipated, which was supported by the recovery of government revenue and the optimization of deficit financing. As a result, Indonesia's SiLPA for that year was recorded at IDR 119.21 trillion. For 2023, Indonesia is planning to issue IDR 598.2 trillion of government debt, IDR 176 trillion of which will be used for investing in Trans-Sumatra Toll Road, endowment funds for Islamic boarding schools, and disaster pooling funds (See Figure 46) among other projects.

Figure 52. 2023 Budget Deficit Financing Allocation for Investment

Infrastructure - IDR 85.3 tn

- Trans-Sumatra Toll Road
- Power infrastructure (transmission, substations, and rural electricity)
- Land procurement
- Social housing

Education - IDR 20 tn

Improve access to education and continuation of education development, including endowment funds for Islamic boarding schools and research & development

Others - IDR 70.6 tn

Among others, to:

- Develop disaster pooling funds⁴
- Preserve the environment
- Strengthen Indonesia's international relations

Sources: Ministry of Finance (2022)

Notes: [1] The 2019-2022 figures are based on realised spending, whereas the 2023 figure is based on the planned budget; [2] Assuming ICP 105, 14,700 IDR/USD exchange rate; [3] RON 92-equivalent price from other retailers. [4] Disaster pooling funds is a scheme for collecting, accumulating and distributing special disaster funds by a fund management institution.

8. Government

8.3 The 2023 spending budget has been set lower as part of fiscal consolidation (in an attempt to maintain the deficit below 3% of GDP)

Figure 53. Central Government Spending, 2019-2023 (IDR trillion)¹

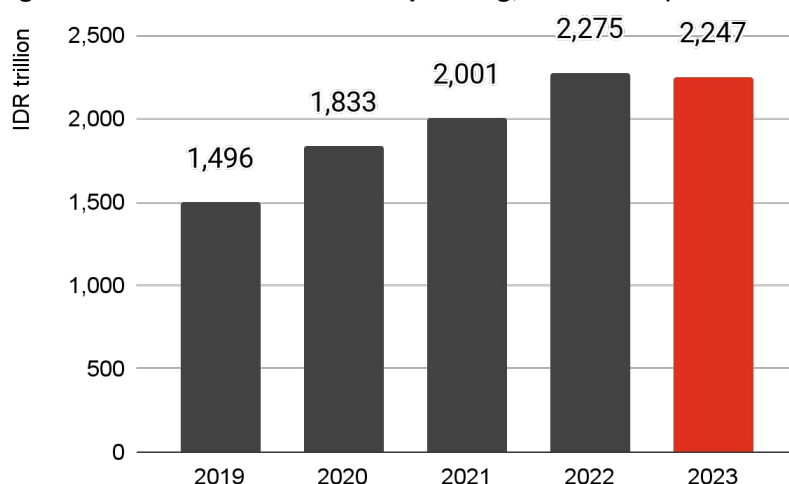


Table 2. Fuel Price Conditions during the 2022 Fuel Subsidy Adjustment

Fuel type	Solar	Pertalite (RON 90)	Pertamax (RON 92)
Market price (IDR per L)	13,950 ²	14,450 ²	17,300 ³
Retail price (IDR per L)	5,150	7,650	12,500
Gap/subsidy (IDR per L)	8,800 (63%)	6,800 (47%)	4,800 (28%)
Adjusted price (IDR per L)	6,800	10,000	14,500

The fuel subsidy adjustment in September 2022 was one of the major fiscal decisions made last year. This was done in response to the oil price shock following the Russian invasion of Ukraine, where, in the absence of an adjustment, there could have been severe pressure on the state budget. Prior to the adjustment, the government subsidy ranged from 28% to 63% of the market price, depending on the fuel type. It is worth noting that according to the 2021 Social and Economic Survey (i.e. *Susen* 2021), less than 30% of the allocated subsidy was being enjoyed by people at the bottom 40% household income, indicating ineffective targeting. Nevertheless, as a way to cushion the impact for low-income households, the Gol redirected some of the saved budget spending via ad-hoc conditional cash transfers (i.e. BLT BBM), where eligible families were entitled to IDR 600,000 each distributed across four months.

Sources: Ministry of Finance (2022)

Notes: [1] The 2019-2022 figures are based on realised spending, whereas the 2023 figure is based on the planned budget; [2] Assuming ICP 105, 14,700 IDR/USD exchange rate; [3] RON 92-equivalent price from other retailers.

Government spending (realised), 2022, IDR trillion

Social protection	Food security
IDR 161 tn (7.08%)	IDR 94.1 tn (4.14%)
Education	Health
IDR 575 tn (25.28%)	IDR 212.9 tn (9.36%)
Infrastructure	Environment
IDR 373 tn (16.4%)	IDR 13.6 tn (0.6%)

2023 spending priorities:

- Improve Indonesia's human capital
- Accelerate basic infrastructure development (including for the new capital city)
- Improve the efficacy of social protection programmes, including subsidy reforms
- Support the revitalisation of value-added and export-based industries
- Support the adoption of green energy and the energy transition

9. Development

The Government of Indonesia's efforts to improve living standards are constrained by its budget capacity, and the government needs to increase coverage and quality infrastructure. Such shortcomings are exacerbated by uneven development that disproportionately affects East Indonesia.

9.1 Indonesia's Human Development Index ("HDI")¹ score has increased again after stagnating during the first year of the pandemic

Figure 54. Indonesia HDI Scores, 2011-2022

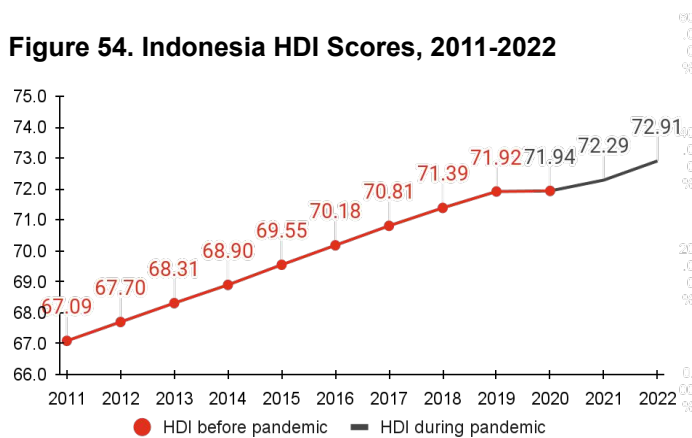


Figure 55. Indonesia HDI by Indicator, 2022

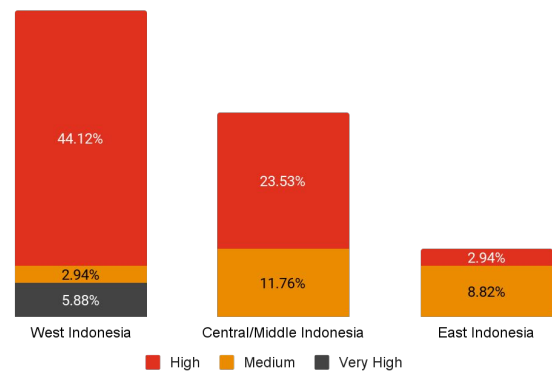
Life Expectancy (Year)	Expected Years of Schooling ² (Year)	Average Length of School ² (Year)
71.85	13.10	8.69
Expenditure per capita (IDR mn per year)	HDI	Growth (%)
11.5	72.91	0.86

During the first year of the pandemic in 2020, Indonesia's HDI score stagnated, largely due to a drop in per capita expenditure. However, it has been able to improve again since 2021.

While already passing United Nations Development Programme ("UNDP")'s "High Development" category (i.e. having an overall HDI score above 70 but below 80), Indonesia is still fourth amongst its ASEAN-5 peers, with life expectancy at birth and mean years of schooling being the lowest performing indicators.

9.2 HDI scores in East Indonesia provinces are mostly at a medium level, indicating unequal development

Figure 56. Indonesia HDI by Region and Level, 2022



5 provinces with the highest HDI scores			5 provinces with the lowest HDI scores		
1	DKI Jakarta	81.65	1	Papua	61.39
2	DI Yogyakarta	80.64	2	West Papua	65.89
3	East Kalimantan	77.44	3	East Nusa Tenggara	65.90
4	Riau Island	73.52	4	West Sulawesi	66.92
5	Bali	76.44	5	West Kalimantan	68.63

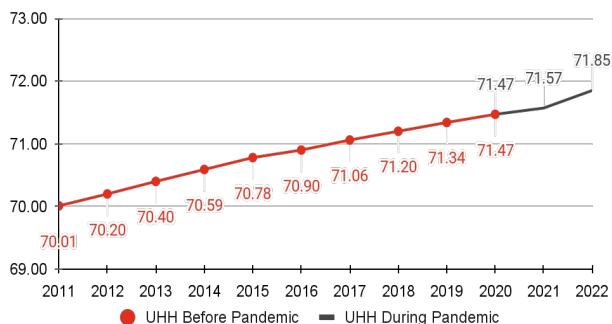
Provinces with medium HDI scores are disproportionately represented outside of West Indonesia³. While no provinces had low HDI scores (i.e. HDI scores below 60) in 2022, the majority of provinces with medium HDI scores were found in Central Indonesia and East Indonesia, which represent 20.6% of Indonesia. In addition, West Indonesia was the only region with very high HDI scores (i.e. HDI scores above 80).

Sources: Badan Pusat Statistik (2023); United Nations Development Programme (accessed 2023); PwC Analysis (2023).
 Notes: [1] The HDI is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and having a decent standard of living. The HDI is the geometric mean of normalised indices for each of the three dimensions; [2] Expected years of schooling refers to the number of years a child of school entrance age is expected to spend at formal education, whereas average length of school refers to average number of years the population older than 25 have spent in formal education. [3] West Indonesia refers to provinces in Sumatra and Java; Central Indonesia refers to provinces in Kalimantan, Sulawesi, West Nusa Tenggara and East Nusa Tenggara; East Indonesia represents provinces in Maluku and Papua.

9. Development

9.3 Indonesia's social security system has yet to cover all of its citizens

Figure 57. Indonesia's average life expectancy, 2011-2022 (years)

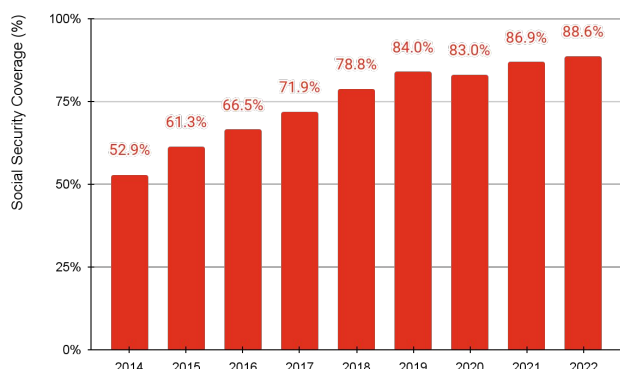


Between 2011 and 2022, Indonesia's life expectancy ("Umur Harapan Hidup" or "UHH") increased by 1.84 years from 70.01 to 71.85 years (2.6% growth). West Sulawesi was recorded as having the lowest UHH of 65.6 years, whereas DI Yogyakarta had the highest UHH of 75.1 years.

Indonesia launched its universal healthcare programme, *Jaminan Kesehatan Nasional*, in 2014. As of 2022, it had reached 88.6% coverage (see Figure 60). To support access to healthcare, the GoI also provides premium assistance for people with low income (i.e. *Program Penerima Bantuan Iuran*). In 2022, 96.7 million people were recipients of this programme.

The subsidised premiums are paid for directly from the Ministry of Health to *Badan Penyelenggara Jaminan Sosial* ("BPJS"), the state-owned enterprise in charge of the nation's social security. Although social security coverage has been increasing, the programme still needs more funding from the state budget, which would require the government to be more efficient in managing spending.

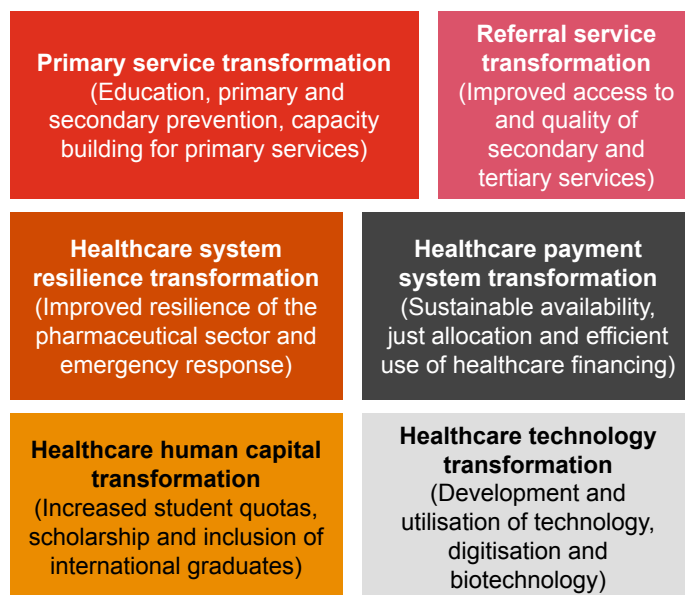
Figure 58. Social Security Coverage, 2014-2022 (%)



Sources: Badan Pusat Statistik (2023); Ministry of Health (2023); PwC Analysis (2023)

9.4 Learning from the shortcomings of Indonesia's healthcare system during the COVID-19 pandemic

Figure 59. Six Pillars of Indonesia's Healthcare System Transformation



In 2021, the Ministry of Health launched its healthcare system transformation programme, which is based on six pillars (see Figure 61). This was done in acknowledgement of the shortcomings of Indonesia's healthcare system during the COVID-19 pandemic. The programmes from these pillars include but are not limited to:

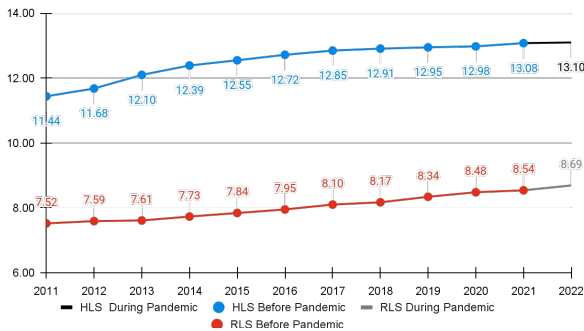
- Empowerment of primary services (i.e. municipal healthcare centres – *Puskesmas*);
- Development of a priority service network that focuses on the nine conditions with the highest mortality rates (e.g. stroke, cancer, diabetes);
- Production of six of the 14 types of antigen vaccine;
- Expansion of promotive and preventive benefits;
- Equal distribution of scholarships for all regions;
- Integration and development of healthcare data systems.

The Ministry of Health has also developed the 2024 Strategy Blueprint for Digital Healthcare Transformation, which was created in acknowledgement of the myriad of government applications and the limited regulations on data standardisation and data exchange. The end goal is to develop the Indonesia Health Services ("IHS") Platform, an integrated platform for the digital healthcare ecosystem that integrates information from various healthcare applications in Indonesia.

9. Development

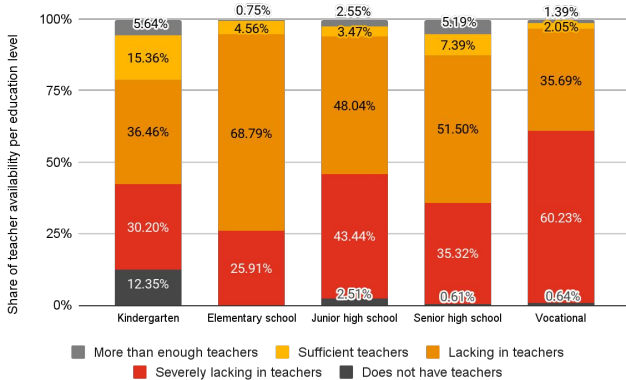
9.5 Indonesia is still lacking sufficient and qualified teachers

Figure 60. Average and Expected Lengths of Schooling¹ in Years, 2011-2022



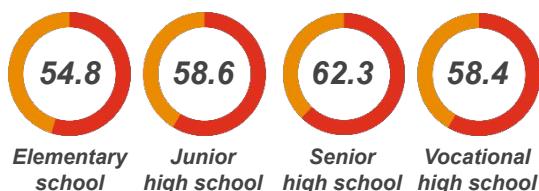
Between 2011 and 2022, Indonesia’s expected and average lengths of schooling (“HLS” and “RLS”, respectively) experienced 15% and 16% growth, respectively. Provinces with the lowest HLS were from West Indonesia, including West Java, whereas the lowest RLS were all found in East Indonesia, in regions such as East Nusa Tenggara.

Figure 61. Teacher Availability at Different Educational Levels, 2019 (%)



In terms of teacher availability, in 2019, the majority of schools across all educational levels suffered from a lack of teachers (see Figure 63), where schools with sufficient numbers of teachers sat at a single-digit percentage, with the exception of kindergartens (15.4%). Moreover, only teachers at the senior high school level scored higher than 60 out of 100 in the teacher competency test (see Figure 64).

Figure 62. Teacher Competency Scores across Levels of Education, 2019



Note: [1] Expected years of schooling refers to the number of years a child of school entrance age is expected to spend at formal education, whereas average length of school refers to average number of years the population older than 25 have spent in formal education. Sources: Badan Pusat Statistik (2023); Ministry of Education and Cultural Affairs (2023); PwC Analysis (2023).

9.6 “Merdeka Belajar” seeks to transform Indonesia’s educational system

Merdeka Belajar was launched by the Ministry of Education and Cultural Affairs to transform Indonesia’s educational system to support the improvement of its human capital. As of now, it consists of 22 programmes that form part of a series of continuous developments that have been undertaken since the first policy of revising the national exams was introduced in 2019.

Figure 63. Examples of Merdeka Belajar Programmes

Merdeka Belajar Programmes

- 1**

Revision of the national exam (i.e. “*Ujian Nasional*” or “*UN*”) to one that is focused on literacy, numeracy and character with international benchmarks in mind.
- 2**

Introduction of the “Kampus Merdeka” programme, as part of which university students have been allowed to convert two semesters’ worth of course credits into other activities such as courses in other programmes, internships, student exchanges and humanitarian projects.
- 3**

Change to school operational aid (“*Bantuan Operasional Sekolah*” or “*BOS*”) via increases in funds, expansion of the allocation for non-permanent teachers and the strengthening of reporting accountability.
- 4**

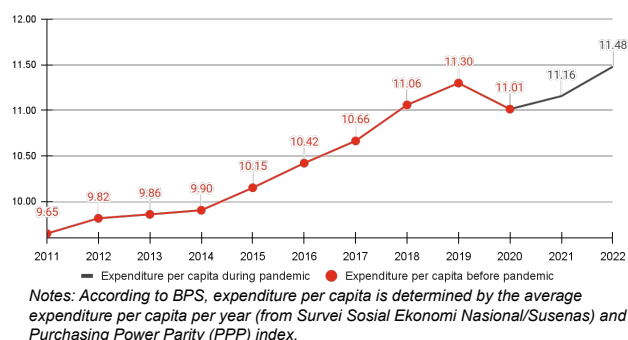
Introduction of “Merdeka Mengajar”, an integrated platform for educators with reference materials to support standardised quality through collaboration.
- 5**

Regulation of sexual abuse prevention and treatment in higher education to foster a community of academicians that is healthy and safe.

9. Development

9.7 On average, an Indonesian spends IDR 11.48 million per year (USD 751.54 per year) or IDR 957,000 per month (USD 62.63 per month)¹

Figure 64. Expenditure per Capita, 2011-2022, IDR Million per Year



Between 2011 and 2022, Indonesia's expenditure per capita increased from IDR 9.65 million to IDR 11.48 million per year (19% growth). During the start of the COVID-19 pandemic in 2020, the number dropped from IDR 11.3 million to IDR 11.01 million, which can be attributed to the loss or decrease of income along with the mobility restrictions implemented to contain the spread of the virus. However, the number has since rebounded; in 2022, it surpassed the pre-pandemic figure

Similar to other HDI indicators, the lowest expenditure per capita is disproportionately found in provinces in East Indonesia such as Papua, East Nusa Tenggara and North Maluku.

Figure 65. Government Cash Transfer Programmes

Government Cash Transfer Programmes

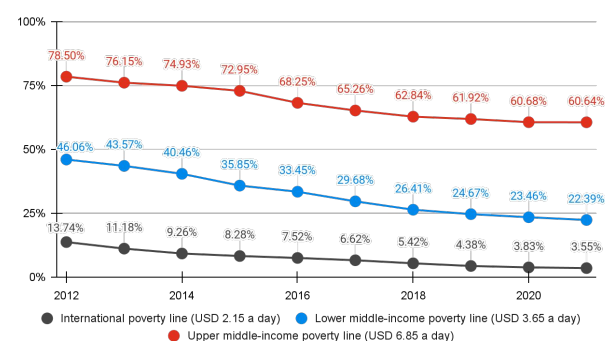
<div style="background-color: #333; color: white; padding: 5px; text-align: center; font-weight: bold;">1 Bantuan Langsung Tunai ("BLT")</div> <div style="border: 1px dashed #ccc; padding: 10px;"> <p>a. BLT BBM (i.e. fuel) Description: Conditional cash transfer to cushion the impact of the fuel price increase in 2022 Benefit: IDR 600,000 per month Recipients: 20.7 million families in 2022</p> <p>b. BLT minyak goreng (i.e. cooking oil) Description: Conditional cash transfer to cushion the impact of cooking oil scarcity in 2022 Benefit: IDR 100,000 per month Recipients: 20.7 million families in 2022</p> <p>c. BLT Desa (i.e. rural area) Description: Conditional cash transfer specifically for people living in rural areas Benefit: IDR 300,000 per month Recipients: 7.48 million families in 2022</p> </div>	<div style="background-color: #333; color: white; padding: 5px; text-align: center; font-weight: bold;">2 Program Keluarga Harapan ("PKH")</div> <div style="border: 1px dashed #ccc; padding: 10px;"> <p>Description: Conditional cash transfer that prioritises pregnant women and children's access to healthcare and education Benefit: IDR 900,000 to IDR 11.4 million per year (depending on the number of beneficiaries) Recipients: 18.8 million families in 2022</p> </div>
<div style="background-color: #333; color: white; padding: 5px; text-align: center; font-weight: bold;">3 Kartu Sembako</div> <div style="border: 1px dashed #ccc; padding: 10px;"> <p>Description: Conditional cash transfer for purchases of basic commodities at selected merchants Benefit: IDR 200,000 per family per month Recipients: 18.8 million families in 2022</p> </div>	

Notes: [1] Assuming 15,274 IDR/USD exchange rate

Sources: Badan Pusat Statistik (2023); World Bank (accessed 2023); Ministry of Social Affairs (accessed 2023); Ministry of Finance (accessed 2023); PwC Analysis (2023).

9.8 About 24.7% of Indonesians were living below the lower middle-income poverty line as of 2021

Figure 66. Poverty Levels, 2012-2021, (%)



In general, poverty is in decline in Indonesia, although Indonesia's poverty levels are still the highest in the ASEAN-5. The measures by which Indonesia underperforms include the share of people living below the international poverty line; as of 2021, 4.4% of Indonesians were living on less than USD 2.15 a day.

Based on other poverty measurements, 24.7% of Indonesians live below the lower middle-income poverty line (USD 3.65 a day) and 61.9% live below the upper middle-income poverty line (USD 6.85 a day). It is worth noting that between 2012 and 2021, people living below the lower middle-income poverty line experienced the highest average annual reduction (2.6% per annum).

9. Development

9.9 Gender outcomes have remained relatively stable over the past decade, except in regard to the number of women with university-level education

2018 witnessed a tipping point where there were more women than men in the workforce with university-level education. The number of women who at least have a senior-high school-level education has also been increasing. Nevertheless, the gender pay gap remained relatively high at around 20%. Workforce participation among women also remained at 50%, compared to 80% for men.

Figure 67. 2022 Gender Pay Gap



Figure 68. Gender Pay Gap, 2014-2022 (mn IDR per month)

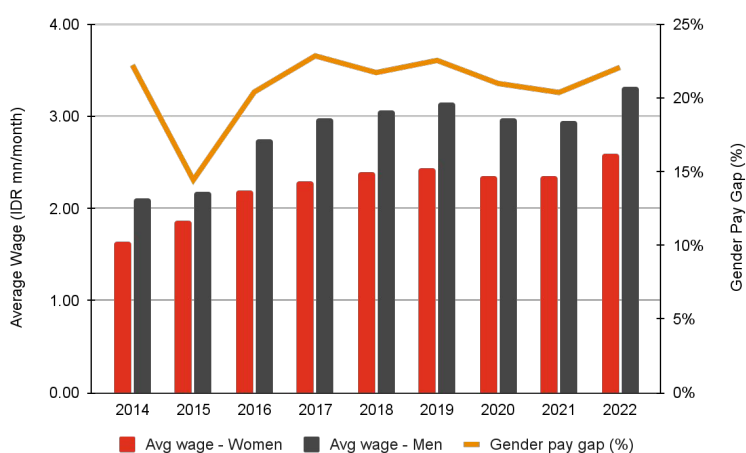


Figure 69. Sectors with Highest Gender Pay Gap in 2022



Figure 70. Workforce Participation by Gender in 2022

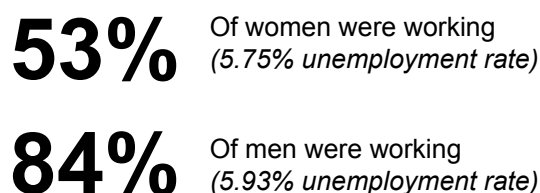


Table 3. Educational Attainment by Gender in 2022

	No schooling	Primary School	Senior High School	University
Women	1.87% (1.9 million)	24.03% (25.2 million)	20.05% (19.8 million)	8.29% (8.7 million)
Men	1.08% (1.1 million)	23.66% (24.8 million)	21.15% (22.1 million)	7.66% (8.0 million)

Sources: Badan Pusat Statistik (2023); PwC Analysis (2023).

10. Governance

Governance plays an important role in contributing to national economic growth and ensures that countries have the necessary foundations to operate in an environment of constant change.

10.1 World Governance Indicators (“WGIs”)

To capture foreign investors’ interest and investment, Indonesia has committed to improving its transparency in government efforts and ease of conducting business. The Worldwide Governance Indicators comprise six broad indicators of governance. They have been used to judge the governance of over two hundred countries and territories over the period from 1996 to 2021. They are as follows:

1. Voice and Accountability
2. Political Stability and Absence of Violence/Terrorism
3. Government Effectiveness
4. Regulatory Quality
5. Rule of Law
6. Control of Corruption

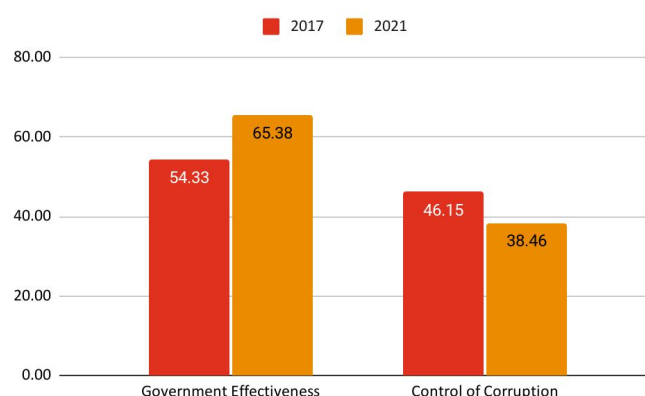
Between 2017 and 2021, Indonesia’s first, third, fourth and fifth indicators consistently increased, while the second and sixth indicators decreased.

Among the six indicators, the government effectiveness index has been consistently ranked the highest over the past five years. The government effectiveness index increased by 11.05 points between 2017 and 2021, indicating increased public trust in the quality of public services in the country. Further efforts by the Gol that contributed to the increase in the government effectiveness index since 2017 have included:

- A push for stronger infrastructure development. The development of the new capital city in East Kalimantan is expected to boost economic growth, improve logistics networks and create local jobs;
- The pursuit of a free and active foreign policy and diplomacy with many countries; and

- The implementation of the Job Creation Law to promote foreign and private sector development through the streamlining of tax regulations, the simplification of business licensing processes, the easing of labour laws and the liberalisation of FDI structures.

Figure 71. Indonesia’s Best and Worst Performing Governance Dimensions (2017-2021)



Source: World Governance Indicators – World Bank (updated 2022*)

Among the six indicators, the control of corruption index has been consistently ranked the lowest over the past five years. The control of corruption index declined by 7.69 points between 2017 and 2021. A supplementary report by Transparency International demonstrated that Indonesia scored 34 points out of 100 on the 2022 Corruption Perceptions Index (“CPI”). The score remained relatively low, partly because of the Gol’s decision to amend Law No. 19 of 2019 on the Corruption Eradication Commission, which changed the jurisdiction of the institution to be under the executive branch thus reducing its independence. Indonesia ranked #110 out of 180 in 2022 in terms of its effectiveness in controlling systematic corruption within its borders.

Table 4. Rank of E7 Performance in the 6 WGIs

E7 (Countries)	Voice and Accountability		Political Stability and Absence of Violence/Terrorism		Government Effectiveness		Regulatory Quality		Rule of Law		Control of Corruption	
	2017	2021	2017	2021	2017	2021	2017	2021	2017	2021	2017	2021
Brazil	61.08	56.04	29.52	28.77	41.35	35.10	48.56	48.08	43.75	42.31	36.06	34.62
China	7.88	5.31	38.57	29.25	68.27	76.44	46.15	41.35	46.15	53.85	47.60	58.17
Indonesia	51.23	52.66	29.05	27.83	54.33	65.38	56.25	62.50	40.87	46.63	46.15	38.46
India	58.62	51.69	18.57	24.53	56.25	62.50	43.75	49.52	53.37	51.92	47.12	46.63
Mexico	42.86	43.96	17.62	23.58	51.44	39.90	62.02	44.23	31.73	23.08	16.35	16.83
Russia	18.72	19.81	23.81	23.11	48.08	45.19	31.73	32.69	21.15	20.19	17.31	19.71
Turkey	27.59	23.67	7.14	12.26	55.29	49.52	56.73	49.04	42.31	36.54	49.52	40.38

Source: World Governance Indicators – World Bank (updated 2021)

10. Governance

10.2 Global Competitiveness Index (“GCI”)

In 2020, Indonesia's GCI performance was 55.3/100, second to China amongst E7 countries. The 2020 special edition of the Global Competitiveness Report (“GCR”) elaborated on economic transformation through improvements in the environment, human capital, productivity in markets and continued innovation.

The GCR is a yearly report published by the World Economic Forum. The twelve pillars of competitiveness are shown below:

1. Institutions
2. Appropriate infrastructure
3. Stable macroeconomic framework
4. Good health and primary education
5. Higher education and training
6. Efficient goods markets
7. Efficient labour markets
8. Developed financial markets
9. Ability to harness existing technology
10. Market size – both domestic and international
11. Production of new and different goods using the most sophisticated production processes
12. Innovation

The aggregated GCI score is the average score of the 12 pillars, with a higher index indicating better competitiveness in factor-driven (first to fourth pillars), efficiency-driven (fifth to tenth pillars) and innovation-driven (eleventh and twelfth pillars) countries.

Indonesia has been categorised as a “less-prepared” country for economic transformation. Transformation readiness¹ is a measurement of each country's macroeconomic and microeconomic productivity. Factors tested include business environment quality, sophistication of business operations and monetary and fiscal policy, social infrastructure and political institutions. The tested factors and Indonesia's associated transformation scores are as follows:

- Ensure public institutions embed strong governance principles and a long-term vision and build trust by serving their citizens – **58.8**
- Upgrade infrastructure to accelerate the energy transition and broaden access to electricity and ICT – **62.7**
- Shift to more progressive taxation, rethinking how corporations, wealth, and labour are taxed nationally and in an international cooperative framework – **53.7**

- Update education curricula and expand investment in the skills needed for the jobs and markets of tomorrow – **49.0**
- Increase incentives to direct financial resources towards long-term investments, strengthen stability and expand inclusion – **59.7**
- Rethink competition and the anti-trust frameworks needed in the Fourth Industrial Revolution, ensuring market access both locally and internationally – **62.9**
- Facilitate the creation of the markets of tomorrow, especially in areas that require public-private collaboration – **45.0**
- Incentivise and expand patient investments in research, innovation and invention that can create new markets of tomorrow – **45.6**
- Incentivise firms to embrace diversity, equity and inclusion to enhance creativity – **60.4**
- Rethink labour laws and social protection for the new economy and the new needs of the workforce – **N/A**²
- Expand eldercare, childcare and healthcare infrastructure, access and innovation for the benefit of people and the economy – **N/A**²

With the enactment of the Job Creation Law into effect and the success of the G20 summit, the likelihood of investments coming in to Indonesia may increase. This will increase the overall scores for each indicator, and the overall GCI score in Indonesia in the near future.

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