

JANUARY 2023

FORESIGHT 2023

THE BIG
SLOWDOWN

ESG RATINGS —
CLARITY OR CONFUSION

THE RISE OF
ALTERNATIVE DATA

CHINA
DECARBONISED

SIGNS OF DAWN?



ISI Emerging
Markets Group

CEIC EMIS REDD



About ISI Emerging Markets Group

ISI Emerging Markets Group incorporates CEIC, EMIS and REDD Intelligence, renowned globally as the leading providers of data, analysis and research for the world's fastest growing and highest potential countries. For over 25 years, our businesses have gone out of their way to gather the very best data and analysis available for emerging markets. We believe we have a unique model that relies on local expertise and relationships, a quality assurance process that is second to none and the implementation of leading technology to deliver information in the ways our customers need it.

In November 2020, Montagu Private Equity acquired ISI Emerging Markets Group from CITIC Capital Partners and Caixin Global. If you would like to find out more about how we can help you with your emerging market information needs, please visit www.isimarkets.com. For more information about our services:

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Company and industry information – data for over 4mn emerging market companies and detailed research and news analysis from the world's best information providers. Visit www.emis.com.

EM intelligence - access to data and research on distressed, high yield and event driven situation reports. Visit www.reddintelligence.com.

Foresight

ISI Foresight 2023 is the latest in our series of annual reports, providing a forwardlooking perspective on the key issues and developments that are likely to shape the prospects of emerging markets in the year ahead. We draw on past and current events to form expectations about the future. Within this report you will find contributions from each of CEIC, EMIS and REDD Intelligence.

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Contents

Letter from the Editor	5
01 Spotlight	6
The Big Slowdown	8
Light at the End of the Tunnel?	14
The Path to Net Zero	18
Buzzword or Keyword – ESG Gaining Ground in EMs	22
ESG Ratings – Clarity or Confusion	26
02 In Focus	30
The Rise of Alternative Data	32
Rethinking Recession	38
03 Asia	42
China Decarbonised	44
Plugging in China's New Growth Engine	48
AI for Rich and Poor	52
The Return of the Hammer: Southeast Asia Feeling the Volcker Shock	58
04 EMEA	62
Europe's Winter of Discontent	64
Inside Africa's Food Crisis	68
05 Latin America	72
Curing Brazil's Consumer Debt Hangover	74
Bridging the Gap: Colombia's Regional Discrepancies	78

LETTER FROM THE EDITOR

Signs of Dawn?



Gabriela Gandovska
Foresight Editor-in-Chief

As we step into 2023, many of last year's challenges continue to shape our lives but recent economic data fill us with optimism that the worst might be over, and signs of a new dawn are emerging. After three years of strict lockdown, China is finally opening up, abandoning its zero-COVID policy in a move expected to provide a strong impetus to the world's second biggest economy. Alongside China, developing markets are emerging as the bright spot amid expectations that many of them will outperform developed economies in 2023. The positive economic outlook and the signs of a less hawkish US policy fuel hopes that investor appetite for emerging markets will return after the painful 2022 that saw a record capital outflow.

Throughout history, conflicts and crises have often been pivotal in advancing businesses and societies. COVID-19 and Russia's invasion of Ukraine, which have hurt global growth so much, have given an unexpected push to decarbonisation and sustainability efforts and have put alternative data under the spotlight.

The importance of information and data has grown with each subsequent economic challenge and policy-makers, macroeconomists, and investment professionals are increasingly exploring alternative forms of data to stay abreast of the economic situation.

On the energy front, China is taking bold steps on its decarbonisation path that should transform it from the world's biggest polluter into a frontrunner in a zero-carbon future. The massive scaling-up and speeding-up of renewable energy in power generation, industry, buildings, and transport have been at the centre of the EU's decarbonisation policy. As paradoxical as it seems, the current European energy crisis may be a powerful boost to the coveted green transformation.

Doing business while adhering to ESG principles is becoming a reality for many companies in emerging economies, where the term is no longer a buzzword but a keyword to attract investors.

Foresight 2023 aims to give our wider audience a glimpse of our team's reach and skill in understanding all these processes.

A handwritten signature in blue ink, appearing to read 'Gabriela Gandovska', with a stylized flourish at the end.

01

Spotlight

THE BIG SLOWDOWN



Radina Koleva
Macroeconomic Researcher

After two turbulent years marked by COVID-19 and major economic activity disruptions, the global economy experienced just a short-lived post-pandemic recovery as existing challenges and new crises are tipping the world into another big slowdown. The increasing living costs and the unfavourable business environment put policy makers to a test, with the major global central banks occupying the key role. Monetary authorities were compelled to increase interest rates to tame inflation, which, however, put the brakes on economic activity in key developed markets. Developing markets, on the other hand, are emerging as the bright spot amid expectations that many of them will outperform developed economies in 2023. The positive economic outlook for most EMs and signs of a less hawkish US Fed stance fuel hopes that investor appetite for emerging markets will return after the painful 2022, marked by capital outflows mostly due to the stronger US dollar. Moreover, China's reopening should provide a powerful support to the emerging world's recovery.

Signs of Improvement

The CEIC Leading Indicator for the US and the euro area is pointing to an imminent recession, with the reading for the euro area dropping to an all-time low of 62.1 in October 2022, which is significantly below the long-term trend and the neutral mark of 100. Nonetheless, the indicator inched up in the following two months to 73.1 in December 2022, in a sign that the recession could be milder than previously

feared. Inflation followed similar pattern, as it decelerated in December 2022 for the second time in a row to 9.2% y/y, offering hope that the price growth in the common currency union has already peaked. In the US, the CEIC Leading Indicator suggests that the business cycle is firmly in a downturn, with the continuing meltdown in the housing market dragging the indicator down to 84 in November 2022. None-

theless, unlike the euro area, inflation in the US has been decelerating since July, prompting the Fed to slow down the rate hikes. According to the December meeting's minutes, released in early January 2023 the Fed will focus on fine-tuning its approach in order to limit the downside risks to economic growth.

Emerging markets, although more accustomed to higher inflation than developed economies, were not spared any further troubles in 2022 like weaker currencies and capital outflows due to the strengthening US dollar, which usually appreciates during monetary policy tightening cycles. Nonetheless, those are expected to remain in the past, as many emerging markets are set to outperform their developed counterparts in 2023. In China, the reopening comes on top of stable footing: robust vehicle production and ample money supply in the world's largest emerging market will support the economic growth momentum into 2023, providing a counterweight to the underperforming real estate sector that represents about one-fifth of economic activity in China. In another key Asian economy, India, the economy saw positive dynamic in the last month of 2022, as the Purchasing Manager's Index (PMI) for the manufacturing increased for the third straight month, whereas the BSE Sensex equity market index remained near the all-time high reached in Novem-

ber. However, alternative data indicates that global inflation and recessionary pressures are starting to feed into India's consumer sentiment. Motor vehicle registrations have been declining on a weekly basis for five weeks in a row, to reach 362,656 units in December, measured by the 4-week moving average. Two-wheeler registrations follow the same pattern, closing the year at a 3-month low.

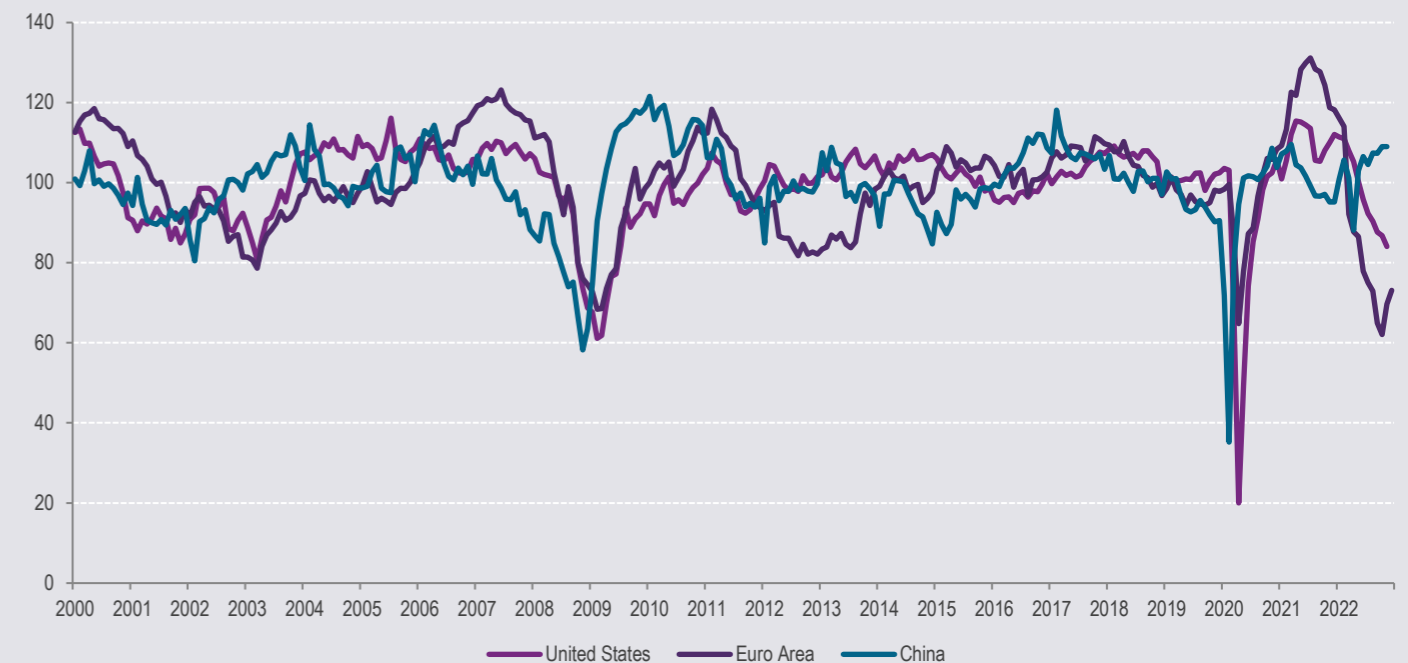
In Indonesia, although the business cycle is still in the downturn phase according to the CEIC Leading Indicator, hopes for recovery emerged, as palm oil prices increased in November. Motor vehicle sales keep growing, but the non-oil and gas exports growth rate is still decelerating.

Unlike other key emerging markets, Brazil is set for a continued slowdown in 2023 but even there GDP will stay in positive territory, helped by a double-digit car sales growth, decelerating inflation and recovering labour market. That said, the fragility of the global economy implies

that any observed improvement or stabilisation might be short-lived. Hence, a very careful fine-tuning is warranted, so that policy makers avoid any abrupt turn-arounds in economic trends and any damages to their credibility. Further, the war in Ukraine remains a source of increased geopolitical uncertainty, shifts in trade flows and commodity prices volatility.

EMERGING MARKETS ARE SET TO OUTPERFORM THEIR DEVELOPED COUNTERPARTS IN 2023, AS CAPITAL OUTFLOWS AND CURRENCY DEPRECIATIONS SHOULD STAY IN THE PAST

CEIC Leading Indicator



Source: CEIC

*The CEIC Leading Indicator is a proprietary dataset designed by CEIC Insights to precede the development of major macroeconomic indicators and predict the turning points of the economic cycle for key markets.

When Normalisation Hurts

In its latest World Economic Outlook report, published in October 2022 the International Monetary Fund (IMF) states that “normalisation of monetary and fiscal policies [...] is cooling demand” to describe the risks leading to downward revisions of the GDP growth forecasts. This normalisation which essentially causes painful disruptions is to a great extent a result of the ultra-accommodative monetary policy, including negative interest rates in the euro area and Japan, which was previously considered a non-conventional monetary policy tool. The ballooning central banks’ balance sheets with the disputable effect on economic activity after the Great Recession of 2007-2009 and

especially the generous money printing during the pandemic contributed to the 2022 inflation acceleration. In that sense, when normalisation hurts, it means that insanity used to be the norm for way too long.

The IMF further states that the global economy’s future health “rests critically on the successful calibration of monetary policy, the course of the war in Ukraine, and the possibility of further pandemic-related supply-side disruptions, for example, in China”. Such an environment in itself makes the task of successful calibration especially hard, as there are way too many potential external shocks.

WHEN NORMALISATION HURTS, IT MEANS THAT INSANITY USED TO BE THE NORM FOR WAY TOO LONG

Further, aggregated foreign trade data from 43 partner countries suggests that Russia’s exports have been constantly decelerating since March. After growing by 69.9% y/y in January 2022, exports have most likely increased by “just” 16.6% in July. Imports, on the other hand, nose-dived to a double-digit annual decline rate. While Russia’s exports to the EU decreased sharply since March, exports to Asia have increased substantially since then. Exports to China grew from USD 6.2bn in February to USD 10.2bn in October; those to India increased from USD 830mn in February to USD 5bn in September, over five-fold. Imports followed the same pattern, but less pronounced for India. Such shifts in trade flows might be short-lived but might as well turn a new page in the bilateral and multilateral relations both in developed and emerging markets. The euro area depends on Russian energy imports, which is why households and businesses alike were preparing for a harsh winter in 2022/2023. Europe’s vulnerability and unfavourable economic position exhibited themselves in both the foreign trade and currency dynamic. In October 2021 the euro area posted its first trade deficit in a decade, and the gap has been widening as of September 2022. Moreover, the deficit in August 2022 (EUR 47.6bn seasonally adjusted) was larger than any surplus since the common currency area was created.

til September 2022, exports growth was in the double digits, ranging from 15% to 30% y/y.

IMF EXPECTS DECELERATION OF THE GLOBAL TRADE VOLUME GROWTH RATES IN 2023

Given the highly uncertain global outlook the IMF expects substantial deceleration of the world trade volume growth rates in 2023, slowing from an estimated 4.3% in 2022 to 2.5%. The world trade volume in 2021 increased by 10.1% after contracting by 7.8% in the pandemic-struck year of

2020. According to the IMF’s estimations, advanced economies have performed slightly better than emerging markets in terms of exports volume in 2022: developed markets have likely posted a 4.2% increase in the trade volume, while the figure for emerging markets is 3.3%. A slowdown is expected for 2023, but it will likely be more pronounced for advanced economies (2.5%) than for emerging ones (2.9%).

In the previous edition of our annual Foresight magazine, as we made a recap of the pandemic-struck world, we argued that the economic crisis marked by the supply crunch showed how important diversification is and how risky overdependence might be. This time around our message is the same. Because diversification – of suppliers, inputs, income sources, energy etc. – makes sure that businesses and individuals do not get overly excited during economic boom and do not suffer that much when the next collapse strikes. In other words, a tinge of modesty during the next exciting times of prosperity could spare us the painful sobering up during the inevitable touch-down afterwards.



Deviation from the Target Inflation

	2018	2019	2020	2021	2022
Brazil	-0.8	-0.5	-0.8	4.5	6.2
Canada	0.3	-0.1	-1.3	1.4	4.8
China	-0.9	-0.1	-1.0	-2.1	-1.0
Colombia	0.2	0.5	-0.5	0.5	7.2
Euro Area	-0.2	-0.8	-1.8	0.6	6.3
India	0	-0.3	2.6	1.1	2.8
Indonesia	-0.3	-0.7	-1.0	-1.4	1.2
Japan	-1	-1.5	-2.0	-2.2	0.4
Mexico	1.9	0.6	0.4	2.7	4.9
Poland	-0.8	-0.2	0.9	2.6	11.8
Russian Federation	-1.1	0.5	-0.6	2.7	9.9
Turkey	11.2	10.5	7.3	14.4	67.0
United Kingdom	0.5	-0.2	-1.2	0.6	6.9
United States	0.4	-0.2	-0.8	2.7	6.1
Vietnam	-0.5	-1.2	-0.8	-2.2	-0.8

Average Policy Rates

	2018	2019	2020	2021	2022
Brazil	6.6	6.0	2.8	4.8	12.6
Canada	1.4	1.8	0.5	0.3	2.0
China	3.3	3.3	3.0	3.0	2.8
Colombia	4.3	4.3	2.8	1.9	7.5
European Union	0.0	0.0	0.0	0.0	0.7
India	6.3	5.7	4.3	4.0	5.0
Indonesia	5.1	5.6	4.3	3.5	4.0
Japan	-0.1	-0.1	-0.1	-0.1	-0.1
Mexico	7.7	8.0	5.3	4.4	7.9
Poland	1.5	1.5	0.4	0.4	5.4
Russian Federation	7.4	7.3	4.9	6.0	11.0
Turkey	15.8	20.0	10.9	17.6	12.6
United Kingdom	0.6	0.8	0.2	0.1	1.5
United States	1.9	2.1	0.3	0.1	1.9
Vietnam	4.3	4.2	3.1	2.5	3.1

IMF Inflation Forecast

	2021	2022	2023	2024
Brazil	10.1	6.0	4.7	3.0
Canada	4.7	6.9	3.2	2.1
China	1.8	2.7	1.8	1.9
Colombia	5.6	11.0	6.0	3.2
Euro Area	5.0	8.8	4.5	2.4
India	6.3	6.4	4.9	4.2
Indonesia	1.9	7.2	3.3	3.0
Japan	0.5	2.4	1.2	1.0
Mexico	7.4	8.5	4.8	3.5
Poland	8.6	15.9	9.0	3.7
Russian Federation	8.4	12.5	4.0	4.0
Turkey	36.1	73.5	36.9	21.4
United Kingdom	5.4	11.3	6.3	1.9
United States	7.4	6.4	2.3	2.1
Vietnam	1.8	4.4	3.6	3.5

Source: IMF, CEIC

When Trade Flows Shift

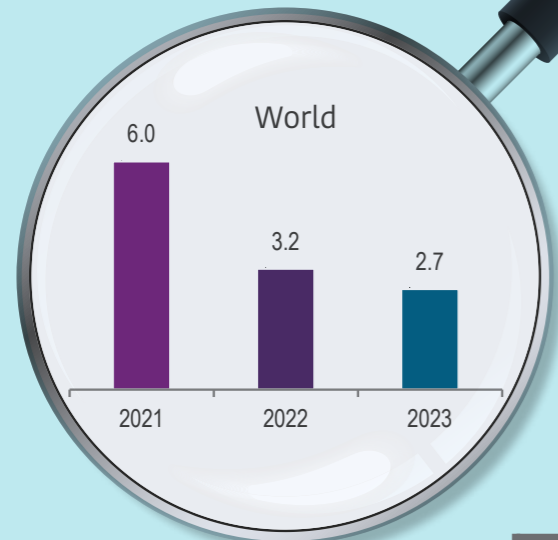
Commodity prices took a roller coaster ride in 2022. The international crude oil benchmark Brent rallied to over a decade high of USD 133 per barrel following Russia’s invasion of Ukraine to the joy of commodity investors but has since cooled down to trade under USD 90 in the end

of 2022. Western sanctions on Russia prompted shifts in trade flows, which are hard to estimate in detail, as the Russian authorities stopped publishing traditional indicators on foreign trade. Nonetheless, it is not impossible to track this dynamic via alternative data and figures from Rus-

sia’s main trading partners. For example, foreign trade turnover data from Russia’s Sea Trade Ports Association has shown that the annual growth rate turned negative, albeit close to zero, in three of the four months up to September 2022.

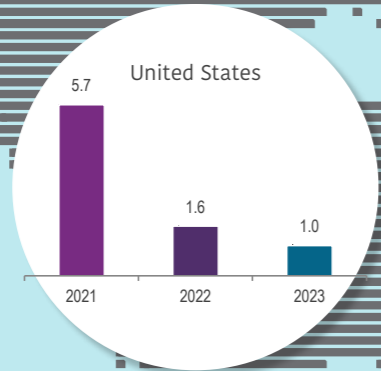
Among emerging markets, China’s exports posted their first decline on an annual basis in October 2022, shrinking by 0.6% y/y. In November 2022, the drop was even bigger (-9.2% y/y). Imports also declined in the four months from August until November 2022, according to the most recent available data as of mid-January 2023. In Southeast Asia, the aggregate exports of the countries in ASEAN 4 (Indonesia, Malaysia, Thailand, and the Philippines) have been confidently increasing since the spring of 2020: from a trough of USD 45.8bn to as high as USD 93.9bn in March 2022, an all-time high. The most recent available data points to USD 81.8bn exports in November 2022, up 2.4% y/y. It was the second consecutive month, when the growth rate was in the single digits. Prior to that, during the 18 months up un-

GDP Growth Forecasts, %

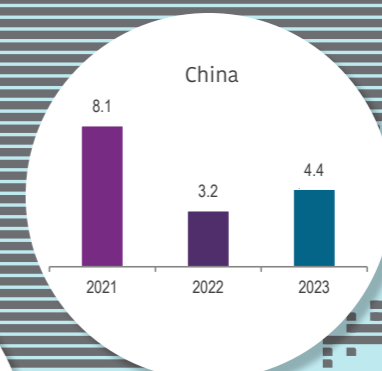
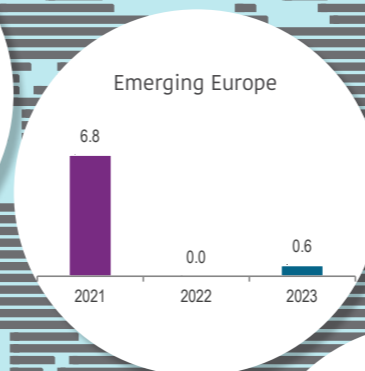
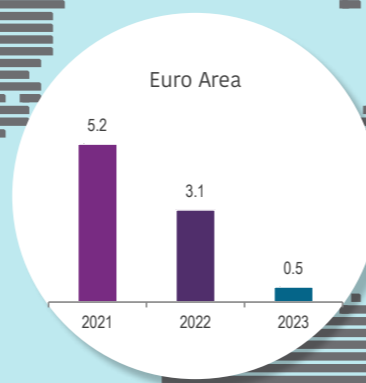


Global economy to experience weakest growth since 2001 except for the global financial crisis and the acute phase of the COVID-19 pandemic.

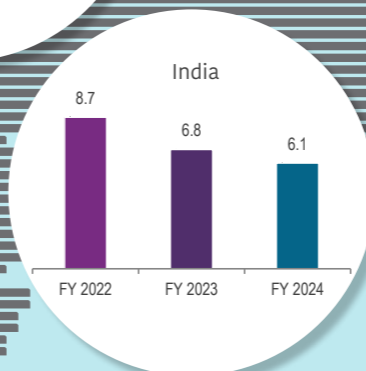
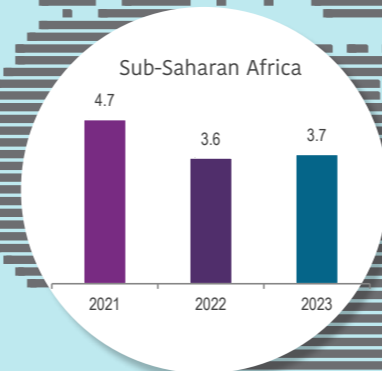
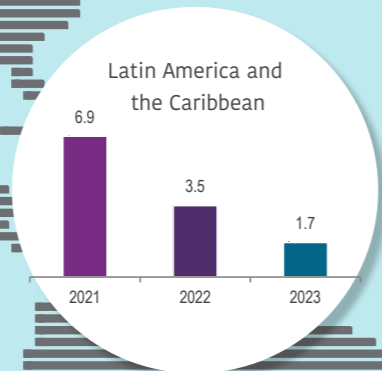
Europe to narrowly skirt recession in 2023 as Russia-Ukraine war hurts the continent the most.



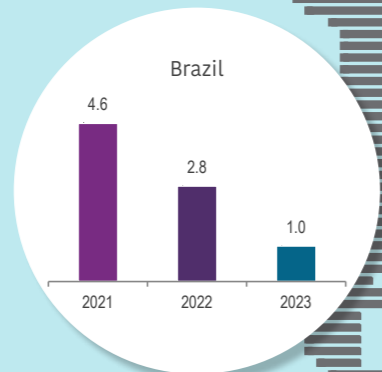
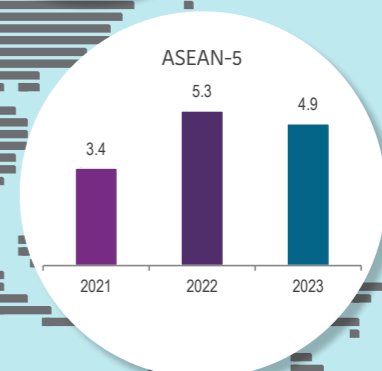
US economy heading for weakest growth since 2008 as falling incomes continue to eat into consumer demand, while higher interest rates are taking an important toll on spending.



Asia remains a relatively bright spot in an increasingly lethargic global economy. Still, growth will likely expand at a rate well below the average of 5.5% seen in preceding two decades.



IMF: "Economic activity to stay modest in Sub-Saharan Africa in 2023 as rising food and energy prices are striking at the region's most vulnerable, and public debt and inflation are at levels not seen in decades. As many as 19 of the region's 35 low-income countries are in debt distress, or at high risk of distress, as inflation rates are in double digits for 40% of the region's economies."



Source: IMF



LIGHT AT THE END OF THE TUNNEL?



Investment flows to EMs may rebound sooner than expected



Mihail Mihaylov
Industry Researcher

While a rising dollar and US monetary policy tightening put pressure on emerging economies in the wake of the COVID-19 pandemic, the Russian invasion of Ukraine threw fuel onto the embers. The largest armed conflict in Europe since WWII rocked global markets sending energy and commodity prices through the roof. Historically, geopolitical instability, economic uncertainty and/or strong dollar have triggered capital outflows from emerging economies. This time around, although many were afraid that the synergies of all three could cook up something even nastier, there is a chance the worse is already over.

History never repeats itself, but it does often rhyme

The convergence of a strong dollar, economic uncertainty and geopolitical instability has raised concerns about the outlook for emerging economies and the trillion-dollar question is whether there is going to be a repeat of previous adverse events such as the Asian crisis of 1997, which started in Thailand, spread across

East Asia, and triggered a slump in capital inflows for the most affected economies of over USD 100bn in the first year alone. The ripples sent by it were felt as far and wide as Latin America and Eastern Europe. While the exact set of reasons for the recessions suffered by many emerging economies at the time differed in each

country, there was a common denominator – a sharply appreciating US dollar. In this context, given the Fed’s aggressive initial steps toward interest rate normalisation, it was understandable why there were concerns that some emerging economies could be in trouble again.

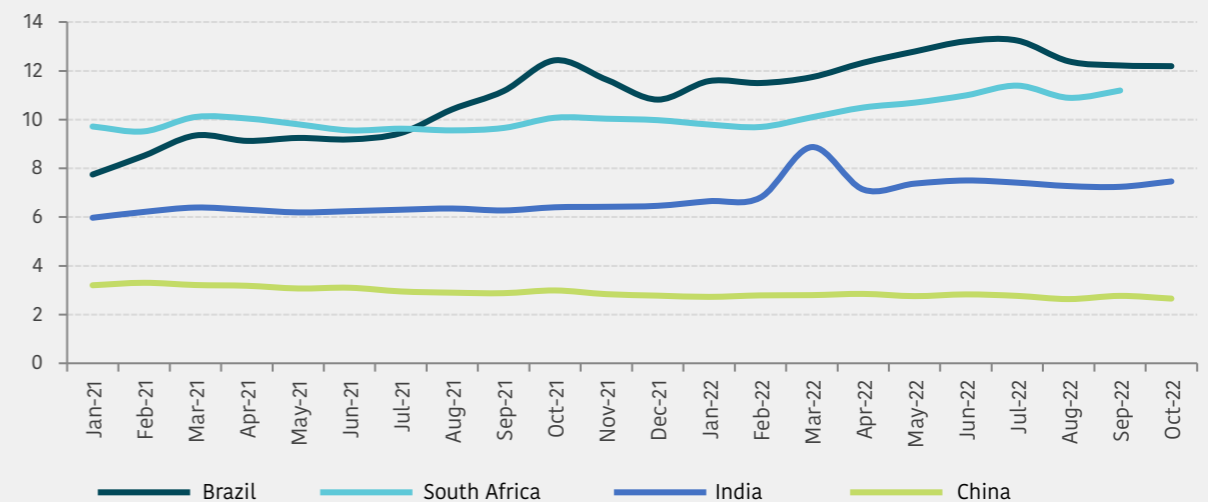
Investors Returning?

In many emerging economies, 2022 started with a promise of better things to come. The recovery from the COVID-19 pandemic was proceeding nicely and several emerging market central banks even took the opportunity to pre-empt inflation by raising interest rates. This move prompted observers to speculate that inflation would peak in the first quarter of the year and then subside. However, Vladimir Putin’s tragic decision to invade Ukraine changed everything. Soaring fuel and food prices were especially tough on developing economies where consumers spend a larger portion of their incomes on such items. Forced to act quickly and determinedly, central banks in emerging economies hiked interest rates to contain inflation but that made their bonds less attractive. In previous episodes of economic and geopolitical instability, outflows from one area were usually compensated for by inflows to another. This time around, the effect was widespread and uniform across all emerging markets, even in commodity-producing countries which were projected to benefit from the

disruption of shipments from Russia and Ukraine. Between January and September 2022 investors withdrew a record USD 70bn from funds investing in EM debt, the Financial Times reported citing JPMorgan’s analysis of EPFR Global data. The figure marked a sharp turnaround as flows in both local and foreign currency EM bond funds were positive in the preceding six years. Amid expectations for tight US financial conditions, JPMorgan raised its forecast for emerging market bond outflows in 2022 to USD 80bn from USD 55bn expected previously. In December 2022, however, non-resident flows to emerging markets jumped to USD 16.8bn from USD 13.7bn in November largely thanks to China reporting a healthy inflow of USD 10.1bn, data from the Institute of International Finance showed. The latest figures fuel optimism that investment flows to the EMs may rebound sooner amid expectations that the Fed will continue to scale down the size of its rate increases and that China’s opening up will provide a strong boost to the world’s second biggest economy.



10-Year Bond Yields for Selected EMs, %



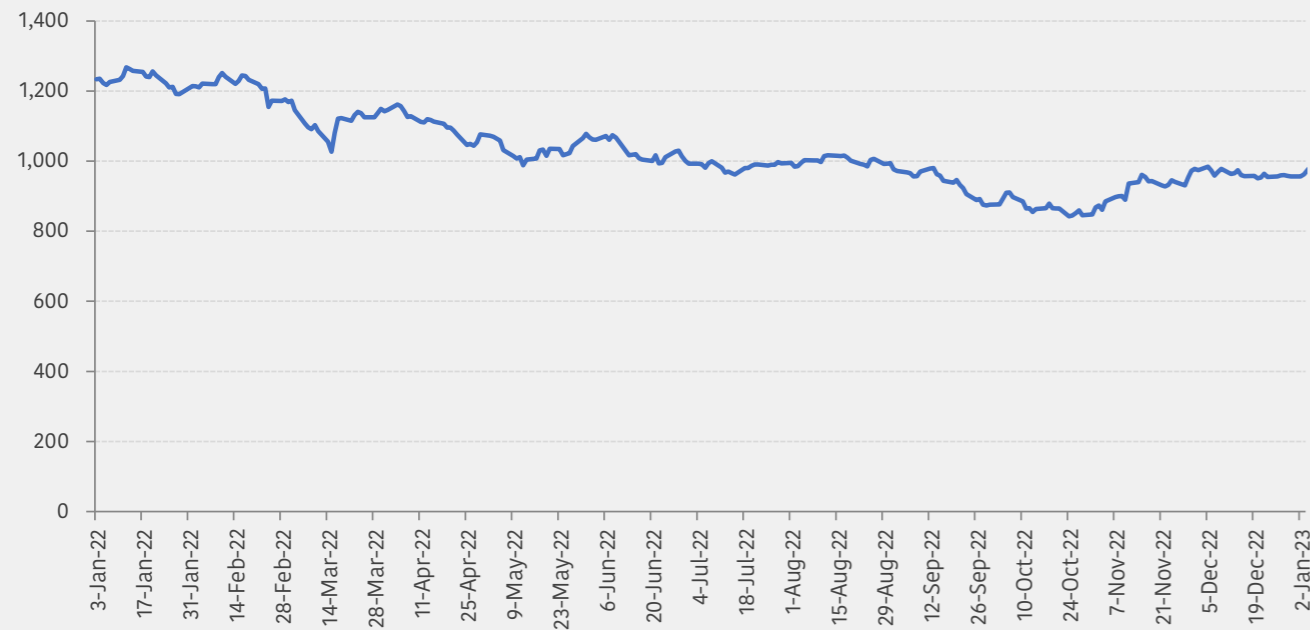
Source: CEIC, China’s National Interbank Funding Centre, The Clearing Corporation of India Limited, Brazil’s National Treasury Secretariat, South African Reserve Bank

In 2022, foreign currency bond yields went into double-digit territory for no fewer than 20 low- and middle-income countries. In some cases, mostly in smaller and more vulnerable countries, yields stood at more than 10 percentage points above those of comparable US Treasury bonds. Albeit not that much, borrowing costs

also increased for large emerging economies such as Brazil, Mexico, India, and South Africa as well. With spreads this wide and depreciating currencies, capital became much more expensive for emerging economies, not only challenging future growth, but also creating significant risk of default, something which already

happened in countries like Zambia, Sri Lanka, Lebanon, Russia, Belarus, and Suriname. Still, with inflation plateauing, if the strength of the dollar can be reined in, emerging economy debt has the potential to see a considerably bigger turnaround than developed market debt.

MSCI Emerging Markets Index



Source: Investing.com

The Start of a Bull Cycle in EM Equities?

In 2022, stock markets in emerging economies saw sharp declines which negated some of the gains from the 2017 rally. The Morgan Stanley Capital International (MSCI) Emerging Markets Index comprises about 1,400 large and mid-cap companies from 24 emerging markets. Each of them is considered a bellwether in their respec-

tive sectors and collectively their performance is used as an indicator of the overall direction the respective markets are going to take. In December 2021, the MSCI Emerging Markets Index reported a one-year net return of -2.54%. In contrast, the MSCI World Index returned 21.82% on the year. On October 24, 2022, at 842.8 points,

the index had slid by 31% on the year weighed down by recession and inflation concerns, worries about weakening global growth, and geopolitical tensions. However, less than a month later the MSCI Emerging Markets Index stood at 956.38 on December 30, 2022, marking an almost 100-point turnaround.

Is the Worse already Over?

Compared to the 1997 crisis, emerging economies now play a significantly more prominent role in the global economy as they account for more than 50% of the world's GDP (at purchasing power parity) and gross capital flows. With a much stronger domestic consumer base and more investment resources available now, they could compensate for some of

the capital outflows. What is more, with inflation plateauing, China's decision to abandon its strict zero-COVID-19 policy and a significantly undervalued bond market, EMs may have a greater recovery potential than their developed counterparts.

THE PATH TO NET ZERO



Nikoleta Slavcheva
Industry Researcher

COVID-19, RUSSIA-UKRAINE WAR REINFORCE NET-ZERO TRANSITION AGENDA

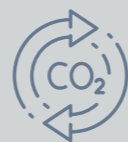
In the seven years since the historic Paris Climate Agreement was signed, governments and companies have been stepping up efforts to promote responsible climate and energy policies to curb humanity's carbon footprint. We got used to ambitious pledges for environmental protection, plans for sustainable growth, and bold declarations for cutting greenhouse gas emissions that often were announced after reports of natural disasters. Back in 2015, decision makers and business representatives from 43 countries gathered for the UN Climate Change Conference (COP21) in Paris, agreeing on a common agenda looking to limit the global temperature increase through reduction of greenhouse gas emissions. Developed countries and the big business were expected to lead the shift towards a net zero economy by mid-century, providing the necessary means, financial and legislative, for such a transformation. Yet, being busy fighting one crisis after the oth-

er, and obsessed with steady economic growth and new business opportunities, often governments and industries around the world did little to turn commitments for environmental protection into real actions with tangible results. Hence, the only evident change in the years that followed the Paris Agreement was the increased frequency, duration, and destructiveness of natural disasters, while the results of environmental protection efforts still lagged far behind the commitments made. Over the past two years, however, we've seen a renewed impulse to the green transition driven by two major events: the COVID-19 pandemic and the Russia-Ukraine war. The steep rise in energy prices, supply shortages and security issues, fuelled by the war in particular, have once again shown the need for a greater diversification of energy supplies, reinforcing the net-zero transition agenda.

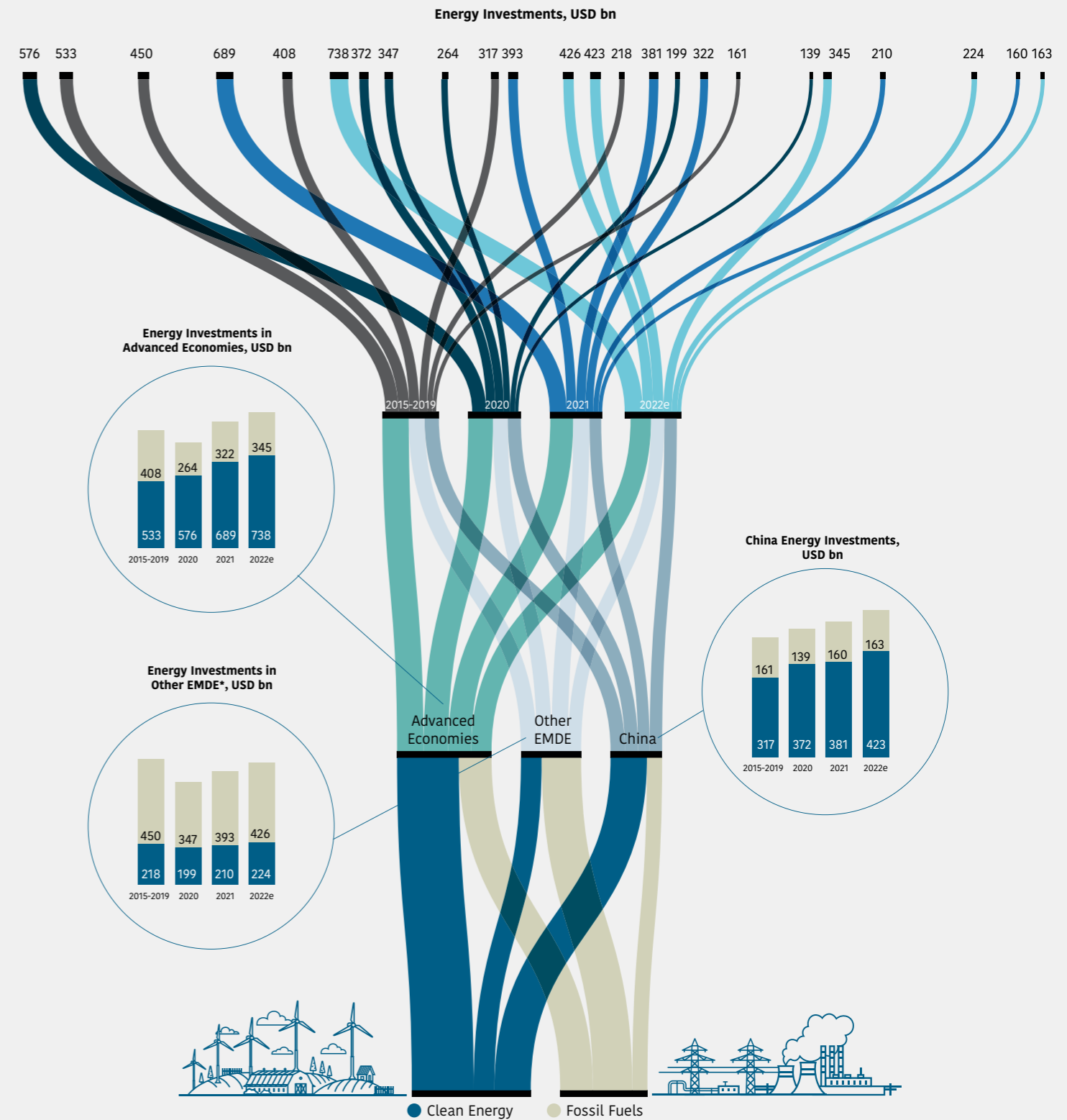
Ramping up Investments

After staying flat for several years, global clean energy investments are finally ramping up and are expected to reach USD 1.4tn in 2022, accounting for nearly three-quarters of the growth in overall energy spending, the International Energy Association (IEA) estimates in its World Energy Investment 2022 report. In the five years after the Paris Climate Deal, clean

energy investment grew at an annual average rate of just over 2%. Since 2020 the rate has risen to 12%, well short of what is required to hit international climate goals, but nonetheless an important step in the right direction, IEA says. China, the EU, and the US were the top clean energy investors being responsible for 65% of global investments in 2021.



GLOBAL CLEAN ENERGY INVESTMENTS ESTIMATED AT USD 1.4TN IN 2022



Source: IEA
*Emerging Market and Developing Economies

The top clean energy investors, however, were also among the ones that spent the most on fossil fuels in 2021, underscoring the challenges governments face in balancing long-term climate goals and short-term energy security. Alongside the high

price environment, investments in fossil fuels have also been driven by policies that aim to diversify away from Russian supply and address short-term market tensions, as is the case in the EU.

In the Green Forefront

Europe was at the forefront of building a regulatory framework with a clear schedule, focused on achieving the goals set by the Paris Agreement. Back in 2019, the European Commission presented its Green Deal, a legally binding strategic agreement aimed at transforming Europe into the first climate neutral continent by 2050. The deal set numerous targets, among which a closure of carbon intensive industries and a 55% reduction of greenhouse gas emissions by 2030 compared to 1990, achievable through the increase of renewable energy sources in the power generation mix, and the use of bridging technologies such as natural gas and nuclear energy until alternative sources reach the necessary share. A budget of EUR 1tn was set to support the implementation of the Green Deal.

In line with the goals set in the deal, the member countries of the EU defined plans for the gradual phasing out of electricity generation based on fossil fuels. Germa-

ny pledged to phase out nuclear power by 2022 and coal-fired plants by 2038. France committed to cut the share of nuclear power in its electricity mix from 70% in 2019 to 50% by 2035. Even Poland, the country that relies on coal for 71% (2021) of its electricity generation, reached an agreement with the European Commission to close all its coal mines by 2049.

Then came February 24, 2022 and prices of crude oil, natural gas and coal went through the roof. The problem was not only the high price but also the availability of energy commodities, as Russia is the EU's top energy supplier, providing 40% of the bloc's gas and 27% of its imported oil. Weaning itself from Russian fuels has been on Brussels' agenda for some time now and the increased use of renewables is a key step in achieving this goal. In May 2022, the European Commission unveiled a new plan, dubbed *REPowerEU*, that will seek to mobilise EUR 210bn in investments by 2027 to end its reliance on Russian oil

and gas. The mid- and long-term target of the plan is acceleration of the transition to renewable energy sources, while the short-term measures are a switch to import more non-Russian gas and more effort to save energy. The plan does reinforce the EU's bold green ambitions, but it also shows the continent's willingness to continue to rely on gas, just not on Russian one.



More Policies, Less Action

On the other side of the Atlantic, in the US, the situation is quite similar, with policies to curb greenhouse gas emissions often accompanied by increased investments in fossil fuels. After officially re-joining the Paris Agreement in February 2021, the US government introduced several ambitious policies to cut the carbon footprint of the country. Among those is an USD 9.5bn programme to support clean hydrogen projects; the Bipartisan Infrastructure Law, approved in November 2021, which features a budget of USD 12bn for the development of technologies for carbon capture, use, and storage (CCUS); and the most recent example, the Inflation Reduction Act, turned into law by President Biden in August 2022. Touted by the White House as "the most aggressive action [...] to confront the climate crisis", the Inflation Reduction Act has a budget of USD 360bn and is looking, among other things, to increase the power generation capacity from renewable energy sources,

stimulate the acquisition of electric vehicles and enhance investments in buildings' energy efficiency, while creating "opportunities for America's 33mn small businesses and innovative start-ups". Still, the act was met with a lot of criticism from environmentalists who accused the government of including in the regulation stimuli for investment in fossil fuels, looking to gain support from the conservatives in the Senate. Notably, the Act binds together the approval for wind and solar power plants on federal lands and US ocean waters with the lease of fields for oil and gas exploration in said areas, claiming that this is the way to ensure the country's energy security while meeting its global obligations. In 2022 the US is expected to pump the most natural gas in its history and export the most LNG in its history, according to the November 2022 Energy Outlook by the EIA. At the same time, an October 2022 report by the Global Energy Monitor (GEM), informed that a

total of 779mn tonnes of annual LNG export capacity was under construction in the world during 2022. This accounts for 173% of global LNG export capacity as of end-2021, with about half of the capacity under construction being concentrated in the US. "These projects could further expose the world's economies to a volatile commodity and lock in decades of new fossil fuel emissions", GEM noted. As of end-2019, the latest data available by the World Bank, the US ranked second globally in terms of greenhouse gas emissions, surpassed only by China.

THE ULTIMATE GOAL OF THE ACT IS TO CUT US GREENHOUSE GAS EMISSIONS BY 40% COMPARED TO 2005 LEVELS

Escaping the Winter of Discontent

In the face of the approaching winter season, Germany started the construction of at least four liquefied natural gas (LNG) terminals (in Lubmin, Wilhelmshaven, Stade, and Brunsbüttel), brought back suspended hard coal power generation capacities, and extended the deadline on nuclear power use from end-2022 to end-2023. Poland signed a ten-year natural gas supply deal with Norway's state-owned Equinor. The UK government lifted the ban on hydraulic fracking and launched

an offshore oil and gas licensing round, the first since 2019, looking to become an energy exporter by 2040. Similar examples for the resurrection of hydrocarbons as a main energy source are easily available in all other countries in Europe. Notably, 40 new LNG terminals were in development in Europe in 2022, according to an October 2022 report by the Global Energy Monitor (GEM), an US-based non-governmental organisation focused on fossil fuels research.



WAR SHOCKS GLOBAL GREEN AGENDA

Time to Act

The Russian invasion of Ukraine triggered a dramatic energy shock not only in Europe, but also all over the world due to the sky rocketing prices of oil derivatives and natural gas. Unfortunately, some of the largest global economies missed the chance to bring a much-needed systemic change and opted to grab the short-term opportunities offered by the moment.

The Closing Window - this is how the United Nation's Environment Programme called the 2022 edition of its Emissions Gap Report. The message is clear, governments' decarbonisation policies must transform from plans to actions soon, or there would be no need of any action at all.

"Everybody, every single day, everywhere in the world, needs to do everything they possibly can to avert the climate crisis," said UN Climate Change Executive Secretary Simon Stiell in his speech at the opening of 2022 UN Climate Change Conference.

"EVERYBODY, EVERY SINGLE DAY, EVERYWHERE IN THE WORLD, NEEDS TO DO EVERYTHING THEY POSSIBLY CAN TO AVERT THE CLIMATE CRISIS."

Simon Stiell
UN Climate Change Executive Secretary



BUZZWORD or KEYWORD?

ESG Gaining Ground in EMs



Natalia Yanakieva
Head of Industry Research



When it comes to ESG, the emerging markets have been walking to the beat of a different drum. Their growing importance on the global market will force them to embrace ESG for the long haul.

It was back in 1992, when the United Nations Environment Programme Finance Initiative (UNEP FI) took the first big step towards the integration of the environment, social responsibility, and corporate governance (ESG) into the decision-making process in the corporate world, proposing that companies should always consider ESG policies. Jumping 30 years

ahead, this buzzword has reached the emerging markets (EMs), proving that doing the right thing matters even in circumstances that are less than ideal.

In developing markets, the change is being driven from the outside and the inside alike. As the western companies (and customers) put ESG compliance as one of the requirements for future investments and demand appropriate reporting of the related activities, the need for more ESG-related information becomes apparent. And that comes with its own set of challenges as ESG data, rankings and observations

for the EMs need to be adjusted to the local specifics. The debate whether ESG will necessarily bring better returns is ongoing everywhere, including in the EMs. So, both foreign and local corporates consider the investment opportunities created by the underused potential of the EMs and the chance to incorporate the strive for sustainability on a wide scale, while never forgetting the bottom line. The more romantic notion that being devoted to ESG will result in better performance has evolved into the more applicable understanding that the two can and should go together.

Easier Said than Done

Up until recently ESG concerns were more pronounced in the developed economies due to the increased costs and the lack of guarantees for short-term returns. But as ESG practices have made their way into the agenda of the EMs, it will be harder to ignore them. Demand for ESG is growing, driven by the acute need to switch to sustainability in the long run. Investors want it as they need to make sure they are putting their money in a place that cares for the environment and the people, and they enjoy the good reputation. However, the intangibility and the delayed manifestation of the positives of ESG make

companies with more modest operations wonder whether it will give them an edge. That brings up the question of whether a company can survive with a poorer competitiveness, but a better ESG profile, or whether it should focus its resources into boosting its competitiveness here and now. Choosing the former for an EM player especially when not being backed by a western investor might be a big ask.

The efforts are expected to pay off, considering that the EMs will shape the future economic growth by playing an increasingly sizable role in the global economy, being ample providers of raw materials,

destination of foreign investments, and considerable production and operation hubs of their own merit. As the presence of the EMs on the world market becomes more extensive, so will their impact in terms of ESG.

ESG, PROFITS CAN AND SHOULD GO HAND IN HAND

Spot the Difference

Implementing ESG practices is an expensive endeavour, whose outcomes have been studied primarily in the developed economies. This will likely change with the growing market presence of the EMs as they have such a substantial, but still untapped potential. In order for that to happen, the drive needs to come from within. Currently, there are very scarce regulations enforcing ESG and those de-

manding that companies report the implementation of these practices are even fewer. Since ESG is something that is constantly improving, flexible regulations to accommodate it will also be necessary. In the developed countries more companies are transparent about ESG of their own volition. This will happen in time in the EMs, too, as stakeholders are increasingly concerned about the exact process and

the consequences of the production of an item or the provision of a service.

In addition to the requirement for companies to share information, another important source of knowledge would be empirical studies. Again, these prevail for the developed markets at the moment. The growing interest in the EMs and the growing availability of such information will contribute to changing that.

Seeing Things in a Different Light

The good news is that lots of data is coming from the emerging markets and businesses but what needs to change is adding the data that relates to ESG in a standardised manner so that investors can assess their exposure to risk in the case of entering a developing market. The standardisation issue is quite complex as it requires not only delivering a set of indicators, but also educating the EM players about what these indicators stand for so that the perception among all stakehold-

ers is the same. The other side of the coin is that despite the standardisation, the context is equally important and although not numerically represented, it should be taken into consideration. Leapfrogging is an example for that. In various industries the emerging markets take advantage of the readily available solutions and know-how from the developed markets and jump right into the future despite lacking existing infrastructure or experience. Companies which do that need foreign

involvement to get the funds, in addition to the knowledge, to move ahead and a lot of potential lies in that. In its study *Emerging Markets Sustainability & Market Engagement*, Morgan Stanley argue that the local companies can “manage these inherent risks and capitalize on opportunities that these can present”. Since it takes two to tango, the secret perhaps lies in having the EM players and the developed markets’ foreign investors work this out together.



Change for the Better

Emerging markets are working hard to no longer be perceived as hotbeds of human rights violations, poor working conditions, pervasive corruption, disregard of environmental protection, and opaque management but rather as economies where ESG is part of the equation. Stakeholders have started bringing up fair and sustainable business as a necessary standard and are forcing companies to become environmentally and socially responsible when doing business. The main challenges in the EMs are the need for further

Fear of the Unknown

An obstacle in the way of ESG implementation in EMs will undoubtedly be the rising capital outflow risks in these markets, a trend we analyse in another piece in our Foresight 2023 report. JP Morgan anticipates that the outflow of emerging market bonds will surge to USD 70bn in 2022. Such a loss of much needed capital will have tough social, economic and environmental consequences.

The economic and geopolitical uncertainties that come on top of the on-and-off COVID-19 restrictions that have plagued the world for the third year in a row resulted in a gloomy environment in which investors wonder whether the EMs are worth it. Investing in EMs has never been without its risks, but 2022 turned out to tip the balance and force some investors into safer places.

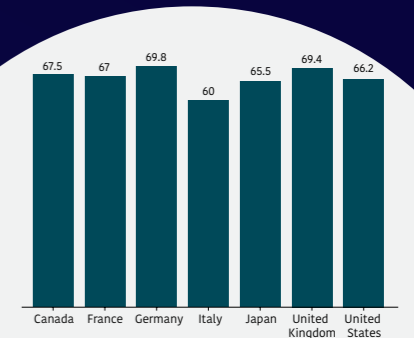
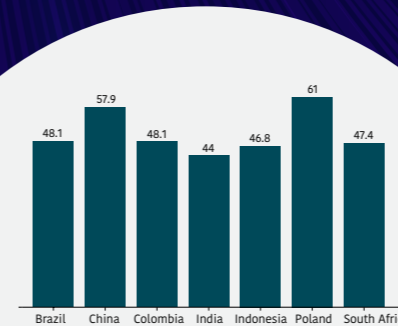




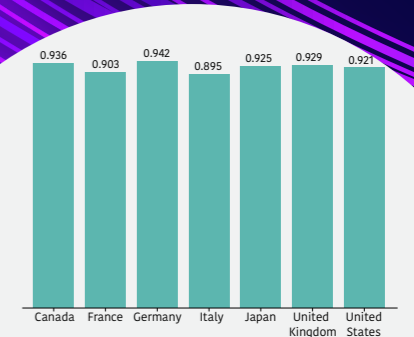
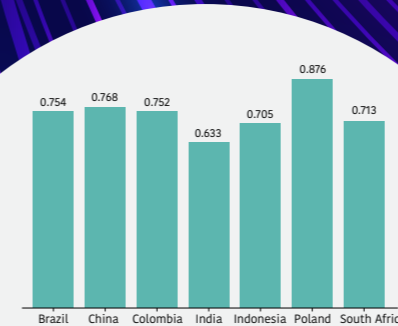
Developing Countries

Developed Countries (G7)

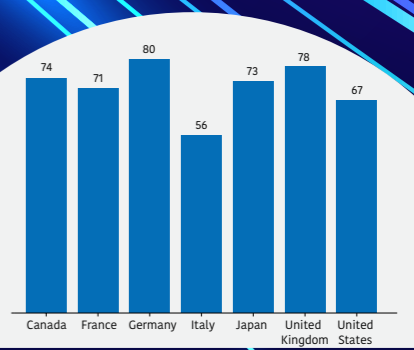
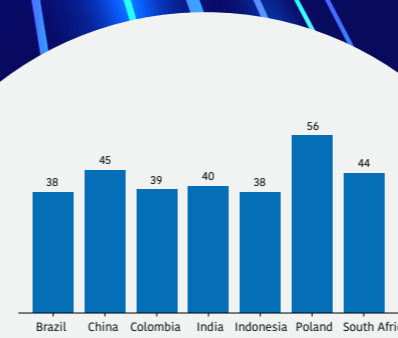
Notre Dame-Global Adaptation Index



Human Development Index



Corruption Perceptions Index



ENVIRONMENT

Environmental issues are one of the biggest threats for EMs, many of which have been fuelling, literally and figuratively, their economies with carbon-based energy sources. The economic slowdown caused by the pandemic and the geopolitical uncertainties make it harder for these economies to give up part of their short-term growth for the sake of sustainability. A positive example is coming from the largest EM – China, which is taking bold steps on the road to decarbonisation. China’s current five-year plan for 2021-2025 was built around environmental considerations, in line with the country’s goal to become carbon-neutral by 2060.

In terms of the index, calculated by the Notre Dame Global Adaptation Initiative, Poland ranks a bit higher than China. ND-GAIN says that Poland, a member of the EU which is one of the biggest advocates for ESG, is well positioned to adapt to the challenges that lie ahead and is considered less vulnerable to the negative effects of climate change, while ranking quite high (38th) globally in terms of readiness to use investments to adapt to climate change. China has a better ranking in terms of readiness (36th), but is considered more vulnerable, hence the lower ND-GAIN country index.



SOCIAL

The UNDP’s Human Development Index is a composite index that ranks the countries in terms of life expectancy and health, education and living standards. No EMs are classified in the top category where the index exceeds 0.8. Of the developing countries that we review here, all are in the second category with the exception of the worst ranking Colombia whose index is below 0.7.

A measurable indicator that allows us to compare the government’s commitment to these

social aspects is the percentage of GDP dedicated to healthcare. According to World Bank data, Colombia is spending as low as 2.9% and India – 3.0% of its GDP to healthcare – a startling difference to most G7 countries which spend 3 times as much. A positive exception is Brazil with 9.6% which is higher than what Italy sets aside and is close to that of the other developed markets reviewed here. The data also shows that China and South Africa have been increasing their healthcare budgets faster than the average for the EMs.



GOVERNANCE

Governance in the developed countries is of a much different nature than that of the EMs where most businesses are either state-owned or family-owned. This means that there is a lack of regulations that demand transparency on how businesses are being run and how board of directors are being appointed. Another very problematic aspect of governance is corrup-

tion. Out of the EMs presented here only Poland ranks better according to Transparency International’s Corruption Perceptions Index with an index of 56, same as that of Italy (both are EU member states). Brazil (38), Indonesia (38) and Colombia (39) have the poorest rankings, thus exhibiting the long road ahead until they reach the rankings of the G7 countries.

Sources: CEIC, Notre Dame Global Adaptation Initiative, United Nations Development Programme, Transparency International

ESG RATINGS

CLARITY OR CONFUSION?



Janvi Sanghvi
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Investment in environmental, social and governance (ESG)-focused companies and funds, or ESG investing, has been around for decades, growing exponentially over the last few years following the COVID-19 pandemic and sustainable investment commitments by governments. Since 1995, total assets in sustainable investments increased 25-fold and over USD 2.7tn of assets are now managed by more than 2,900 ESG funds, according to Morningstar.

The abundance of sustainable investing options coupled with ample investor demand have made it increasingly important to have objective assessments of ESG performance. Investors must screen and make comparisons between companies based on their own objectives/principles

and choose the appropriate investment.

Enter ESG ratings which measure ESG-related risks that have potential implications on a company's credit quality. The evaluation of ESG considerations of companies varies among stakeholders and ESG ratings aim to provide an objective assessment of the steps taken by an entity for investment decisions.

In some cases, ESG ratings can be provided by credit rating agencies like S&P Global Ratings, Moody's, and Fitch Ratings, which assess the sustainability factors of a company and its securities. In others, independent ESG rating providers like Sustainalytics and MSCI ESG Ratings aid investment decisions by providing ESG

ratings, climate risk assessments, data, and solutions in addition to their own ESG equity and fixed income scores.

While ESG Ratings aim to provide objective evaluations of companies and their ESG-related risks, the growth in the number of providers and their respective ratings has led to the opposite. According to a Rate the Raters 2020 report, over 600 ESG ratings and rankings existed globally as of 2018 and have only continued to grow. Each of the providers in turn comes with their own methodologies, definitions, categories, rating scales and even final ESG company ratings/scores, making it difficult for investors to objectively weigh ESG-related risks.

ESG RATINGS ACROSS DIFFERENT PROVIDERS ARE SUBJECTIVE OR INCOMPARABLE

Too Many Opinions

Companies are evaluated based on publicly available information such as company disclosures, media reports, regulatory reports, non-governmental organizations, and other reliable sources, with scores given for each material 'E', 'S' and 'G' topic, alongside an overall ESG score. The subjective nature of what each variable encompasses means that ESG ratings across different providers remains subjective or incomparable, ironically against what they set out to achieve.

Importantly, there is no strict definition of what falls under the E, S and G labels and the scope of issues that characterise the three components. Differences also exist in the specific indicators used to describe performance for each issue and the weightings applied to the ESG factors to arrive at a final rating. As a result, there are differences in evaluations across providers – and subsequently, differences in ratings. What qualifies as essential environmental practice for one rating provider could be simply be a preference for another.

For example, as of February 8, 2022, Indian automotive manufacturer Tata Motors was rated 31.3 by Sustainalytics, putting it under the high-risk category. In comparison, the company scored 82/100 by Refinitiv as of April 28, 2022, implying low risk.

As per Sustainalytics, top material issues for Tata Motors pertained to corporate governance, product governance, management of carbon through products and services and human capital. While the company also scored relatively low

on governance (72/100) under Refinitiv's methodology, Refinitiv's score focused on transparency in reporting of material ESG data, which could be the differentiating factor between Tata Motors's score by the two ratings agencies.

Differences are also evident in the category to which companies are assigned and given "relative scores". For example, Indonesian farm products company Japfa Ltd was ranked very low (55/588) under the food products industry by Sustainalytics. However, the same company was given a score of 51/100 by Refinitiv, having above average transparency in reporting ESG materials publicly. However, Refinitiv classifies Japfa under the Food and Tobacco industry, comparing it with a completely different set of companies than Sustainalytics.

As an investor, these differences can lead to uncertainty regarding which classification would be more appropriate and which ESG considerations used by both Sustainalytics and Refinitiv should be used to accurately evaluate Japfa's ESG risks.

DIFFERENCES IN ESG RATINGS CREATE UNCERTAINTY FOR INVESTORS

Sowing Confusion

Apart from variations in ESG evaluations, there is also an observable difference in the presentation of ESG ratings/scores, depending on the metrics used by rating agencies. For example, the rating scale used by Sustainalytics and Sustainable Fitch has five categories, while MSCI has three categories and Refinitiv's has four levels.

ISS and MSCI have graded scales, Sustainalytics and Refinitiv use deciles and quartiles, S&P uses a numerical scale ranging from 1-100 while Sustainable Fitch uses rankings from 1-5. Sustainalytics uses a scale of 0-50 with intervals of 10 points, Refinitiv has scores as per quartiles and MSCI, which first allocates 1-10 scores for each variable considered, has a final a scale close to the existing credit rating scales – ranging from AAA to CCC.

On Sustainalytics' ESG scale, a higher score indicates worse ESG-related performance, but a higher score on the Refinitiv

and S&P ESG scales indicates better performance.

The vast and varied differences in ESG ratings often leave investors making assessments based on the several scores of rating firms. In a report conducted from investor feedback, SustainAbility found that while investors favoured ESG ratings provided by MSCI and Sustainalytics because of their wide coverage, they did not limit themselves to simply one ESG rating scale to make investment decisions and analysis.

Often, rating agencies do not cover the same universe of companies, forcing investors to look at multiple rating agencies for their investment portfolio. Inconsistencies in methodologies, divergence in ratings and different terminologies adopted by ESG rating providers also affect the credibility and reliability of such ratings, ultimately increasing the risks of greenwashing or impact washing, where-

by companies make impact-focused claims without truly demonstrating a positive sustainable impact. Retail investors may be repelled due to scepticism about the claims being made, given that they do not have a single, objective source to make evaluations.

The divergence can also give mixed signals to companies about their performance and the actions that the market values and/or expects from them, in turn impacting ESG investments in such companies.

As though the evaluation and scoring systems were not confusing enough, investors must also navigate through implicit issues such as weak disclosure requirements, credibility checks of information provided by a company and weak regulations.

Inadequate Disclosure

ESG disclosures by companies are the first and most important resources for investors and ratings agencies to begin ESG assessments. Given the lack of regulation, disclosures by companies are often arbitrary, and they may choose to highlight different aspects while hiding any activities which may be unsustainable practices or red flags for ESG rating firms. For example, annual sustainability reports by India's Adani Group mentions social initiatives that have "touched 3 million lives" and "uplifted 2,315 villages", but this gives scant detail about how exactly value was created.

Another point of contention is the reliability of information provided by companies.

When issuing financial reports, results and statements are audited by licensed auditors. No such requirement exists for ESG/sustainability reports or statements published by companies; rather companies may choose to appoint auditors.

Most importantly, ESG ratings assess the external ESG risks to a company's ability to generate profits and cash flows in the future. However, they are not concerned with what most people assume – the risks that companies pose to the environment or society, according to a report by The Fashion Law.

For example, Indian port infrastructure company Adani Ports & SEZ is allocated a

score of 12.4 by Sustainalytics as of April 3, 2022 and 70/100 by Refinitiv – both of which place Adani Ports under the low-risk category.

However, as noted in a report by REDD Intelligence, Adani Ports is responsible for transporting and handling large volumes of coal for its sister company Adani Power Ltd as well as other third parties. The company is also involved in a controversy for its alleged involvement with the Myanmar military government for a new port development, highlighting obvious corporate governance risks.

ESG RATINGS PROVIDERS NOT BOUND BY REGULATORY SCRUTINY

Ratings Regulations

Currently, there are no global regulatory standards that ESG rating agencies must follow, nor are there mandatory standards that companies, including those that want to issue sustainable bonds, must adhere to.

Researchers at Columbia University and the London School of Economics compared the ESG record of US-based companies in 147 ESG fund portfolios and US-based companies in 2,428 non-ESG portfolios. They found that the companies in the ESG portfolios had worse compliance records for both labour and environmental rules. Companies added to ESG portfolios also did not subsequently improve compliance with labour or environmental regulations, according to a Harvard Business Review report.

While many jurisdictions have now moved towards enforcing some form of ESG re-

porting by corporates, ESG rating providers continue to largely operate without being bound by specific regulations or regulatory scrutiny. In a November 2021 report on 'ESG Ratings and Data Products Providers', the International Organization of Securities Commissions (IOSCO) provided recommendations for ensuring consistency and transparency in the functioning of ESG rating and data products providers.

Recognising the importance of monitoring ESG rating providers in the current climate, certain regulators started evaluating proposals to regulate ESG rating providers. For example, in a January 2021 letter to the European Commission, the European Securities and Markets Authority (ESMA) proposed that a legal definition be introduced for 'ESG rating' and any entity that issues such ratings be required to register with and be supervised by a

public authority. In July 2021, the European Commission issued a Strategy for Financing the Transition to a Sustainable Economy', stating that it will take actions to improve reliability and comparability of ESG ratings.

Another example of regulatory action comes from India. In January 2022, the Securities and Exchange Board of India (SEBI) – India's securities market watchdog – issued a consultation paper seeking public comments on a proposed regulatory framework for ESG rating providers.

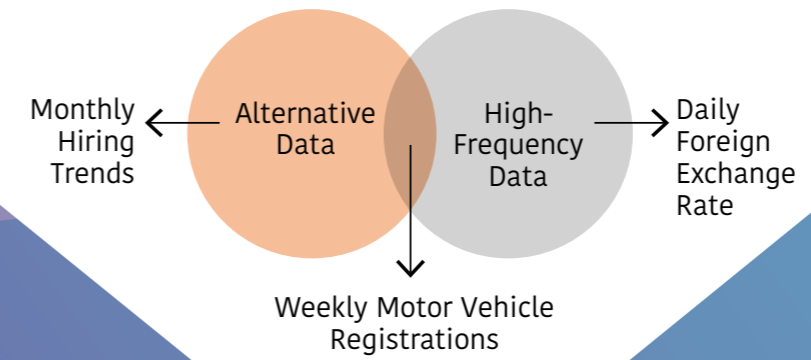
The regulation of ESG rating providers is likely to be a hot topic for securities market regulators across the globe. An IOSCO report flagged concerns that any regulatory framework for ESG rating providers needs to be principles-based in the interest of market innovation.

12

In Focus

NAVIGATING THROUGH STORMY WATERS

The Rise of Alternative Data



PANDEMIC, WAR IN UKRAINE SPUR DEMAND FOR TIMELY DATA



Rohini Sanyal
Research Economist
India

Sherlock Holmes, one of literature’s most famous detectives, created by Sir Arthur Conan Doyle, in *A Study in Scarlet* says, “It is a capital mistake to theorise before one has data”. While the detective may be fictional, his words are pearls of wisdom, that are somehow even more relevant now, in the 21st century. The importance of information and data has grown with each subsequent economic crisis, and as a result, policymakers, macroeconomists, and investment professionals are increasingly exploring alternative forms of data to stay abreast of the economic situation.

IT IS A CAPITAL MISTAKE TO THEORISE BEFORE ONE HAS DATA

Now the question is, what is alternative data?

Traditional economic data consists of national accounts, price indices, industrial production, and retail sales, amongst others. Alternative data, such as credit card transactions, luminescence from nightlights, web-scraped data, mobility data, and daily retail prices, to name but a few, are not direct measures, but are strongly correlated with direct measures and are available in a timely manner. Besides these, there is also an influx of data from statistical models which predict the real-time GDP or inflation, called

nowcasts. The alternative data’s primary role is to obtain timelier information about a particular company, a sector, or even the whole economy since traditional economic indicators take considerable time to be released. It should also be noted that high-frequency data, i.e., data that is released more frequently than once a month, should not be synonymous with alternative data. There are indeed overlaps between both – for example, weekly motor vehicle registration data. Alternative data has been gaining popularity over

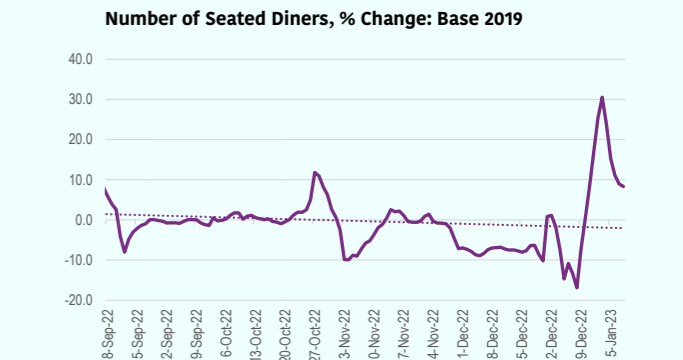
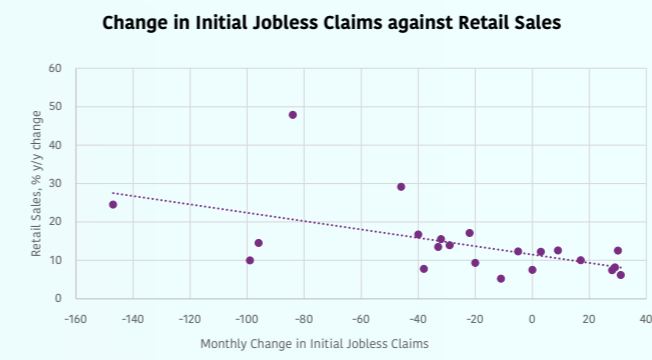
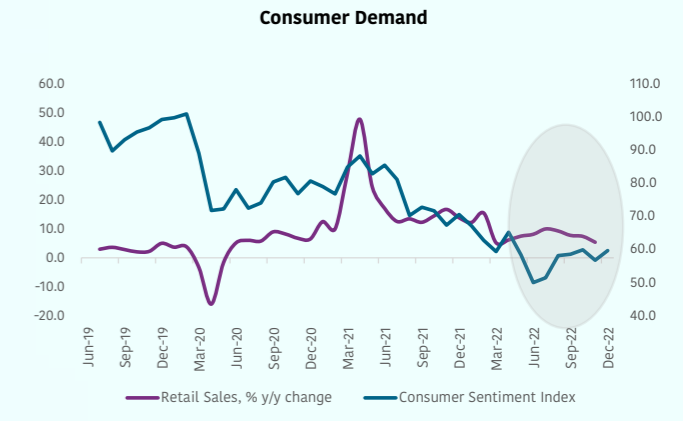
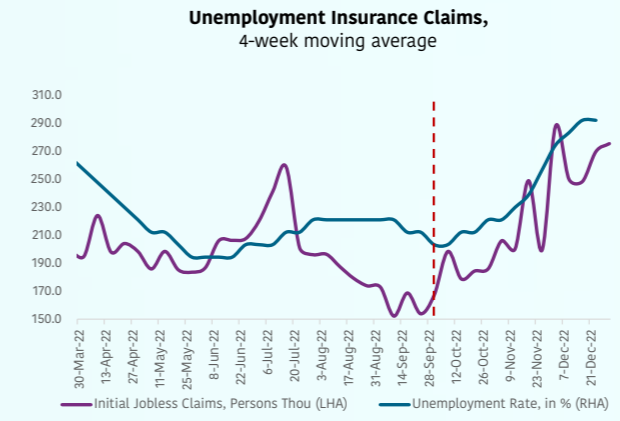
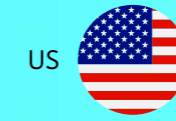
the last decade, but it was the COVID-19 pandemic that really highlighted the need for timely and reliable statistics. The importance of alternative data was later catalysed by Russia’s invasion of Ukraine in February 2022. While the market for alternative data can still be considered in its infancy, some market analysts have estimated a total of USD 1.1bn spending on alternative data by buy-side firms globally in 2019, and sales worth USD 1.7bn in 2020.

The world economy has undergone a whirlwind of changes since the outbreak of the pandemic in 2020, its woes exacerbated by Russia’s invasion of Ukraine. Inflation in major markets is at record highs, while economic output is expected to decrease. As the challenges to global economy rise, the future seems more and more uncertain, which in turn has heightened the demand for more real-time data.

Consider the US, the world’s largest economy, whose growth is projected to slow to 1.6% in 2022. The country is currently battling high inflation with aggressive monetary policy tightening. At the same time, unemployment is at levels matching pre-pandemic ones, and non-farm job va-

cancies are at a record high, accompanied with pent-up demand for both goods and services. Juxtaposed against the forecasted slowdown in economic output, thanks to higher borrowing costs, the US seems to be moving towards a stagflationary period, last seen in the late 1970s and the early 1980s. Delving deeper into the present situation using alternative data, the number of initial claims for unemployment insurance has broadly moved upwards since the first week of October, showcasing a shift in the unemployment situation in the country. This shift can also be corroborated by the unemployment rate in October, which has increased to 3.7%, marking a 0.2-pp increase over the September value. The upward trend

of the unemployment rate is expected to continue in early 2023. The US labour markets have remained tight in the wake of COVID-19, due to the unavailability of workers. Non-farm job vacancies touched record high levels in 2022, making it the second-best year for hirings since the 1940s, after 2021. However, a three-month moving average shows that vacancies may have peaked at the beginning of 2022 and are now trending downwards. Looking at the broad picture, it seems that the current exuberance of the labour market may be short-lived, and it might be on the cusp of a turnaround.

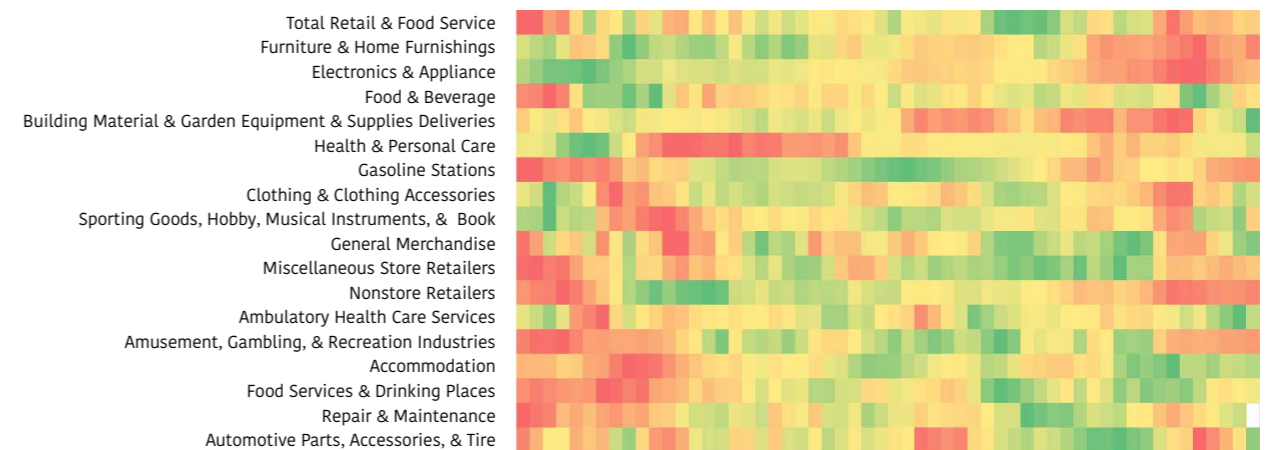


From a consumption perspective, signs of a slowdown are emerging as growth of retail sales have slowed for a third straight month in November 2022, to 5.4% y/y, further corroborated by the sales of light vehicles, which grew by 4.9% y/y in December 2022, marking a second consecutive deceleration. Accentuating this with another alternative daily dataset showing the change in the number of seated diners in restaurants (compared to 2019), a simple seven-day moving average shows a broad downward trend in data. A com-

parison with data on median credit card transactions, provided by Fiserv, however, shows that transactions bottomed out mid-November, and has broadly improved until the latest available numbers. Furthermore, the data reveals that categories under necessity consumption, such as food and beverage, automotive parts, health and personal care, accommodation, and repair and maintenance, have seen steadier transactions than those under discretionary spending. Categories such as home furnishings, amusement

and recreation, and electronics and appliances, are displaying greater restraint. Transactions at gas stations have also seen a remarkable deceleration since the first week of November, capturing the effects of higher prices of fuel. Lastly, credit card transactions on food and drinks services, amusement, gambling, and recreation, are picking up on an annual basis but continue to remain below pre-pandemic levels.

Credit Card Transactions, November 2021 to November 2022, 4-week moving average



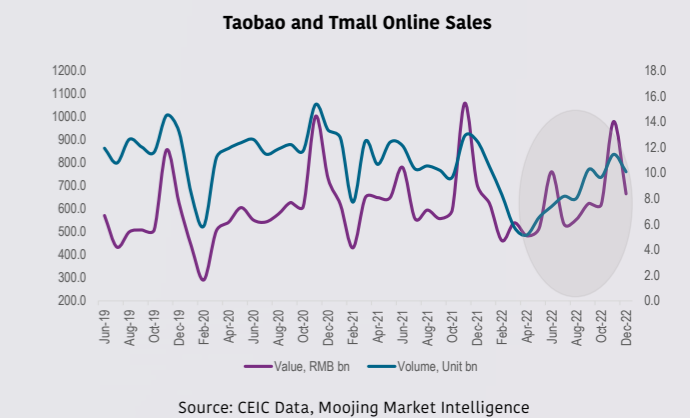
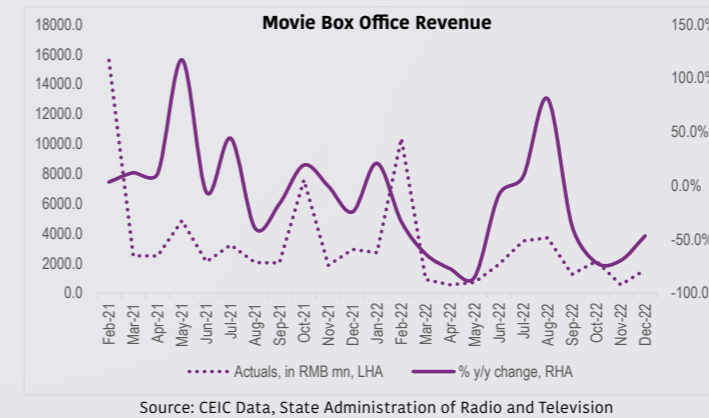
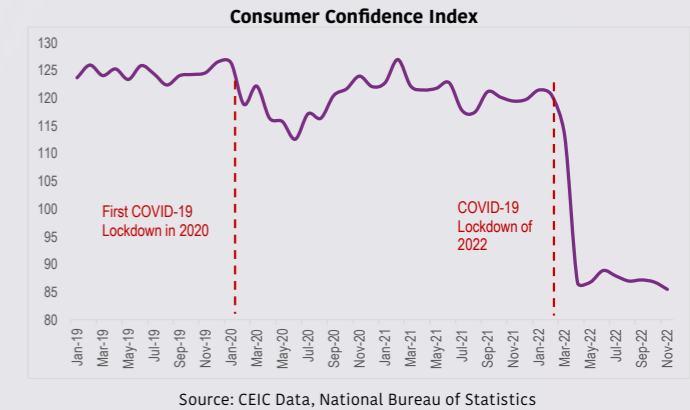
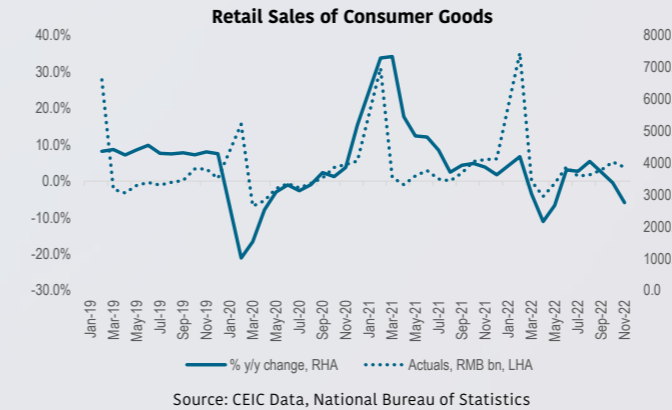


Across the Pacific Ocean from the US, China, the world's second largest economy in nominal terms has undergone massive transformation since December 6, 2022, after a substantial relaxation of COVID-19 restrictions were announced by the government. While the country was one of the quickest to bounce back in 2020 due to stringent COVID-19 policies, the "zero-tolerance" policy was also to be blamed for the disrupted economic activity in early 2022. The economic issues were worsened by debt defaults seen across the property sector that stalled many pre-sold housing projects. The Chinese government has introduced a slew of measures to arrest the crisis in its property sector, which seem to be working as property sales remain largely unaffected, at least in the major cities. Alternative data on property transactions and supply from China Real Estate Information Website, shows that sales in the two major cities, Beijing, and Shanghai, did decelerate between March and June, overlapping with the COVID-19 led

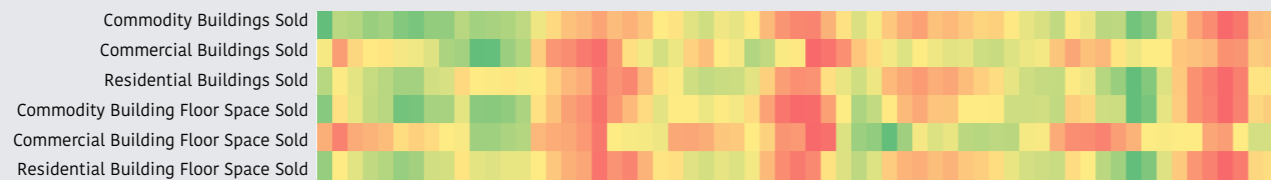
lockdown period. The impact of the measures in Shanghai was more pronounced, given the more stringent nature lockdowns in the city.

This brings us to the next question, how is China's consumption performing now? The country's consumer confidence index crashed between March and May, reflecting subdued demand in light of the strict lockdowns. However, retail sales of consumer goods, while showing a sluggish movement when year-on-year values are considered, indicate a pick-up in demand when momentums are considered, especially since April 2022. This can be corroborated by alternative data such as the volume of online sales on Taobao and Tmall, which is broadly climbing upwards but is yet to reach the levels prior to the 2022 lockdown. The total value of online sales, on the other hand, has caught up better in contrast to the volume. China's retail sales skyrocketed in November 2022 due to China's biggest shopping festival, that

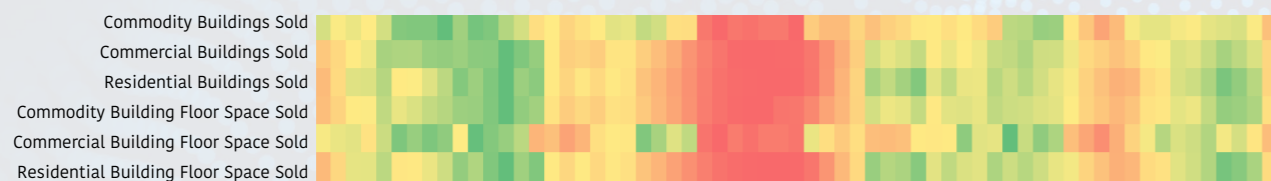
can be seen in the Taobao and Tmall data for that month. While sales decelerated in December, both in terms of value and volume, it remained above the October figures, reflecting a stronger consumer demand. Interestingly, over the same month, total retail sales dropped, both in terms of year-on-year values as well as nominal figures, suggesting a divergence between urban and rural consumption when contrast with online sales. Furthermore, box office revenues, which is a proxy of discretionary spending, demonstrate a clear slowdown both in terms of year-on-year change and nominal figures, capturing the COVID-19 surge, alongside the growing uncertainty triggered by global events. While these global recessionary pressures are expected to weigh in on the country's economic recovery path, the reopening augurs well for the Chinese economy, enhancing demand as well as productivity.



Beijing, October 3, 2021 to December 4, 2022, in units, 4-week moving average



Shanghai, October 3, 2021 to December 4, 2022, in units, 4-week moving average



The current outlook of the world economy is only going to propel the adoption of alternative data. Let's assume that in a surprise turn of events, the war between Russia and Ukraine ends and all goes back to normal. How does this translate onto the global economy? Hence, it can be stated with confidence that alternative data is here to stay, and its definition is

expected to continuously evolve as more and more unorthodox ways of collecting and analysing data come into play. The disruption caused by COVID-19 has triggered a tectonic shift in how data is used in the post-pandemic era, which will remain the driving force of this new age of alternative data.

ALTERNATIVE DATA IS HERE TO STAY

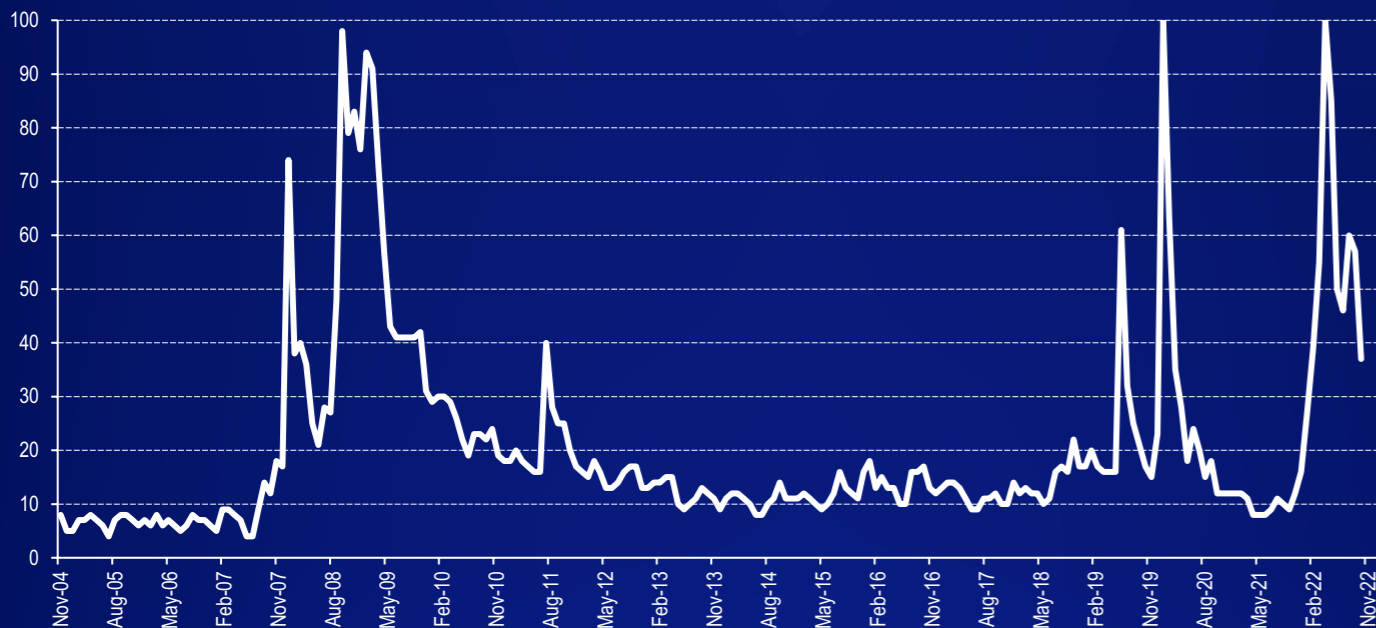
RETHINKING RECESSION



Georgi Ninov
Macroeconomic Researcher

Everyone talks about it, although it is probably the thing we'd rather avoid talking about - recession seems to be around the corner. Google trends showed that the world "recession" reached peak popularity in June 2022 - the same level of interest registered only during the Great Recession of 2007-2009 and the first COVID-19 wave in 2020. Even Elon Musk tweeted his opinion about how long the recession would last (spoiler alert - until spring of 2024). But will recession actually materialise as a self-fulfilling prophecy?

Recession Search Popularity, 100=peak popularity



Source: Google Trends

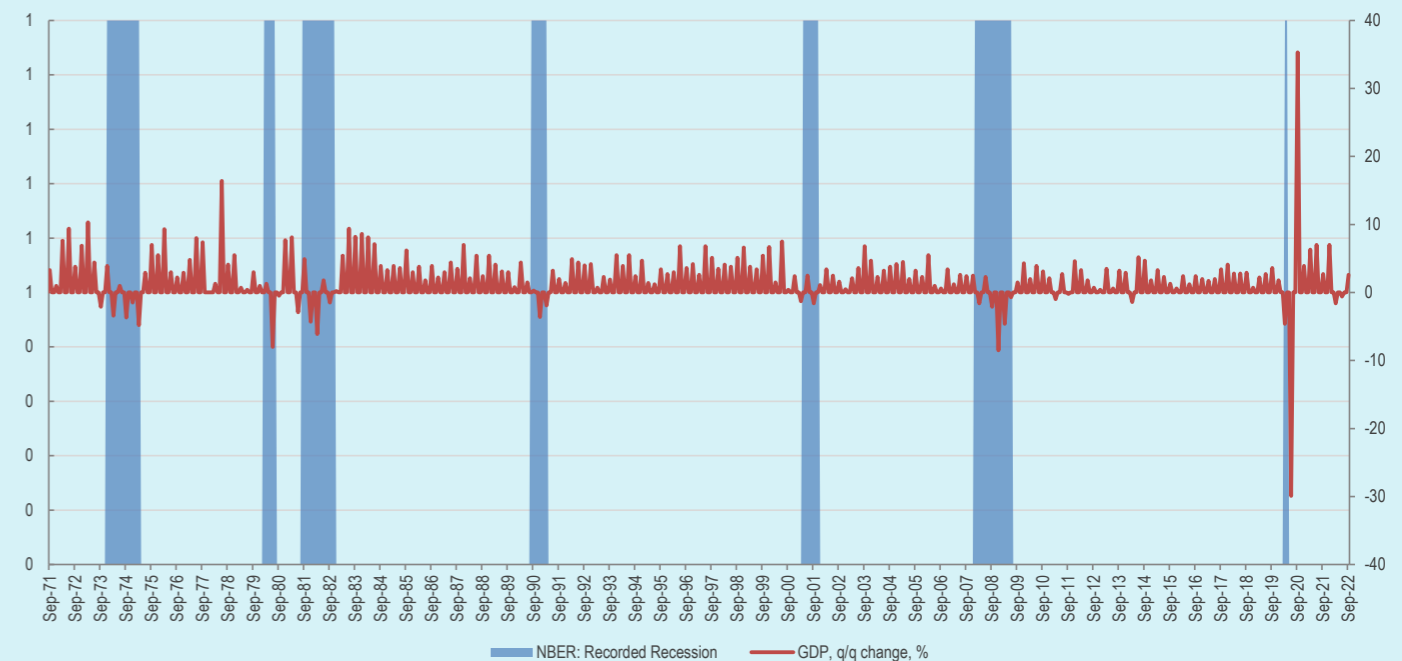
Definition of Choice

The most common definition of recession is the so-called "technical recession", coined by Julius Shiskin in 1974. This definition is quite straightforward: two consecutive quarters of negative GDP growth. The problem with this simple definition is that it is too broad, excluding for example sharp ups and downs in the economy, or massive, short-term downturns like the one witnessed in Q2 2020 caused by the earliest COVID-19 wave.

The US-based National Bureau of Economic Research (NBER), however, has offered another popular definition - "a significant decline of economic activity that is spread across the economy and lasts more than a few months". This definition is vaguer and allows for some breathing room for the problems described above - under the NBER classification the COVID-19 recession would be accepted as such. The NBER recession classification is more

business cycle oriented - it is not based solely on GDP fluctuations as an indicator of the business cycle direction but on a more broadly defined economic activity which includes real personal income less transfers, non-farm payroll employment, employment as measured by the household survey, real personal consumption expenditures, wholesale-retail sales adjusted for price changes, and industrial production.

NBER Recessions and US GDP Growth



Source: NBER, US Census Bureau, CEIC

However, the NBER's approach has also been challenged. One clear disadvantage is the lack of an established quantitative rule about recession occurrence which, in turn, makes NBER's recession identification sluggish. For example, the 2001 US recession was declared as such by the NBER in mid-2003, long after the fact. The NBER itself acknowledges this deficiency, stating that their approach is "retrospective".

Other recession definitions also exist. For a global recession, the World Bank uses a definition by Kose and Terrones (2015) - a contraction in annual global real per capita GDP "accompanied by a broad decline in various other measures of global

activity". An immediate problem this approach faces is again timeliness - using an annual measure is impractical for the purpose of identifying recessions quickly. Some approaches focus mostly on the labour market and more specifically on the unemployment rate rising above a pre-determined benchmark. Many economists employ the most used "technical" recession and NBER recession definitions with slight adjustments - for example replacing real GDP growth with real GDP per capita growth or excluding indicators that might not be particularly relevant for a given economy or too volatile to give meaningful interpretation.

EXISTING RECESSION DEFINITIONS NEED TO BE RE-EXAMINED

Emphasis on Effect

Both classic definitions of recession (“technical” and NBER recession) essentially do not put the emphasis on the causes of the economic slump. It does not matter what brings GDP or the business cycle down, whether it is a structural deficiency of the economy or an external factor, the important thing is the end result which is what fits the definition of recession. The Great Depression and the Great Recession are the two prime examples of

massive economic downturns caused by glitches in the economy. However, the recession caused by the COVID-19 crisis was a pure external shock which had little to do with actions (or inactions) of the authorities.

Going into 2023, perhaps this distinction should become important. Economies are facing the combined trifecta of the COVID-19 shock, the war in Ukraine and the energy crisis, none of which could

be attributed to any structural economic deficiencies. Which begs the question – if the economy has been otherwise fine but external shocks have put it into a recession, should that be labelled as a recession in the widely accepted sense? Does a drop in GDP necessarily mean that an economy is in recession? Or should we look at other hints about whether the economy has functional problems, or is just a victim of outside pressure?

Can Alternative Data Help?

One of the reasons why problems exist with recession definitions is that they might be obsolete. The global economy now is not the same as the one in 1974 when the technical recession definition was coined. We are in possession of more ways to gather data, more statistical models and, in general, more knowledge about the science of economics. These can help change the retroactive approach to identifying recessions.

A good example is labour market data which is notoriously lagging both in terms of reporting from official sources and reflecting the real time economic situation. In the case of the US, however, an alternative measure has provided better real time results during the COVID-19 crisis in 2020 – unemployment claims, which are posted on a weekly basis, rose to record levels in the space of just two weeks between March 14 and April 4. In contrast, the drop

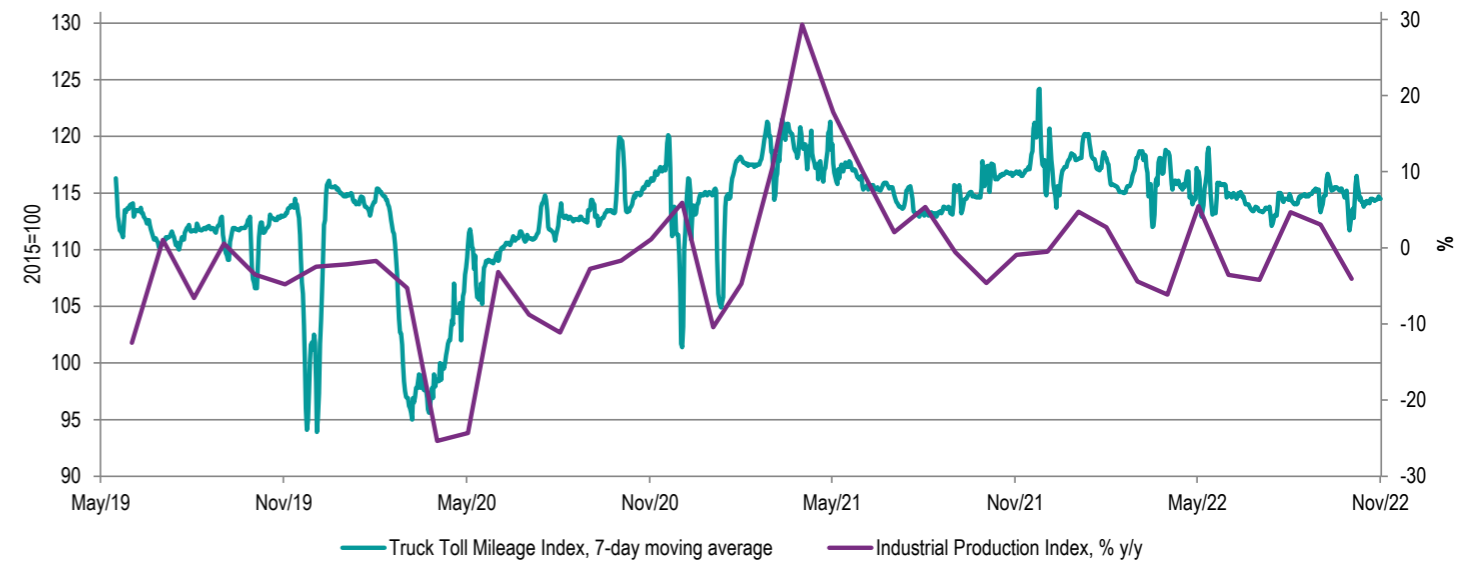
in employment for April was reported as late as the beginning of May. Daily data on job postings, total employees and wages from major platforms can also provide a real-time snapshot of the employment situation of a given economy.

ALTERNATIVE DATA TO CHANGE THE RETROACTIVE APPROACH TO IDENTIFYING RECESSION

Another example is mobility data for different types of cargo movement which could serve as a proxy for industrial production and supply chain disruptions. Daily data from German truck toll mileage for example, has a strong correlation with in-

dustrial production and can give early signals about annual declines of the industrial production index. Gathering mobility data through applications and satellite images has also become possible due to modern technology.

German Truck Toll Mileage vs Industrial Production



Source: Germany's Statistics Office, CEIC

US Weekly Jobless Claims vs Employment



Source: US Department of Labor, US Bureau of Labor Statistics, CEIC



In the end, reconsideration not only of recession definitions but also of policymakers' approach should be considered in today's day and age. Not because traditional data is necessarily obsolete but because alternative sources can give a timelier picture and fill some important shortcomings. As evidenced by the way shocks paralyse economies in an extremely short time, policymakers should be able to respond more rapidly – and perhaps be more flexible in what they perceive as recession. 2023 might be the year of real time recession actions – after all, if everything in our daily life is speeding up, recessions will not wait either.

13

Asia

CHINA DECARBONISED



Zhengliang Wei
Industry Researcher
China

Imagine you wake up in the morning and eat a breakfast that has been prepared by smart home appliances powered by solar energy. Then you go to work using your new energy car on a route that was planned by your smart transportation system so that it saves both time and energy. Your office is in a building constructed with green technologies that make air conditioning dispensable most of the time. You come back home and find several packages delivered by photovoltaic drones at your front door. A few hours later you go to bed and the smart home system dims the light in your room and starts charging your smartphone and car with wind power collected at night. This is not a scenario for a science fiction movie. Instead, it might be just an ordinary low-carbon day for many Chinese in 2060.

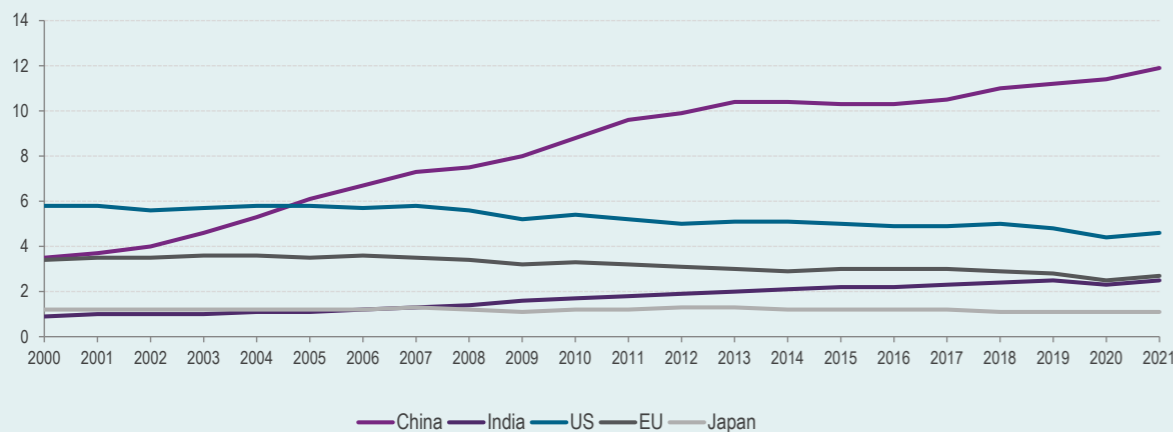
Blueprint for Carbon Neutrality

China's rapid industrialisation and the economic reforms launched by Deng Xiaoping in the 1980s lifted millions out of poverty and turned China into the world's factory. But this has also made China the world's biggest polluter with the country being responsible for a third of global CO2 emissions. In September 2020 in his address to the United Nations General

Assembly President Xi Jinping said China will aim to have CO2 emissions peak before 2030 and achieve carbon neutrality before 2060. Xi's dual carbon targets were embodied in China's 14th five-year plan, the country's social and economic blueprint for 2021-2025. Additionally, in 2022 the government released a set of detailed plans and pathways for various

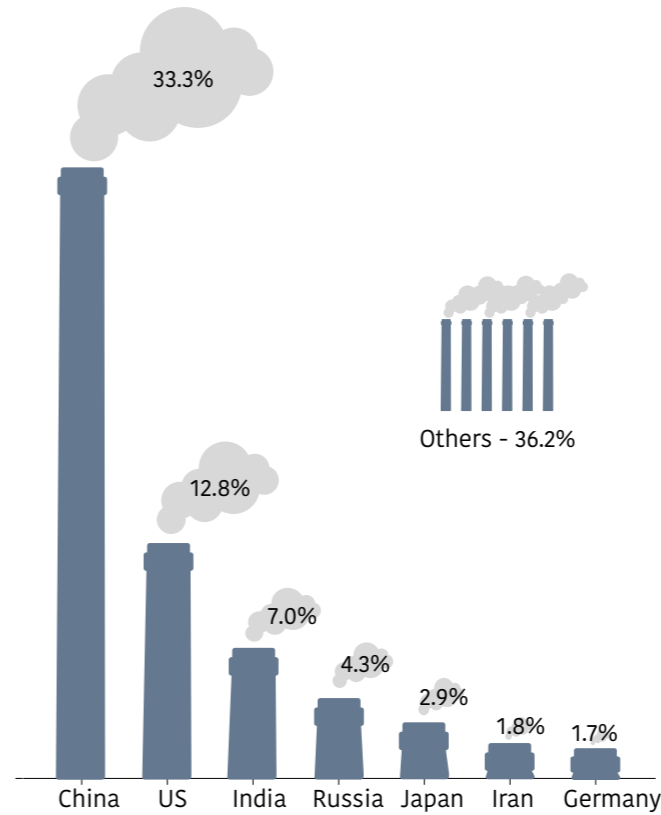
industries to achieve carbon neutrality, setting the political and technical frameworks for China's decarbonisation process in the following decades. In general, China will form a low-carbon economic system by 2025, make notable achievements in its green transition by 2030, and finally establish a carbon-neutral society by 2060.

CO2 Emissions in Selected Economies, gigatonnes



Source: International Energy Agency

Carbon Emissions by Country, 2021

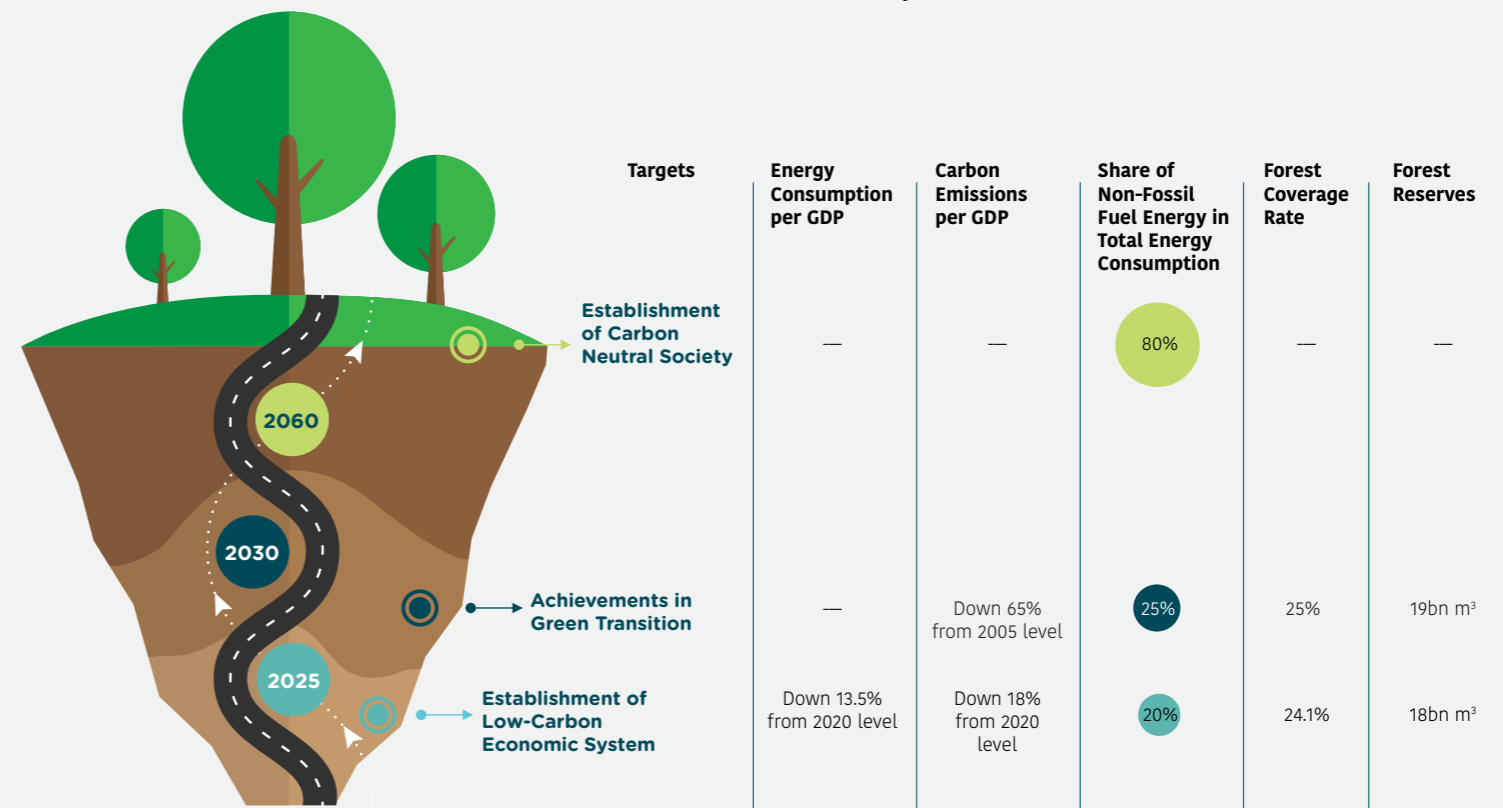


Source: International Energy Agency

Even though the 2060 target is 10 years after the climate-neutrality deadlines set by both the US and EU, if China pulls it off it would be the fastest decline from emissions peak to net-zero. Ranked as the world's second-biggest economy, China is still classified as a developing nation, which is yet to reach its emissions peak – that's forecast to come by 2030 – meaning that China will be aiming to achieve carbon neutrality in just 30 years following emissions peak, versus 70 years in the case of the US and the EU.

**CHINA PLEDGES TO
ACHIEVE CARBON
NEUTRALITY
BEFORE 2060**

China's Road to Carbon Neutrality



Source: China's State Council

Impulse to Investments and Jobs

The low-carbon transformation is inevitably linked to a set of restrictive measures on carbon-intensive industries, but it also provides a huge impetus to investments and jobs. The People's Bank of China estimates that the country's carbon neutrality drive will need investments of over RMB 135tn in the 2023-2060 period, or between RMB 2.2tn and RMB 3.9tn a year, equivalent to nearly 2.5% of the country's annual GDP during that period.

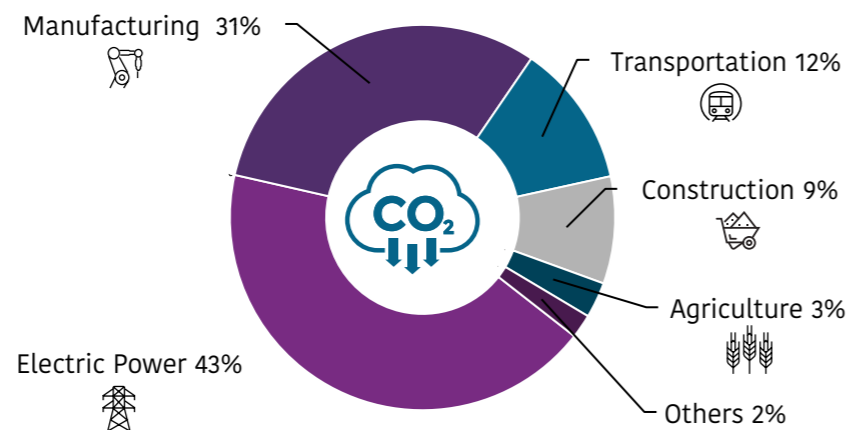
The huge investment has the potential to create 40mn jobs, more than 4.5% of China's current working-age population. In view of these stimuli to the economy, as well as its salutary effects on industrial restructuring and technical innovation, the Chinese government believes that the low-carbon transition is a powerful engine to boost economic growth, optimise energy and industrial structures, and realise high-quality development.

**CARBON NEUTRALITY
DRIVE WILL NEED
RMB
135tn
IN INVESTMENTS**

Catalyst for Industrial Upgrade

China's manufacturing industries are characterised by relatively low added value, high energy consumption, and therefore high carbon intensity. In the past, the elimination of outdated production capacities and the attempt to adjust industrial structures was often met with stiff resistance amid worries that such moves would hurt growth. In a stark contrast, the carbon neutrality goal will bring about fundamental changes and accelerate the upgrade of all carbon-intensive industries.

China's Carbon Emissions by Industry, 2021



Source: International Energy Agency

1. Power Generation

As China's largest carbon emitter, the electric power industry is responsible for over 40% of the country's carbon emissions as a result of its heavy reliance on fossil fuels. In 2021, the share of thermal electricity in the country's total power generation reached 71.1%, while renewable energy (hydro, wind, and solar power) contributed 23.8%. This distribution not only leaves the electric power industry vulnerable to fuel price fluctuations but also becomes a huge obstacle to carbon reduction. Consequently, China plans to largely increase the presence of renewable energy in its future power mix. In 2030, renewable energy is expected to contribute over 50% of the country's total power generation, with the proportions of hydro, wind, and solar power reaching about 19%, 19%, and 15%, respectively,

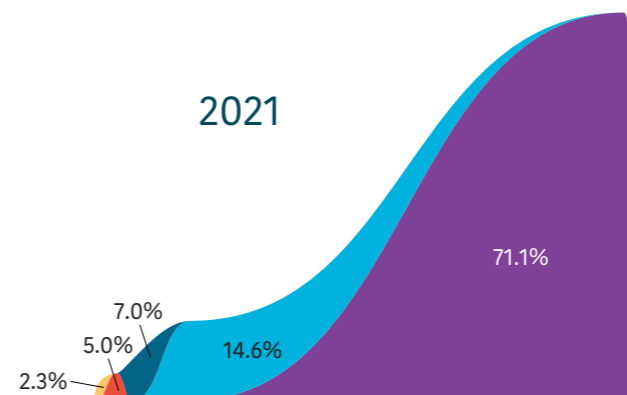
according to estimates by the China Energy Research Society. Besides traditional renewable energy, opportunities will also be found in many new-type clean energy categories, such as offshore wind, biomass energy, and tidal and geothermal power generation.

RENEWABLES WILL ACCOUNT FOR OVER 50% OF CHINA'S ENERGY MIX IN 2030

To meet its ambitious carbon neutrality goal, China has been heavily investing in upgrading its sprawling electricity grid

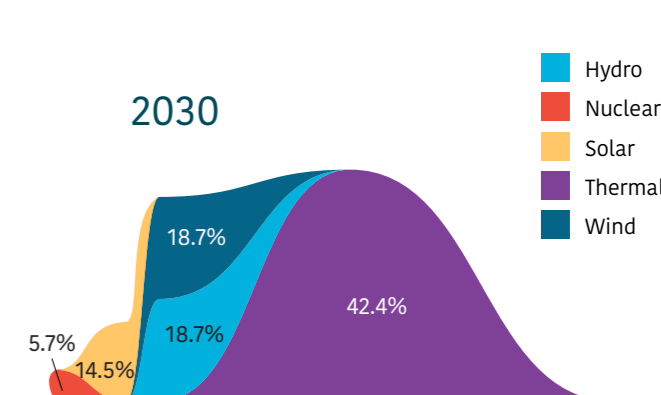
to improve its reliability and accommodate the increasingly large share of renewables, whose generation strongly fluctuates depending on weather patterns. To address these challenges, China is building a nationwide "super grid" that employs massive, cross-country ultra-high voltage (UHV) power lines. UHV lines transmit energy at 800,000 volts and above, double the voltage of conventional high-voltage lines, allowing them to transport large amounts of electricity with minimal losses. The UHV technology is key to Xi Jinping's ambition of building a massive fleet of wind and solar plants in the country's inland deserts and connecting them to faraway consumers located in the densely populated megacities in the east.

China Power Generation by Source, 2021



Source: China's State Statistical Bureau

China Power Generation by Source, 2030f



Source: China Energy Research Society

2. Manufacturing

The manufacturing industries generate nearly one-third of China's carbon emissions. Within them, the iron and steel and the chemical sectors are the largest CO2 emitters. For the iron and steel sector, the replacement of a long-process production capacity, which utilises iron ore as a raw material, with a short-process capacity, which uses steel scrap instead, is considered as the most important measure for

carbon reduction. As regards the chemical sector, many innovative technologies, such as the crude oil cracking method and the CCUS (carbon capture, utilisation, and storage) approach, will be promoted to lower the sector's carbon intensity. Moreover, the authorities also plan to introduce a tiered electricity pricing system into the chemical sector to further enhance its energy utilisation efficiency.

3. Transportation and Construction

These two industries jointly generate about 20% of China's carbon emissions. In the next decades, the electrification of vehicles, trains, and vessels will become a dominant trend within the transportation sector, while green building and BIM (building information modelling) technologies will be more widely employed within the construction sector.

Delivering on High Targets

China's carbon neutral targets are undoubtedly bold, but it remains to be seen whether Beijing can deliver. The power crunch China suffered in late 2021 has been the latest example of how difficult it is for authorities to balance long-term climate goals and short-term energy security. Still, if China succeeds in its 2060 pledge, the impact on the world will be

massive - it could lower global warming projections by around 0.2-0.3°C by 2060. This would represent the largest and most significant reduction by any country, according to estimates by Climate Action Tracker, an independent organisation that tracks countries' commitments to the 2015 Paris agreement on climate change.

**CHINA'S SUCCESS
CAN HAVE MASSIVE
BENEFICIAL EFFECTS
ON GLOBAL
WARMING**

PLUGGING IN CHINA'S NEW GROWTH ENGINE



Xintong (Olivia) Wu
Macroeconomic Researcher
China

“We went to the mall to buy a pair of Lululemon leggings but ended up buying both the leggings and a Tesla,” a friend told me the other day.

Shopping Spree

My friend lives in Jinan, the capital of Shandong province in eastern China. The shopping mall she and her husband went to has a giant Tesla experience store on the first floor just next to Lululemon. This kind of setup has been rapidly gaining popularity in the past three years. New energy carmakers are adding more and more experience stores in Chinese city centres, aiming at attracting and educating customers who used to go to traditional 4S stores in the suburbs. Short for Sales, Service, Spare Parts and Surveys (customer feedback), in the early 2000s 4S car stores became the most popular distribution channel for vehicle brands

in China. Electric car makers are betting on a new approach – showrooms in shopping malls. More than 2,200 new energy vehicle (NEV) stores were opened in shopping malls across the nation by the end of 2021, data from the China Automobile Dealers Association shows. More than half the malls in Shanghai have at least one electric-vehicle showroom.

It's not only about the fancy stores. Consumer interest in China's NEV market is high largely due to government incentives such as purchase subsidies, tax deductions, parking fee reductions, licence plate privileges, etc. For example, if you

live in Shanghai, you may have to pay as much as USD 13,000 for a licence plate alone, a significant amount of money even for the residents of China's richest city. However, if you buy a new energy car instead, you get a special licence plate for free. The government also decided to extend its NEV subsidy programme by the end of 2023. This was the third time the programme had been extended, a clear sign of the Chinese government's strong support for the development of the sector. The switch from gasoline and diesel-powered cars to NEVs is an important step in China's pledge to become carbon neutral by 2060.

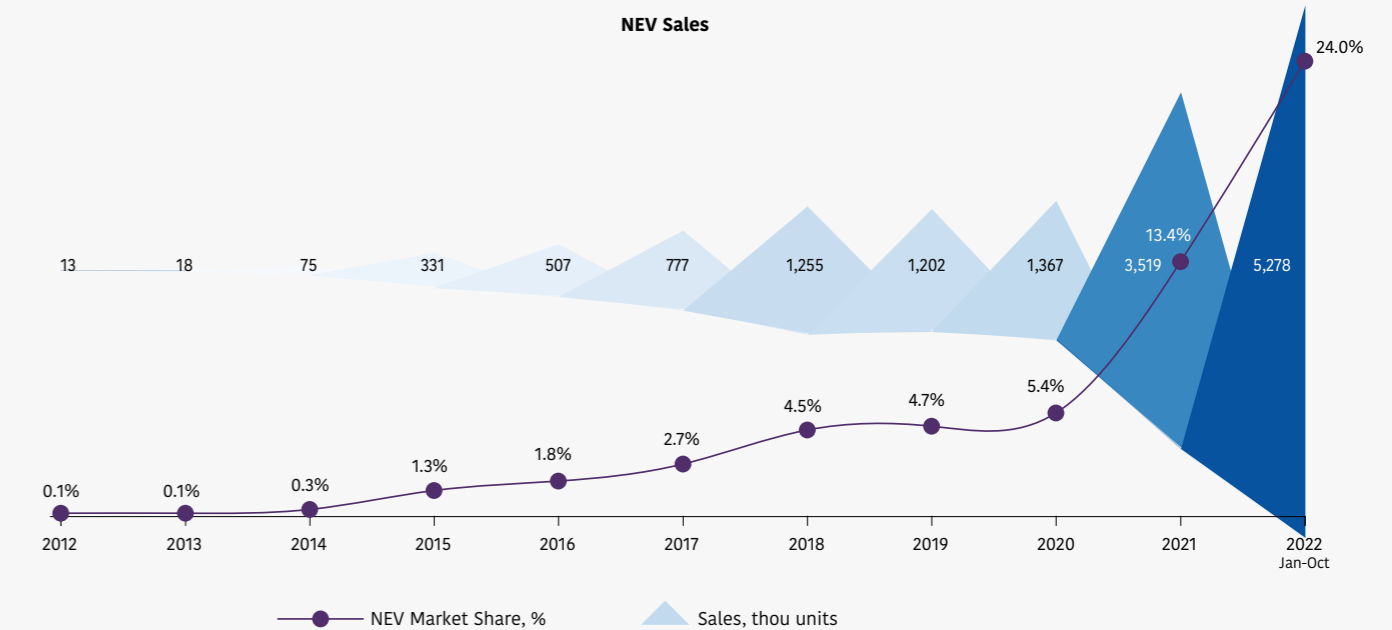
Racing Ahead

A number of factors are driving the NEV boom – the strong government support, the rising demand, and the fact that NEV's supply chain has not suffered the heavy blow traditional vehicles felt as they are less reliant on imported components. And the result is stunning – the NEV's record streak has helped the country achieve its target three years ahead of schedule. China was targeting a 20% NEV share in new vehicle sales by 2025, while the most recent data showed green cars accounted for 24% of vehicle sales

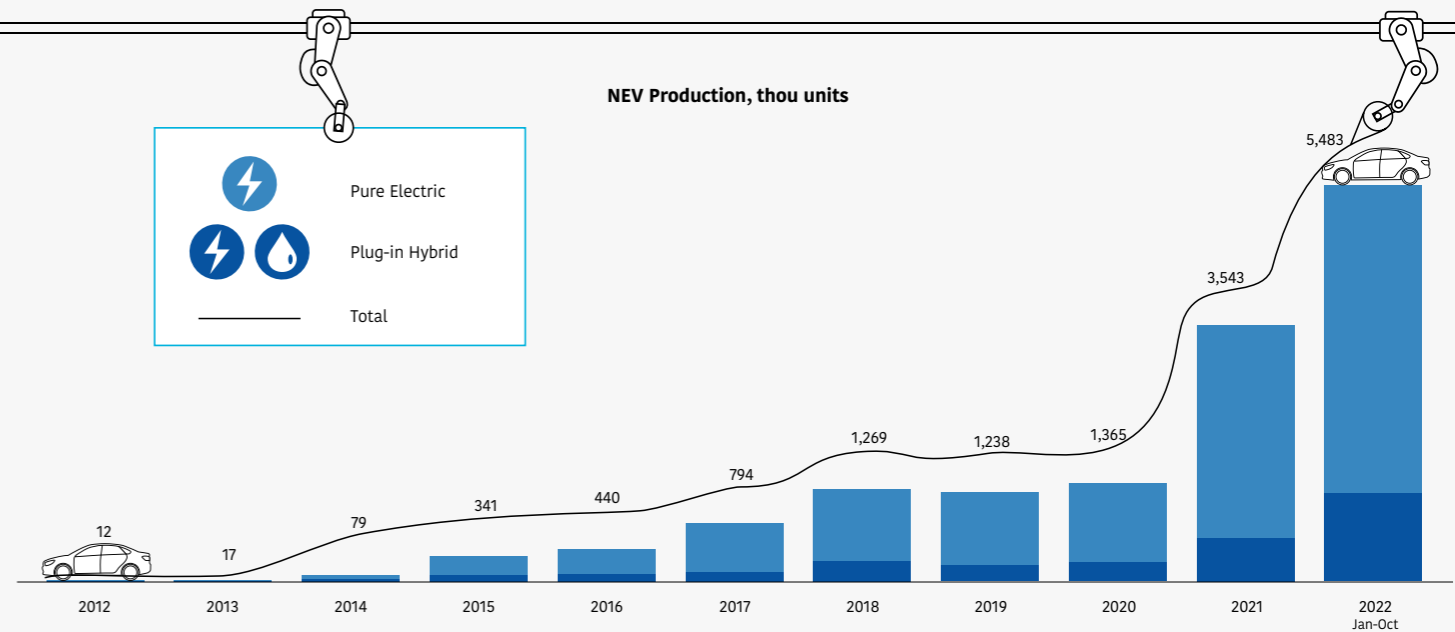
in January-October 2022. The share nearly doubled from 2021, when it stood at 13.4%. And if we look at the 2020 data, the share was only 5.4%. NEV sales in China have been rising at a breakneck speed. In 2021 they skyrocketed by 157% y/y to 3.5mn units, accounting for more than half of global sales of electric vehicles, meaning that Chinese customers bought one out of every two EVs sold globally in 2021. And while the sheer size of China's auto market pre-defines the country's dominant global position in terms of volume, it is

the fast market penetration that is truly remarkable. Should China keep this pace, it may soon challenge Europe's dominance in terms of electric vehicles market penetration.

From January to October 2022, China's total auto sales grew by less than 5% y/y. However, sales of new energy cars have been skyrocketing, increasing by as much as 107% y/y. For many households in China, new energy cars are not the future but rather a part of their everyday lives.



Source: China Association of Automobile Manufacturers, CAIC



Source: China Association of Automobile Manufacturers, CAIC

Getting Global

The domestic market is not the only battlefield for China's NEV manufacturers. Since 2021, China's auto sector has become an increasingly important driving force of the country's exports. Data from the China Association of Automobile Manufacturers showed that in the first nine months of 2022, China exported 2.1mn cars, growing by 55.5% y/y. New energy cars accounted for 18.5% of the total, with their exports more than doubling on the year to reach 389,000 units. Back in 2020, China exported 70,000 new energy cars, accounting for only 7% of the total auto exports. Throughout 2021, the number quickly increased to 310,000, or 15% of the total.

What is even more important, China's NEV manufacturers are now taking the global lead, a position that has never been achieved by China's traditional carmakers, which had to compete with foreign automakers with a long-standing reputation of being more technologically advanced.

CHINA PRODUCES 3/4 OF ALL LITHIUM-ION BATTERIES GLOBALLY



For an economy that is very likely to continue to suffer from a slowing-down property sector in the foreseeable future, the robust expansion of the NEV sector as a new growth engine is definitely exciting. Compared with fossil fuel vehicles, the NEV industry chain is much more expanded. From downstream raw materials such as lithium, cobalt, iron, and rare earth to motor, through midstream electric control, and batteries, to vehicle manufacturing, charging services and post-market

services in the downstream, the sprawling industry chain provides numerous opportunities for China's economic growth.

China is already dominating the global NEV battery supply chain. The country produces three-quarters of all lithium-ion batteries and is home to 70% of the production capacity for cathodes and 85% of the production capacity for anodes, both key components used in batteries. Over half of the lithium, cobalt and graphite processing and refining capacity is also located in China, according to data from the International Energy Agency (IEA). Half of the top 10 global power battery suppliers are Chinese companies with a market share of 37.3%. To further boost their global reach, Chinese companies are



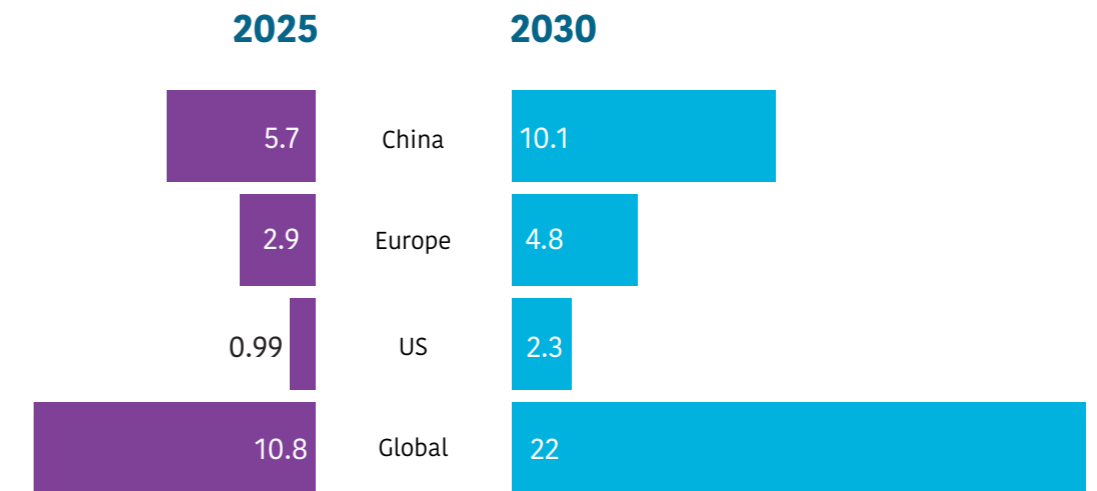
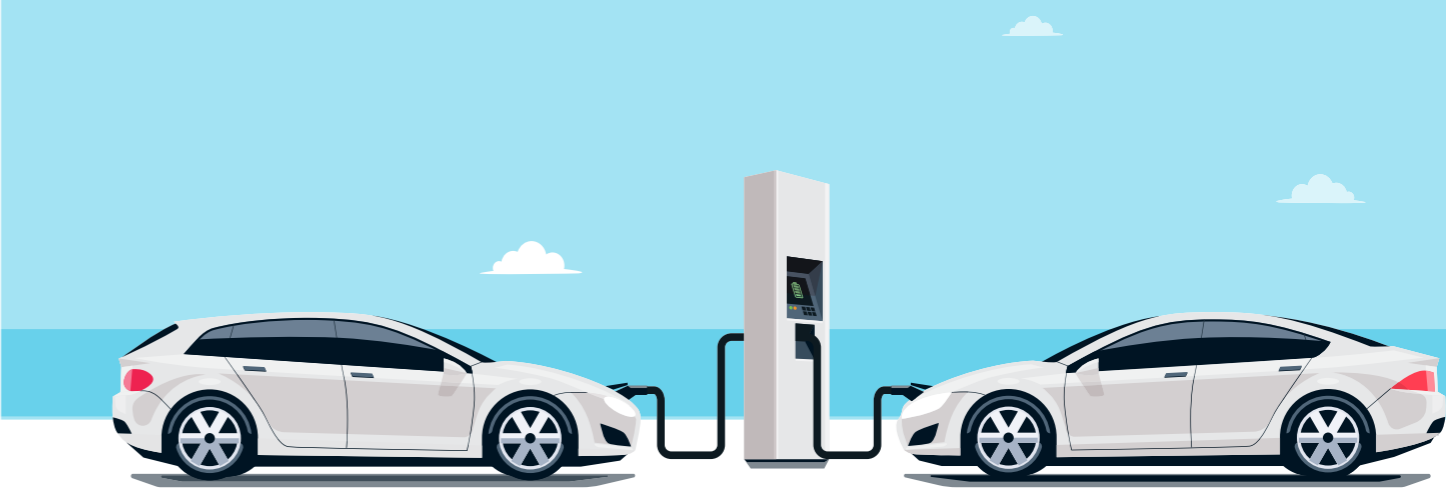
heavily investing in projects that will increase their capacities in the mining and processing of raw materials for battery production. In January 2022, Zijin Mining Group bought Canadian lithium miner Neo Lithium Corp. In June 2022, China's largest producer of battery metal Ganfeng Lithium started the construction of the Mariana lithium project in Argentina, one of the largest lithium deposits in the world. Once fully operational, total production should reach 20,000 tonnes of lithium

chloride a year. Chinese electric vehicle maker BYD is in talks to buy six lithium mines in Africa, with total reserves of lithium oxide at 2.5% grade estimated at more than 25mn tonnes. China's leading makers of electric vehicle battery materials have announced plans to spend a combined USD 11bn to boost their production capacities, with investments covering all key components of lithium-ion batteries, Nikkei Asia reported in April 2022, citing publicly available capital expenditure plans released by 13 manufacturers. Benchmark Mineral Intelligence, a UK-based research and consultancy firm focusing on the lithium-ion battery to EV supply chain, estimates that China is on course to have 3,733 GWh of lithium-ion

battery cell capacity by 2031, more than double the total capacity (1,721GWh) expected in the rest of the world.

EXPERIENCE STORES, GOVERNMENT INCENTIVES BOOST CHINESE NEV MARKET

NEV Sales Outlook 2025-2030, mn units



Source: IEA

CHINA'S NEV MARKET TO EXPAND AT CAGR OF 38% IN 2021-2025

New Pillar Industry

So, will the NEV sector become the new pillar industry for China? A report published by global market research firm International Data Corporation estimated that China's NEV market is likely to expand at an impressive CAGR of around 38% from 2021 to 2025, with the total market size reaching 12.99mn units in 2025. Analysts from Guotai Junan Securities predict that in 2022, the whole NEV industry chain will contribute 1.6% of the overall GDP. With the rapid growth of the

sector, it is expected to contribute 5% or even more of the GDP in the years ahead. However, many challenges remain. Skyrocketing costs as a result of surging prices of materials, chip shortages, regional discrepancies in NEV-related infrastructure are just a few to highlight. Nevertheless, China's NEV sector is on a fast track and leading the nation's transition to a greener and more advanced economic growth model.

AI FOR RICH AND POOR

AI to fuel India's growth trajectory across the board



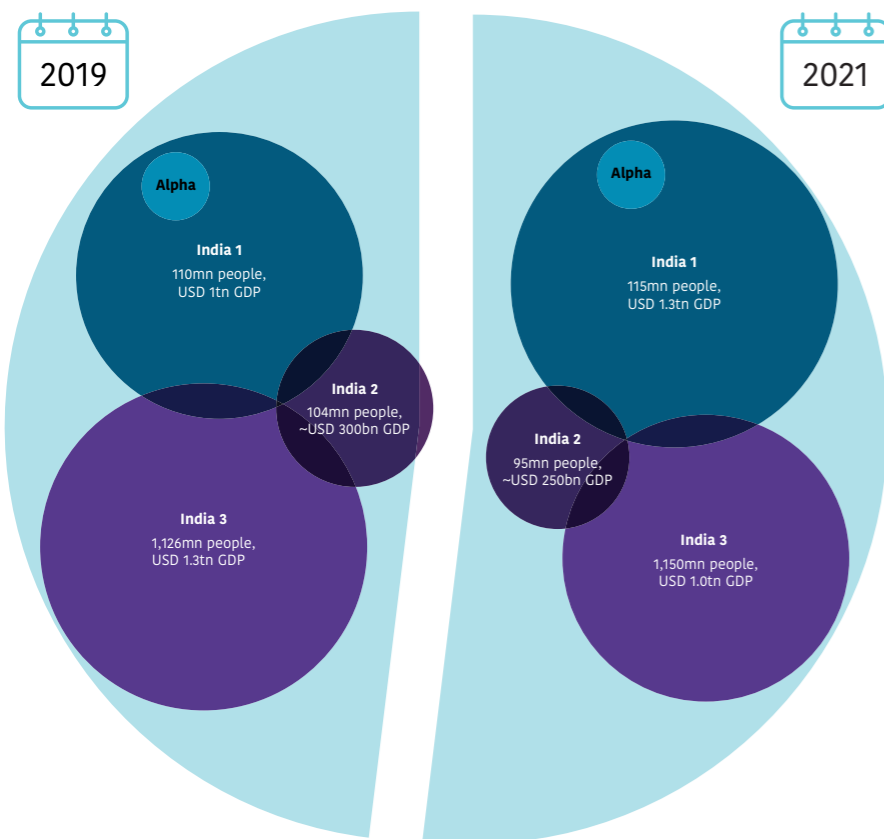
Boryana Nedyalkova
Industry Researcher

India is among the global leaders in AI research and adoption which it counts would help it become a developed nation by 2047. However, digitally enabled workplaces and smart online shopping cater to as little as 8.5% of its population. To make the remaining join the digital economy, the government first needs to increase their discretionary income. AI can help in staging a manufacturing revival and creating made-to-measure financial products and a start-up environment that would allow poorer Indians to make money before they spend it.

Globally, such a manufacturing revival would allow India to rise as an alternative to China in many global supply chains, which the COVID-19 pandemic has proved to be crucial for many businesses worldwide.

ACCORDING TO THE WORLD INEQUALITY REPORT 2022, IN 2021 IN INDIA, THE WEALTHIEST 10% OF THE POPULATION OWNED 65% OF TOTAL HOUSEHOLD WEALTH

The India Consumer Stack



Source: Sajith Pai, Blume: "Indus Valley Annual Report 2022"

India 1 Alpha

- Mumbai, Delhi NCR, Bengaluru, Pune
- Native English speakers, Westernised
- Top 5% of Tier 1 cities
- Top 0.1% of Tier 2 cities

India 1

- Tier 1 cities
- Delhi, Mumbai, Kolkata, Jaipur, Chennai, Goa
- Fluent in English
- Digitally savvy
- Western values
- Convenience over cost

India 2

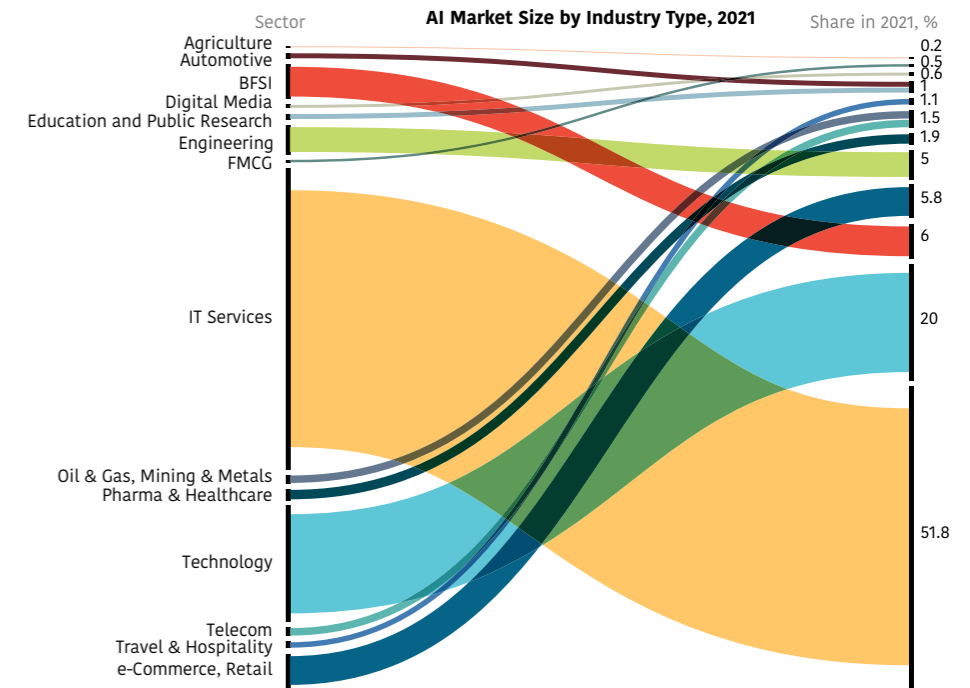
- Tier 2 & 3 cities
- Koimbatore, Vizag, Indore, Lucknow, Agra
- Vernacular languages
- Not fluent in English
- Less digitally savvy
- Aspiring to a better life

India 3

- Tier 3 towns, rural centres
- Less educated
- Engaged in informal and/or manual labour
- Excited by connectivity and access to content

How Big is AI

India's domestic AI market is expected to jump from USD 9.4bn in 2022 to USD 23bn in 2026, growing at a CAGR of 27.5%, according to "State of Artificial Intelligence in India - 2021", a report by Analytics India Magazine (AMI) and TAPMI, an Indian business and management centre for research and executive education. AI solutions in three segments - (1) retail and e-commerce, (2) semiconductors chips and sensors, and (3) engineering technology - are going to drive this development, with the market size of AI in retail and e-commerce alone expected to reach USD 6bn in ten years from USD 448mn in 2021.



Source: State of Artificial Intelligence in India - 2021, a report by Analytics India Magazine and TAPMI

At the Global Vanguard

India made the maximum use of AI during the COVID-19 pandemic compared to major economies like the US, UK and Japan, with more than 70% of Indian companies having implemented some form of AI at that time, global consultancy PwC said in a report titled "AI: An Opportunity Amidst a Crisis".

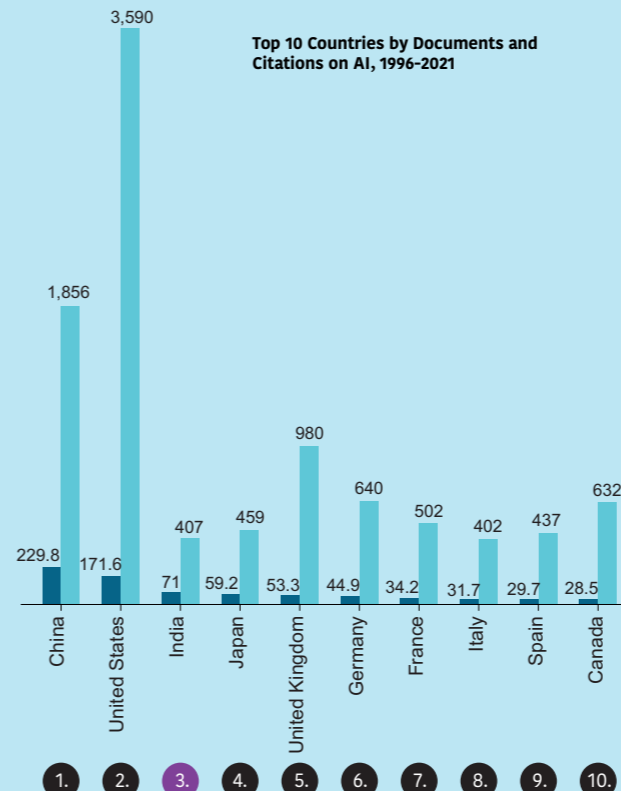
Businesses headquartered in India showed the highest adoption of AI in 2021,

ahead of businesses based in China, Latin America, the Middle East, the ASEAN region, north Africa and south Asia, global consultancy firm McKinsey's said in its "State of AI in 2021" report.

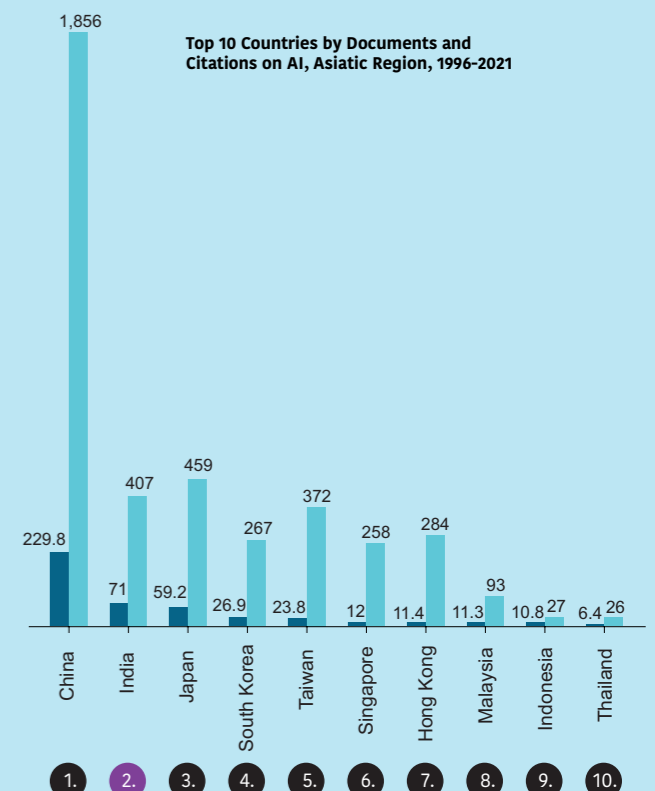
Also in 2021, a study by the Washington-based nonprofit public policy organization The Brookings Institution ranked India among the Top 10 nations in the world in technological advancements and

funding in artificial intelligence. India was ranked sixth in spending and investments on AI made by public, governmental initiatives, as well as by private institutes and organisations, but was found to be outside the Top 10 in terms of commercial and research initiatives. In 2021, India was at par with the UK at the global number three in tech venture capital funding.

Top 10 Countries by Documents and Citations on AI, 1996-2021



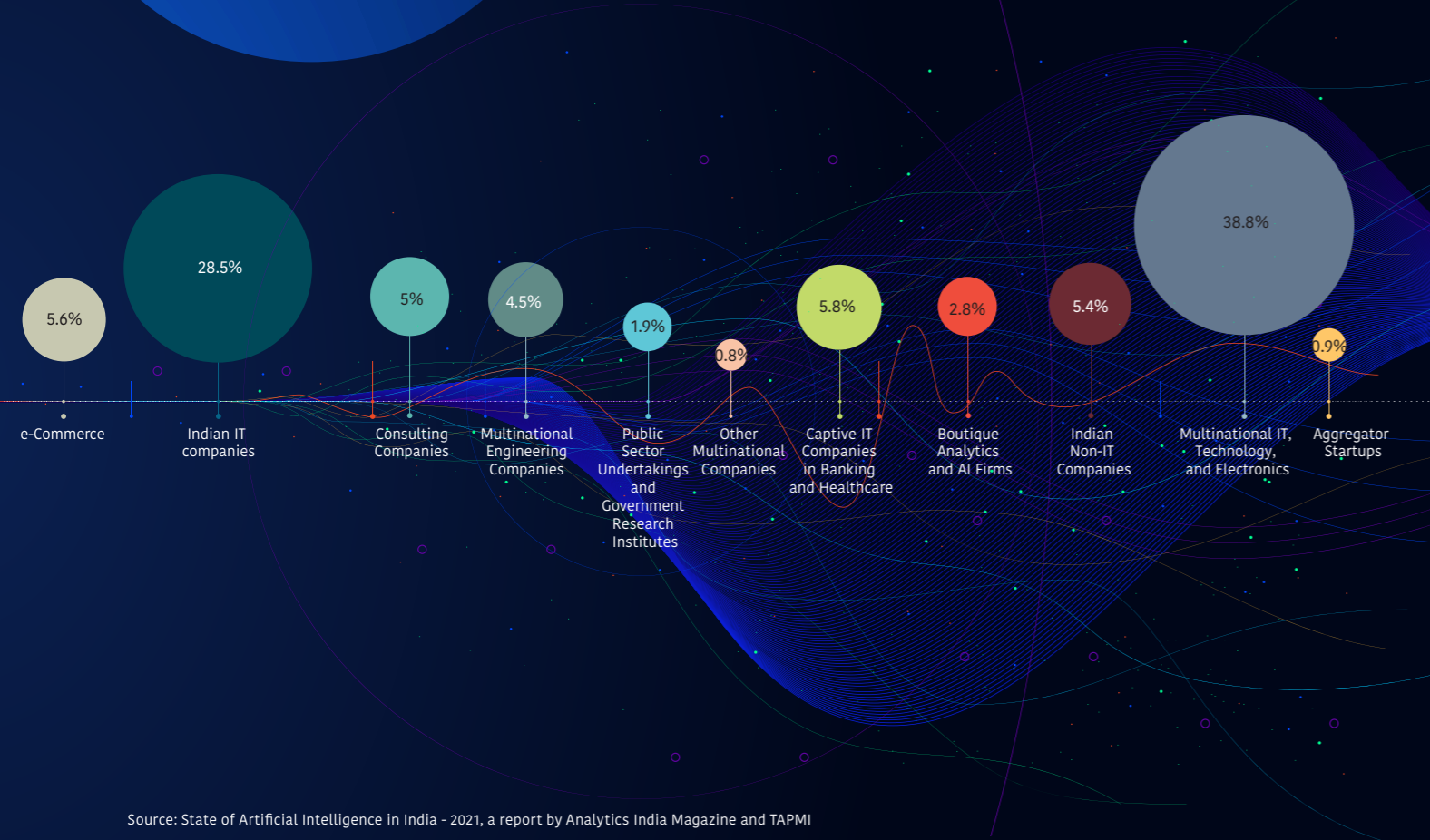
Top 10 Countries by Documents and Citations on AI, Asiatic Region, 1996-2021



AI Players

The AI R&D environment in India is populated by multinational and domestic IT firms working on AI solutions, as well as by captive AI units largely of banking and healthcare companies, various manufacturing companies implementing AI solutions in their products, and a multitude of digital technology-driven start-ups developing or using AI in their operations.

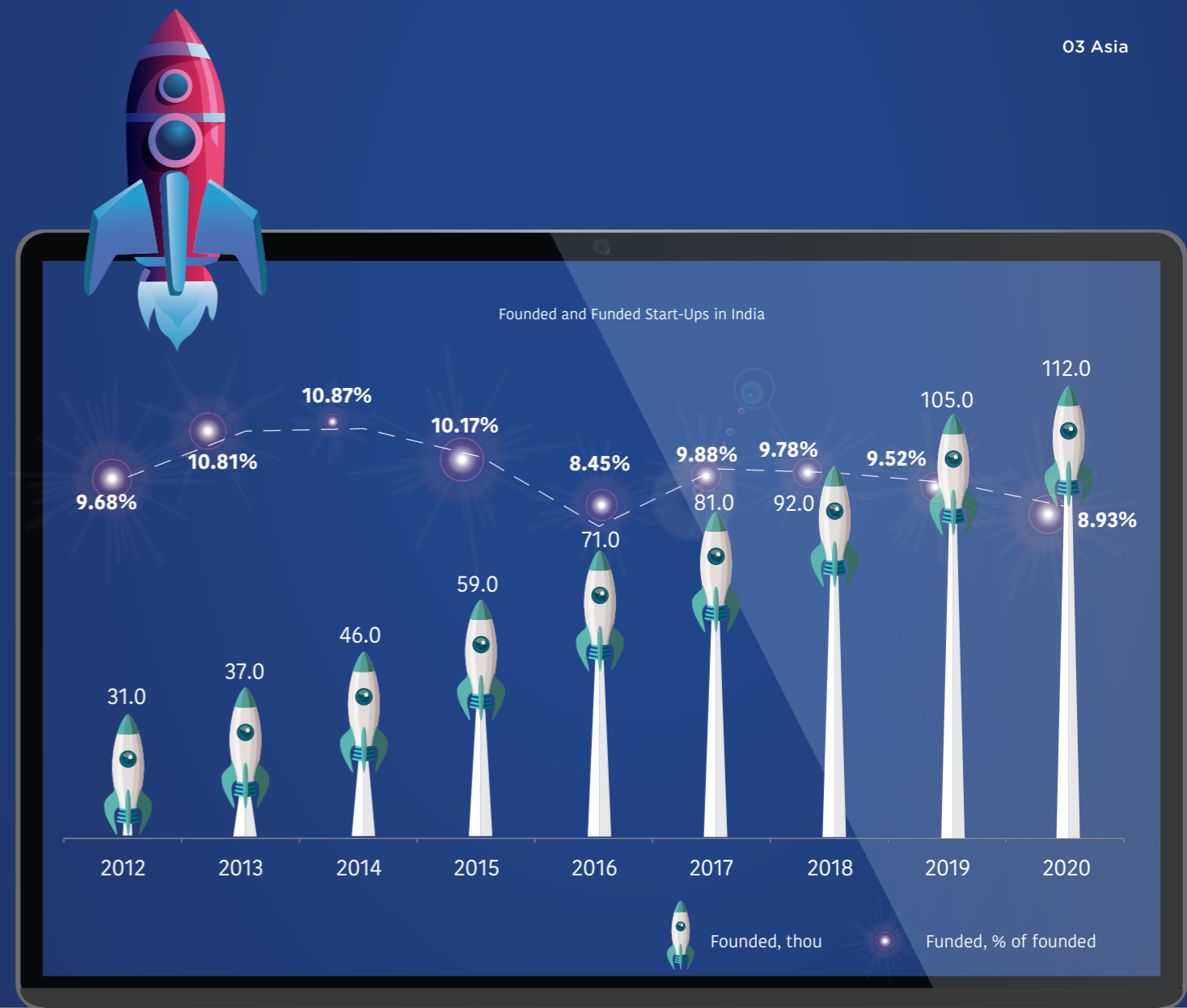
AI Market Size by Company Type, 2021



Source: State of Artificial Intelligence in India - 2021, a report by Analytics India Magazine and TAPMI

A total of 44 Indian-based start-ups turned unicorns, i.e., were valued at over USD 1bn, in 2021, India's highest number in a year, said the Economic Survey of India 2021-22. This brought the total number of unicorns in India to 83, valued at a combined USD 277bn. Technology start-ups account for the largest share of India's unicorns, which was made possible through high smartphone penetration, flourishing digital payment platforms and digital-

focused business models, according to the India Innovation Index 2021 by the National Institution for Transforming India (NITI Aayog), a government think-tank set up in 2018 to replace the erstwhile Planning Commission of India. As of January 10, 2022, India ranked third globally in number of start-ups, behind the US and China and ahead of the UK, the Economic Survey of India 2021-22 said.



Source: VCC Edge, MCA, Credit Suisse, Bain, "Indus Valley Annual Report 2022" by Blume

Regulation Overdue

Despite this multitude of players and bustling activity, the use of AI-powered tools in India is severely under-regulated.

The government's intentions to foster digital transformation in the country can be traced back to as early as the first decade of the 2000s, when the IT Act 2000, and its amendment IT Act 2008 were adopted to promote the IT industry, regulate e-commerce, facilitate e-governance and prevent cybercrime. As of end-2022, this is the only legislation at India's disposal for handling the IT industry, the use of AI-en-

abled tools included.

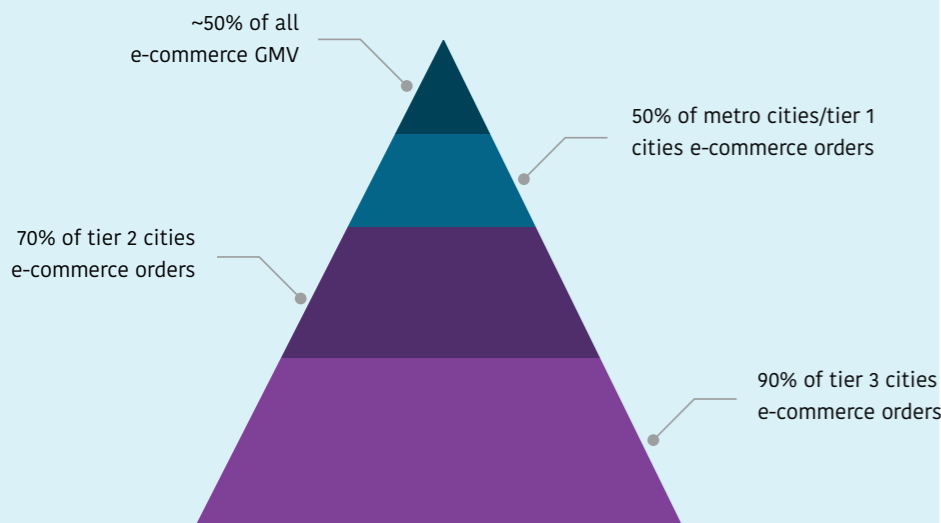
In August 2022, the government withdrew a piece of proposed legislation, the Personal Data Protection Bill 2019, because it increased the compliance burden and data storage requirements of private companies while exempting law enforcement agencies and public entities from the law's provisions for national security reasons.

The need to regulate AI use in India comes from many places. One issue is defining

what is permissible use of AI in business, another is granting protection from malicious use of AI tools, yet another has to do with the ethics of usage of the data that is being fed into the AI algorithms.

We can expect the year 2023 and beyond to bring in much-awaited legislation targeting storage and use, but also potential misuse or leakage of personal data related to the rapid spread of AI-enabled tools and services in India.

E-Commerce Gross Merchandise Value (GMV) Paid for via Cash-on-Delivery

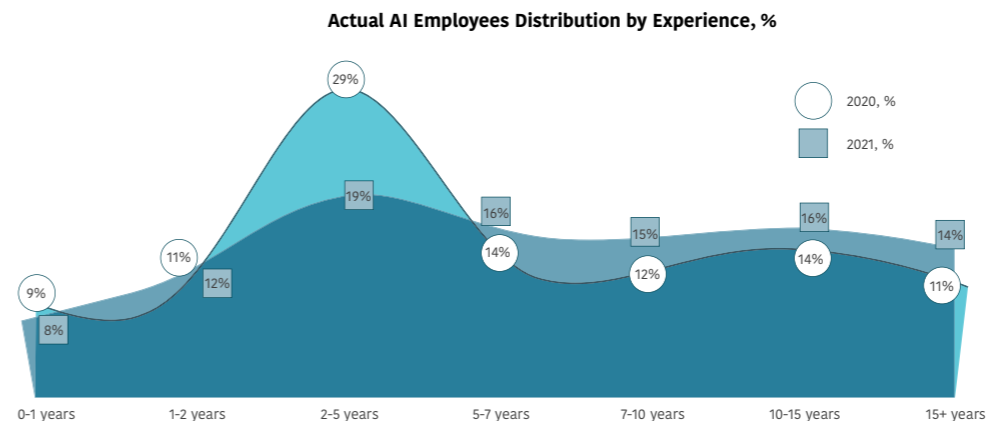
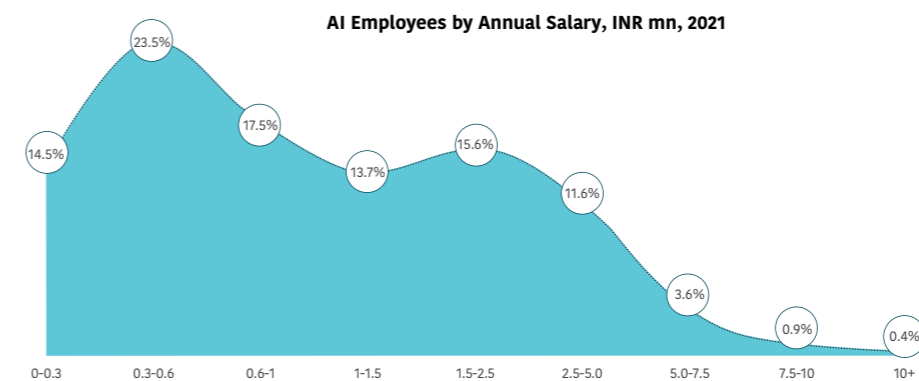


Source: SBI, Morgan Stanley, Bain, "Indus Valley Annual Report 2022" by Blume

Why Is India an AI Powerhouse

Services Outsourcing

Several factors have contributed to India's emergence as a global leader in AI research and adoption. In the 1990s, the country lost to China the race to become the global centre of outsourced manufacturing. At the same time, its vast pool of well-educated and English-speaking young people made it a suitable location for business process outsourcing. This essentially meant that India started specializing in business-oriented technology and engineering education. Physical infrastructure in India is very hard to develop because of its costs and the vastness of the country. Against this backdrop, digital infrastructure has emerged as more affordable. Targeted government policy and the physical distancing norms introduced to handle the spread of the coronavirus from March 2020 onwards, have thus turned India the world's fastest-growing market for new internet users as of 2022.



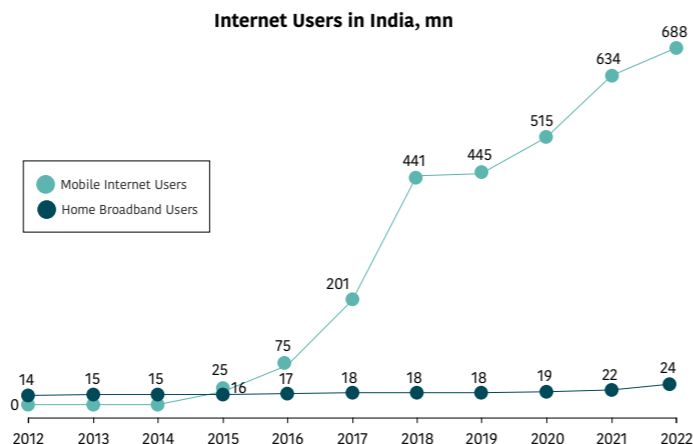
Source: State of Artificial Intelligence in India - 2021, a report by Analytics India Magazine and TAPMI

Cheap Mobile Internet

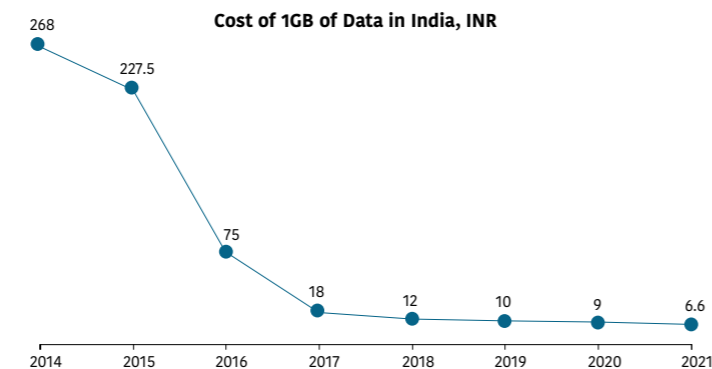
Millions of less well-off Indians have come online from 2016 onwards, thanks to the entry of 4G operator Jio Infocomm on the market. Backed by its deep-pocketed parent company Reliance Group, Jio unleashed a real price war with affordable phones and free data plans. For subscribers this meant higher affordability and usage, which contributed to a higher smartphone and mobile Internet penetration rate and helped generate revenue in other sectors such as e-commerce and online banking. As of 2022, Reliance Group holds the largest market share of AI operations among Indian companies, with AI-powered solutions across its retail, telecom, oil & gas and other segments. Around 2016, it turned out that most Indians accessing the internet for the first time, do so on a smartphone or a tablet, leapfrogging the desktop PC and the laptop, and creating huge opportunities for developers of mobile phone apps and services.

UPI

The country is globally renowned for its Unified Payments Interface (UPI), a payment system facilitating low-cost, real-time payments and supporting broad inter-operability between different providers. The scale of penetration of UPI is unbelievable by Western standards, with street vendors – a very traditional occupation – largely accepting UPI payments from their customers. Such an environment has enabled the captive AI R&D units of banks and start-ups to develop AI-driven innovative tools for mobile payments.



Source: Redseer, Lumikai, "Indus Valley Annual Report 2022" by Blume

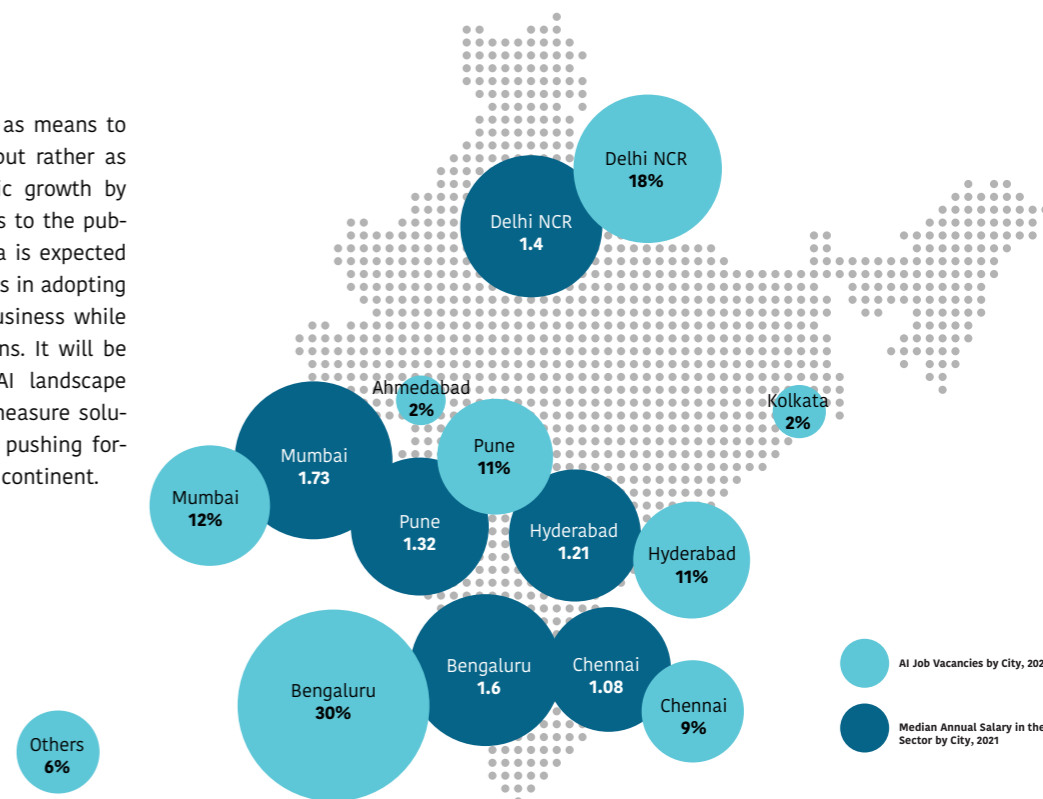


Source: QZ, TRAI, "Indus Valley Annual Report 2022" by Blume

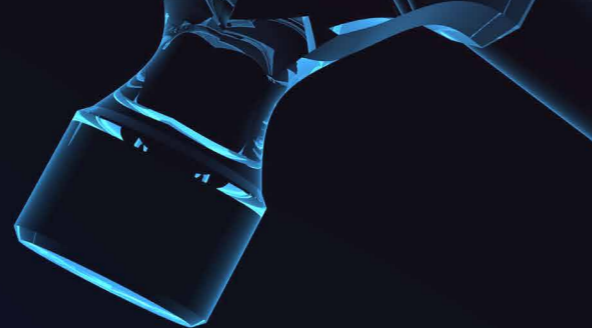
ONLY 10% OF INDIANS HAVE EVER SHOPPED ONLINE, COMPARED TO ABOUT 50% OF CHINESE

In India, AI is not perceived as means to achieve global domination but rather as a tool to promote economic growth by bringing measurable benefits to the public. In 2023 and beyond, India is expected to record substantial progress in adopting AI to do more and better business while improving the lives of Indians. It will be exciting to watch India's AI landscape come to life with made-to-measure solutions and better regulation, pushing forward a country that is also a continent.

Wages and Job Vacancies in the AI Sector by City, 2021



Source: State of Artificial Intelligence in India - 2021, a report by Analytics India Magazine and TAPMI



THE RETURN OF THE HAMMER

Southeast Asia Feeling the Volcker Shock



U-Ming Lee
Industry Researcher
Southeast Asia

The US Federal Reserve caused a stir in the global financial markets in June 2022 when it raised its interest rates by 75 basis points (bps), the most aggressive upward step it had made since 1994. The Fed's hawkish move wasn't wholly unexpected; after all, the US central bank had signalled its intentions to tamp down multi-decade high inflation. The June rate hike was swiftly followed by another five straight 75 bps raises.

The June rate hike was swiftly followed by three more 75 bps raises as the Fed was raising interest rates at a speed unseen in a generation, raising the spectre of a repeat of the Volcker shock of the 1980s.

In this article, we will briefly explore the history of the Volcker shock and the negative impact on the Southeast Asian economies. Then, we'll critically evaluate whether the intervening four decades have decoupled the Southeast Asian economies from US monetary policy decisions, or whether they remain vulnerable to a Volcker shock.

“THE DOLLAR IS OUR CURRENCY, BUT IT'S YOUR PROBLEM.”

– John Connally

The bold statement, made by former Treasury Secretary John Connally in 1971, succinctly describes the US dollar's hold on the global economy. The US government makes fiscal and monetary policy decisions motivated by domestic concerns, however, as the primary global reserve currency, the US dollar's policy-driven movements impact investment and trade flows worldwide. For countries whose domestic socioeconomic conditions parallel those of the US, the Fed's decisions can be a potent boost to global economic standing. However, woe betide countries whose conditions line up differently from the US because the Fed's decisions can render domestic policymakers powerless to affect the changes their societies need.

It took less than a decade before Connally's pronouncement made itself dramatically evident. The US had suffered from ruinous inflation throughout the 1970s, with spiralling prices becoming a political hot button as consumers felt the rapid erosion of their purchasing power. In 1981, US Federal Reserve chairman Paul Volcker came up with a painful but ultimately effective solution in breaking the inflation's hold on the economy. Volcker's plan was to aggressively raise the federal funds rate. When he took the Federal Reserve chair in August 1979 the reference interest rate was 10.94% and by July 1981 it had been raised to a high of 19.04%. The Federal Reserve's sudden and prolonged interest rate increase, known as the Volcker shock, served its purpose to bring down inflation under control but at the price of nosediving the US economy into a recession.

Feeling the Volcker Hammer

The US Federal Reserve's decision had an enormous impact on the rest of the world, including Southeast Asia. The Volcker shock's freezing effect on economic activity resulted in severe commodity price declines, hitting the revenues of Southeast Asia's export-oriented economies. Moreover, for countries like the Philippines and Malaysia, which had amassed US dollar-denominated debt, the rapid interest rate hikes led to unsustainably high debt servicing costs. The resulting global recession led to severe economic slowdowns in these otherwise rapidly growing econo-

mies, forcing the Philippines, for instance, to turn to the IMF for debt restructuring assistance. In contrast, Thailand and Indonesia remained relatively unscathed by the Volcker shock. Thailand managed to escape it by implementing costly but necessary economic reforms, including raising interest rates to match those of the US and enforcing fiscal discipline. Meanwhile, Indonesia benefited from having concessional loans with fixed interest rates, insulating it from the ruinous impact of reference interest rate increases.

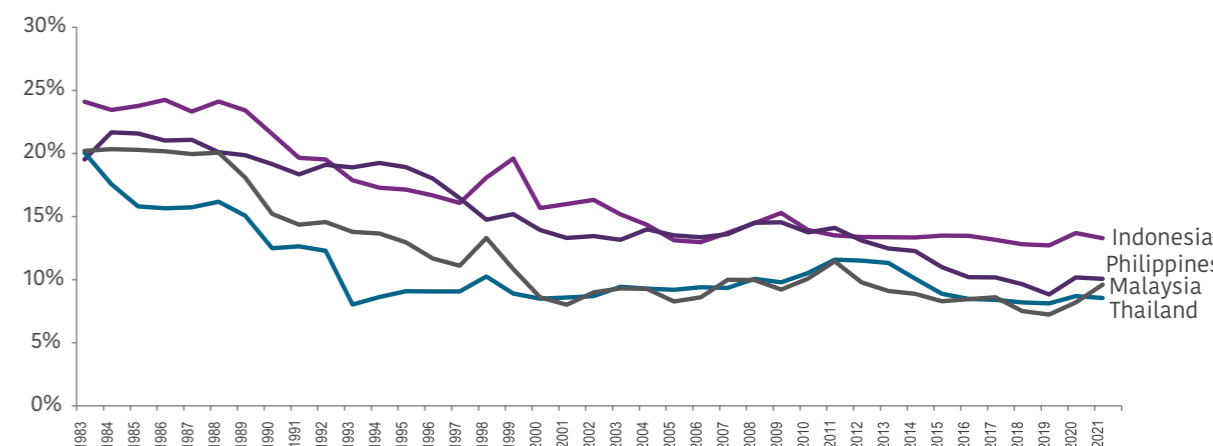
1980s VOLCKER SHOCK SEVERELY HIT REVENUES OF SOUTHEAST ASIA'S EXPORT-ORIENTED ECONOMIES

How Things Stand Now?

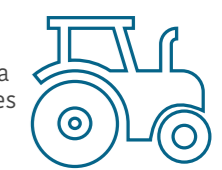
Much has changed in the Southeast Asian economies since the 1980s. The economies in the region have diversified greatly. While three decades ago they were dependent on agriculture, today they rely on a wider spectre of industries to fuel growth.

Meanwhile, unemployment and poverty have fallen in every country throughout the region as the rising economic tide raised all boats, swelling the middle classes and establishing consumerist societies everywhere in Southeast Asia.

Share of Agriculture in Selected Southeast Asian Economies



Source: World Bank

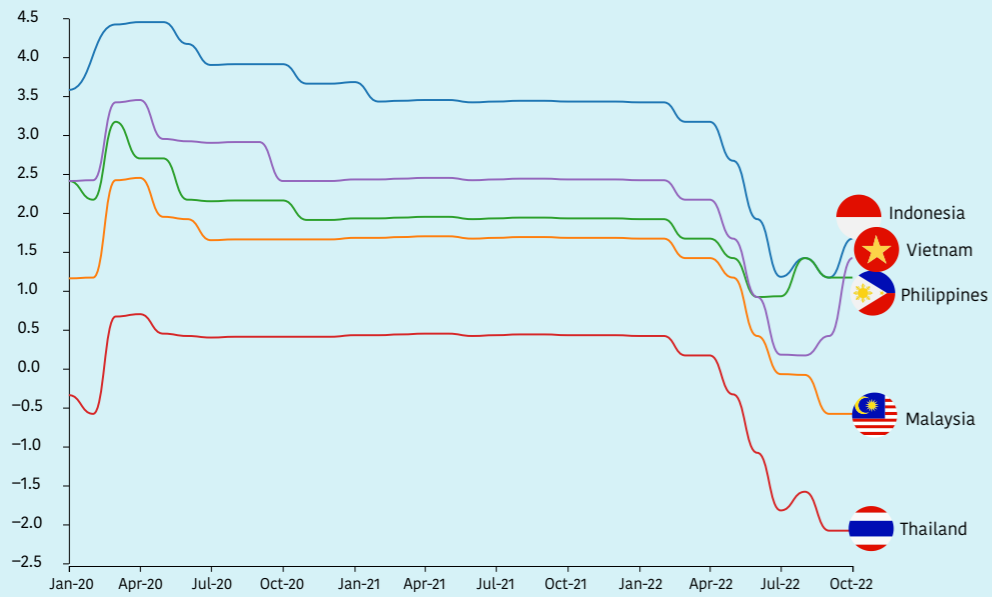


However, John Connally's exhortation from half a century ago, remains as true as it was back then. Southeast Asia's central banks have struggled to keep pace with the contemporary Federal Reserve's rapid interest rate rises. Interest rate spreads

– the difference between each Southeast Asian economy's reference rates and the Fed funds rate – have narrowed significantly between 2020 and 2022. In two cases, i.e., Malaysia and Thailand, the interest rate spread turned negative in 2022.

JOHN CONNALLY'S WORDS STILL RING TRUE AFTER 50 YEARS

Difference between Southeast Asian Reference Interest Rates with Fed Funds Rate



MALAYSIA, THAILAND'S EXCESSIVE CAUTION ABOUT RATE HIKES SEND THEIR CURRENCIES PLUMMETING

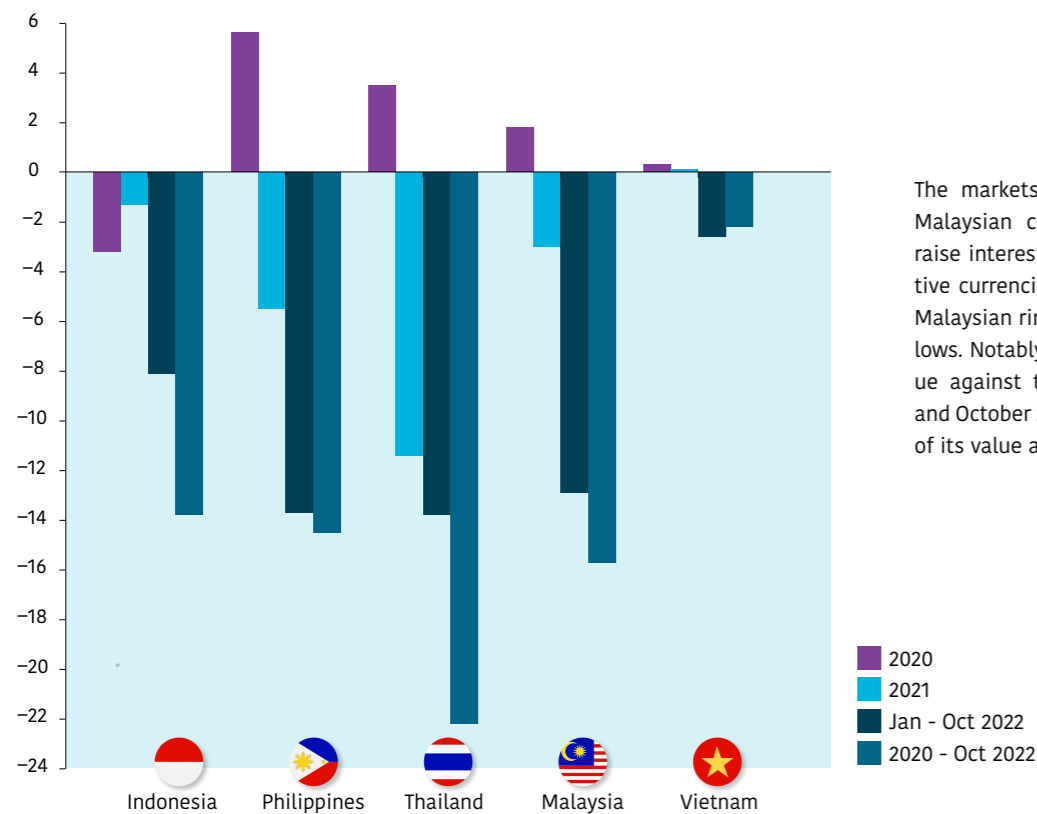
Source: US Federal Reserve Board, Central Banks of Indonesia, Thailand, Malaysia, Vietnam and the Philippines, CEIC

Malaysia and Thailand's significant lag with the Federal Reserve's interest rate moves reflect the dilemma their central banks face. Malaysia and Thailand's household debt-to-GDP ratios in 2021 were among the highest in Southeast Asia at 90.1% and 89.1%, respectively. Their central banks' reluctance to track the Federal Reserve's interest rate raises likely

reflects a considerable policy constraint, i.e., they risk pushing non-performing loans upwards, choking off the current recovery in consumer spending. The central banks also must surely be aware of the considerable debt assumed by their governments in response to the COVID-19 pandemic. Aggressive interest rate rises tracking the Federal Reserve's decision

would crimp the governments' ability to repay or roll over existing debt. Finally, with elections looming in both Thailand and Malaysia, central banks are also probably cautious about taking unorthodox policy moves, lest potential political instability impair these countries' nascent economic recovery.

Performance of Selected ASEAN Currencies vis-a-vis US dollar



The markets seized upon the Thai and Malaysian central banks' reluctance to raise interest rates, sending their respective currencies - the Thai baht (THB) and Malaysian ringgit (MYR) - to multi-decade lows. Notably, the THB lost 22% of its value against the US dollar between 2020 and October 2022, while the MYR shed 16% of its value against the greenback.

Source: IMF, Vietnam Central Bank, CEIC



THAILAND'S TOURISM SECTOR RECOVERY STILL SLOW

Trade and tourism-dependent Thailand and Malaysia benefit less from their weakened currencies post-pandemic. Thailand's tourism sector, which accounted for 11% of the country's GDP pre-COVID, is recovering slowly as high airline ticket prices keep the free-spending

long-haul tourists away. Furthermore, its tourism sector is crippled by the virtual absence of Chinese tourists, who were stuck at home by that country's strict zero-COVID policies. Before the pandemic, Chinese tourists accounted for approximately 30% of total arrivals.



WEAK MALAYSIAN CURRENCY TRANSLATES INTO HIGH FOOD INFLATION

Meanwhile, Malaysia enjoys some benefits from the windfall tax revenues due to higher palm oil prices amidst the ongoing Russia-Ukraine conflict. Nevertheless, record profits for Malaysia's large-scale plantation companies do not necessarily translate into benefits for its citizens. Malaysian consumers depend on import-

ed goods; notably, approximately 60% of Malaysian foodstuffs are imported. The weakening Malaysian ringgit thus translates into accelerating food price inflation, pushing some household finances that were already strained due to the pandemic to breaking point.

Closing Thoughts

The Southeast Asian countries' inability to raise their interest rates in lockstep with the US Federal Reserve highlights the degree to which the Southeast Asian economies remain exposed to changes in US monetary policy. The string of four 75-bps interest rate hikes in 2022 had already stretched Southeast Asian central banks' capacity to control interest rate

policy so the Fed's decision to slow the pace of interest rate hikes in December 2022, when it implemented a 50-bps hike, is a welcome news. The Fed is broadly expected to continue scaling down rate hikes throughout 2023, a move that would send the US dollar down and Asian stocks rallying as investors turn east. Moreover, investor appetite for the region will be

supported by a bullish economic outlook, with ASEAN's economy expected to expand at a rate faster than any other region in the world in 2023.

ASEAN ECONOMY TO OUTPERFORM ALL OTHER REGIONS IN 2023

14



EMEA

EUROPE'S WINTER OF DISCONTENT



Andrzej Zurawski
Research Economist
Poland

Months before Russia's invasion of Ukraine rattled the global energy markets and sent chills through the EU that is highly dependent on Moscow for its gas, consumers on the continent were already feeling the impact of a brewing energy crisis. The post-pandemic economic recovery had fuelled demand for energy, sending prices skyrocketing as supply chain disruptions were hindering the flow of gas. Prices on the Dutch TTF hub – a European benchmark for natural gas – grew more than fivefold throughout 2021, pushing prices above EUR 100 per megawatt hour (MWh) for the first time ever.

Still, the worst was yet to come. Gas prices continued to break record after record surpassing at some point EUR 300 per MWh.

And as European consumers turned on the heating in their homes, the rising gas prices were not the main worry. Alongside energy prices, the war in Ukraine pushed up food prices, driving inflation to multidecade highs, prompting rapid monetary policy tightening, squeezing household budgets, and pushing the EU into a deeper economic downturn. The full-blown energy crisis once again showed that the EU must build up its energy resilience and accelerate its transition to a low-carbon economy. Ironically or not, weaning off Russian energy supplies might prove to be a stronger motivator than the climate change for societies to work harder for a greener future.

ENERGY CRISIS REITERATES IMPORTANCE OF EU ENERGY INDEPENDENCE

Pre-War Status Quo

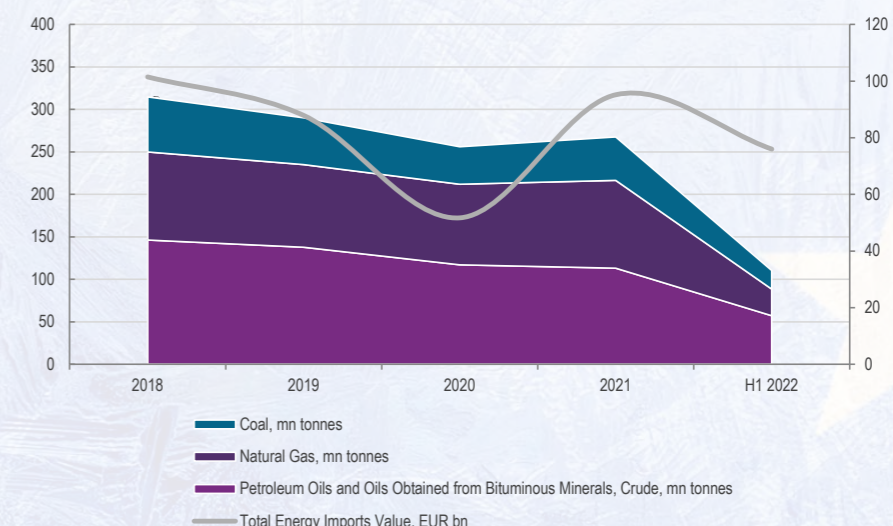
Russia has historically been the largest exporter of natural gas and the second-biggest oil supplier in the world. It has also been the biggest supplier of gas and oil to the EU for more than a decade. The EU imported 785.8mn tonnes of energy products in 2021, up by 3.5% y/y, according to data provided by Eurostat. In value terms, the bloc was paying an average of EUR 25.8bn a month for energy product imports in 2021, which accounted for 14.6% of the EU's total imports. In terms of energy products, petroleum oils had the largest share, making up 56.2% of the

bloc's total energy import volume in 2021. Natural gas followed, taking 28.9%, ahead of coal with a share of 12.6% in 2021. Russia had a dominant position both in terms of value and volume of imported natural gas and petroleum oil. In volume terms, Russia supplied 44.5% of the natural gas and 25.9% of the petroleum oil the EU imported in 2021. In value terms, the share of Russia stood at 39.7% of the bloc's gas imports and at 25% of the oil imports in 2021. So, the EU was paying Russia roughly EUR 400bn a year for oil and gas.



RUSSIA SUPPLIED 44.5% OF THE EU'S NATURAL GAS, 25.9% OF THE PETROLEUM OIL IN 2021

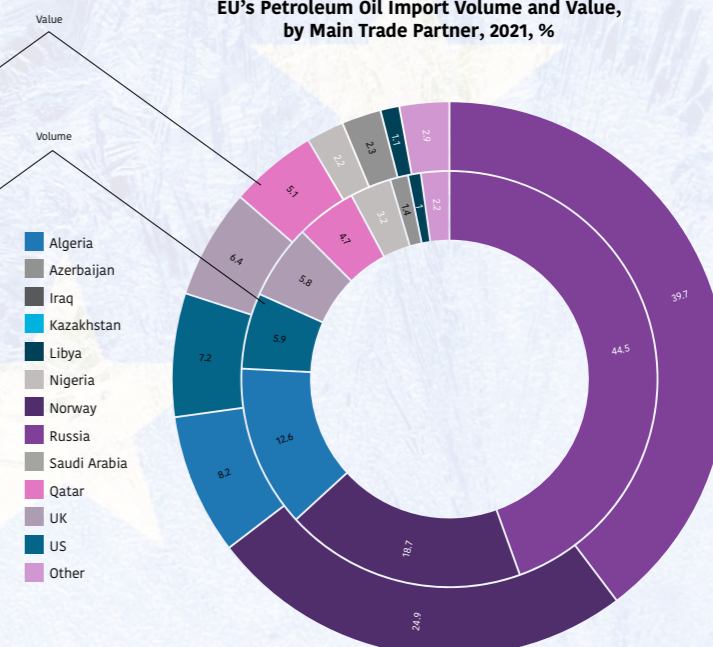
EU Imports of Energy Products from Russia



EU's Gas Import Volume and Value, by Main Trade Partner, 2021, %



EU's Petroleum Oil Import Volume and Value, by Main Trade Partner, 2021, %



Tangible Results

The EU has long been seeking to reduce its reliance on Russian fossil fuels, but it has been failing to achieve tangible results over the years. It was Russia's invasion of Ukraine that forced the EU to take real actions that yielded positive results.

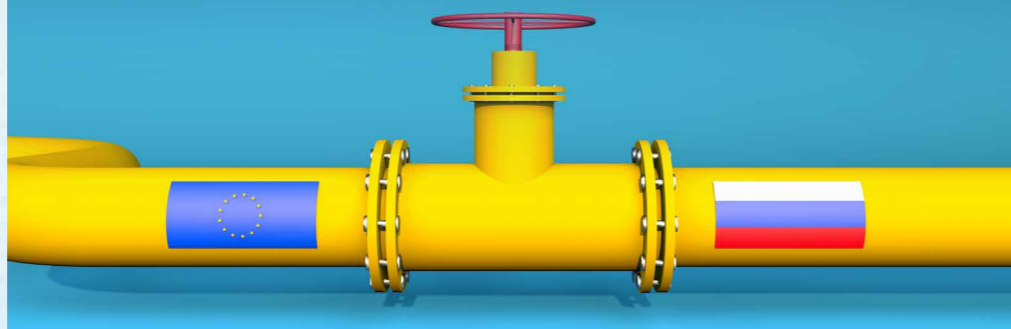
RUSSIAN INVASION OF UKRAINE FORCES EU TO ACT

As a first step, the EU adopted in April 2022 the fifth round of sanctions against Russia that included a full ban on the import of Russian coal that came into force in August. The move saw coal imports from Russia more than halve to 22mn tonnes in the first half of 2022 from 51.2mn tonnes in full-2021.

As part of the sixth round of sanctions, in 2022 Brussels blocked Russian oil imports by sea and cut Russian gas imports by two-thirds, aiming to fully wean off Russian gas in 2070.

The EU's resolve to reduce Russian gas supplies is behind Berlin's decision to halt the approval of the Nord Stream 2 Baltic Sea gas pipeline project, designed to double the flow of Russian gas directly to Germany. The controversial USD 11bn

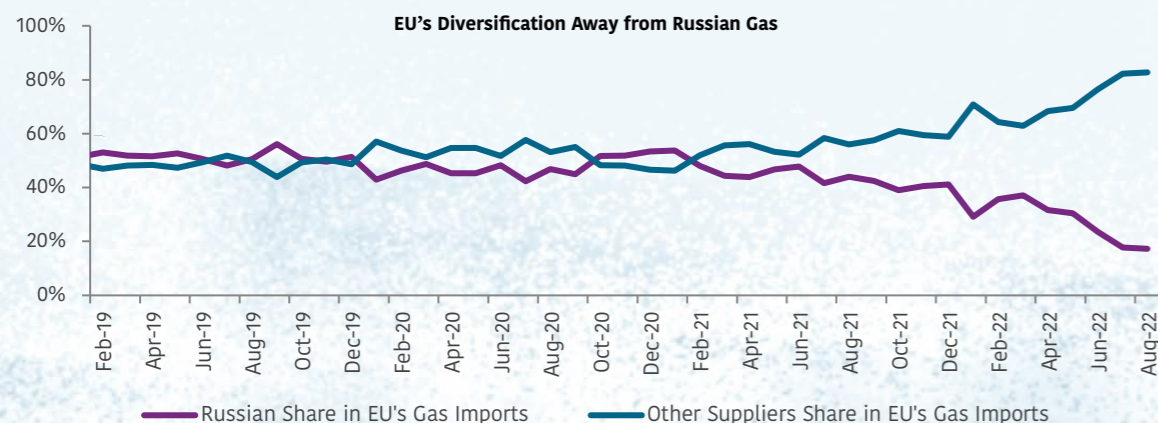
RUSSIAN GAS IMPORTS TO EU DECLINE FROM 56.1% IN SEP 2019 TO 17.2% IN AUG 2022



pipeline was completed in September 2021 and was expected to come onstream in 2022. Russia's reaction to the German rejection was to start reducing supplies through the parallel pipeline, the Nord Stream 1, which is its largest gas pipeline to Europe and normally supplies the EU with about 35% of all the gas it imports from Russia. The undersea pipeline stretches 1,200 km under the Baltic Sea from the Russian coast near St Petersburg to north-eastern Germany. In June, Russia cut deliveries through the pipeline by 75% and in July it closed it for 10 days, citing the need for maintenance. When it reopened, the flow was halved to 20mn cubic metres a day, well below the full capacity of 170mn cubic metres. In late August, Russia shut down Nord Stream 1 entirely, blaming problems with equip-

ment. The pipeline has not been opened since then. In late September four leaks were discovered on the Nord Stream 1 and Nord Stream 2, and Swedish authorities said that explosions had been detected before the leaks. The European Commission head Ursula von der Leyen has said the pipelines were probably sabotaged, while Russia denied responsibility.

All these measures implemented by the bloc are testament for Brussels' resolve to achieve its long-term goal to improve energy security and wean off Russian fossil fuels. Data from Eurostat is showing that the bloc is on track to meet its targets. From as high as 56.1% in September 2019, the share of Russia in the EU's gas imports declined to as low as 17.2% in August 2022.



Source: Eurostat

Weaning off Russia's fossil fuels has been at the centre of the EU's REPowerEU. The plan, which seeks to mobilise investments of up to EUR 300bn by 2030, focuses on

three key topic areas: improving energy efficiency, expanding the use of renewable energy, and securing non-Russian suppliers of oil and gas. The measures

that will help EU states to achieve these targets are energy savings, diversification of energy supplies, and accelerated roll-out of renewable energy.



EU RELIES ON ENERGY SAVINGS, DIVERSIFYING SUPPLIES

Stepping Up Renewables

The long-term measures to address the energy crisis are related to the massive scaling-up and speeding-up of renewable energy in power generation, industry, buildings, and transport. These measures are expected to help the EU accelerate its energy independence, give a boost to the green transition, and reduce prices over time. Over the past few years, the bloc has been deploying renewables at such a fast rate that it helped it overachieve its 2020 renewable energy target. The share of gross final energy consumption from renewable sources reached 22% in 2020,

Saving Energy and Diversifying Supplies

The short-term measures to address the current energy crisis are energy savings and diversifying supplies. The EU has managed to fill its gas storage to 90% ahead of the winter and the IEA estimates that a 13% demand reduction would be needed to keep storage levels above 33% into 2023 if lower flows continue. An EU regulation adopted in July 2022 calls for a 15% voluntary reduction in the bloc's gas demand between August 1, 2022 and March 31, 2023, compared to its five-year average. Data from the European Network of Transmission System Operators

for Electricity shows that electricity consumption has been falling since May 2022 to levels not seen since 2015.

Diversifying supplies has resulted in increased demand for LNG. The bloc's LNG imports rose by almost 70% y/y (or 35bn cubic metres) in the first eight months of 2022. In addition to the record inflow of LNG, EU member states started to diversify their imports from non-Russian pipeline suppliers which included agreements with Algeria, Azerbaijan, and Norway.

or 2 pp above the target level for 2020. That share increased further in 2021, with estimates by the European Environment Agency putting it at 22.2%

To speed up the clean energy transition, Brussels is proposing to increase the headline 2030 target for renewables from 40% to 45%. This would bring the total renewable energy generation capacities to 1,236 GW by 2030, up from 1,067 GW envisaged under the EU's target proposed in 2021.



Achieving this ambitious target would require more steps such as doubling the solar photovoltaic capacity by 2025 and installing 600 GW by 2030; doubling of the rate of deployment of heat pumps, and measures to integrate geothermal and solar thermal energy in modernised district and communal heating systems; setting a target of 10mn tonnes of domestic renewable hydrogen production and 10mn tonnes of imports by 2030, to replace natural gas, coal and oil in hard-to-decarbonise industries and transport sectors.

As paradoxical as it seems, the current European energy crisis may be a powerful boost to the long-dreamed green transformation. The shortages of fossil fuels leading to skyrocketing prices appear to

be a stronger motivator for societies than a climate change. Strategic partnership with various suppliers, who are expected to substitute Russia, such as Algeria or Azerbaijan will likely have an impact on political ties.

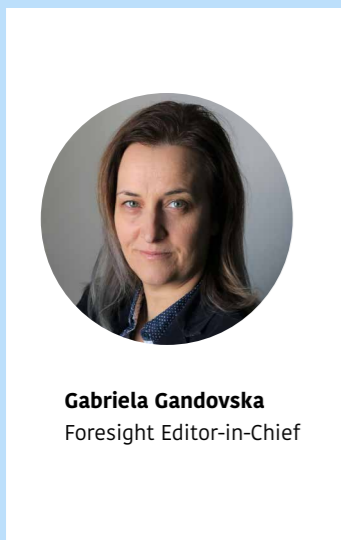
EUROPEAN ENERGY CRISIS MAY BE BOOST LONG-AWAITED GREEN TRANSFORMATION

One should also never forget Ukraine. The country is among the world's largest producers of various minerals crucial for the

green transformation, such as iron, titanium, and uranium. Once the war is over, there will be much space to tighten cooperation for the benefit of both the EU and Ukraine.

Nonetheless, the 2022/2023 winter will be hard. Europeans will pay bills that were hard to imagine a year ago and even that price does not guarantee that all the shortages would be avoided. The relief programmes, such as the EUR 65bn package proposed by the German government, while important for citizens, undermine anti-inflationary struggles of the central banks. Europe has to survive until spring, then come back to a discussion for the transformation of its energy sector.

INSIDE AFRICA'S FOOD CRISIS



Gabriela Gandovska
Foresight Editor-in-Chief

Africa is feeling the brunt of what has been dubbed as the perfect storm with soaring food and energy prices, rising debt, and extreme weather pushing millions into extreme poverty and exposing the continent's overdependency on global food supply chains.

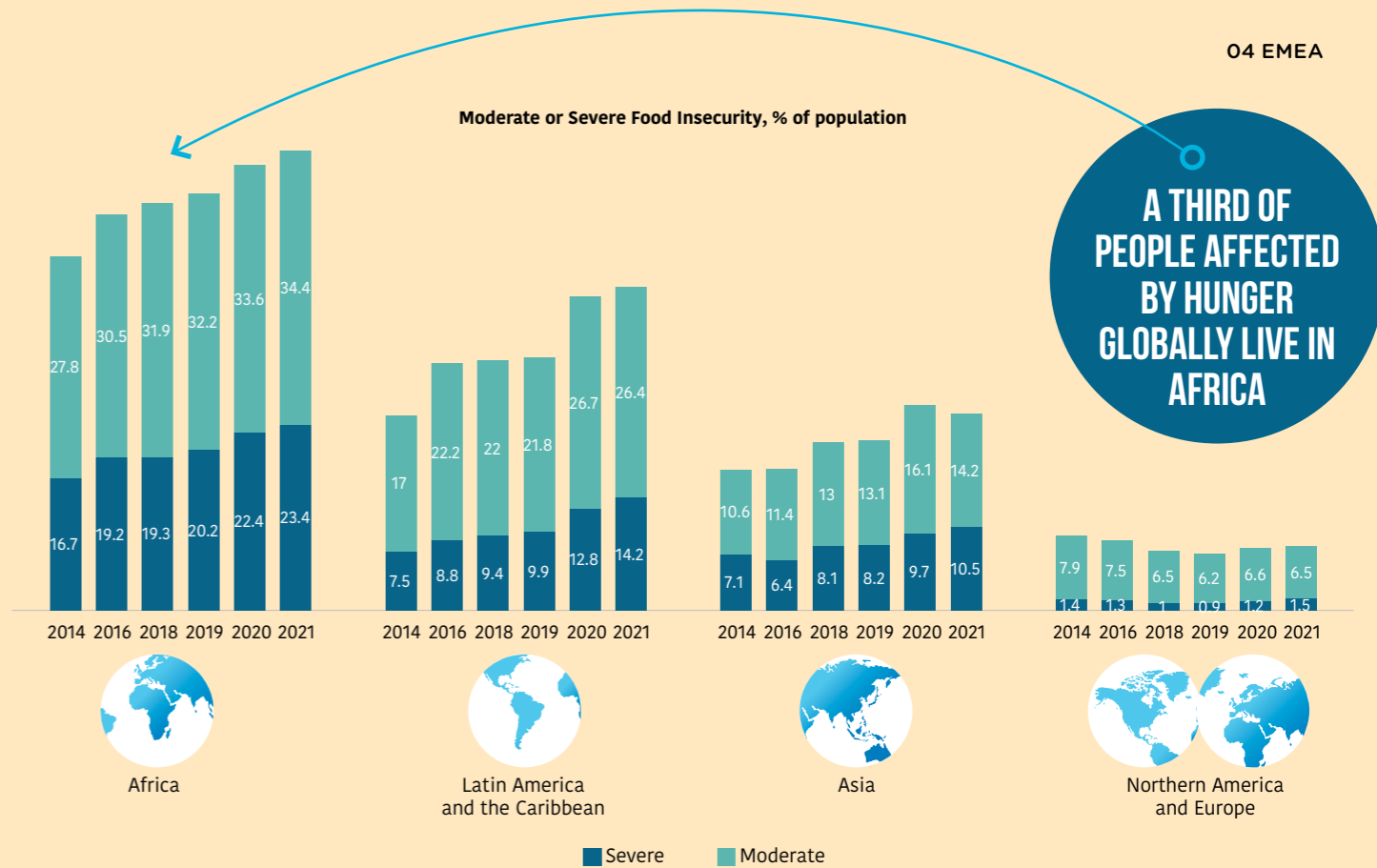
The Russia-Ukraine war has caused shock waves across global markets as both countries are major producers and exporters of key energy and food commodities. The war between the two agricultural production warehouses has had knock-on effects well beyond the front lines, squeezing food supplies, and sending prices skyrocketing. Moreover, the war comes on the heels of pre-existing challenges that have already put pressure on prices and supply chains: the COVID-19 pandemic, shipping constraints, and an energy crisis.

Deeper into Poverty

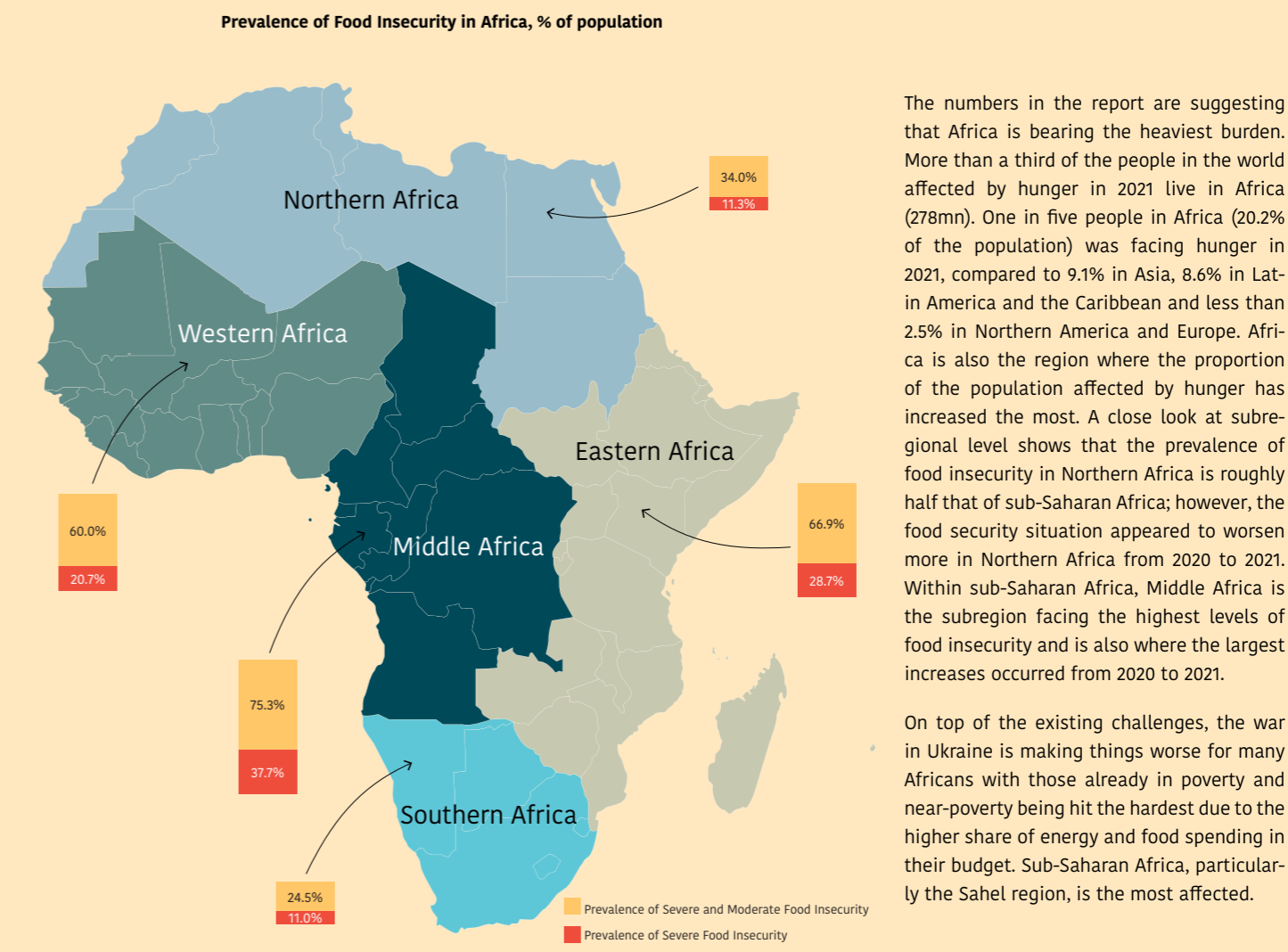
After steadily falling for a decade, global hunger is again on the rise, affecting nearly 10% of the global population. From 2019 to 2022, the number of undernourished people grew by 150mn, according to the latest edition of The State of Food Security and Nutrition in the World report, published by the UN Food and Agriculture Organisation (FAO), the International Fund for Agricultural Development (IFAD), the United Nations Children's Fund (UNICEF), the UN World Food Programme (WFP) and

the World Health Organization (WHO). Additionally, some 2.3bn people in the world (29.3%) were moderately or severely food insecure in 2021, 350mn more compared to before the outbreak of the pandemic. Two decades of progress in the reduction of poverty have been pushed into a sharp reverse, after the proportion of people affected by hunger jumped in 2020 and continued to rise in 2021, to 9.8%. This compares with 8% in 2019 and 9.3% in 2020.

GLOBAL HUNGER IS ON THE RISE AGAIN



A THIRD OF PEOPLE AFFECTED BY HUNGER GLOBALLY LIVE IN AFRICA



The numbers in the report are suggesting that Africa is bearing the heaviest burden. More than a third of the people in the world affected by hunger in 2021 live in Africa (278mn). One in five people in Africa (20.2% of the population) was facing hunger in 2021, compared to 9.1% in Asia, 8.6% in Latin America and the Caribbean and less than 2.5% in Northern America and Europe. Africa is also the region where the proportion of the population affected by hunger has increased the most. A close look at sub-regional level shows that the prevalence of food insecurity in Northern Africa is roughly half that of sub-Saharan Africa; however, the food security situation appeared to worsen more in Northern Africa from 2020 to 2021. Within sub-Saharan Africa, Middle Africa is the subregion facing the highest levels of food insecurity and is also where the largest increases occurred from 2020 to 2021.

On top of the existing challenges, the war in Ukraine is making things worse for many Africans with those already in poverty and near-poverty being hit the hardest due to the higher share of energy and food spending in their budget. Sub-Saharan Africa, particularly the Sahel region, is the most affected.

Source: FAO

Squeezing Budgets

Russia's invasion of Ukraine has prompted a surge in food and energy prices, squeezing further African consumers budgets. The spike in food prices is especially worrying for the region, where food accounts

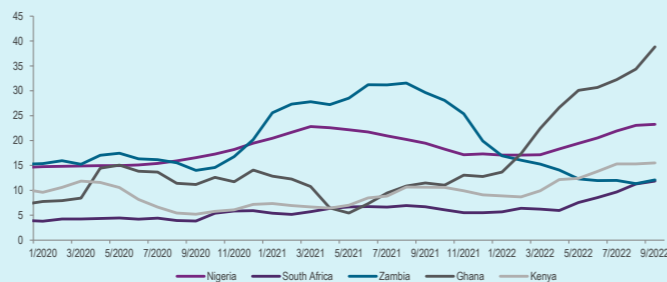
for about 40% of consumer spending. Staple food prices in sub-Saharan Africa grew by an average 23.9% in the 2020-2022 period, the most since the 2008 global financial crisis, according to IMF estimates.

RUSSIA-UKRAINE WAR LED TO SHORTAGE OF 30MN TONNES OF FOOD IN AFRICA

Food and Non-Alcoholic Prices in Northern Africa, y/y change, %



Food and Non-Alcoholic Prices in Selected Sub-Saharan African Countries, y/y change, %



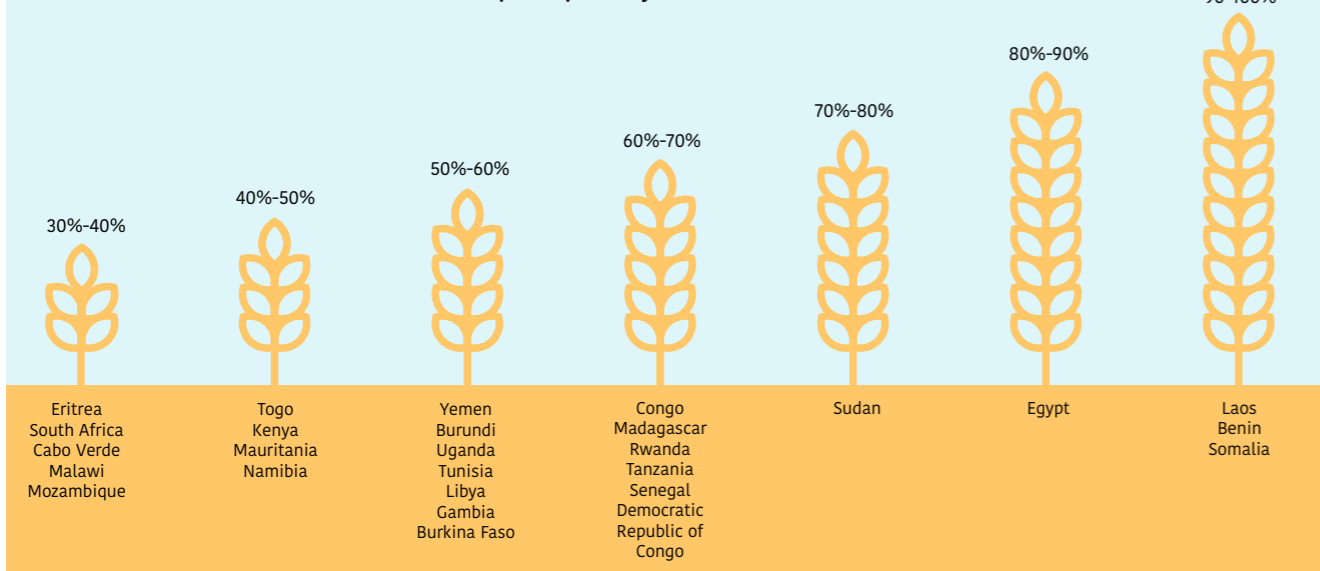
Source: CEIC, National Statistics Offices

One of the reasons for the spike in food prices is that the continent imports most of its top staple foods—wheat, palm oil, and rice. In the case of wheat, the ripple effect from the war is the most significant as countries in Northern, Western and Central Asia are highly dependent on Russia and Ukraine for their wheat supplies. Overall, more than 30 net importers

of wheat rely on Russia and Ukraine for more than 30% of their needs. Data from FAO shows that 11 countries relied on Russia and Ukraine for over 70% of their wheat imports: Eritrea, Armenia, Mongolia, Azerbaijan, Georgia, Somalia, Belarus, Turkey, Lebanon, Egypt, and Madagascar. According to USDA, Egypt met 60% of its wheat and maize consumption and 56%

of its coarse grain needs with imports in the 2020/2021 marketing year. Algeria is also a large crop importer, meeting 69% of its domestic wheat needs with imports. Overall, Ukraine and Russia usually supply over 40% of Africa's wheat, the African Development Bank (AfDB) says. The war, however, has led to a shortage of 30mn tonnes of food in Africa, the bank claims.

Wheat Import Dependency Ratio in Selected African Countries



Source: UNCTAD



Prices of locally sourced staples have also increased significantly in some countries on the back of domestic supply disruptions, local currency depreciations, and higher fertilizer and input costs. Take Nigeria for example, where the prices of both cassava and maize more than dou-

bled since the start of 2020 despite the fact that they are mainly produced locally. Cassava prices in Ghana spiked by 78% in 2020-2021, reflecting higher production costs and transport constraints, among other factors, the IMF estimates.

Conflict and Climate

The food supply is further constrained by droughts and flooding or conflict and violence. More than 80% of the 137mn Africans facing acute food insecurity are in conflict-affected countries underscoring that conflict continues to be the primary driver of Africa's food crisis. Eight of the top 10 African countries experiencing acute food insecurity are facing conflict, the African Centre for Strategic Studies says in a report published in October 2022. Some 73% of acute food insecurity on the continent is concentrated in eight countries: the Democratic Republic of the Congo, Ethiopia, Nigeria, Sudan, South Sudan, Somalia, Niger, and Burkina Faso.

CONFLICT CONTINUES TO BE PRIMARY DRIVER OF AFRICAN FOOD CRISIS

Another major challenge is climate change that is increasingly felt throughout the continent. It is especially detrimental to the rural areas without the infrastructure and technology to mitigate the effects of drought, flooding, and other weather events. Sahel countries Burkina Faso, Chad, Mali, Mauritania, and Niger are experiencing their worst levels of food insecurity in nearly a decade due

to drought. Below-average rainfall continues to impact Somalia, Ethiopia, and Kenya. Madagascar is also suffering from consecutive poor rainfalls and drought, particularly in its southern region where the effects are most severe. Conversely, the food crisis in South Sudan has been worsened by abnormal flooding. The World Bank estimates that food security declines by 5%-20% with each flood or drought. At the same time, while agricultural exports are rising, Africa remains a net food importer at an annual cost of USD 43bn, and without action, the continent's food import bill might reach USD 110bn by 2025, the bank warns.

Building Resiliency

Adapting the African food system to climate change and increasing its resilience towards external shocks is no longer a choice but an imperative for the continent. A report from the Global Center on Adaptation, The State and Trends in Adaptation Report 2021: Africa, argues that investments by the public sector should prioritise research and extension, water management, infrastructure, land restoration, and climate information services to build resilience among small-scale farmers, fishermen, and small businesses. Multilateral institutions, like the IMF, the World Bank and AfDB, are also positioned to assist by expanding financing tools for Africa's agriculture development, including providing capital access and partner-

ships for small farmers. Seeking to boost food security, nutrition, and resilience across the continent, in July 2022 the AfDB approved a USD 1.5bn African Emergency Food Production facility. The plan will provide 20mn smallholder farmers on the continent with seeds and increased access to agricultural fertilisers and will also support governance and policy reform, which is expected to encourage greater investment in Africa's agricultural sector. The facility will enable African farmers to produce 38mn additional tonnes of food over the next two years, estimated at USD 12bn. Trade liberalisation and import diversification will also help in stabilising food supply and prices. Access to bigger markets could boost investment in agri-

cultural production, spread know-how, and spur competition. One positive step in this direction is the Africa Continental Free Trade Agreement, an ambitious trade pact to form the world's largest free trade area by creating a single market for goods and services of almost 1.3bn people across Africa.

ADAPTING TO CLIMATE CHANGE, EXTERNAL SHOCKS IS IMPERATIVE FOR AFRICA

15

Latin America

CURING BRAZIL'S CONSUMER DEBT HANGOVER



Adriano Morais
Research Economist
Brazil

Brazil succeeded in reducing inflation and keeping a robust growth in 2022, but a record private debt may cool down its economy next year.



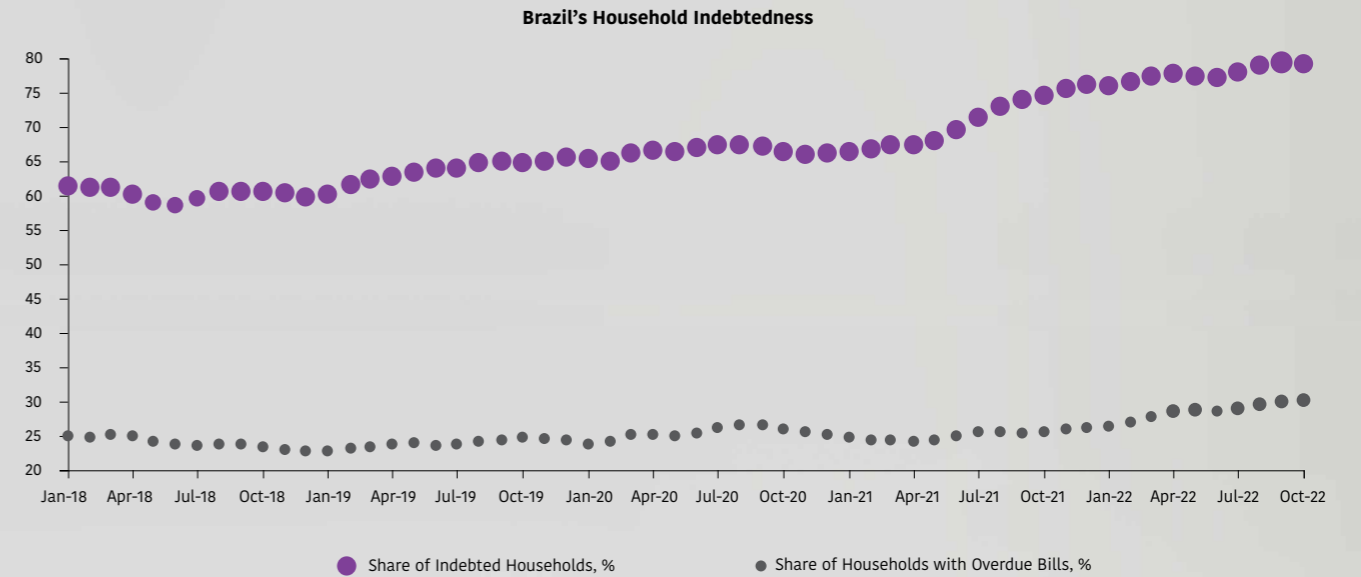
New Stewardship

Brazil is entering the new year under new stewardship. Latin America's largest economy will change its course of direction after leftist Luiz Inácio Lula da Silva narrowly won the October 2022 presidential elections, defeating incumbent right wing leader Jair Bolsonaro. Lula's win comes after what many have described as Brazil's most polarised election campaign and represents a stunning comeback for the 77-year-old former metalworker who was president for two terms between 2003 and 2010 but then spent time in prison for corruption convictions that were later annulled. This was also the first time an acting president in Brazil has lost a re-election bid.

The deep polarisation of Brazil's electorate mirrors the completely different visions Lula and Bolsonaro offered for the country and the economy. Still, the two opponents shared a common goal: to implement a debt forgiveness programme for Brazilian consumers who are struggling to make ends meet as private debt is hitting record highs, while the central bank is pressing on with a cycle of aggressive interest rate hikes. The household indebtedness indicator published by the central bank and showing how much of the family budget is eaten up by debt payments, reached a record high of 50.1% in July 2022 and has stayed close to that level ever since. Data from the National Confederation of Trade, Services and

Tourism (CNC) showed that the share of Brazilian families facing debt, overdue or not, reached 79.3% in September, the highest level since the series started in 2010. Defaulters, i.e. families with overdue bills, reached an all-time high of 30% in September and hit a new record-high of 30.3% in October 2022.

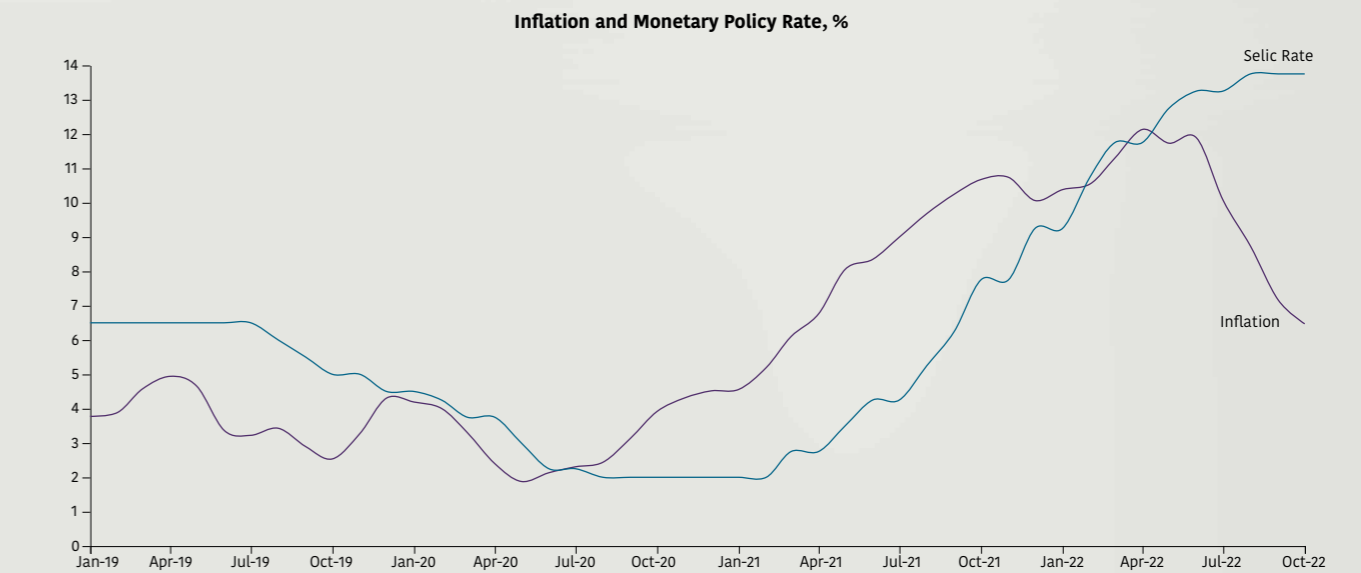
HOUSEHOLD INDEBTEDNESS INDICATOR REACHES RECORD HIGH OF 50.1%



Source: CNC, CEIC

The rising streak started in the early months of 2021, when inflation accelerated to a two-digit annual rate, and many households were forced to borrow money to purchase food and pay for other basic expenses. Low interest rates at that time also played a role, as they were below the annual inflation rate during the whole of 2021, stimulating households to take loans although Brazil's central bank launched its first tightening cycle in six years. It took the bank nearly a year to

bring its benchmark Selic interest rate above the inflation rate. When the tightening cycle started in March 2021, the Selic rate stood at a record low of 2% and has since been raised to 13.75% in what has been the world's most aggressive rate-hiking cycle. In September 2022, the bank decided to pause the tightening cycle after consumer prices registered their second straight monthly drop in August, helped by tax cuts on fuel and energy.



Source: Central Bank, CEIC

Government Steps In

Aiming to control inflation, the federal government cut down taxes on food and fuels between May and June, which reduced the official CPI growth to 6.5% y/y in October, compared to 11.9% y/y in June. The labour market also improved in this period. After stagnating at around 11.1% in Q1 2022, Brazil's unemployment rate declined gradually to 8.7% in September 2022, the lowest level in seven years. The

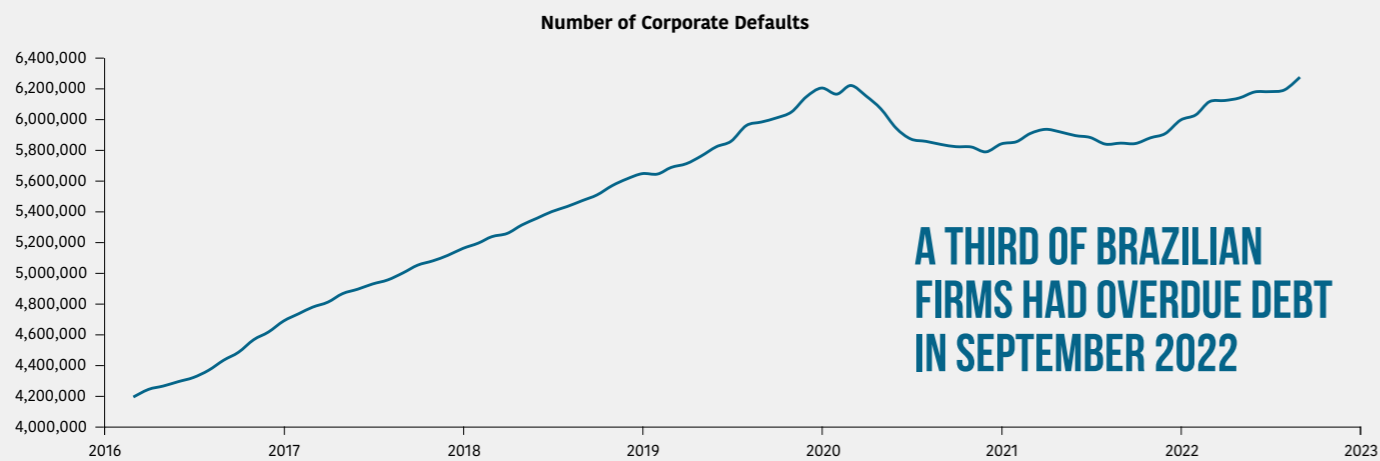
federal government also increased some cash transfer programmes before the October elections, raising the monthly payments to vulnerable families – the Auxílio Brasil – from BRL 400 to BRL 600 until the end of the year, and announced special payments for truck and taxi drivers, to help them with the higher prices of fuels. Consequently, the real income gradually improved to BRL 2,737 in September 2022,

reducing the gap from the pre-pandemic month of September 2019 to only 1.9%.

Despite all this positive news, the proportion of indebted households continued to grow amid the rising interest rates. The average lending rate for unsubsidised household loans rose by 7.4pp between January and September 2022, to 53.7% per annum.

According to CNC data, 86.2% of households in October 2022 had credit card debts, compared to 78.5% in October 2020. Another concerning figure is the proportion of households with overdue debts, which hit a record high of 30.3% of the total households in October 2022. One year earlier, in October 2021, it was 25.5%. This means that, for a record number of Brazilians, the available income is not sufficient to pay the debt service burden.

The Brazilian central bank grew concerned with the impact of the growing indebtedness and higher insolvency risks on the national financial system. In the November 2022 edition of its Report of Financial Stability, the local monetary authority said that the households' ability to pay debts may be reduced in the next months, as Brazilians have increased their debts in credit cards and risky loans, which charge higher interest rates. Brazilian credit card holders face an annual percentage rate of between 184% to 388% on their plastics.



Source: Serasa, CEIC

Corporate Defaults on the Rise

The reduced purchasing power of households, in an environment of high interest rates and rising indebtedness, is affecting corporate insolvency, particularly for small and medium businesses. Data from credit research firm Serasa suggests that a third of companies in Brazil had overdue debts in September 2022 – 6.24mn out of

20.4mn companies. Most of the defaulting companies, around 5.6mn (+5% y/y), are small and medium-sized businesses. The total debt of non-financial corporations (NFC) in the country rose by 15.9% y/y in September 2022, but the outstanding amount of overdraft loans for NFC, and the overdraft guaranteed accounts,

rose even further, by 35.4% and 37.8 y/y, respectively. The average interest rates for corporate overdrafts and for overdraft guaranteed accounts were 322.9% and 45.8% per annum in October, respectively, well above the 23.5% average interest rate for all unsubsidised corporate loans.

Lula's Cure

During his election campaign, Lula proposed a consumer debt renegotiation programme backed by government guarantees and aimed at supporting lower-income families. The Desenrola Brasil programme will look to renegotiate overdue utility bills of households earning up to three minimum wages. Renegotiated debts would be partially covered by a government guarantee fund of BRL 7bn-

16bn, Reuters reported in mid-October citing economist Guilherme Mello, an advisor to Lula's Workers Party. Under the programme, the government would set a minimum discount for renegotiating debts and prioritise creditors offering more relief. According to Mello, preliminary calculations for the guarantee fund assumed a default rate of 25% and a discount of 30%-70% on debts.



Some weeks before the runoff voting, Lula gained the support of the defeated presidential candidate Ciro Gomes and promised to add to his programme Gomes' proposal to renegotiate all of the delayed debts recorded on the local credit bureaus, of around 80mn of Brazilians, with debts up to BRL 4,000. Bolsonaro's debt relief offer was less ambitious. He proposed to renegotiate debts only with the state-owned bank Caixa, one of the five

biggest banks in the country. According to Senator Wellington Dias, one of the coordinators of Lula's campaign, public banks – particularly the giants Banco do Brasil and Caixa, and the national development bank BNDES – are expected to have an important role in the next government to help indebted families in the country, just like they did in the first two mandates of Lula, from 2003 to 2020.

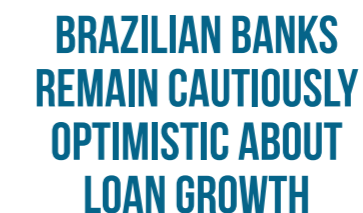
Banks under Pressure

The surging default rates hit hard some of Brazil's biggest banks. The country's third biggest lender Bradesco saw its shares fall to a 25-year low on November 9, one day after it said that its Q3 profit plunged by 22.8% y/y. Bradesco saw its default rates rise to 3.9% in September 2022, compared to 2.6% a year earlier, and needed to increase its loan loss provisions, which reduced its profitability. The situation with Bradesco also affected the share prices of its peers Itau and Santander. On November 10, state-owned Banco do Brasil reported a 62.7% y/y rise in Q3 profit and yet the price of its shares declined on the same day as investors were concerned with the role of the bank under the next government, more focused on public policies than on profitability.

respectively. The default rates are expected to stand at 4.3% in 2022 and at 4.6% in 2023. Most of the banks (70%) expect the GDP growth to slow down in the next quarters, ending the year with a growth rate of between 0.5%-1%, which is well below the markets estimate of 2.77% for 2022, according to the local central bank's Focus survey of November 11.



Yet, banks in Brazil are optimistic about the loan growth outlook. The Brazilian Federation of Banks (FEBRABAN), in a regular survey among 20 local banks, estimated in November that the outstanding amount of loans in the country may rise by 14.1% in 2022 and by 8.4% in 2023. In the previous September edition, the estimates were for growth of 13.9% and 8%,



BRIDGING THE GAP

Tackling Colombia's Regional Discrepancies



Nicolás Echeverry Lopez
Research Economist
Colombia

COLOMBIA'S TOP 10% EARNERS RECEIVED ALMOST 40% OF THE COUNTRY'S INCOME

Colombia witnessed its best year on record in 2021, when the economy expanded by 10.7%, driven by a rebound in consumer demand after the easing of COVID-19 measures and by the soaring prices of the country's main export commodities - oil, coal, and coffee. The outlook for 2023, however, is for a sharp slowdown with the IMF estimating growth at just 2.2%. Like many other commodity-dependent countries in Latin America, Colombia's economy is highly vulnerable to changes in commodity prices. The commodity booms over

the past decade have helped the country's economy expand at a rate faster than the average for the region and rank it as Latin America's fourth largest economy after Brazil, Argentina, and Chile. But growth is not distributed equally across the country, which has one of the highest income inequalities in the world. Data from the World Bank shows that the top 10% of the country's earners received almost 40% of the country's income in 2020, which is 10 times what the bottom 20% earned. The income inequality has traditionally been

higher in rural areas as the country's economic and social development over the years has been concentrated in very few territories, mainly in the big cities. Colombia is divided into 32 departments, one special district (Bogota) and 1,102 municipalities, each one with a fiscal and administrative autonomy. Boosting the growth of Colombia's underdeveloped regions will be key to sustaining the country's economic growth in the long run.



A Little Piece of History

There are two main historical reasons for the big discrepancies between Colombia's regions. On the one side, Colombia was formed as a centralist state - political and administrative power is concentrated under the president and policies are executed by local officials appointed by the president. As a result, over the years governments have encouraged social and economic development in the central regions with less attention paid to the peripheral regions of the country. On the

other hand, the peripheral regions of the country were the ones that suffered the most from the nearly six-decade armed conflict between the state and the Revolutionary Armed Forces of Colombia (FARC) that ended with the signing of the 2016 peace deal.

Several reforms were conducted in the country to decentralise administration, enabling local and regional elections to choose the mayors and governors for each

department and municipality but the outcome of these reforms was a mixed bag. On one hand, bigger and stronger regions benefitted from this regulation since they had more autonomy to design and implement economic and social policies. However, the strain on less developed regions grew since they had to develop their own policies but at the same time lacked the necessary capacity.

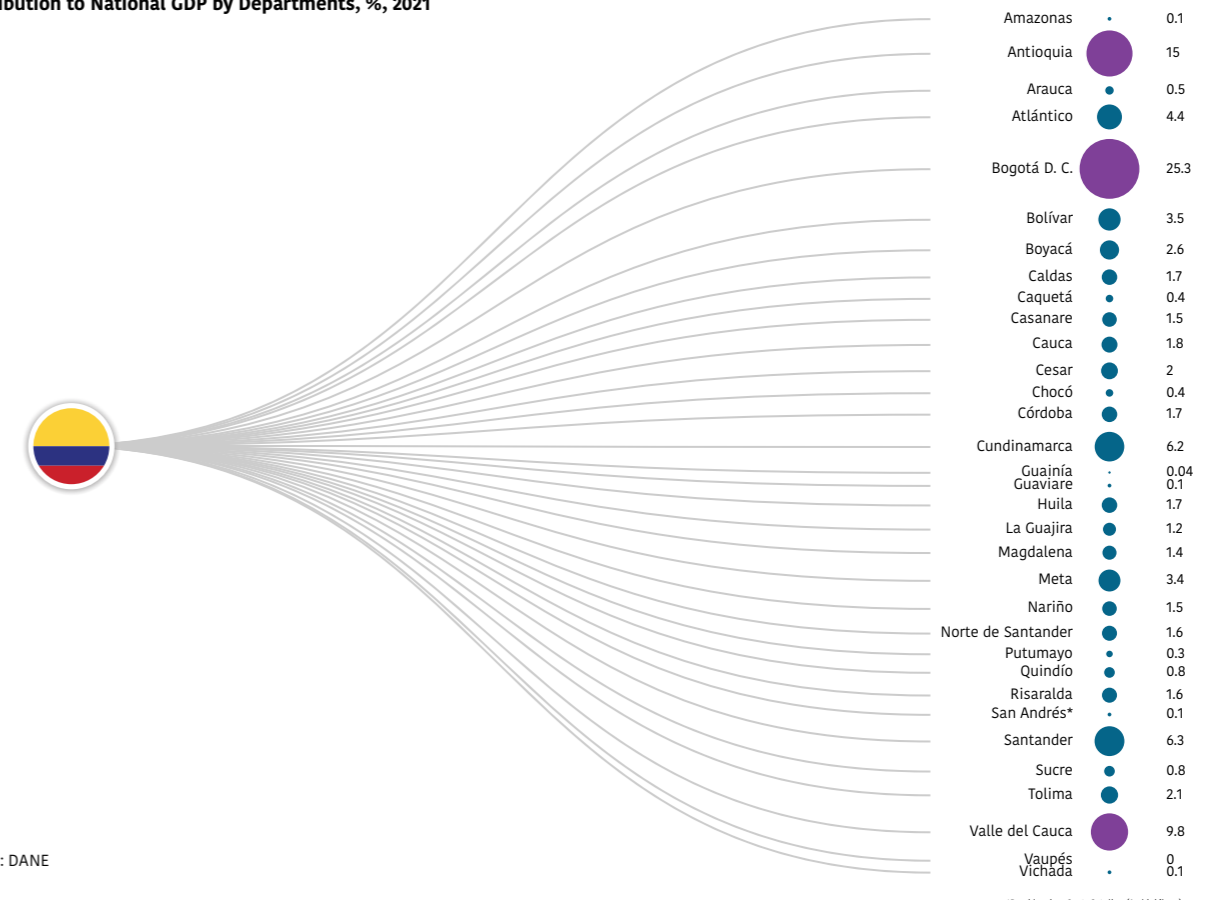
Welfare Distribution Is Quite Unequal

Clear evidence for the economic gap between the regions is the fact that half of the country's GDP is generated in only three regions - Bogota, Antioquia and Valle del Cauca. The top 10 departments earned around 80% of the GDP in 2021. Still, we should consider that the top three departments account for 38% of total population, and the top 10 departments for around 70% of the population. At the bottom of the list - Vaupes, Guainia, Vi-

chada, Amazonas, and Guaviare - earned just 0.3% Colombia's GDP, but they also accounted for around 0.8% of total population. In terms of GDP per capita, the top departments were Casanare, Bogota, Meta and Santander with readings of between USD 8,575 and USD 10,484 in 2021, while the least developed had a GDP per capita of USD 1,807 to USD 2,362. The average for the country stood at USD 6,161.



Contribution to National GDP by Departments, %, 2021



Source: DANE

*Providencia y SantaCatalina (Archipielago)

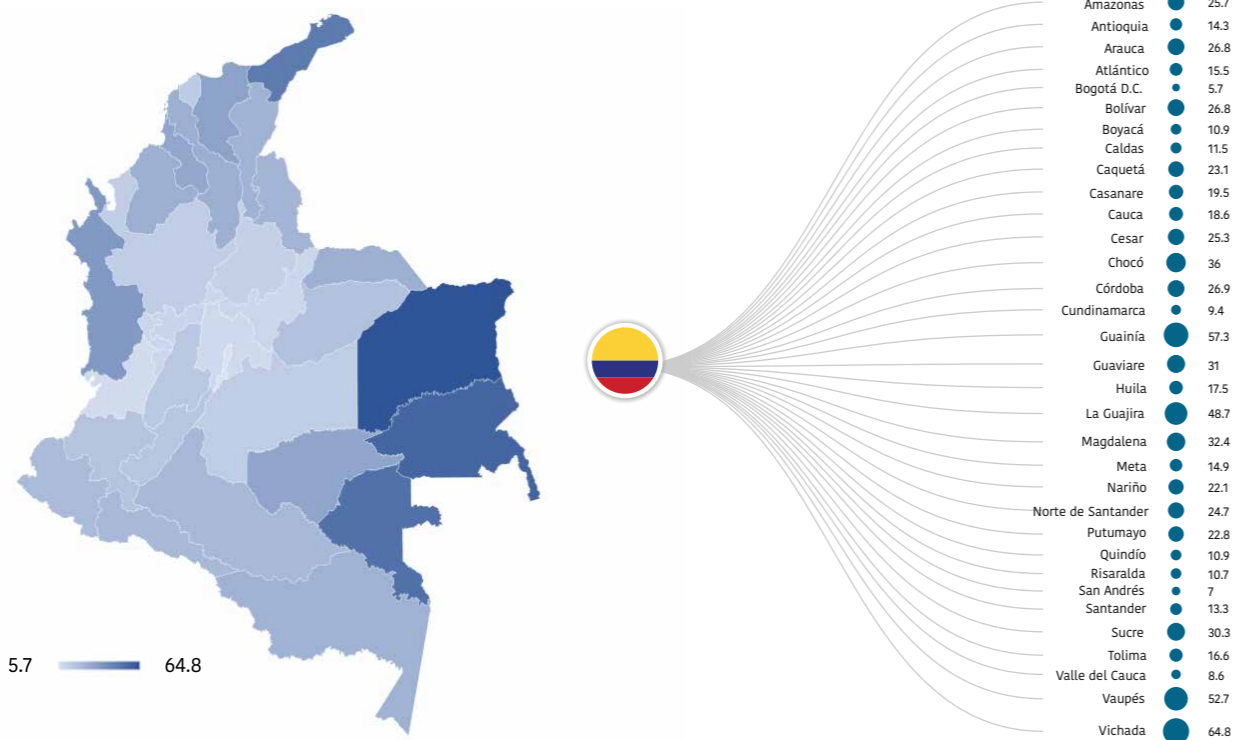
Alongside the high income inequality, Colombia also has a high poverty rate. Data from the government's statistics agency DANE has shown that some 19.6mn of Colombia's 50mn people lived in poverty at the end of 2021, while 6.1mn were in extreme poverty. DANE defines poverty as surviving on some USD 3 per day, while those in extreme poverty live on USD 1.36 a day or less. Though still high, the poverty rate declined from 42.5% in 2020, while the share of those living in extreme poverty fell to 12.2% in 2021 from 15.1% the

previous year. Poverty levels vary across the country – the lowest were recorded in the departments of Cundinamarca, Caldas and Antioquia (23%, 28% and 29%, respectively) and the highest in La Guajira, Choco and Magdalena (at 67%, 63% and 61%, respectively).

These results are highly correlated with the capacity of the local administration to execute social and economic policies, which also is tied to the available resources. In 2021, the regions with the highest

public budget were Bogota (USD 5.7bn), Antioquia (USD 5.6bn), Valle del Cauca* (USD 3bn) and Cundinamarca* (USD 2.5bn), while the ones with the lowest resources were Vaupes (USD 73mn), Vichada (USD 88mn), Guainia (USD 91mn) and Amazonas (USD 93mn). But this is one side of the story. The other is that the more productive regions also have greater technical skills to design and implement public policies on their territories, increasingly leaving a gap between the institutional capacities of the subnational governments.

Multidimensional Poverty Incidence by Region,% of people under multidimensional poverty*



*DANE measures the index by taking into account the educational conditions of the household, conditions of children and youth, health, work and housing conditions and access to public services.

*Includes municipal and departmental budgets

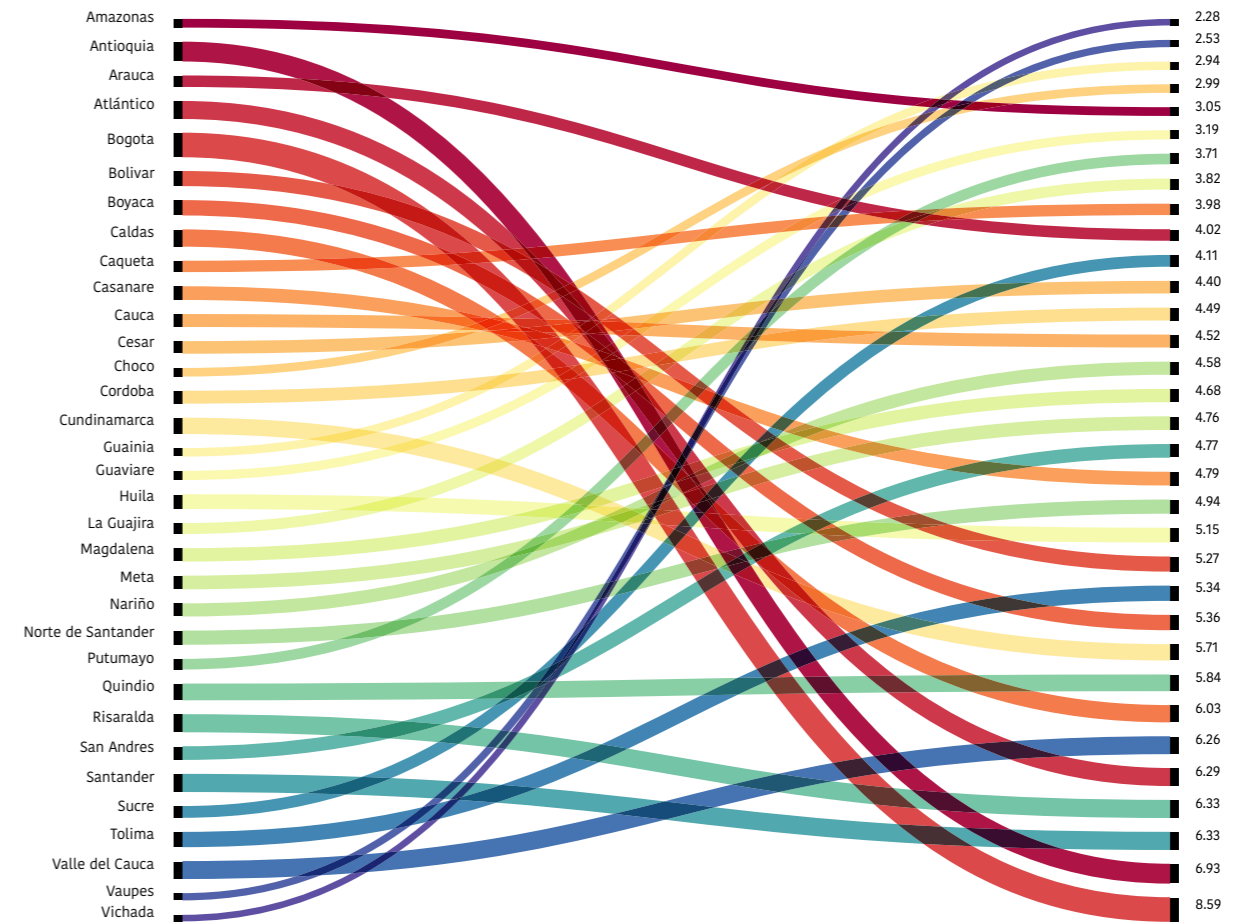
Competitiveness Gap

The competitiveness gap between departments in Columbia is another factor that contributes to the regional discrepancies in the country. According to the Departmental Competitiveness Index, compiled by the Private Competitiveness Council and Rosario University, Bogota was ranked as the most competitive region in the country with a score of 8.59 out of 10. The least competitive was Vichada with a score of 2.28. This index aggregates 13 categories: Institutions, Infrastructure, Social Conditions, Public Services, Labour Market, Financial System, and Innovation,

among others. A more detailed view shows that the categories where the struggling regions ranked the worst were Innovation, Financial System, ICT Development, and Infrastructure. All these limitations keep these regions in the poverty trap. Also, low competitiveness causes an outflow of skilled workers away from the rural areas to big cities, which also undermines the institutions and economic development, creating a poverty cycle that regions are not able to break.



Departmental Competitiveness Index 2022



Source: Private Competitiveness Council, Rosario University

One Goal, Different Strategies

There are some obvious activities that could help improve the economic and social development in the struggling regions: agriculture and industry. However, it is not as easy as it may appear. Colombia has over 36mn hectares of arable land, but these are mostly located in the central parts of the country. The most struggling departments (Choco, Amazonas, Guaviare, Guainia and Vaupes) have between 1% and 7% of arable land on their territories, which indicates that there is no great potential for agricultural development.

A second option would be the development of industries in these regions. The problem that arises is that these territories are mostly environmental reserves, so it might not be a good idea to create urban areas around them. So, Colombia should seek a new strategy. Tourism is a great option, but it needs to be sustainable. The regions could consider entering the carbon market with the support of the national government, either through green bonds or credits tied to environmental conservation and restoration goals. Finally, the regions could special-

ise in environmental care and services, attracting investment and human capital to their territories. In a nutshell, it is key to find ways of creating value added through the services these regions can offer, which in this case are mainly environmental.

UNDERDEVELOPED REGIONS SHOULD STRIVE TO CREATE VALUE ADDED

What To Do Next?

The development blueprint for these regions should be a mixture of strengthening the policies and programmes already in place and designing more appropriate strategies for each territory. An increase in resources for investment in the territories must be considered along with strengthening human capital so that the resources obtained are invested in

the best way and can give the expected results.

There is no single route for development but to boost Colombia's economic development in the long term, improving the competitiveness of its struggling regions must be at the top of the agenda.





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