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ASIA HOUSE **ANNUAL OUTLOOK 2022**

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EXECUTIVE SUMMARY

Asian economies risk being trapped as middle-income countries, held back from sustainable and equitable growth, unless policy action is taken to galvanise green finance, speed up digitalisation and deliver more comprehensive regional policy coordination.

As in the rest of the world, policies in Asia have so far failed to provide the levels of real investment spending capable of securing a sustainable recovery from the COVID-19 pandemic. Low interest rates and injections of liquidity have created financial wealth and spurred consumption – but they have only had a limited impact on real investment.

Investment, as well as cross-border trade, may well decelerate further in 2022 as the global economy stages an uneven recovery at best. The World Trade Organization (WTO) sees Asian exports growing at just 2.3 per cent this year, below pre-pandemic levels.

Many central banks, meanwhile, are not able to respond to the 2022 recovery challenge, having largely exhausted their monetary policy options by reducing interest rates significantly.

Indeed, against a backdrop of gradually rising consumer price inflation, the next moves in monetary policy in developed economies may well be tightening – the Bank of England has already moved that way – which could lead to significant declines in asset prices.

A shift is needed towards policies that specifically address both the immediate economic scarring of the pandemic and secure longer-term resilience and prosperity.

For the 21st century to become the Asian Century, with Asia's economies set to take a share of over half of global GDP by 2050, only a determined effort by the authorities to fill an evident policy gap will enable growth to continue at the required levels. Adopting a trio of priorities now will enable a robust economic tomorrow: green finance, digitalisation and enhanced regional cooperation.

For green finance, unprecedented levels of coordinated public and private investment are required to meet the Paris Climate Agreement commitments supporting the transition to a low-carbon world.

In Asia, however, access to and the distribution of green finance remains profoundly uneven; this is a partial reflection of the variable depth and breadth of the region's financial markets, as well as an inability to mitigate and underwrite the risks attached to inward investment.

Only by addressing these obstacles to green finance will policymakers be able to create ecosystems within which green investment can flourish and be mainstreamed. Supporting green finance allows steps to be taken towards combatting climate change, while at the same time avoiding investments that raise the risk of cascading environmental crises.

Prioritising wider digitalisation will boost economic resilience and productivity in a region that is already a leader in digital innovation. Asia can build further on digital success stories that are supporting its drive to tackle climate change and where digitalisation is increasingly being applied in agricultural, financial and energy markets.

KEY MESSAGES:

Asian economies need green finance, broader digitalisation and greater regional coordination to avoid being caught in a middle-income trap that holds them back from greater development.

Achieving this triple-policy objective will promote sustainable, productivity-driven and equitable growth, delivering the trade and investment needed to secure long-term recovery.

The newly launched Asia House economic readiness indices suggest that China leads in both green finance and digital transformation. Within Southeast Asia, Vietnam leads in green finance while Malaysia leads in digital responsiveness.

Unprecedented investment is required for energy transition: fast-tracking green finance will redirect investments away from cascading environmental crises.

Prioritising wider and more diversified digitalisation in Asia will boost climate resilience and productivity in a region that already leads in digital innovation.

Despite their varying size and stage of development, Asian economies must cooperate more comprehensively on policies that will help to achieve shared objectives.

KEY POLICY RECOMMENDATIONS:

Asian economic policymakers should elevate the use of institutionally mobilised finance, including blended finance, to de-risk and catalyse investment flows.

Private and public sector coordination to promote and incentivise green finance must be prioritised to combat the climate crisis.

Asia's central banks should include sustainability objectives in their monetary policy mandates and explicitly incorporate climate risks into their assessments.

The promotion of Industry 4.0 – the integration of automation, artificial intelligence (AI), cloud computing etc. in manufacturing – coupled with digital reskilling and knowledge diffusion is needed to secure the Asian Century and avoid the middle-income trap.

Currency reserves should be pooled and their management coordinated, while the foundation for a common digital currency in Asia needs to be laid.

COUNTRY OUTLOOKS: KEY MESSAGES

China is likely to see economic growth decelerate. Its consumer sector will recover, and underpin e-commerce, but trade and investment growth could slow.

Japan is likely to experience a moderate acceleration in growth, spurred by the policies of the new administration and Japan's broad financial ecosystem. But authorities must speed up digitalisation efforts.

India is expected to be the world's fastest-growing economy in 2022, with GDP up some 8.5 per cent. But building economic resilience and closing its digital divide will be essential for its sustainability.

Indonesia's 2022 growth is likely to be one of the strongest in ASEAN. Trade growth could see a turnaround if Indonesia's connectivity gap is addressed. Its inward foreign direct investment (FDI) and portfolio investment suggest momentum ahead.

HOW READY ARE ASIA'S ECONOMIES FOR A GREEN AND DIGITAL FUTURE?

Asia House unveils new Economic Readiness indices

Asia finds itself at an important crossroads with its constituent economies poised to transition to higher levels of income, innovation, and resilience. To gauge progress in the region's core economies – the notable greenhouse gas emitters and those most vulnerable vulnerable to the climate crisis – the Asia House Annual Outlook introduces new economic readiness indices for green finance and digitalisation in eight countries.[1]

The indices measure progress in macroeconomic readiness to foster green finance and digitalisation, scoring each country out of 100. China is projected to continue to lead in both its promotion of green finance and digitalisation in 2022, with both of its scores of 72 in the top quartile. Japan follows close behind. Thailand and the Philippines, however, bring up the rear (Figures 1 to 3).

The detailed components and construction of the indices can be found in Appendix 1.

[1]The eight countries are China, Japan, India, Indonesia, Vietnam, Malaysia, Thailand and the Philippines.

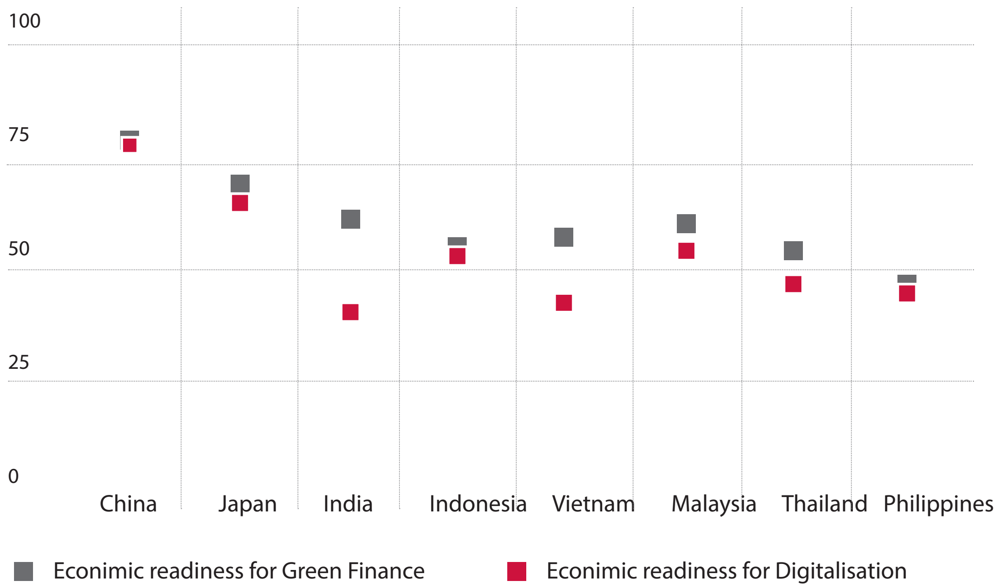
FIGURE 1. ASIA HOUSE ECONOMIC READINESS INDEX SCORES FOR GREEN FINANCE

	China	Japan	India	Indonesia	Vietnam	Malaysia	Thailand	Philippines
Economic readiness	72	63	55	50	51	54	48	41
Financial resilience	70	72	60	58	48	71	52	48
Financial development	44	64	47	47	45	59	44	46
Ease of capital	84	44	53	21	54	27	25	28
Equitable ecosystem	91	72	62	73	60	58	73	41

FIGURE 2. ASIA HOUSE ECONOMIC READINESS INDEX SCORES FOR DIGITALISATION

	China	Japan	India	Indonesia	Vietnam	Malaysia	Thailand	Philippines
Economic readiness	72	59	36	50	37	49	41	40
Digital facilitation of trade	83	58	51	62	50	65	70	68
Expanding Industry 4.0	76	64	39	40	27	33	10	32
Domestic digital depth	71	46	22	63	31	38	48	31
Digital knowledge transfer	57	69	33	36	40	61	34	28

FIGURE 3. ASIA HOUSE ECONOMIC READINESS SCORES FOR ASIA-8



Source: Asia House Research

Note: Asia 8 denotes China, Japan, India, Indonesia, Vietnam, Malaysia, Thailand and the Philippines.

1. INTRODUCTION: ASIA'S YEAR OF OPPORTUNITY

As the world cautiously recovers from the ravages of the COVID-19 pandemic, Asia's economies have the opportunity in 2022 to cement the benefits of renewal with policies that can also deliver sustainable growth for the longer term.

Putting the right policies in place now is crucial to ensuring a more robust future, notably boosting trade, investment and sustainability.

This means elevating the role of green finance, widening digitalisation and delivering effective regional cooperation. It also means reversing the shortfall in policies that has led to a dearth of adequate and appropriate investment, especially given that, even in recovery, there is likely to be a slowdown in global trade and investment growth.

Central banks have borne the brunt of policy responses since the 2007–09 financial crisis, through record low interest rates and injections of liquidity. These policies propped up economies but failed to incentivise real investment. These policy tools are now all but exhausted, with interest rates at or below zero. Furthermore, with inflation accelerating, the next move in most interest rates is likely to be up, risking significant downward pressure on asset prices and broader investment.

By some metrics, meanwhile, cross-border trade is in a secular downtrend that predates the pandemic. It will not necessarily benefit from central bank tightening.

Asia's policymakers need to step into this policy gap with a determined reform effort that will ensure that even the fastest-growing countries in the region do not fall into the middle-income trap[2] that then becomes a barrier to the next level of development. The reforms will help ensure more widely shared economic prosperity.

It is only by adopting the right mix of policies that Asia will achieve its Asian Century milestone of having its economies take a more-than-half share of global GDP. To play its increasingly important role in the world economy, Asia's need to address its own challenges assumes an ever-greater significance. The openness of Asian economies, and their regional and global interconnections through bilateral trade and investment, mean implementing successful responses that go beyond its borders.

The Asia House Annual Outlook for 2022 assesses the importance of policies elevating green finance, digitalisation and regional cooperation.

The scale of those challenges raises the stakes. Asia's advanced and emerging economies are some of the most exposed and vulnerable to climate change. Asia is 16 times more at risk from natural hazards than North America or Europe (UNESCAP, 2020; Prakash, 2018). Additionally, it is the highest-emitting region in the world. [3]

The shortfall in policies is particularly acute when it comes to global warming, where current national pledges and other mitigation measures will leave the planet facing a global temperature rise of 2.7°C by the end of the century (UNEP, 2021), woefully short of the Paris Climate Agreement goals.

Such an outcome would severely affect biodiversity and food production, leading to a catastrophic rise in disease and mass mortality (Lynas, 2020). Given such devastating risks, it is all the more urgent that policymakers act now to rethink their economic and financial responses. The Asia House Annual Outlook for 2022 assesses the importance of policies elevating green finance, digitalisation and regional cooperation for successfully boosting trade, investment and sustainability. It analyses how well-placed individual economies are to deliver them.

[2] As economies develop into middle-income status, and employment shares move from low- to high-productivity sectors, they lose the comparative advantage of cheaper labour costs and become less competitive. If the country does not then innovate effectively, its ability to compete with developed economies' export sectors is limited, resulting in being trapped in middle-income status.

[3] https://www.statista.com/statistics/205966/world-carbon-dioxide-emissions-by-region

2. A TRIO OF POLICIES FOR ASIA

2022 will be a decisive year for Asian economies: they urgently need to deliver an ambitious trio of new policies even as they contend with the unprecedented shocks and scarring of the COVID-19 pandemic.

Only by accelerating green finance, broadening digitalisation and forging new pragmatic financial regionalism will they be able to boost the underlying momentum of a region that is already showing signs of post-pandemic acceleration.

And only by getting the structure of the triple-policy objective right will they set the foundations for sustainable future growth and avoid the middle-income trap that would hold them back from moving to the next level of development and prosperity.

The region continues to face huge risks, but also opportunities. If Asia's economies successfully seize these opportunities, the rewards will be significant.

2.1. FAST-TRACKING GREEN FINANCE

Global ambitions to deliver a sustainable economic future that mitigates the climate crisis can only be achieved by significantly changing financial systems. This requires scaling up and mainstreaming the availability of green finance and aligning financial flows and financial systems on a path to low-carbon economies with lower greenhouse gas emissions.

Just as finance enables the distribution of the world's savings to areas where they are most productive, green finance[4] supports investments that would not have been feasible with traditional funding. Green finance raises living standards and can engineer new low-carbon-intensive cycles of growth (Pereira da Silva, 2017).

At the COP26 climate talks in Glasgow in November 2021, Mark Carney, UN Special Envoy for Climate Action and Finance, welcomed the pledge through an international coalition of 450 financial firms who were to commit US$130 trillion to meeting the net-zero carbon emissions target globally. But while at least some of the financing might now be there, Carney said, mechanisms need to be put in place so it can be used effectively.

This is as true for Asia as anywhere else. Green financing needs are significant in the region, with estimates of US$26 trillion being required between 2016 and 2030 to maintain growth levels, eradicate poverty and respond to climate change (Sachs et al., 2019).

It is likely that new shocks, as the COVID-19 pandemic underlined, will be a trigger highlighting the need for further sustainable investment (UNCTAD, 2021).
The challenge is how most effectively to utilise the growing pools of available finance. These can only be channelled towards climate goals with a realignment of the financial system.

There are the following challenges:

- Transition risks. Policies are required to redirect and re-incentivise investment towards green energy systems and away from the construction of coal-fired power plants. Investments are needed, for example, in electric vehicles. Meanwhile, the management of stranded assets – relating to devaluations and premature write-downs – and the associated risks need to be addressed in Asia's fast-growing urban economies.

- Cascading risks.[5] The combination of economic risks interacting with climate risks, if policy action is mismanaged, adds to the drag on economies' productive potential. It can also create a feedback loop that makes any initial economic shock worse (Lawrence et al., 2020). Green finance can stop or mitigate some of this spillover because of its ability to provide liquidity, underwrite risks and institute new funding pathways.

- Emerging Asia's developing financial markets. Mainstreaming green finance by providing greater breadth, depth and scale of green instruments in relatively undeveloped financial markets is a key challenge. Central banks can help institute and support pricing mechanisms of environmental risk, but only approximately 12 per cent of central banks have explicit

[4] Green bonds, green banks, carbon market instruments, fiscal policy, green central banking, fintech and community-based green funds are all tools that fall under green finance (Sachs et al., 2019).
[5] Natural disasters have impacts that spread beyond the epicentre of the shock. Indirect impacts are particularly relevant for agricultural, low-income regions because disaster shocks can impact both the supply side (disruption of supply networks) and the demand side (income losses and migration), eventually triggering cascading losses that exacerbate initial vulnerabilities (Naqvi and Monasterolo, 2021).

sustainability mandates (Dikau and Volz, 2020).

- A shortfall in blended finance and patient capital. Patient capital[6] and institutionally mobilised public and private investment are important catalysts for a longer-term transition to a low-carbon, green economy. Equally, the private sector needs to incorporate social impact in calculating financial returns, find new mechanisms for funding and underwrite and manage risks from green investment.

The COVID-19 pandemic has heightened the importance of building resilience. Climate finance – and the potential of technological advances – remains core to this. Several governments, including those of China and Japan, have built strategies that can integrate a number of tools. Creating supportive policies, including for promoting blended private and public investment, remains essential to making green investments commonplace and increasing the depth, breadth and scale of the green financial ecosystem.

Asia already has several policies in place to promote green finance. However, further prioritising the following three areas would spur the region's momentum:

- Blended finance. The blending of private- and public-sector finance can de-risk green investments that may otherwise be deemed too risky (or be underpinned by longer-term uncertainty requiring technical assistance). Development finance institutions (DFIs) and multinational development banks can scale up support and guarantees that connect large-scale commercial finance supply with small-scale borrowers. Crucially, they do this from multiple entry points to mobilise widespread and broader-based commercial capital (OECD, 2021b).

- Green central banking. Looking ahead, a second crucial support for fast-tracking green finance lies within monetary policy mandates. The inclusion of climate risk is necessary in central bank policy, and in the employment of its multiple policy levers (Box 1), given the impacts on financial and economic stability. Translating climate risk scenarios is a complex and ongoing process that takes time to fine-tune. The extent to which a central bank adopts sustainability objectives is ultimately political (Dikau and Volz, 2020). Nevertheless, monetary policy will not be able to sideline climate change for much longer given its impacts on domestic financial stability.

BOX 1: THE GROWING ROLE OF CENTRAL BANKS IN GREEN FINANCE

Central banks are playing an increasingly active role in promoting the move towards a sustainable global economy[7]. This is illustrated by the recently established Network for Greening the Financial System (NGFS)[8], which brings together around 40 central banks, supervisory agencies and international financial institutions to develop a coordinated response to climate-related risks in the global financial system (Pereira da Silva, 2017).

Various tools are available to central banks to support the greening of the financial system. These range from disclosure requirements and the provision of data to the integration of climate-related risks in financial stability assessments (Volz, 2018). Crucially, central banks can help mobilise funds through lower interest rates, uniform taxonomies and good governance to contribute to the large-scale public-sector investment required to reach the goals of the Paris Climate Agreement.

A key tool is using the portfolios of assets (and foreign exchange reserves) that central banks manage in the context of exchange rate policies. With the growing issuance of green bonds, sustainable investments can be included in central banks' reserve portfolios (without forgoing safety and return), although accessibility and liquidity constraints are currently a limiting factor.

Adding both green and conventional bonds[9] to central bank portfolios can also help asset diversity and, hence, improve the risk-adjusted returns of traditional government bond portfolios.

[6] Patient capital constitutes a long-term investment that is based on investment or philanthropic capital and is predicated on maximising social impact and focused on long-term return.
[7] https://www.ecb.europa.eu/pub/pdf/sintra/ecb.forumcentbank201911~e0dd97f2c0.en.pdf
[8] https://www.ngfs.net/en
[9] Green bonds are fixed income securities whose proceeds are used to finance new or existing eligible green projects, e.g., projects to combat pollution, climate change or the depletion of biodiversity and natural resources (Ehlers et al., 2020).

Asia's new industrial ecosystems that combine multiple elements are crucial for generating higher productivity, and efficiency, through increased data flows and enhanced connectivity.

- Incentivising non-bank financial institutions. Banking cannot finance green projects alone, making diversified funding channels important. Engaging non-bank financial institutions, including pension funds and insurance companies, will be crucial (Gianfrate and Lorenzato, 2018). Pension funds' resources exceeded US$35 trillion assets in the OECD alone by the end of 2020, despite the COVID-19 shock.[10] Similarly, impact investors, often within the domestic economies themselves in Asia, have the potential to fill debt and equity financing gaps for green SMEs (Rodin and Brandenburg, 2014).

Diversified green finance that is supported and prioritised by institutions – such as central banks or blended finance facilities – will help to realign the world of finance with a lower-carbon economic growth path.

At root, greater green finance will then support an ecosystem that promotes clean energy projects. But it will also create new feedback mechanisms that support the aggregation of projects so that small projects can achieve commercial scalability; nurture innovative financial products; and, crucially, boost market growth through information sharing on the benefits of clean energy.

2.2. ACCELERATING ASIA'S DIGITAL DYNAMISM

Asia already leads in digital innovation, using it, for example, to facilitate energy transition (Asia House, 2021). As home to some of the world's fastest-growing economies and 60 per cent of the world's population, it accounts for more than half of the global internet user base, according to the World Bank. It has also produced multiple technology giants: Asia's top 10 smartphone brands – including Samsung, LG, Xiaomi and Sony – account for nearly 70 per cent of global handset sales.[11] The region is also home to one-third of the world's 2.3 million app developers.[12] Alibaba, Tencent and Baidu in China are providing services from e-commerce to fintech and cloud computing, while Indonesia's Gojek offers ride-hailing, logistics and digital payments.

Key economic challenges that will further underscore Asia's strength in this sector include:

- Broader e-commerce. This is particularly important in driving productivity and consumer demand. Asia's firms that are engaged in e-commerce export 50 per cent more than those that are not (Kinda, 2019). China is at the forefront: recent estimates are that 44 per cent of the global e-commerce market (valued at US$4.28 trillion in 2020) is owned by just four Chinese companies (Koetsier, 2020). E-commerce and fintech now need to reach across a broader array of sectors to boost productivity and create new sustainable jobs.

- Digital reskilling and knowledge diffusion. In order to avoid an economy falling into the middle-income trap, digital technology needs to be employed and expanded to increase productivity. The digital reskilling of portions of the labour market is required: there are already several ongoing policy efforts aimed at improving skills within SMEs, including funding for SME access to training and R&D. Policies should also aim to improve SMEs' access to knowledge brought in by inward FDI concentrated in the digital economy.

- Increasing Industry 4.0. Industry 4.0 is still, to a degree, a visionary concept[13] and presents continued growth opportunities for Asia given the region's manufacturing sector growth; its information and communications technology (ICT) production base; and FDI's as-yet limited contribution to the latter (Kim et al., 2019). Of particular note is that Asia's digital-technology adoption is widespread across the region (Sedik, 2018), with Japan, Korea, Hong Kong SAR and Singapore being notable leaders.

[10] https://www.oecd.org/finance/private-pensions/Pension-Funds-in-Figures-2021.pdf
[11] https://www.statista.com/statistics/271496/global-market-share-held-by-smartphone-vendors-since-4th-quarter-2009/
[12] For example, China's WeChat combines the capabilities of a classic website, a product catalogue, an online ordering and payment system, a newsfeed and a social network.
[13] Industry 4.0 is characterised by a new level of control over the entire value chain of products through rapid advancements in new manufacturing technologies. Industry 4.0 includes the Internet of Things, the Industrial Internet of Things, smart manufacturing and cloud-based manufacturing (Vaidya et al., 2018).

However, policy approaches to date are somewhat fragmented. It is imperative that digital products and digital infrastructure are further employed to aid sustainable trade and investment. As a part of this process, the drivers of productive growth, particularly new jobs, need to be elevated in policy agendas in order to aid economic transformation. Operationally, increasing digital technology to facilitate SME access to trade finance, and establishing a conducive regulatory environment that fosters digitalisation (such as the wider acceptance of electronic documents), have proven successful.

For Asia's digital transformation in particular, the following policies will be important:

- Fostering further smart cities. This would promote economic clustering effects[14] and play a vital role in building critical infrastructure and ecosystems for research and innovation. Co-investment in AI and digital research is an important precursor to the creation of innovation centres. These activities help support the feedback loops and clustering effects that generate digital hubs as attractive places to work, triggering a self-reinforcing boost to employment and investment (Yoon et al., 2020).

- Identifying, creating and funding the digital jobs of the future. This will ease job displacement concerns (European Parliament, 2021; OECD, 2019; CISCO, 2018) and help to avoid the middle-income trap (Zhou and Hu, 2021. Policymakers should prioritise budgets for reskilling the local population. Alongside this, businesses can take a lead role. Reskilling would foster sustainable trade and investment (ILO, 2021).

- Using digital data technology to strengthen Asia's remittance industry. Enhancing the speed, security and affordability of sending and receiving remittances with improved digital data can play a key economic role, given the fact that remittances to emerging economies are often of greater significance than official aid (ADB, 2021). Remittances grew from US$75 billion in 2000 to US$548 billion in 2019, exceeding FDI of US$534 billion (World Bank, 2020).

Greater consensus around common challenges and better-funded coordination within Asia is essential for regional resilience.

- Accelerating digital trade agreements. Digitally enabled transactions of trade in goods and services are developing into an important impetus for growth. Digital trade (and new service supply models such as cloud computing) are predicated on the movement of data. Digital data agreements need to be accelerated to expedite cross-border trade and investment.

- Expanding digital technologies, including digital currency use. This could increase financial access and foster greater inward digital FDI. Fintech helps SMEs access affordable financial services, reducing the risk and costs inherent in cross-border payments systems. As providers of financial services and, in part, supporting digital currency use, Asia's tech giants will continue to reshape the region's digital infrastructure, its bilateral trade and its investment.

At root, industry 4.0 is based on rapidly evolving ICT capacities, advanced analytics, connected machineries through the internet, the Internet of Things and digitally supported human–machine interactions. To build resilience, new industrial ecosystems that combine these elements are crucial for generating higher productivity and efficiency through increased data flows and enhanced connectivity. The region's new cities and ecosystems should continue to build on the development of smart factories that foster flexibility and efficient resource allocation through ICT integration in the entire production process.

Shaping a new digital economy is a core challenge for Globalisation 2.0 (Morris, 2021). Globalisation 1.0 represented significant trade growth, shifts in global value chains and surging capital and investment flows.

[14] Successful smart cities have been predicated on a comprehensive strategy and there is no one-size-fits-all approach for smart cities.

Looking to the future, the most successful economies in Asia are likely to continue to find competitive niches – a trend that will be supported by the expansion of its middle class. At the same time, Globalisation 2.0 could allow Asian economies to capitalise on the economic opportunities inherent in the flows of data via platforms and networks driven by AI (ibid.).

2.3. ASIA WOULD BENEFIT FROM HEIGHTENED REGIONAL COORDINATION

The Asian Century will require a higher degree of regional cooperation and integration. By 2050, Asia's share of global GDP could surpass 60 per cent (ADB, 2017; ADB, 2011). For that to happen, its GDP per capita needs to converge towards the mean for the world as a whole (ibid.). Key economies – in particular, China, India, Indonesia, Thailand and Malaysia – will also need to raise productivity to achieve this.

There is, however, a shortfall in Asia's policy coordination (ADB, 2018). Greater consensus around common challenges and better-funded coordination within Asia is essential for regional resilience.[15] Policies are generally decided on an individual-country basis, despite some joint actions to achieve a common objective. For example, in the management of risks, the Chiang Mai Initiative (and its subsequent multilateralisation)[16] has been important in funding liquidity gaps in times of crisis.[17]

Looking to 2022 and beyond, Asian policymakers will inevitably coordinate policies further, as economic integration deepens and as spillovers from systemic and idiosyncratic shocks could become more widespread. Fostering cross-institutional links should be the basis of a deeper, growth-responsive and sustainable cooperation in the longer term. Some of what is needed includes:

- Enhanced reserve management. It is clear that Southeast Asia's central banks have been building up their foreign exchange reserves. Such reserves bolster the capacity to respond to shocks. Increases in China and India, for example, have reflected, in part, a willingness to have a buffer against volatility (although the outlook for China is unclear in light of the recent dip in reserve growth (see Figure 4)). Accordingly, a regional pooling of a portion of Asian central bank reserves is desirable to cushion against new shocks

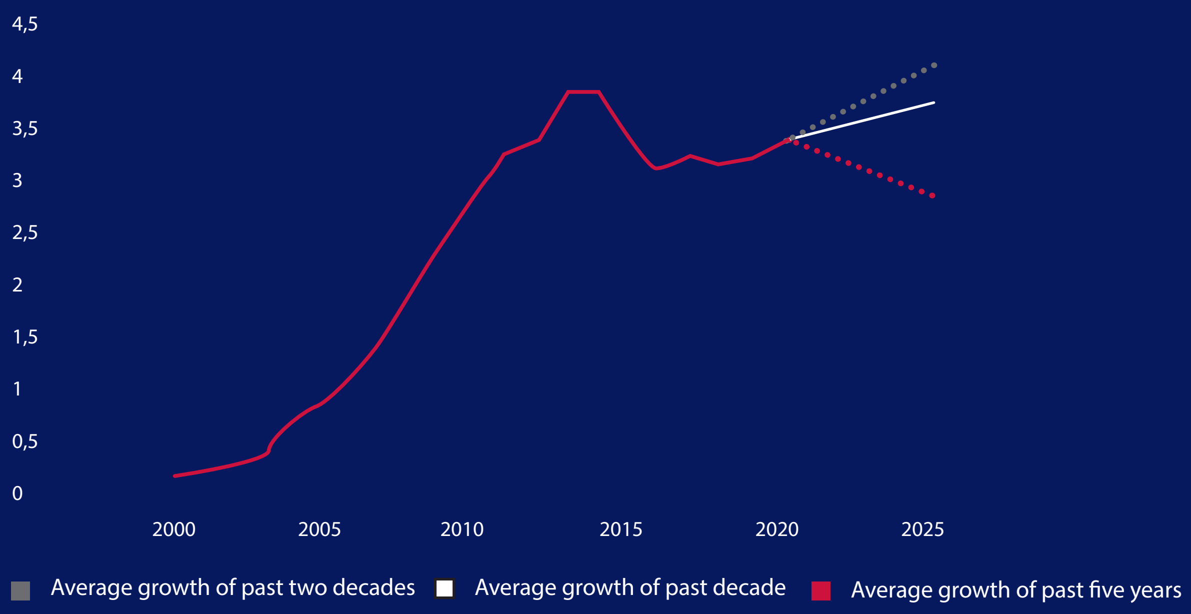
- Regional coordination on green finance. The ASEAN Capital Markets Forum has developed the ASEAN Green Bond Standards,[18] which include requirements for continuous information disclosure – a key to developing the sector. Regulations should enable a wider range of firms (including smaller ones) to issue green bonds, and/or raise finance through regulated mini bonds starting green projects (including investments in technologies that promise environmental benefits).

- The acceleration of digital trade agreements.[19] This would strengthen cross-border data flows, potentially the interoperability of data privacy regimes, and would shape new cybersecurity norms.[20] ASEAN's Regional Comprehensive Economic Partnership, which came into force on 1 January 2022, includes an e-commerce chapter with provisions on the free flow of data and on data localisation requirements. Harmonising national data rules will spur cross-border economic activity (Pisa and Nwankwo, 2021).

- A foundation for a common (and digital) currency to be built. This would yield economic benefits and also help the region to prosper, although success would be dependent on successfully defining an optimal currency area (Melvin and Norrbin, 2017) and leveraging the benefits of digitalisation (Box 2). ASEAN has played a central role in Asian economic integration; a monetary

[15] In mid-2019, the 10 ASEAN member states adopted the Indonesian-sponsored ASEAN Outlook on the Indo-Pacific. The AOIP envisions the Asia-Pacific and Indian Ocean as a closely integrated and interconnected region with a comprehensive security approach, maritime cooperation, connectivity, and sustainable development goals. In addition to the ASEAN AOIP, economic and financial integration should be leveraged to strengthen the regional architecture that has been instituted.
[16] https://aric.adb.org/initiative/chiang-mai-initiative
[17] The Chiang Mai Initiative is an example of Asia's policymakers leaning to internationalism and open regionalism and is, in part, an alternative to International Monetary Fund (IMF) bailout packages. It was the first regional currency swap arrangement launched by the ASEAN+3 in May 2000 at an annual meeting of the Asian Development Bank. The facility is composed of the ASEAN Swap Arrangement (ASA) among ASEAN countries, and a network of bilateral swap arrangements (BSAs) among the ASEAN+3 countries. The amended Chiang Mai Initiative Multilateralisation (CMIM) came into effect on 17 July 2014 and doubled its total size (to US$240 billion from US$120 billion) and introduced a CMIM Precautionary Line of liquidity.
[18] The ADB helped establish the ASEAN Green Bond Standards through its technical assistance.
[19] For example, the more recent US–Japan Digital Trade Agreement, the Singapore–Australia Digital Economy Agreement and the Digital Economy Partnership Agreement (DEPA) between Singapore, New Zealand and Chile are illustrative of this. https://ustr.gov/about-us/policy-offices/press-office/fact-sheets/2019/october/fact-sheet-us-japan-digital-trade-agreement
[20] https://asean.org/speechandstatement/asean-outlook-on-the-indo-pacific/

FIGURE 4. CHINA'S RESERVE DYNAMICS IN PERSPECTIVE



Source: World Bank and Asia House research.
Note: The 2022 to 2025 figures denote potential scenarios based on the past growth rates of China's reserve accumulation.

BOX 2: A PAN-ASIAN DIGITAL CURRENCY IN THE PIPELINE?

The possibility of launching a successful pan-Asian digital currency is predicated on the disruptive potential of central bank digital currencies (CBDCs), transcending individual economies.[21] The emergence of digital currency sandboxes is useful. One announced by the ASEAN Financial Innovation Network – a non-profit organisation jointly run by the Monetary Authority of Singapore, the International Finance Corporation, and the ASEAN Bankers Association – will allow banks and fintech institutions to build and test CBDC applications. The COVID-19 crisis accelerated the spread of digital payments. For some time, however, central banks have been researching and piloting their own, in part to assert their sovereignty. Southeast Asia is at the forefront of this trend of trialling CBDCs:

• In October last year, Cambodia launched a CBDC known as Bakong. In the pipeline since 2016, it was developed by the National Bank of Cambodia in collaboration with SORAMITSU, a Japanese/Swiss fintech company.

• Indonesia's central bank has announced that it is planning to launch a CBDC and is currently assessing which platform to use. This is partly in response to a recent spike in online banking activity: Bank Indonesia reported that growth in transaction frequency on digital banking platforms has accelerated significantly.

• Thailand awarded a contract to develop a CBDC to Giesecke+Devrient Currency Technology. In addition, the country's central bank has collaborated with US-based blockchain company ConsenSys and the Hong Kong Monetary Authority on a cross-border CBDC. The introduction of a common pan-Asian digital currency is predicated on a number of prerequisites.

Any type of currency union requires a degree of synchronisation across multiple economic and financial variables (including response functions to shocks). However, currencies based on blockchain systems – and issued by individual central banks – could serve to expedite integration and deepen cooperation. One aspect of this is that the employment of blockchain, online banking and digital payments usage mean that paper currency would not need to be issued, which, until recently, is one of the principal obstacle to such a project.

[21] In broad terms, a CBDC is digital form of hard currency that is based on blockchain technology and typically backed and issued by a central bank.

union would help consolidate a strategy and could help cushion against future shocks – particularly as inflation would be better anchored in several economies.

- Regional coordination to advance early warning systems. Several regional economies have significantly reduced the number of fatalities from natural disasters. More widespread usage of analytics could be employed in the prediction and management of natural disasters. Analytical capacity assessing cross-border risks and vulnerabilities that are used to identify risk hotspots, and the additional required risk-informed investment (such as cross-border infrastructure) could be a crucial area of heightened collaboration.

Looking ahead, the notion of risk-sharing and risk management is important for the Asia region, particularly within the economies that have increasingly high levels of economic integration. Risk-sharing continues to be comparatively low in Asia (Ng and Yarcia, 2014). The fact that there has been an increase in cross-economy correlation in consumption – that coincides with an even higher cross-economy correlation in output (He and Liao, 2011) – suggests that the strength in economic ties is greater than the region's risk-sharing. One benefit of greater integration, particularly financial integration, is the greater scope for regional resilience to shocks.

3. RISKS TO ASIA'S ECONOMIC OUTLOOK

Asia-Pacific will remain the fastest-growing region in the world in 2022, but the divergence among its constituent economies will remain high. There are fault-lines that stem, at least in part, from COVID-19 vaccination coverage and the different policy supports that have been put in place. The International Monetary Fund (IMF) estimates that medium-term output levels in emerging markets and developing economies as a whole will remain below pre-pandemic trends in the coming year.

Asia will be particularly vulnerable to downside risks given its pandemic-related economic scarring in production capacity and in its labour markets. Additional downside risks to the outlook come from vaccine efficacy against virus variants and their mutations (IMF 2021), continued supply chain disruptions, potential global financial spillovers from US monetary normalisation that could compound domestic financial vulnerabilities, and rising inflation. There are also significant geopolitical risks.

At a time when Asian countries' trade and investment shares are either declining or stagnant (see Figure 5), the prospect of intertwining risks could be particularly disruptive. It would provoke further inequality and unevenness in economic recovery. The secular decline in trade and weakness in investment also makes Asia's economies, as with other economies, all the more vulnerable to shocks.

In this section, we examine three major risks: tensions in the South China Sea, input cost inflation, and economic scarring. Each has the potential to offset any green shoots of recovery in global trade and investment.

3.1. GEOPOLITICAL RISKS: SOUTH CHINA SEA

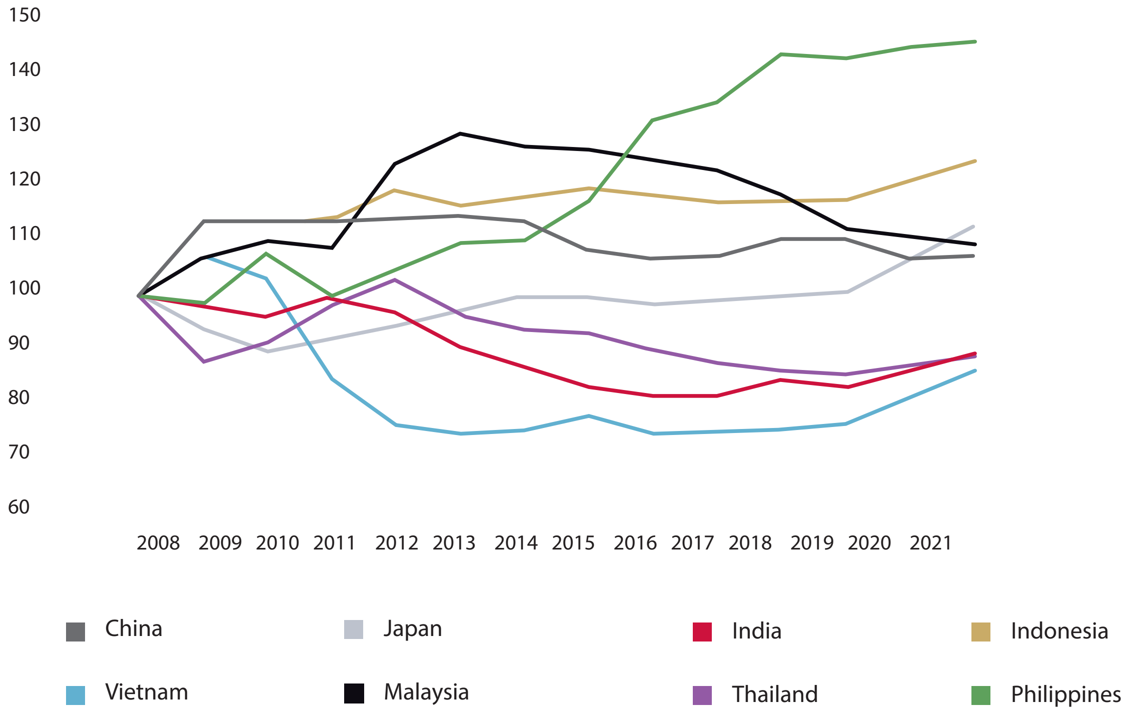
The relative stability seen in relations between the US and China over the past four decades has been waning. The two countries – powerful enough to have recently been dubbed the 'G2'[22] – account for 40 per cent of world GDP and 50 per cent of global military spending This underlines the concern about their engagement largely giving way to estrangement (Yergin, 2020) – a trend heightened by the COVID-19 crisis. It is in the South China Sea, incorporating Taiwan to the north and disputed, energy-rich islands to the south, that the political fault-line mainly lies. Both the US and China have conducted naval exercises in the South China Sea, and there have been patrols by Australia, Japan and EU countries.[23]

Historical tensions in the South China Sea stem from a host of issues – including the US–China power balance. As the world's most critical waterway, it sees an estimated US$3.5 trillion of world trade pass through it, including 80 per cent of China's oil imports. At stake are oil and gas deposits (known and unknown), fishing resources (and the rights of navigation associated with the exclusive economic zone), and control over the sea lanes and the trade that goes through them. Given this, it is unlikely that China will step back from asserting control over what it sees to be an instrumental, national interest, particularly given Beijing's concern about China falling into a middle-income trap.

[22] The Group of Two (G2) concept of the US–China relationship was first coined by Fred Bergsten and is referenced by Yergin (2020).
[23] https://www.bbc.com/news/world-us-canada-53397673

FIGURE 5. GROSS FIXED CAPITAL FORMATION SINCE THE 2007-09 FINANCIAL CRISIS

(% GDP, Index 2008=100)



Source: World Bank and Asia House Research.

There are three potential trigger points:

- **Trade and freedom of navigation.** China claims the area as part of its exclusive economic zone, so counterclaims over the rights of foreign (the US's and others') military navigation will be a potential source of tension for some time to come. Continued supply chain disruptions could exacerbate these tensions given the volume of maritime trade that passes through the waterway. Financial market volatility in the event of an escalation in tensions would cascade across the region.

- **Military clashes.** When one rising power (China) threatens to displace another (the US) – a so-called Thucydides Trap – military conflict can occur. China's strategy is characterised by a patient accumulation of relative advantage (Allison, 2018), which suggests that, as long as South China Sea developments are generally moving in its favour, it is unlikely to use military force. But if trends move against it, this may change; historically, China has been known to use military force against powers that are of equal or even greater military strength, while being more willing to negotiate with weaker adversaries (ibid.).

- **An economic turn in China.** A sharper than expected economic slowdown in China and/or political unrest could lead to military escalation in the South China Sea because of the potential of either to weaken China's economic weight. A response to slower growth and political unrest could include disruption to adversaries' critical cyber-infrastructure. An increase in hacking and intellectual property theft would significantly damage financial markets and real economic growth.

Looking ahead, China is likely to increase its economic leverage and presence in the South China Sea region – a move that is likely to outweigh the historical economic presence of the US. Policymakers in the region are likely to respond with flexible strategies; given historical

Tail risks are particularly important when it comes to China. There has been over-investment in certain sectors, leading to unsustainable debt that has been exacerbated by the pandemic.

and economic links, Southeast Asian economies are especially sensitive to spillover effects from the state of US–China relations. Currently, tensions are tempered by a commitment to multilateralism and shared objectives – particularly when it comes to the climate crisis.

3.2. INFLATION RISKS: COST PUSH INFLATION

Inflation dynamics constitute a significant risk in the year ahead – both in terms of the impact on Asia's recovery and on potential, sometimes unexpected, monetary tightening. In individual countries, the impact of the inflationary shock will depend on the degree to which it is (i) a one-off or sustained price increase, (ii) changing the inflation expectations of consumers, businesses and investors and/or (iii) demand-led or supply-driven. In Asia, supply-side bottlenecks that push up prices are likely to be largely resolved, while demand is likely to remain muted. In these circumstances, inflation is unlikely to be problematic.

However, there are risks to this baseline scenario. Supply-driven (or cost-push) inflation could continue. Supply chain disruptions, producer prices, and broader commodity and trading costs have surged globally. This could continue as new waves of COVID-19 variants (and their mutations) arrive to disrupt trade, leading to bottlenecks in production and supply capacity. Unexpected volatility in the costs of materials and transporting them would disrupt global value chains and have knock-on effects on exports. A sudden increase in costs on intermediate goods (particularly those that occur post-manufacturing) can be large even with low tariff barriers (De Backer and Miroudot, 2013).

Global inflation pressures could also lead to de-facto monetary tightening in Asia. Central banks in the region are likely to normalise policy gradually, if they do so at all, in 2022. But normalisation from years of stimulus in some G7 central banks (such as in the US where there could be a wage-inflation spiral) could lead to de-facto tightening via the bond markets. Or it could lead to further inflation risk (through lower regional exchange rates via US dollar appreciation). Currency volatility would disturb the investment climate and the ecosystem for green finance. This would hinder the growth in green financial flows within Southeast Asia, given that monetary accommodation is already comparatively less there than in the G7.

3.3. COVID-19 ECONOMIC RISKS: SCARRING

The international goal of limiting global warming to 1.5°C appears increasingly out of reach (Lynas, 2020), despite the pledges at the 2021 COP26 meeting in Scotland. It will be further out of reach if policymakers' reactions are impaired by the economic scarring that has resulted from the COVID-19 crisis and its potential spillover – or tail risk – events.[24] Climate-induced economic impacts are already limiting countries' potential growth. As the number of hours during which temperatures exceed the key thresholds that limit physical labour rise, there is a decline in hours worked, labour supplied and economic output (Kjellstrom et al., 2009). This has exacerbated Asia's decline in labour productivity. Labour losses could reach 50 per cent and 30 per cent in industry and services respectively (ILO, 2021).

Tail risks are particularly important when it comes to China. There has been over-investment in certain sectors, leading to unsustainable debt that has only been exacerbated by the pandemic. Although China's overall non-performing loans are comparatively low, key sectors have seen a significant rise in bad loans. Stricter regulatory measures have been instituted to limit risks, and the authorities have loosened monetary policy to cushion the slowdown in real estate and any spillover from the restricted default of its largest developer,

[24] A tail risk event is defined here as a high-risk, low-probability event.

FIGURE 6: ECONOMIC READINESS BAROMETERS FOR GREEN FINANCE

FINANCIAL RESILIENCE

- Nonperforming loans
- Broad monetary support
- Reserve buffers
- Currency dynamics

FINANCIAL DEVELOPMENT

- Market capitalisation
- Corporate market depth
- Portfolio investments
- Foreign Direct Investment

EASE OF CAPITAL

- Private sector credit
- Real interest rates
- Green central banking initiatives
- Blended finance capacity

EQUITABLE ECOSYSTEM

- Gender employment equity
- Per capita supply variability
- Access to finance (low income)
- Government expenditure on agriculture

FIGURE 7: ECONOMIC READINESS BAROMETERS FOR DIGITALISATION

DIGITAL FACILITATION OF TRADE

- ICT goods exports
- ICT goods imports
- Digital currency development
- Ease of digital trade

EXPANDING INDUSTRY 4.0

- Medium-/high-tech manufacturing
- Domestic investment
- Salaried employment
- Robot density

DOMESTIC DIGITAL DEPTH

- Mobile connectivity
- Fixed broadband connectivity
- E-commerce growth
- Remittance digitalisation

DIGITAL KNOWLEDGE TRANSFER

- Greenfield FDI
- Government expenditure on R&D
- Researcher density
- STEM graduate density

Source: Asia House Research.

Evergrande. But China's authorities could find themselves in a position where resources are continually devoted to restructuring and/or bailing out large companies to maintain domestic stability. This could have systemic implications for the region.

Other tail risks stem from increased protests, unrest and labour disputes in China, India and Southeast Asia – any combination of which could cause economic disruption. The disparity in access to healthcare during the pandemic, poor vaccine availability in several emerging economies, significant job losses, dissatisfaction with governments' pandemic responses, and loss of income have fuelled discontent.

There have been protests and/or political tensions throughout the region, including in Thailand, India, Malaysia and the Philippines. Political and humanitarian developments in Myanmar will continue to have regional impacts, including through the flow of refugees.

4. ASSESSING ASIA'S ECONOMIC READINESS TO SPEED UP ITS SUSTAINABILITY

As one of the fastest-growing regions in the world, Asia cannot afford to fall short in prioritising green finance, digitalisation and regional coordination. It is therefore essential that there is an ongoing assessment of how trade and investment practices are (or are not) becoming more sustainable.

This section examines the economic readiness for green finance and for digitalisation in the eight countries included in the newly launched Asia House economic readiness indices. They constitute major economies, those that are major greenhouse gas emitters, or those that are particularly vulnerable to unsustainable practices.

Trade and investment in Asia have been drivers of growth and development. Liberalisation has meant that most of the region's economies are comparatively more open than the US. Over the last three decades, Asia's economies[25] have substantially liberalised foreign trade and investment regimes to varying degrees under multiple operating frameworks, including initially through the WTO (Kawai and Wignaraja, 2014).

But since the global financial crisis of 2007–09, and, for some, the Asian crisis of 1997–98, trade and investment have started to contribute less to growth. This is both significant and problematic. Consumption-driven growth tends to lead to more crises, particularly those linked to rising indebtedness. Policies that strengthen investment are central to fostering durable growth (Kharroubi and Kohlscheen, 2017).

A stable and growing macroeconomic environment that is conducive to fostering sustainability depends on economic readiness to take on policy challenges. Figures 6 and 7 present the broad economic barometers that we use to rank the countries discussed in terms of their economic readiness.[26] When it comes to green finance, for example, economic readiness is intimately linked to non-performing loans, real (inflation-adjusted) interest rates, and credit and liquidity conditions. Miscalibrated policy leads to high levels of non-performing loans, for example, making raising green finance difficult. And when it comes to real rates, it is clear that liquidity conditions in Southeast Asia are not as stimulative as in the larger, more advanced economies.

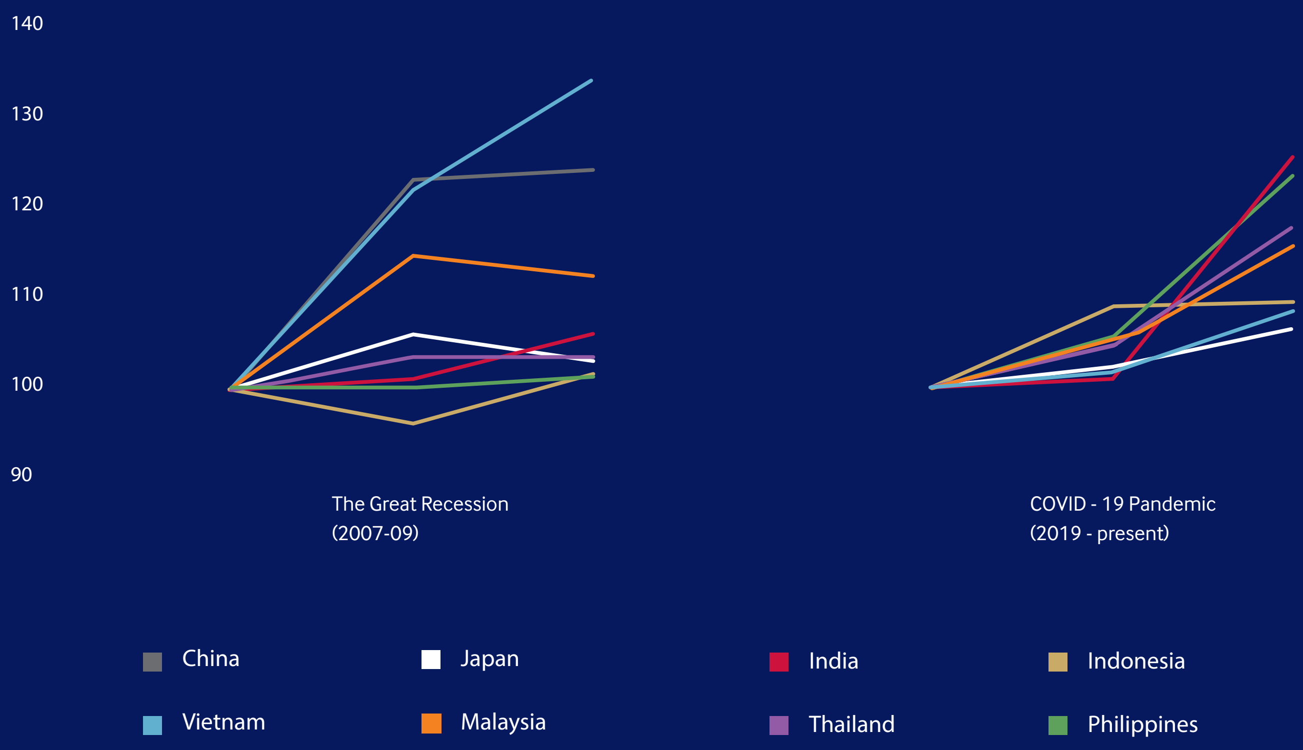
Overall this year, Asia's economies will see resurgent growth, broad monetary and financial stability, and a growing openness to fostering green finance. More uniform credit provision to the private sector during the COVID-19 crisis has been encouraging (see Figure 8).

As the country outlooks in the following sections suggest, there has been welcome growth in the region's digital economies and exponential growth in digital connectivity, e-commerce and the use of innovative technology to spur investment.

Further efforts are needed to orient digital technologies towards boosting productivity. In so doing, the use of innovative technologies will help Asia's economies sustainably increase national income and escape the middle-income trap. On a regional level, pragmatic coordination needs to take hold to mobilise funding to build resilience against economic shocks and tackle the climate crisis.

[25] For these purposes, Asia is defined as the ASEAN-10, the People's Republic of China, Japan, the Republic of Korea, Hong Kong SAR, Chinese Taipei and India.
[26] For further information on index composition and construction, see Appendix 1.

FIGURE 8. CREDIT TO NON-FINANCIAL PRIVATE SECTOR DURING CRISES
(% GDP, Index 2008=100, Index 2019=100)



Source: Bank for International Settlements and Asia House Research.
Note: Percentage shares of private credit have been indexed to the start of each period under consideration

Asia's economies will see resurgent and uneven growth trajectories. Continued credit provision to the private sector, and particularly to SMEs, will be essential to underpin financial ecosystems.

4.1. CHINA: A MULTIFACETED GROWTH DECELERATION AHEAD

China faces greater economic uncertainty in 2022. Indeed, slower growth is the goal of policymakers who want economic expansion to be more sustainable and have indicated a lower target of 5.5 per cent, versus 6 per cent in 2020 (Yao, 2021). This is in part to rein in overheated sectors. The crucial factor will be the composition of China's growth: whether consumption and investment will stage a turnaround. Our expectation is that the consumer sector will continue to recover, but that trade and investment growth will decelerate as the economy faces new challenges, including the loss of some of its developing country privileges at the WTO (Farge, 2021).

Green finance: SME access and market depth are key

China leads in economic readiness to harness green finance and in digital responsiveness in the sample of eight countries surveyed. The Asia House index indicates that China's monetary accommodation – broad money growth and credit conditions – should support green finance as well as the real economy (see Figure 9). China's growing financial market capitalisation points to greater scale, breadth and depth for its financial instruments, all of which will sustain its economy (Levine and Zervos, 1998). However, green finance targeted at SMEs is essential, given the reported financing gaps (Papadavid, 2021).

China's green bond market has grown rapidly, with issuance breaking a new record last year. In the first nine months of 2021, China raised US$63.16 billion in green debt locally –US$25 billion in the third quarter alone – with non-financial corporates dominating issuance (Igno et al., 2021). This compares with US$44 billion in the whole of 2020[27] and leaves China responsible for nearly 40 per cent of global green bond issuance.

The key challenge will be access to this and other finance by SMEs, particularly amid the economic impact of the COVID-19 pandemic. Policymakers' clear emphasis on maintaining stability will mean that targeted liquidity should be given to SMEs (in addition to the support given to China's systemically important state-owned enterprises). Liberalisation remains key to increasing the depth and breadth of China's financial instruments, but there is a risk that this will be halted when faced with shocks such as tighter US monetary policy and repeated outbreaks of COVID-19.

China's digitalisation: leading from the front

China's coastal regions are particularly advanced when it comes to digitalisation, with e-commerce and fintech being key drivers (Zhang and Chen, 2019). Consumers in China (as well as those in India and Indonesia) are already using the e-wallet – electronic 'cards' used for online transactions – as their preferred form of payment for e-commerce. By the end of 2019, nearly two-thirds of online purchases in China were made via e-wallet (OECD, 2021b). Given its existing ICT infrastructure – including steadily high broadband rates – China is well-positioned to expand the scale and scope of its digitalisation into areas of sustainable trade and investment.

Digital trade finance can also help boost e-commerce, enabling treasurers to drive down the cost per unit of transactional revenue. Increased information transparency can result in improved cash forecasting and deployment of capital that enables greater e-commerce. Overall, though, it will be the consumer that drives the digital sector. On the back of its base of nearly one billion internet users, China's e-commerce sales grew to $US1.7 trillion in 2020 – a number that is equivalent to 30 per cent of all retail sales in China (Bu et al., 2021).

When all this fully embraces cryptocurrencies is not yet clear. China began pilot trials for its CBDC in 2020, but at the same time outlawed all other crypto-related activities. This was aimed at ensuring domestic financial and monetary stability in order to facilitate a smoother pathway for using the digital renminbi in China, and, eventually, for cross-border usage.

The People's Bank of China's (PBOC) digital currency is comparatively advanced[28] (China scores highest in its sub-index for digital currency development). The digital renminbi should become both important and disruptive, domestically and globally. It could ultimately be the

[27] https://www.climatebonds.net/resources/press-releases/2021/09/china-state-market-2020-report
[28] Work started in 2014. On 20 April 2020, the PBOC confirmed pilot testing was underway for a retail CBDC – the state-controlled Digital Currency Electronic Payment (DCEP) – in several cities (Cheng, 2020).

means through which the renminbi challenges the US dollar's dominance (Papadavid, 2021b).

China's regionalism: more coordination than competition

China views itself as an integral part of Asia, and Asia is where its key interests lie. Its relationship within the Indo-Pacific region is summed up by in its stated objective of pursuing good neighbourly relations and partnership with neighbours and fostering a harmonious, and secure neighbourly environment (Pan, 2014). In other words, it formally aims for peaceful development, which includes the notions of equality and mutual trust, and common cooperative security. (Note this does not rule out the use of force when justified by China's leaders, such as with Taiwan (Larus, 2005).)

Under President Xi Jinping, China has been pursuing a more assertive role in regional affairs in the Indo-Pacific (Blanchard and Flint, 2017). The Belt and Road Initiative unveiled in 2013 is a response to this (Brewster, 2019).

Fostering stability in relation to its neighbours is in China's own interest for economic development. Looking ahead, it will have to contribute further to the region's financial resilience against shocks, such as COVID-19, if it is to consolidate its leadership.

Of key importance will be its role in digital agreements. China's 'red lines' in digital trade feature provisions that are incompatible with many international trade agreements. The Regional Comprehensive Economic Partnership text, for example, included provisions –largely at the insistence of China – that permit substantial government interference in the digital market, including one that would allow members to require that firms locate computing facilities within their country and divulge their source code as a condition of trade. Almost no other previously negotiated free trade agreement allows these measures, and the US and others would not be likely to accept their inclusion in a future text (Hufbauer and Hogan, 2021).

We expect China to continue playing an outsized role in the region, befitting its dominant economic and political weight.

4.2. JAPAN: DOMESTIC INNOVATION POLICY NEEDS MOMENTUM

Japan is likely to see moderate growth acceleration in 2022. With a new administration in place and the country having emerged from a COVID-related state of emergency at the time of writing, the increased capacity of the government to act should spur growth, trade and investment after a prolonged period of lockdown. Japan's ability to channel and mobilise green finance is the second highest in our country index ranking; it is needed, in particular, for SMEs, and further issuance of green bonds will be required. Central bank green initiatives will also have to be further elevated.

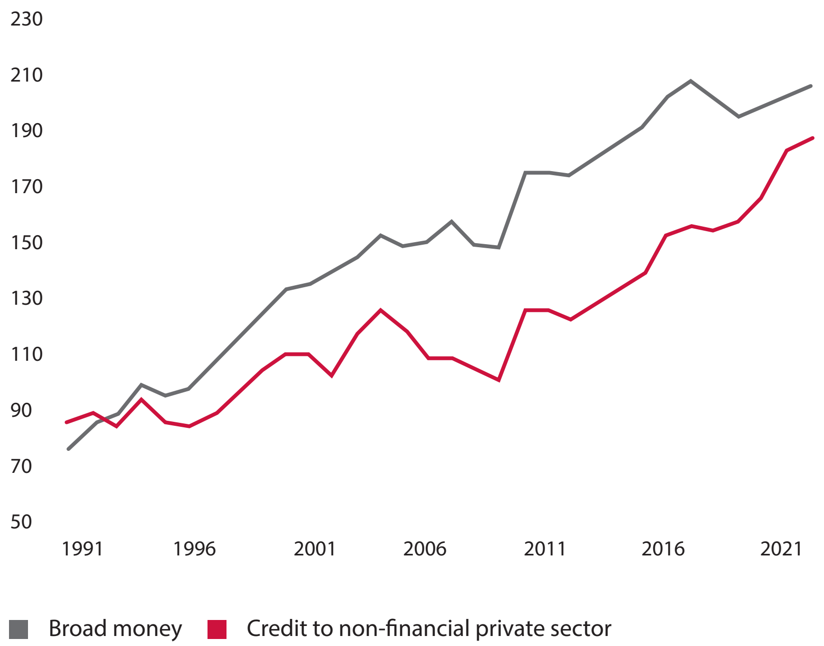
Japan's green finance ecosystem boosted by domestic stability

Japan's policymakers have provided unprecedented amounts of liquidity to the economy during the COVID-19 crisis – outpacing their response to the 2008–09 financial crisis and even China's level of broad monetary liquidity (see Figure 10). Among the world's most disaster-prone countries and significantly affected by climate change, Japan set a goal to be carbon neutral by 2050. All of its monetary and financial indicators – and particularly the low level of non-performing loans, resilient broad money growth and credit easing (see Figure 11) – have contributed to a higher ranking for the promotion of green finance and for greater depth and diversity in its green ecosystem.

The country's green bond market is growing but remains relatively small. Japan's 2020 green bond issuance was US$10.6 billion, making it seventh in global country rankings, according to the Climate Bonds Initiative. But plans to expand the market and to further assess and strengthen financial institutions' resiliency to climate risks are underway. In collaboration with the Bank of Japan, the Financial Services Agency will stress test Japan's three mega-banks and top three non-life insurers to measure their resilience to risks posed by climate change. Japan will also set up a scheme to certify green bonds in conjunction with the operator of the Tokyo Stock Exchange on a common platform for issuers and investors (Kihara, 2021).

FIGURE 9. A TIMELINE OF CHINA'S MONETARY AND CREDIT DYNAMICS

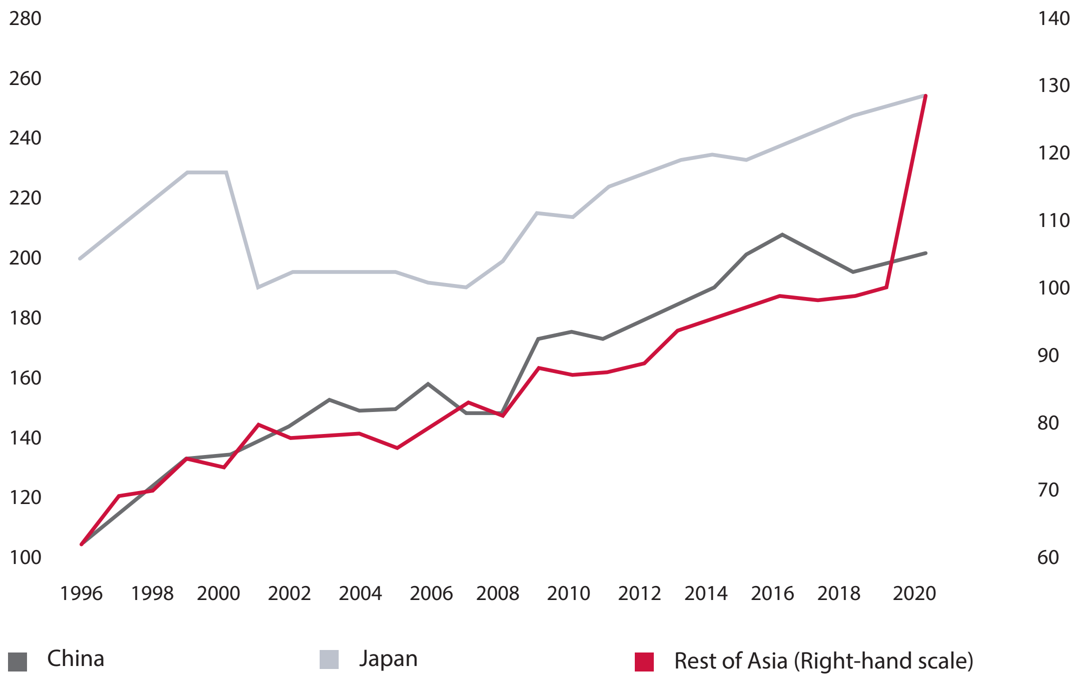
(% GDP)



Source: World Bank, Bank for International Settlements and Asia House Research

FIGURE 10. MONETARY DEVELOPMENTS IN CHINA AND JAPAN

Broad money (% of GDP)



Note: Rest of Asia denotes an equally weighted average of India, Indonesia, Vietnam, Malaysia, Thailand and the Philippines.

Source: World Bank, Bank for International Settlements and Asia House Research

On top of this, however, implementation of climate mitigation and adaptation strategies among carbon-intensive Japanese companies is low when compared with the Paris Climate Agreement ambitions of the government. This poses significant climate-related risk exposure for current investor portfolios that needs be addressed by both the financial sector and government regulators (Schumacher et al., 2020). To reach the country's green targets, Japan's financial sector needs to expand sustainable finance and develop greater environmental, social and corporate governance policies,[29] as well as scaling up the financing of the net-zero carbon economy via its portfolios across all asset classes (ibid.).

Japan's digitalisation needs momentum

Japan's comparatively low level of digitalisation has impeded its productivity, particularly in managing the impact of shocks. The promotion of new and innovative technologies, e-commerce growth and inward greenfield FDI are comparatively weaker in Japan's sub-indices. During its COVID-19 lockdown, only 26.8 per cent of office employees in Japan worked from home, according to a Ministry of Health, Labour and Welfare survey, in part because just 28 per cent of companies had an online system that allowed staff to work remotely. Despite having robust telecommunication systems compared with other countries, less than 10 per cent of Japanese administrative procedures can be completed entirely online, according to the Japan Research Institute. Given these challenges, Japan launched a state agency for digital reform[30] in September, which will pursue inclusive digitalisation, supervise the overhaul of government computer systems and introduce data protection regulations.

While digitalisation lags in offices, however, Japan's e-commerce market is the third largest in the world. With a revenue of US$114 billion in 2020 – larger than the US and UK[31] – growth has been propelled by the COVID-19 crisis and is expected to expand in the year ahead. Equally, the government is pushing ahead with the digitalisation of trade, and particularly seeking to scale back on the paperwork that, to date, has been a hallmark of trade, manufacturing, customs and logistics.

Multiple and multifaceted efforts are needed to improve the breadth and scale of digitalisation and innovation in Japan. Its ICT exports have lagged on a comparative basis, particularly with regard to supply chain disruptions linked to the COVID-19 crisis. However, more fundamentally, the government's growth strategy council is focused on innovation as a foundation for trade, investment and growth. This should lead to an increase in employment and real wages, as well as boosting Japan's trade position. The government, for example, will seek to make the car production supply chain less carbon-intensive and intends to review regulations for digital technology, such as for using AI in car inspections and financial product sales.

Japan's regional role is core to mobilising global finance

Alongside its allies and partners, Japan has sought to maintain regional stability through supporting a "rules-based order" (Tamaki, 2020). This, in essence, now means containing China through "soft" strategies of active diplomatic "encirclement" and a "hard" build-up of Japanese military capabilities (Hughes, 2016). Japan's Free and Open Indo-Pacific Strategy[32] was announced at the sixth Tokyo International Conference on Africa's Development, emphasising cross-regional connectivity between Asia, the Middle East and Africa – already being linked with China through Beijing's Belt and Road Initiative. The move emphasised Japan's commitment to free and open seas.

The size of Japan's financial system and the Bank of Japan's global importance give it a major role in mobilising Asia's green economy, along with its ability to foster green financial hubs and promote green finance. Japan has the capacity to provide a key financial buffer when future economic and climate shocks and challenges materialise. The size of Japan's foreign exchange reserves and the global role of the yen as the third-most-traded currency in the world[33] and a global safe-haven asset,

[29] This includes disclosures made through the task force on climate-related financial disclosures through TCFD-aligned disclosure of climate-related financial risks.
[30] https://www.japan.go.jp/kizuna/2021/09/new_digital_agency.html
[31] https://ecommercedb.com/en/markets/jp/all
[32] https://www.mofa.go.jp/policy/page25e_000278.html
[33] https://www.bis.org/statistics/rpfx19_fx.htm

make Japan a key country to further institute bilateral swap facilities (BSFs) and blended finance to tackle the climate crisis. The Bank of Japan continues to renew and institute BSFs, including most recently with China.[34] The risk to Japan's regional role, however, remains its past tendencies to prioritise its relationship with the US over its leadership in multilateral regional cooperation (Hook et al., 2002).

4.3. INDIA: DIGITAL EXPANSION IS ESSENTIAL

Despite downward revisions stemming from the COVID-19 crisis, India is still expected to be the world's fastest-growing economy in 2022. As with several other Asian economies, India's foreign exchange reserves have risen significantly, which will both help build financial resilience against shocks and boost its regional economic presence. Its digital connectivity is low, however, and aspects of its economy and financial system are problematic for fostering green finance. Our index rankings indicate that what is needed is greater digitalisation, coupled with recalibrated monetary accommodation to foster green finance, including for SMEs. This is especially key to arresting the decline in India's share of world trade.

India's green finance: the barrier of bad debt

From a macroeconomic standpoint, India should be in a position to embrace green finance. Credit and monetary conditions are accommodative (but need to be more so). India's real interest rates, for example, are higher than they were during the 2007-09 financial crisis (see Figure 12). One of the biggest barriers to green finance, however, is the level – and projected rise – in India's non-performing loan ratio. This has been high and is projected to worsen, despite measures taken by the Reserve Bank of India (Sanglap, 2021). Initiatives specifically geared towards financing renewable energy platforms, such as those that include the involvement of international organisations, are needed.

India had its first green bond issuance in 2015. It came from Yes Bank – India's fifth-largest private-sector bank and a domestic pioneer in India's green financing – along with a US$50 million investment from the World Bank's International Finance Corporation (Panajyan, 2015). Issuance has since grown and is likely to have reached a new record in 2021 after a 643 per cent increase between January and the beginning of August, according to Bloomberg. Indian companies are being helped by cheaper borrowing costs and loose monetary conditions. As the world's third-biggest greenhouse gas emitter, India has made a significant new investment in renewables and is introducing new regulations that could accelerate a clean energy transition and lead to further green bond issuance. Companies will be allowed to purchase (and thereby switch to) renewable electricity from state distributors at a green tariff. [35]

For a large emerging economy such as India's, ensuring access to energy, creating new jobs, and committing to sustainable trade and investment require careful policy sequencing and synergies between climate and development policies. India continues to grow as a financial hub, yet the incorporation of environmental, social and governance factors is still not fully developed (Tandon, 2020). Given that India is particularly exposed to the climate crisis, unprecedented finance will be required, and could be as high as US$4.5 trillion for urban sustainability and renewable energy by 2040.[36] This dwarfs India's fiscal capacity, underscoring the urgent need for private and blended finance facilities.

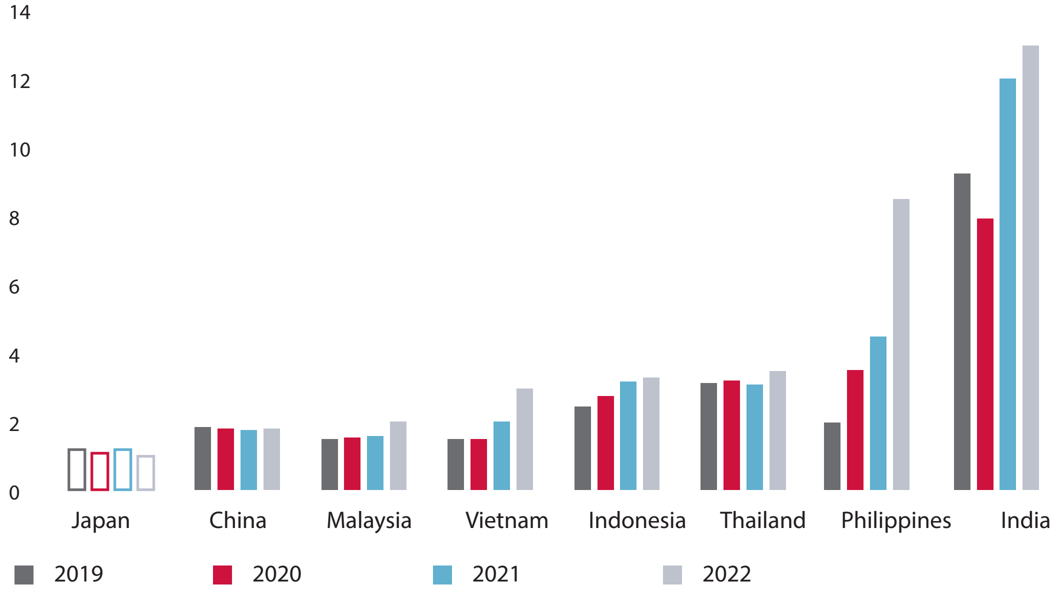
India's digitalisation: an essential catalyst for trade transformation

India's digital economy is growing at an accelerating pace and is expected to reach US$1 trillion by 2025 (Investcorp, 2021). But there is a mixed picture when it comes to India's digitalisation efforts. For example, India lags significantly behind its Asian counterparts and trading partners in terms of fixed broadband coverage (see Figure 13) and ranks low in our index rankings relating to exports of ICT goods. On the positive side, this means there is significant – and unprecedented – opportunity for growth.

[34] https://www.boj.or.jp/en/announcements/release_2021/rel211025a.pdf [3]
[5] https://www.thehindubusinessline.com/economy/policy/govt-launches-green-tariff-policy/article34904391.ece
[36] https://www.newindianexpress.com/business/2018/jun/25/infrastructure-investment-for-usd-45-trillion-a-challenge-finance-minister-piyush-goyal-1833414.html

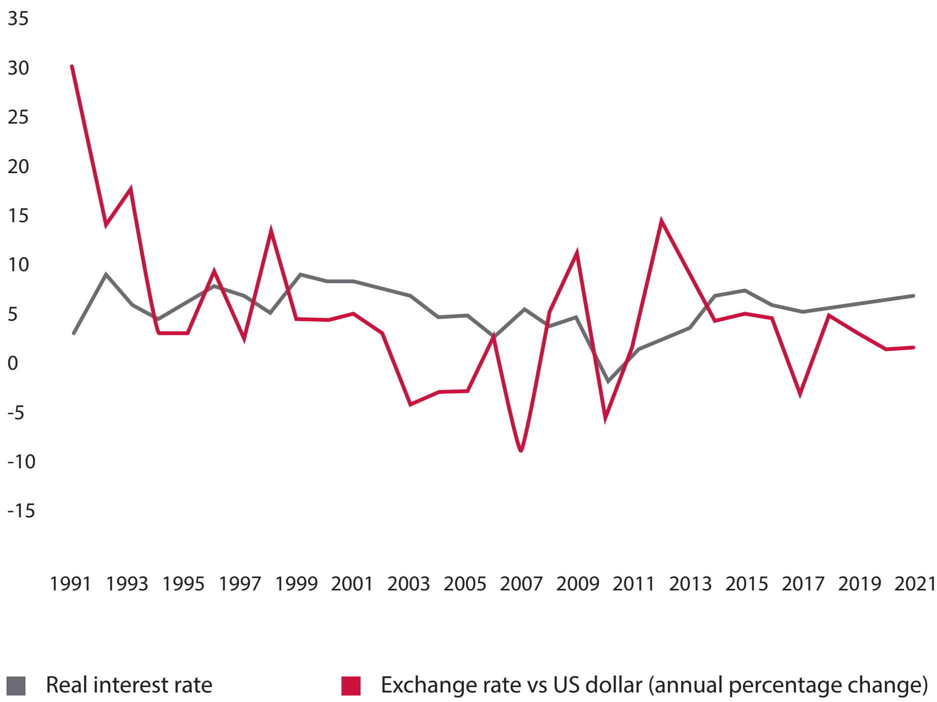
FIGURE 11. NONPERFORMING BANK LOANS

(as a % of total gross loans)



Source: World Bank and Asia House Research.

FIGURE 12. A TIMELINE OF INDIA'S MONETARY CONDITIONS



Source: Reserve Bank of India, World Bank and Asia House Research.

To avoid becoming mired in a middle-income trap, heightened digital transformation can provide a crucial policy strategy to promote investment and boost its consumer sector further (the latter has typically driven growth, in contrast to China). E-commerce in India has transformed India's economy, particularly during the COVID-19 pandemic, changing the way business is done. The e-commerce market is expected to grow to US$111.4 billion by 2025 from US$46.2 billion in 2020, according to the India Brand Equity Foundation.[37] Much of the growth has been triggered by an increase in internet and smartphone penetration, strong consumer demand and rising internet usage stemming from the government's 'Digital India' programme.[38]

Digital trade finance is crucial for India's outlook. As with a number of other economies (including China), arresting the decline in trade is an important element in fostering sustainable growth. India's digitalisation can bring on rapid innovation, as seen by India's largest bank, the State Bank of India, which has automated and harmonised its operations on an integrated platform.

This has facilitated a tripling of trade-finance transactions while cutting average processing time by 95 per cent (OECD, 2015). Even preceding the COVID-19 crisis, several digital trade platforms were launched to facilitate digital export finance in India.[39]

India's regionalism: counterbalance to China

Not surprisingly, India's future relationship with China will shape its regional stance. Over the next decade, India will have a growing regional and global profile with a flexible commitment to both rules-based multilateralism[40] and bilateral strategies (Rao, 2018; Sidhu et al., 2013). Its role within the Indo-Pacific as a major economic power and democracy makes it the obvious counterbalance to Beijing, albeit that challenges to established order can bring risks (Allison, 2018).

India's capacity to act as a regional leader is tied to its economic resilience and its financial firepower. To the extent that it has built up its foreign exchange reserves, its financial position will hold it in good stead when it comes to managing economic, health and climate shocks. It has instituted BSFs but should strengthen its economic partnership and investment relationships with its key economic partners. Developments on this front have so far been disappointing, however.

Most recently, the Reserve Bank of India has only extended a BSF with Sri Lanka. Given its withdrawal from the Regional Comprehensive Economic Partnership, there could be a risk of growing protectionism (Gaur, 2020). As a result, India's commitment to multilateralism risks being limited to issues of security, via the Quadrilateral Security Dialogue with Japan, the US and Australia[41], rather than to economic or financial multilateralism geared towards sustainability.

4.4. INDONESIA: TACKLING DOMESTIC OBJECTIVES ALONGSIDE THE G20 PRESIDENCY

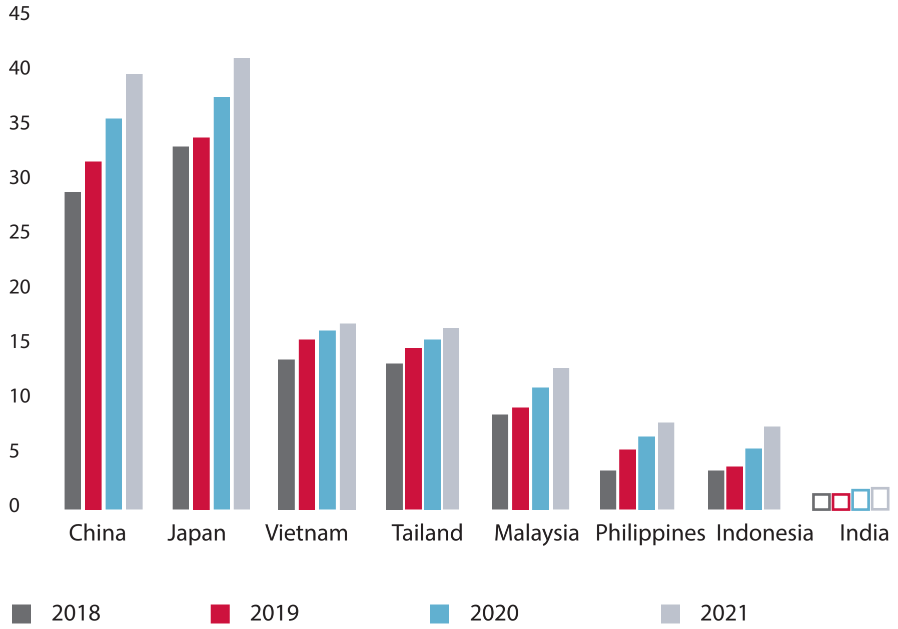
Indonesia's 2022 growth rate is likely to be one of the strongest in ASEAN. Its growth drivers and composition matter – particularly in terms of the degree to which investment spending accelerates and trade recovers. Continued dynamism in inward investment will be particularly encouraging (see Figure 14).

The latter continues to decline as a share of GDP and is lower than several of Indonesia's neighbours. Green finance is being actively promoted by the government in both the public and private sectors, but digital connectivity remains an obstacle to the country's economic transformation (World Bank, 2021). Indonesia scores highest in the sub-indices of e-commerce and FDI. Progress on digitalisation, expanding the breadth of its green bonds, and elevating pragmatic coordination as the holder of the G20 presidency will be key this year.

[37] https://www.ibef.org/industry/ecommerce.aspx
[38] https://www.digitalindia.gov.in/
[39] https://www.modifi.com/static/documents/MODIFI_Press_Release_06.06.2019.pdf
[40] In 2016, Prime Minister Modi affirmed India's role as a maritime nation and its Security and Growth for All in the Region (SAGAR) policy. Later in 2018, speaking at the Shangri-La Dialogue, Prime Minister Modi outlined a cooperative and inclusive Indo-Pacific vision, highlighting the importance of ASEAN centrality in guiding India's policies.
[41] https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/12/quad-leaders-joint-statement-the-spirit-of-the-quad/

FIGURE 13. FIXED BROADBAND SUBSCRIPTIONS

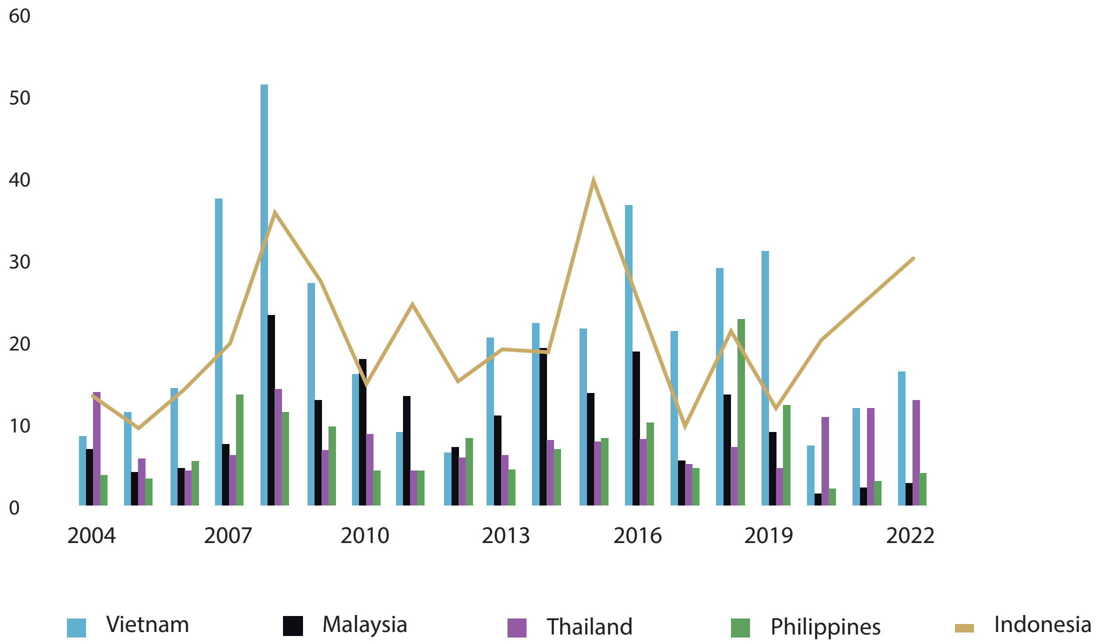
(per 100 people)



Source: World Bank and Aisa House Research

FIGURE 14. INDONESIA'S GREENFIELD FOREIGN DIRECT INVESTMENT

(% change)



Source: UNCTAD and Asia House Research.

Note: The data denote annual percentage changes in the value of announced greenfield FDI projects, by destination. 2022 figures are Asia House estimates.

Indonesia's green finance: prioritising financial market development

Although forms of digital finance (and digital banking, in particular) have grown significantly[42], Indonesia's financial market development and capitalisation remain low compared with the rest of Asia. Its broad money growth has not reached the (highly stimulative) levels seen during the Asian financial crisis of the late 1990s, and private-sector credit growth remains comparatively low. These two metrics do not augur well alongside Indonesia's low financial market capitalisation. So, while Indonesia has had success in issuing corporate green bonds, a further expansion in its market depth and breadth are necessary (World Bank, 2018). Despite discussion about issuing municipal green bonds, for example, there has been little success (Wijaya et al., 2021). Our indices indicate that the rising level of non-performing loans could also be problematic.

Transformation in Indonesia's financial sector is necessary for green financing, given that, like many Southeast Asian economies, Indonesia's financial system is dominated by its banking sector. Joint efforts by Bank Indonesia and Indonesia's financial regulatory authority to boost green finance have yet to yield tangible results, with the banking sector still lacking many of the necessary tools to assess environmental credit risks. Green financing has, however, grown significantly since the launch of a sustainable-finance roadmap in 2014 and Indonesian banks are likely to have pushed sustainable lending to more than US$56 billion in 2021.[43]

Additionally, Indonesia's economy will continue to play a significant and innovative role in the promotion of green Islamic finance. Total sukuk, or Islamic bonds, issued in 2021 grew solidly by 36 per cent on an annual basis– with Indonesia (and Malaysia) having been key jurisdictions.[44] In June 2021, Indonesia issued an offshore sukuk with a 30-year green tranche included, adding diversity to its innovative financing mechanisms. Since issuing the world's first sovereign green sukuk in 2018, which was oversubscribed, Indonesia's Ministry of Finance has consistently tapped the bond markets to finance and refinance renewable energy, energy efficiency and sustainable transportation projects.[45]

Indonesia's digitalisation: greater connectivity is key

Compared with many of its neighbours, Indonesia's basic level of connectivity (in terms of broadband subscriptions per 100 people) remains low, even if it is growing. This poses a major challenge to economic transformation and the full exploitation of digital technologies to enhance Indonesia's potential growth and long-term productivity. Almost half of the adult population is still without access to the internet. Incomplete data and an untapped potential for building a comprehensive digital identity framework are holding back broader digital transformation (World Bank, 2021).

The digital economy is estimated to have contributed just 4 per cent of Indonesia's GDP in 2020 (Aggarwal, 2021) versus around 18 per cent in neighbouring Malaysia. The sector's main driver is e-commerce, followed by the transport sector and food delivery. Virtual classrooms (ed-tech and health-tech) grew in significance during the COVID-19 crisis, and digital technologies such as blockchain, data analytics and 5G mobile have enabled greater collaboration, expanded trade and increased access to services. But Indonesia's trade in ICT remains low.

Indonesia's e-commerce is expected to accelerate, however, in line with the government's emphasis[46] on the potential for growth in the sector, which currently largely covers only the transport and food-delivery sectors. Fostering an innovation ecosystem will require training people in technology, funding research in the digital economy, and creating adequate digital governance and strategies to handle new-wave technologies such as 5G, the Internet of Things, blockchain, AI and cloud computing.

Indonesia's regionalism: potential as G20 chair

The Indo-Pacific regional concept is predominantly the brainchild of Indonesia (Weatherbee, 2019), which positions the country as a regional leader and bridge-builder (Agastia, 2020)[47]. Indonesia was a founder of

[42] https://www.trade.gov/market-intelligence/indonesia-digital-banking
[43] https://www.bloomberg.com/news/articles/2021-11-03/indonesian-banks-to-push-sustainable-lending-to-over-56-billion
[44] https://www.fitchratings.com/research/islamic-finance/promising-outlook-for-global-sukuk-market-following-robust-2021-11-01-2022
[45] https://www.undp.org/stories/pioneering-green-sukuk-indonesia
[46] https://setkab.go.id/en/trade-minister-indonesian-digital-economy-to-grow-eightfold-by-2030/
[47] https://onlinelibrary.wiley.com/doi/full/10.1002/app5.308

ASEAN, which was designed to foster regional harmony, buffer external threats, protect against proxy-power conflicts and increase development.

As 2022 G20 president, Indonesia now faces a defining moment. It has taken the lead in developing a more inclusive and cohesive regional architecture where powers counterbalance each other. With ASEAN, it has also worked to provide a common language for sustainable finance among member states.[48] It has become a regional hub for blended finance, which is crucial if countries are to achieve net-zero targets. The coming year will be a test.

4.5. VIETNAM: CONTINUED TRADE STRENGTH TO FUEL GROWTH

Vietnam's economy showed resilience during the COVID-19 crisis, reflecting its long-held strategy of elevating growth through its bilateral trade and investment relationships (see Figure 15). It has made considerable strides in nationwide electrification with a relatively diversified energy mix that is dominated by hydropower, followed by gas and coal. Without further investment, however, Vietnam's dependence on imported coal could increase, bringing substantial negative environmental, health, climate-change and economic consequences. In particular, the promotion of and access to finance for SMEs to recover from the impacts of the COVID-19 crisis will be of particular importance. Vietnam's index rankings indicate resilience in its financial sector (particularly in its reserve dynamics and credit provision to its non-financial private sector).

Vietnam's green finance: further financial accommodation needed

Vietnam's National Green Growth Strategy[49] aims to create green financial instruments to unlock renewable energy investments (Nguyen et al., 2018). This will entail maintaining a healthy monetary system to ensure stable and predictable interest. Its comparatively undeveloped financial market will also require changes to meet green ambitions, including data disclosure, transparency on green finance activities, and listed companies publishing financial reports referring to sustainable development and green development.

There are several challenges, not least Vietnam's relatively high level of real interest rates. The banking system has also been something of a barrier given the general view that renewable energy projects are risky (Nguyen et al., 2018), reinforced by Vietnam's high level of non-performing loans. Although Vietnamese banks have been showing more interest recently in their green-lending portfolio, the most significant obstacle is the inadequate capacity for processing green-credit appraisals, including the risk assessment and evaluation of new technologies (ibid.). SMEs, meanwhile, need particular attention given that household enterprises account for 97 per cent of Vietnam's firms (Berkel et al., 2020).

When it comes to fostering green finance, Vietnam is dealing with a financial system that is comparatively underdeveloped and not fully operational. To attract more private-sector involvement, the domestic financial sector needs to be brought up to standard, particularly its primary and secondary fixed-income market, where liquidity and capacity can be built up over the long term. Also required are the development of investment funds and venture capital for renewables, a more effective credit guarantee scheme to provide more concessional loans, and increased access to finance for green SMEs. Alongside this, building up credit-rating agencies with a high capacity to conduct credit appraisal of energy projects is essential.

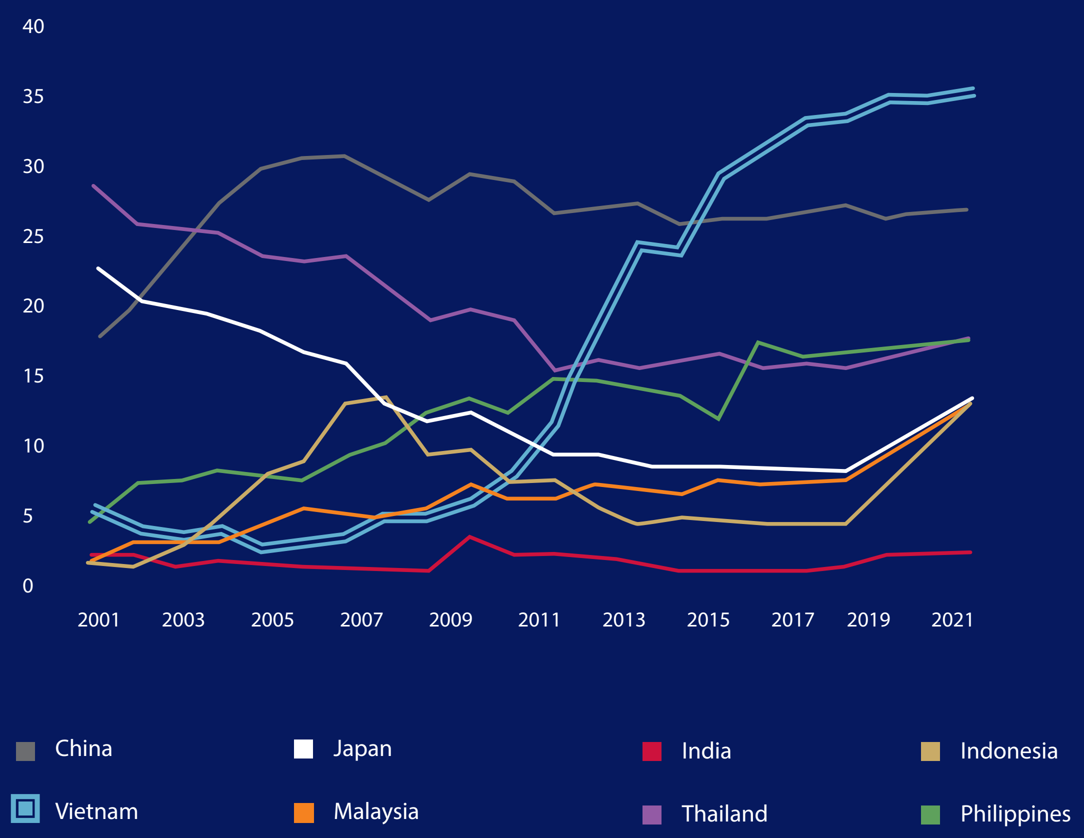
Vietnam's digitalisation: a key engine for economic transformation

In contrast to its domestic financial system, Vietnam has one of the fastest-growing digital economies in Southeast Asia (Devanesan, 2020). As with other countries, it will need to avoid the middle-income trap. The timing looks opportune: Vietnam's digital sector is viewed as one of

[48] https://asean.org/wp-content/uploads/2021/11/ASEAN-Taxonomy.pdf
[49] https://www.greengrowthknowledge.org/national-documents/viet-nam-national-green-growth-strategy

FIGURE 15. VIETNAM'S EXPONENTIAL GROWTH IN ICT EXPORTS

(% of total goods exports)



Source: World Bank and Asia House Research

Vietnam's economy showed resilience during the COVID-19 crisis, reflecting its long-held strategy of elevating growth through its bilateral trade and investment relationships – particularly its high and rising share of ICT goods exports.

the country's engines of growth over the next decades, enabling Vietnam to achieve its development strategy of becoming a high-income economy by 2045. If Vietnam's digital sector were to expand by approximately 10 per cent a year, the cumulative gains for the economy would exceed US$200 billion over 2021–45, or about the size of Vietnam's current GDP (Morisset, 2021). On this basis, digitalisation alone will drive economic transformation. Digital finance is also likely to support Vietnam's trading relationships, particularly as its share of ICT goods exports is high and rising, even surpassing China's, and Vietnam's sub-index leads in inward greenfield FDI. Not only will the digital sector become more dominant in the economy, but the use of ICT tools and digital platforms will create productivity gains. Within supply-chain finance and cross-border trades, data analytics are already expediting Vietnam's due diligence process in underwriting and in risk management.[50] The government will have to increase its research capacity and expenditure devoted to R&D.

On 21 June, Vietnam and Singapore agreed to establish a technical working group on a platform for digital partners. It was a move towards a digital economy agreement establishing digital trade rules and digital economy collaborations between the two. The broader cooperation will also cover logistics, e-commerce, hi-tech agriculture, processed food, and the development of environment-friendly and innovative Vietnam–Singapore industrial parks. This will effectively increase the ease with which Vietnam participates in and increases digital trade with all of its neighbours.

Vietnam's regionalism: trade integration at the forefront

Vietnam is a proponent of regional economic integration, seeing its own economy as reliant on trade and export-oriented growth. Its trade agreements are designed in part to put it in strategically advantageous positions in relation to its key partners, notwithstanding the risk that its role in regional production chains could be limited by its being a low value-added producer (the latter being one of the main risks for Vietnam in terms of becoming stuck with a middle-income status).

Looking ahead, Vietnam will continue to focus on accelerated export-oriented growth and international economic integration. In particular, preferential access to the EU and the US – ASEAN's main consumer markets – would allow Vietnam to export finished manufactured products at a lower cost than other countries in the region. Domestically, meanwhile, Vietnam will continue to use international trade agreements to lock in reforms that are difficult to pass but necessary for continued economic growth.

4.6. MALAYSIA: LEADING IN GREEN ISLAMIC FINANCE

Malaysia's near-term economic performance will depend on government measures to sustain the economy in the light of the COVID-19 crisis. Broad macroeconomic indicators, such as liquidity conditions and private-sector credit, remain in accommodative territory, but both trade and investment have declined as a share of the economy during the crisis. Over the longer term – and as Malaysia converges with high-income economies – greater productivity will be needed to foster the incremental growth required to sustain higher potential output. In particular, access to finance for SMEs recovering from the impacts of the pandemic will be vital.

Green finance: Islamic bond issuance at the fore

Sustainable finance is poised to play a more prominent role in Malaysia, driven by the country's commitments to the Paris Climate Accords. Its underlying macroeconomic conditions reflect some accommodative monetary policy, with broad money growth having been boosted during the pandemic. Somewhat problematic is the relatively high level of Malaysia's real interest rates, of over 4 per cent, which can make raising finance costly, though it is lower than some of its regional counterparts. Our indices indicate that further action on the part of Bank Negara Malaysia to build up green finance initiatives would support the domestic financial system in channelling green finance.

Malaysia is already a leader in sustainable Islamic finance (in part, through the Malaysian Sustainable Finance Initiative).[51] The country issued a US-dollar-denominated

[50] https://www.ifc.org/wps/wcm/connect/39af7426-bab2-4b9b-ae02-8a65be7d2dcb/Session+4_+6_Thuan+Nguyen_ENG.pdf?MOD=AJPERES&CVID=no90v3i
[51] https://www.msfi.com.my/sustainable-finance-state-of-market-in-malaysia/

sustainable sovereign sukuk in April 2021 that underlined the attractiveness of such financing. The offer was increased from an initial target size of US$1 billion to US$1.3 billion after being 6.4 times oversubscribed.[52] Proceeds are used for eligible social and green projects aligned to the UN's Sustainable Development Goals. The sukuk also attracted geographically diverse investors, with 55 per cent of the principal amount of the 10-year sukuk distributed to investors in Asia, 33 per cent to EMEA and 12 per cent to the US.[53]

Looking ahead, Malaysia is set to expand its green finance ecosystem with policies that should provide a regulatory framework for more green, social and sustainable offerings. This will bring sustainable finance into the financial mainstream, drive financial diversification and encourage further green bond issuance. The Bank Negara Malaysia has already issued guidance to reorient Islamic finance business models towards generating positive and sustainable impacts on the economy, community and environment. Additionally, stock exchange Bursa Malaysia has instituted a sustainability reporting requirement for large companies. This will gain traction in light of the country's comparatively high market capitalisation.

Digitalisation: expansion of digital free trade areas

The digital economy is expected to contribute approximately 23 per cent of Malaysia's GDP in 2022.[54] The country has instituted federal policies to support SMEs, to facilitate cross-border transactions and trade across industries, and to further expand digital inclusion. Our indices indicate comparatively high rankings in inward greenfield investment and ease of digital trade. Major corporations are behind Malaysia's digitalisation strategy: IBM Malaysia Managing Director Catherine Lian has stated that Malaysia must play a leading role at the regional level in developing and benefitting from the digital trade rules that will govern the next generation of trade agreements.[55]

E-commerce has seen significant growth, with forecasts that the sector will be worth over US$8 billion by 2025, driven by the growth in smartphones (World Bank, 2018b). Nearly three in five of all Malaysian e-commerce consumers place their orders via smartphone (ibid.). The launch of the Digital Free Trade Zone between China and Malaysia in March 2017, spearheaded by the Malaysia Digital Economy Corporation, has been a driving force behind the economy's digitalisation[56] and is providing an e-service platform and a satellite services hub. It promotes bilateral investment through digital tools geared towards payments, insurance and human capital development. Within months of the launch, Chinese companies registered over US$295 million worth of FDI into Malaysia.

These developments put Malaysia on course to become the e-commerce hub of the region (World Bank, 2018b). However, significant progress on digitalisation, and boosting fixed broadband coverage (which remains comparatively low), will be essential for economic transformation – particularly in improving its bilateral trade and investment relationships. Attention to trade in ICT goods and services is also needed, given the sector's relatively small share of total exports.

Malaysia's regionalism: ASEAN, a key cornerstone

ASEAN remains an important cornerstone of Malaysia's foreign policy, although by some accounts it has yet to constructively embrace the grouping (Mishra and Wang, 2021). Almost all ASEAN members articulated their strategies for the region, but Malaysia has yet to do so as clearly as its regional partners.

Malaysia's foreign and defence policies[57] have also not explicitly elaborated on specific dynamics relating to the Indo-Pacific; Malaysia has shown notable neutrality, even apprehension, on this front (Krishnan, 2020). By contrast, China's has been the country's main bilateral trade and investment partner in the region, which has been a dominant policy focus.

Nevertheless, Malaysia can be expected to build deeper ties in the Indo-Pacific under its new administration. It is likely to emphasise both ASEAN and bilateral relations with its partners. Additionally, Malaysia is committed to fostering cooperation between Islamic nations through the Organisation of Islamic Cooperation.

[52] https://www.msfi.com.my/world-first-sovereign-us-dollar-sustainability-sukuk-issuance-by-the-government-of-malaysia/
[53] https://www.msfi.com.my/world-first-sovereign-us-dollar-sustainability-sukuk-issuance-by-the-government-of-malaysia/
[54] https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=473&bul_id=cmRYZ21sUVF4elBySHVWckhkMGU4Zz09&menu_id=b0pIV1E3RW40VWR-TUkZocEhyZ1pLUT09
[55] https://www.nst.com.my/business/2020/12/647699/malaysias-digital-trade-takes-greater-importance-post-covid-world
[56] https://mdec.my/digital-economy-initiatives/for-the-industry/entrepreneurs/dftz/
[57] https://www.kln.gov.my/foreign-policy-framework/files/assets/common/downloads/Foreign%20Policy%20Framework.pdf

The launch of the Digital Free Trade Zone between China and Malaysia has been a driving force behind the economy's digitalisation, and has contributed to Malaysia's growth as a key regional e-commerce hub.

4.7. THAILAND: DIGITALISATION TO DRIVE GROWTH

Thailand's economy has been one of the hardest hit by the COVID-19 crisis in the region. Its trade as a percentage of its economy has declined to levels not seen since the Asian financial crisis of the late 1990s, and its investment share has continued its long-term decline. Thailand is nonetheless well placed for an economic recovery in 2022, though its reliance on tourism remains a key downside risk. Given this, efforts to deepen and expand digitalisation and to promote financial market development are even more urgent – its e-commerce index ranking is the second lowest in our set of eight countries.

Thailand's green finance: more monetary accommodation needed

The government has pledged to reduce the intensity of greenhouse gas emissions as a proportion of GDP by 45 per cent before 2030. Thailand's underlying macroeconomic conditions are generally unfavourable to the mobilisation of green finance. As with some of its ASEAN counterparts, the level of real interest rates is creeping up and its currency dynamics could constitute a downside risk. Further policy easing will be required to support the economy and to foster an ecosystem that can channel alternative and new sources of green finance. Encouragingly, both broad money growth and credit growth to the private sector remain resilient as a share of GDP. Added to this, the level of non-performing loans in Thailand is not currently a problem, although, at just above 3 per cent of total loans, it is worth monitoring as the long-term scarring effects of the COVID-19 crisis become more evident.

Despite the need for more accommodation, Thailand's bond market is likely to continue as one of ASEAN's fastest growing. Its green finance ecosystem is also developing rapidly within its Sustainable Financing Framework (SFF).[58] Authorities intend to issue green, social and sustainability bonds and loans, using the proceeds to finance and re-finance existing and future government loans in the form of direct investment expenditures. The funded projects will reduce Thailand's environmental footprint and aid the transition to a low-carbon economy. Under the SFF, the Public Debt Management Office issued its first (green infrastructure) sustainability bond in September 2020 to help deal with the economic repercussions of the COVID-19 pandemic.[59]

Thailand's digitalisation: scope for broader connectivity

Since the government launched its Digital Economy and Society Development Plan in 2016, Thailand has made notable progress in becoming a regional digital hub. It has strengthened key pillars of its digital economy, including hard and soft infrastructure, promotion and innovation, and service infrastructure. The Ministry of Digital Economy and Society aggressively pursued strategic plans in 2021, supporting e-commerce capacity (an estimated 11.5 per cent of its GDP). According to Thailand's Digital Economy Promotion Agency, Thailand's digital industry grew by more than 10 per cent in value between 2019 and 2020 to US$20.6 billion.

Thailand's Joint Standing Committee of Commerce, Industry and Banking has trialled a trade platform leveraging blockchain technology and AI, developed by Japan's NTT DATA.[60] The project will boost international trade between Thailand and the rest of ASEAN and is part of a private-sector initiative to develop a National Digital Trade Platform in the country. The primary goal is to link the trading platform with those of neighbouring countries. Thai banks, forwarders, carriers, exporters and insurers (and a Japanese importer) took part in the trial.

Digital content is, and will continue to be, a key industry in Thailand, with a total market value forecast at about US$1.08 billion in 2020 driven by the gaming, big

[58] https://www.greenfinanceplatform.org/policies-and-regulations/kingdom-thailand's-sustainable-financing-framework
[59] https://www.greenfinanceplatform.org/policies-and-regulations/kingdom-thailand%E2%80%99s-first-sustainability-bond-issuance
[60] https://www.ledgerinsights.com/thailand-blockchain-trade-ntt-data/

data and animation industries. Thailand's overall gross merchandise volume – a way of calculating online sales – reached US$18 billion in 2020, having grown 7 per cent year on year, while the Thai digital economy is likely to reach US$53 billion in value by 2025 (Google et al., 2020). The digital economy is on track to reach more than 30 per cent of Thailand's GDP by 2025. Thailand's digital collaborations with local tech start-ups, private companies and other stakeholders are growing along with this.[61]

Thailand's regionalism: central to ASEAN

Thailand has myriad regional interests that range from maritime security to environmental governance. It has significant economic and historical ties with the US and Japan, and with China, with which it has been intertwined culturally and economically for centuries. However, its relationship with both the US and China is now determined in a large part by the support and economic responsiveness of each country during the Asian financial crisis of the late 1990s (Chachavalpongpun, 2011). Japan has a significant economic presence in Thailand, including in its automobile industry. Its pro-trade and pro-investment policy has led to continued investment inflows to the extent that it accounts for 31 per cent of all direct investment into Thailand.[62]

Thailand's strategic location, meanwhile, situates it at the heart of the ASEAN region, and will continue to augur well when it comes to its bilateral economic relationships. Being at the crossroads of ASEAN and China and India allows Thailand access to a burgeoning consumer market. Trade and business transactions are made easier through Thailand's extensive highway system, modern city-wide mass transit, international airports, deep seaports, and international river ports. As the hub of ASEAN, Thailand's advocacy for free and fair trade and investment[63] has been instrumental in the formulation of the ASEAN Free Trade Area (Chirathivat and Mallikamas, 2004).

Developing economies in Southeast Asia benefit from a strong Thailand; it has used developmental diplomacy to enhance its trade with and investment in neighbouring Cambodia, Laos, Myanmar and Vietnam.

4.8. PHILIPPINES: A SLOW RECOVERY

Economic growth is expected to accelerate in the Philippines this year, with policies supporting both trade and investment, important drivers. Both have been in decline. Encouragingly, as with a number of Asian economies, the Philippines has built up its foreign exchange reserves significantly and maintains a buffer to protect its financial system against volatility and shocks (such as the risk of newer, more contagious COVID-19 variants that could result in the return of stricter containment measures).

The Philippines' economic readiness is mixed: credit growth is low, the number of non-performing loans and real rates are prohibitively high, and digital connectivity is low. Given this, prioritising green finance and digitalisation is of crucial importance.

Non-performing loans could hinder green finance

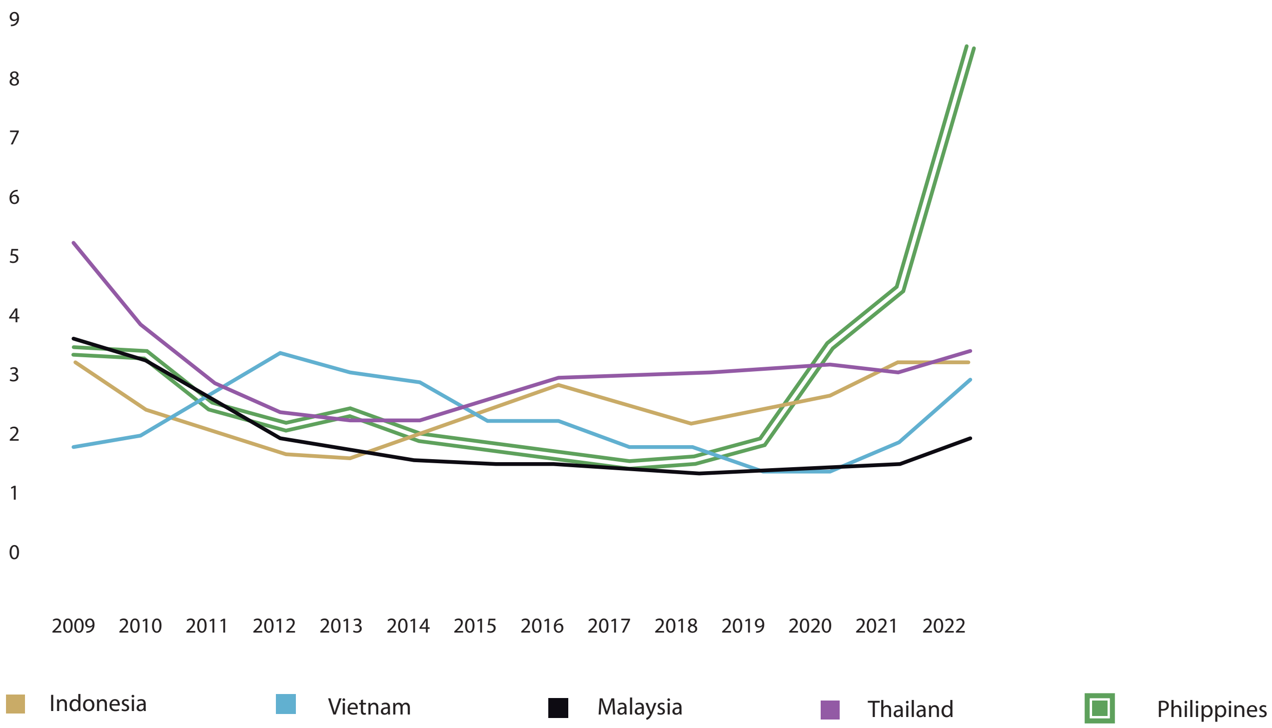
The Philippines' financial sector has seen an increase in non-performing loans, dampening the potential for raising finance, including through green bond issuance (see Figure 16). Its green finance ecosystem also needs to be supported by greater financial diversification in terms of financial tools. Overall, financial market capitalisation remains comparatively low in relation to other Asian economies, while high real interest rates and weak credit growth add more hurdles. Given the economic fragility and the likelihood of financial volatility in the year ahead, fostering a stable and diversified ecosystem remains paramount.

The Philippines' Mabuhay Bond set a precedent as the first green bond denominated in Philippine pesos to be issued by a multilateral development institution, in this case the International Finance Corporation.[64] The issue – triple-A rated and worth approximately US$90 million with a 15-year maturity – will support the local capital market and renewable energy. This development is, in part, significant because it signifies a capacity to channel and support underlying mechanisms for blended finance and diversified sources of private and institutionally mobilised capital in aid of the country's sustainability objectives.

[61] https://www.thaiembassy.be/2021/06/07/the-next-asian-digital-behemoth-thailands-4-0-revolution/?lang=en
[62] https://www.mofa.go.jp/region/asia-paci/thailand/data.html
[63] http://investasean.asean.org/index.php/page/view/asean-member-states/view/709/newsid/862/thailand.html
[64] https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=16783

FIGURE 16. NONPERFORMING BANK LOANS

(as a % of total gross loans)



Source: World Bank and Asia House Research

If there is going to be a sustainable, long-term issuance of green bonds, however, the market needs to be supported by a functional sustainable-finance framework, which has yet to be announced by the authorities. Having said that, the Philippines does lead in the issuance of equity instruments, credit guarantees, and specialty funds for green infrastructure and renewable energy. The country has more than 70 projects in low-carbon transport, renewable energy, sustainable water and sustainable waste management in the pipeline, with some already completed.[65]

Digitalisation: grappling with a continued divide

The Philippines has made strides in pushing forward its digitalisation agenda, but some of its basic barometers – such as fixed broadband subscriptions – remain comparatively low, suggesting a persistent and significant digital divide. Trade in ICT ranks better, which augurs well. However, the government must increase investment in both infrastructure and skills to promote the digital economy. This type of investment will impact the Philippines' longer-term productivity growth, which is in decline. Adequate digital investment includes government policies and projects that can supplement commercial initiatives to ensure equal access to technology and training for the population.

With an estimated 60 per cent of households without internet access (World Bank, 2020b), digitalisation in the Philippines is needed to tackle future shocks and build resilience against them. Although COVID-19 has accelerated the adoption of digital technologies, low (high-speed) broadband penetration is a key restraint in boosting productivity and economic activity. As a result, face-to-face interactions and analogue practices largely dominate in the Philippines, making social distancing economically costly (ibid.). The Philippines' e-commerce

[65] https://seads.adb.org/news/philippines-grows-its-green-finance-market

ranking is the lowest within the eight countries examined. The digital ecosystem needs to be elevated as a matter of priority for the country's financial and economic resilience. The government can do so by promoting digital payments in its largely cash-based economy and recalibrating regulatory constraints for increased competition.

The Philippines' regionalism will promote the centrality of ASEAN

The Duterte administration advocated for the passage of the ASEAN–China Code of Conduct in 2019 (De Castro, 2020) against a background of what were seen to be Chinese encroachments in the South China Sea. These were seen domestically to have deprived the Philippines of vital fishery and mineral resources as an input to their economic activity. Manila plays a role in multilateral meetings called to confront the emergent and complex security threats, including the ASEAN Regional Forum, the East Asia Summit and, more recently, the ASEAN Defence Ministers' Meeting Plus (ibid.).

Looking ahead, ASEAN will continue to be the cornerstone for several policies that are employed by the Philippine government. The main aim of the administration will likely be to continue to promote its own economic recovery (and domestic financial stability) within the realm of a stable Southeast Asia. It will also continue to affirm ASEAN centrality both internally and with its international partners, and work for ASEAN to remain as the driver of regionalism. The underlying agenda of this is the Philippines' strong support for a regional order that promotes economic prosperity and trade – particularly in the face of multiple and persistent shocks.

5. CONCLUSION

Asia's economies are likely to be the standout performers of 2022 as the global economy emerges, albeit tentatively, from the COVID-19 pandemic. As the region's economic recoveries take shape at differing paces, the structural reforms that underpin more sustainable trade and investment will take on increased importance. Governments and multinational institutions will be shepherding their resources to meet economic, financial and climate commitments for the coming year and beyond.

Fostering economic recovery is unlikely to be an easy task for the majority of Asia's economies, which are exhibiting economic scarring from the COVID-19 crisis and not uniformly getting as much monetary support as they did for the Asian financial crisis of the late 1990s and the financial crisis of 2007–09. It is likely that policymakers will have to contend with multiple new shocks and risks – including resurgent inflation and intermittent US–China tensions – while managing economic recovery.

As the country outlooks in this report suggest, the triple-policy objective in each of Asia's economies is to fast-track green finance initiatives, embrace broader digitalisation and promote new regional coordination. Of significant note already in Asia has been the broad-based increase in different forms of digitalisation – connectivity, e-commerce and innovative technology.

Of paramount importance entering 2022 is that further policy efforts are made to target innovative digital technologies towards boosting productivity. Doing so will help Asian countries sustainably increase national income and escape being stuck as middle-income economies – thus consolidating the promised Asian Century. On a regional level, pragmatic coordination needs to become far more concrete in order to mobilise funding to build resilience against economic shocks and to tackle the climate crisis.

The triple-policy objective of accelerating green finance, broadening digitalisation and forging a new pragmatic financial regionalism is essential to boosting the underlying economic and financial momentum of the region. Getting the structural elements of Asia's triple-policy objective right will also mean that its constituent economies set the foundation to grow and innovate sustainably.

In this respect, 2022 will be a decisive year in which a handful of Asia's economies will need to forge ahead with ambitious policies despite also having to contend with unprecedented challenges.

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APPENDIX 1: METHODOLOGY ON THE ASIA HOUSE READINESS INDICES

Economic readiness for green finance

The Asia House index for gauging readiness for green finance is calculated using the following data components.

Data composition for financial resilience

- Non-performing bank loans, to total gross loans, are sourced from the World Bank World Development Indicator database.

- Broad money, as a percentage of GDP, is sourced from the World Bank World Development Indicator database.

- Total reserves (including gold) is in current US dollars and are sourced from the World Bank World Development Indicator database.

- Official exchange rates are in local currency per US dollar and are period averages. Data is sourced from the World Bank World Development Indicator database.

Data composition for financial market development

- Market capitalisation of listed domestic companies (as a percentage of GDP) is sourced from the World Bank World Development Indicator database.

- Credit (to the non-financial private sector) is sourced from the Bank for International Settlements database.

- Net portfolio investment is in current US dollars. Data is sourced from the World Bank World Development Indicator database.

- Net inflows of foreign direct investment is in current US dollars. Data is sourced from the World Bank World Development Indicator database.

Data composition for ease of capital

- Monetary sector credit to private sector, as a percentage of GDP) data are sourced from the Bank for International Settlements.

- Real interest rate data are in percentage terms and are sourced from the World Bank World Development Indicator database.

- Relevant central bank announcements related to green policy initiatives are cumulated for each central bank under consideration, ranked and scored.

- Blended finance capacity is approximated using data on private sector finance mobilised by development finance institutions, from the OECD.

Data composition for equitable ecosystem

- Ratios of female to male labor force participation rates are ILO-modeled estimates and are sourced from the World Bank World Development Indicator database.

- Data on per capita food supply variability (kcal/cap/day) is sourced from the United Nations Food and Agriculture Organization (FAO).

- Access to finance for lower-income households is denoted by account ownership (with a financial institution or a mobile-money-service provider) for the poorest 40 per cent of the population aged 15 and older. Data is sourced from the World Bank World Development Indicator database.

- Data on the agriculture share of government expenditure is sourced from the World Bank World Development Indicator database.

Economic readiness for digitalisation

The Asia House index for gauging digital transformation is calculated using the following data components.

Data composition for trade facilitation

- ICT goods exports are as a percentage of total goods exports. Data are from the World Bank World Development Indicator database.

• ICT goods imports are as a percentage of total goods imports. Data are from the World Bank World Development Indicator database.

• Digital currency policy developments are cumulated for each country under consideration, ranked and scored.

• Ease of digital trade is approximated by cumulating developments for each country including in e-documentation, digital infrastructure and e-platform development.

Data composition for gauging industrialization 4.0

• Medium and high-tech manufacturing is as a percentage of manufacturing value added. Data are from the World Bank World Development Indicator database.

• Gross fixed capital formation is as a percent of GDP. Data are from the World Bank World Development Indicator database.

• Salaried workers are a percentage of total employment and are ILO-modeled estimates. Data are from the World Bank World Development Indicator database.

• The number of installed industrial robots are per 10,000 employees in the manufacturing sector. Data are from the International Federation of Robotics.

Data composition for digital economy development

• Mobile cellular subscriptions are per 100 people. Data are from the World Bank World Development Indicator database.

• Fixed broadband subscriptions are per 100 people. Data are from the World Bank World Development Indicator database.

• Growth in e-commerce is in millions of US dollars and denotes business to consumer (B2C) transactions. Data are from Statista and JP Morgan.

• Digital remittances are in millions of US dollars. Data denote transaction values in cross-border remittances and are from Statista.

Data composition for digital knowledge diffusion

• Greenfield foreign direct investment (FDI) is the value of announced greenfield FDI projects, by destination and is in millions of US dollars. Data are from UNCTAD.

• Government expenditure on research and development are as a percentage of GDP. Data are from UNESCO.

• Researchers, in full-time equivalent, are per million inhabitants for each country. Data are from UNESCO.

• STEM graduates are as a percentage of total graduates in tertiary education. Data are from UNESCO.

Asia House economic readiness index construction

The 2022 data points for each of the 4 indicators, under each of the 8 sub-themes, are calculated for each of the eight countries. A linear transformation is then imposed on each of the 32 data points for each country, to re-scale and normalise each of the readings for comparability.
The linear transformation used for the 2022 readings is: ((worst reading– 2022 reading)/(worst reading– best reading)).

Where worst denotes the worst performing country for the particular indicator in the sample of eight countries for 2022. And best denotes the best performing country in the sample of eight countries.

Indicators where a higher value indicates a deterioration (such as with non-performing loans, or real interest rates) are transformed using an inverted re-scaling. The worst performing economies therefore have higher values and so there is an inversion imposed.

All variables are scaled according to each country's GDP, income level or population where relevant to ensure that progress according to country context is being monitored and measured. Where relevant, the rate of change has been applied to the variables.

ABOUT THE AUTHOR

PHYLLIS PAPADAVID is a leading international economist and financial strategist with extensive research experience across the private and public sectors. She leads Asia House's Research and Advisory work, driving the organisation's research agenda and directing projects. Before joining Asia House, Phyllis was a Research Associate and formerly head of international macroeconomics at the Overseas Development Institute, and held leadership roles at BNP Paribas and Societe Generale CIB, and has advised the Government of Mongolia. She has also advised multilateral organisations including the World Bank and the United Nations. Phyllis is an associate faculty member in Applied Analytics and Strategy at Columbia University. Phyllis's recent research has focused on the management of financial shocks, the economic impact of COVID-19 on emerging markets, and the rising role of the renminbi, which was featured in Barron's Asia's Best Minds.

ASIA HOUSE
63 New Cavendish Street
London
W1G 7LP

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