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PineBridge® INVESTMENTS

Age of Asia:
Rise of a Multipolar World

By 2040 the world could look very different, with Asia representing half of global GDP and 40% of global consumption. This report looks at long-term trends to examine how economic gravity is shifting and the need to prepare for a new phase of globalisation — one that is likely to see Asia as one of the key players in a multipolar world.

Research conducted by:

ECONOMIST IMPACT

Foreword

In 1988, Chinese leader Deng Xiaoping told then Indian Prime Minister Rajiv Gandhi that the coming of the “Asian century” was far from certain. “No genuine Asia-Pacific century or Asian century can come until China, India, and neighboring countries are developed,” he said.[1]

A generation later, conditions are ripe for those conditions to be fulfilled. Asia is the fastest-growing region in the world and the largest source of global GDP. China, the world’s second-largest economy[2], has become a major agent of development for the rest of the world through its expansive Belt and Road Initiative and foreign direct investments into emerging markets. India, the world’s sixth-largest economy,[3] boasts of world-leading industries such as information technology services and pharmaceuticals. And on the periphery of these economic and geographic giants, Southeast Asian economies are steadily transforming, thereby raising expectations that the realization of the “Asian century” is at hand.

For the second time, PineBridge has partnered with Economist Impact to produce a forward-looking and thought-provoking research report on Asia. This time, we probe the powerful underlying trends that underpin Asia’s future well beyond the immediate aftermath of the Covid-19 pandemic. We believe these trends will be felt for many years to come, not only in Asia but across the world and will help define the economic contours of the 21st century. Incidentally, rather than holding them back, the pandemic and prevailing tensions between the US and China have only added fuel to some of these growth drivers, such as the digitalization of daily life, the push for self-sufficiency in technology, and the urgency of environmental, social, and governance (ESG) solutions.

From our unique perch in Asia as a global asset manager owned by an Asia-based group with investment teams well-positioned across the region, we witness the unfolding of these investment opportunities from the ground up. Our teams live through and are part of these structural changes. What is clear to us is that Asia’s dynamism transcends the cookie-cutter investment approach that others have defaulted to when confronted with a fast-moving landscape. Independent thinking and an unconstrained approach are key, and they form the pillars of our active, high-conviction investment strategies.

We are sincerely grateful to the experts who generously contributed their perspectives to Economist Impact for this research report. We hope that this publication will prove valuable for investors who are seeking to frame the future of Asia and navigate the region’s next growth era.

Greg Ehret
Chief Executive Officer
PineBridge Investments

[1] Excerpt from a talk by Deng Xiaoping, 21 December 1988. http://en.people.cn/dengxp/vol3/text/c1930.html
[2] IMF data accessed 19 July 2021.
[3] IMF data accessed 19 July 2021.

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About the research

Age of Asia: Rise of a multipolar world is an Economist Impact report, sponsored by PineBridge Investments, that examines Asia's long-term and evolving place in the global economy. The trends discussed here form a picture of possibility, opportunity and risk that's set to play a transformative role in the years ahead. As a multipolar balance of technological, economic and geopolitical power reshapes the global stage, Asia is very likely to take on greater importance globally. Considering the forces behind that change and where they might lead is the goal of this report.

Adam Green is the report author and Jason Wincuinas is the editor. In addition to desk research and data analysis, the report includes in-depth interviews with subject matter experts with on-the-ground views and experience of the region coupled with wider industry knowledge. Our thanks are due to the following individuals for their time and insights:

- **Jeffrey Ding,** postdoctoral fellow, Stanford's Center for International Security and Cooperation; China lead, Future of Humanity Institute
- **Dr Hoe Ee Khor,** chief economist, ASEAN+3 Macroeconomic Research Office
- **Lars Faeste,** managing director, Greater China, Boston Consulting Group.
- **Hiroshi Fujiwara,** delegate, International Federation of Robotics (IFR) and Japan Robot Association (JARA)
- **Parag Khanna,** founder and managing partner, FutureMap; author, The Future is Asian: Commerce, Conflict and Culture in the 21st Century
- **Krittee Manoleehagul,** vice-president, Tencent Cloud International for Southeast Asia
- **Charles Mok,** founder and director, Tech for Good Asia; former Hong Kong legislator
- **Ma Tianjie,** Beijing project director, China Dialogue
- **Patrick Tsang,** chairman, Tsangs Group

About Economist Impact
Economist Impact combines the rigour of a think-tank with the creativity of a media brand to engage a globally influential audience. We believe that evidence-based insights can open debate, broaden perspectives and catalyse progress. The services offered by Economist Impact previously existed within The Economist Group as separate entities, including EIU Thought Leadership, EIU Public Policy, EIU Health Policy, Economist Events, EBrandConnect and SignalNoise.

We are building on a 75-year track record of analysis across 205 countries. Along with framework design, benchmarking, economic and social impact analysis, forecasting and scenario modelling, we bring creative storytelling, events expertise, design-thinking solutions and market-leading media products, making Economist Impact uniquely positioned to deliver measurable outcomes.

Executive summary

Asia has already roiled the world with three waves of economic transformation. A fourth is now building, drawing on past strengths and adding new digital-age capabilities. By 2040 the world could look very different, with Asia representing half of global GDP and 40% of global consumption—much of it originating from the Association of South-East Asian Nations (ASEAN). This report looks at long-term trends to examine how the economic gravity is shifting and why organisations need to prepare for a new phase of globalisation, one that is likely to see Asia as one of the key supports in a multipolar world.

During the cold war era, two major blocs dominated, dividing the world into a bipolar power balance. Since then, a rare combination of trends have risen that will determine how the next era of globalisation unfolds, one in which no single power dominates and multiple voices have sway. The US and China vying for the top ranks in global GDP is a dynamic that is likely to endure, and while the two may be economic anchors, Europe, Japan, BRICS and other blocs will be able to tip the balance in different situations. Economic cycles and financial markets are already becoming less US-centric. And as China and the US compete in multiple arenas—technology, healthcare, energy, etc—multiple alliances are also likely to emerge, further splitting power centres and distributing influence. With China, Japan, India and ASEAN all holding significance in key economic factors, Asia as a whole is more in the driver's seat than ever.

Home to some of the world's fastest-growing economies, Asia has already led GDP metrics for the past five years. And The Economist Intelligence Unit forecasts that trend to continue for the next five. Asia as a whole leads the GDP trend lines over Europe, the Middle East and the Americas. The region's economic trajectory has advanced and branched since the turn of the millennium, driving an evolution from supply-chain hub to engine of consumer demand.

Today's Asia sees entrepreneurs building world-leading businesses, trade pacts facilitating both talent migration and cross-border commerce, and new Chinese capital, with its tech focus and Belt and Road linkages helping to lift regional economies. And with the G7 taking renewed interest in having more influence in the region, more investment could be on the way. At the same time, Asia's own governments are becoming innovators, deploying digital technology for healthcare, personal identification and currencies. It all culminates into potential to pull the world's economic gravity east.

That's not to say that Asia is without challenges. Spillover from US-China tensions, China's regulatory pressures on its domestic corporate giants, covid-19's continued threat and climate change add uncertainty that could derail current trends.

This report examines the circumstances, opportunities and risks that business leaders and investors looking toward long-term change should consider in an Age of Asia.

Convergence of the third and fourth waves of Asian growth. South-east Asia is among the fastest growing subregions in the world with expertise, finance and resources from previous waves (post-war Japan, the East Asian tiger economies and China) compounding and supporting them. Burgeoning consumer classes across the entire region add potency to today's growth stories, as do a large services sector and the potential to produce huge domestic companies. Still feeding that trend is China's continuing third wave as the world's second-largest GDP contributor, rapidly moving towards becoming first. As Asia moves away from supply-chain orientation, its economic focus is shifting to internally trading goods, services and talent. Consequently, the continent is seeing reduced reliance on the West and new momentum just as the geopolitical balance globally is also shifting.

Asian tech to rival the West? Once confined to outsourced manufacturing or accused of copying Western technology, Asian companies are becoming category-definers. TikTok is perhaps the most visible example. Less obvious are China's multi-national corporations, like Ping An, an insurance firm, competing among the world's most active artificial intelligence (AI) players. TSMC, a Taiwanese semiconductor company is often heralded as the lynchpin of that industry. And a wave of 'super apps' like Paytm, WeChat, KaKao and Go-Jek, which bundle financial services in a digital economy, have beaten out Western competitors in Asia. Pre-covid-19, the world was already in an up-cycle of digitalisation and automation; in 2021 that transition could further benefit Asia—Singapore, South Korea and Japan, for example, already lead the world in robot density in manufacturing.

Spoilers to Asia's momentum. Covid-19, US-China tensions and climate change are material risks to growth. The geopolitical flare-up between the US and China is having complex repercussions, driving investment into other countries as multinationals de-risk their China operations, and forcing technology buyers and sellers to consider separate tech stacks, which could balloon everyone's costs. Tightened scrutiny of companies and sectors that the Chinese government deems problematic for social equality or stability has spooked equity markets, suggesting more uncertainty for China's growth companies. Covid-19's fiscal and public-health impact still looms large with the spread of the Delta variant sparking new worries in countries that initially seemed to avoid the worst of the pandemic during 2020. Finally, Asia is among the most vulnerable regions to climate change; a rapid shift to decarbonise will be essential, as will investments and innovation to improve resilience and adaptability. But on this point, the whole world is on the same precipice.

Introduction: Asia aligns

For decades, pictures of factory workers—often in poor conditions—toiling at crude assembly lines were the snapshots many Western investors kept in their minds about Asian economies.

It's time to develop a new image. The chapter of Asia as a satellite of the West, producing goods at low cost for overseas consumers, has closed. Aside from utilising more robots in its factories than anywhere, Asia's internal consumption and economic agendas are beginning to outpace much of the world, leading GDP growth charts. Asia's nations brim with new skyscrapers, luxury brands contending for consumers and entrepreneurs building world-leading businesses. Western companies that once might have expected to dominate the region are finding formidable competition—a totemic example was Alibaba's 'David and Goliath' defeat of eBay in the early 2000s. With US-based Uber throwing in the towel against local rival Grab, the trend has continued. In the Global Fortune 500 list for 2021, half of the top ten climbers were Asian brands and local names like Wave Life Sciences, a Singapore biotech firm, Razorpay, an Indian fintech and AI Inside, a Japanese AI service firm, all boast three-digit compound annual growth rates (2016-19) and absolute growth rates of over 1,000%.[4] The long-term implication is a region that is growing fast and far less dependent on the West for that growth. Asia is rising as a strong economic player in a multipolar world.

Three waves of Asian growth and economic transformation (post-war Japan, the East Asian tigers and China) have already arisen since the mid-20th century, as Parag Khanna, author of The Future is Asian, outlines. Today, a fourth has started building—converging with China's third—adding a new cluster of nations, namely ASEAN, to Asia's economic expansion. The bloc's ten member states are a diverse coalition of countries poised to produce 140 million new young consumers, nearly a fifth of the world's total, over the next decade.[5]

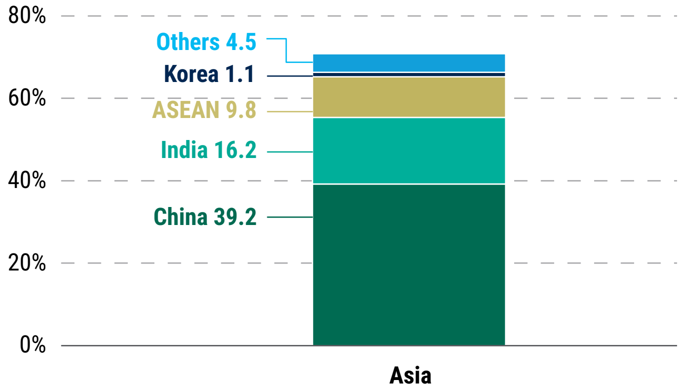
"These are countries that are actually a lot more like the West than people often realise," says Mr Khanna. "They're [full of] young people who go to live in cities, who drive cars and motorcycles, who eat out at restaurants and who work in the digital economy. Politics aside, they're just poorer per capita versions of youth in the West". Yet, these workers and consumers also generally have lower costs of living while digital-age advances keep bringing more of them into formal economies.

ASEAN demographics are among numerous trends driving Asia's growth and promise. The region's sheer size is another; the continent is home to 4.5 billion people and on track to represent half of global GDP and 40% of consumption by 2040. [6,7]

Asia's first and second waves from Japan, South Korea and Taiwan—with now established financial, engineering and industrial companies—are still part of the picture, as are the dynamic hubs of Hong Kong and Singapore, where capital collects and invests throughout the region. China's third wave is far from cresting and continues to be part of the picture. As highlighted in a previous PineBridge commissioned study, about "480m Chinese consumers (more than the whole of the US population) should reach upper-middle and high-income status by 2030."[8] China's recent policy reforms aim at broadening economic opportunity for these vast populations. And supporting that trajectory are advances in manufacturing and innovations in frontier technologies like AI, clean-tech and consumer-facing digital businesses within China.

And India, with its billion-plus workers, consumers and entrepreneurs, further adds to Asia's growing economic clout.

Figure 1. Two-thirds of global economic growth is Asian
Contributions to global growth in 2019 (%)



Source: IMF, World Economic Outlook, 31 December 2019.
Note: Regional categories based on IMF classification, ASEAN: Association of Southeast Asian Nations

An expanding middle class—forecast to rise from 2 billion to 3.5 billion over the next decade[9] contributing almost 90% of the global increase in middle-class consumers in recent years—is the most visible signal of Asia's economic transition.

[4] Financial Times, "Asia-Pacific High-Growth Companies 2021", https://www.ft.com/high-growth-asia-pacific-ranking-2021
[5] Bain & Company and the World Economic Forum, "Future of Consumption in Fast-Growth Consumer Markets: ASEAN 2030", https://www.bain.com/insights/future-of-consumption-in-fast-growing-markets-asean-2030/
[6] World Population Review, "Continent and Region Populations", https://worldpopulationreview.com/continents
[7] McKinsey Global Institute, "Asia's future is now", https://www.mckinsey.com/featured-insights/asia-pacific/asias-future-is-now
[8] The Economist Intelligence Unit, "China Icebergs", https://www.pinebridge.com/en/investment-opportunities/china-icebergs
[9] World Economic Forum, "This chart shows the rise of the Asian Middle Class", https://www.weforum.org/agenda/2020/07/the-rise-of-the-asian-middle-class

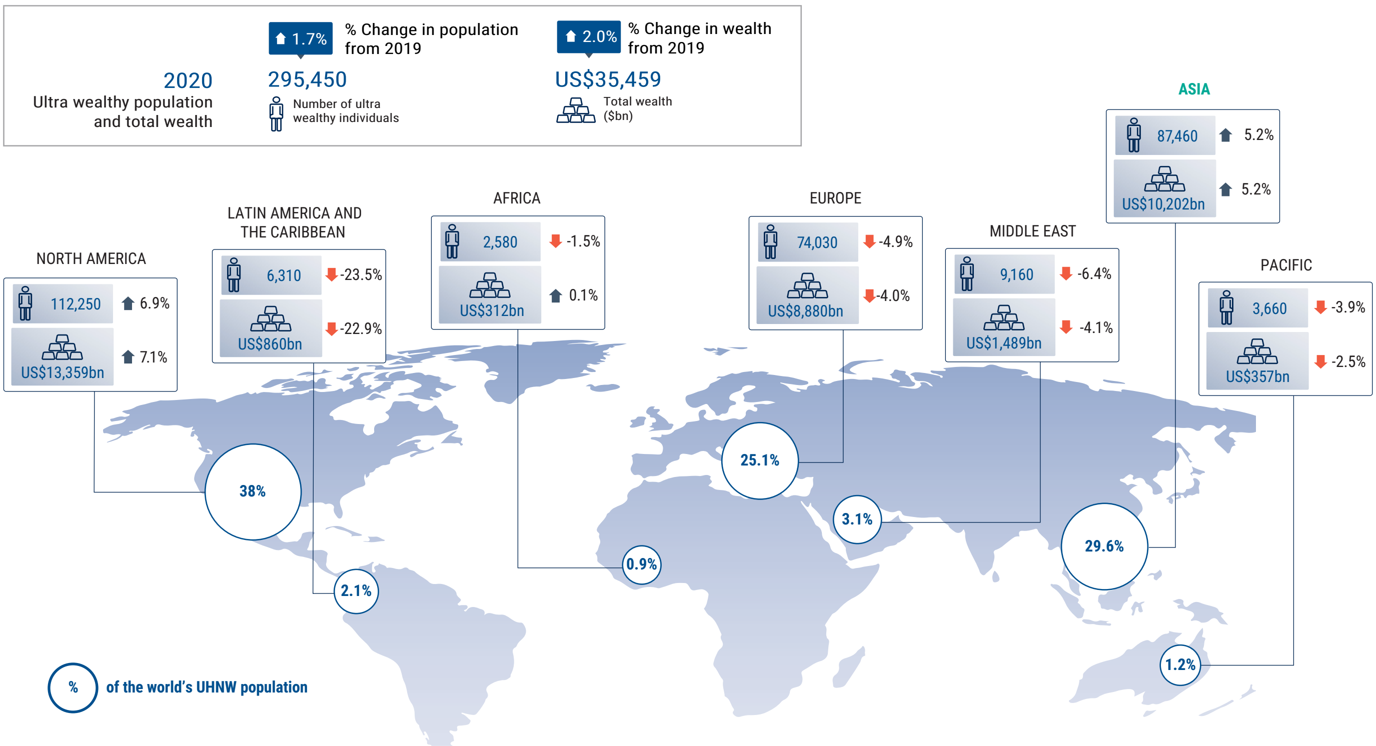
Even during the pandemic in 2020, four of the top ten nations measured by middle-class expenditure were Asian: China (1st), India (3rd), Japan (4th) and Indonesia (7th).[10] Asia's rise is not based on one nation but the whole of China, ASEAN, and wider Asia-Pacific growth and integration combined.

"In Shanghai, a couple today would not bat an eye at spending US$50 on a bottle of wine, which would never have happened 10, 15 years ago," says Patrick Tsang, chairman of family office, investment firm, Tsangs Group. He also points out high levels in Asia of what is termed revenge spending—post-pandemic splurging. Mr Tsang cites record sales on luxury names like Ferrari, Lamborghini, Hermès and Chanel.

While the Americas and Europe once led luxury spending, Asia took the lead in 2020. And Bain and Company forecasts that China alone will move to the front in less than five years to represent about 45% of all luxury-goods purchases.[11] Combine that shift with the spending power of Asia's ultra-wealthy—second only to North America's in terms of net-worth growth in 2020 when most other regions declined[12] —and the extent of Asia's economic influence becomes more apparent.

Figure 2. Map of millions

Populations of high-net-worth individuals by geography and wealth



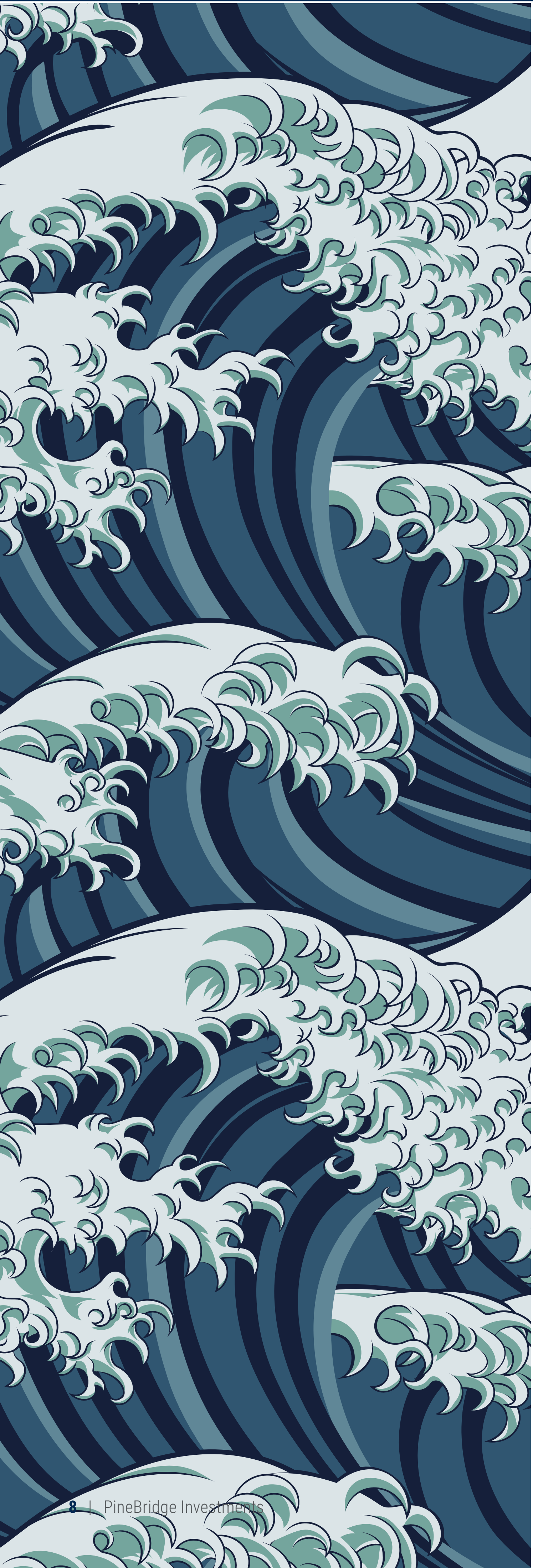
Source: Wealth-X, 31 December 2020.
Note: Data on % of the world's ultra wealthy population does not total 100% due to rounding.

Dr Hoe Ee Khor, chief economist of ASEAN+3 Macroeconomic Research Office (AMRO), believes corporate appetite to meet Asia's consumer opportunity drives much of the investment into the region. And with a nearly 700-million strong population, South-east Asia is leading what Mr Khanna characterises as the fourth wave of Asian growth. This time, services and domestic demand rather than cheap labour for manufacturing are the force behind it.

[10] The Brookings Institution, "China's influence on the Global Middle Class", https://www.brookings.edu/wp-content/uploads/2020/10/FP_20201012_china_middle_class_kharas_dooley.pdf

[11] Bain & Company, "The Future of Luxury: Bouncing Back from Covid-19", https://www.bain.com/insights/the-future-of-luxury-bouncing-back-from-covid-19/

[12] Wealth X, "New Report Reveals Global UHNW Population Grew 1.7% in 2020 Despite Covid-19 Disruption", http://go.wealthx.com/world-ultra-wealth-report-2021



Asia's waves

In Mr Khanna's framing, Asia's first three waves were 1) post-war Japan; 2) the East Asian tigers (Hong Kong, South Korea, Taiwan and Singapore); and 3) China.13 Each wave has reinforced the next, with earlier leaders becoming investors in the fast-growing, emerging economies of today. Japanese, South Korean, Singaporean and Chinese businesses are bringing capital and innovation expertise to wider Asia to seek out new opportunities.

Sixty percent of Asian trade is already intra-regional.[14] Lynchpins include economic blocs like ASEAN and trade deals such as the Regional Comprehensive Economic Partnership (RCEP), a 15-nation initiative signed in November 2020 that eliminates tariffs on 91% of goods to create a free-trade area covering around a third of the global economy.[15]

Mr Khanna also points to the Indian economy, sixth-largest in the world (or fourth on a purchasing parity basis), as another growth driver for Asia. The Economist Intelligence Unit forecasts (as at September 2021) that India's real GDP will grow by 10.4% in fiscal year 2021/22 (April-March) with an average annual growth rate of 4.2% to 2050. While covid-19 has hit the country hard, India continues to exceed expectations in areas like technology, drawing investment interest from global titans from Google to Walmart and combining that with renowned local brands like Reliance and upstarts such as Flipkart.[16,17] Home-grown mobile payments platform, Paytm, is planning in 2021 what could prove to be India's largest-ever IPO.[18] And aside from Paytm, India's consistent push to move up the value chain in IT, manufacturing, business and information services should buttress the country's economic progress generally, along with government-led investment into infrastructure upgrades.

[13] Financial Times, "South-east Asia rides fourth wave of regional growth", https://www.ft.com/content/c33e95f4-6acc-11ea-a6ac-9122541af204
[14] Ibid
[15] South China Morning Post, "China backs Hong Kong to join RCEP trade deal in potential boost to city's flagging logistics sector", https://www.scmp.com/economy/china-economy/article/3138789/china-backs-hong-kong-join-rcep-trade-deal-potential-boost
[16] Reuters, "Google expands Jio partnership with Indian smartphone, cloud tie-ups", https://www.reuters.com/technology/google-says-cloud-partnership-with-indias-jio-boost-5g-plans-2021-06-24/
[17] Bloomberg, "Walmart's Flipkart Aims for IPO in Fourth Quarter, Sources Say", https://www.bloomberg.com/news/articles/2021-04-06/walmart-s-flipkart-is-said-to-aim-for-ipo-in-fourth-quarter
[18] Bloomberg, "Paytm Targets $3 Billion IPO in What Would Be India's Largest Debut", https://www.bloomberg.com/news/articles/2021-05-27/paytm-is-said-to-target-3-billion-ipo-largest-ever-for-india

Across the border in China, the Baidu, Alibaba and Tencent trio signalled an arrival of indigenous Asian tech giants a decade ago. Now, these firms compete on international frontiers in AI, cloud computing and entertainment. As highlighted in The Economist Intelligence Unit's 2019 *China Icebergs report*, TikTok, a video-based app, rapidly became a global sensation; and with 'super apps' like WeChat/ Weixin[19] or Grab, Asia is producing new category-defining products and business models that consolidate and streamline economic activity—paying utilities, small vendors, booking travel or borrowing/ lending money—on low-cost mobile devices. While Chinese regulators have recently stepped up scrutiny of these firms, causing short-term uncertainty for the sector, the long-term view still looks in China's economic favour.

The pandemic, for example, has deepened consumer relationships with digital platforms, and not just in China. Singapore's Sea Ltd, the parent company of e-commerce platform Shopee, was one of the world's most successful companies during the pandemic from a securities point of view, with its share price surging by about 400%.[20] Indonesia's online mall Bukalapak, backed by Microsoft, went public in early August in what was the country's largest listing.[21]

Universally, the pandemic forced the private sector to shift to digital and hybrid working arrangements. In Asia, where there is still a large manufacturing contingent, Tencent has worked with contract electronics producer Foxconn to develop what's known as 'lights out' factories, which run without staff onsite. The concept started deploying in 2018 and stepped up in 2020 after the pandemic started.

"There is now less reliance on onsite resources. Business can have their teams operate their facilities from home, leveraging AI and remote work technology," explains Krittee Manoleehagul, vice-president of Tencent Cloud International for South-east Asia. He adds that the covid crisis pushed many traditional companies online at a rapid pace. "I talked to a cement company in Bangkok, and they are hiring younger salespeople who can go online to sell. It's surprising but you can sell cement online by giving the price, and some freebies. This never happened before, and it is happening now. And younger generations are helping move these conventional businesses along."

Innovation is not just a private sector domain. Asia's governments are also pioneering digital options in everything from personal identification to currencies. The Taiwanese have become global standard-setters for using digital platforms to encourage mass engagement in public policy decisions; the 'g0v' (gov-zero) platform demonstrates how people can be engaged on issues from city budgets to e-scooter regulations.[22,23] Hong Kong and Singapore have been competing for the fintech crown, establishing testbeds for innovation through regulatory sandboxes. And not to be left behind, Thailand and Malaysia's governments have drawn up digital transformation plans to modernise their economies for the 'Fourth Industrial Revolution'.

Innovation alone, however, cannot assure a solid future. Threats and risks exist and covid-19's impact is still unwinding; as the delta variant spreads through the world, there is significant uncertainty about where Asia is situated in the long cycle of the pandemic.

Poorer countries are likely to struggle to achieve universal vaccination, possibly for years. The resurgent Delta variant shows that even rich nations have challenges with vaccines. Asia has political flashpoints too; trade tensions between the US and China are forcing countries and companies to make difficult and sometimes loss-making decisions on supply chains and partnerships. There was huge optimism about the continent in the 1990s before the Asian financial crisis exposed weaknesses. And it's those memories and fears that linger among outside investors, which could yet crimp foreign direct investment (FDI). In addition, Asia faces an outsized challenge with climate change; according to a 2021 report from Verisk Maplecroft, 99 of the 100 most at-risk cities in the world are in Asia.

Still, current momentum may be enough to deliver the economic gravity needed to ground Asia's people and businesses in a safer, more sustainable and more prosperous era. As political, economic and technological influence dissipate into a multipolar power balance, business leaders and investors should watch for the implications of Asia's fourth wave of growth, as well as continued influence from its third. The age of Asia is rising.

[19] WeChat is also known as Weixin inside mainland China and offers different user groups and features. WeChat was designed for users outside mainland China, while Weixin is for those on the mainland.
[20] Financial Times, "Cash splash: how Sea became south-east Asia's biggest public company", https://www.ft.com/content/8454485d-7054-41ae-9f7c-0e81d6e1b21b
[21] PYMNTS, "IPO Hits $1.5B For Indonesian eCommerce Firm Bukalapak", https://www.pymnts.com/news/ipo/2021/ipo-hits-1-5b-for-indonesian-ecommerce-firm-bukalapak/
[22] Public Digital Innovation Space, "What do we do?", https://pdis.nat.gov.tw/en/
[23] MIT Technology Review and Omidyar Network, "Data fairness: A new social contract for the 21st century economy", https://mittrinsights.s3.amazonaws.com/datafairness.pdf

Chapter

01

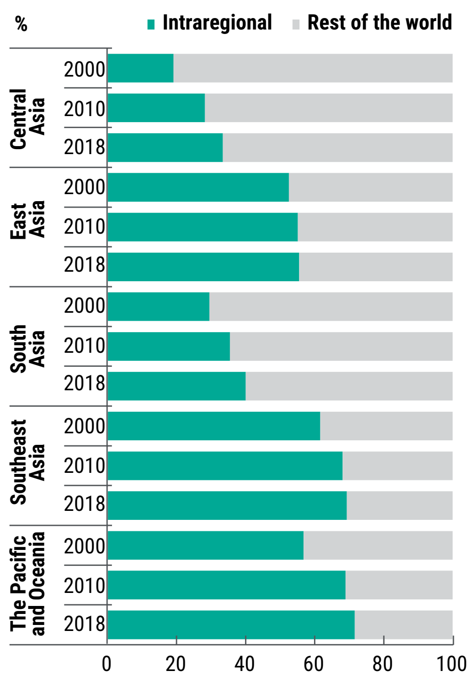
Countries without borders

For decades, Asian economies acted as factories for Western consumers, producing everything from televisions to t-shirts. While European and North American economies are still major trade partners, Asian countries have begun tightening economic and commercial ties with each other. Recent data show nearly 60% of Asia's trade is intra-regional. That's a higher share than North America and only slightly below the EU's 68%.

Intra-regional trade has grown across all subregions since the millennium (see Figure 3)[24] and partly drives the emerging multipolar geopolitical landscape. In Asia, three critical forces are at work: China's economic evolution and lift, accelerated regional trade and mobility, and improved connectivity and infrastructure.

Figure 3. Tightening economic ties

Intra-regional trade shares by Asian subregion



Source: ADB, International Monetary Fund, September 2019.

[24]Asian Development Bank, "Asian Economic Integration Report 2019/2020", https://www.adb.org/sites/default/files/publication/536691/aeir-2019-2020.pdf

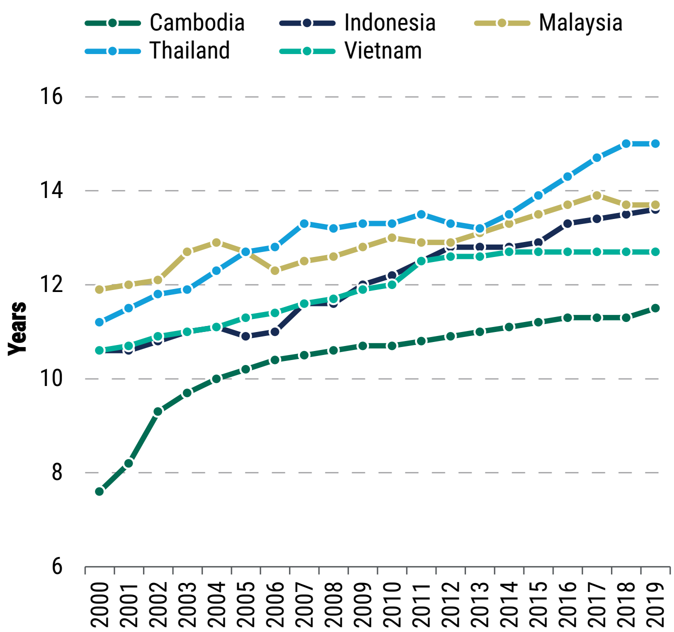
China's ripple effects

As the most populous nation and largest economy in Asia, China's wave of modernisation influences regional trajectories. Rising domestic wages along with US-trade tensions have prompted multinational companies to consider and sometimes follow through with diversifying manufacturing into neighbouring countries. Reports of Taiwan's Foxconn looking to Vietnam as a site for making Apple's iPads[25] and Intel also picking the country for its largest chip assembly plant[26] or South Korea's Samsung accounting for a quarter of Vietnam's exports[27] are all evidence of the trend. In 2019 Vietnam, Cambodia and Indonesia posted their highest levels of inward FDI. Relocating multinational operations out of China was a key driver.[28]

That shift is not without hiccups. Much of South-east Asia lacks China's engrained supply chains and its massive and high-skilled labour force.[29,30] Labour developments are a key area to watch, as skills levels in China's manufacturing sector still tend to exceed those in other Asian countries.

China's government has spurred rapid advances in literacy. Shanghai and Beijing showed literacy rates on par with developed economies by 2014. Other Asian economies will need to ramp up education reforms if they aim to reproduce China's labour dynamics. In Vietnam, for instance, much of the labour force has incomplete secondary education. And many people work in sectors that provide little training; three-quarters of jobs are in family farming, household enterprises or informal employment.[31] Likewise, Indonesia's labour market has a significant mismatch between education and industry needs.[32] While Thailand has above-average spending on education compared with the rest of ASEAN, 2018 PISA (Programme for International Student Assessment) results put Thai students lower than the OECD average on this metric.[33] Still, Asia's young, digital-savvy consumers and workers are better educated than their parents and educational trend lines do show improvement, albeit slowly.

Figure 4. A smarter fourth wave
Expected length of schooling (years)



Source: UNDP[34]

Breakneck growth among Chinese companies over the past two decades is also accelerating Asia's integration. Ant Group, the financial affiliate of Alibaba, is targeting the large ethnic Chinese consumer markets in South-east Asia, according to Jeffrey Ding of the Future of Humanity Institute; the company is rolling out mobile payment systems in the region, partly just to serve Chinese travellers. The company has also invested in local South-east Asian upstarts including Thailand's Ascend Money, Indonesia's Dana and the Philippines' Mynt.[35]

25 Reuters, "Exclusive: Foxconn to shift some Apple production to Vietnam to minimise China risk", https://www.reuters.com/article/us-foxconn-vietnam-apple-exclusive-idUSKBN2860VN
26 Financial Times, "Global manufacturers are flocking to Vietnam. Is it ready?", https://www.ft.com/content/19b81f73-1375-4275-b1e6-e9262b9402d2
27 Financial Times, "Global manufacturers are flocking to Vietnam. Is it ready?", https://www.ft.com/content/19b81f73-1375-4275-b1e6-e9262b9402d2
28 UN ESCAP, "Asia-Pacific Trade and Investment Trends 2020/2021, Foreign Direct Investment Trends and Outlook in Asia and the Pacific", https://www.unescap.org/sites/default/d8files/knowledge-products/APTIT%20FDI.pdf
29 Wall Street Journal, "Manufacturers Want to Quit China for Vietnam. They're Finding It Impossible.", https://www.wsj.com/articles/for-manufacturers-in-china-breaking-up-is-hard-to-do-11566397989
30 UN ESCAP, "Asia-Pacific Trade and Investment Trends 2020/2021, Foreign Direct Investment Trends and Outlook in Asia and the Pacific", https://www.unescap.org/sites/default/d8files/knowledge-products/APTIT%20FDI.pdf
31 The World Bank, "Vietnam's future jobs – leveraging mega trends for greater prosperity", https://documents1.worldbank.org/curated/en/670201533917679996/pdf/129380-v2-WB-Future-Jobs-English-25-6-2018.pdf
32 The Jakarta Post, "Why skills development is even more imperative for Indonesia", https://www.thejakartapost.com/academia/2020/07/11/why-skills-development-is-even-more-imperative-for-indonesia.html
33 OCED Economics Department, "Thailand's education system and skills imbalances: Assessment and policy recommendations", https://www.oecd-ilibrary.org/docserver/b79addb6-en.pdf?expires=1628246684&id=id&accname=guest&checksum=D9AD7B264C12E049EF2B0121B13E3C5E
34 UN DP, "Expected Years of Schooling", http://hdr.undp.org/en/indicators/69706
35 Nikkei Asia, "China's Ant eyes Southeast Asia e-payment dominance with IPO", https://asia.nikkei.com/Business/Business-Spotlight/China-s-Ant-eyes-Southeast-Asia-e-payment-dominance-with-IPO

Chinese utilities are building critical infrastructure. Huawei, frozen out of key Western markets, has become a 5G provider for countries including Malaysia, Singapore, Indonesia and Thailand. Tencent, China's largest social media and gaming company, is pushing into the rest of Asia too, opening a new office in Singapore to nurture its South-east Asian business.[36]

South-east Asia's consumers are younger and more numerous than in Western markets, which points to a long-term gain for companies that establish themselves early on in Asia's growth trajectory.

Blocs and pacts

A second force supporting regional integration is new trade agreements that facilitate investment, and mobility, allowing more trade and talent migration.

"Young people are increasingly moving into cities. Right now in the post-pandemic environment in Western societies, we're talking about de-urbanisation and remote work. But Asians still want to move to cities because the gap in the quality of life between tier one and tier two cities and the rest of the infrastructure is still very significant," explains Mr Khanna. That's a trend that blankets much of Asia's economic hubs and the region's diversity provides plenty of opportunity for mutual gains.

As ageing, higher-income economies aim to tackle gaps in the labour market, migration can fill essential but low-skilled roles that nationals might eschew in growing segments like healthcare or the 'care economy'. The wealthiest ASEAN nation is 25 times richer than its poorest and the median age of the oldest member country is nearly double that of the youngest.[37] The West and Gulf states may have long been magnets for Asian migrants, but that is now shifting as migrants look closer to home. Thailand, for example, now attracts for over half of ASEAN migrants—and, along with Malaysia and Singapore, account for 6.5 million such workers.[38]

"When people think of South-east Asia, they tend to bucket us into just one, but we're quite diverse in terms of geography, culture, language, religion," says Manoleehagul. He believes the bloc's uniqueness derives from engaging economically, in trade and investments, with larger economies of the world. "We are truly a melting pot of culture, and it's not surprising that we've also grown with a multicultural perspective on how to do business."

That sentiment is being codified. Governments have busily signed agreements to improve the orderliness of migration, especially among the low skilled. And some governments have long been working to better protect their outward-travelling migrants in particular, most notably the Philippines.[39]

The ten-member ASEAN bloc has also made strides towards trade integration and provided the institutional foundations for RCEP's signing. A decade in the making, RCEP has grown from an ASEAN-centric trade agreement to become the world's biggest ever free-trade deal when signed in November 2020 (despite India's decision to withdraw).[40,41] The deal could boost Indonesia's exports by up to 11% and inbound investment 18-22% within five years of ratification claims Indonesia's trade minister.[42]

South Korea could net a 1.4% GDP boost from RCEP, its first major trade bloc accession, with Japan's at 1.3%[43] reports Yuki Masujima, a Bloomberg Intelligence economist.

RCEP has drawn criticism, mainly for lacking labour and environmental protection principles common in Western trade agreements.[44] There is also an overlapping, Western-driven agreement, the Comprehensive and Progressive Trans-Pacific Partnerships, involving 11 Pacific Rim countries including Canada (the US withdrew under the previous president, Donald Trump).[45] Its predecessor, the Trans-Pacific Partnership (TPP), was central to former US president Barack Obama's pivot to Asia and, more broadly, an attempt to ensure that the US, rather than China, would be instrumental in signing the 21st century's

[36] Bloomberg Quint, "Tencent Picks Singapore as Asia Hub After India, U.S. Bans", https://www.bloombergquint.com/business/tencent-picks-singapore-as-asia-hub-after-india-u-s-bans

[37] World Bank Group, "Migrating to Opportunity, Overcoming Barriers to Labor Mobility in Southeast Asia", https://openknowledge.worldbank.org/bitstream/handle/10986/28342/9781464811067.pdf?sequence=22

[38] Katika Tipayalai, Journal of Economic Structures, "Impact of international labor migration on regional economic growth in Thailand", https://journalofeconomicstructures.springeropen.com/articles/10.1186/s40008-020-00192-7

[39] International Labour Organization, "Bilateral Agreements and Memoranda of Understanding on Migration of Low Skilled Workers: A Review", https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---migrant/documents/publication/wcms_385582.pdf

[40] Bloomberg, "Asia Pacific Nations Sign Biggest Regional Trade Deal", https://www.bloomberg.com/news/articles/2020-11-15/asia-pacific-nations-sign-the-world-s-biggest-trade-deal

[41] White & Case, "15 Asia-Pacific Countries Sign World's Largest FTA; A Closer Look at RCEP's Key Outcomes and Implications", https://www.whitecase.com/publications/alert/15-asia-pacific-countries-sign-worlds-largest-fta-closer-look-rceps-key-outcomes

[42] Jakarta Globe, "Indonesia Eyes Multiple Benefits from RCEP", https://jakartaglobe.id/business/indonesia-eyes-multiple-benefits-from-rcep/

[43] Bloomberg, "Welcome to the Might-Is-Right Global Trade Era", https://www.bloomberg.com/opinion/articles/2020-11-16/rcep-pact-reflects-return-to-might-is-right-global-trade-era

[44] Bloomberg, "Why China Is Creating a New Asia-Pacific Trade Pact: QuickTake", https://www.bloomberg.com/news/articles/2019-11-04/what-s-the-rcep-and-what-happened-to-the-tpp-quicktake

[45] Bloomberg, "China Steps Up Efforts to Join Trade Pact Created to Exclude It", https://www.bloomberg.com/news/articles/2021-05-17/china-steps-up-efforts-to-join-trade-pact-created-to-exclude-it

economic rulebook.[46] New trade agreements like this also contribute to a more multi-polar balance of power globally.

South Asia recently boasted the highest share of economies implementing trade reforms in the World Bank's Doing Business 2020 ranking.[47] Reforms yet to make their way through entire economies and those still on the drawing table also hold significant promise. Countries long stifled with bureaucracy and red tape are reforming quickly. Dr Khor of AMRO highlights Indonesia's move towards a more liberal investment climate as among the most notable changes.

"If you're going to do e-commerce, you want to make sure that you're allowed to ship goods freely across the region; you need that kind of a facilitation of trade and services," says AMRO's Dr Khor. "E-payment, for instance, has become very big in the region and I think all countries have a plan in order to facilitate this kind of technology."

Asia-Pacific is still a fragmented financial services market[48] but momentum towards central bank digital currencies (CBDCs)—which gained considerable recognition over two years in an Economist Intelligence Unit survey[49] on digital spending—could fill that gap to further support a more dynamic ecosystem. Many of Asia's major economies, such as Japan, India, South Korea and Singapore, have announced plans for or investigations into CBDCs—as have Hong Kong, Thailand and Cambodia. Although major economies in the West have also announced CBDC studies, including the US, none are as close to implementation as China and Cambodia, according to PwC's CBDC global index, published in April 2021. Cambodia's digital currency is already being used, recording 1.4m transactions with a value of US$500 million through the first half of 2021; cross-border transactions with ASEAN nations have also begun.[50]

In Asia, where banking services have lower penetration rates than mobile phone usage, a shift to digital currencies could represent a leapfrog event for financial inclusion and consumer spending—again bolstering the region's overall long-term trend of growing economic clout. The advent of digital currencies is a disruption to money itself. In an increasingly multipolar world, the structure of financial dealings will take on new importance, and if Asian nations take the lead here such innovations could pose a challenge to the old world order. But, at the very least, digital currencies and spending are apt to bring more of Asia's spenders into the formal economic fold.

[46] Council on Foreign Relations, "What's Next for the Trans-Pacific Partnership (TPP)?", https://www.cfr.org/backgrounder/what-trans-pacific-partnership-tpp
[47] World Bank Group, "Doing Business 2020, Comparing Business Regulations in 190 Economies", https://openknowledge.worldbank.org/bitstream/handle/10986/32436/9781464814402.pdf
[48] Deloitte Centre for Regulatory Strategy, "2020 Asia Pacific Financial Services Regulatory Outlook", https://www2.deloitte.com/content/dam/Deloitte/au/Documents/financial-services/deloitte-au-fs-apac-regulatory-outlook-2020-290121.pdf
[49] The Economist Intelligence Unit, "Digimentality 2021, Digital Currency from Fear to Inflection", https://digitalcurrency.economist.com/
[50] Forkast, "Cambodian state digital currency sees strong uptake", https://forkast.news/headlines/cambodias-cbdc-sees-strong-uptake/

Multi-Asset

Michael Kelly, CFA
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PineBridge Perspectives

While global investors for years were conspicuously US-centric, over the past decade they have come to focus on the global bookends (the US and China) as twin engines of global growth. And in a world short on growth, their focus also continues to recognize the tremendous opportunities throughout Asia.

The pandemic is just the latest reminder of Asia's outsized impact on the rest of the world. Global supply chains revolve around Asian factories and logistics, which, during lockdowns early in the pandemic, meant intercontinental supply snarls. Those supply chains increasingly encompass world-beating technology as well. Close to a billion workers in China and India have joined the global workforce, Taiwan leads the world in semiconductor process technology, ASEAN nations have witnessed rapid growth. As such, demand for certain products, such as commodities, agricultural products, and luxury goods, has now become so tethered to the region that acute knowledge of Asian trends is a must to effectively assess sectors as wide-ranging as metals and mining, consumer discretionary and staples, and semiconductors. Clean energy opportunities, which are part of our "energy evolution basket," have Asian footprints, too – the biggest electric vehicle (EV) battery makers, for example, are in Asia (dominated by China, Korea, and Japan).

Our Global Multi-Asset Team looks for opportunities across over 80 asset classes globally, yet Asia figures prominently in our investment decision-making. Asia is full of opportunities, and its fixed income markets continue to experience capital deepening. Asian companies and sovereigns form a significant component of several asset classes we follow and are key influencers in others. Two prominent dots on our radar that we think will influence market developments are China and global climate imperatives, which this report has discussed in depth.

Notwithstanding demographic pressures, Chinese policymakers are increasingly comfortable with a moderate growth target (i.e., quality over quantity) and are focused on more equitable growth as well as preventing excesses from posing risks to China in the longer term. Moderate growth in China is still world-beating. The focus is on enhancing productivity through technological innovation as the gateway to prosperity for its aging population. Labor productivity and urbanization have been key drivers. Secular trends in China, such as digitalization, rising wealth, and consumption, are firmly in place – and prudent consideration of the strategies leveraged to capture these enduring opportunities in China and emerging markets is needed.

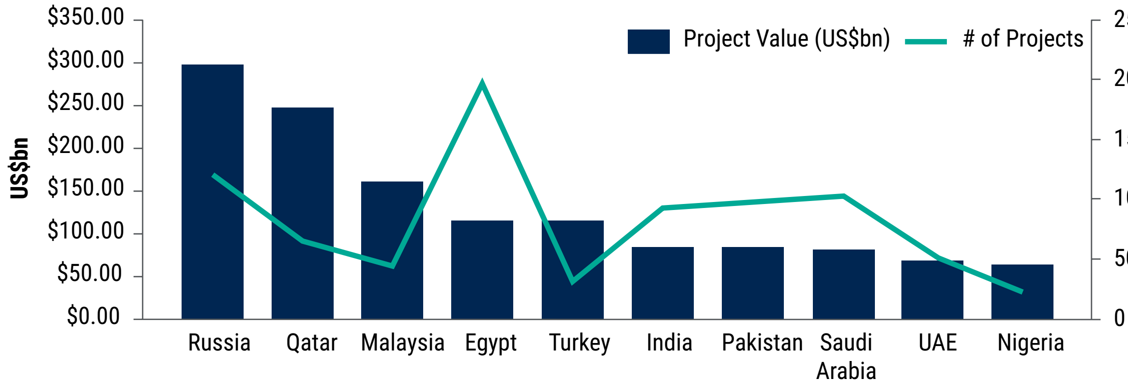
Environmental, social, and governance (ESG) concerns now influence most investment decisions and are propelling investments in cleaner processes and procedures. Again, this trend circles back to Asia, not least because of its burgeoning EV industry, but also because the region will be one of the most heavily impacted by climate change. Another reason is the significant room for improvement on all three ESG components in the Asian asset classes we follow. The transition to renewables, new environmental regulations, and national-level emission reduction pledges are encouraging, albeit uneven, measures to narrow the lacuna between problem and remediation (China and India remain top 10 carbon emitters). We see a compelling multi-year opportunity in this ESG delta for discerning investors. While starting later, China is now seeking to achieve peak emissions by 2030 and carbon neutrality by 2060. This 30-year objective from peak to neutral compares with 60 years in Europe and 45 in the US, should all these countries achieve their stated objectives.

Having invested in Asia for a long time, what's notable is how quickly change occurs. In this dynamic market, it is imperative to remain close to the ground, gather high-quality data, remain highly flexible, and collaborate with our specialist colleagues in Asian equities and fixed income to navigate the waves of opportunities as well as their potential spoilers.

A continent connected

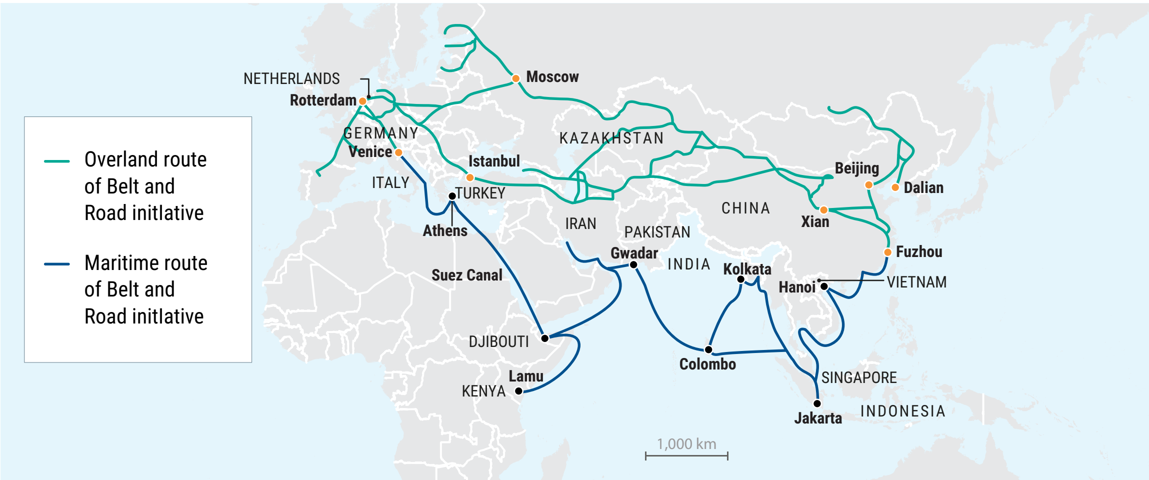
A third factor supporting Asia's integration is improving infrastructure and connectivity. The Belt and Road Initiative (BRI), a modern-day reference to one of the first waves of globalisation—the Han dynasty's 4,000-mile Silk Road—launched in 2013. So far, about 2,950 projects are completed or under way, reaching close to US$4bn in investment by the start of 2020.[51] While covid-19 has caused delays with projects, according to data from the Council on Foreign Relations, 139 countries now formally endorse or are affiliated with BRI; and while China may have backed off a related public relations push, investment flows continue.

Figure 5. Strengthening infrastructure and connectivity
Projects by value



Source: Refinitiv BRI database, 31 July 2019.

Figure 6. Reconstructing ancient trade networks
Map of BRI projects and routes



Source: New York Times analysis[52]

"The Belt and Road Initiative is a public road open to all, not a private path owned by one single party," China's state media quoted the president, Xi Jinping, as saying.

[51] Oxford Business Group, "Has Covid-19 prompted the Belt and Road Initiative to go green?", https://oxfordbusinessgroup.com/news/has-covid-19-prompted-belt-and-road-initiative-go-green

[52] The New York Times, "How China got Sri Lanka to cough up a port", https://www.nytimes.com/2018/06/25/world/asia/china-sri-lanka-port.html

Mass urbanisation: As Yukon Huang, senior fellow for the Asia Program with the Carnegie Endowment for International Peace and a former country director for China at the World Bank pointed out in PineBridge commissioned report *China Icebergs*, rapid urbanisation was a major growth driver for China over the past 30 years. With investment from China and others into Asia, that same phenomenon could repeat on a wider scale across the region. Malaysia, Bangladesh and Myanmar are among the largest recipients of BRI funds—not all of it without controversy.

Asia's infrastructure does need further capital, especially in fast-growing nations like Vietnam and Bangladesh (see Figure 7). Infrastructure spending was a sizeable portion of GDP in recent years (see Figure 8), especially in China, Laos, Vietnam and Malaysia.

As climate change and the pandemic have altered economic landscapes, the BRI also needs to evolve in response to a range of concerns, including the fact that recipient countries are taking on unsustainable debt, that BRI is viewed as a tool for geopolitical influence rather than a facility for the economic betterment of recipient countries, and that its lending includes too significant a portion of fossil fuel-based projects.[53,54] China's priority does seem to be evolving towards more green-energy projects and technology-related investments, couched in talk of a 'green silk road' and 'digital silk road'.[55,56]

Chinese capital is not the only financing source for infrastructure in Asia. The G7 partnership, Build Back Better World, or B3W, is a possible rival. Although details remain unclear at the time of writing, and there has been a flurry of similar initiatives in recent years that came to nought,[57,58] much more capital, in the form of trade, loans or infrastructure assistance could be heading to the region.

The combination of these factors argues for an Asia with stronger internal links than ever before. That dynamic helps to both create the multipolar era and give Asia a new level of economic influence and political clout within it. Adding B3W capital flows to BRI funding could accelerate trends that are already well under way.

[53] Fang Jin, Center for Strategic & International Studies, "The Belt and Road Initiative: Progress, Problems and Prospects", https://www.csis.org/belt-and-road-initiative-progress-problems-and-prospects

[54] The Council on Foreign Relations, "The Climate Challenge and China's Belt and Road Initiative", https://www.cfr.org/blog/climate-challenge-and-chinas-belt-and-road-initiative

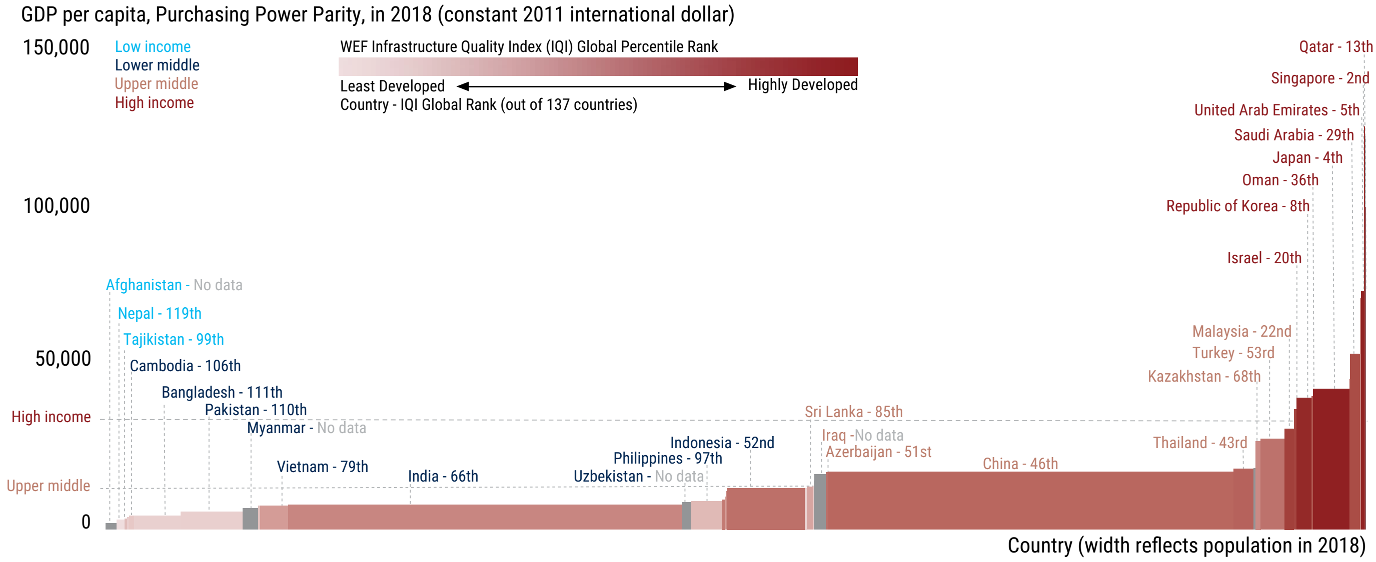
[55] Oxford Business Group, "Has Covid-19 prompted the Belt and Road Initiative to go green?" https://oxfordbusinessgroup.com/news/has-covid-19-prompted-belt-and-road-initiative-go-green

[56] Foreign Policy, "Coronavirus Hasn't Killed Belt and Road", https://foreignpolicy.com/2021/01/06/coronavirus-hasnt-killed-belt-and-road/

[57] *The Guardian*, "G7 backs Biden infrastructure plan to rival China's belt and road initiative", https://www.theguardian.com/world/2021/jun/12/g7-global-infrastructure-plan-to-rival-chinas-belt-and-road-initiative

[58] *Financial Times*, "West and allies relaunch push for own version of China's Belt and Road", https://www.ft.com/content/2c1bce54-aa76-455b-9b1e-c48ad519bf27

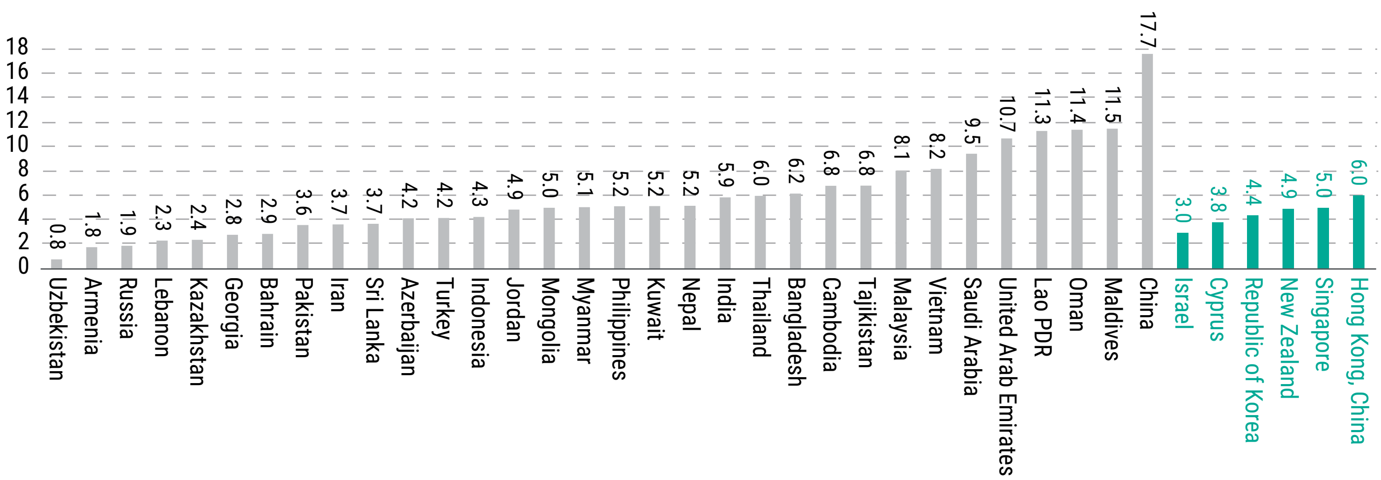
Figure 7. Infrastructure spend: promised and needed
Infrastructure development and quality in Asia



Source: Asian Infrastructure Investment Bank/The Economist Intelligence Unit[59]

Notes:
1. Analysis includes 43 countries—Afghanistan, Armenia, Azerbaijan, Bahrain, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Cyprus, Georgia, India, Indonesia, Iraq, Israel, Japan, Jordan, Kazakhstan, Republic of Korea, Kuwait, Kyrgyz Republic, Lao PDR, Lebanon, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Oman, Pakistan, Philippines, Qatar, Saudi Arabia, Singapore, Sri Lanka, Tajikistan, Thailand, Timor-Leste, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan, and Vietnam.
2. World Economic Forum's IQI measures the overall quality of infrastructure across countries. Higher scores indicate more developed infrastructure in land, water, air transport, electricity and water facilities.
3. No data means a lack of data on infrastructure quality index global rank.

Figure 8. Asia's infra-king: China
Infrastructure investment as a percentage of GDP (2017)



Source: Asian Infrastructure Investment Bank/Economist Intelligence Unit[60]

[59] Asian Infrastructure Investment Bank and The Economist Intelligence Unit, "Asian Infrastructure Finance 2020", https://www.aiib.org/en/news-events/asian-infrastructure-finance/2020/_common/pdf/AIIB_AIF2020_16April2020.pdf
[60] Ibid

Chapter

02

Asia tech—from copycat to pioneer bull

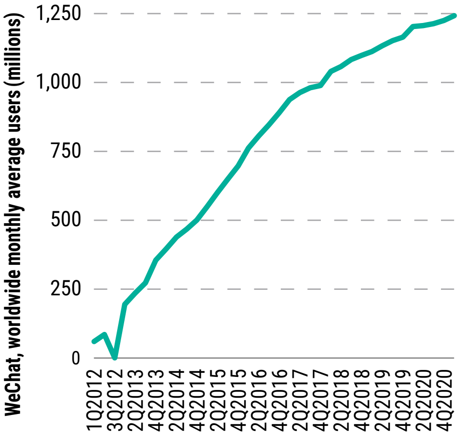
Nowhere is Asia's transition from producer for Western markets to a service-based model for domestic consumption more evident than in the technology sector. From consumer tech to AI and industrial robotics, Asia is charting a very different course from western rivals.

In the past decade, the region birthed several tech giants sharing a homegrown model that not only departs fundamentally from developed-world counterparts but has also become their envy.

This model of super apps on smartphones host an entire universe of functions from messaging to payments, to gig work and ride-hailing within a single product. WeChat/Weixin, owned by Tencent, was a pioneer. Launched as a messaging service in 2011, it evolved quickly under a fail-fast-and-learn ethos, transforming into a sprawling ecosystem of online service. Beyond chat, people use Weixin in China to book travel, pay utility bills, search for housing or borrow money. For companies, the app has customer relationship management functions, stores, content paywalls, scan and buy features, and other payment gateways. Tencent continues to diversify revenue with expansions into new product areas even as user numbers plateau—given near-universal adoption in China.

Figure 9. WeGrow

WeChat/Weixin, monthly average users globally (millions)



Source: Tencent historical operating metrics[61]

[61] Tencent, "Investor kit", https://www.tencent.com/en-us/investors.html#investors-con-4

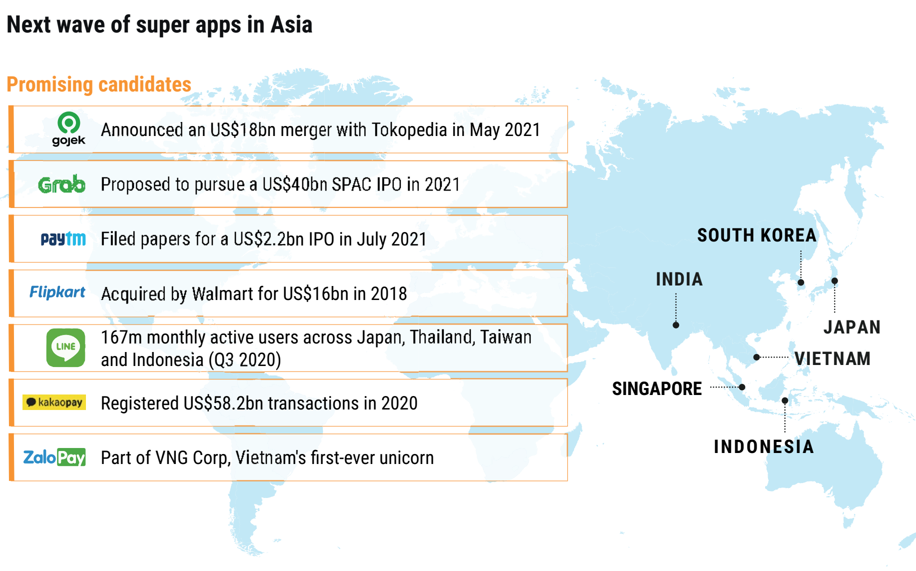
In mid-2021 several high-profile Chinese tech companies came under new regulator scrutiny. While repercussions in equity markets were swift and sharp, long-term ramifications are yet uncertain. China's tech giants have weathered many challenges, but few have come so directly from China's government. Tencent, for example, faced anti-trust actions with its previous mergers and music exclusive rights, as well as increasing scrutiny over its protection of minors. Meanwhile, Alibaba had to pay a near US$3bn fine in 2021 for anti-competitive behaviour. According to a company press release, this resulted in Alibaba's first operating loss since becoming public. At the same time, the online giant expects nearly 30% revenue growth in its 2022 fiscal year.[62] While much has been said in western media about "tech crackdowns" in China, the government's stated goal has been to enhance equality, inclusion and stability; provisions in China's new data privacy rules, for example, have been compared with the EU's General Data Protection Regulation (GDPR).[63]

More than a phone

The super app model works for several reasons that characterise fast-developing Asian markets, but are absent in Europe or the US. Rapid economic growth and smartphone penetration are creating millions of new mobile internet users in Asia each year. In China, for example, less than a third of web users ever connect via computers.[64] What super apps represent is a microcosm of trend dynamics aligning with innovative solutions.

Rapid economic growth and smartphone penetration are creating millions of new mobile internet users in Asia each year. In China, for example, less than a third of web users ever connect via computers.

Figure 10. Asia's next wave of super apps
Regional app unicorns



Sources: Tracxn; Briter Bridges; Business of Apps; The Economist Intelligence Unit ", 30 September 2021.

[62] CNBC, "Alibaba posts first operating loss as a public company following $2.8 billion antitrust fine", https://www.cnbc.com/2021/05/13/alibaba-earnings-q4-net-loss-after-2point8-billion-antitrust-fine.html
[63] *Wall Street Journal*, "China Passes One of the World's Strictest Data-Privacy Laws", https://www.wsj.com/articles/china-passes-one-of-the-worlds-strictest-data-privacy-laws-11629429138
[64] According to China Internet Network Information Center, in 2020 99.7% of China's internet users (986 million) accessed the internet via their mobile phones while 32.8% and 28.2% accessed it via desktop and laptop, respectively. Lian Wang and Chun Liu, "Lost in mobile? Exploring the mobile internet digital divide among Chinese college," International Journal of Educational Technology in Higher Education volume 18, https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-021-00267-w

Asia's fourth wave of growth has implications for a digital world, and how companies interact with and make money from consumers in it. If Asia pulls ahead digitally, it may prove a long-term advantage—especially in the face of the pandemic where rapid digitalisation was key to business survival.

There could be advantages too for societies that have already embraced digital ways of working, paying or conducting business. Unlike developed-world counterparts, Asian mobile consumers generally have less pre-existing experience with or attachment to multinational brands or financial services, such as with a global bank.

Bain & Company, a consultancy, predicts that digital payments and remittances have reached an inflection point; 70% of adults in South-east Asia fall into either unbanked or underbanked categories. They may encounter messaging, digital payments and ecommerce simultaneously when procuring smartphones and moving online. That encourages trust in a single application as a gateway to both digital and financial worlds. A different attitude toward data privacy in Asia, which does now appear to be evolving, has also facilitated digital penetration into ever-increasing aspects of life's transactions.

"People in Asia have not been as selective in terms of privacy, how their data is used," says Mr Tsang. "They want convenience and speed. They have accepted that governments might be monitoring their data, but they would rather be able to get things done more quickly." The trade-off is rooted more in practicality than ideology.

How the West was won over (or about to be?)

As fintech moves into that opening, where banks for example can't or won't compete, the situation gives Asia's tech companies an opportunity to outcompete Western rivals.

Uber, in one critical example, found itself ejected from the Indonesian market in 2018 when it could not match the cross bundling of services offered by domestic super app Gojek and Singapore-based Grab. The latter two had both learned from WeChat to offer ride-hailing as one of many products. Competition for Uber in China was even stiffer.

But Uber didn't leave the market empty handed. As part of exit deals, it reportedly took positions (through buyouts or mergers) in its Asian rivals. The company also took home some key business lessons. Uber has been trying to replicate the Asian super app model. Chief executive Dara Khosrowshahi signalled the intention in late 2019, writing: "We want Uber to be the operating system for your everyday life."[65]

After transferring rapidly from China to ASEAN, Asia's super app model is spreading to the rest of the developing world, from Gozem in Francophone West Africa, to Rappi in Latin America and Careem in Dubai (recently purchased by Uber). The storyline is an indication that emerging markets, such as in Africa, Latin America or the Middle East, may begin to look more to Asia than the US for inspiration.

"A lot of internet-based business models [financial services, healthcare, insurance] popping up in China will be relevant to the rest of the world," says Lars Faeste, managing director of Greater China at Boston Consulting Group (BCG). A few examples are WeDoctor, WeBull and WeLab (unrelated firms with different major investors), which are all valued over US$1bn. WeDoctor offers health and chronic disease management via its app; WeBull is an online retail brokerage claiming to offer more data than its Western equity-trading rivals along with live customer support; and WeLab is an online bank with a range of financial services, including back-end assistance to traditional banks to put their operations on mobile phones. These businesses are all global, although WeBull in particular has set its sights on growing in non-Chinese markets.

Meanwhile, Asia's e-commerce platforms have largely followed a path that Alibaba laid out years ago, while China's new data-driven pioneers stretch from health-insurer Ping An through to entertainment and media giants like ByteDance and Tencent. Newer Chinese unicorn entrants are starting out in entirely new industries that have global potential such as in autonomous driving. ZongMu Technology, for example, is an autonomous systems start-up; it already counts traditional Chinese automakers, Dongfeng and BAIC Group, as partners. Xiaomi, a smartphone maker, also announced an electric vehicle (EV) project in March 2021 and CB Insights, a technology intelligence provider, now counts the company among ZongMu's clients.

Beyond e-commerce, industries such as biotech, AI and 5G are also areas where Asia has been ramping up and has potential to outpace the West. While US efforts to cut China out of the 5G race have been persistent—most notably with sanctions against Huawei—it may yet be falling behind. In 2020 the US had about 50,000 5G base stations installed across the nation, compared with about 700,000 in China.[66] According to China's

[65] Uber Newsroom, "An Operating System for Everyday Life", https://www.uber.com/newsroom/everyday-life-os/
[66] *Wall Street Journal,* "U.S. vs. China in 5G: The Battle Isn't Even Close", https://www.wsj.com/articles/u-s-vs-china-in-5g-the-battle-isnt-even-close-11604959200

Ministry of Industry and Information Technology, that total has grown to exceed 990,000 as at September 2021. That China's 5G network would be the largest in the world shouldn't be a surprise due to the country's manufacturing scale and supportive policies. But the greater implication comes a step further down in the food chain. The promise of 5G technology isn't about consumer take-up of new phones, it's about industrial applications that hinge on low- or no-latency in wireless connectivity. As such, 5G is an enabling technology for even greater productivity boosters like smart electrical grids, remote factory control, autonomous cars and machines, remote medical diagnostics, and virtual and augmented reality applications. The advantage then comes in the installed base, where China is far away in the lead.

Mobile-first

Relatedly, a common denominator of success with Asia's super-app approach is that many of the region's markets are mobile-first and had limited financial-services penetration before phone adoption. South-east Asia alone, for example, is home to 290 million unbanked individuals,[67] most of whom own smartphones.[68] The same circumstance could repeat in Central Asia, Latin America or Africa. That familiarity of market conditions could give Asia's developers an advantage versus Western firms in new markets.

In Kenya, for example, the same conditions already led to the birth of mobile money almost 15 years ago. Only about 30% of Kenyans have a traditional bank account, but over 70% use mobile money apps.[69] Africa's emerging "unicorns" are largely fintech companies focused on payments; Nigeria's Interswitch and Flutterwave are two examples, the latter entering into partnerships with Visa and China's Alipay to facilitate digital payments between China and Africa.[70]

Having built models that serve local needs and market structures, Asian companies are now asserting themselves on a global stage. ByteDance, the Chinese company that owns TikTok, is the highest valued private tech start-up in the world (as at April 2021).[71] Its offering combines video and social features previously the domain of US giants such as YouTube, Facebook or Snapchat.

[67] Fitch Ratings, "Digital Banks in South-East Asia", https://www.fitchratings.com/research/banks/digital-banks-in-south-east-asia-19-08-2020
[68] *Nikkei Asia*, "Southeast Asia eclipses China as world's mobile economy hot spot", https://asia.nikkei.com/Business/Business-trends/Southeast-Asia-eclipses-China-as-world-s-mobile-economy-hot-spot
[69] Financial Inclusion Insights, Kantar, "Kenya", https://finclusion.org/country/africa/kenya.html#dataAtAGlance
[70] African.Business, "Investors from Silicon Valley to China catch the African fintech bug", September 2021, https://african.business/2021/09/technology-information/investors-from-silicon-valley-to-china-catch-the-african-fintech-bug/
[71] Statista, "The Highest-Valued Startups in the World", https://www.statista.com/chart/19317/highest-valued-startup-companies-in-the-world/

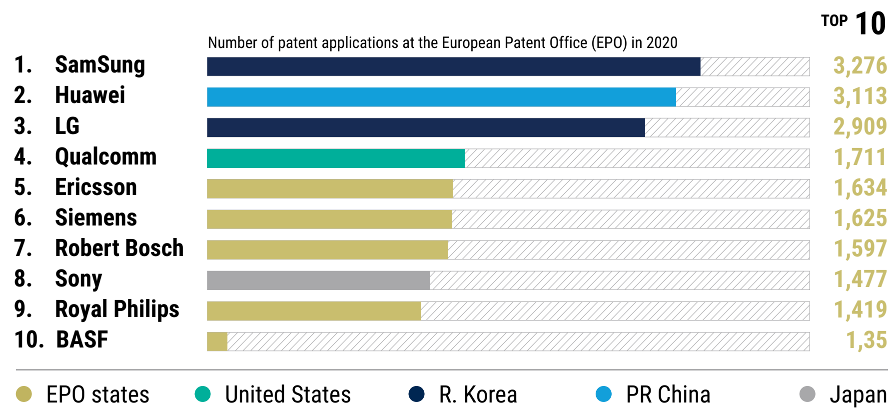
Not just an app

While far from eclipsing US tech, super apps demonstrate growing clout for Asia's developers. More than becoming laboratories for innovation, they have international potential and are drawing global investment and talent.

Sea Group, a Singaporean tech company that spans gaming, e-commerce and payments is one example. Its investors include China's Tencent, Canada's Ontario Teachers' Pension Plan and US money manager General Atlantic. Singapore's strong regulatory regime seems to have encouraged an inflow of expertise. "A Chinese national leading Tencent and an American private equity manager from General Atlantic were the key partners taking SEA Group public," notes Mr Khanna.

Established Asian tech players are also at the leading edge of global innovation. South Korea's two consumer tech giants—Samsung and LG—are among the most active patent applicants in the European market with, China's Huawei and Japan's Sony also in the top ten (see chart).[72]

Figure 11. Asian innovation in the race to overtake
Top applications for European patents



Source: European patent office, 2021.

Just as US firms built on post-war advantages and internet leadership, Asia's digital success stories have sparked a positive feedback loop that's integral to the region's influence in a multipolar world. Names like Grab, Bukalapak, Carsome and FinAccel are all unicorn-level ASEAN start-ups with IPO or SPAC (special purpose acquisition company) deals approaching.

According to CB Insights, corporate venture capital investment—funds from names likes Google, Salesforce or Citi—into Asia-based companies rose by 17% year on year in the first half of 2021, reaching a record number of deals for any half year. Not only did the US$20bn value of those investments nearly match the full year of 2020, but 2020 was already up US$5bn versus 2019 despite the pandemic.[73]

"We're going to get a lot more entrepreneurs [in Asia]," says Mr Tsang, "a lot more different kinds of free-thinking people that will make the tech even better in places like Indonesia, like Vietnam. People are very literate, very hardworking. At the same time, I think there's a lot of US companies and also entrepreneurs that are seeing that Asia is growing, and a lot are moving to Asia, to take advantage of cheaper resources and to build on bigger markets such as your Vietnams and Indonesias."

"This is a young population, which makes it a good time to see these unicorns popping up. Seeing Grab and Shopee on the street corner also makes tech innovation more tangible [for them]," says Manoleehagul.

Talent is recirculating too, with people joining tech companies and taking their skills into traditionally analogue industries, like banking, which are becoming more like tech incubators, Manoleehagul adds.

[72] European Patent Office, "Expert analysis: patenting trends in 2020", https://www.epo.org/about-us/annual-reports-statistics/statistics/2020/patenting-trends.html
[73] CB Insights, "The 2021 Mid-Year Global CVC Report", https://www.cbinsights.com/research/report/corporate-venture-capital-trends-h1-2021/

PineBridge Perspectives

Collectively, the 20 stock exchanges of Asia-Pacific form a US$39 trillion regional market, with over 30,000 listed companies – each potentially able to capitalize on the exciting secular trends highlighted in this report.* Despite the Covid-19 pandemic, the Asian equity investment universe expanded in 2020 with new companies going public, proving that even a once-in-a-lifetime global crisis cannot hold back Asia's entrepreneurial energy.

The question for global investors is no longer whether to invest in Asia, but rather how best to uncover the winners of the future. With quantum changes bubbling up, we expect large dispersion of returns across Asian equities, which, in turn, sets up greater opportunities for alpha generation.

However, opportunity, without access and ability, would come to naught. In such a vast market, selectivity is important, and this starts with having access to the full opportunity set. In the past, investors had limited access to Asian equities, partly due to foreign investor restrictions in domestic capital markets. Today, stock selectors can navigate the full breadth and depth of these markets across economies, market segments, industries, and market capitalizations via a flexible and unconstrained active investment approach – the cornerstone of our Asia equity strategies.

As bottom-up investors, we seek to find companies that can deliver consistent alpha over the long term by focusing on fundamentals – the strength and sustainability of their business models, the excellence of the people running them, and their valuations. Whether in Hong Kong or Mumbai, our locally based teams are constantly listening; gathering and deciphering information and insights and building up the research that supports our high-conviction stock calls. Indeed, being on the ground in Asia provided us with an unparalleled vantage point to see the unfolding Covid-19 pandemic and gather firsthand information on its impact, not only on our investee companies but on global supply chains. Timely and effortlessly shared across the firm, this information allowed us to position our global portfolios for the pandemic's emerging risks as well as the rare investment opportunities as the region's economies quickly bounced back.

As Asia's regulatory and business landscape evolve and risk assumptions are reconfigured, having a robust process to assess financial as well as environmental, social, and governance (ESG) considerations will be critical, given the increasing materiality of these factors to investment performance. Government actions around climate change, social well-being, and transparency in Asia and elsewhere also signal the growing entrenchment of ESG in the policy agenda. Our investment process, which combines our proprietary Lifecycle Categorization Research and Equity Risk Assessment frameworks, fully integrates ESG and helps us capture the right long-term value-creating companies with strong and sustainable business models.

Over 30 years of cumulative experience in equity investing in the region has been fully integrated into our global investment process, creating a deep knowledge base from which to draw upon in our decision-making, especially in topsy-turvy times.

With such long track records in Asia, one may ask, why are we still bullish about this region after all these years? Have we not harvested all the alpha by now? The answer is simple: the Asian growth story is open-ended – the region continually reinvents itself, catalyzed by a seemingly inexhaustible entrepreneurial drive. With patience, discipline, and conviction, we believe our time-tested approach will rise to the challenge of each new Asian metamorphosis.

Anik Sen
Global Head of Equities

Elizabeth Soon, CFA
Head of Asia ex-Japan Equities

* WFE, domestic market capitalization, as of June 2021.

AI: A new frontier

Between 1997 and 2017 China's global share of AI research papers surged from 4% to 28%, leapfrogging the US to become the world leader.[74] China has also now surpassed the US in AI journal citations,[75] an important metric of influence in this field.

"China has a robust consumer internet with a lot of consumer applications using facial recognition," notes Mr Ding from the Future of Humanity Institute. Just as super apps emerged from specifically Asian dynamics, so has China's success in AI research. It has surged ahead with facial recognition, which can be used to authorise payments—as is the case already in China's giant smartphone-based economy.

Facial recognition is also strongly associated with China's security apparatus, and this has proven a double-edged sword for the country's AI start-ups. While it gives them the chance to deploy innovations at scale, generate the large datasets AI relies on, and earn revenue without having to make international sales, it can also bring added scrutiny in other markets, making attracting international capital more challenging.

Megvii, for example, one of China's leading facial recognition start-ups, filed for an IPO in Hong Kong in late 2019, largely thanks to revenue from surveillance products. It was promptly placed on a US government list of entities, likely to be "involved, in activities contrary to the national security or foreign policy interests of the United States".[76] That meant it became subject to various licensing restrictions. Plans for its IPO in Hong Kong stalled and the company now expects to list in mainland China.[77]

Developments in the field are both quickly evolving and subject to changing regulatory environments, which differ territory to territory. Growth opportunities may abound but navigating the terrain is likely to be as uncertain as the technology's development trajectory.

Integrating AI

Smart infrastructure is another key AI focus. In China that is particularly meaningful because new cities are still being built almost entirely from scratch, which can offer developers a natural laboratory for mass deployment of connected technologies with AI. China's State Grid utility, for example, has 540 million smart meters across the country, which—as one of Mr Ding's translated articles maintains—"is several times the number of camera terminals in the security field."[78] To predict and manage consumption and storage, the company plans to use AI and is already ranked in the top 20 AI patent applicants globally, according to the World Intellectual Property Organization.

Again quoting from Mr Ding's translation: "Because the storm of AI-driven upgrading of traditional industries is coming, the arrival of the industrial internet in the next 20 years may be as violent as that of the Internet/mobile internet in the past 20 years!"[79]

Across Asia, this ability to build greenfield technology infrastructure, rather than having to upgrade existing networks, allows for rapid progress in various fields of technology, not only AI. An Economist Intelligence Unit study from July 2021 finds Asia is also at the forefront with its 5G roll-out. South Korea, Taiwan and China are among world leaders, with Thailand close behind. "One-third of the Asian countries studied were able to make the coveted 3.3-3.5-gigahertz (GHz) and 26-28 GHz bands available, unlike many wealthy nations in Europe or North America."[80]

Mr Ding, however, points out that there are several potential weaknesses hidden within the impressive headlines around China's AI research. While its academic grounding is strong, centred on research labs clustered in Tsinghua, Peking and Nanjing, linkages to the private sector are not as deep as often is the case in the US. Diffusion of AI into the business sector is limited and Chinese AI papers are less likely to involve collaboration between industry and academia.[81] In the US, on the other hand, two-thirds of AI PhD graduates now take industry rather than academic jobs, according to Stanford's annual AI study.[82]

Daitian Li, who spearheaded China's AI Development Report, notes that "AI is open science", meaning that once research is published, it is very easy for any other company to leverage it. Real benefits are gained when companies collaborate. But tech-decoupling pressures from US-China trade tensions could upend such benefits. If Asian and US companies develop separate ecosystems, it would reduce economies of scale and increase costs. The separate development that different market needs drove naturally in the case of consumer tech could be forced in industrial sectors.

"Many of our clients have two technology stacks, such as car companies working on autonomous driving," notes Mr Faeste from BCG. "This is happening in more and more industries. It will lead to inefficiencies eventually and you won't have the positive effect of global exchange."

Dr Khor at AMRO foresees the decoupling threat extending as far as smartphones, which are the basic unit of internet access in Asia. "If there's a bifurcation in the standard setting, the result of that would be different smart devices that are unable to communicate with each other. That would be a deadweight loss, which means that instead of having one phone, you'll need two phones if you're crossing borders."

Uncertainty around decoupling generally is still a source of concern for investors. But the assurance of losses on both sides means governments have incentive to find a middle path.

If stock markets are any way to gauge sentiment, 2021's track record would indicate more integration, not less. Data compiled by Bloomberg show that in January through late April 2021, Chinese companies raised over US$6bn in IPOs in the US. As well as being a record, it represents "an eightfold increase from the same period in 2020."[83]

[74] Harvard Business Review, "Is China Emerging as the Global Leader in AI?", https://hbr.org/2021/02/is-china-emerging-as-the-global-leader-in-ai
[75] Stanford University Human-Centered Artificial Intelligence, "Artificial Intelligence Index Report 2021", https://aiindex.stanford.edu/wp-content/uploads/2021/03/2021-AI-Index-Report_Master.pdf
[76] US National Archives Federal Register, "Addition of Certain Entities to the Entity List", https://www.federalregister.gov/documents/2019/10/09/2019-22210/addition-of-certain-entities-to-the-entity-list&ved=2ahUKEwiO082V07zxAhUGcBQKHdlUAIUQFjAAegQIAxAC&usg=AOvVaw2UjgLrPDX27whfbtnLbX2y
[77] Bloomberg, "Alibaba-Backed AI Startup Megvii Files for IPO in Shanghai", https://www.bloomberg.com/news/articles/2021-03-12/alibaba-backed-chinese-ai-startup-megvii-files-for-shanghai-ipo
[78] ChinAI Newsletter, "ChinAI #82: State Grid - A Hidden Giant in AI?", https://chinai.substack.com/p/chinai-82-state-grid-a-hidden-giant [79] Ibid
[80] The Economist Intelligence Unit, "The 5G Readiness Guide; Deployment strategies, opportunities and challenges across the globe", https://www.eiu.com/n/the-5g-readiness-guide/
[81] Caixin, "China is Top Producer of AI Papers, But Researchers Are 'Isolated'", https://www.caixinglobal.com/2019-01-17/china-is-top-producer-of-ai-papers-but-researchers-are-isolated-101371163.html
[82] Stanford University Human-Centered Artificial Intelligence, "Artificial Intelligence Index Report 2021", https://aiindex.stanford.edu/wp-content/uploads/2021/03/2021-AI-Index-Report_Master.pdf
[83] Business Times, "China firms are listing in the US at a record-breaking pace", https://www.businesstimes.com.sg/companies-markets/china-firms-are-listing-in-the-us-at-a-record-breaking-pace

Robotics: Asia's developed markets lead the way

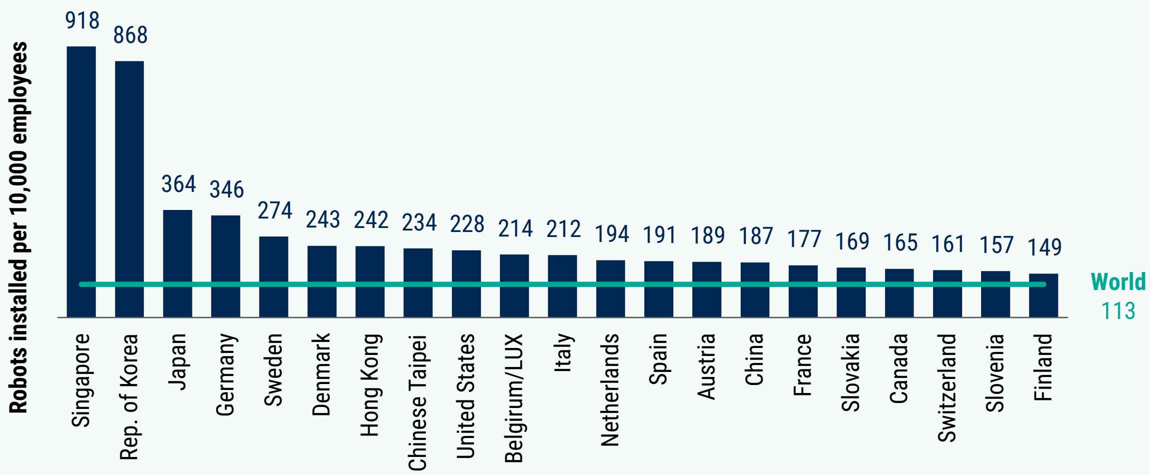
In 2021 there's increased focus on robots and automation and Asia again could benefit from the transition.

India and China often hog headlines when it comes to economic or business development. But the region is also home to mature economies such as Japan, South Korea and Singapore, with market structures that often resemble Europe or the US more than their developing Asian neighbours.

And like Western counterparts at the pandemic's onset, the Japanese government prodded companies to reshore production to reduce exposure to trade disruptions.[84] Samsung had already made a push to rely more on in-country supply chains[85] and South Korea's government has offered tax and subsidy incentives for reshoring.[86] But as production returns to such wealthy economies, the business consequence is higher labour costs.

"After large shocks like recessions, firms restructure their businesses and adjust production toward technologies that lower labour costs," IMF economists Tahsin Saadi Sedik and Jiae Yoo noted in a recent post about how the pandemic could accelerate automation.[87]

Figure 12. Automation favouring Asia
Robot density in manufacturing by country



Source: International Federation of Robotics[88]

[84] Bloomberg, "Japan Allocates $2.4 Billion to Beef Up Supply Chains", https://www.bloomberg.com/news/articles/2020-11-20/japan-allocates-2-4-billion-for-better-supply-chain-resilience

[85] Pulse by Maeil Business News Korea, "Samsung Electronics turns eager in initiative to localize chip supply chain", https://pulsenews.co.kr/view.php?sc=30800028&year=2020&no=651847

[86] The Diplomat, "South Korea's Struggle to Bring Manufacturing Home", https://thediplomat.com/2020/09/south-koreas-struggle-to-bring-manufacturing-home/

[87] IMF Blog, "What Pandemics Mean for Robots and Inequality", https://blogs.imf.org/2021/04/19/what-pandemics-mean-for-robots-and-inequality/

[88] IInternational Federation of Robotics, "Robot Race: The World´s Top 10 automated countries", https://www.processonline.com.au/content/factory-automation/news/robot-race-the-world-s-top-10-automated-countries-1242355105

Robot central: Developed Asia

Singapore, South Korea and Japan lead the world for robots deployed in industrial processes, according to the International Federation of Robotics (IFR).[89] In 2019, even before the pandemic, there were 918 robots deployed for every 10,000 human workers in Singaporean industry, compared with just 228 in the US and 346 in Germany.

Japan, a major manufacturer and adopter of robotics, saw production and exports accelerate during the pandemic even as other industrial outputs slowed.[90] "In the short term, there were adverse effects [from the pandemic] such as a drop in orders, but in the long term, I expect the introduction of robots will be accelerated," says Hiroshi Fujiwara, IFR delegate for Asia and Japan Robot Association (JARA). "The improvement of [the] automation rate is expected to accelerate in the manufacturing industry and logistics sites. In addition, in order to reduce the risk of infection of covid-19 and lead a safe and secure life and business continuity, there are examples of using robots, especially in the field of sterilisation, cleaning, transportation, guidance work, so that people can live or make a business in a non-contact and non-face-to-face manner."

The IFR highlights Japan and South Korea's strategic approach to their robotics industries. As both countries position themselves to be leaders in this capital intensive fourth industrial revolution, government investment for deploying robots will need to be significant.[91] South Korea doubled its number of industrial robots in the five years leading up to 2019. Key drivers include a need to increase productivity despite an ageing population and the government's workforce plan that includes a projected increase of smart factory workers—robots and co-bots—by 2022.[92]

China too, which is already nearing the US in terms of robot deployment despite far lower wages, is investing heavily in robotics. Its Made in China 2025 strategy is aiming for 70% of robots used in the country to also be made domestically by 2025.[93]

"Japan, China and South Korea are all focusing on strengthening and nurturing the robot industry, but there are differences in their objectives and approaches," says Mr Fujiwara of JARA. "Japan is facing some of the social issues including labour shortage in the welfare and long-term care industry due to rapid declining birth-rate and ageing population. Ageing social infrastructure is also one of the social issues."

In the US, a multi-decade trend of offshoring does show signs of coming to an end. Factors are diverse, ranging from labour costs in Asia, climate change concerns, trade conflicts and the pandemic. Robots could play a role in offsetting these for US manufacturers, but the fact remains that robots are predominantly produced in Asia. Short of a deep rift between the East and West on tech and trade, there's little reason to believe that the US wouldn't outsource its supply of robots too. Asia looks to benefit in either scenario.

89 Ibid
90 Financial Times, "Pandemic boosts automation and robotics", https://www.ft.com/content/358f6454-e9fd-47f3-a4b7-5f844668817f
91 International Federation of Robotics, "How Nations Invest in Robotics Research", https://ifr.org/ifr-press-releases/news/how-nations-invest-in-robotics-research
92 International Federation of Robotics, "Korea hits new record of 300,000 industrial robots in operation", https://ifr.org/ifr-press-releases/news/korea-hits-new-record
93 Reuters, "Factbox: Made in China 2025: Beijing's big ambitions from robots to chips", https://www.reuters.com/article/us-usa-trade-china-policy-factbox-idUKKBN1HR1DK

Chapter

03

Asia's green (energy) revolution

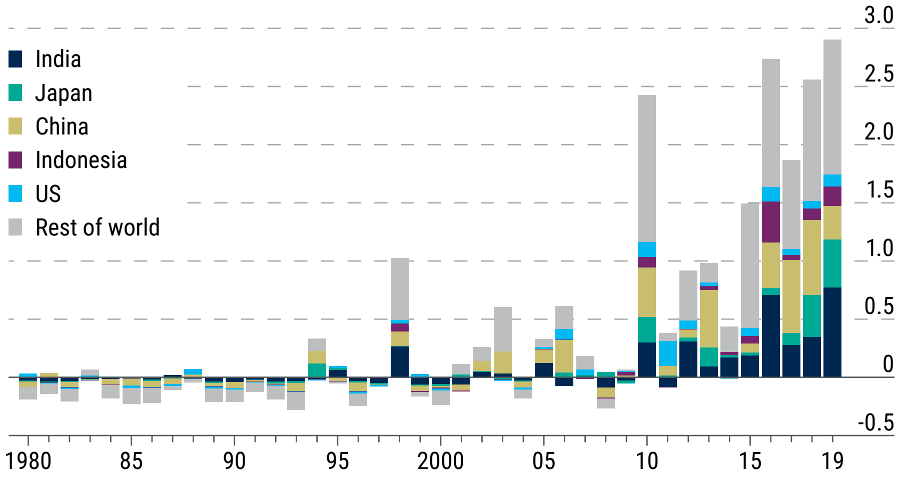
Millions of Asia's citizens dwell in low-lying and coastal areas in mega-cities, which are already exposed to heavy rains, monsoons, typhoons and high temperatures. Climate change could make them all worse and is bearing down hard.

Ninety-nine of the world's 100 most environmentally exposed cities are in Asia, as are 13 of the top 20 cities that are projected to suffer a major increase in economic losses from flooding.[94,95] Floods are now so severe in Jakarta, which is also sinking, that the government is considering moving itself to a new city on higher ground on an entirely different island (Borneo).[96] Yet the number of people dwelling on flood plains is likely to more than double between 2000 and 2060.[97] And some predictions show that Asia's hottest cities could become uninhabitable to elderly and populations with heart disease and other health problems; 2020 already was one of the warmest years on record.[98]

[94] The Economist, "Climate change is forcing Asian cities to rethink their flood defences", https://www.economist.com/asia/2019/09/21/climate-change-is-forcing-asian-cities-to-rethink-their-flood-defences
[95] The Guardian, "Asia is home to 99 of world's 100 most vulnerable cities", https://www.theguardian.com/cities/2021/may/13/asia-is-home-to-99-of-worlds-100-most-vulnerable-cities
[96] The Economist, "Flooding in Jakarta is the worst for over a decade", https://www.economist.com/asia/2020/01/11/flooding-in-jakarta-is-the-worst-for-over-a-decade
[97] The Economist, "Climate change is forcing Asian cities to rethink their flood defences", https://www.economist.com/asia/2019/09/21/climate-change-is-forcing-asian-cities-to-rethink-their-flood-defences
[98] The Economist, "Heatwaves are killing a record number of people", https://www.economist.com/graphic-detail/2020/12/03/heatwaves-are-killing-a-record-number-of-people

Figure 13. Existential hotness

Days of heatwaves



Source: The Lancet Countdown on health and climate change, 2020

All of this makes a green transition an urgent priority rather than an abstract exercise in preparedness or supporting the global good. For Asia, sustainability is existential. Positively, that means the political will exists to create enough momentum towards a greener future. That alone could itself boost the continent's economic fortunes, again leapfrogging clunky fossil energy infrastructure and innovating.

As highlighted in The Economist Intelligence Unit's report series *Sustainable and actionable*,[99] many of Asia's large asset owners—such as sovereign, monetary and pension funds—are actively making commitments and asserting that state funds must go toward the dual goals of sustainability and profitability.

At the same time, governments are setting national targets. China, Japan and South Korea have all declared net-zero ambitions,[100] while India has among the most ambitious solar goals in the world.[101] All ASEAN members have identified national renewable energy goals; and Vietnam, Thailand and the Philippines have adopted policies to nurture green industries through zoning, permitting and feed-in tariffs.[102] One major step comes from the Philippines announcing a moratorium on new coal-fired power.[103]

China's gaining green

As the largest local economy, China is the most significant actor—or potential non-actor. Slower to start initially, China is now moving more determinedly towards net zero. In late 2020 the government committed to carbon neutrality by 2060 and peak emissions by 2030, which "set the tone for the whole country," according to China Dialogue's Ma Tianjie.

State-owned enterprises carry out a huge slice of economic activity in China and because of the state's guiding role in the economy, political declarations are consequential and results-oriented. If the government requires carbon cuts, they are likely to follow. And private companies that intend to remain competitive in China also need to put that compliance high on their agenda.

"The importance of the climate neutrality target is that it provides an overarching plan and roadmap," says Mr Tianjie. If change comes to Asia in terms of reducing carbon footprints, expect China to either lead the way or become an obstacle. Currently, its policies aim more at leadership.

China has been the dominant solar and wind installer and manufacturer globally for the past decade.[104] It accounts for two-thirds of global production of solar photovoltaics (PVs) and installed 45% of PVs, according to BCG. That dominance is more impressive given that at the turn of the millennium the advanced economies of Japan and Germany

[98] The Economist Intelligence Unit, "Sustainable and actionable: A study of asset-owner priorities for ESG investing in Asia", https://eiuperspectives.economist.com/sustainability/sustainable-and-actionable-study-asset-owner-priorities-esg-investing-asia

[100] Carbon Brief, "South Korea follows Japan and China in carbon neutral pledge", https://www.carbonbrief.org/daily-brief/south-korea-follows-japan-and-china-in-carbon-neutral-pledge

[101] CNBC, "India has some huge renewable energy goals. But can they be achieved?", https://www.cnbc.com/2020/03/03/india-has-some-huge-renewable-energy-goals-but-can-they-be-achieved.html

[102] The National Bureau of Asian Research, "Powering Southeast Asia: Meeting the Region's Electricity Needs", https://www.nbr.org/wp-content/uploads/pdfs/publications/sr89_poweringsoutheastasia_dec2020.pdf

[103] Ibid

[104] Greenpeace Japan, "Achieving Net-Zero with China, Japan, and South Korea's Overseas Energy Finance", https://www.greenpeace.org/static/planet4-japan-stateless/3d3693f8-1.-g3-re-finance-report-full.pdf

dominated the sector with China as a small outlier; Bell Labs invented the first solar cells in 1954 in New Jersey, but by 2011 Chinese companies were the leading manufacturers.[105]

Offshore wind is also taking off, according to China Dialogue's Mr Tianjie, leveraging both wind resources and the opportunity to compete in the wind technology supply chain.

And big picture plans have been followed up by a flurry of institutional activity, carbon market guidelines, a climate co-ordination vehicle, a development roadmap by the state council, and a carbon neutrality working group.[106] In July 2021 China launched its first carbon-trading programme. And underscoring the significance of China's scale, on its debut, the programme was already the world's largest. The potential of China's laggard-to-leader status should not be underestimated.

Still, the picture is nuanced because China is also the world's largest coal consumer, and its reduction targets have come under criticism for falling short of what's needed. Yet on a per-head basis, China already uses less coal than South Korea, Germany or Australia, according to US Energy Information Administration and British Petroleum statistical reviews.[107]

Multi shades of green for a multipolar world.

Asia is outpacing the rest of the world in its renewable-energy push. According to BCG, investment over the next 20 years will bring 2,673GW of renewable energy online by 2040 in Asia, more than double Europe's projected installed capacity and over threefold that in North America[108] during the same period.

As green energy transitions to powering EVs, low carbon gains can be compounded. Already an EV powerhouse, China is setting an example that other Asian countries may follow. Tesla, thanks to a charismatic and controversial CEO, often wins the most public attention, but China's homegrown collective of producers, including NIO, BYD, Great Wall Motor, Li Auto and Xpeng, should not be underestimated. "You have a group of companies here that most people haven't heard of, that are cranking out cars that are beating up Tesla in terms of performance," says BCG's Mr Faeste.

China has the world's largest battery-EV market and is projected to see the sharpest growth in the years ahead (see figure 14). China's sales are also more diversified across companies and geographic area compared with the US market. As discussed in the *China Icebergs* report, the country's scale routinely changes market dynamics and that is again true here.

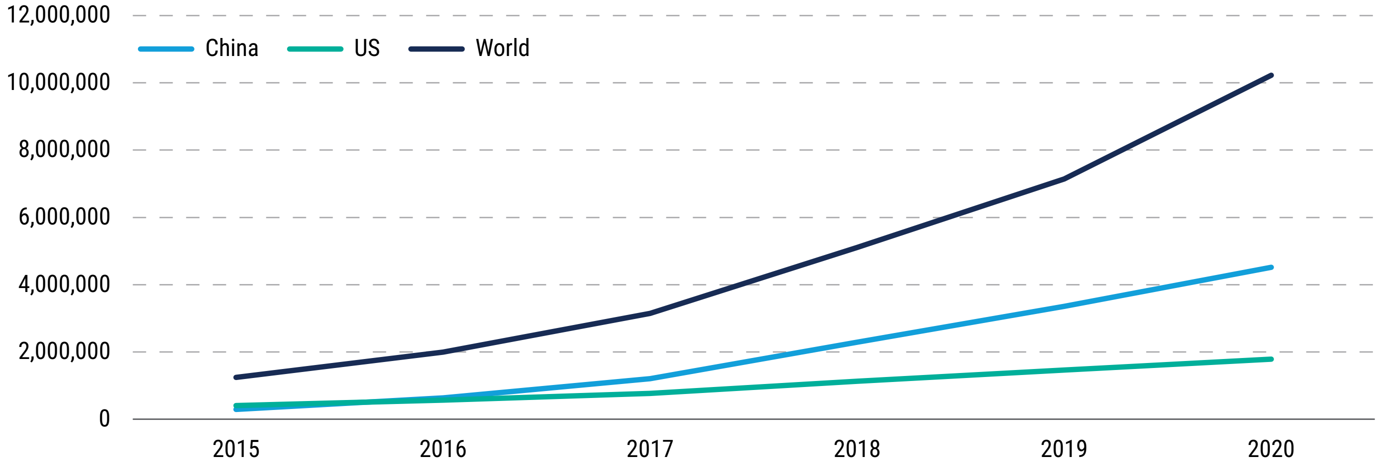
[105] *Wall Street Journal,* "Can America's Solar Power Industry Compete with China's? One Firm Tries", https://www.wsj.com/articles/can-americas-solar-power-industry-compete-with-chinas-one-firm-tries-11624295249

[106] Expert interview, Lars Faeste.

[107] Coal Consumption by Country, https://www.worldometers.info/coal/coal-consumption-by-country/

[108] BCG, "Riding the Renewables Wave in Asia-Pacific", https://web-assets.bcg.com/e8/ba/c4472fcf42afb9a4fa4d53341737/riding-renewables-wave-210107.pdf

Figure 14. Exponential EVs
Number of electric or new energy vehicles sold



Source: IEA.org, 31 December 2020.

Thailand aims to follow China's lead; the government announced in March 2021 that every EV sold in the country should be produced there by 2035.[109] Hyundai has announced plans to build EVs in Singapore and Indonesia. Battery plants are also going up in Indonesia, with both domestic and export production targets.

As Mr Khanna alludes, the capabilities of Asia's higher-income countries can help the next generation of nations, and this holds true for a low-carbon transition too.

Finance is one mechanism. The China Development Bank, Export-Import Bank of China, and Industrial and Commercial Bank of China are funding clean energy projects from Pakistan to Vietnam. The Japan International Cooperation Agency is supporting geothermal projects in Indonesia and Japan's largest three commercial banks are ranked in Bloomberg New Energy Finance's top ten renewable energy lead arrangers and syndicated lenders.[110] The Asian Infrastructure Investment Bank also plans to increase its share of finance to climate change mitigation by over 50% by 2025.[111]

Asian financial centres and multinationals are also phasing out environmentally damaging projects from their portfolios. Japan Bank for International Cooperation and Korea Electric Power Corporation have both announced the end of overseas coal project funding, and Asian multinationals are following suit, with Samsung pledging in November 2020 to halt coal investments.[112,113] Meanwhile, the Asian Development Bank has not funded coal power since 2013.[114] And in late September 2021, Mr Xi told the UN General Assembly that China would stop supporting new coal-power projects overseas.[115]

The culmination of all these developments adds up to progress. The question that remains for societies and investors is: will it be fast enough?

[109] *Bangkok Post*, "Govt ups E-car drive", https://www.bangkokpost.com/business/2089087/govt-ups-e-car-drive
[110] Greenpeace Japan, "Achieving Net-Zero with China, Japan, and South Korea's Overseas Energy Finance", https://www.greenpeace.org/static/planet4-japan-stateless/3d3693f8-1.-g3-re-finance-report-full.pdf
[111] Hiroki Sekine, Chatham House, "Regional cooperation for green growth in Asia", https://www.aiib.org/en/news-events/media-center/blog/2021/AIIB-s-Climate-Finance-Focus.html
[112] The National Bureau of Asian Research, "Powering Southeast Asia: Meeting the Region's Electricity Needs", https://www.nbr.org/wp-content/uploads/pdfs/publications/sr89_poweringsoutheastasia_dec2020.pdf
[113] Reuters, "Samsung's key insurance affiliates pledge to halt coal investments", https://www.reuters.com/article/uk-samsung-coal-idUKKBN27S1Q0
[114] Financial Times, "China's Belt and Road Initiative should stop financing new coal power", https://www.ft.com/content/22f97b67-a1ff-477b-981c-ee54d5c895d5
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Fixed Income

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PineBridge Perspectives

The aperture through which international investors view Asia fixed income has widened. In recent years, this asset class has become a major component of the global emerging market (EM) bond universe, particularly in high yield.

Beyond yield, the Asia fixed income market may excite more than other areas because of the region's underlying possibilities. In Asia's fourth wave of growth, we see the market maturing and deepening, and engendering reforms in transparency, governance, and sustainability. Asia's infrastructure buildout in areas such as intra-regional mobility and renewable power generation would require long-term financing. This is likely to be constructive for the market in terms of lengthening maturities, creating new benchmarks, and potentially ushering in a new supply of sustainability-focused issuances. Capital-intensive operational transformations – from automation to supply-chain relocations – could catalyze further market growth.

Quality remains our focus. We take a more proactive role in seeking improvements in the nonfinancial aspects of our issuers' operations. Through dialogue, we have nudged issuers to enact changes that could add value to their businesses over the long run. We note the increasing consciousness among corporates of their environmental footprint, as well as efforts toward greater community responsibility and strengthening governance through board diversity. One of the more remarkable developments in Asia amid the pandemic is the growth of the ESG-related bond market, which we expect to further gather momentum.

While investors like us commit to integrate ESG considerations in our investment process and effect incremental change over time, governments have not shied away from using powerful regulatory tools to hasten change. Over the past year, regulatory changes have impacted some issuers. By and large, however, we believe these reforms will result in greater market stability.

All this points to the importance of a thorough understanding of the Asian operating environment – the evolving policies and regulations, complex ownership structures, and governance issues – and further highlights the value of having experienced, on-the-ground research teams. Granular nuances that may only be discernable to those with local insights and investing experience could differentiate portfolio returns over the long run.

As active credit selectors with substantial resources on the ground in Asia, we believe we are well-placed to bridge the growing demand for this rising asset class. For over 20 years, our team has navigated the region's investment grade, high yield, local currency, and hard currency markets across industries, economies, and issuer types and ratings – and built robust portfolios designed to deliver income, diversification, and capital preservation benefits for our clients.

Green ASEAN

For Asia's emerging economies, the green transition is essential to close the energy access gap and build a future-proof, low-carbon economy. The transition also provides economic opportunities that represent greater infrastructure investment.

Trend lines here are positive. In South-east Asia, hydropower has quadrupled in output since 2000; it is the main power source in Laos and Myanmar The volcanic 'Ring of Fire' is a huge geothermal resource, with Indonesia and the Philippines boasting the second and third most installed capacity globally.[116]

Solar energy too is gaining ground. Global horizontal irradiation—the metric that determines the efficacy of PV installations—is strong in parts of Asia.[117] Enabling policy frameworks are moving into place. Thailand was the first ASEAN country to explicitly support the solar sector[118] and Vietnam raced ahead to become a standout success,[119] following a slew of regulatory changes and enablers including feed-in tariffs and improvements to bankability and fiscal terms.

Wood Mackenzie, a consultancy, believes South-east Asia's cumulative solar PV capacity could triple by 2024,[120] and projects in Malaysia have already undercut traditional energy projects such as coal, gas and hydropower.

A 2019 study from the International Renewable Energy Agency (IRENA) shows that installing renewables increasingly cost less than even the cheapest fossil fuel power.[121] Singapore, Thailand, Myanmar and Vietnam already produce a minority of power from coal.[122] Greenpeace estimates that South-east Asia's net-zero pathway presents a US$205bn market opportunity while pointing out that currently only Vietnam, the Philippines and Malaysia have the appropriate fiscal and regulatory frameworks for wind and solar project bankability.[123] Research by EY, a consultancy, indicates 800 shovel-ready clean energy projects in Indonesia, Japan, Malaysia, the Philippines, South Korea, Taiwan, Thailand and Vietnam.[124] Because of the region's still considerable energy-access gap, this investment pipeline is yet speculative but critical and could prove transformative in providing the economic infrastructure for both individuals and businesses. With climate change and pollution looming as such certain threats, the incentives to switch to renewable energy are growing. If costs reduce as a barrier, the ASEAN potential for a green future could be near at hand.

The Philippines already exports seven times the global average of solar PV components.[125] Thailand's aim to sell only zero-emission vehicles in the country within the next 15 years counts here too. Its domestic market, while small, remained surprisingly robust during the pandemic even as conventional vehicle sales slumped by a quarter.[126]

Meanwhile, Indonesia could leverage its steel industry and low manufacturing costs for wind turbine production and harness its nickel and bauxite resources for the battery sector. And Vietnam has already specialised in smart-grid, PV and energy-storage components, based on existing specialisations in electronics manufacturing.

There will, of course, be challenges in balancing between the green imperative with a 'fair' transition. In China, for instance, the state-owned coal sector is a major employer and some regions, like Inner Mongolia, according to Mr Tianjie, are struggling to find new growth pathways for a low-carbon era. India also faces huge challenges in transitioning away from hydrocarbons and biomass, which remain critical energy sources. As the world's third-largest energy consumer, fossil and biomass still satisfy about 80% of India's demand. And as consumers can increase purchases of modern conveniences, such as air conditioning units and vehicles, the country will require more power for a system the size of the EU's within the next two decades.[127]

Squaring Asia's surge in demand for energy-intensive products with emissions reduction is likely to prove difficult and require stiff political will, private sector innovation and active shifts in consumer behaviour. But urgency has a way of driving disparate stakeholders to definitive solutions. If Asia unites to fight the common enemy of climate change, economic gains could follow, opening opportunity for businesses and investors.

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Conclusion: Seizing Asia's moment

The Asian continent has produced three waves of growth and economic transformation since the post-war period, and a new cluster of nations are building on past momentum for a fourth, taking advantage of new opportunities and capabilities in today's digital age. A rising middle class, youthful populations and the momentum that comes with homegrown business success signal a bright decade. Leadership positions in AI, the on-demand economy, super apps and 5G all demonstrate how timing matters: start-ups can scale and become global brands at a speed that would have been impossible in the pre-digital era.

Progress notwithstanding, there are headwinds. There's need in Asia to accelerate economic growth while managing its consequences—notably inequality, environmental stress, innovative and responsive policy and, possibly, a broader role for the private sector in supporting the wider good—as China's government now seems more focused on. More seamless regulatory integration, especially in areas like financial services, could help enable pan-Asian businesses to scale, as could deepening trade agreements. Migration can be a force for good, in both origin and destination countries, but, as the pandemic has shown, migrants are also a vulnerable group that need proper protections and rights. There are also geopolitical and regulatory flashpoints to contend with. China's tightened scrutiny of companies and sectors that it deems to be presenting risks to equality or social stability suggests a volatile business environment for investors in high-growth sectors including media, entertainment, education or ride-hailing.[128] The long-term impacts may be positive but remain unknown. Governments and businesses alike seek stability in society and where they can harmonize, opportunity often arises.

Will Asia's emerging economies follow China's lead, that of East Asian democratic technocracies, the West, or a new vision entirely?

Much will depend on greater intercultural exchange and understanding to help reduce geopolitical frictions and bifurcations that are beginning to show between the East and West. Outdated preconceptions persist on both sides—often fanned by a partisan media, as Mr Tsang relates. "You really need to understand both sides. You can't wear the hat of the Westerner to look at a Chinese problem; you can't wear a Chinese hat to look at a Western problem… I always encourage my Western friends to travel more to Asia, to see what Asia is really about."

Whichever path Asia follows, one thing is clear, its economic gravity has more pull today than ever. The evolution is particularly significant in a geopolitical landscape where the balance of power is far less condensed in a single power or alliance than at any time since the end of the second world war. Within that new landscape, expect Asia to rise as trends of technological change converge with demographic advantages and policy improvements. This is a long-term story set to play out over a decade or longer as China eases into the number one spot on GDP charts and ASEAN's young workers, consumers and entrepreneurs push the region to become one of many sources of influence in a multipolar world.

The future, of course, is uncertain and not without challenge, but the evidence marks an inflection that heralds the age of Asia.

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Key takeaways

Swelling middle class shifts global wealth

Young, educated, tech-savvy and consumption-ready populations have long been key to economic growth. What economists, business strategists and investors should note is the outsized surge in these metrics for Asia today. Calling it a “swelling middle class” may be an understatement—90% of the increase in global middle-class consumers in recent years has been in Asia. And this cohort could grow from 2 billion to 3.5 billion in the next decade. That’s about the same as total world population growth from 2001 to today. This growth in purchasing power is poised to drive a large and long-term fourth wave of change in global economic demand. In a multipolar world, that will be significant for dynamics in Asia but also around the world. What might be the offshoot for your region?

Burgeoning tech pushing global adoption

Much has been written about Industry 4.0 and the digital transformations AI, 5G, IoT and other deep-tech developments will bring. The spoils of winning a technology contest, such as the space race of the 1960s, are a combination of short-term economic gains and a positive feedback loop that may pay dividends for decades. While the first industrial revolution and the computer age each remade the world with those in the West as clear winners, that might be about to change. Even if the East does not come away as the clear winner this time, it’s likely that the West will not either. Even a split decision will have a transformative effect on how the world works. Economic power and influence is shifting East, the question for businesses and investors is: to what degree?

Climate inflection driving green advances

Mitigating climate change is a challenge every region, country and city in the world must face and ultimately overcome. But with 99 of the 100 most-threatened cities in the world all in Asia, the stakes are much higher for the East. Economists, ESG proponents and climate scientists have been predicting significant economic loss from climate change. But the flip side of this risk is gain. The biggest benefits could go to those who invest in a low-carbon future. Clean-tech in the form of renewable energy, batteries and EVs are gaining significant momentum in Asia; a low installed base of coal and falling renewable energy prices could be a boon for some ASEAN nations in particular. With over 2,000GW of renewable energy slated to come online across Asia-Pacific in the next decade, a leapfrog moment may be on the cards. Rising water levels and temperatures may yet prove insurmountable but if Asia has the most at risk, it may tackle global warming with the most preparation; that could represent a power shift in how the world works. Is it better to bet against or with Asia’s ingenuity?

Age of aligning economic gravity

Any one of the conditions described above, on its own, could hold enough influence to shift the world’s economic gravity eastward. What happens if all three converge in Asia’s favour?

About PineBridge Investments

PineBridge Investments is a private, global asset manager focused on active, high-conviction investing. We draw on the collective power of our experts in each discipline, market, and region of the world through an open culture of collaboration designed to identify the best ideas. Our mission is to exceed clients' expectations on every level, every day. As of 30 June 2021, the firm managed US$141.4 billion across global asset classes for sophisticated investors around the world.

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