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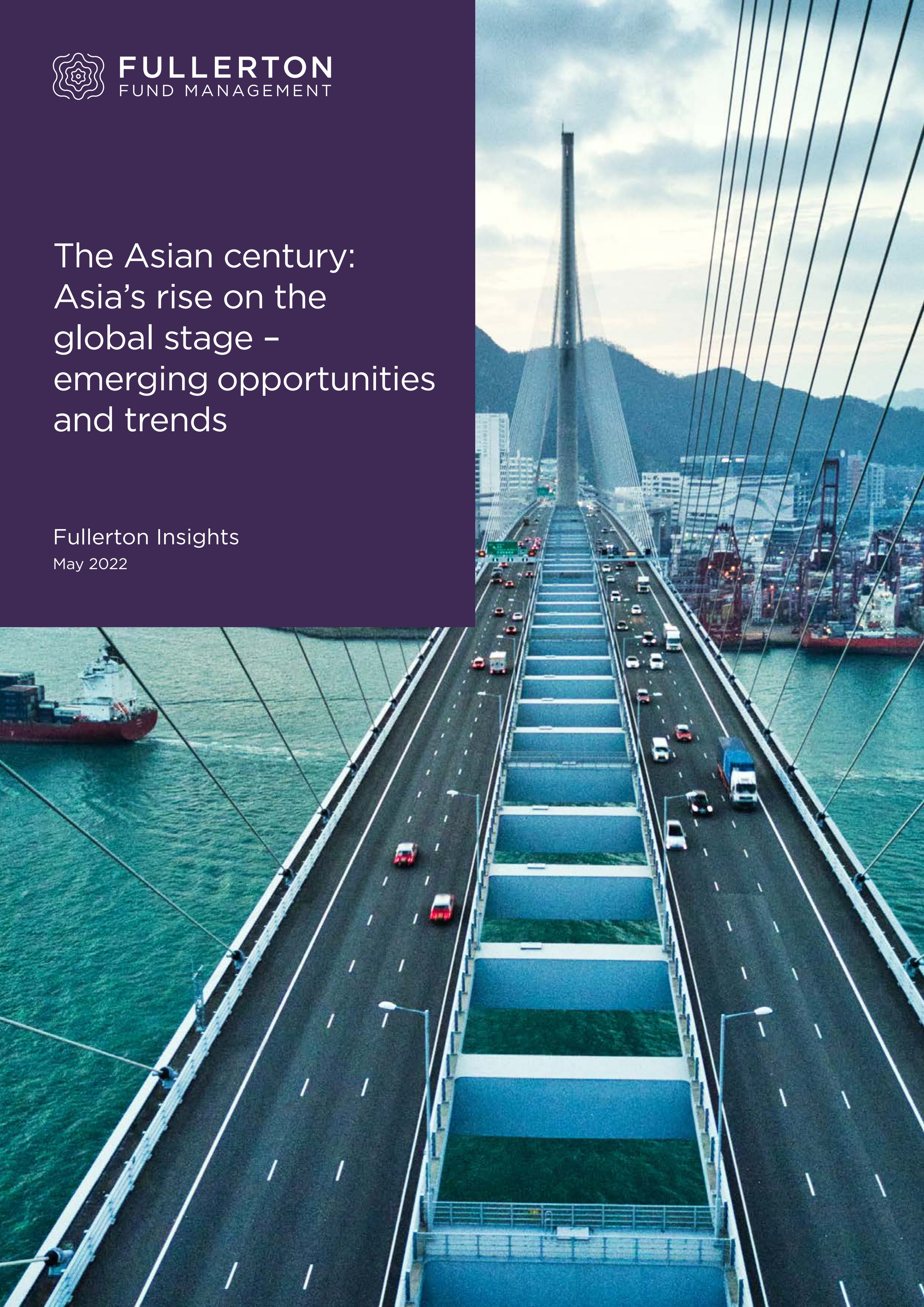
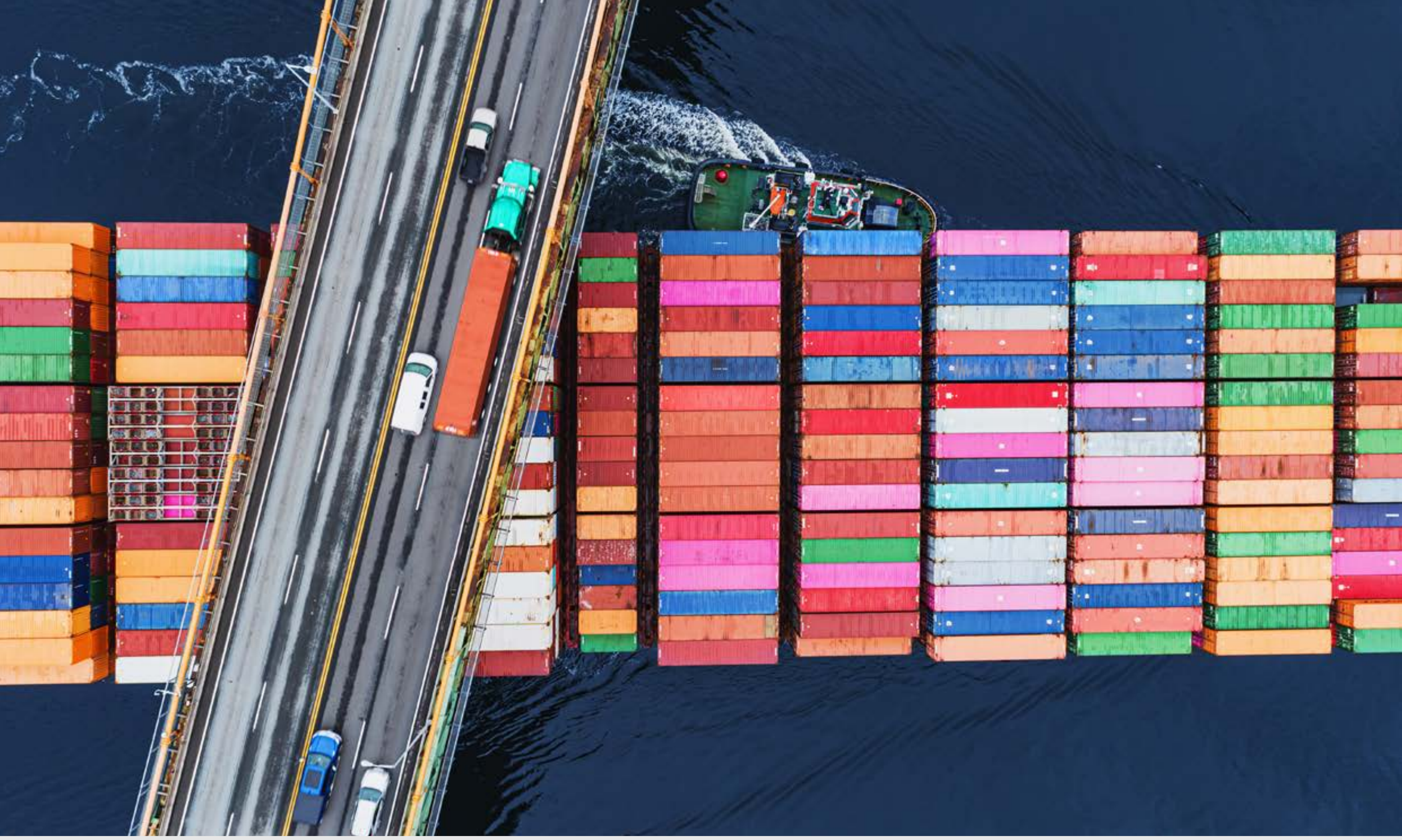
The Asian century: Asia's rise on the global stage – emerging opportunities and trends

Fullerton Insights

May 2022





Executive Summary

This paper takes a deeper look at some of the key features and trends we believe make Asian equities an attractive long-term investment. The paper encompasses two parts: 1. Why invest in Asian equities?; and 2. How to invest in Asia. The key assertions put forward are:

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- Asian equities offer potentially attractive investment opportunities underpinned by its long-term structural growth trends such as an emerging middle-class, technological progress, increased innovation, and rising intra-regional trade and integration which are distinct to the region.

- There are many world-class global champions unique to Asia, such as in the areas of high-end semiconductor chip manufacturing, and also emerging players in new industries like Fintech, as well as clean and renewable energy.

- As China moves up the value chain towards higher-end manufacturing, this creates newfound opportunities for other economies in the region to step up and occupy the part of the chain that China has vacated.

- Many of the interesting and disparate opportunities in Asia are under-represented in the passive equity indices of the region (which tend to be heavily slanted to the State-owned Enterprises and "old economy" names). Hence, we believe active investing is better suited to exploit the alpha opportunities in Asia.

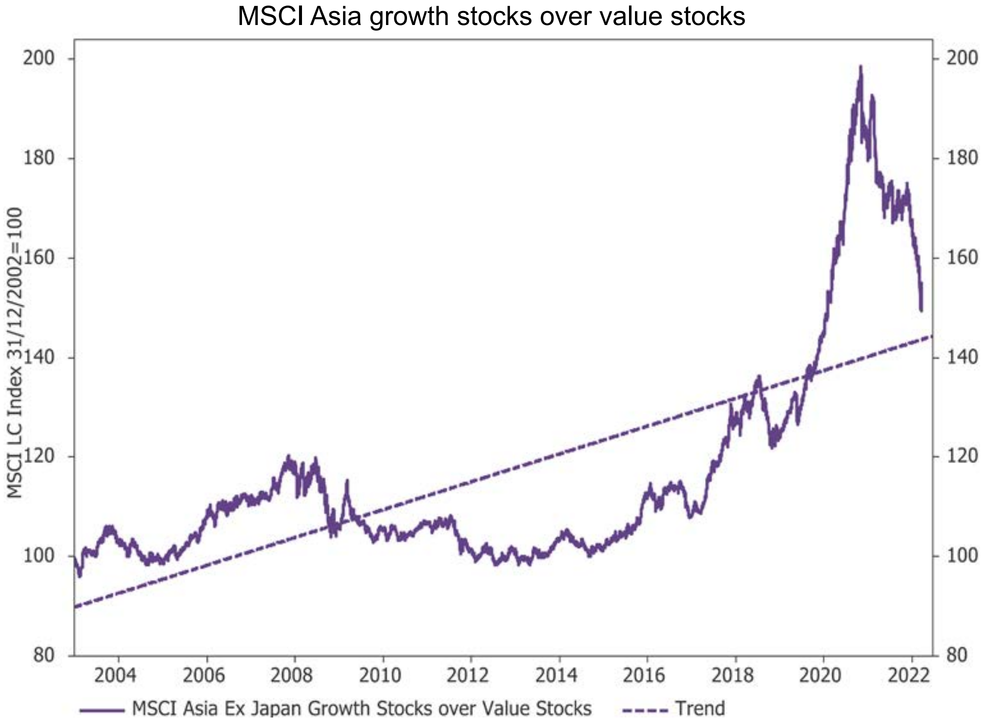
1. Why invest in Asian equities?

Trouble in the Orient or opportunities ahead?

The Orient, or the East, namely Asian equities may at times be viewed as a niche investment area that presents more trouble than it's worth. We look to debunk this notion by first addressing the significant cyclical weakness in Asian equity returns and go on to tackle the long-standing arguments against Asia by examining the structural trends shaping the long-term opportunities in this space.

Asian earnings growth has been hurt as rising cost pressures squeeze margins, and as COVID policies dampen activity across key markets. These cyclical corrections can be significant and painful, but Asia has the advantage that its growth-linked stocks remain on a favourable long-term trend (see Figure 1).

Figure 1: Asia's long-term "growth story" has a favourable trend



Source: Refinitiv Datastream, March 2022

That said, Asia still has challenges to overcome, such as sustaining higher productivity and earnings growth, which in turn will impact the return expectations of investors. Key structural shifts that can help mitigate Asia's challenges include robust growth in per capita incomes, greater consumerism and e-commerce, improvements in financial integration, as well as improvements in the ease of doing business.

Asia's returns have been less volatile than other Emerging Markets

Although the forward earnings growth outlook for Asia in the current cycle may be soft, its return profile has seen less fluctuation compared to the wider Emerging Markets bloc. Over the last 10 years annual equity returns from Latin America have been 1.3 times more volatile than those from Asia[1]. In part that may reflect Asia's reforms and how its "ease of doing business" has improved e.g. the World Bank's 2020 "Ease of Doing Business" report ranked 5 Asian economies in the top 15 globally, with big economies like China and India having improved by 50 rank positions (or more) over the last 5 years.

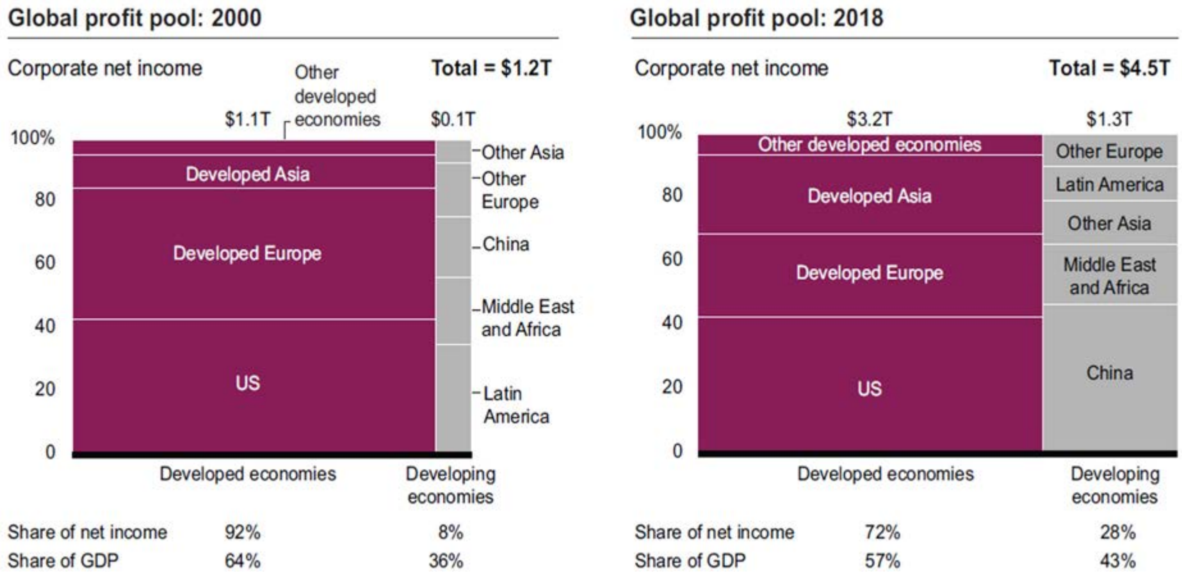
Asia has also achieved better earnings growth and returns than other Emerging Markets

Over the last 20 years Asia has taken a larger share of global profits from Developed Markets, and from other developing economies across EMEA and Latin America. Key reasons for Asia's gains in profitability have come

1. Source: MSCI equity returns from Jan 2012 to Feb 2022, Refinitiv Datastream.

from its industrialisation, trade, increased innovation, rising incomes, and reforms improving the business environment. As a result, Asia's global profit share almost trebled, shifting from $0.16tn in 2000 (a 13% share of global profits) to $1.6tn by 2018 (a 36% share of global profits. See Figure 2[2]).

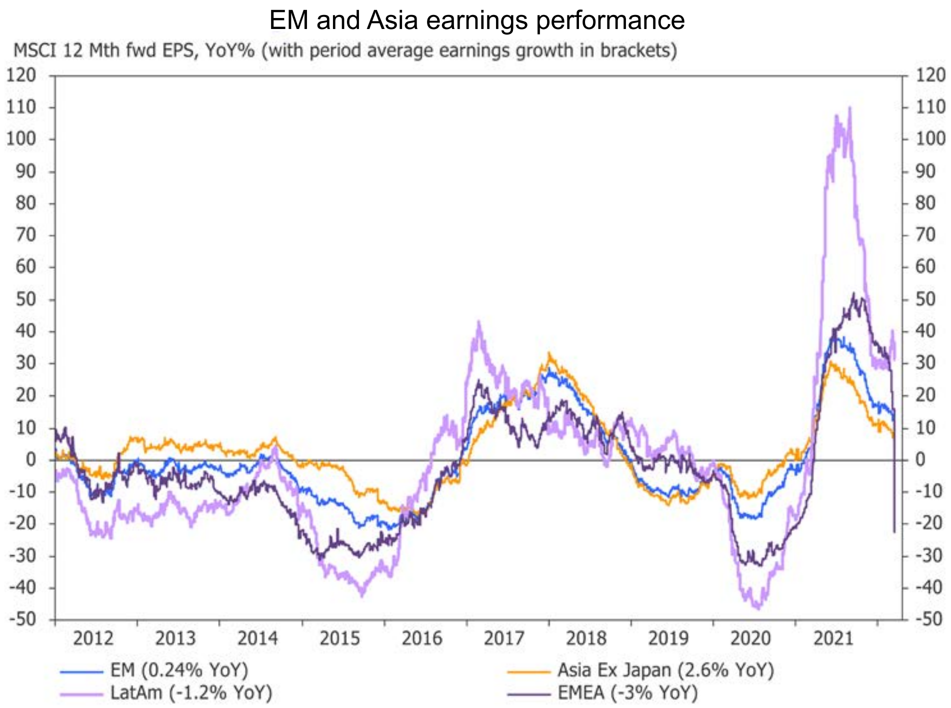
Figure 2: Share of global profit in 2000 and 2018



Source: Bain & Co, 2020

That said, a common criticism is that given Asia's gains in economic profits since 2000, its earnings growth expectations, and returns to investors, should have been stronger than achieved over the last decade (see Figures 3 and 4).

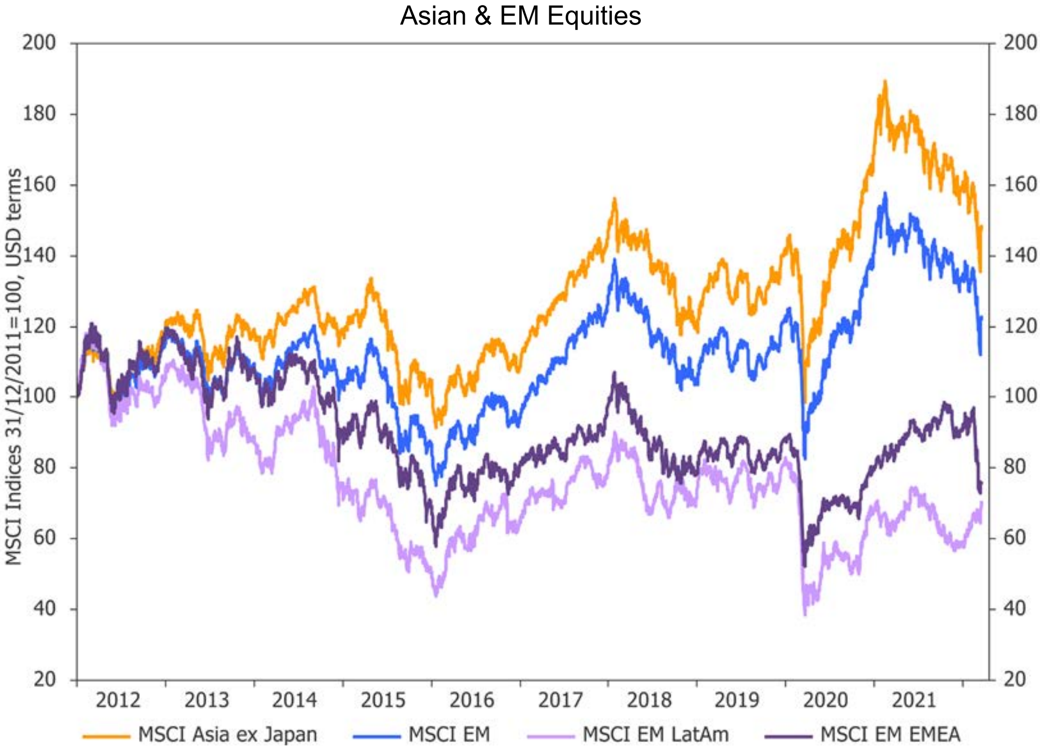
Figure 3: EM and Asia forward earnings growth performance



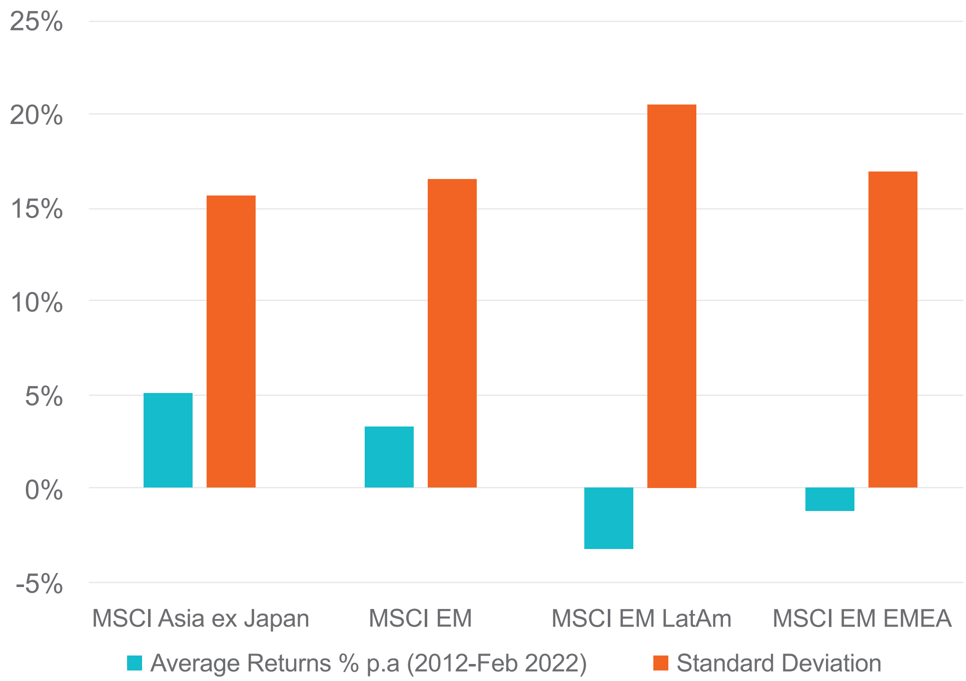
Source: Refinitiv Datastream, March 2022

2. In contrast, total non-Asia EM's global profit share only doubled, shifting from $0.07tn in 2000 (a 6% share of global profits) to $0.53tn by 2018 (a 12% share of global profits).

Figure 4: EM and Asia equity performance



Source: Refinitiv Datastream, March 2022



Source: Refinitiv Datastream, March 2022

We believe that Asia can lift its earnings growth and returns to shareholders longer-term because corporate reforms, increased innovation, and Asia's evolution to higher value-added production can result in improved productivity.

Asia is becoming more productive and that should help to deliver potentially better returns for investors over time

Stronger productivity is a key determinant of better earnings performance (see "Future of Asia", McKinsey 2020). Furthermore, a key driver of stronger corporate profits is innovation, and Asia has started to score much higher on global rankings over the last few years. Productivity and innovation are driven by many factors across the economy, such as: R&D spending, concentrations of high-tech sectors and high value-added manufacturing, the quality of tertiary education, concentrations of researchers, and patent activities. Bloomberg puts all these factors together in a weighted score of global innovation performance.

Asia's innovation performance leads the world, as there are four Asian countries in the global top-20 of innovating countries i.e. South Korea #1, Singapore #2, Japan #12, and China #16 (for comparison, the US ranks #11[3]). Given China's big players across e-commerce and industry, many investors believe that China dominates everything across Asia and therefore it may come as a surprise that it does not rank higher on innovation scorecards. What the innovation data reveals is that Asia has a broad range of global leaders in high value-added manufacturing and Asian countries, much smaller than China, are at the forefront of being able to provide alpha opportunities across modern technology and industrialisation.

Reasons why South Korea performs so well is because it ranks highly on its R&D spending, its large concentrations of high-tech and high value-added manufacturing, its high number of researchers engaged in R&D, as well as robust growth in business patent filings. Singapore is also very innovative because, like South Korea, it has a large concentration of high-value added manufacturing in the economy which can create positive spill-over benefits to the efficiency of other firms.

The Bloomberg innovation data also reveals that the single most important driver of stronger innovation and productivity growth is the number of active researchers enhancing R&D across the economy. Asia seems well positioned to continue to prosper from that trend over time, as China ranks highly with its business patent activity (#3), along with South Korea (#1), and Singapore (#4). Over time Singapore has the added benefit that the efficiency of its tertiary education system ranks #1 on the Bloomberg global innovation scorecard.

IMF research (2019)[4] has also shown that a key spill-over benefit from consumerism and e-commerce, where Asia is already a global leader, is that it can boost profitability over time because businesses that engage in e-commerce tend to require a more knowledgeable and innovative workforce. Asia's e-commerce firms have recently become more productive than the rest of the world and its other firms have comparable productivity on average (see Figure 5).

3. Source: Bloomberg Global Innovation Index (2021).
4. "E-commerce as a Potential New Engine for Growth in Asia", T Kinda (2019), IMF.

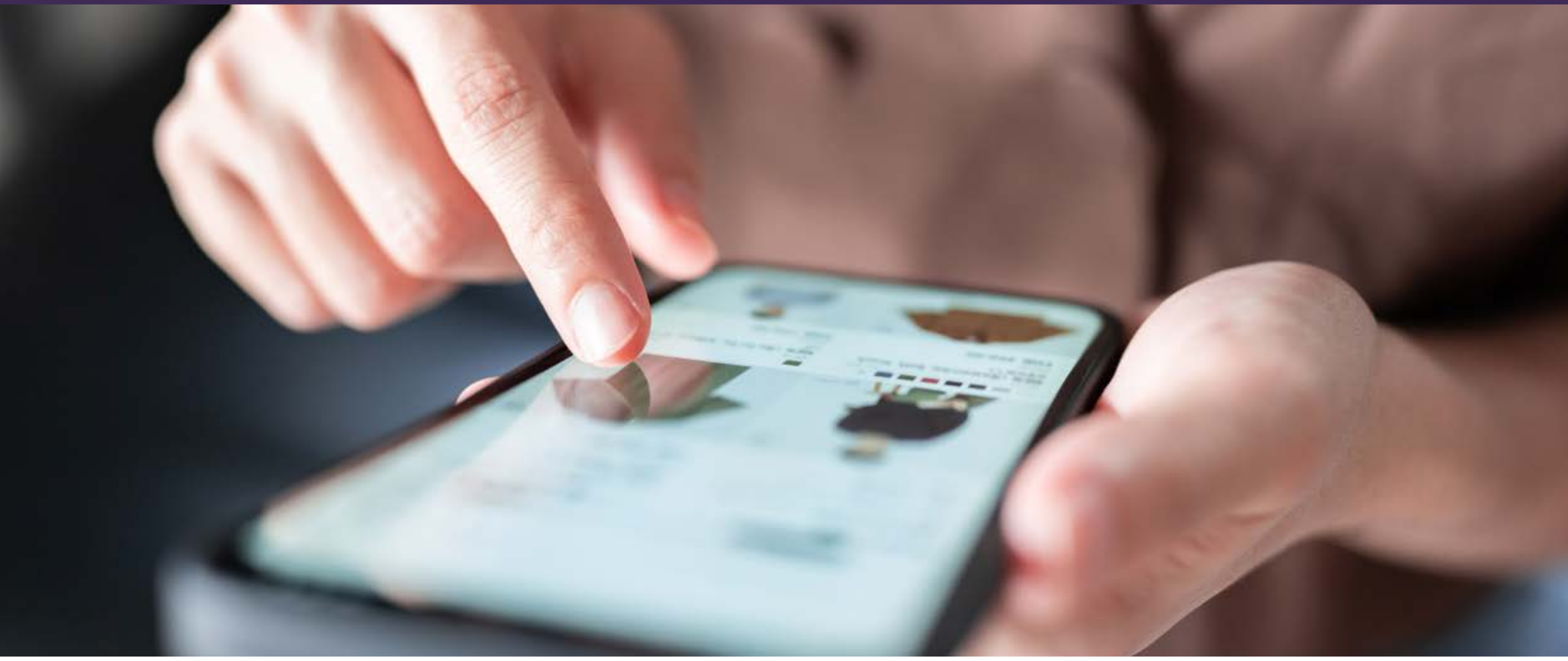
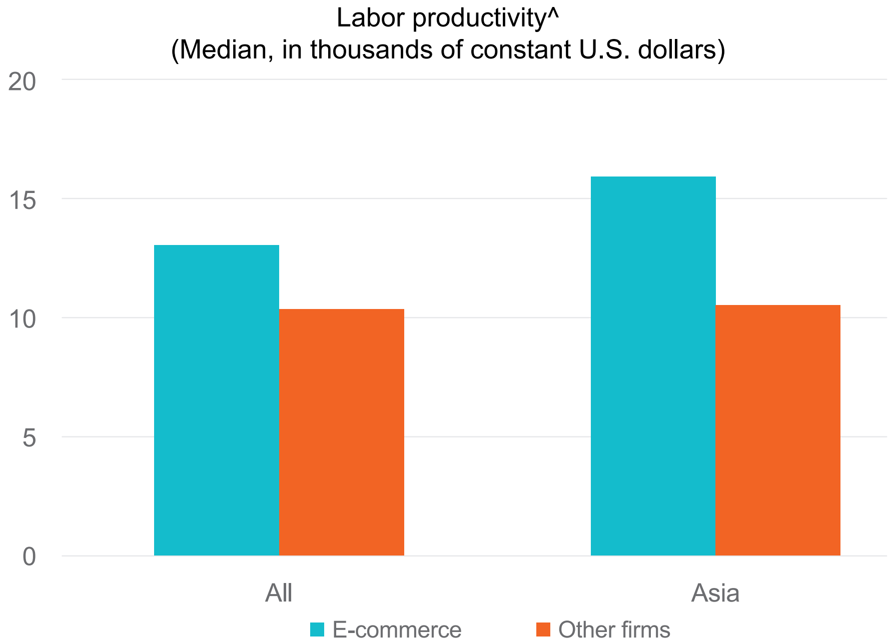


Figure 5: Labour productivity differences between e-commerce firms (and other firms) in Asia and the rest of the world



Sources: World Bank, Enterprise Survey; and IMF staff calculations. ^Labor productivity is the ratio of value added by the number of employees. Source: IMF, 2019

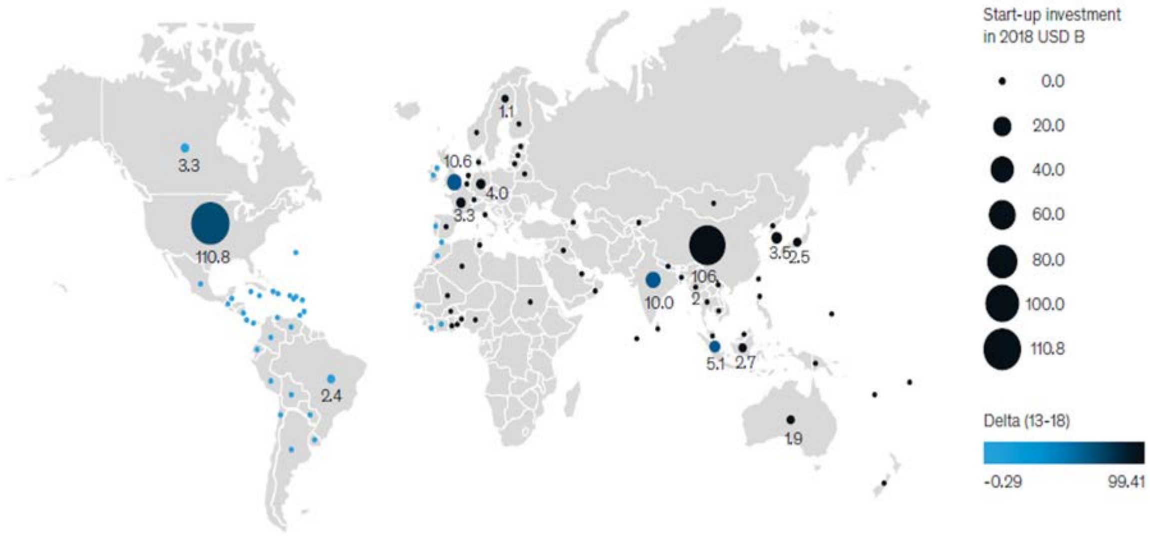
We believe Asia's global leadership in e-commerce productivity could result in favourable spill-overs to the rest of the wider economy over time, and potentially drive higher profitability and returns to investors longer term.

The last factor that makes us excited about Asia's future productivity is that it has ample venture capital to support entrepreneurship going forward. For example, China only ranks behind the US for start-up investment, while Asia accounts for almost half of new global investment (see Figure 6). It is also worth noting that venture capital investment into China reached an all-time high in 2021[5] after a few sluggish years due to US-China trade tensions, and the COVID-19 pandemic, signifying that the regulatory uncertainty has not significantly damaged appetite and the entrepreneurial sprits within China's domestic tech sector.

5. Venture capital investments in China reached US$130.6 billion for 2021, according to the research firm Preqin.

Figure 6: Asia is a hub for global investment in start-ups

USD Billion, 2018, 2013-2018



Source: Preqin, McKinsey Global Institute analysis, July 2019

Governments in Asia are also supportive with many of their Sovereign Wealth Funds (SWF) and Quasi-government entities often taking key strategic ownership interest by backing and funding these start-ups with sizeable equity stakes.

As a result, Asia has become an important source and destination for venture capital across virtual reality (VR), autonomous vehicles, 3-D printing, robotics, drones, and artificial intelligence (AI)[6]. The private capital scene funding a number of these start-ups in the region is also fairly active and robust. In stark contrast, other Emerging Markets, like Latin America for example, have seen venture capital for start-ups decline (i.e. the negative deltas in Figure 6).

An allocation to Asia has a deep pool of potential alpha opportunities

China's equity market is already the second largest in the world[7], and when investors consider opportunities across Asia they typically think about the top companies that make up the MSCI Asia (ex-Japan) index (see Figure 7).

An obvious advantage of investing in Asia is that it has a much deeper pool of potential alpha opportunities because there are so many large companies to invest in. The number of companies in Asia, with a market cap greater than $10bn USD, is almost 10-times greater than in Latin America and 6-times greater than across EMEA (see Figure 7).

As we explain further in Section 2 of this paper: How to invest in Asia? – an essential element of Asia's attraction to foreign investors is its pool of global champions. Exposure to Asia via market indices does not give sufficient weight to Asian companies that are already global leaders with large revenue streams. These global champions can create unique alpha opportunities, and active managers (such as Fullerton Fund Management) are best able to take advantage of Asia's positive thematic trends and build a consistent, high-conviction, "bottom-up" portfolio.

6. "Innovation hubs" are starting to take root across the region. For example, China, South Korea, and Singapore have made AI development a strategic priority. Asia is also home to more than one-third (119) of the world's 331 "unicorns" (i.e. start-ups valued at more than US$1bn). 91 of these companies are in China, followed by India with 13, South Korea with 6, and Indonesia with 4. Source: "Asia's Future is Now", McKinsey (July 2019).

7. See "When Opportunity Knocks: The Case for Investing in Chinese Equities" (Fullerton Insights February 2021) https://www.fullertonfund.com/documents/insights/Fullerton_Insights-When_opportunity_knocks.pdf.

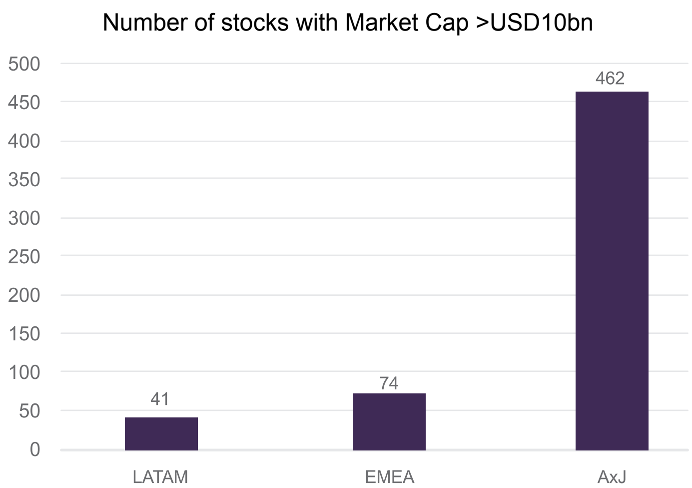
Figure 7: Asian equity markets

MSCI Asia (ex-Japan) Index: top 10 companies (as at 31 August 2021)

Taiwan Semiconductor MFG	Taiwan	Info technology
Tencent Holdings	China	Comms services
Alibaba Group	China	Consumer discretionary
Samsung Electronics	Korea	Info technology
AIA Group	Hong Kong	Financials
Meituan	China	Consumer discretionary
Reliance Industries	India	Energy
Infosys	India	Info technology
Hong Kong Exchange & Clearing	Hong Kong	Financials
China Construction Bank	China	Financials

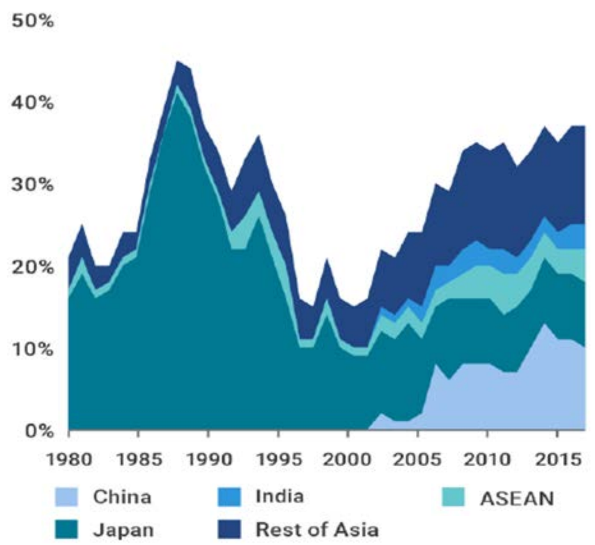
Source: MSCI AC Asia ex Japan Index, August 2021

Number of large cap stocks (compared to other EM)



Source: MSCI and Bloomberg, August 2021

Asia's equity markets
(% share of global market capitalisation)



Source: GIC "Asia's Growing Importance in the Global Economy and Financial Markets", July 2019

For exposure to "the factory to the world", IT, and new industrialisation

Fundamental asset allocation suggests that a global portfolio should have exposure to the most important cross-country sectors that drive economic activity and profitability. Asia is already a world leader in manufacturing[8] so investors get an important slice of its profitability, coupled with the payoffs to come from more recent shifts toward new industrialisation.

China is a focal point as it is a larger player across industrials, automation, infrastructure, and the green transition. In particular, semiconductor manufacturing is a matter of national interest given how critical these components are to China's 5G rollout. However, the rest of Asia also makes important contributions and has global leaders across various industries.

For example, Taiwan and South Korea are key players in high value-added semiconductor chips manufacturing, IT hardware, and alternative energy (especially across solar and batteries). Singapore is a leading producer and exporter of integrated circuits, machinery, and biotech equipment. India is a leader in IT services and software. It should also be noted that given Asia's competitive advantage in this space (skilled workforce, technical progress, and affordable wages), it will likely be challenging for other regions to replicate this capability.

In short, Asia is a key component parts manufacturer in the global supply chain of modern technologies such as 5G (for enhanced connectivity), robotics, automation, and clean energy, and is likely to maintain its leadership position in many of these areas in the years ahead.

China's rebalancing can create investment opportunities across Asia

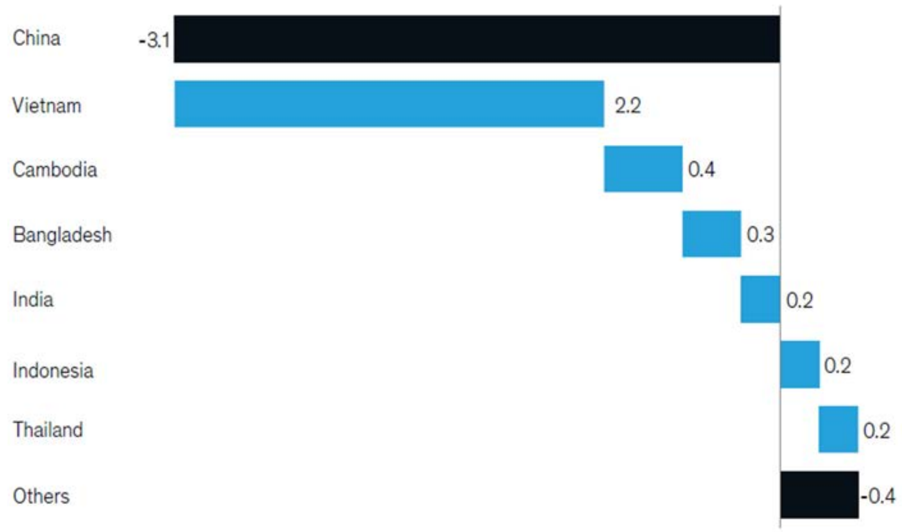
Historically, China has been the "factory to the world" but this is evolving rapidly. China is progressing up the value-added chain, and as it transitions, the rest of Asia is stepping into some of its former niches that it is vacating. As China's economy matures, and rebalances more toward consumption, the rest of Asia can benefit in two ways.

Firstly, Asia's fast growing and competitive manufacturing countries, like Vietnam, India, Indonesia, and Thailand, are filling China's output gaps (see Figure 8). Secondly, all of Asia's exporters can benefit from greater consumption demand from China and stronger intra-regional trade growth.

Collectively, we believe these two key trends will create investment opportunities across Asia's labour-intensive manufacturers, and across more mature economies (e.g. South Korea and Singapore) producing consumer goods for China, especially higher-end brands.

Figure 8: China's fall in manufacturing has been more than picked-up by the rest of Asia

Change in share of emerging-market exports in labour-intensive manufacturing, 2014-17
Percentage points



Source: IMF; WTO; McKinsey Global Institute analysis, July 2019

8. Asia dominates global manufacturing with around a 30% share of output and with five countries ranked in the top-10 of global manufacturing output (source: UN, WEF, 2019).

China is also going through a renewed reform process and as we noted in "China's regulatory shifts: Where do we go from here?" Fullerton Insights (October 2021) investors need to be selective as there will be sector winners and losers[9]. We also noted that longer-term, it is possible that China's "common prosperity" drive could create a larger "economic pie" for investors, with China's rebalancing toward domestic consumption driving stronger corporate revenues.

Infrastructure and trade will enhance Asia's growth story and alpha opportunities

Other key trends that we feel will also help create alpha opportunities over time are the significant infrastructure investments across the region. Examples include infrastructure-based connectivity initiatives such as China's Belt and Road Initiative, Japan's Quality Infrastructure Investment and the International North-South Transport Corridor driven by Russia, Iran and India. China's Belt and Road Initiative (BRI) however stands out as the largest geo-economics initiative, involving 140 countries with estimates of over $1tn USD worth of infrastructure spending projected out to 2027. In mid-2021, Beijing published the "Green Development Guidelines for Overseas Investment and Cooperation" and "Guidelines for Ecological and Environmental Protection of Foreign Investment Cooperation and Construction Projects", paying more attention to environmental risk management for all BRI projects and their supply chains when engaging overseas. In the document, both private and state-owned Chinese companies need to promote green and high-quality development overseas projects in four major areas: energy, petrochemicals, mining, and transportation. These four sectors of the BRI account for about 70 percent of the overall BRI overseas value of investments and construction. They will accelerate green projects worldwide, which offer cooperation opportunities with the West, and will have even greater impacts over time (this is one of the key structural investment themes across Asia that we like and we discuss it further in Section 2).

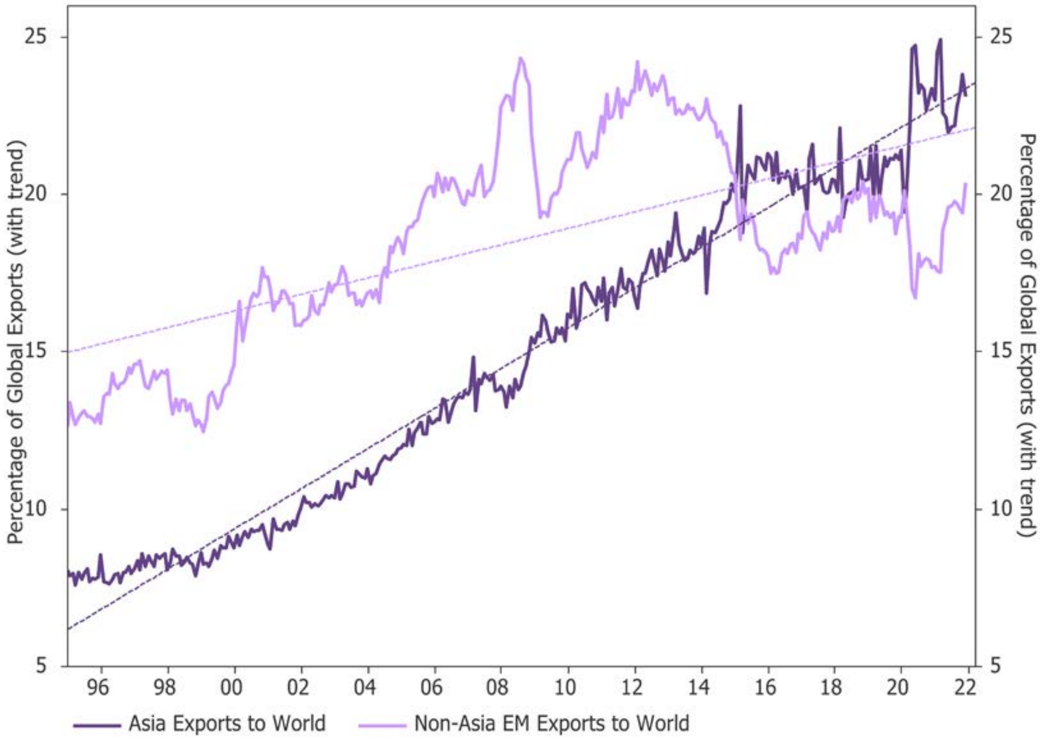
Over a more immediate horizon, we also believe that spill-over benefits from free trade agreements may also facilitate more infrastructure investment now that the Regional Comprehensive Economic Partnership (RCEP) has launched[10]. Asia already has a greater share of global trade (and a more favourable rising trend) than other Emerging Markets, and more than half of trade flows are intra-regional (see Figure 9).

9. See "China's regulatory shifts: Where do we go from here?" Fullerton Insights October 2021 https://www.fullertonfund.com/documents/insights/Fullerton_Insights_China's_regulatory_shifts_October_2021.pdf

10. Signed by Australia, Brunei, Cambodia, China, Indonesia, Japan South Korea, Laos, Malaysia, Myanmar, NZ, the Philippines, Singapore, Thailand, and Vietnam. It is the largest trading block in history, comprising 30% of the world's GDP.

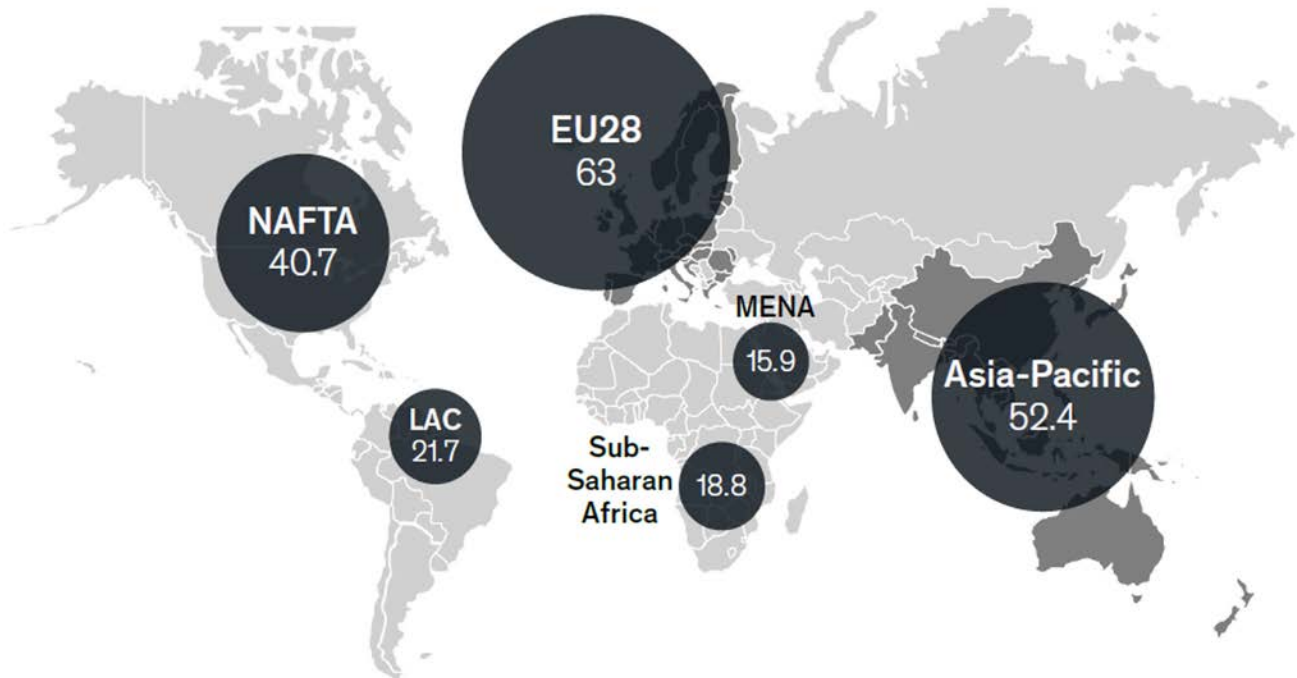
Figure 9: Asia and non-Asia EM shares of global trade, with shares of intra-regional trade (in 2017)

Asia vs EM trade share



Source: Refinitiv Datastream, March 2022

Share of intraregional goods trade by region, 2017
Percent



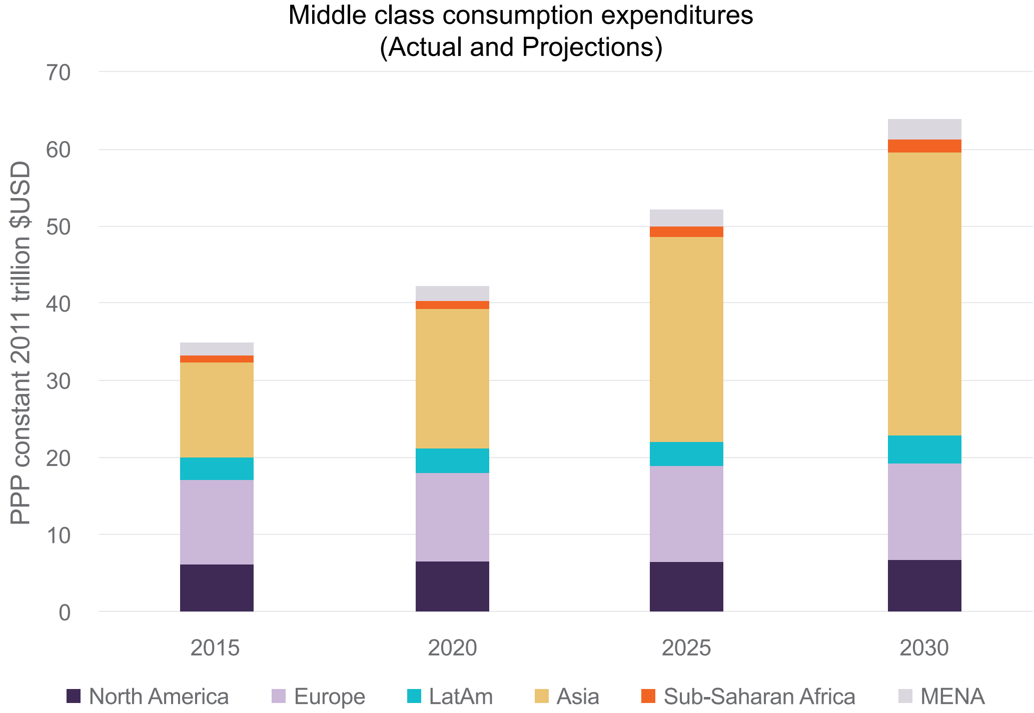
Source: McKinsey Global Institute analysis, July 2019

In this "new normal" COVID environment, and with greater geopolitical risks (driven by worries surrounding the Russia-Ukraine war), economies may continue to be more inward looking, shifting away from globalisation to regionalisation. Asian investors could benefit from such trends given the underlying strength of regional trade and the demand growth already emanating from China, bucking the purported wider trend of "de-globalisation" taking place outside of Asia.

To get a share of the profits from strong consumerism, especially e-commerce

Since 2015, Asia's middle-class has overtaken those of Europe and North America, and as urbanisation continues, Asia's middle-class population will increase from around 2 billion to 3.5 billion by 2030. Such a large population pool will drive a significant increase in household spending - by 2030, the region will account for almost 60% of global middle-class consumption (See Figure 10).

Figure 10: Asia is shifting from "factory of the world" to its biggest consumer

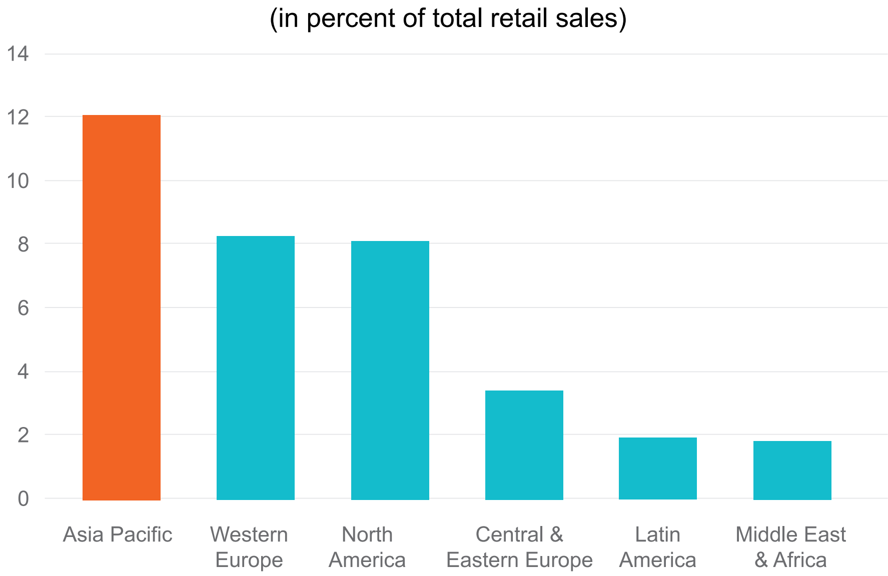


Source: Brookings Institute, February 2017

Asia's most attractive alpha opportunities may stem from e-commerce

Rising per capita incomes will in our view continue to drive trend consumerism, but Asia's most attractive alpha opportunities may stem from its profitable e-commerce enterprises. Already Asia has more e-commerce activities, as a share of total retail activities, than any other region (see Figure 11)[11].

Figure 11: E-commerce sales across regions: Asia is a world leader already



Sources: ystats.com; and staff estimates | Source: IMF 2019

We observe that digital platforms have the advantage of serving the most affluent, and increasingly well-connected consumers, as well as unlocking latent demand by enabling the lowest income households to obtain services they could not previously access or afford. It is interesting to note that Asian consumers have made the leap to online digital channels quicker compared to other regions, and they have been more receptive to embracing innovative changes and taking their spending habits online, to now be the global leader. One reason why Asia has taken to e-commerce at a faster rate could be its wider physical geographical area, and less developed hard infrastructure which is now overcome by online spending channels. In other words, the added benefit of e-commerce is a larger "game changer" for Asia than other parts of the world, given the region's historical background and geographical make-up. Separately, online retail activities have the huge advantage of minimised distribution costs which can eventually result in higher profits and returns for investors.

A key contributor to Asia's e-commerce success is its efficient and profitable logistics sector. For example, in the World Bank's Logistics Performance Index (for 2018) eight countries in Asia are in the global top 20% of performers (i.e. Singapore, Japan, Hong Kong, South Korea, Taiwan, China, Thailand, and Malaysia). As with global innovation, logistics is another key area where much of Asia can offer alpha opportunities beyond China centric investments, especially across the faster growing exporters (e.g. Singapore, South Korea, Malaysia, Thailand, and Vietnam).

With Asia already accounting for around half of global internet users, its on-line connection has also fuelled the growth in e-commerce. It follows that Asia will also be well-positioned to embrace new innovations in IT and the metaverse (we explain more on this positive thematic trend of "lifestyle-linked" consumption and IT in Section 2).

Another interesting observation worth highlighting is that Asian consumers, notably in Southeast Asia have exhibited greater affinity and brand loyalty in embracing their "home grown" e-commerce players like Lazada and Shopee (online shopping platforms), or even GrabPay (an e-payments application) as opposed to adopting international names like Amazon, or Apple Pay and Google Pay. This could be due to a variety of reasons such as international players being late to the scene, or just the fact that the regional Asian e-commerce players have "first mover advantage", closer proximity, and understanding of their user profiles and their online behaviours, and thus are more successful in building loyalty and keeping users on their ecosystems. It also demonstrates Asian consumers' high degree of confidence in their own e-commerce names, despite the presence of strong international competition.

11. China is a key driver and its scale is most evident over big events e.g. China's 2021 Singles' Day sales online transactions reached c. USD $151.4bn, significantly dwarfing the US' online Black Friday and Cyber Monday Sales of $8.9bn and $10.7bn respectively in 2021 (sources: Statista, Business Insider, and Adobe Digital Economy Index).

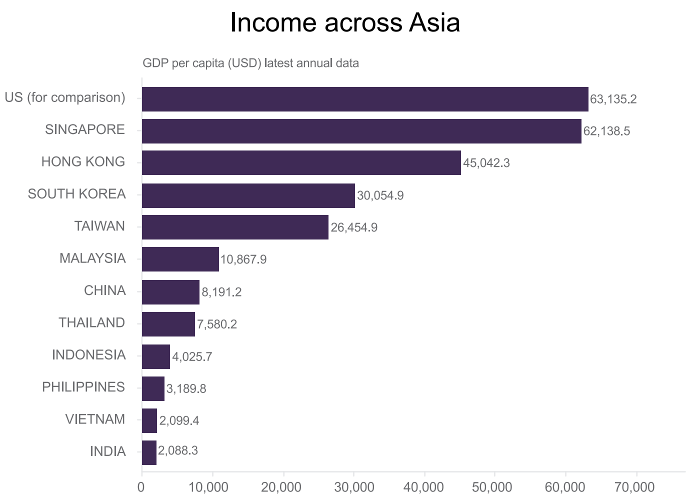
2. How to invest in Asia: the structural investment themes we like the most

Differentiated markets dictate active "bottom-up" stock selection

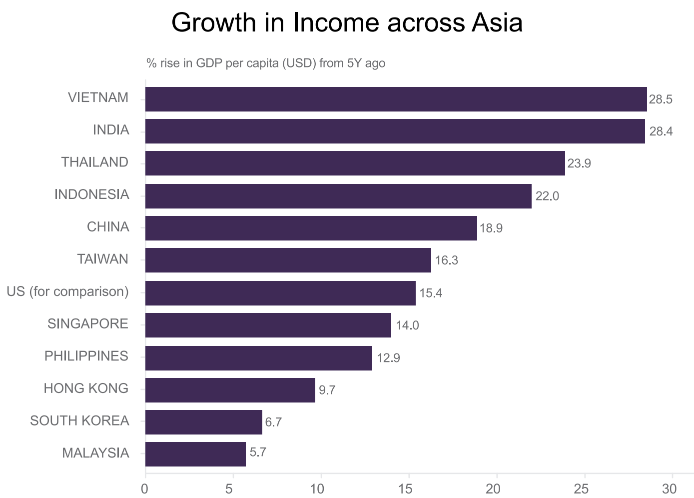
Despite the common trends of industrialisation, trade, financial development, and rising consumerism, Asia is still very heterogenous. Across Asia there are still many economies at vastly distinct stages of wealth and development: i.e. there are mature advanced economies like Singapore, Hong Kong, and South Korea; large developing countries like China; emerging markets like India; and rapid growing countries like Vietnam, Thailand, and Indonesia (see Figure 12).

The faster growing countries may offer greater alpha opportunities across infrastructure and labour-intensive manufacturing, while the more advanced economies will tend to offer opportunities across higher value-added production, services, and consumerism.

Figure 12: Asia's high income and fastest growing economies



Source: Refinitiv Datastream, March 2022



Source: Refinitiv Datastream, March 2022

With stark cross-country differentiation, investors need to focus on active management and "bottom-up" stock selection to have the best chance of targeting companies and sectors that can benefit the most from the key drivers of growth across the region.

We believe Asia can potentially offer attractive alpha opportunities because of its rising middle-class spending, technological progress, infrastructure investments, and regional integration. Furthermore, some of these key growth drivers may get an additional boost from structural changes in spending due to COVID, as public health spending rises and as households demand more IT services from the growing "metaverse".

Index-based investments don't give sufficient recognition to Asia's global champions

We believe that exposure to Asia via market indices does not give sufficient weight to the structural investment themes we like the most, and the rising importance of its new growth drivers. Across Asia, market indices tend to over-represent state-owned enterprises, labour intensive manufacturing, and other "old economy companies". In addition, such indices do not give sufficient exposure to Asian companies that are already global leaders with large global revenue streams[12].

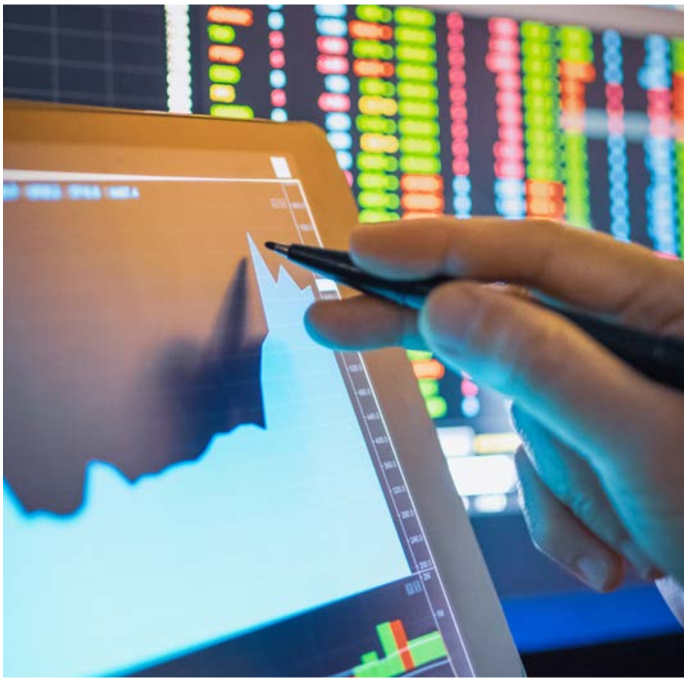
Many Asian firms have become global market leaders in industry, technology, finance, and consumerism. As of August 2021, 158 (or 32%) of the world's 500 biggest companies by revenue come from Asia (ex-Japan), with 135 firms from China - ranking it above the US (with 126 firms) for the first time in history[13]. Taking an even larger sample, in 2017 Asia already commanded around 43% of the world's 5,000 largest firms by revenue (see Figure 13).

Figure 13: Asia's global champions

Composition of world's 5,000 largest firms, % share of total

Sources: McKinsey Corporate Performance Analytics, January 2020

Accordingly, active managers, who are not beholden to the index, can capture thematic growth opportunities, especially those offered by Asia's global champions, in a fundamentals driven, high conviction, bottom-up portfolio.



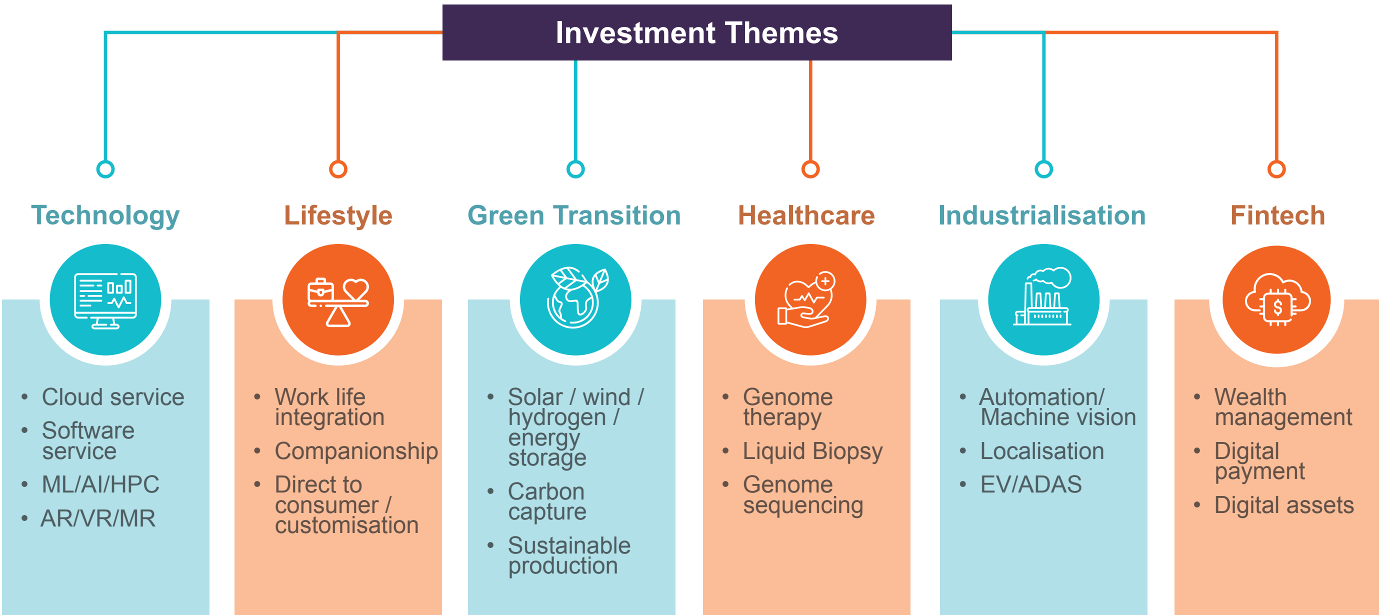
There are six structural investment themes we like the most

The sectors and industries we are most excited about include technology, consumerism (influenced by lifestyle changes), green transition, healthcare, industrialisation, and fintech (see Figure 14).

There are interdependencies and spill-overs between these themes and their potential sector implications. For example, consumer spending and changing lifestyle demands will contribute to alpha opportunities across technology and industrialisation. Technology and industrialisation are likely to be key enablers for investment opportunities across green energy, fintech, and healthcare.

12. For further discussion on whether investors should focus on stock selection and active management or on index-based investments please see: "The Changing Dragon: Exploring Opportunities in China" (Fullerton Insights June 2020) https://www.fullertonfund.com/fullerton-insights/the-changing-dragon-exploring-opportunities-in-china/ and "When Opportunity Knocks: The Case for Investing in Chinese Equities" (Fullerton Insights February 2021) https://www.fullertonfund.com/documents/insights/Fullerton_Insights-When_opportunity_knocks.pdf.
13. Source: Fortune (August 2021).

Figure 14: Six structural investment themes we like the most



Source: Fullerton, for illustrative purposes only.

With changing lifestyle demands, Asia seems well placed for investment opportunities to come through in tech, industrialisation, and many other areas

We have observed that the post COVID-19 environment has accelerated the demand for a variety of IT-related services and has broadly benefited companies with solid online propositions. Many of those companies reside in Asia, as do many firms across the numerous sectors expected to benefit from the adoption of cloud services, 5G, and new software.

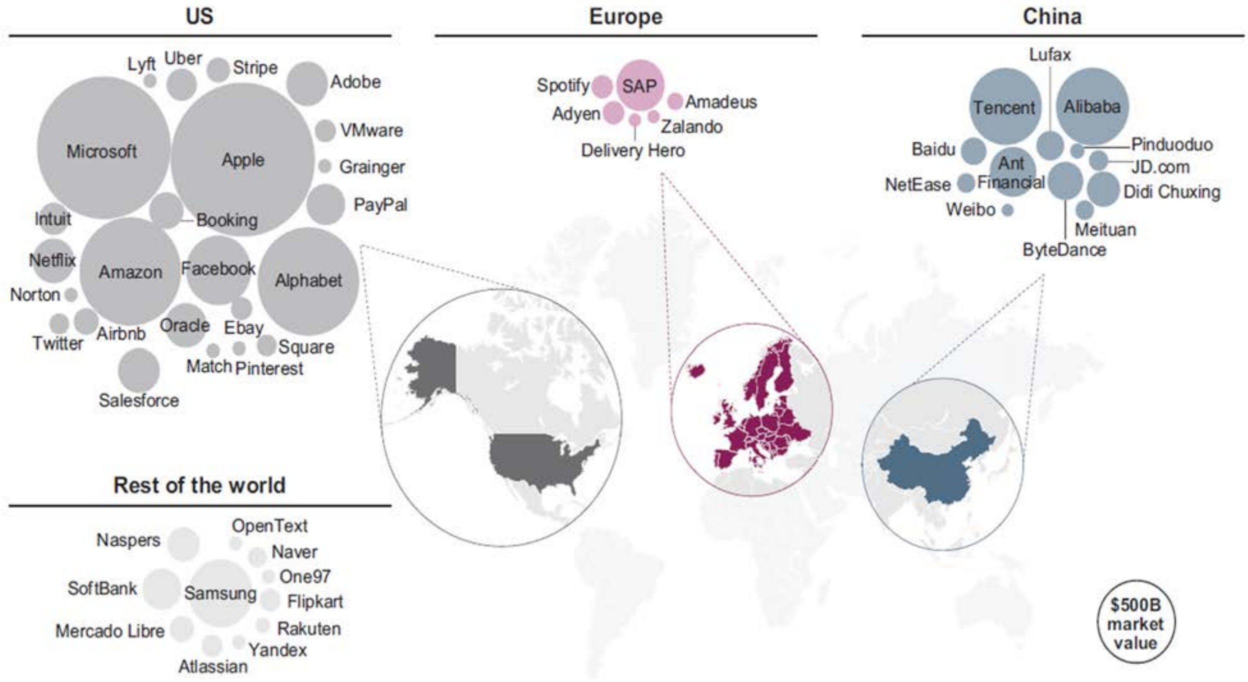
Asia already accounts for around half (2.8bn) of the world's internet users (5.2bn) which gives an enormous pool of digital consumers driving tech-related revenues. As a result, Asia should have a solid "on-line" demographic that will enhance alpha opportunities as metaverse-related services grow over time.

Technology companies across Asia contribute to multiple industries across the economy, with significant revenue streams across internet services, software, e-commerce, and manufacturing. At the company and sector level, most investors are familiar with the rise of Chinese IT/tech giants like Baidu, Alibaba and Tencent. While recent headlines on regulatory anti-monopoly may target these dominant tech firms in China, affecting their market leadership within the sector, shifts in relative competitiveness should not lead to a wholesale collapse in the equity value of the entire sector. More fundamentally however, it is certainly not China's intention to enact long term damage to its tech sector. If anything, the fraught external economic and geopolitical environment will only force China's leadership to support its domestic tech champions, so as to improve China's self-sufficiency in key technology products. China's large-cap tech players have established a rich digital ecosystem and are now growing beyond that, which reinforces the importance of IT to Asia's long-term growth story. These companies are already global leaders and are collectively second only to the US in terms of market value (see Figure 15).

For China, and its rich e-commerce ecosystem, there is still a long growth runaway ahead still. The Chinese e-commerce players may have market capitalisations behind that of their larger US peers, but in terms of domestic market share dominance, user population, underlying activity, transaction volumes, and value of merchandise traded on their platforms, the Chinese e-commerce players far overshadow their larger US peers, suggesting there could still be further potential in this space. For example, despite higher regulatory oversight in China in 2021, the Gross Merchandise Value (GMV) of goods traded on Alibaba's China Retail Marketplaces was USD 1.3 trillion (three times that of Amazon's GMV of USD 400bn). Alibaba also has 900 million annual active users (c. three times the size of the US population), and the average user on Alibaba transacts at least twice a week, with the average annual spend increasing on average by a multiple of four times to USD 1,600 a year by the time the average user is on their fifth year on the platform[14]. As China continues transitioning to a consumption-based economy from an investment-led one, and with GDP growth and per capita income expected to rise in the years ahead, the opportunity set for China's e-commerce scene remains robust.

14. Source: Goldman Sachs (April 2022).

Figure 15: Technology sector ecosystems in the US, Europe, and China



Notes: Market valuations as of December 31, 2019; firms with market value of less than $10 billion not displayed
Sources: S&P Capital IQ; European Policy Centre; literature search

Asia's other top performing IT / tech companies, which will benefit from new metaverse-related demand and digitalisation, are spread across Taiwan (e.g. TSMC), South Korea (e.g. Samsung), and India (e.g. Infosys).

Taiwan Semiconductor Manufacturing Company (TSMC)* is an interesting example because it illustrates how an "upstream" IT manufacturer can become a global champion, in both IT and new industrialisation, from the derived demand for its chips[15]. TSMC is the world's most valuable semiconductor company (by market cap, as of end March 2022), and many of its key global customers (i.e. AMD, Apple, and Nvidia) are likely to be important facilitators for consumer demands from the metaverse. A key strength for TSMC in Asia is that it benefits from cutting edge technologies, at the same time as the demand for its products expands, across high value-added manufacturing and digitalisation.

In South Korea, Samsung's* most significant advantages stems from its huge global brand value, economies of scale, and its vast diversification. Samsung has evolved from being one of the world's largest IT and electronics manufacturers, to a global leader in ship building, and in finance (with its life insurance subsidiary). Samsung has also utilised its strong research and development resources to drive its expansion into new market areas like healthcare, with its biopharmaceutical division. A key attraction for Asian investors is that Samsung is a large blue-chip conglomerate, which is highly innovative and serves multi-layers of global customers from consumers to manufacturers, across sectors as diverse as healthcare and finance.

In South Asia, Infosys* is a leading Indian multinational IT company, specialising in software platforms, outsourcing, and consulting services. Infosys has become a key global provider of software solutions for finance and manufacturing, as well as for AI platforms, and cloud services. One of its key strengths has been its ability to leverage on India's advantages in outsourcing models to build significant market presence across both Asia and the Developed Markets. As of March 2021, the company has development centres and offices spread across 234 locations globally in more than 50 countries[16].

Another example, where derived demand may help to boost longer-term corporate performance, is China's Longi Green Energy Technology* (the world's largest manufacturer of silicon wafers used in circuits and in solar cells). Longi stands to benefit not just from stronger demands for chips to fulfil metaverse-related services but also from the surge in spending on solar energy.

* This is for illustration purposes only and does not represent Fullerton's current view of the security or constitute any recommendation.

15. TSMC is already the world's most valuable (by market cap) semiconductor company, with almost half the global market share (but with an 80% market share in advanced node production) and customers that include AMD, Apple, and Nvidia.

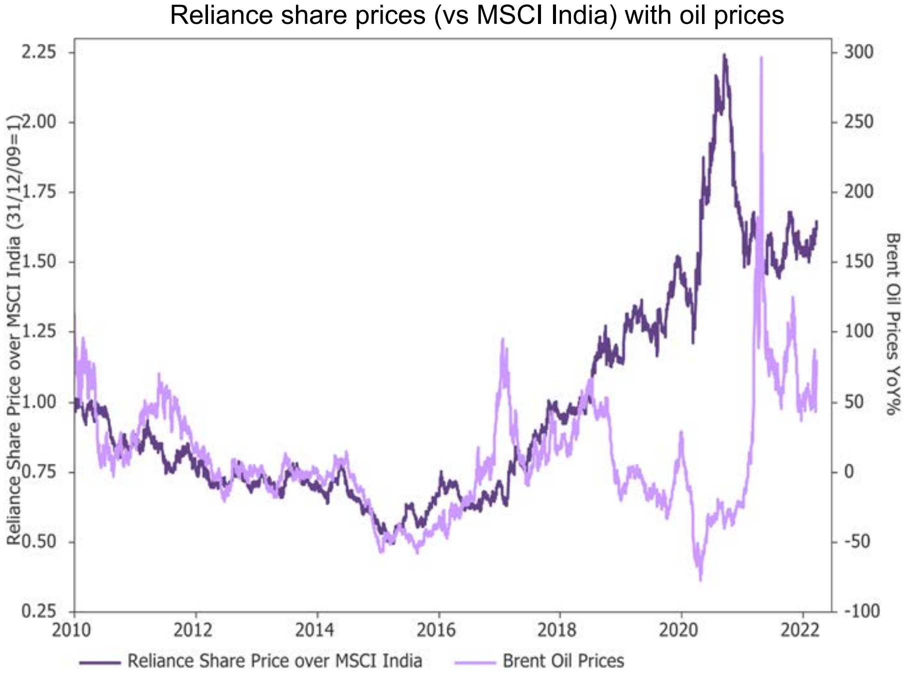
16. Source: Infosys (https://www.infosys.com/investors/reports-filings/documents/global-presence2021.pdf).

The green transition will create opportunities in the energy sector and alternatives

The COVID environment, coupled with greater geopolitical risks (driven by the Russia-Ukraine war), and supply constrained resources, is likely to reinforce de-globalisation trends over time. Energy prices, in particular, have increased significantly and could prove to be higher for longer than otherwise, as investment and supply are still recovering.

Asia's energy sector seems well positioned to benefit from structurally higher energy prices as India's Reliance Industries *, for example, makes up almost half of the MSCI Asian energy sector (and is #7 by index weight in the MSCI Asia ex Japan index). What is most encouraging for the longer term, especially given the green transition, is that the performance of Reliance has decoupled and out-paced oil price movements over the last few years (see Figure 16).

Figure 16: Performance of Reliance with oil price movements



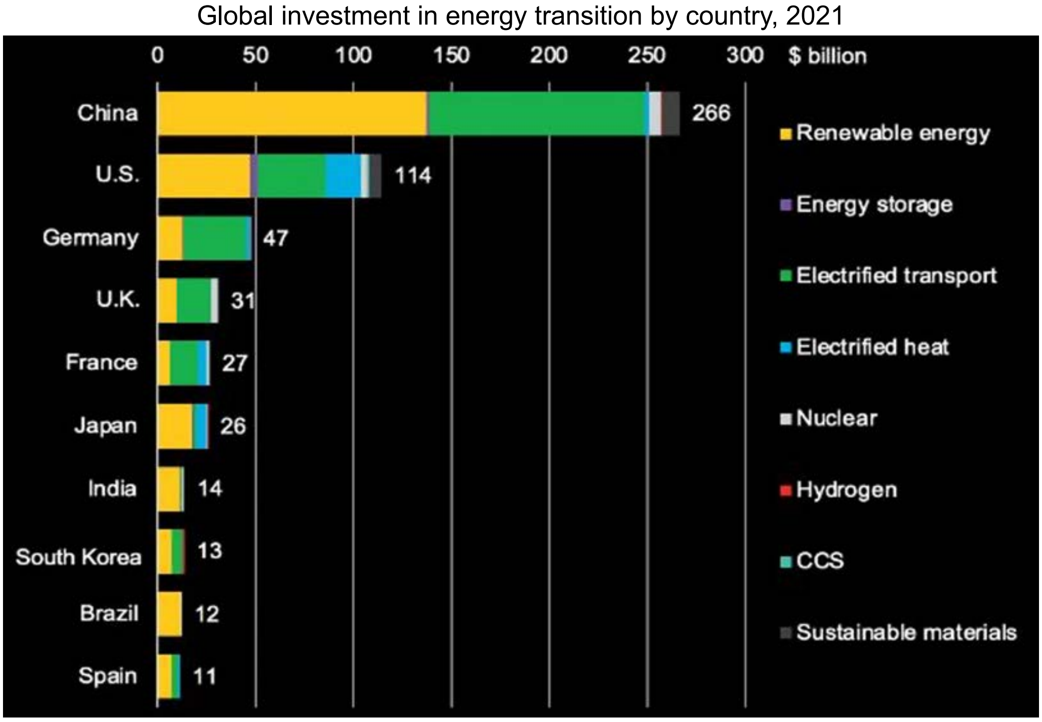
Source: Refinitiv Datastream, March 2022

Reliance has benefited significantly from improved productivity, higher refining margins, strong demand for petrochemicals (driven by plastics manufacturing), and capturing shifts toward greener energy with its rising natural gas production. This is just one of a few examples of how large Asian corporates are reinventing themselves to take advantage of the structural long-term growth trends of tomorrow.

Although energy prices may be elevated over the short to medium term in 2022, geopolitical events in Eastern Europe in Q1 2022, if anything highlights the need to accelerate the transition away from fossil fuels to clean and renewable energy. Climate change considerations are also creating new investment opportunities across green energy, as well as across the broader economy, as related infrastructure spending increases. Across Asia, China remains a key focal-point for such alpha opportunities as it is already the global leader for spending on the "green engine" transition. Last year China spent $266bn (a 35% share of total global spending. See Figure 17) on such infrastructure, dominated by solar renewables and electric vehicles (EV).

* This is for illustration purposes only and does not represent Fullerton's current view of the security or constitute any recommendation.

Figure 17: Global investment in energy transition in 2021



Source: BloombergNEF February 2022. Note: CCS = carbon capture and storage.

China's long-term objective, to reach peak carbon usage by 2030 and carbon neutrality by 2060, implies that spending every year will remain significant (achieving peak carbon usage by 2030 may require an extra $6.5tn USD in infrastructure investment[17]). According to its latest five-year plan for the energy sector, China is planning to build out more renewable power to facilitate the green transition and boost production of green hydrogen to curb emissions. Notably, the major Chinese automaker, BYD has announced it no longer produces gasoline-driven vehicles using internal combustion engines (ICE). Over the next five years or so, China is likely to continue to dominate global alpha opportunities across investments in solar, wind, and power grid upgrades.

A good example of a leading company driving China's green transition is Contemporary Amperex Technology LTD (CATL*). Specialising in the manufacturing of batteries for EVs, as well as battery management systems, it has become the largest lithium battery manufacturer in the world (with a global EV battery market share of c. 33% in 2021[18]).

Going forward a larger proportion of CATL's overall growth, in our view, will increasingly come from partnerships with foreign automakers like Tesla, BMW, Volkswagen, and Hyundai. Another key ingredient in CATL's success has been the significant amount it spends on R&D, which as we outlined earlier can be a key driver of stronger productivity and returns to investors over time.

Fintech opportunities will stem from Asia's strong on-line presence and passion for e-commerce

Fintech is another critical enabler of e-commerce, and Asia's durable base will create alpha opportunities across firms focused on bank account management, peer-to-peer money transfers, and digital payments. In Asia (especially India and China), the younger generation has skipped the usual process of owning a credit or debit card, in favour of using mobile apps (see Figure 18 for the significant usage of online payments in selected Asian locations). In comparison, adoption of mobile payments is weakest in developed nations, such as Germany and France, where consumers face inertia in moving away from traditional hard cash and card usage. As it is, in the US, Apple Pay is still not being used frequently in-store, despite over 50 million users signing up for the service.

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17. Or 40% of China's annual GDP (source: The Financial Times 16 November 2021).

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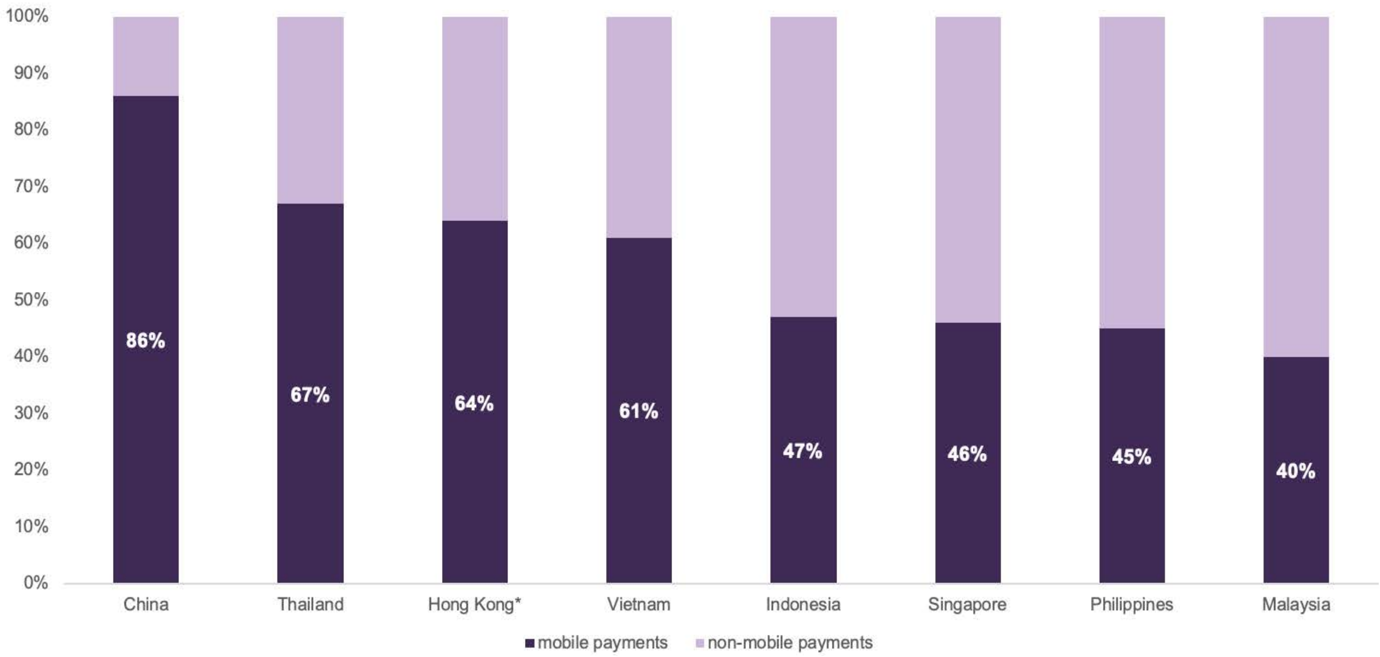
18. Source: SNE Research, February 2022.

Figure 18: Percentage of consumers in selected Asian locations using mobile payments in stores (2019)



Source: PwC – Global Consumer Insights Survey 2019. Question: Paid for my purchase using mobile payment (summary by territory). *Low base for Hong Kong.

China has by far the highest adoption rate for mobile payments, from buskers to street food vendors, to taxis all offering QR codes as payment methods. We are seeing a similar surge in adoption in India as well with regards to QR code payments adoption. Beyond China, several regional mobile payment services are also emerging and experiencing rapid growth over the past few years. This includes the likes of GrabPay (Southeast Asia), SadaPay (Pakistan) and PhonePe (India). This growth has been further accelerated by COVID-19, as safe distancing measures have pushed many consumers to adopt mobile payments as a safer means to perform commercial transactions. The higher adoption of regional payment brands suggests that global brands, such as Apple and Google, may have a harder time gaining market share in the near future outside of their dominant markets, similar to how Uber struggled in Asia. Going forward, we see the further development of regional payment regulations and industry standards boosting Asia's e-commerce ecosystem over time.

While the region's future growth may be slower, especially as China's economy matures, Asia in aggregate will still likely outpace the performance of developing and emerging economies outside of Asia. Even as China slows, a big attraction for investors in Asia is not just exposure to China's massive consumer market, but also tapping the potential growth in its global market share where penetration is still low (e.g. especially across high value-added manufacturing like rail, semiconductors, aircraft, robotics, fintech, and renewables[19].)

19. For further discussion on this issue please see "When Opportunity Knocks: The Case for Investing in Chinese Equities" (Fullerton Insights February 2021) https://www.fullertonfund.com/documents/insights/Fullerton_Insights-When_opportunity_knocks.pdf.