# Asia's Mega Trends 2022

www.am.miraeasset.com

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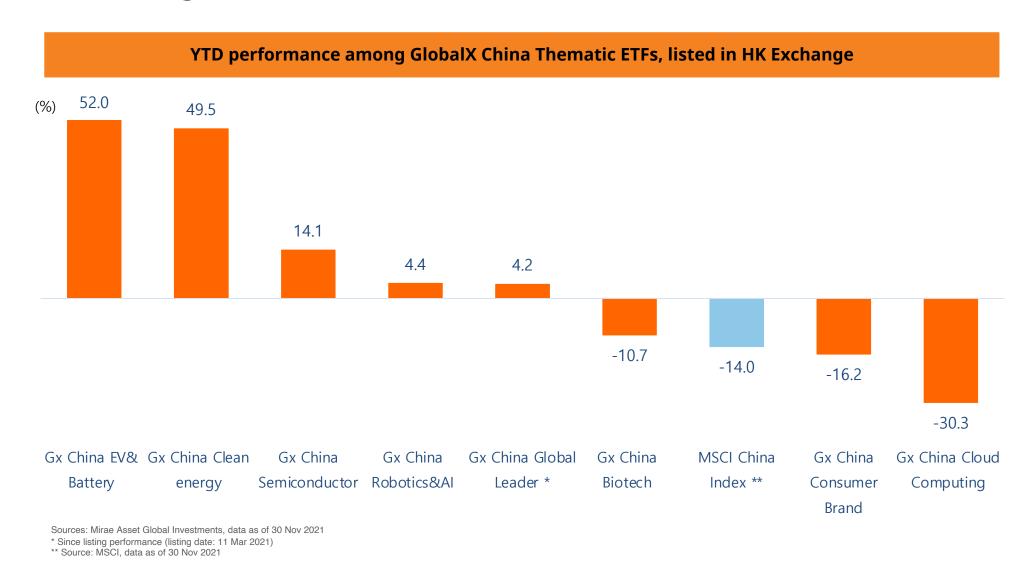
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## Mega Trend Review in Asia

# Asia is still rich in megatrends\* despite the regulatory crackdown on Chinese internet companies

\* Megatrend = Growth themes

## China's growth theme review in 2021



## **Divergence of China growth themes**

**China Cloud computing ETF** Internet, **Game & Entertainment ETF** domestic oriented **China Consumer brand ETF** themes **Ecommerce & logistics ETF China EV& Battery ETF China Clean Energy ETF** Export, manufacturing, China Robotics & AI ETF **Strategic** themes **China Semiconductor ETF China Global Leader ETF** 

## **Divergence of China growth themes**





# 2. Mega trend (1) Clean energy tech

## How Do We Define 'Mega Trend'?

1

The **disruption force** against incumbents should be strong The addressable market should be significantly large

2

A group of companies should be **globally competitive** 

3

Near-term events should be supportive of the trend

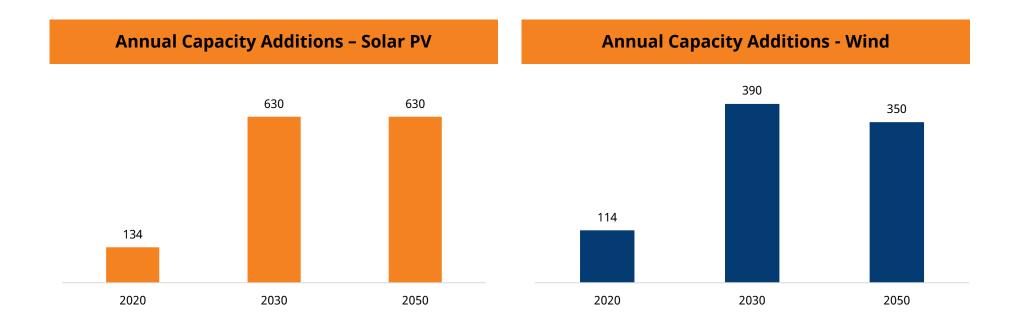
## Mega Trend in Asia: Clean Energy Tech



'Zero-coal' trend will provide enormous opportunities to Asian clean energy companies

## How big is the addressable market for Asia's Clean Tech?

- Annual solar panel installations should grow by 5x between 2020 and 2030 to meet the 1.5°C target, implying 16% CAGR for the coming 10 years, making solar one of the high growth industries
- For comparison, Apple's revenue has grown by just 3x in the past 10 years

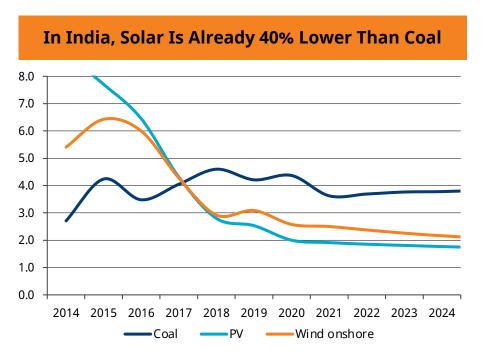


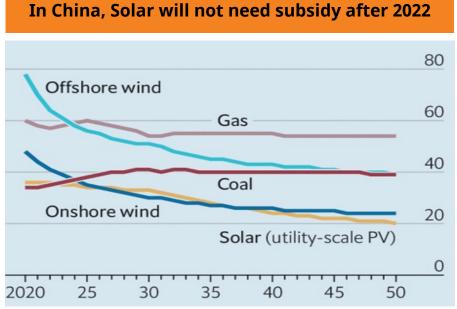
Source: IEA, data as of 2021. Unit: Gigawatts (GW)

Source: IEA, data as of 2021. Unit: Gigawatts (GW)

## How big is the addressable market for Asia's Clean Tech?

- India lacks oil and gas reserves but is full of competitive solar energy resources
- Solar is boom to India, solving its energy import problems; a serious growth bottleneck for most emerging countries → India's future relies on how they use solar energy
- We expect great investment to come in India's power sector, given that 70% of power in India still comes from coal

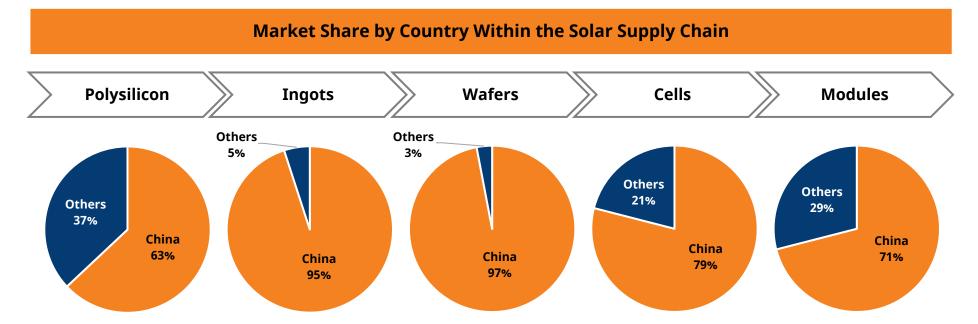




Source: UBS, data as of 2019, rupee per Kwh

Source: BENF and The Economist, data as of 2020, Unit: \$ per megawatt hour (Mwh)

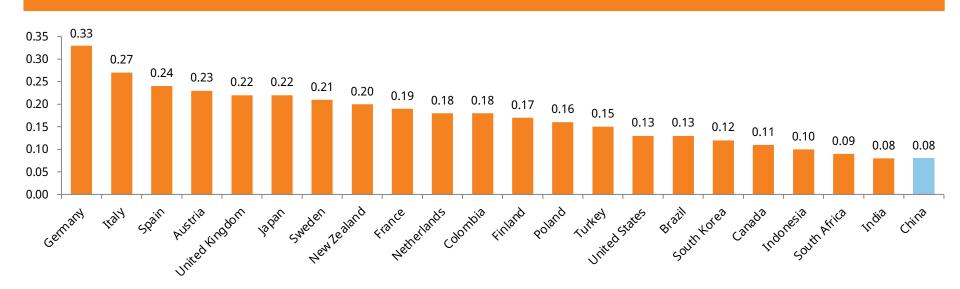
- Asia, especially China, is extremely competitive in solar panel manufacturing
- The origin of competitiveness:
  - Subsidy
  - Cheap Electricity, one of major cost factors
  - Industry Cluster leading to "knowledge effect"



Source: LONGi New Energy and Macquarie, data as of 2020; UBS, data as of 2019

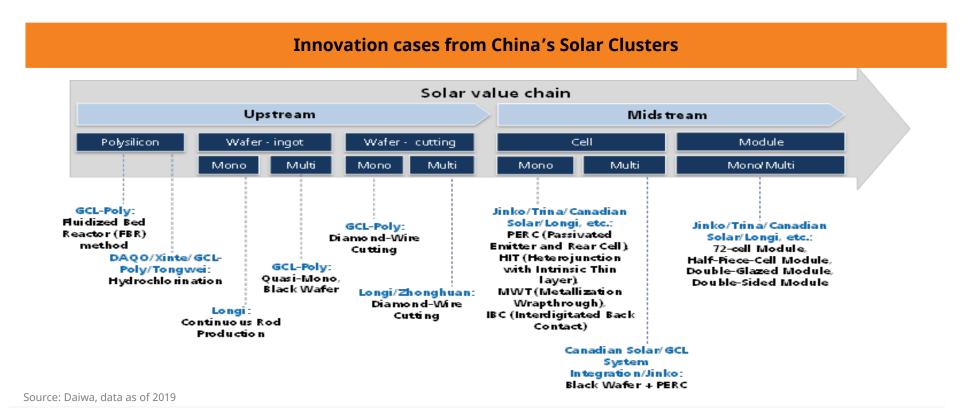
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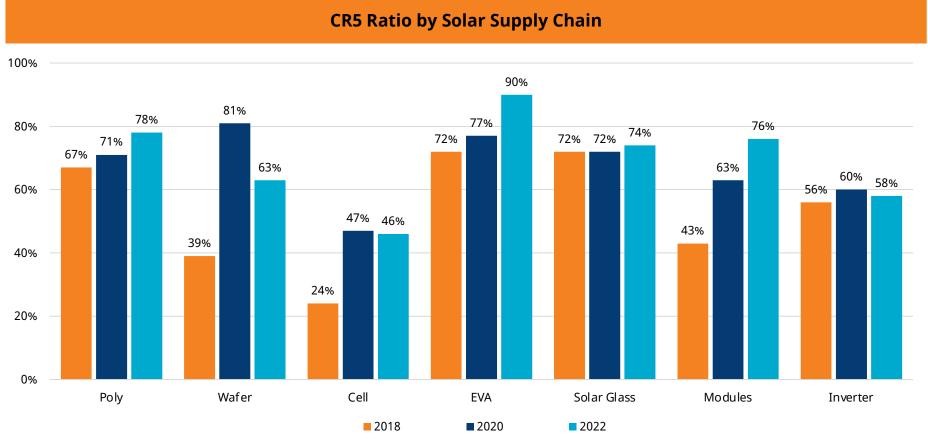


Source: World Energy Council, data as of 2018, Unit: \$ per Kilowatt (kWh)

- China has been successful in mastering the whole supply chain of an industry
- China has internalized key components and machines for solar panel (and EV battery)
- The knowledge effect of China's solar cluster is getting stronger:
  - Since 2015, the most significant solar innovations have come from China



- The supply chain is already well consolidated, allowing leading companies to enjoy higher ROE
- Most of the leading solar companies are located in Asia

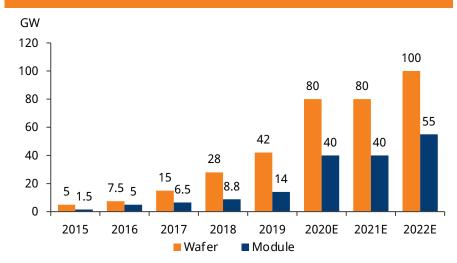


Source: Mirae Asset Global Investments, SolarZoom and Jefferies Estimates, data as of 2021, Note: CR5 is the concentration ratio of the top 5 firms within a sector as measured by market share

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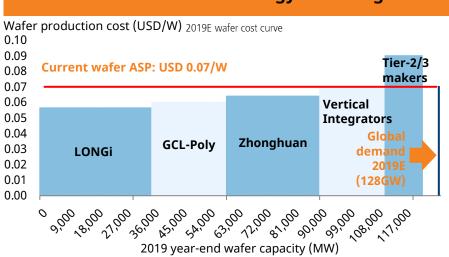
- (Case 1) LONGi: Solar Wafer Innovator
  - The Company has 10%+ cost advantage vs. other mono wafer competitors
- (Case 2) Xinyi Solar and Flat Glass: Duopoly
  - The two Chinese solar-grade glass makers claim 60%+ market share in the world
- (Case 3) Tongwei
  - Global leader in polysilicon and pioneer in PERC cell manufacturing

#### LONGi, Champion in Solar Wafer and Module



Source: LONGi New Energy and Macquarie, data as of 2020

#### ... Thanks to its Technology Advantage



Source: UBS, data as of 2019

## **Near-term trend: Glasgow provided milestones**

- Despite some disappointment on the COP26 agreement, it's still a positive step for the clean energy sector, as the need to phase down coal has been addressed for the first time
- Thanks to the agreement, the issue of solar intermittency is now identified as a challenge to overcome, rather than something that's denied



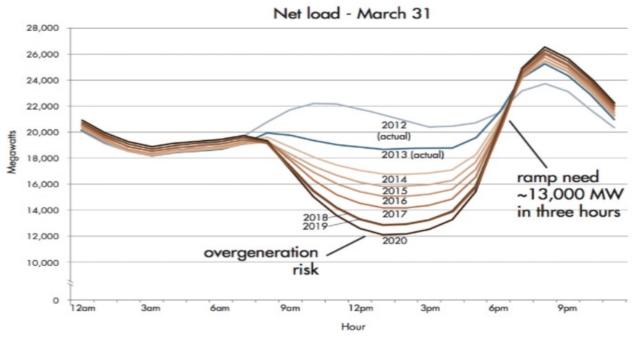


Source: Reuters, 13 November 2021

## **Near-term trend: Glasgow provided milestones**

- The greatest weakness of solar power generation is the so-called 'duck curve' (solar can't generate power during the evening when power demand soars), thus critics of solar assumed there would still be a strong need for coal power plants
- But, this assumption is no longer valid after COP26

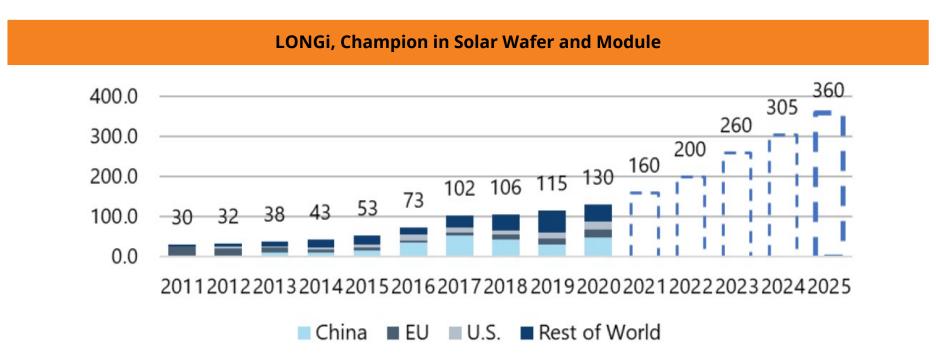
#### "Duck Curve" Caused by Solar Would Require Rapid Ramping in the Evening Time



Source: National Renewable Energy Laboratory (NREL), data as of 2021

## Near-term trend: Strong pent-up demand in 2022

- After four years of modest growth, we expect a strong growth from 2022 onwards
- The industry has grown slowly because of massive subsidy cuts in China in 2018 (5., and due to COVID-19 and supply chain disruption in 2020 and 2021, respectively
- Pent-up demand should support high growth in 2022 once issues in the polysilicon supply chain have eased



Source: NEW, CPIA, EPIA, SEIA and Jefferies Estimates, data as of 2021

# 3. Mega trend (2) EV & Battery tech

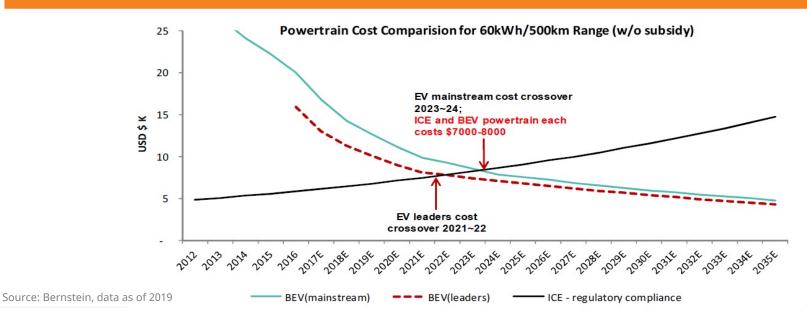
## Mega Trend in Asia: EV and Battery



**Electric Vehicle revolution at high speed in 2022** 

- EV is Booming, thanks to Cheaper mass-market Battery and Attractive Model Roll-Out
  - With subsidies, EVs are already cost competitive in many countries, where there is good charging infrastructure
  - Without subsidies, mainstream EVs are likely to be cost competitive to ICE car by 2023
  - No EV subsidies but more penalties on ICE cars in the future, will also see the cost trend clearly head in one-way direction

#### **EV Cost Competitiveness: Cost Cross Over soon**



#### Battery Demand Forecast is Impressive

 Pure EV penetration ratio is still less than 5% of global auto sales in 2021e. Macquarie research expects 39% CAGR between 2020-2025

**Global Battery Demand Forecast** 

The battery adaption will be the most outstanding mega trend in the coming decade

| Downstream demand ('000 units)          | 2017   | 2018   | 2019   | 2020   | 2021E  | 2022E  | 2023E  | 2024E  | 2025E   | CAGR (20-25E) |
|---|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------------|
| Global light vehicle sales ('000 units) | 96,448 | 95,544 | 91,988 | 80,466 | 84,928 | 90,638 | 94,797 | 97,423 | 100,073 | 4%            |
| YoY growth (%)                          | 2.6%   | -0.9%  | -3.7%  | -12.5% | 5.5%   | 6.7%   | 4.6%   | 2.8%   | 2.7%    |               |
| Global EV (k units)                     | 3,200  | 4,280  | 5,871  | 8,835  | 13,759 | 19,540 | 24,995 | 30,469 | 36,090  | 33%           |
| Battery EV (BEV)                        | 778    | 1,276  | 1,675  | 2,268  | 3,753  | 5,541  | 7,710  | 10,098 | 12,529  | 41%           |
| Plug-in hybrid EV (PHEV)                | 429    | 634    | 589    | 1,069  | 2,131  | 3,188  | 3,992  | 4,473  | 4,830   | 35%           |
| Hybrid EV (HEV)                         | 1,989  | 2,240  | 2,494  | 3,004  | 3,649  | 4,809  | 5,659  | 6,709  | 7,509   | 20%           |
| Mild hybrid EV (MHEV)                   | 4      | 130    | 1,113  | 2,494  | 4,226  | 6,002  | 7,634  | 9,189  | 11,222  | 35%           |
| Internal combustion engine              | 93,249 | 91,263 | 86,117 | 71,631 | 72,069 | 72,602 | 71,414 | 68,575 | 65,512  | -2%           |
| Global Battery Demand (GWh)             | 2017   | 2018   | 2019   | 2020   | 2021E  | 2022E  | 2023E  | 2024E  | 2025E   | CAGR (20-25E) |
| EV demand (GWh)                         | 85     | 123    | 137    | 185    | 307    | 460    | 647    | 882    | 1,152   | 44%           |
| ESS demand (GWh)                        | 4      | 14     | 24     | 9      | 57     | 83     | 101    | 120    | 137     | 74%           |
| Consumer battery (GWh)                  | 70     | 68     | 71     | 72     | 75     | 78     | 81     | 85     | 88      | 4%            |

265

14%

440

622

41%

830

34%

1.087

31%

1,377

27%

Source: GGII, CIAPS, Roskill, IDC, Canalys, ESCN, IEA and Macquarie Research, 2021

Total Global Battery Demand (Gwh)

YoY growth (%)

159

205

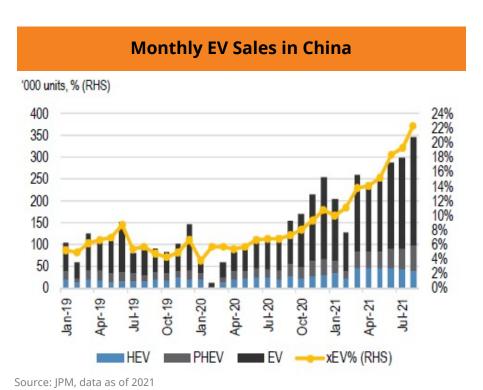
29%

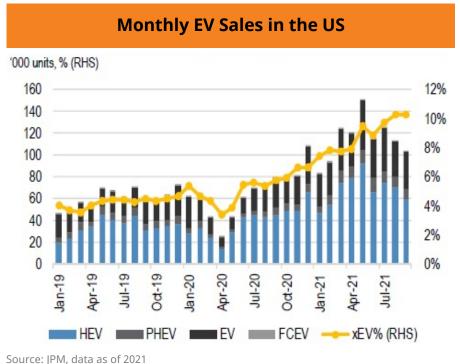
233

13%

39%

- EV is Booming Thanks to Cheaper mass-market Battery and Attractive Model Roll-Out
  - EV sales soared, especially in 2021 after modest growth in the previous two years, thanks to better and widened model offering by various auto brands in China and across the world
  - EV volume growth was weak in 2019 due to the China subsidy cut, and in 2020 due to COVID-19, but finally took off in 2021





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- EV is Booming Thanks to Cheaper mass-market Battery and Attractive Model Roll-Out
  - One of the most impressive trend is not Tesla Model 3, but Hongguang Mini EV, whose MSRP is only £4k with 170km driving range. Hongguang Mini EV sales is likely to reach 500k units in 2021, which will make it the best selling model in EV history
  - Why? Some consumer group doesn't care driving range, implicating broader adaption of EV ahead

#### **Top 10 Selling NEV Model in October 2021 in China**

| Rank | Туре              | Sales (Unit) | YoY      |
|------|-------------------|--------------|----------|
| 1    | Hongguang MINI EV | 47,834       | 131.85%  |
| 2    | BYD Qin PLUS DM-i | 17,393       | -        |
| 3    | Tesla Model Y     | 13,303       | -        |
| 4    | BYD Song DM       | 11,316       | 1831.06% |
| 5    | BYD Qin PLUS EV   | 8,405        | -        |
| 6    | BYD Han EV        | 8,284        | 63.88%   |
| 7    | Aion S            | 8,020        | 73.22%   |
| 8    | LI ONE            | 7,649        | 107.18%  |
| 9    | IronBone          | 7,443        | -        |
| 10   | Chery eQ          | 7,431        | 56.61%   |



Source: CPCA and CR Securities, data as of 2021

- Asia is Dominant in EV Battery Supply Chain
  - Asia, especially China, is dominant in the supply chain of EV manufacturing
  - China is cost competitive in making batteries, thanks to production innovations like LFP and packaging

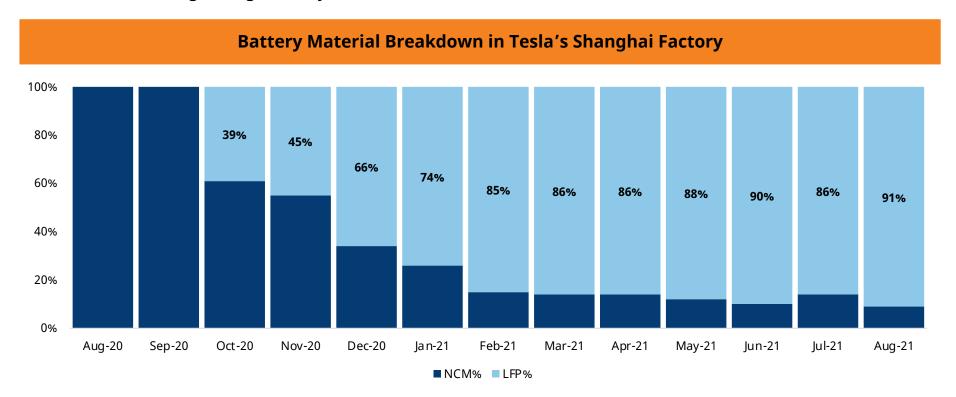
#### **LFP Material Battery Makes EV Cost-Competitive**

| GWh                               | 2016          | 2017    | 2018 | 2019  | 2020       | 2021E  | 2022E | 2023E    | 2024E | 2025E |
|-----------------------------------|---------------|---------|------|-------|------------|--------|-------|----------|-------|-------|
| NCM                               | 6             | 16      | 31   | 38    | 39         | 85     | 120   | 180      | 254   | 338   |
| LFP                               | 20            | 18      | 22   | 20    | 22         | 71     | 110   | 139      | 174   | 213   |
| Others                            | 1             | 2       | 5    | 4     | 2          | 3      | 5     | 7        | 9     | 11    |
| China EV battery demand           | 28            | 36      | 57   | 62    | 63         | 159    | 235   | 326      | 437   | 563   |
| China EV Battery demand breakdown | 10.070.070.07 | 0.00000 |      | 77791 | 147,717    | 011000 | 2000  | 1.035001 | 970   |       |
| NCM                               | 23%           | 44%     | 54%  | 62%   | 62%        | 53%    | 51%   | 55%      | 58%   | 60%   |
| LFP                               | 72%           | 50%     | 38%  | 32%   | 36%        | 45%    | 47%   | 43%      | 40%   | 38%   |
| Others                            | 5%            | 6%      | 8%   | 6%    | 3%         | 2%     | 2%    | 2%       | 2%    | 2%    |
| Total                             | 100%          | 100%    | 100% | 100%  | 100%       | 100%   | 100%  | 100%     | 100%  | 100%  |
| China EV Battery demand y/y       |               |         |      | 10.11 | 1 11111111 |        |       |          |       |       |
| NCM                               | 67%           | 148%    | 92%  | 25%   | 1%         | 118%   | 42%   | 49%      | 41%   | 33%   |
| LFP                               | 107%          | -11%    | 20%  | -7%   | 12%        | 216%   | 56%   | 27%      | 25%   | 22%   |
| Others                            | 180%          | 41%     | 118% | -11%  | -60%       | 102%   | 48%   | 38%      | 34%   | 29%   |
| Total                             | 99%           | 28%     | 57%  | 10%   | 1%         | 152%   | 48%   | 38%      | 34%   | 29%   |

Source: JPM, data as of 2021; SNE Research and Mirae Asset Global Investments, 2020

#### Asia is Dominant in EV Battery Supply Chain

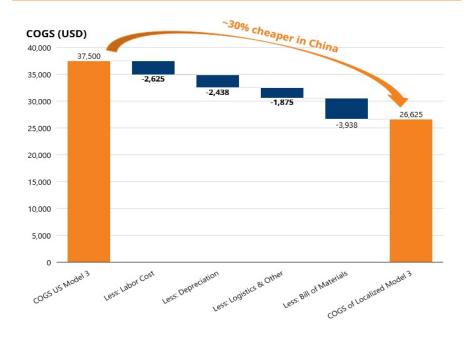
- China is cost competitive in making batteries, thanks to production innovations like LFP and packaging
- This explains why Tesla achieved 10%+ operating margin in the latest quarter: More LFP battery from its Shanghai Giga factory



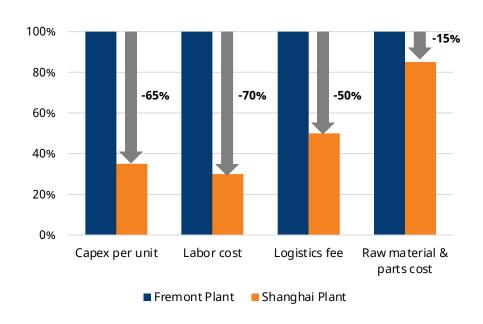
Source: JPM, data as of 2021

- Tesla Model 3 Witnesses China's Manufacturing Advantage
  - Model 3 (blended) Shanghai factory cost lower than the US by around 30%

#### **COGS Comparison (US vs. Shanghai Factory)**



#### **Cost Comparison (Fremont vs. Shanghai)**



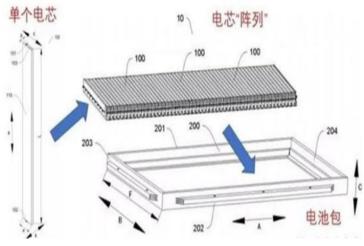
Source: UBS, data as of December 2020

Source: UBS, data as of December 2020

- Example of Battery Innovation: Packaging
  - BYD's blade battery (cell to pack) resulted in the revival of the LFP battery to overcome its lower energy density problem

#### **BYD's New Battery Package Technology Improves Energy Density**





Source: BYD, 2020

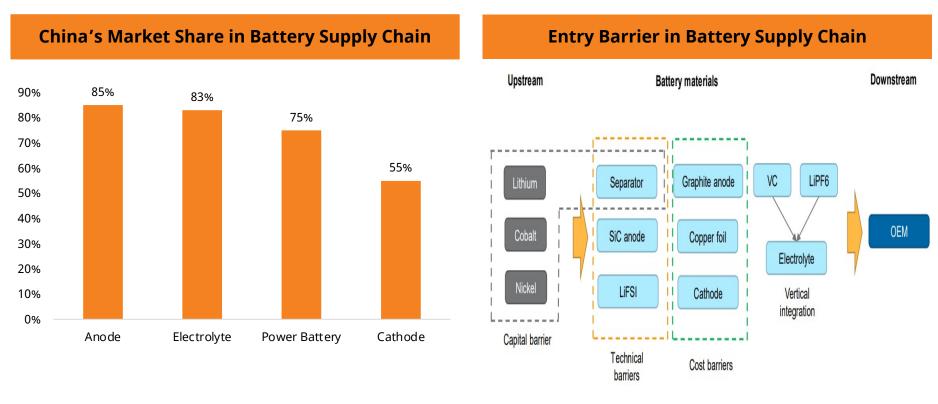
China-made EVs are 20-70% Cheaper Compared to its EU Peers

#### **EV Price Comparison between China and EU**

| Model         | Region | Model         | Class | Battery<br>kWh | Range (NEDC)<br>km | Max Power<br>kW | Wheelbase<br>mm | Retall price ex-sub<br>Rmb | sldy, VAT<br>EUR |
|---------------|--------|---------------|-------|----------------|--------------------|-----------------|-----------------|----------------------------|------------------|
| Renault Zoe   | EU     | Small Sedan   | A0    | 46             | 334                | 80              | 2588            | 233,259                    | 29,397           |
| BMW i3        | EU     | Small Sedan   | AO    | 42             | 345                | 135             | 2570            | 360,641                    | 45,450           |
| Ora White cat | China  | Small Sedan   | AO    | 34             | 360                | 35              | 2490            | 81,416                     | 10,260           |
| BYD E2        | China  | Small Sedan   | A0    | 35             | 305                | 70              | 2610            | 93,805                     | 11,822           |
|               |        |               |       |                |                    |                 |                 |                            |                  |
| Nissan Leaf   | EU     | Compact Sedan | Α     | 62             | 435                | 160             | 2700            | 318,080                    | 40,086           |
| VW ID3        | EU     | Compact Sedan | Α     | 58             | 467                | 150             | 2765            | 288,470                    | 36,355           |
| BAIC EU5 R500 | China  | Compact Sedan | Α     | 52             | 416                | 160             | 2670            | 134,867                    | 16,997           |
| GAC Aion S    | China  | Compact Sedan | Α     | 59             | 460                | 135             | 2750            | 143,628                    | 18,101           |
| BYD Qin EV    | China  | Compact Sedan | Α     | 53             | 421                | 100             | 2670            | 129,292                    | 16,294           |
|               |        |               |       |                |                    |                 |                 |                            |                  |
| Mercedes EQC  | EU     | Mediium SUV   | В     | 80             | 445                | 300             | 2873            | 488,681                    | 61,586           |
| Nio ES6       | China  | Medium SUV    | В     | 84             | 490                | 320             | 2900            | 380,973                    | 48,012           |
| Audi E-tron   | EU     | Large SUV     | С     | 95             | 485.05             | 265             | 2928            | 53 9,440                   | 67,983           |
| Nio ES8       | China  | Large SUV     | С     | 84             | 485                | 400             | 3010            | 485,398                    | 61,173           |

Source: UBS, data as of December 2020

- Chinese Companies Became a Dominant Force in the Battery Supply Chain
  - China wants to make its automobiles exportable in this decade, thanks to its battery and autonomous driving technology advantage



Source: ICCSINO and Macquarie Research, data as of 2021

- (Case) BYD: Uniquely Integrated Business Model That Works
  - BYD has been long devoted to in-house development of crucial EV technologies, such as battery,
     power semiconductor, and electric motor
  - As the EV industry is still in an infant stage, it would be better for a Company to be engaged in the entire manufacturing process → BYD and Tesla are the only two exceptional Companies from this perspective
  - Since 2020, BYD entered a new product cycle when they launched the big-hit model 'Han' and we expect to see more attractive EV models launching in 2021 and 2022

#### BYD Model 'Han (汉)'



Source: BYD and Mirae Asset Global Investments

#### Model Han vs. ICE models

|                               | BYD Han<br>(EV) | Honda Accord<br>(ICE) | VW Passat<br>(ICE) | Toyota Camry<br>(ICE) |
|-------------------------------|-----------------|-----------------------|--------------------|-----------------------|
| MSRP (RMB k)                  | 229.8-279.5     | 179.8-259.8           | 185.9-282.9        | 179.8-279.8           |
| Tax and<br>Subsidy<br>(RMB k) | 22.5            | -                     | -                  | -                     |
| Wheelbase<br>(mm)             | 2920            | 2830                  | 2871               | 2825                  |
| 0-100km/h<br>acceleration (s) | 3.9-7.9         | 8.07                  | 9.1                | 10.35                 |
| Power (kW)                    | 163-363         | 130-143               | 110-162            | 131-160               |
| Torque (Nm)                   | 330             | 230-260               | 250-350            | 210-250               |
| Driving Range<br>(km)         | 550-605         | 903                   | 1181               | 1091                  |

# 4. Mega trend (3) Internet biz in Emerging Asia

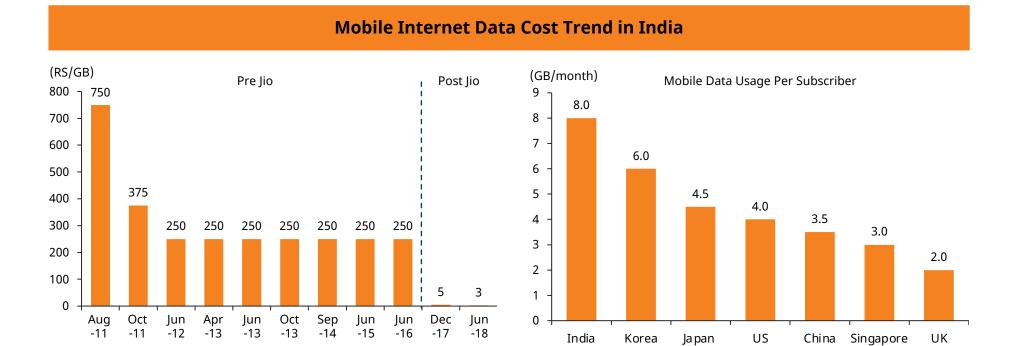
## Mega Trend in Asia: Internet Biz Model



Internet biz models are booming in Emerging Asia

## **Internet in Emerging Asia**

- What Happened in India: Crucial Role of Reliance
  - Reliance Group's venture into 4G mobile network from scratch turned out to be the most impressive and successful innovation in India over the last decade
  - After Reliance's 4G network, mobile internet data cost plunged by 98%, which triggered a boom in mobile internet-based businesses

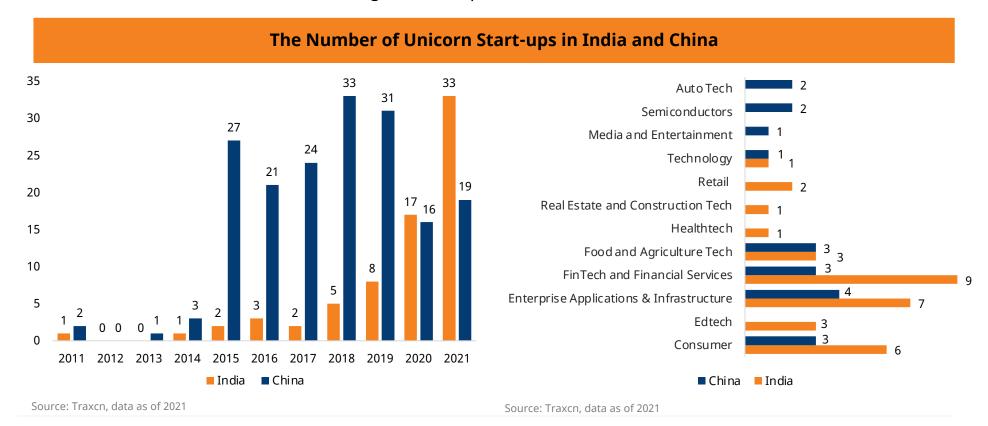


Source: CLSA. data as of 2019

## **Internet in Emerging Asia**

#### What Happened in India?

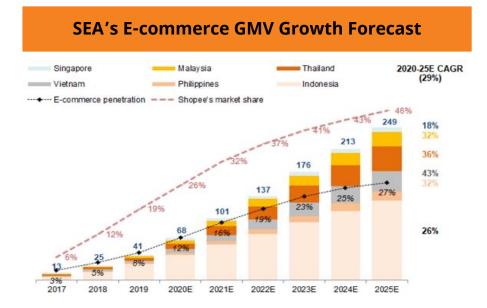
- After the establishment of 4G network, mobile internet-based business models started to emerge
- It very much resembled the US in 2000's and China in early 2010's
- ASEAN is also at a similar stage of development as India



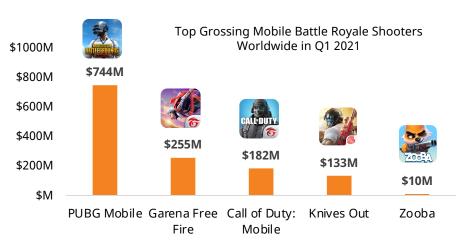
### **Internet in Emerging Asia**

#### SEA Co.

- ASEAN represents ~9% of the global population and has one of the largest groups of millennials
- o Online accounts for 6% of retail sales in ASEAN in 2019, compared with c. 30% in China.
- Southeast Asia E-commerce market is set to deliver a secular growth of 29% CAGR (2020-2025E)
- Shopee, SEA's e-commerce business, is the largest beneficiary of the rising tide; it will become the dominant player with more than 40% market share by 2025E



#### SEA's Free Fire's Position in Battle Royale<sup>1</sup>



Source: Google, Temasek, Bain Inc., Sensor Tower Store Intelligence and Mirae Asset Global Investments estimates

Note: Does not include revenue from 3rd-party Android stores in China or other regions (includes revenue for Game For Peace in China)

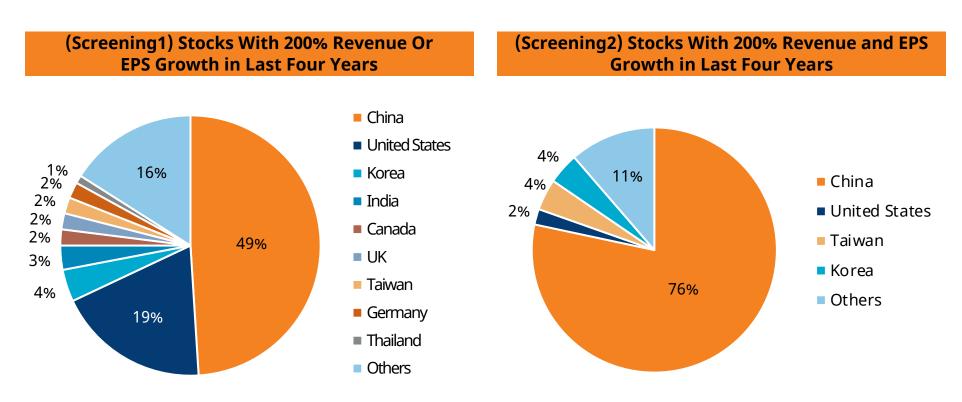
## 5. Why Mirae Asset Asia Growth Fund?

#### Main thesis on Mirae Asset Growth Fund

Whatever noise there is,
Asia Inc. will continue to produce growth stocks

#### Where Growth Stocks Are Born: Asia

- We screened out stocks by country with criteria of 200% revenue or EPS growth between 2016-2020 out of MSCI AC World Index. They could be called "growth stock"
- Surprisingly, Asian stocks account for 60% of the world's growth stocks, where China is ranked first

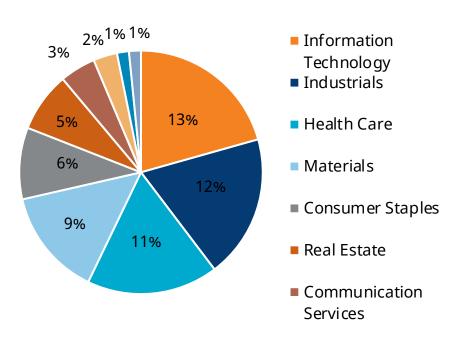


Source: Morgan Stanley and Mirae Asset Global Investments, data as of 2021, Note: Period between 2016 and 2020

#### Where Growth Stocks Are Born: Asia

- Chinese growth stocks came from various sectors, not limited to internet business models
- To name a few, they include Xiaomi (IT brand), LONGi (Solar), EVE Energy (battery), Luxshare Precision (Manufacturing), Will Semiconductor, Sany (Heavy machine), and Wuxi Bio (Biotech)

#### Number of Stocks by Sector That Achieved 200% Growth in Revenue and EPS in Four Years



#### Selected Chinese IT Stocks to Meet the Criteria

| Company                  | Country | GICS Sector            | Market cap<br>(\$mn) | 4Y Revenue<br>growth | 4Y EPS Growth |
|--------------------------|---------|------------------------|----------------------|----------------------|---------------|
| XIAOMI CORP B            | China   | Information Technology | 87,212               | 259%                 | 3023%         |
| LONGI GREEN ENER A(HK-C) | China   | Information Technology | 74,778               | 373%                 | 406%          |
| LUXSHARE PREC A (HK-C)   | China   | Information Technology | 46,834               | 572%                 | 455%          |
| WILL SC A (HK-C)         | China   | Information Technology | 44,043               | 817%                 | 724%          |
| NAURA TECH GRP A (HK-C)  | China   | Information Technology | 24,819               | 273%                 | 396%          |
| MAXSCEND A (HK-C)        | China   | Information Technology | 21,653               | 625%                 | 56%           |
| WINGTECH TECH A (HK-C)   | China   | Information Technology | 19,283               | 285%                 | 2493%         |
| WUXI LEAD INTG A (HK-C)  | China   | Information Technology | 17,198               | 443%                 | 144%          |
| YONYOU NETWORK A (HK-C)  | China   | Information Technology | 16,796               | 67%                  | 389%          |
| HUNDSUN TECH A (HK-C)    | China   | Information Technology | 13,978               | 92%                  | 7149%         |
| BYD ELECTRONIC INTL      | China   | Information Technology | 13,550               | 99%                  | 341%          |
| MONTAGE TECH A (HK-C)    | China   | Information Technology | 11,470               | 116%                 | 697%          |
| JCET GROUP CO A (HK-C)   | China   | Information Technology | 10,608               | 38%                  | 693%          |
| WUHAN GUIDE INF A (HK-C) | China   | Information Technology | 9,827                | 311%                 | 1271%         |
| SHENZHEN SC NEW A (HK-C) | China   | Information Technology | 6,444                | 387%                 | 233%          |
| INSPUR ELECTRS A (HK-C)  | China   | Information Technology | 6,270                | 398%                 | 46%           |
| SUZHOU DONGSHAN A (HK-C  | ) China | Information Technology | 5,493                | 234%                 | 689%          |
| ZHONGJI INNO A(HK-C)     | China   | Information Technology | 4,206                | 5256%                | 3550%         |
| WUS PRINTED A (HK-C)     | China   | Information Technology | 4,161                | 97%                  | 905%          |
| CHINA TRANSINFO A (HK-C) | China   | Information Technology | 3,984                | 302%                 | 133%          |
| BEIJING E-HUALU A (HK-C) | China   | Information Technology | 2,989                | 25%                  | 381%          |

Source: Morgan Stanley and Mirae Asset Global Investments, data as of 2021, #Note: Period between 2016 and 2020

#### **Multi-Year Growth Themes in Asia**













Semiconductor

**Clean Energy** 

EV Battery

**Internet biz** 

**Biotech** 

Cloud & Software

AI & 5G higher demand for semiconductors

Leaders in solar industry are all in Asia & smart grid investment is prerequisite

EV will become a mainstream in auto industry Companies who are building out an ecosystem

Asia is emerging as a noble drug R&D hub Cloud and Software is the fastest growing area in Asia







1





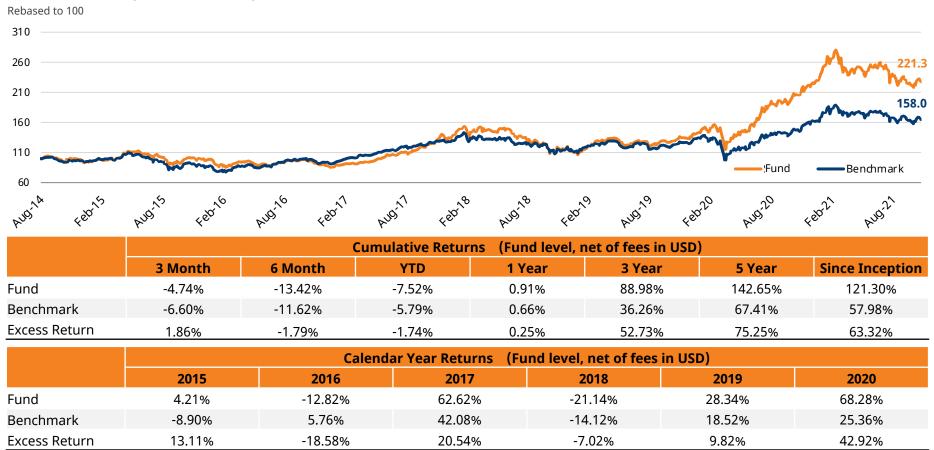
TSMC, MediaTek, Hua Hong, Will Semi LONGi, Tongwei, Xinyi Solar, NARI CATL, Wuxi Lead, BYD, EVE energy LG Chem, Xiaopeng SEA Reliance, Naver, Kakao, Hibe, Tencent,

Hengrui, Wuxi Bio, Sino bio, Innovent Sangfor, Tata consulting, Douzone

## Mirae Asset Asia Growth Equity Fund



#### Fund Performance (Fund level in USD) net of fees, as of 30 November 2021



Source: Mirae Asset Global Investments, Morningstar and Bloomberg. Date of fund inception: 6 August 2014. The performance figures shown are at the Fund level of the Mirae Asset Asia Growth Equity Fund (the "Fund"). The net asset value per share of the Fund at fund level is calculated by using the total net asset value of the Fund divided by the total number of units issued by the Fund and is represented in the reference currency of the Fund (i.e. US dollars). Performance figures of the Fund is net of fees, NAV to NAV, in USD with dividends reinvested. The benchmark is MSCI AC Asia Ex Japan Index (Gross). Morningstar 5-star rating applies to Class I (USD) and Class K (USD) share of the Fund, as of 30 November 2021. © 2021 Morningstar, Inc. All rights reserved. The information contained herein: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete, or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information. Past performance is no guarantee of future results.

## **Fund Key Fact**

| Fund Information (as of 30 | November 2021)   |
|----------------------------|--|
| Name                       | Mirae Asset Asia Growth Equity Fund  |
| Benchmark                  | MSCI AC Asia ex Japan (Gross) Index  |
| Domicile                   | Luxembourg (SICAV)   |
| AUM                        | USD 334.26 million   |
| Inception                  | 6 August 2014  |
| Base Currency              | USD  |
| <b>Additional Currency</b> | EUR, GBP   |
| Lead Portfolio<br>Manager  | Phil S. Lee  |
| Co-Portfolio Manager       | Rahul Chadha   |
| Number of Holdings         | 56   |
| ISIN Code                  | Class I-USD : LU1081214832<br>Class A-USD : LU1211592289<br>Class R-USD : LU2272889812 |

| Risk Statistics - 5 Years (as of 30 November 2021) |        |  |  |  |
|--|--------|--|--|--|
| Annualized Volatility                              | 19.53% |  |  |  |
| Beta   | 1.08   |  |  |  |
| Annualized Alpha                                   | 8.54%  |  |  |  |
| Sharpe Ratio                                       | 0.93   |  |  |  |
| Tracking Error                                     | 8.62%  |  |  |  |
| Information Ratio                                  | 0.99   |  |  |  |

Source: Mirae Asset Global Investments (Hong Kong) Limited, Benchmark: MSCI AC Asia ex Japan (Gross) Index

Due to rounding, the sum of portfolio may not equal 100%

| A All                             | N 2024        | ١                |                |
|-----------------------------------|---------------|------------------|----------------|
| <b>Asset Allocation</b> (as of 30 | November 2021 | )                |                |
| Country                           | Fund (%)      | Benchmark (%)    | Difference (%) |
| China                             | 51.86         | 38.75            | 13.11          |
| Taiwan                            | 13.72         | 17.81            | -4.09          |
| India                             | 12.96         | 13.77            | -0.81          |
| Korea                             | 9.29          | 13.87            | -4.58          |
| Hong Kong                         | 2.04          | 7.13             | -5.09          |
| Indonesia                         | 1.95          | 1.68             | 0.27           |
| Vietnam                           | 1.73          |                  | 1.73           |
| Singapore                         | 1.29          | 2.80             | -1.51          |
| Malaysia                          |               | 1.52             | -1.52          |
| Pakistan                          |               | 0.02             | -0.02          |
| Philippines                       |               | 0.80             | -0.80          |
| Thailand                          |               | 1.85             | -1.85          |
| Cash & others                     | 5.15          |                  | 5.15           |
| Total                             | 100.00        | 100.00           |                |
| Sector                            | Fund (%)      | Benchmark<br>(%) | Difference (%) |
| Information Technology            | 31.79         | 24.68            | 7.11           |
| Communication Services            | 14.55         | 10.59            | 3.96           |
| Industrials                       | 12.82         | 6.14             | 6.68           |
| Consumer Discretionary            | 9.67          | 15.82            | -6.15          |
| Health Care                       | 7.48          | 4.83             | 2.65           |
| Financials                        | 7.18          | 18.68            | -11.50         |
| Materials                         | 3.42          | 5.09             | -1.67          |
| Consumer Staples                  | 3.13          | 4.90             | -1.77          |
| Utilities                         | 2.49          | 2.63             | -0.14          |
| Energy                            | 2.32          | 2.84             | -0.53          |
| Real Estate                       |               | 3.80             | -3.80          |
| Cash & others                     | 5.15          |                  | 5.15           |
| Total                             | 100.00        | 100.00           |                |

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The Company's Prospectus and the KIIDs can be obtained from <a href="https://www.am.miraeasset.eu/fund-literature">www.am.miraeasset.eu/fund-literature</a>. The Prospectus is available in English, French, German, and Danish, while the KIIDs are available in one of the official languages of each of the EU Member States into which each sub-fund has been notified for marketing under the Directive 2009/65/EC (the "UCITS Directive").

Please refer to the Prospectus and the KIID before making any final investment decisions.

A summary of investor rights is available in English from www.am.miraeasset.eu/investor-rights-summary.

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UK investors: The Company is a Luxembourg registered UCITS, recognised in the UK under section 264 of the Financial Services and Markets Act 2000. Compensation from the UK Financial Services Compensation Scheme will not be available in respect of the Fund. The taxation position affecting UK investors is outlined in the Prospectus.

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