Guinness Atkinson
China & Hong Kong Fund
Review of 2021

Fund Philosophy

The Fund invests in quality, profitable companies which give exposure to the structural growth themes in China. These seven themes are:

- Rise of the Middle Class[1]
- Sustainability [2]
- Manufacturing Upgrades
- Healthcare
- Cloud Computing & Artificial Intelligence
- Next Gen Consumer [3]
- Financial Services

Once we have identified companies which give exposure to these themes, we also apply a set of quantitative filters to identify quality, profitable companies with strong balance sheets. Quality is defined as a return on capital above the cost of capital while a strong balance sheet is defined as debt/equity less than 150%. These filters reduce the universe from an initial ~1,600 companies to ~800 companies, of which we generally pick 30-40 to form an equally weighted portfolio.

- Overall, we are looking for companies with the following characteristics:
- High return on capital companies.
- Companies with growing operating cashflow, which we expect to continue to grow.
- The ability to deploy this cash at a high rate of return.
- Sensibly structured balance sheets with no excessive debt.
- Management we trust to grow the business.
- Companies that are judged to not harm society's wider interests.
- Market is undervaluing the growth opportunities.

[1] The **Rise of the Middle Class** refers to the opportunity set as China's middle class continues to grow in size and wealth. A company falls within this theme if it gives exposure to Food, Home Improvements, Beverages, Urbanization, Leisure or Education.

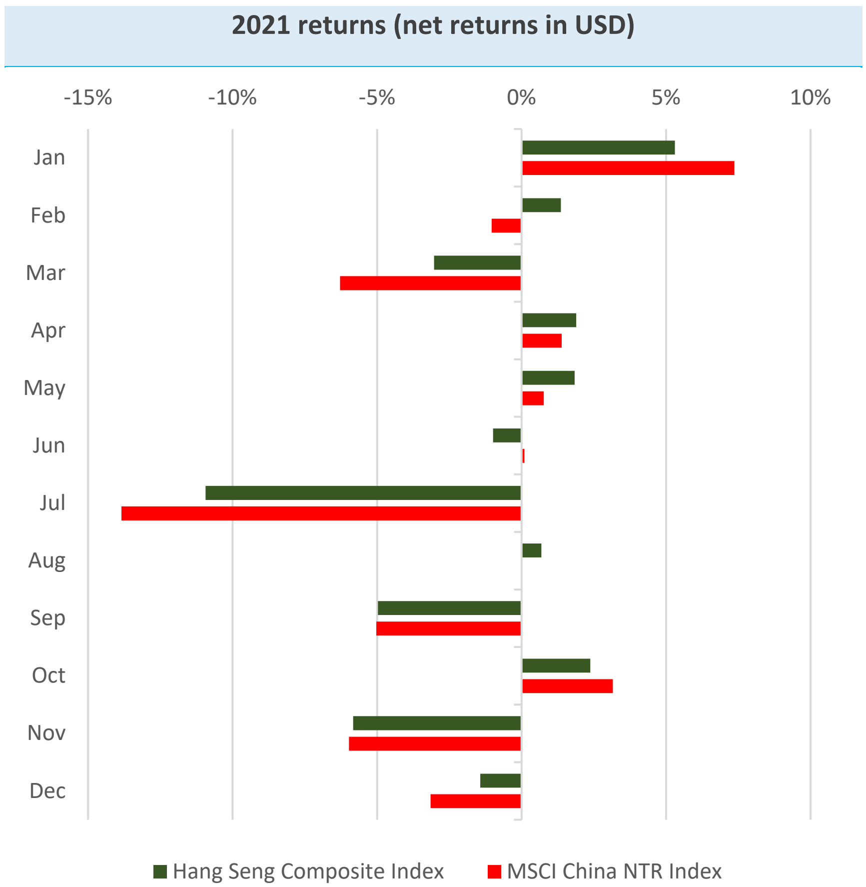
[2] **Sustainability** refers to China's efforts to reduce its carbon output and to reduce its impact to the environment. A company falls within this theme if it gives exposure to the ongoing energy transition, electric vehicles or waste reduction.

[3] **Next Gen Consumer** refers to new ways of consumption. A company falls within this theme if it gives exposure to E-Commerce or Online Entertainment.

The Fund has a valuation discipline to ensure that we do not overpay for future growth. When assessing the valuation of companies on a discounted cash flow basis, we adjust the discount rate where necessary to reflect the potential for higher global interest rates.

The Fund is run on an equally weighted basis, meaning it has high conviction in 30-40 stocks. This results in a high active share of 89% relative to the MSCI China Index (as of 12/31/21).

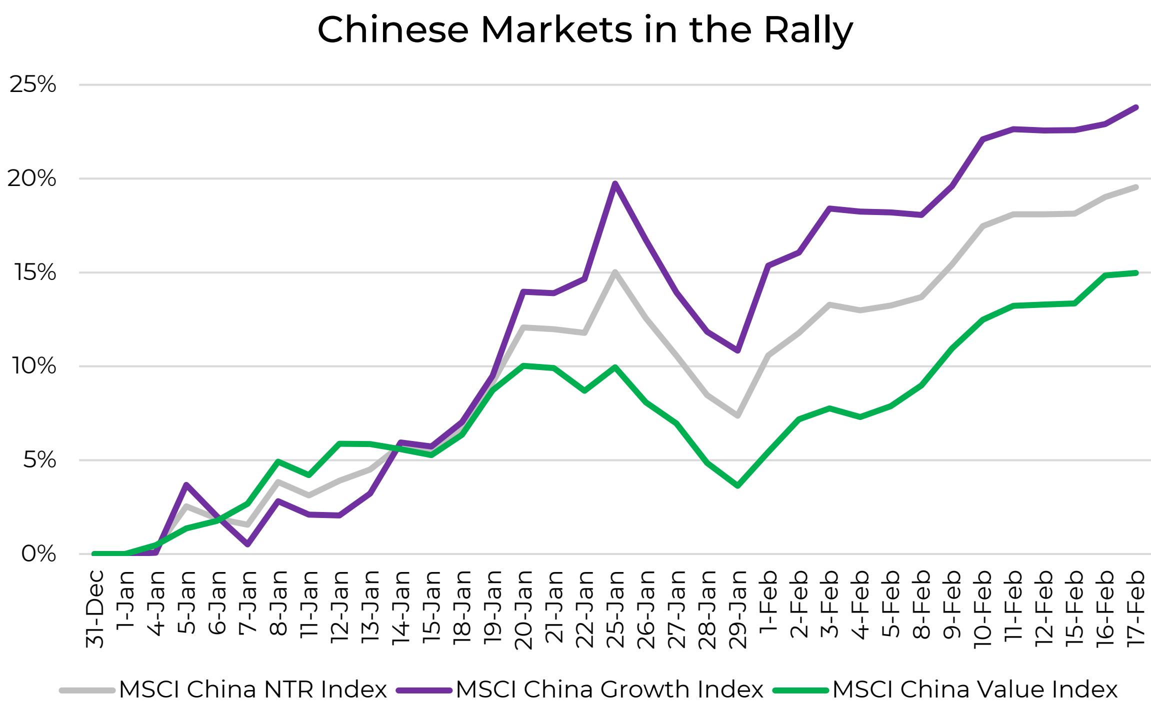
Market Review



(Source - Guinness Atkinson Asset Management, Bloomberg. Data as of 12.31.2021).

<u>The Rally</u>

The year started off strongly for China, with the large cap tech stocks driving a rally which lasted until mid-February. A bullish mood partly explained this rally, with newly launched funds braking fundraising records. At the time we did note that certain parts of the market were looking expensive and there was a risk of a derating if expectations were not met. In particular, discount rates in Hong Kong reached their lowest level in 10 years and so we made a point of using higher discount rates when valuing companies, to reflect the risk of rising global interest rates.



(Source: Guinness Atkinson Asset Management, Bloomberg. Data from 12/31/21 to 02/17/21, returns in USD)

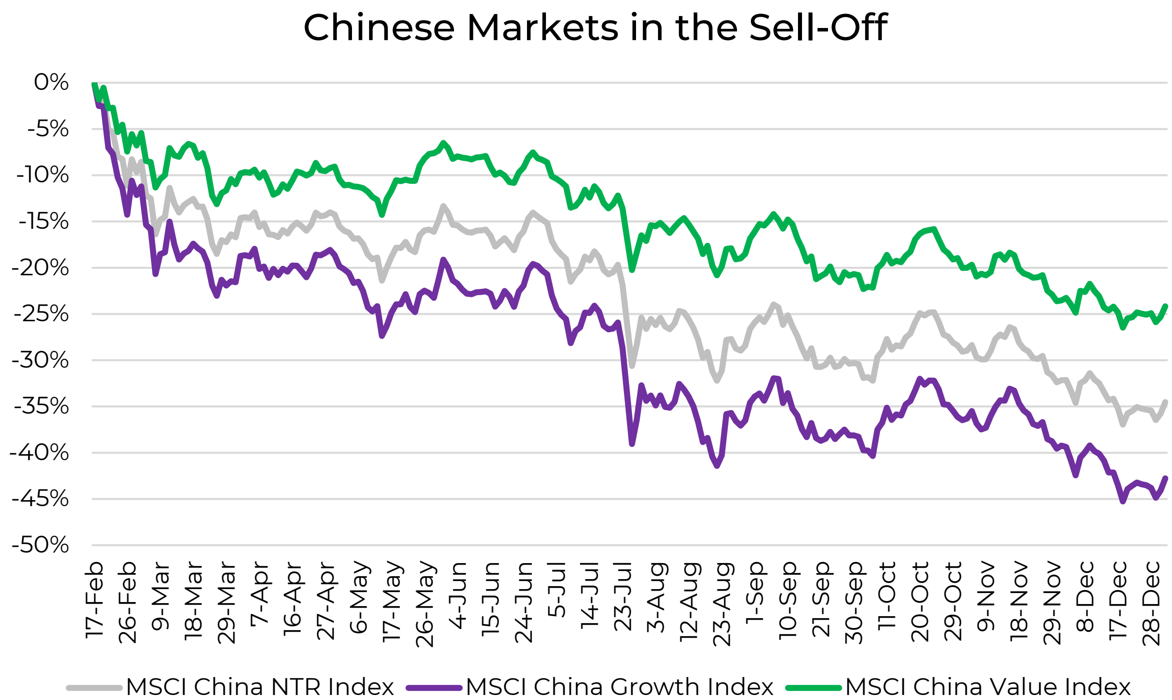
Chinese markets peaked in February and in this rally the MSCI China NTR Index rose 19.6%. We think it is also meaningful to split China's performance into Growth and Value – the MSCI China Growth Index rose 23.8% while the MSCI China Value Index rose by 15.0%.

The Sell-Off

But following the peak, Chinese markets were weak for the rest of the year due to multiple reasons. In February concerns over the potential for higher global interest rates, in response to higher inflation, led to a global sell-off. High growth stocks, whose valuations were boosted by 12 months of very low discount rates, were particularly weak. Additionally in China the central bank indicated monetary policy was unlikely to be loosened further, compounding the initial effect. In March, the MSCI China NTR Index fell 6.3%.

Over the spring and summer, we saw increased government regulation affecting various industries. We think the government introduced new rules for several reasons, with the aims of:

- Improving poor corporate behavior in industries where there had previously been relatively less regulation.
- Reducing social inequality, which links in with the government's focus on common prosperity.
- Protecting data security, which is linked to the structure that Chinese companies use to list overseas.



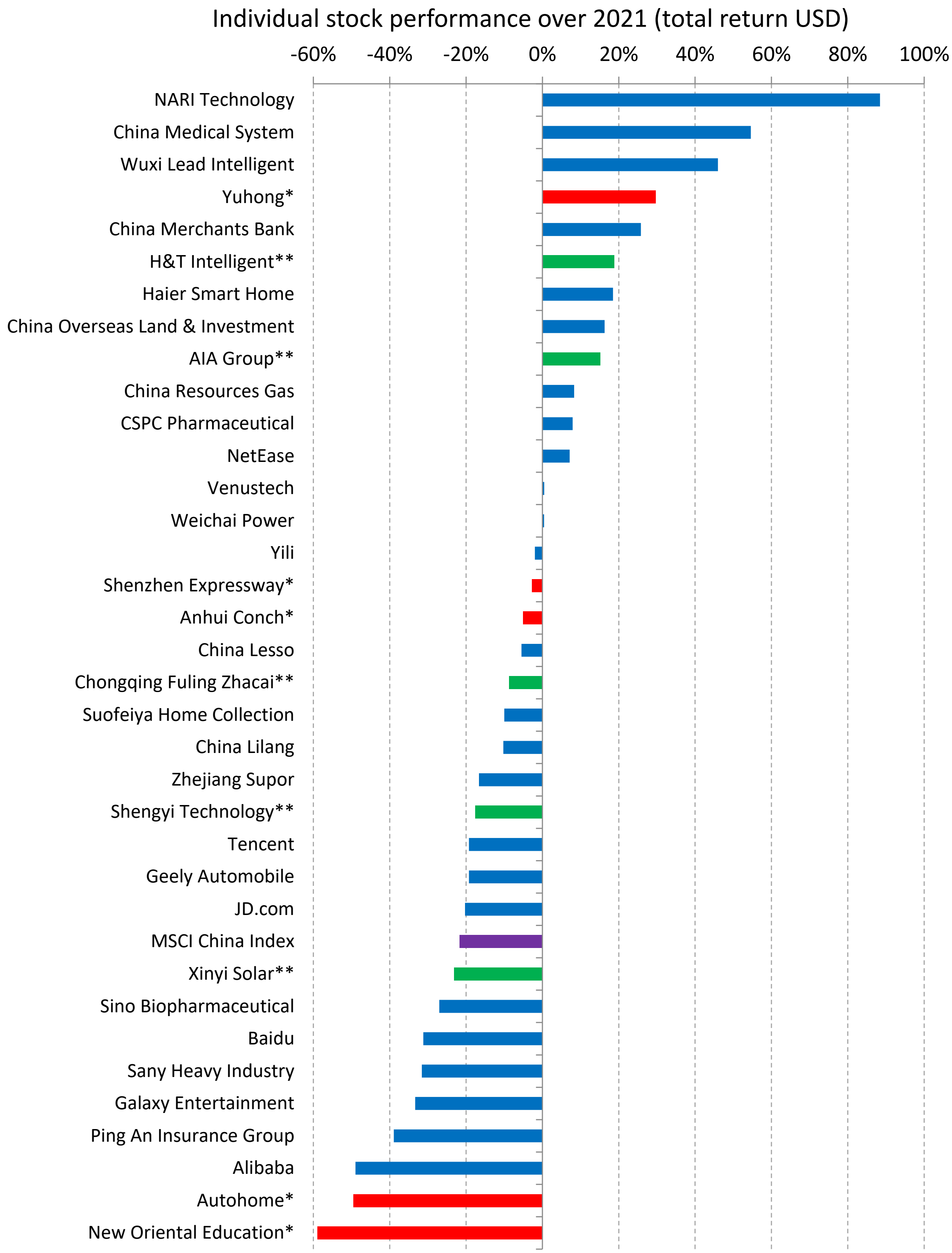
(Source: Guinness Atkinson Asset Management, Bloomberg. Data from 02/17/21 to 12/31/21, returns in USD)

Chinese markets were most affected by regulations in July, with the MSCI China NTR Index falling 13.8%, the MSCI China Growth Index falling 42.8% and the MSCI China Value Index falling 24.2%. Towards the end of the summer, new headwinds appeared, including:

- Evergrande was unable to borrow more to pay off its liabilities, meaning it could not repay a bond due in September. This led to concerns over potential contagion in the property market, as well as in the wider economy.
- Unexpected power cuts led to weaker economic activity in September. We think these cuts were due to inefficiencies in Chinese power markets, meaning power plants were reluctant to produce in light of higher cost prices.
- Economic growth was slowing down, as the government wound down monetary stimulus.

Chinese markets were broadly flat between August and October, but fell in November, driven by further weakness in the large cap tech stocks. Tencent was asked by regulators to temporarily pause releasing new apps and to stop updating existing apps. This was because the company was found to violate data protection rules on four occasions in the past. Alibaba reported weaker results than expected, which reflected the headwinds the business was facing. Though revenues grew 29% year-on-year in the third quarter, the core business, the customer management segment, only grew sales by 3%. The company is investing to generate growth in other parts of the business, but margins are likely to suffer.

Stock Performance



* sells, ** buys

Source: Guinness Atkinson Asset Management, Bloomberg

Leaders

Nari Technology benefited from a rerating during the year. The company makes software and hardware for the electricity grid, focusing on dispatching and distribution solutions. Nari is an indirect beneficiary of China's buildout of renewable energy, which requires investment in the state grid network to link the sources of renewable energy to where electricity is demanded. Part of this effort also involves the construction of Ultra High Voltage (UHV) lines to transport electricity at long distances with minimal energy loss, where Nari also has exposure to.

China Medical System was by far the strongest stock in the portfolio in the first half of the year, rising 139%. The stock then gave back much of its gains, but still ended the year as one of the strongest performing stocks in the portfolio. The company was historically a contract sales organization that sold drugs on behalf of foreign companies in China. Its focus was on generics, an area in which the government has initiated significant price cuts to lower overall healthcare costs. As a business dealing exclusively in generics, CMS's share price sold off sharply in 2019 and was weak in 2020. We felt the share price during this period was implying the worst-case scenario so continued to add to the position as part of the Fund's rebalancing process. Over time, CMS has delivered. Price cuts for its generic products have been well below average due to the relatively lower level of competition. The business has signed deals to build its innovative pipeline, where pricing power is much higher compared to generics. In the first half of 2021, revenue grew 24% and net income grew 27%.

Lead Intelligent makes equipment used to manufacture batteries for electric vehicles. It is well known for its winding equipment, which packs cells together, but also has a good offering in the early stage of the battery manufacturing process where electrodes are made. CATL, one of the largest battery manufacturers in the world, is now Lead's second largest shareholder. CATL has guaranteed the company at least 50% share in its main battery cell equipment orders between 2021 and 2023, so Lead Intelligent should derive good earnings growth from this deal. The business also has exposure to other customers, such as Northvolt in Europe. We think the demand for electric vehicles is very likely to continue to grow, which requires battery plants to be built, leading to rapid growth in Lead Intelligent's business.

China Merchants Bank is, in our opinion, the best run bank in China. One of the company's advantages is its good customer service, which allows the company to obtain cheaper sources of funding from its retail base, rather than rely on wholesale markets. The business earns its income through income on loans, as well as on fee income from its credit card, wealth management and custodian businesses. The wealth management business sells funds, insurance products and wealth management products, which allows the bank to take advantage of China's growing middle class. In 2021, China Merchants Bank grew operating income by 14% and grew net profit by 23%.

Haier Smart Home gives exposure to rising demand for household appliances such as air conditioners, washing machines and fridges. Management is confident the business can target growth profits of 15% a year in the medium to long-term, given the wide range of products the business offers. The company's premium *Casarte* continues to grow quickly at higher margins than the rest of the business. The *Leader* brand, on the other hand, is a mass market brand targeted at younger consumers, offering more value-for-money products. The combined contribution from the two brands is now 20% of total revenue.

Laggards

New Oriental Education was sold in June after it became much likelier that the government would ban weekend and holiday tuition. This fear became a reality as after we sold the stock, the government banned for-profit firms from operating in the after-school tuition industry. Though we did sell well below the stock's peak, we still made a ~50% return on the stock over the total holding period. Furthermore, we avoided making a loss on the investment, as after the government announced its restrictions in the month after we sold the stock, New Oriental's share price fell a further 70% in two days.

We sold **Autohome** due to its lack of earnings growth. The company operates China's largest online platform for buying and selling cars. However, the ongoing chip shortage has affected car sales which is out of the company's control. Increasing competition from well-funded businesses is another headwind that Autohome is facing. The market is not expecting earnings to reach 2020's level until 2024 and we do not have a strong view as to why the market is wrong.

Alibaba had a tough year, with increased government restrictions and a slowing core business. In November 2020, Alibaba's founder, Jack Ma, gave a speech criticizing various aspects of China's financial system. While criticism is allowed in China, one has to be very careful about the way in which it is done. Jack Ma's method was public and direct, which was not well received by the government. Soon after, Ant Group, which is owned by Alibaba, saw its public listing suspended. This marked the beginning of the government's antitrust efforts targeting the tech sector. Additionally, the core e-commerce business is slowing down and Alibaba is investing to try to generate new growth drivers, which will depress margins in the short-term. The business was trading at high valuations at the beginning of the year, implying growth rates which the business has not been able to achieve, explaining the sharp derating in 2021. As previously discussed, the Fund's equally weighted nature means Alibaba has a neutral weight of ~3.3% in the Fund. In Feb-21, Alibaba was the second largest stock in the MSCI China Index with a 14.1% weight. Therefore, given the sell-off in the stock, the Fund has benefited significantly from its underweight in the stock. We continue to hold the stock because Alibaba gives good return on capital exposure to e-commerce which we expect to continue to grow over time. We limit the stock specific risk to the company through the equally weighted nature of the portfolio, which helped in 2021.

Chinese insurers have had a tough year, and **Ping An** is no exception. Consumer demand has been sluggish in a weaker macro environment and so demand for more expensive insurance protection products has been weak. Customers have instead shifted towards savings products but these are lower margin for Ping An. In response to the weak market, insurers have been letting go of part-time agents and are replacing them with fewer, but more qualified and productive full-time agents. Additionally, the market has been worried about Ping An's exposure to property. Ping An invested in the property developer China Fortune Land Development, which defaulted on its debt in March, and so Ping An took an impairment of RMB 36bn. We think the share price probably reflects the issues we have outlined and that the business is trying to increase productivity in the current environment.

Galaxy Entertainment operates casinos and hotels in Macau. Given China's zero-COVID policy, only domestic Chinese customers can enter Macau. But with COVID outbreaks over the year, it has been difficult for some domestic Chinese to move around the country. Therefore, it has been another weak year for the business.

Portfolio Changes

Sells

Conch Cement was sold as it was difficult to argue, with confidence, that earnings will meaningfully increase in the medium term. The long-term growth driver for the cement industry is ultimately driven by real estate and infrastructure and at least in the case of infrastructure, there are better names available. Conch Cement is a consolidator but is ultimately a price taker in the cement industry, and so has limited pricing power.

We sold **Shenzhen Expressway** as it was also difficult to identify the long-term structural growth drivers for the business. The company runs toll roads with revenue concentrated in Shenzhen and the broader Guangdong province. Though margins are relatively high, the business is very capital intensive and so asset turnover is low, resulting in a low overall return on capital.

We sold **Yuhong**, a manufacturer of waterproofing materials used in the construction industry. We believe the share price did not fully reflect the company's exposure to Evergrande, and therefore took profit on the stock. We still like the company and it remains on our watchlist as Yuhong's balance sheet is strong enough to weather a weaker year. At the time of the sale, there were more attractive ideas on the watchlist.

New Oriental Education and **Autohome** were also sold – please see the Laggards section on page 7 for details.

Buys

We bought **Xinyi Solar**, which is the world's largest manufacturer of solar glass and so through its economies of scale, has benefited as the low-cost producer in the industry. However its competitive advantage is not solely a function of its scale. The quality of Xinyi's glass is high relative to its peers so the company is well trusted by its clients. This is very important given the rising popularity of bifacial panels which need thinner and so more durable glass. Tighter emissions standards also raise the cost of production, as well as the barriers to entry, protecting incumbents such as Xinyi. Policymakers in all major regions around the world are aiming to significantly increase investment into renewable energy sources which should bode well for Xinyi.

Fuling Zhacai is a condiment company focused on the production of zhacai and paocai. Zhacai is made using mustard roots and is commonly eaten with rice and buns. Fuling Zhacai has a long history of manufacturing zhacai and has a market share of 36%. 28% of sales are from the South where the company is based but there is a fairly even split between the other major regions of China. Fuling Zhacai has been able to pass on cost increases to its customers which is a strong indicator of its pricing power, allowing the company to earn a high return on capital over time.

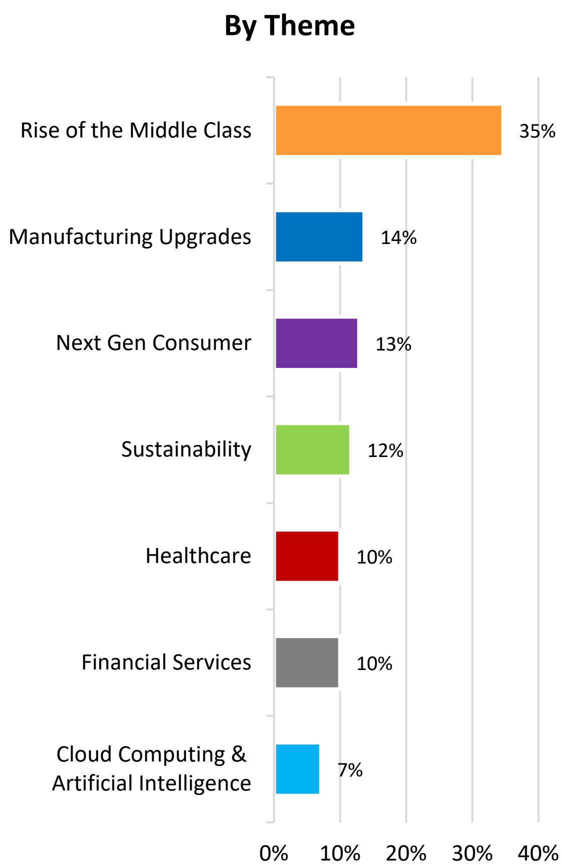
AIA gives the Fund exposure to the rising demand for premium life and health insurance. It is headquartered in Hong Kong and derives more than 50% of its revenue from the China region. AIA also has exposure to Southeast Asia, namely Thailand, Malaysia and Singapore. However, much of the future earnings growth is likely to come from mainland China. AIA is targeting the rising middle class in the country and we believe there is a lot of room for the company to grow from a relatively low base. AIA targets the premium end of the market, using its highly trained workforce which is viewed as giving some of the best service in the industry. This is backed up by AIA's very low turnover rate amongst its staff, relative to its competitors.

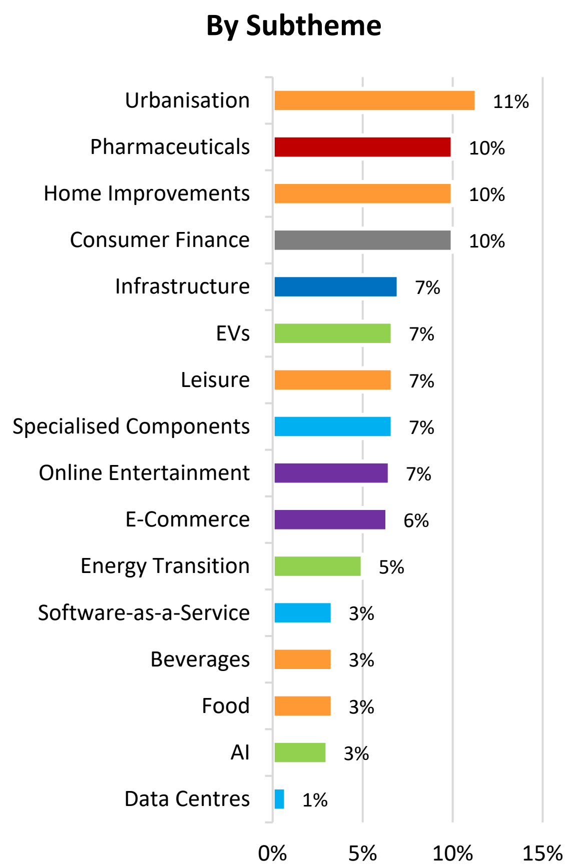
Shengyi Technology makes copper clad laminates (CCLs), which are the main base material for printed circuit boards (PCBs). It has benefited from multiple trends which point to greater demand for CCLs and PCBs: growing popularity of 5G compatible devices, growing demand for servers and cloud services as well as localisation towards Chinese suppliers in the Chinese market. Shengyi is quickly moving up the value chain, supporting a gradual rise in margins over time.

We bought **H&T Intelligent** which makes controllers used in applications such as household appliances and power tools. H&T's controllers are used in well-known brands such as Whirlpool, Siemens and Bosch. The company is well placed to take advantage of growing demand for the Internet of Things (IoT), which naturally complements the existing business. H&T is also aiming to expand into the automobile market where electronic control units, which are not too dissimilar from controllers, are becoming increasingly used.

Portfolio Positioning

By theme, the Fund's largest exposure are to the Rise of the Middle Class, followed by Manufacturing Upgrades and the Next Gen Consumer. Important subthemes include Urbanization, Pharmaceuticals, Home Improvements and Consumer Finance.

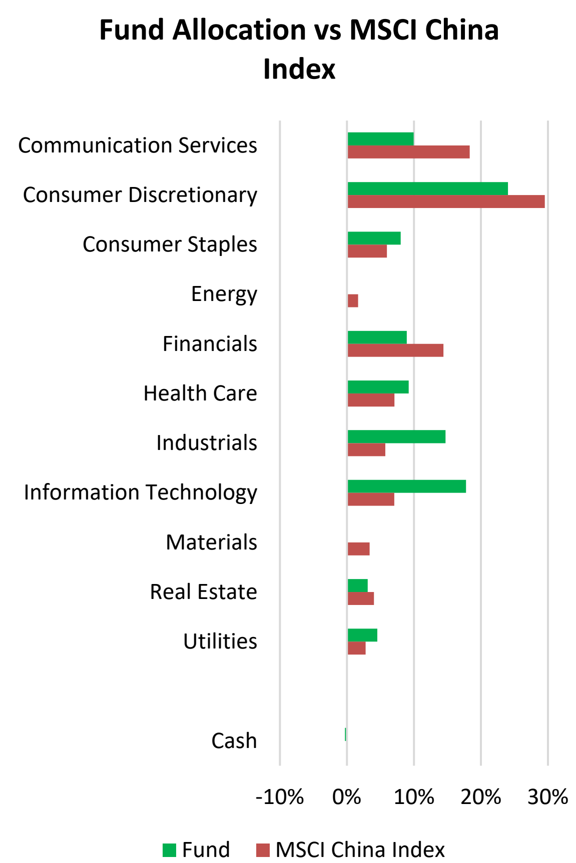


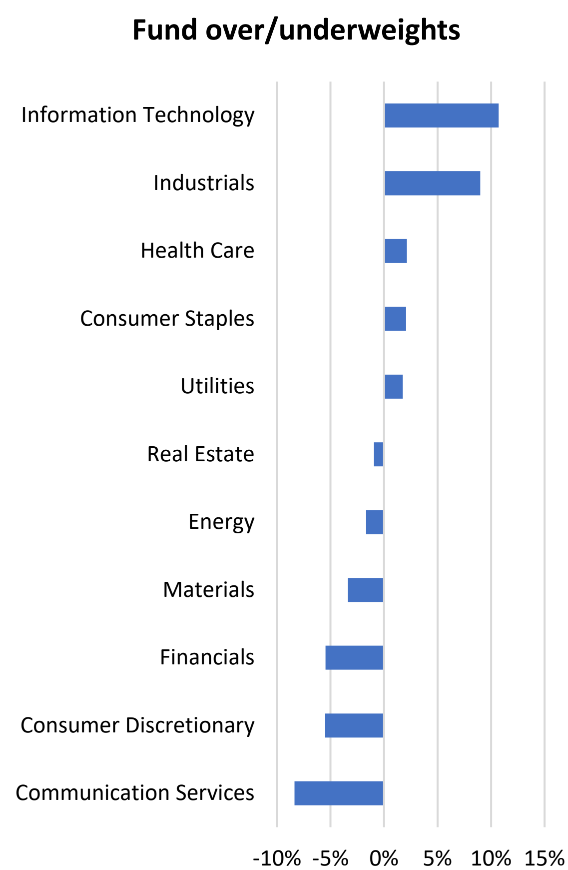


(Source: Guinness Atkinson Asset Management. As of 12/31/21)

On a sector basis, the Fund's largest exposures are to the Consumer Discretionary, Information Technology (IT) and Industrials sectors. Relative to the MSCI China Index, the Fund is overweight in IT and Industrials, and underweight in Communication Services and Consumer Discretionary sectors. On the surface, the Fund's IT weight is high but within this group of companies there are completely different businesses whose operations are unrelated. Based on the classifications below, we believe our IT holdings are well diversified.

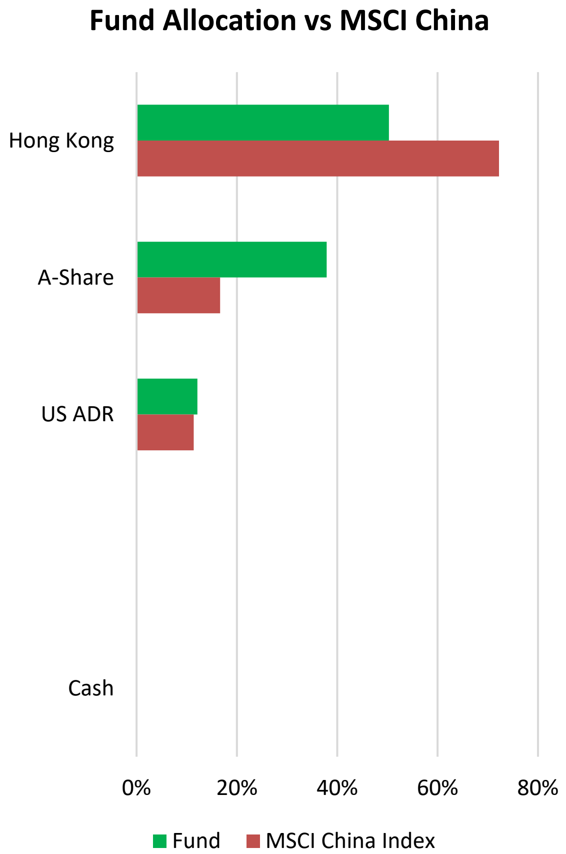
- Cybersecurity – Venustech, one of China's largest providers of cybersecurity services.
- Electric vehicle (EV) equipment – Lead Intelligent, supplier of equipment used to build out EV plants.
- Solar power – Xinyi Solar, world's largest supplier of glass used in solar panels.
- Copper clad laminates (CCLs) – Shengyi Technology, exposure to smartphones and servers.
- Controllers and IoT – H&T Intelligent, exposure to household appliances and power tools.

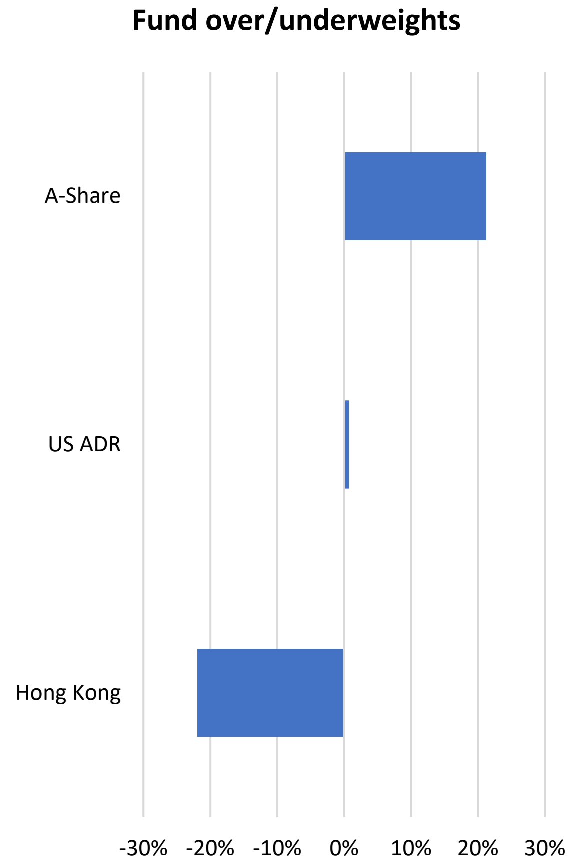




(Source: Guinness Atkinson Asset Management, Bloomberg, MSCI. As of 12/31/21)

On a listing basis, the Fund has 50% exposure to stocks listed in Hong Kong and 38% exposure to the A share market.





(Source: Guinness Atkinson Asset Management, Bloomberg, MSCI. As of 12/31/21)

Outlook

(Source: Guinness Atkinson Asset Management, Bloomberg. Data from 11/30/15 to 12/31/21. SD refers to standard deviation.)

Valuations for China have fallen significantly from their peak and are now at more reasonable levels. But to justify an investment in China, we argue lower valuations are not enough. Earnings growth is required to justify long-term returns and this is the component of shareholder return that we can attempt to control in the Fund.

The Fund is invested in quality, profitable companies which give exposure to the structural growth opportunities present in China. Our companies have in aggregate grown net income by 13% a year over the past 10 years i.e. they have shown they can translate the structural growth opportunities into consistent earnings growth. Our companies have done this while maintaining a high return on equity of 22%. To be clear, we are not interested in loss making, low return businesses which happen to be in boom areas.

Though our companies have, over the past 10 years, grown earnings by 13% a year, the market is expecting higher growth over the next two years. Based on consensus earnings estimates, the market is expecting earnings for the Fund’s holdings, in aggregate, to grow by 17% a year between 2020 and 2022, as China and the global economy recover from COVID.

What could lead to the global market paying more attention to China? In response to what is, by China’s standards, a weak macroenvironment, we think the government is likely to loosen fiscal and monetary policy in 2022. We expect this to lead to an improvement in growth and sentiment towards China, potentially leading to a rerating. Stability was the core theme at the Central Economic Work Conference (CEWC), a key event which sets the economic agenda for 2022. For the first time, the CEWC mentioned weaker expectations as a challenge facing the economy, and also mentioned a fall in demand for the first time since 2015. The CEWC called for government bodies to introduce pro-growth fiscal and monetary support. We expect this support to include front-loaded infrastructure investments, green energy investments, tax cuts and targeted monetary loosening. We expect some support for the property market which remains weak, but at the same time we do not see broad based easing. The CEWC maintained the line that housing is for living, not for speculation, so we do not see the government aggressively easing monetary policy either.

For this reason, if we are right in assuming that more supportive government policies could improve the Chinese economy, we can see investors paying more attention to China at some point in 2022. The Fund is invested in good quality businesses which give exposure to the growth opportunities in China. Currently these companies are out of favor, but this could change for the aforementioned reasons. We believe that at today's prices, it is a good entry point to invest in the Fund. The Fund is supported by strong historic earnings growth which we expect to continue, potentially boosted by a valuation rerating if China becomes a more popular investment destination.

Performance

As of 12/31/2021	1 Year	3 Year	5 Year	10 Year
China & Hong Kong Fund (ICHKX)	-6.71%	11.58%	10.53%	6.48%
Hang Seng Composite Index TR	-13.89%	4.80%	6.99%	6.96%
MSCI China Net Total Return Index	-21.72%	7.76%	9.35%	7.16%

All returns over 1 year annualized. *Source: Bloomberg, Guinness Atkinson Asset Management.*

Expense Ratio: 1.60%

Performance data quoted represents past performance; past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance of the Fund may be lower or higher than the performance quoted. To obtain performance as of the most recent month end, please visit www.gafunds.com or call 1-800-915-6565. Total returns reflect a fee waiver in effect and in the absence of this waiver, the total returns would be lower. Performance data does not reflect the 2% redemption fee for shares held less than 30 days and, if deducted the fee would reduce the performance noted.

The Fund's investment objectives, risks, charges and expenses must be considered carefully before investing. The statutory and summary prospectus contains this and other important information about the investment company, and it may be obtained by calling 800-915-6566 or visiting gafunds.com. Read it carefully before investing.

Investments in foreign securities involve greater volatility, political, economic and currency risks and differences in accounting methods. These risks are greater for emerging markets countries. The China and/or Hong Kong stock markets in which the Fund invests may experience periods of volatility and instability. These fluctuations may cause a security to be worth less than it was at the time of purchase. Market risk applies to individual securities, a particular sector or the entire economy. China and/or Hong Kong stocks may fall out of favor with investors, the value of Chinese currencies may decline relative to the U.S. dollar and/or China or Hong Kong stock markets may decline generally. The Fund invests in invest in small-cap or mid-cap, which involve additional risks such as limited liquidity and greater volatility, than investments in larger companies.

One cannot invest directly in an Index.

Themes:

The **Rise of the Middle Class** refers to the opportunity set as China's middle class continues to grow in size and wealth. A company falls within this theme if it gives exposure to Food, Home Improvements, Beverages, Urbanization, Leisure or Education.

Sustainability refers to China's efforts to reduce its carbon output and to reduce its impact to the environment. A company falls within this theme if it gives exposure to the ongoing energy transition, electric vehicles or waste reduction.

Next Gen Consumer refers to new ways of consumption. A company falls within this theme if it gives exposure to E-Commerce or Online Entertainment.

Active share measures the extent of active management in a portfolio compared to the corresponding benchmark listed.

Forward P/E is a measure of the P/E using forecasted earnings for the P/E calculation.

Hang Seng Composite Total Return Index is a market capitalization weighted index that monitors the performance of stocks listed in Hong Kong.

MSCI China Index captures large and mid cap representation across China A shares, H shares, B shares, Red chips, P chips and foreign listings (e.g. ADRs). With 703 constituents, the index covers about 85% of this China equity universe.

MSCI Hong Kong Index is a capital weighted stock index designed to measure the performance of the large and mid cap segments of the Hong Kong market. It has 48 constituents and covers approximately 85% of the free float-adjusted market capitalization of Hong Kong equity stocks.

MSCI Emerging Markets Index is used to measure equity market performance in global emerging markets.

Shenzen Component Index, also known as SZSE Index, is an index of 500 stocks that are traded at the Shenzhen Stock Exchange (SZSE).

Shanghai Composite Index, also known as SSE Index, is a stock market index of all stocks that are traded at the Shanghai Stock Exchange.

Opinions expressed are subject to change, are not a guarantee and should not be considered investment advice. Past performance is not indicative of future results.

Standard deviation measures the variation of a set of values around its mean.

Top Fund Holdings as of 12/31/21:

1. NARI Technology Co Ltd	6.11%
2. China Resources Gas Group Ltd	4.54%
3. Inner Mongolia Yili - A Shares	4.30%
4. NetEase Inc - ADR	4.28%
5. Haier Smart Home Co Ltd	4.17%

6. Shenzhen H&T Intelligent Control Co., Ltd. 4.10%
7. Chongqing Fuling Zhacai Group Co Ltd 3.72%
8. China Merchants Bank Co Ltd - H Shares 3.69%
9. JD.com Inc 3.67%
10. Venustech Group Inc 3.65%

Fund holdings and sector allocations are subject to change and are not recommendations to buy or sell any security.

Distributed by Foreside Fund Services, LLC.