

# Annual Report

December 31, 2022

- **Alternative Energy Fund**
- **Asia Focus Fund**
- **China & Hong Kong Fund**
- **Global Energy Fund**
- **Global Innovators Fund**
- **Renminbi Yuan & Bond Fund**

Guinness Atkinson™ Funds  
Annual Report

December 31, 2022

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Dear Guinness Atkinson Funds Shareholders,

Like most, we're hoping for better things in 2023. This last year was trying. But as difficult as it was, and to be clear, it was very difficult, we remained calm with the knowledge that we've been here before and that things will get better. As it turns out, early in 2023 things are indeed much better. Will the buoyancy we've experienced in the financial markets the first six weeks of 2023 last throughout the year? We have good reason to be hopeful.

Writing these letters each year affords an opportunity for reflection. As we look at our previous letters, we recognize that we occasionally need to report on a poor, or indeed, a very poor year. Most of the time, the subsequent years are generally much improved. We also notice that often the year's worst performer in the Guinness Atkinson Fund range has a way of being among the following year's leaders. We offer these thoughts as observations not predictions.

This year marks the 30th year for this Fund family; the China & Hong Kong Fund was launched in 1994. It also marks the 25th year for the Global Innovators Fund which was launched in 1998. We mention this because we are quite aware that many of our shareholders have been with us for multiple decades including many that have been with us since the very beginning. We don't often get the opportunity to acknowledge this and to offer our thanks for your support. We are appreciative of your confidence, and we are thankful.

The performance tables adjacent to this letter provides the details for the performance and Morningstar ratings for each of the Guinness Atkinson Funds. Not surprising, only the Global Energy Fund produced a positive total return for the year.

Throughout this report are detailed commentaries on each of the Guinness Atkinson Funds prepared by our portfolio managers.

As usual, we appreciate the confidence you have placed in us and our management team and look ahead to what we hope is a great 2023.

We encourage you to visit [gafunds.com](http://gafunds.com) for the latest news and announcements on the Guinness Atkinson Funds.

*Performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment in the Fund 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. Performance data current to the most recent month-end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com), or calling (800) 915-6565.*

*Mutual fund investing involves risk. Principal loss is possible.*

Sincerely,

Timothy Guinness

James Atkinson

The table below provides total return data for each of the Funds over the one, three, five, ten year and from inception periods through December 31, 2022. Also included in the table is the expense ratio data from the most recent prospectus dated May 1, 2022.

Fund (inception date)	1-year	3-year	5-year	10-year	Since Inception	Expense Ratio
Alternative Energy Fund (March 31, 2006)	-12.67%	20.85%	14.20%	9.07%	-3.64	1.98% net 1.73% gross
Asia Focus (April 29, 1996)	-28.03%	-5.31%	-2.69%	1.27%	2.60%	1.98% net 1.89% gross
China & Hong Kong (June 30, 1994)	-23.71%	-6.56%	-3.29%	2.26%	5.79%	1.50%
Global Energy Fund (June 30, 2004)	34.33%	8.86%	2.92%	0.60%	5.75%	1.45% net; 1.99% gross
Global Innovators Fund Investor Class (December 15, 1998)	-29.67%	5.18%	5.81%	11.99%	7.73%	1.24% net; 1.17% gross
Global Innovators Fund Institutional Class (December 31, 2015)	-29.51%	5.44%	6.07%	12.19%	7.81%	0.99%
Renminbi Yuan & Bond Fund (June 30, 2010)	-9.20%	0.64%	0.66%	0.92%	1.14%	0.90% net; 2.29% gross

Periods of greater than one year are average annualized returns; one year and shorter period returns are actual returns. All returns are for the periods ending December 31, 2022.

**Performance data shown for the Global Innovators, Institutional Class (GINNX), prior to its launch date on December 31, 2015, uses performance data from the Global Innovators, Investor Class (IWIRX).**

*Performance data quoted represents past performance and 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 the original cost. Current performance of the Funds may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com).*

Each of the Asia Focus Fund, the China & Hong Kong Fund, and the Renminbi Yuan & Bond Fund imposes a 2% redemption fee on shares held less than 30 days. Performance data quoted does not reflect this fee. If it had, total return would be lower.

Expense ratios are from the most recent prospectus (dated May 1, 2022) and are from the most recent audited financials (period ending December 31, 2021) at the time that prospectus was completed.

The Adviser has contractually agreed to reduce its fees and/or pay Fund expenses in order to limit the Fund's Total Annual Operating Expenses to through June 30, 2025. Total returns reflect a fee waiver in effect & in the absence of this waiver, the total returns would be lower.

#### Morningstar Ratings Through December 31, 2022

Fund	Category	Overall	3-Year	5-Year	10-Year
Alternative Energy	Global Small/Mid Stock	4 ★★★★★ (127 funds)	5 ★★★★★ (127 funds)	5 ★★★★★ (110 funds)	3 ★★★★★ (70 funds)
Asia Focus	Pacific/Asia ex-Japan	1 ★ (48 funds)	1 ★ (48 funds)	1 ★ (44 funds)	1 ★ (32 funds)
China & Hong Kong	China Region	3 ★★★★★ (95 funds)	2 ★★ (95 funds)	3 ★★★★★ (77 funds)	3 ★★★★★ (52 funds)
Global Energy	Energy Equity	3 ★★★★★ (68 funds)	3 ★★★★★ (68 funds)	3 ★★★★★ (66 funds)	3 ★★★★★ (53 funds)
Global Innovators Investor Class	Global Large Growth	4 ★★★★★ (309 funds)	3 ★★★★★ (309 funds)	3 ★★★★★ (272 funds)	5 ★★★★★ (179 funds)
Global Innovators Institutional Class	Global Large Growth	3 ★★★★★ (309 funds)	3 ★★★★★ (309 funds)	3 ★★★★★ (272 funds)	5 ★★★★★ (179 funds)
Renminbi Yuan & Bond	Emerging Markets Local Currency Bond	5 ★★★★★ (75 funds)	5 ★★★★★ (75 funds)	5 ★★★★★ (70 funds)	5 ★★★★★ (54 funds)

#### Morningstar Ratings Disclosure

Global Innovators Fund ratings shown were given for the Investor Share Class.

For each fund with at least a three-year history, Morningstar calculates a Morningstar Rating™ based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a fund's monthly performance (including the effects of sales charges, loads, and redemption fees), placing more emphasis on downward variations and rewarding consistent performance. The top 10% of funds in each category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars and the bottom 10% receive 1 star. (Each share class is counted as a fraction of one fund within this scale and rated separately, which may cause slight variations in distribution percentages.)

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## GUINNESS ATKINSON FUNDS

### Expense Examples (Unaudited)

As a shareholder of the Funds, you incur two types of costs: (1) redemption fees (applicable to the Asia Focus Fund, the Asia Pacific Dividend Builder Fund, the China & Hong Kong Fund, and the Renminbi Yuan & Bond Fund); and (2) ongoing costs, including advisory fees and other Fund expenses. The examples below are intended to help you understand your ongoing costs (in dollars) of investing in the Funds and to compare these costs with the ongoing costs of investing in other mutual funds.

The examples are based on an investment of \$1,000 invested at the beginning of the period shown and held for the entire period from July 01, 2022, to December 31, 2022.

#### Actual Expenses

For each Fund, the first line of the table below provides information about actual account values and actual expenses. You may use the information in this line, together with the amount you invested, to estimate the expenses that you paid over the period. Simply divide your account value by \$1,000 (for example, an \$8,600 account value divided by \$1,000 = 8.6), then multiply the result by the number in the first line under the heading entitled “Expenses Paid during Period” to estimate the expenses you paid on your account during this period.

#### Hypothetical Example for Comparison Purposes

For each Fund, the second line of the table below provides information about hypothetical account values and hypothetical expenses based on the Fund’s actual expense ratios and an assumed rate of return of 5% per year before expenses, which is not the Fund’s actual return. The hypothetical account values and expenses may not be used to estimate the actual ending account balance or expenses you paid for the period. You may use this information to compare the ongoing costs of investing in the Fund and other funds. To do so, compare this 5% hypothetical example with the 5% hypothetical examples that appear in the shareholder reports of the other funds.

*Please note that the expenses shown in the table are meant to highlight your ongoing costs only and do not reflect any redemption fees. Therefore, the second line for each Fund of the table is useful in comparing ongoing costs only and will not help you determine the relative total costs of owning different funds. In addition, if these redemption fees were included, your costs would have been higher.*

	Beginning Account Value (07/01/2022)	Ending Account Value (12/31/2022)	Expenses Paid During Period* (07/01/2022 to 12/31/2022)	Expense Ratios During Period* (07/01/2022 to 12/31/2022)
Guinness Atkinson Alternative Energy Fund Actual	\$1,000.00	\$1,120.50	\$10.58	1.98%†
Guinness Atkinson Alternative Energy Fund Hypothetical (5% return before expenses)	\$1,000.00	\$1,015.22	\$10.06	1.98%†
Guinness Atkinson Asia Focus Fund Actual	\$1,000.00	\$896.20	\$ 9.46	1.98%†
Guinness Atkinson Asia Focus Fund Hypothetical (5% return before expenses)	\$1,000.00	\$1,015.22	\$10.06	1.98%†
Guinness Atkinson China & Hong Kong Fund Actual	\$1,000.00	\$858.40	\$ 8.29	1.77%
Guinness Atkinson China & Hong Kong Fund Hypothetical (5% return before expenses)	\$1,000.00	\$1,016.28	\$ 9.00	1.77%
Guinness Atkinson Global Energy Fund Actual	\$1,000.00	\$1,163.50	\$ 7.96	1.46%†
Guinness Atkinson Global Energy Fund Hypothetical (5% return before expenses)	\$1,000.00	\$1,017.85	\$ 7.43	1.46%†
Guinness Atkinson Global Innovators Fund – Investor Class Actual	\$1,000.00	\$993.70	\$ 6.23	1.24%†
Guinness Atkinson Global Innovators Fund – Investor Class Hypothetical (5% return before expenses)	\$1,000.00	\$1,018.95	\$ 6.31	1.24%†
Guinness Atkinson Global Innovators Fund – Institutional Class Actual	\$1,000.00	\$994.60	\$ 4.98	0.99%†
Guinness Atkinson Global Innovators Fund – Institutional Class Hypothetical (5% return before expenses)	\$1,000.00	\$1,020.21	\$ 5.04	0.99%†
Guinness Atkinson Renminbi Yuan & Bond Fund Actual	\$1,000.00	\$969.60	\$ 4.47	0.90%†
Guinness Atkinson Renminbi Yuan & Bond Fund Hypothetical (5% return before expenses)	\$1,000.00	\$1,020.67	\$ 4.58	0.90%†

## **GUINNESS ATKINSON FUNDS**

### **Expense Examples (Unaudited)**

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\* Expenses are equal to the Funds' annualized expense ratio as indicated, multiplied by the average account value over the period, multiplied by the number of days in most recent fiscal half-year period (184), then divided by the number of days in the fiscal year (365) (to reflect the one-half year period).

† Net of fee waivers and expenses absorbed/recaptured. If those fee waivers and expenses absorbed/recaptured had not been in effect, the Fund's actual expenses would have been higher/lower.

**GUINNESS ATKINSON ALTERNATIVE ENERGY FUND**  
**ANNUAL REPORT FOR THE PERIOD ENDED**  
**DECEMBER 31, 2022**

**1. PERFORMANCE**

AVERAGE ANNUALIZED TOTAL RETURNS	1 YEAR	3 YEARS	5 YEARS	10 YEARS
FUND	-12.67%	20.85%	14.20%	9.07%
BENCHMARK INDEX:				
MSCI WORLD INDEX (NET RETURN)	-18.14%	4.94%	6.13%	8.85%

Gross 1.73% & Net 1.98%. The Adviser has contractually agreed to reduce its fees and/or pay Fund expenses in order to limit the Fund's Total Annual Operating Expenses to 1.98% through June 30, 2025.

For the Fund's current one-year expense ratios, please refer to the Financial Highlights section of this report.

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The key takeaways for the Fund from 2022 are as follows:

- In 2022 the Fund produced a total return (USD) of -12.67% vs the MSCI World Index (net return) of -18.14%. The Fund therefore outperformed the index by 5.47% over the period.
- The energy transition accelerated in 2022 as a result of the Russian invasion of Ukraine and the increasing importance of energy security
- The REPower EU Plan and Inflation Reduction Act were announced during the year and are significant supporting policy measures
- Despite raw material and energy inflation, we see better relative economics of sustainable energy generation versus fossil fuels
- Solar, wind, EV and energy efficiency activity grew ahead of our expectations at the start of the year
- Strongest performers were solar equipment manufacturers and US domiciled companies while our electric vehicle holdings and Chinese companies were weakest

**2. REVIEW**

In 2022, **energy security** has become arguably the most important catalyst driving the energy transition, reflecting governments' desire to reduce reliance on fossil fuels, whose prices spiked due to Russia's invasion of Ukraine. This energy crisis is accelerating the transition towards sustainable energy sources that help to reduce energy-importing nations' reliance on fossil fuel imports.



Much of the key policy support for the energy transition in 2022 was enacted with a focus on improved energy security, including:

- **The REPowerEU deal** which was passed as a direct response to the invasion of Ukraine. The EU intends to invest €210bn between 2022-27 and a total of €300bn by 2030 with a particular focus on renewable energy generation (€86bn) and energy efficiency (€97bn).
- **The Inflation Reduction Act (IRA)** which included \$369bn of direct funding and simplified, extended 10-year tax credits that target climate and energy security across electricity generation, transport, industrial manufacturing, buildings, and agriculture. The incentives may help increase US utility-scale annual solar installations by 5x and US wind installations by 2x over the next three or four years compared to 2020 levels.

Supporting these two significant policy steps were the **Chinese 14<sup>th</sup> renewable energy plan** and the **COP27 climate conference**. The Chinese plan targets a 50% increase in renewable energy generation in 2025 (versus 2020) while the COP27 conference kept the higher end of the ambition of the Paris Agreement (a 1.5° temperature increase target) although was short on specific new targets.

While energy transition growth plans were ratcheted higher, the actual pace of the transition in 2022 also accelerated. We saw around 380 GW of new **renewable generation capacity** installed, 90 GW higher than the record installations seen in 2021 and around double the 194 GW installed in 2019. Solar represented nearly two-thirds of the new capacity additions, with wind installations at around 25% and hydro in third place. **Renewable electricity generation** increased by around 7% to over 8,500 TWh, outpacing global electricity demand growth (estimated at 3% in 2022). **Electric vehicle sales** surged, reaching around 13% of global light auto sales, up from just over 3% in 2020 driven by China (60% of the market) with Europe now a distant second.

**High energy prices catalysed the need for efficiency** and the IEA estimates that global energy intensity improved by 2% in 2022. This is meaningfully higher than the 0.5-0.6% levels seen in the pandemic years but still not enough to hit net zero by 2050, according to the IEA. Investment into energy efficiency reached \$560bn in 2022 (versus \$400bn pa from 2015-2020).

The disruption to energy markets in 2022 brought sharp **energy price inflation** to the world economy. Companies involved in the manufacturing of sustainable energy equipment were not immune to these inflationary pressures, with energy inflation eclipsing the post-COVID raw material cost inflation and supply chain issues that have started to abate. While inflation was acute in the key battery metals of lithium and nickel, battery companies were able to adjust their cathode chemistries and deliver economies of scale, helping to contain battery price increases at 7% in 2022, leading to prices being broadly flat versus 2020.

Whilst inflationary pressures increased the cost of installing and generating renewable power in 2022, we observe that **renewable energy generation continued to become relatively more economic than fossil fuels** as the year progressed. Improved relative economics as well as security of supply considerations will help to sustain strong demand for sustainable energy activities during any potential global recession.

Against this backdrop, the **Guinness Atkinson Alternative Energy Fund** delivered a total return (USD) of -12.67%, outperforming the MSCI World Index (net return) at -18.14%. Solar equipment manufacturers were the strongest performing subsector, whilst our electrification sub sector (including electric vehicle-oriented companies) was the weakest. Eight of our top ten performing stocks were US listed companies, reflecting a strong positive swing in sentiment after the passage of the IRA. Three of the eight weakest performers were Chinese (Hong Kong) listed entities, reflecting the negative economic momentum and poor sentiment in that market.

### 3. ACTIVITY

During the period, we exited our position in Hella, Albioma, TransAlta Renewables and SiemensGamesa and replaced them with positions in Eaton, Trane Technologies and Sunnova Energy International.

The portfolio was actively rebalanced during the period and, over the year, the weighting to consumption (i.e. the demand side of the energy transition) increased to 44.1% at the end of December 2022 while the weighting to renewables (i.e. supply side) fell to 50.3%.

#### 4. PORTFOLIO POSITIONING

At 31 December 2022, the **Guinness Atkinson Alternative Energy Fund** traded on a 2023 P/E ratio of 19.1x and 2023 EV/EBITDA multiple of 11.6x (around 10-20% lower than the same one year forward metrics published in our last annual outlook). The fund trades at a premium to the MSCI World, reflecting greater expectation for growth from sustainable energy companies relative to the index. As a sense check, we see that consensus EPS growth (2021-2024E) of the portfolio (at 18.8%pa) is well ahead of the MSCI World (at 7.2%pa).

The growth outlook for the sector has improved in 2022 and the growth premium of the fund versus the MSCI World (11.6%pa) is markedly higher than the 7.8%pa growth premium at the start of the year. Looking over the next five years, we believe that the portfolio is likely to deliver normalised earnings growth of around 14%pa, well ahead of growth in the MSCI World Index, that will bring the fund P/E ratio down from the current 19.1x for 2023E to around 13x in 2026E.

#### 5. OUTLOOK

Looking ahead to 2023 and beyond, we expect further acceleration of the transition:

- On the supply side of the energy transition, the IEA is forecasting that **renewable power additions** over the coming five years will be just over 2,400 GW; a 30+% increase on its previous five-year forecast and their largest upward revision. The world is set to add as much renewable capacity in the next five years as it did in the past 20 years, equivalent to the entire current power capacity of China.
- The IEA has described **solar power** as “the cheapest electricity in history” and large-scale solar remains at the bottom end of the cost curve. Globally, we expect solar installations to grow in 2023 by 50 GW to around 310 GW, with all key regions seeing higher installations across a broader spread of countries. Polysilicon prices have peaked, bringing cost relief for cell and module manufacturers, supporting consumer demand.
- Global **wind** installations are expected to grow in 2023 to a record level of 113 GW, driven by global policy support in China, Europe and the US. The raw material and supply chain issues of 2021 and 2022 will increasingly turn into tailwinds, helping to keep installations at the current high levels and give us confidence to increase our long-term installation rate estimates. We believe that global wind capacity should nearly triple by 2030 (20%pa growth from 2021) with offshore wind growing nearly five times.
- **EV sales should reach 12-13 million in 2023**, representing around 15% of total passenger vehicle sales, taking the global EV stock to nearly 30 million vehicles. Improved economics, better range and quicker charging times are the key drivers of improved EV sales. The end of Chinese EV subsidies in January 2023 could well affect demand this year.
- **Battery demand** for use in EVs and energy storage will accelerate further in 2023 despite battery metal prices remaining at elevated levels. Moderation of commodity prices, improvements to cell chemistry and efficiency improvements in battery pack design and manufacturing will help in achieving the \$100/kWh level at which mass market EVs become affordable. This tipping point is likely delayed to 2027.

The outlook we summarise here is broadly consistent with current government activity and observable investment plans. To be clear, however, the growth described falls well short of the energy transition activity needed to achieve a **net zero / 1.5 degree scenario** in 2050, as targeted by the IPCC and reiterated at COP27. In a net zero scenario, the deployment of renewable generation capacity, penetration of EVs and battery storage, use of alternative fuels and implementation of energy efficiency measures will need to accelerate markedly.

We expect investor interest in sustainable energy equities will continue to be high in 2023 reflecting the importance of energy security and increased individual, social and government pressures for consumers to become more energy efficient and for producers to increase their share of sustainable energy generation. We believe that the Guinness Atkinson Alternative Energy portfolio of 30 equally weighted equities, chosen from our universe of around 250 companies, provides concentrated exposure to the theme at attractive valuation levels. The Fund is positioned to benefit from this attractive outlook for sustainable energy.

***Portfolio managers***

***Jonathan Waghorn and Will Riley***

***January 2023***

**The Fund invests in foreign securities, which involves political, economic and currency risks, greater volatility, and differences in accounting methods. These risks are greater for emerging markets. The Fund's focus on the energy sector to the exclusion of other sectors exposes the Fund to greater market risk and potential monetary losses than if the Fund's assets were diversified among various sectors. The Fund invests in smaller companies, which involves additional risks such as limited liquidity and greater volatility.**

The MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets. Net Return reflects deduction for withholding tax but reflects no deduction for fees and expenses. Net Return is net of local withholding taxes that any investor would pay. This index is unmanaged, not available for investment and does not incur expenses.

PER or P/E – Price to Earnings ratio is calculated by dividing current price of the stock by the company's trailing months' earnings per share.

EV/EBITDA multiple - The enterprise value (EV) to earnings before interest, taxes, depreciation, and amortization (EBITDA) ratio is calculated by dividing EV by EBITDA or earnings before interest, taxes, depreciation, and amortization.

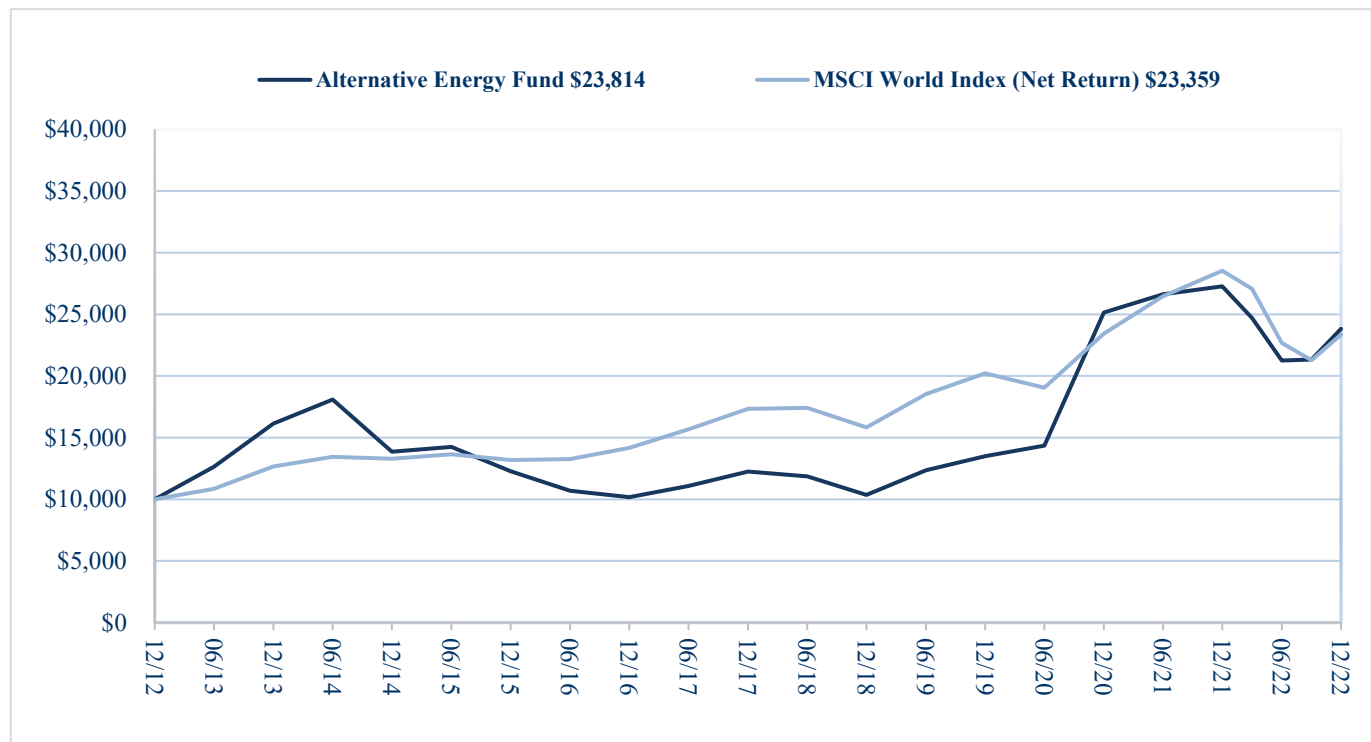
EPS – Earnings per Share.

Please refer to the Schedule of Investments for details on Fund holdings. *Current and future portfolio holdings are subject to risk.*

The information provided herein represents the opinion of Guinness Atkinson Asset Management, Inc. for the period stated and is not intended to be a forecast of future events, a guarantee of future results, or investment advice. Opinions, Fund holdings and sector allocations are subject to change at any time, and are not recommendations to buy or sell any security.

## Alternative Energy Fund

### Growth of \$10,000 (Unaudited)



### Average Annual Total Return Periods Ended December 31, 2022

One Year	Five Years	Ten Years
-12.67%	14.20%	9.07%

*Performance data quoted represents past performance and 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. Performance data current to the most recent month end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com).*

Total returns for certain periods reflect a fee waiver in effect and in the absence of this waiver, the total returns would be lower. Returns reflect the reinvestment of distributions made by the Fund, if any. The graph and the performance table above do not reflect the deduction of taxes that a shareholder would pay on Fund distribution or the redemption of Fund shares.

The MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets. Net Return reflects deduction for withholding tax but reflects no deduction for fees and expenses. Net Return is net of local withholding taxes that any investor would pay.

**FUND HIGHLIGHTS at December 31, 2022**  
**GUINNESS ATKINSON ALTERNATIVE ENERGY FUND**

		<b>Fund Managers:</b>	
# of Holdings in Portfolio:	29	Will Riley	
Portfolio Turnover:	17.8%	Jonathan Waghorn	
% of Stocks in Top 10:	42.6%		

<b>Top 10 Holdings (% of net assets)</b>	
Iberdrola SA	5.3%
Nextera Energy Inc.	4.7%
First Solar Inc.	4.5%
Infineon Technologies AG	4.2%
Trane Technologies PLC	4.1%
Schneider Electric SE	4.1%
Vestas Wind Systems A/S	4.0%
Eaton Corp. PLC	4.0%
Samsung SDI Co., Ltd.	3.9%
Ormat Technologies Inc.	3.8%

<b>Geographic Breakdown (% of net assets)</b>			
United States	47.1%	Denmark	4.0%
South Korea	7.7%	Sweden	3.5%
China	7.0%	Ireland	3.2%
Spain	5.3%	United Kingdom	3.1%
Germany	4.2%	Canada	3.0%
France	4.1%	Israel	2.1%

**GUINNESS ATKINSON ALTERNATIVE ENERGY FUND**
**Schedule of Investments**
**at December 31, 2022**

Shares	Common Stocks: 94.3%	Value
	<b>Electrification: 29.4%</b>	
9,394	APTIV PLC	\$ 874,863
14,479	Gentherm Inc.*	945,334
37,880	Infineon Technologies AG	1,152,852
33,018	Johnson Matthey PLC	849,037
2,151	LG Chem Ltd.	1,025,022
16,584	ON Semiconductor Corp.*	1,034,344
2,298	Samsung SDI Co., Ltd.	1,078,646
25,305	Sensata Technologies Holding*	1,021,816
80,000	Tianneng Power International	84,453
		<u>8,066,367</u>
	<b>Energy Efficiency: 14.7%</b>	
16,322	Ameresco PLC*	932,639
4,298	Hubbell Inc.	1,008,655
103,462	Nibe Industrier AB - B Shares	962,783
6,735	Trane Technologies PLC	1,132,086
		<u>4,036,163</u>
	<b>Renewable Energy Generation: 19.9%</b>	
593,000	China Longyuan Power Group Corp. - H Shares	724,769
1,348,000	China Suntien Green Energy Corp. Ltd. - H Shares	561,267
124,749	Iberdrola SA	1,459,634
15,548	Nextera Energy Inc.	1,299,813
12,003	Ormat Technologies Inc.	1,038,019
20,499	Sunnova Energy International Inc.*	369,187
		<u>5,452,689</u>
	<b>Renewable Equipment Manufacturing: 30.3%</b>	
26,552	Canadian Solar Inc.*	820,457
6,926	Eaton Corp PLC	1,087,036
3,350	Enphase Energy Inc.*	887,616
8,186	First Solar Inc.*	1,226,181
14,157	Itron Inc.*	717,052
7,972	Schneider Electric SE	1,115,568
2,000	Solaredge Technologies Inc.*	566,540
16,282	TPI Composites Inc.*	165,099
37,938	Vestas Wind Systems A/S	1,103,728
584,200	Xinyi Solar Holdings Ltd.	646,654
		<u>8,335,931</u>

The accompanying notes are an integral part of these financial statements.



**GUINNESS ATKINSON ALTERNATIVE ENERGY FUND**  
**Schedule of Investments**  
**at December 31, 2022**

Shares	Common Stocks: 94.3%	Value
	<b>Total Common Stocks</b> (cost \$25,768,356)	<u>\$ 25,891,150</u>
	<b>Total Investments in Securities</b> (cost \$25,768,356): 94.3%	<u>25,891,150</u>
	Other Assets less Liabilities: 5.7%	<u>1,577,044</u>
	<b>Net Assets: 100.0%</b>	<u><b>\$ 27,468,194</b></u>

\* *Non-income producing security.*  
*PLC - Public Limited Company*

The accompanying notes are an integral part of these financial statements.

**GUINNESS ATKINSON ASIA FOCUS FUND  
ANNUAL REPORT FOR THE PERIOD ENDED  
DECEMBER 31, 2022**

**1. PERFORMANCE**

AVERAGE ANNUALIZED TOTAL RETURNS	1 YEAR	3 YEARS	5 YEARS	10 YEARS
FUND	-28.03%	-5.31%	-2.69%	1.27%
<b>BENCHMARK INDEX:</b>				
MSCI AC FAR EAST FREE EX JAPAN INDEX (NET RETURN)	-21.57%	-3.26%	-1.70%	2.98%

(All performance data given in USD terms)

Gross 1.89% & Net 1.98%; The Adviser has contractually agreed to reduce its fees and/or pay Fund expenses in order to limit the Fund's Total Annual Operating Expenses to 1.98% through June 30, 2025.

*For the Fund's current one-year expense ratio, please refer to the Financial Highlights section of this report.*

*Performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment in the Fund 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. Performance data current to the most recent month-end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com), or calling (800) 915-6565.*

The Fund fell -28.03% in 2022 compared to the benchmark which fell 21.57%.

The under-performance of the Fund, which mainly occurred in the second half of the year is attributable to the sharp declines in China growth stocks. However, on a more positive note the situation in China changed significantly from the end of October, after which the Fund began to climb and to outperform and this has carried on into January.

For most of 2022 concerns around China dominated and centred on Covid policy, regulation, the property sector, monetary policy and geopolitics. China was being discussed in some quarters as being 'uninvest-able'. In a hectic few weeks following the Party Congress and the confirmation of Xi Jinping's third term as leader, China shifted on all five. On Covid, the shift could not have been more profound – from zero-COVID to the removal of all restrictions. In all other areas there were substantive changes: technology regulation retreated with new IPOs permitted and the take-up by the state of 'golden shares' giving it board representation; monetary support for the struggling property developers; a re-focus on accelerating economic growth with funds to back it; and a more conciliatory diplomatic drive caused investors to switch their focus from high risk to cheap valuations.

The technology and semiconductor sector, alongside the consumer sector, is an important structural growth theme for the region. Last year, the story was one of chip supply shortages with customers scrambling to secure supplies and build inventory while manufacturers were looking to increase production capacity significantly. In 2022, the story has moved on with the focus shifting onto the outlook for demand. In the personal computer (PC) segment for example, there has been heavy inventory build in processors while at the same time, sales forecasts for PCs have slowed. According to International Data Corporation (IDC) global shipments of PC are expected to have fallen by almost 45 million units to 305 million and tablet shipments by 11.5 million units to 157 million. There is a similar story for smartphones, with 2022 sales expected to be down 9% on 2021, a drop of 124 million units.

This is not a panic moment for the sector which will adjust, but it does help explain the stream of weaker news from the chip manufacturers and the equipment makers. The designers and makers of processors, modems, screen controllers and memory, to list just some examples of the those especially exposed to consumer electronics, have seen meaningful drops in revenue in recent quarters. Those technology manufacturers, including semiconductor makers, that supply into industrial applications, infrastructure, data centres and servers or into newer areas such as sustainable energy and electric vehicles have seen steadier demand.

Consumer Price Inflation (CPI) has not been as pressing in Asia as it has been in developed markets. It is true to say that in certain markets such as Indonesia and Korea inflation has breached 5% (India's reached 7.8% but that is in the context of a 3-year average of 6.2%) but for the most part inflation has not gone much above 4%. Chinese economic weakness has kept CPI close to, or below 2% this year and so the aggregate regional inflation rate ended the year at 2.9% compared to US CPI inflation of 7.1% and US Core Inflation (less food and energy) of 5.7%. Interest rates in Asia have moved higher as inflation has increased but for the most part the main concern has been to keep pace with US interest rate increases, to prevent the interest rate differential from widening sufficiently to bring about pressure on currency exchange rates against the dollar. Asian exchange rates, a reasonable barometer of economic health, moved in line with developed market currencies.

Asian market returns in 2022 were dragged down by the performances of China, Korea and Taiwan which together account for 77% of the Fund's benchmark index. As China wrestled with the multiple challenges of zero-Covid policies, intensified regulation and a property sector slowdown, investors took cover in Australia, India and south-east Asia. Korea and Taiwan are heavily exposed to global markets through technology products and components and also, in Korea's case to a wide array of capital and consumer products ranging from refrigerators and TVs to cars and ships.

Indonesia and Thailand were the only two markets to record positive returns. Indonesia rose on the back of higher energy prices and a heavy (58%) index weighting to banks. Thailand saw broader-based strength on expectations of the return of tourists after a two-year absence. Tourist arrivals accelerated in the latter part of the year but reached only around 6 million for 2022 versus ~40 million visitors a year pre-Covid.

Both asset allocation and stock selection played their part in underperformance in 2022. Under-weight exposures to Financials, which benefitted from rising interest rates, Energy and Materials all detracted from relative performance. Detractors through stock selection were attributable either to China or to the auto sector. On a country basis, our low exposure to Australia and India, in favour of China worked against us this year. Our exposure to China A shares in consumer staples, in industrials, renewable energy and infrastructure all weighed on performance. We also have exposure to Chinese car maker, Geely and to Korean car parts maker, Hanon Systems. Much of this weak performance, however, was attributable to valuation compression rather than underlying operational weakness. This sets the fund up for recovery, therefore, as investor sentiment improves and lifts valuations which we have seen happen since the end of October.

The five best performing stocks during the year were drawn from different sectors: DBS Group (Singapore banking), Autohome (Chinese e-commerce), Bajaj Auto (Indian motorcycle maker), China Medical System (a pharmaceutical distributor and developer) and Venture Corp (a Singapore manufacturer of technology components). The weakest names were Wuxi Lead intelligent (EV battery equipment), Tech Mahindra (IT services), Geely Automobile, Hanon Systems (Korea, auto parts) and Elite material Co (Taiwan technology materials).

## **2. PORTFOLIO CHANGES**

Two stocks were sold during the year. Novatek Microelectronic, held since 2013, was sold because we believe company is entering a period of lower growth as competition intensifies for its display-driver chips. China Lesso, a manufacturer of plastic pipes and also held since 2013, was sold following its results announcement which included a switch in direction into the solar industry and a cancellation of its dividend.

## **3. PORTFOLIO POSITION**

The fund's major exposure is to China, accounting for 60% of the Fund. The other main exposures, each accounting for 6% to 10% of the portfolio are to Australia, India, Korea, Singapore and Taiwan. There is also 6% exposure to US stocks which generate over 50% of their revenues from the region.

The Chinese exposure reflects our views on the long-term structural growth that we see across diverse sectors. We also think that today China offers the best combination of growth and value backed up by our expectations of a reacceleration in domestic growth driven by the kind of significant counter-cyclical policy support that developed economies would like to provide but cannot given the inflation pressures which they are struggling to contain.

The portfolio's China exposure is not simply made up of the e-commerce and technology platforms with which many investors are familiar and which have dominated the Chinese benchmark index. Our selection we think is much more interesting and captures ideas in the seven long-term structural growth themes we have identified: Rise of the middle class, Manufacturing upgrades, Cloud Computing, Sustainability, Health care, Next generation consumer and Financial services.

#### **4. OUTLOOK**

Our global outlook is shaped by expectations for US inflation, US interest rates and global growth prospects. The regional outlook is heavily influenced by China re-opening this year and over the 2023/2024 period, by expectations of possible recession followed by recovery. Finally, we discuss the prospects for the Fund whose investment strategy, while affected by macro conditions especially through valuations, is focused upon the operational strength and cash flow generation of the companies themselves.

Our expectation for US inflation and interest rates is more cautious than that of the broader market because while we can see headline inflation coming down (driven by falling commodity and transportation costs and by the base effect for year-on-year comparisons) we think that underlying price pressures may still be there. Inflation may slow, in other words, but prices may still be rising. We think the Federal Reserve is very aware of this and for that very reason may move rates higher and keep them there for longer than the market currently expects.

Global growth expectations have been scaled back in recent months as the lagged effect of higher interest rates continues to be felt. The World Bank in the January 2023 publication of its Global Economic Perspectives cut its estimated for World GDP growth to 1.7% for the coming year, half the level of its June 2022 forecast. The bright spots according to the World Bank are Asia, the Middle East and Africa.

The story of a widening economic growth differential between Asia and the US from a gap of 1.8% in 2022 (3.7% vs 1.9%) to 4.3% in 2023 (4.7% in Asia vs 0.4% in the US) is a big part of the bull case for Emerging vs Developed markets this year. The cautionary note is that much of this is riding on a China re-opening story playing out as hoped with no additional disruptions or shocks. Domestic driven GDP growth is likely to be the main story in 2023 with the global slowdown most keenly felt by Taiwan and Korea whose economies are forecast to decelerate and then pick up again in 2024.

Earnings growth for the portfolio over the next two years is forecast to be twice that of the market at 16.2% per annum, based on consensus estimates, compared to 8% per annum for the market. The valuation of the Fund at the end of the year was 14.6x 2023 estimated earnings compared to 11.4x for the market.

*Edmund Harriss*  
*January 2023*

**The Fund invests in foreign securities, which involves political, economic and currency risks, greater volatility, and differences in accounting methods. These risks are greater for emerging markets. The Fund is non-diversified, meaning that its assets may be concentrated in fewer individual holdings than diversified funds. Therefore, the Fund is more exposed to individual stock volatility than diversified funds. *Investments focused in a single geographic region may be exposed to greater risk and more volatility than investments diversified among various geographies.* The Fund invests in smaller companies, which involves additional risks such as limited liquidity and greater volatility.**

The MSCI AC (All Country) Far East ex Japan Index is a free float-adjusted market capitalization-weighted index that is designed to measure equity market performance of the Far East, excluding Japan. Net Return reflects deduction for

withholding tax but reflects no deduction for fees and expenses. Net Return is net of local withholding taxes that any investor would pay. This index is unmanaged and is not available for investment, and does not incur expenses.

Consumer Price Inflation – The change is the prices of a basket of goods and services that are typically purchased by specific groups of households.

PER or P/E – Price to Earnings ratio is calculated by dividing current price of the stock by the company's trailing twelve months' earnings per share.

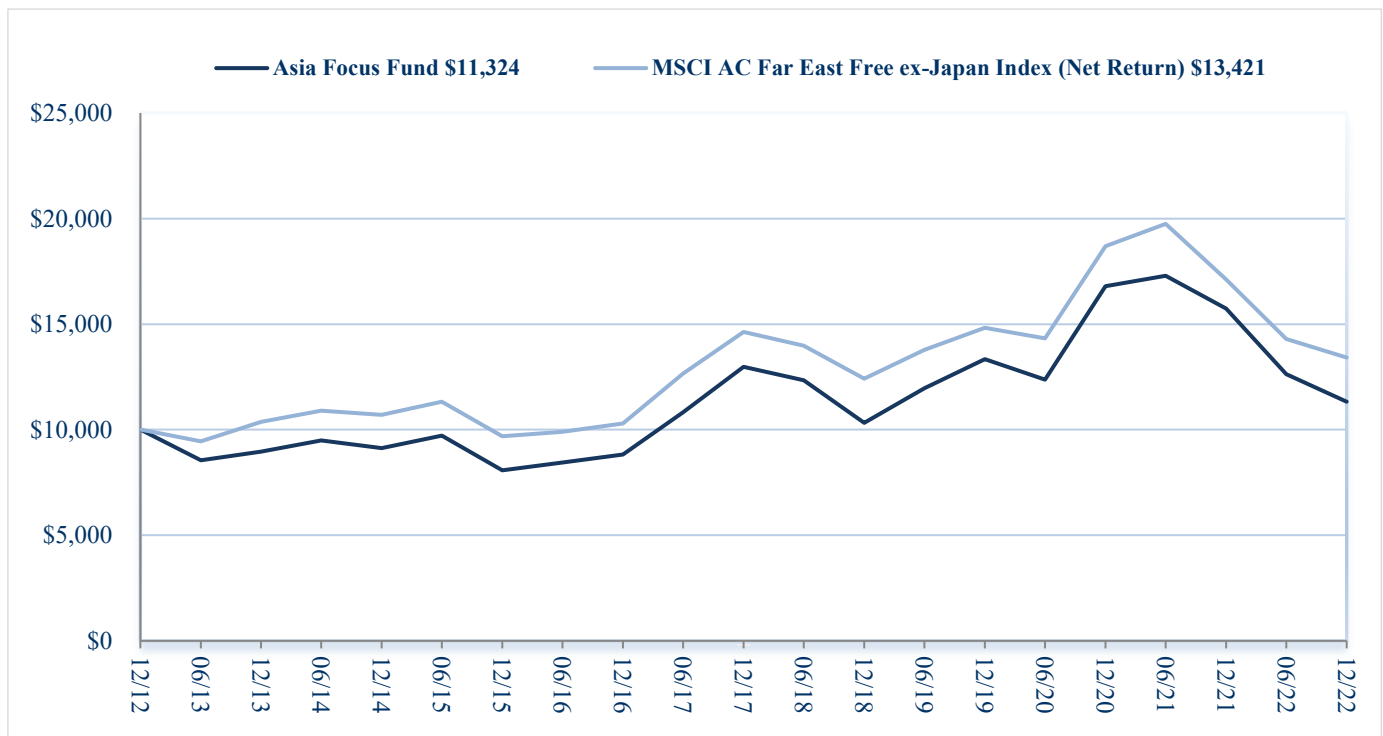
GDP – Gross domestic product (GDP) is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period.

Please refer to the Schedule of Investments for details on Fund holdings. *Current and future portfolio holdings are subject to risk.*

The information provided herein represents the opinion of Guinness Atkinson Asset Management, Inc. for the period stated and is not intended to be a forecast of future events, a guarantee of future results, or investment advice. Opinions, Fund holdings and sector allocations are subject to change at any time, and are not recommendations to buy or sell any security.

## Asia Focus Fund

### Growth of \$10,000 (Unaudited)



### Average Annual Total Return Periods Ended December 31, 2022

One Year	Five Years	Ten Years
-28.03%	-2.69%	1.27%

*Performance data quoted represents past performance and 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. Performance data current to the most recent month end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com).*

Total returns for certain periods reflect a fee waiver in effect and in the absence of this waiver, the total returns would be lower. Returns reflect the reinvestment of distributions made by the Fund, if any. The graph and the performance table above do not reflect the deduction of taxes that a shareholder would pay on Fund distribution or the redemption of Fund shares.

The MSCI All Country Far East Free ex-Japan Index (MSCI AC Far East Free ex-Japan Index) is a free float-adjusted, capitalization-weighted index that is designed to measure equity market performance of the Far East region excluding Japan. The index referenced in this chart is not available for investment and does not incur expenses. Net Return reflects deduction for withholding tax but reflects no deduction for fees and expenses. Net Return is net of local withholding taxes that any investor would pay.



**FUND HIGHLIGHTS at December 31, 2022**  
**GUINNESS ATKINSON ASIA FOCUS FUND**

		<b>Fund Manager:</b>	
# of Holdings in Portfolio:	31	Edmund Harriss	
Portfolio Turnover:	6.0%		
% of Stocks in Top 10:	45.0%		

**Top 10 Holdings (% of net assets)**

Broadcom Inc.	5.7%
DBS Group Holdings Ltd.	5.5%
Autohome Inc. - ADR	4.7%
JD.com Inc. - ADR	4.6%
Shenzhou International	4.5%
China Medical System Holdings Ltd.	4.2%
Inner Mongolia Yili Industrial Group Co., Ltd. - A Shares	4.1%
Samsung Electronics Co., Ltd.	4.0%
NARI Technology Co., Ltd.	4.0%
Taiwan Semiconductor Manufacturing Co., Ltd.	3.7%

**Industry Breakdown (% of net assets)**

Electronic Components - Semiconductor	12.8%	Electronic Component Miscellaneous	3.2%
Commercial Banks	8.9%	Batteries/Battery Systems	3.2%
E-Commerce/Services	8.2%	Internet Application Software	3.1%
Building Products - Cement/Aggregates	4.7%	Insurance	2.9%
Textile - Apparel	4.5%	Photo Equipment & Supplies	2.9%
Medical Products	4.2%	Auto - Cars/Light Trucks	2.7%
Food - Dairy Products	4.1%	Travel Services	2.6%
Machinery - General Industries	4.0%	Machinery - Construction & Mining	2.4%
Semiconductor Components - Integrated Circuits	3.7%	E-Commerce/Products	2.3%
Computer Data Security	3.7%	Auto/Truck Parts & Equipment	2.2%
MRI/Medical Diagnostic Imaging	3.6%	Beverages House Hold Products	1.7%
Pharmaceuticals	3.5%	Metal Processors & Fabricators	0.0%
Entertainment Software	3.4%		

**GUINNESS ATKINSON ASIA FOCUS FUND**
**Schedule of Investments**
**at December 31, 2022**

Shares	Common Stocks: 98.5%	Value
	<b>Australia: 6.2%</b>	
28,819	Corporate Travel Management Ltd.	\$ 289,023
19,149	Sonic Healthcare Ltd.	390,737
		<u>679,760</u>
	<b>China: 60.2%</b>	
8,900	Alibaba Group Holding Ltd.	98,344
1,700	Alibaba Group Holding Ltd. - ADR	149,753
16,900	Autohome Inc. - ADR	517,140
3,400	Baidu Inc.* -ADR	388,892
293,000	China Medical System Holdings Ltd.	460,959
66,500	China Merchants Bank Co., Ltd. - H Shares	371,880
205,000	Geely Automobile Holdings Ltd.	299,402
100,700	Inner Mongolia Yili Industrial Group Co., Ltd. - A Shares	451,077
380	JD.com In. - CL A	10,720
9,000	JD.com Inc. - ADR	505,170
124,008	NARI Technology Co., Ltd. - A Shares	437,219
5,200	NetEase Inc. - ADR	377,676
49,000	Ping An Insurance Group Company of China Ltd. - H Shares	324,237
114,600	Sany Heavy Industry Co., Ltd. - A Shares	261,638
44,300	Shenzhen International	498,304
659,000	Sino Biopharmaceutical Ltd.	385,832
8,000	Tencent Holdings Ltd.	342,321
108,400	Venustech Group Inc. - A Shares	408,504
60,160	Wuxi Lead Intelligent Equipment Co., Ltd. - A Shares	349,891
		<u>6,638,959</u>
	<b>Singapore: 5.5%</b>	
23,862	DBS Group Holdings Ltd.	<u>604,300</u>
	<b>South Korea: 8.0%</b>	
38,530	Hanon Systems	247,565
330	LG Household & Health Care Ltd.	189,231
10,050	Samsung Electronics Co., Ltd.	441,400
		<u>878,196</u>

**GUINNESS ATKINSON ASIA FOCUS FUND**
**Schedule of Investments**
**at December 31, 2022**

Shares	Common Stocks: 98.5%	Value
	<b>Taiwan: 9.8%</b>	
63,000	Elite Material Co., Ltd.	\$ 350,558
4,800	Largan Precision Co., Ltd.	318,636
2	Shin Zu Shing Co., Ltd.	5
28,000	Taiwan Semiconductor Manufacturing Co., Ltd.	408,643
		<u>1,077,842</u>
	<b>United States: 8.8%</b>	
3,508	Applied Materials Inc.	341,609
1,120	Broadcom Inc.	626,226
		<u>967,835</u>
	<b>Total Common Stocks</b>	<u>\$ 10,846,892</u>
	(cost \$9,162,867)	
	<b>Total Investments in Securities</b>	<u>10,846,892</u>
	(cost \$9,162,867): 98.5%	
	Other Assets less Liabilities: 1.5%	<u>169,598</u>
	<b>Net Assets: 100.0%</b>	<u><u>\$ 11,016,490</u></u>

\* Non-income producing security.

ADR - American Depositary Receipt

**GUINNESS ATKINSON CHINA & HONG KONG FUND**  
**ANNUAL REPORT FOR THE PERIOD ENDED**  
**December 31, 2022**

**1. PERFORMANCE**

<b>AVERAGE ANNUALIZED TOTAL RETURNS</b>	<b>1 YEAR</b>	<b>3 YEARS</b>	<b>5 YEARS</b>	<b>10 YEARS</b>
<b>FUND</b>	-23.71%	-6.56%	-3.29%	2.26%
<b>BENCHMARK INDEX:</b>				
HANG SENG COMPOSITE INDEX	-15.18%	-5.42%	-3.49%	2.68%

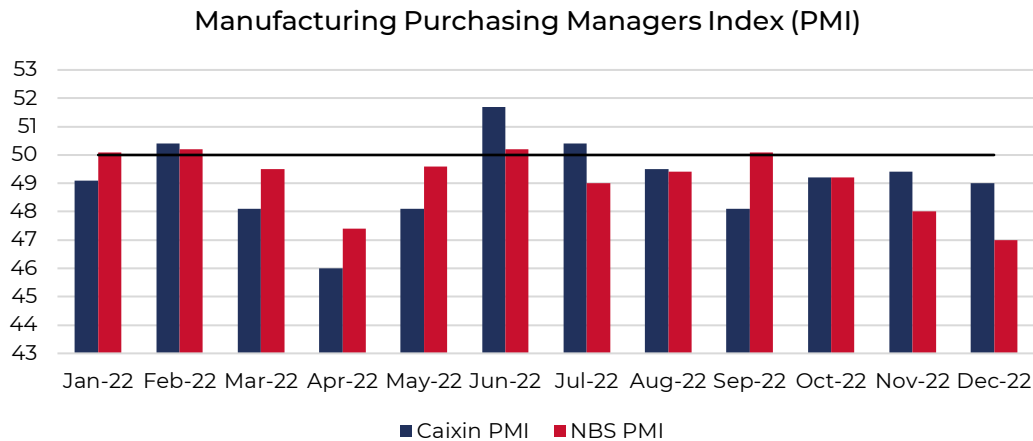
*Expense Ratio 1.50%.*

*For the Fund's current one-year expense ratio, please refer to the Financial Highlights sect of this report.*

*Performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment in the Fund 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. Performance data current to the most recent month-end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com), or calling (800) 915-6565.*

In 2022, the Fund fell 23.71% while the benchmark, the Hang Seng Composite Index, fell 15.18%. Therefore the Fund underperformed by 8.53%.

For much of 2022 China persisted with its zero Covid policy, the economic costs of which increased significantly with the very transmissible Omicron strain. This policy led to a cycle of lockdowns and movement restrictions across the country, impacting economic growth. To illustrate this, we show the Purchasing Managers Index (PMIs) below, which is a monthly questionnaire asking purchasing managers about changes in new orders, output, employment, suppliers' delivery times and inventories. The answers are combined into one final value, where a value above 50 indicates expanding activity while a value below 50 indicates contracting activity. The Caixin PMI, which is more geared towards private enterprises, was below 50 for much of the year. The NBS PMI, which is more geared towards state owned enterprises (SOEs), showed a similar trend. Whether one looks at the private or state sector, it is clear economic activity was weak in 2022.



*(Source – Bloomberg)*

Early in the year, Russia began its invasion of Ukraine, which led to globally higher energy prices. In March, Chinese markets fell by the most in a month since the Global Financial Crisis. The MSCI China Index fell 7.7% (in USD unless otherwise stated) on 14th March 2022 and a further 6.1% on the following day. We believe the sharp fall over that two-day period was due to several reasons, which all combined to create a sense of panic selling. On 17th March, Vice Premier Liu He convened a meeting, chairing the Financial Stability Committee. The committee released a series of statements acknowledging market concerns. Chinese markets rallied sharply on the news, increasing 14.5% on 18th March and a further 6.0% on 19th March. They were essentially flat for the rest of the month. However, in April Covid cases increased rapidly in Shanghai. The local government intended to tolerate a certain number of cases before locking down, but cases reached a critical level. The city entered full lockdown in April and May before reopening in June. Other cities avoided Shanghai's fate by locking down much earlier, but this led to weak economic activity in China. At the time we argued that Covid outbreaks and restrictions were likely to continue as the Omicron variant was too transmissible to eliminate completely.

In August, Chinese markets slightly recovered. A likely short squeeze led to a rally in the large tech stocks. In Sichuan province a record heatwave led to rivers and dams drying up, meaning hydropower could not generate enough energy. At the same time the demand for air conditioning significantly increased, placing strain on the electricity grid in the province. The local government initiated power cuts which led to companies stopping production for a week. Rising Covid cases led to lockdowns in Tibet, Sichuan and Shenzhen. The US and China reached a deal to let the US regulator, the Public Company Accounting Oversight Board (PCAOB), inspect the audit work of Chinese companies listed on American exchanges.

In October, China was the weakest major market, falling 16.8% compared to the MSCI World Index which rose 7.2%. Markets were worried about the impact of leadership changes to the Politburo and Standing Committee of the Politburo. Xi Jinping began his third term as leader of the country while Premier Le Keqiang was not reappointed to the Standing Committee. Markets were concerned with the lack of “market-friendly” faces on the Standing Committee, with questions raised over China's commitment to growth. Despite the sell-off, we do not see any significant change to China's growth model. Decision making has become more centralised, but this is acceptable if decisions are rational and of course a problem if they are not. We have not seen any strong arguments explaining why the leadership changes will lead to irrational decision-making. We think that in the medium term, the stability in leadership is likely to allow Xi to carry out his economic plan: to upgrade China's competence

in fields including high-end manufacturing, pharmaceuticals, semiconductors, and so on. These will be examples of his pillar industries – not the current internet tech companies.

Chinese markets were strong in November, with the MSCI China Index rising 29.7%. It was a volatile month with Chinese markets initially rallying in the first two weeks of the month, giving back some of the gains the following week, and then rallying at the end of the month. Following the political events in October, we saw significant changes in China's Covid and real estate policies. On the Covid front, the number of days required for centralised quarantine was cut from seven days to five days. The classification of risk districts was simplified into just high and low-risk districts, eliminating mid-risk districts.

However as the relaxation in Covid policies was announced, Cases increased sharply, surpassing the peak seen in spring when Shanghai locked down. In response many cities and towns introduced lockdowns and movement restrictions, as local government officials ignored the new rules issued by central government. But in a surprising turn of events, protests over lockdowns spontaneously erupted in multiple cities across China. This demonstrated the frustration that had built up after nearly three years of restrictions. In our opinion, the level of discontent surprised the government and certainly increased the cost of maintaining the status quo. Soon after the protests, China gradually dropped its zero Covid policy in December. In the beginning of the month, for those who tested positive, the requirement for centralised quarantine in a government facility was dropped. Instead people could home quarantine if they were asymptomatic or had mild symptoms. Close contacts were also allowed to home quarantine. At the end of December, nearly all restrictions were dropped. The only restriction left was for people coming into China, a negative PCR test was required 48 hours before departure.

For the Fund, the main sources of negative performance in 2022 were:

- Stock selection within Industrials, driven by Wuxi Lead Intelligent, Sany Heavy Industry, Nari Technology and China Lesso.
- Stock selection within Consumer Staples, driven by Chongqing Fuling Zhacai and Inner Mongolia Yili.

The main sources of positive performance were:

- Underweight in the large tech stocks of Tencent, Alibaba and Meituan. The Fund is run on an equally weighted basis and so each position has a neutral weight of about 3.2%. As these stocks underperformed the market, the Fund captured less of the downside.
- Stock selection within Health Care, driven by CSPC Pharmaceutical, China Medical System and Sino Biopharmaceutical.
- Stock selection within Real Estate, driven by China Overseas Land & Investment, which had a total return of 17.2% while the Real Estate sector fell 27.8%.

## **2. ACTIVITY**

In the year, we sold four positions and bought four positions.

### Sells

China Resources Gas is a gas distributor focusing on urban areas, targeting both residential and commercial customers. At the start of the year gas prices had risen but following Russia's invasion of Ukraine, spiked up further. Though in theory gas distributors can pass on these higher costs, there was a possibility they are asked to conduct 'national service'. This could mean absorbing some of the higher



costs, rather than passing them onto small and medium enterprises (SMEs) and residential customers. Given the weak economy, we felt there was a non-trivial probability of this occurring, and so sold the stock.

We sold Galaxy Entertainment earlier in the year due to our belief rising Omicron cases would become harder to control, which turned out to be a correct assumption.

We sold China Lesso, a manufacturer of plastic pipes used in infrastructure projects and the real estate industry. It unexpectedly omitted the dividend and announced an expansion into the solar business where it had no expertise. We did not see how the existing business gives Lesso a competitive advantage in solar and so sold the stock.

We also sold China Lilang, a clothing retailer targeting the men's casualwear segment. Given repeated COVID outbreaks in China, sales in the physical stores which make up most of revenue had been weak. Liquidity in the stock had also declined in the past year.

### Buys

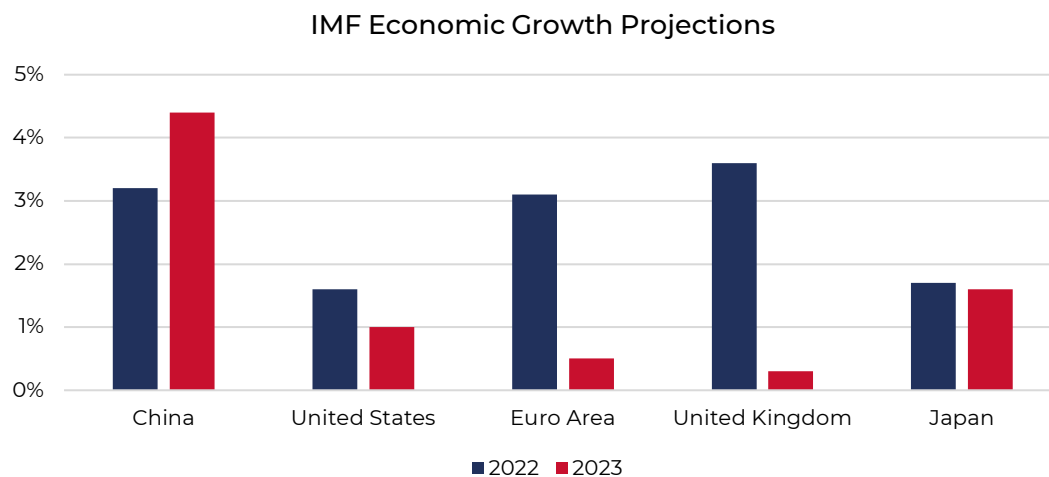
We bought Shenzhou International, a textile and apparel maker, after the stock sold off on a profit warning. Due to COVID-related suspension of production sites across Cambodia and Vietnam, costs increased and revenues fell in the second half of 2021. We do not think these conditions are likely to last for the next three years. The risk reward ratio for the stock became much more attractive and so we bought the stock.

Following the sell-off in the middle of March, we bought Shenzhen Inovance Technology and Hong Kong Exchanges and Clearing. We felt that many quality stocks were selling off regardless of their fundamentals, and so we were assessing the ideas on our watchlist. The two additions made had been expensive for a very long time but within a few days presented an acceptable upside for the amount of risk taken. Inovance is a manufacturer of industrial automation equipment. It started off making inverters (frequency converters) for industrial equipment and elevators, before successfully expanding into servos (error-sensing devices) and automation equipment. Inovance is now one of the top five firms in the inverter and servo market in China, when measured by revenue. The business gives exposure to various traditional industrial markets as well as newer markets such as electric vehicles (EVs) and solar panels. Inovance has a quickly growing EV controller business which may become profitable in 2022, and we expect this to become a further growth driver for the business.

Hong Kong Exchanges & Clearing (HKEX) is a high-quality stock which is often expensive. As we are clearly bullish on the demand for Chinese stocks over time, we expect the exchange, which facilitates the trade of Chinese stocks, to also do well. The exchange benefits through the Stock Connect scheme which allows foreigners to buy domestic A-shares. The ETF Connect was approved in June which allows mainland investors to buy HKD-denominated ETFs in Hong Kong – a further positive step for HKEX.

We bought Hangzhou First Applied Material, which is the world's largest manufacturer of EVA (ethylene vinyl acetate) film, which is used to protect solar modules. In order for solar modules to operate for 20 or more years, high quality EVA film is needed, and so brand image is important. Hangzhou First Applied is now the world's largest manufacturer of EVA film for the solar industry. Since the business listed in 2014, it has generated a cash return on capital above the cost of capital, which is encouraging as it is a sign that the business has withstood prior slowdowns in the solar space.

### 3. OUTLOOK



*(Source: IMF, World Economic Outlook, October 2022)*

As China has removed nearly all COVID restrictions, it is the only major economy which is expected to see an acceleration in economic growth in 2023. As the US has normalized monetary policy, developed markets are expected to see a deceleration in economic growth. This, along with other factors, means Europe and the United Kingdom may well enter a recession in 2023.

From an investment perspective, we remind readers that returns can be broken down into three components: changes in valuation multiples, earnings growth and dividends. Below we break down the first two component to argue why investors should be allocating to China and specifically, the Guinness Atkinson China & Hong Kong Fund.

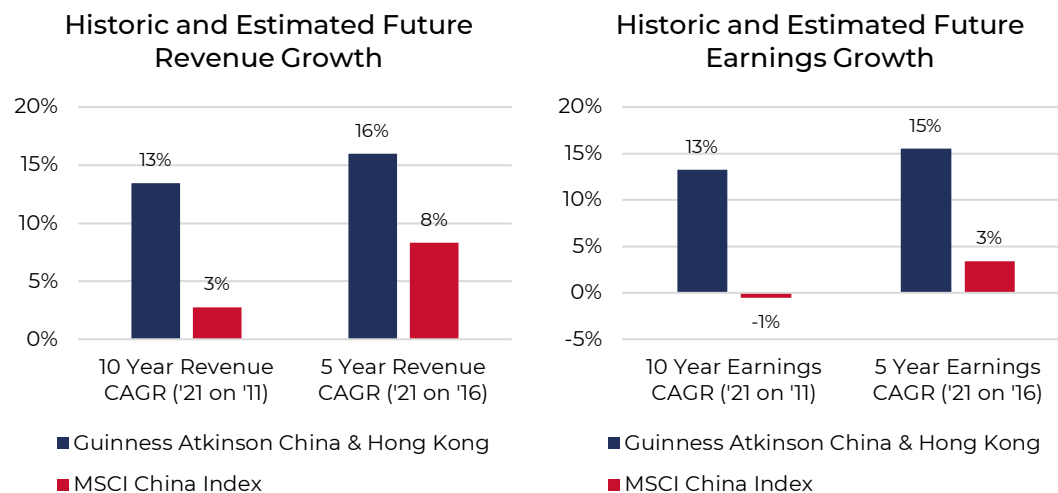


*(Data from 11/30/15 to 12/31/22, source: Guinness Atkinson Asset Management calculations, Bloomberg)*

Despite the bounce at the end of the year, Chinese equities remain attractively valued relative to their medium-term average. As of 12/31/22, the one-year forward price earnings ratio for MSCI China was 12.2x, below its medium-term average. (We use Nov-15 as the starting point to calculate this average since this is when the US-listed ADRs, which are generally more expensive, were included in the index.

Valuations before this point are less useful for making comparisons today). While of course valuations can fall below historic levels, we argue today there is a low probability that investors are overpaying for China.

On consensus estimated 2023 earnings, the Fund is trading on 13.7x. We argue this premium is worth paying for given the Fund's focus on earnings growth.



*(Data as of 12/31/22, in USD, source: Bloomberg, Guinness Atkinson Asset Management calculations. Earnings refers to net income. Data for the Fund is a simulation based on actual historic data for the Fund's current holdings)*

Over the long-term, it is earnings growth that provides investors with the bulk of their returns. We argue that our companies are likely to grow their earnings in the future because they give exposure to the structural growth themes in China. To back up this claim, above we show the 10-year compound annual growth rate (CAGR) in earnings for our holdings. Over the past 10 years, the Fund's current holdings have, in aggregate, grown earnings by 13% a year. This compares to the MSCI China Index where earnings have actually contracted by 1% a year in the same period. We argue a passive approach leads to poor outcomes for investors in China.

Overall, we argue we offer a sensible approach to China, generally looking for companies with the following characteristics:

- High return on capital.
- Ability to convert revenues into cashflows.
- Growing operating cashflows, which we expect to continue to grow.
- The ability to deploy this cash at a high rate of return.
- Sensibly structured balance sheet with no excessive debt.
- Management which we trust to grow the business.
- Absence of activities judged to be harmful to society's wider interests.
- Growth opportunities undervalued by the market.

Now that China has dropped nearly all COVID restrictions and life should be back to normal in 2023, investors should be seriously looking to invest in what is the world's second largest economy. Global

investors are significantly underweight in China despite the size of its economy – we expect this gap to close over time which is likely to serve investors in China well.

*Edmund Harriss*

*Sharukh Malik*

*January 2023*

**The Fund invests in foreign securities, which involve political, economic and currency risks, greater volatility, and differences in accounting methods. These risks are greater for emerging markets. 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 small-cap or mid-cap, which involve additional risks such as limited liquidity and greater volatility, than investments in larger companies.**

The Hang Seng Composite Index is a market capitalization weighted index that covers about 95% of the total market capitalization of companies listed on the main board of the Hong Kong Stock Exchange. This index is unmanaged, not available for investment and does not incur expenses.

The MSCI China Index captures large and mid-cap representation covering about 85% of this China equity universe. This index is unmanaged and is not available for investment, and does not incur expenses.

The MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets. This index is unmanaged and is not available for investment, and does not incur expenses.

The Caixin PMI measures the performance of the manufacturing sector and is derived from a survey of more private companies.

The NBS PMI measures the performance of the manufacturing sector and is derived from a survey of state companies.

Return on capital is the ratio of net profits to total capital, indicating how efficiently capital generates net profits.

Earnings Growth - The actual or expected increase in profits over two comparable periods of time.

Price/Earnings Ratio – the ratio of a company's share (stock) price to the company's earnings per share.

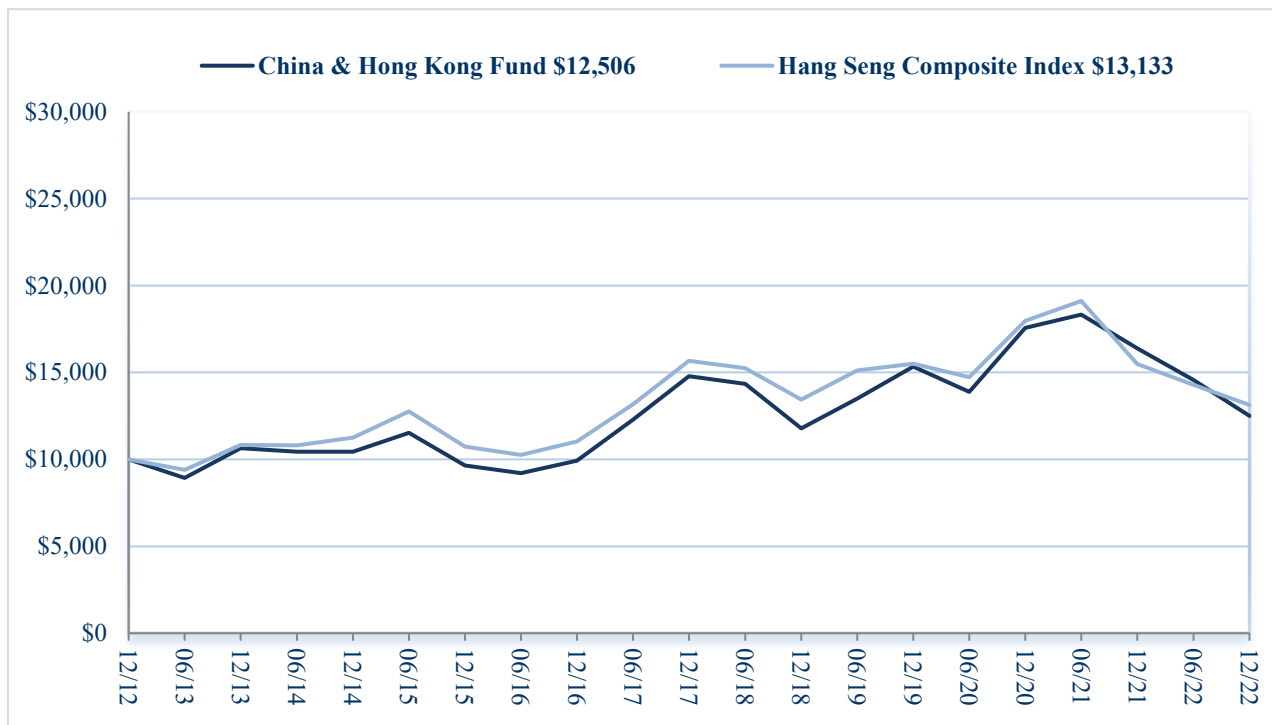
Please refer to the Schedule of Investments for details on Fund holdings. *Current and future portfolio holdings are subject to risk*

The information provided herein represents the opinion of Guinness Atkinson Asset Management, Inc. for the period stated and it is not intended to be a forecast of future events, a guarantee of future results,

or investment advice. Opinions, Fund holdings and sector allocations are subject to change at any time, and are not recommendations to buy or sell any security.

## China & Hong Kong Fund

### Growth of \$10,000 (Unaudited)



### Average Annual Total Return Periods Ended December 31, 2022

One Year	Five Years	Ten Years
-23.71%	-3.29%	2.26%

*Performance data quoted represents past performance and 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. Performance data current to the most recent month end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com).*

Total returns for certain periods reflect a fee waiver in effect and in the absence of this waiver, the total returns would be lower. Returns reflect the reinvestment of distributions made by the Fund, if any. The graph and the performance table above do not reflect the deduction of taxes that a shareholder would pay on Fund distribution or the redemption of Fund shares.

The Hang Seng Composite Index is a market-capitalization weighted index that comprises the top 200 companies listed on the Hong Kong Stock Exchange, based on the average market capitalization for the past twelve months. The index referenced in this chart is not available for investment and does not incur expenses. Net Return reflects deduction for withholding tax but reflects no deduction for fees and expenses. Net Return is net of local withholding taxes that any investor would pay.



**FUND HIGHLIGHTS at December 31, 2022**  
**GUINNESS ATKINSON CHINA & HONG KONG FUND**

		<b>Fund Manager:</b>
# of Holdings in Portfolio:	32	Edmund Harriss
Portfolio Turnover:	17.5%	
% of Stocks in Top 10:	38.7%	

**Top 10 Holdings (% of net assets)**

China Medical System Holdings Ltd.	4.5%
JD.com Inc. - ADR	4.5%
NARI Technology Co., Ltd. - A Shares	4.1%
Shenzhen Inovance Technology Co., Ltd. - A Shares	4.0%
Hangzhou First Applied Materials Co., Ltd.	4.0%
NetEase Inc. - ADR	4.0%
Venustech Group Inc. - A Shares	3.5%
Baidu Inc.	3.4%
Sino Biopharmaceutical Ltd.	3.4%
AIA Group Ltd.	3.3%

**Geographic Breakdown (% of net assets)**

China	90.1%
Hong Kong	10.0%

**GUINNESS ATKINSON CHINA & HONG KONG FUND**  
**Schedule of Investments**  
**at December 31, 2022**

Shares	Common Stocks: 100.1%	Value
	<b>Appliances: 6.6%</b>	
365,400	Haier Smart Home Co., Ltd. - H Shares*	\$ 1,245,222
175,709	Zhejiang Supor Cookware - A Shares	1,255,762
		<u>2,500,984</u>
	<b>Auto/Cars - Light Trucks: 3.2%</b>	
861,000	Geely Automobile Holdings Ltd.	<u>1,257,490</u>
	<b>Auto/Truck Parts &amp; Equipment: 2.8%</b>	
797,480	Weichai Power Co., Ltd. - H Shares	<u>1,070,724</u>
	<b>Batteries/Battery System: 2.6%</b>	
173,440	Wuxi Lead Intelligent Equipment Co., Ltd. - A Shares	<u>1,008,729</u>
	<b>Commercial Banks: 3.1%</b>	
213,000	China Merchants Bank Co., Ltd. - H Shares	<u>1,191,133</u>
	<b>Computer Data Security: 3.5%</b>	
350,050	Venustech Group Inc. - A Shares	<u>1,319,159</u>
	<b>E-Commerce/Services: 7.7%</b>	
24,500	Alibaba Group Holding Ltd.	270,721
10,300	Alibaba Group Holding Ltd. - ADR	907,327
1,352	JD.com Inc.	38,141
30,400	JD.com Inc. - ADR	<u>1,706,352</u>
		<u>2,922,541</u>
	<b>Electronic Components: 5.0%</b>	
376,589	Shenzhen H&T Intelligent Control Co., Ltd. - A Shares	793,386
532,400	Shengyi Technology Co., Ltd. - A Shares	<u>1,108,566</u>
		<u>1,901,952</u>
	<b>Energy-Alternate: 6.8%</b>	
160,440	Hangzhou First Applied Materials Co., Ltd.	1,540,287
973,987	Xinyi Solar Holdings Ltd.	<u>1,078,111</u>
		<u>2,618,398</u>
	<b>Finance: 3.3%</b>	
28,700	Hong Kong Exchanges & Clearing Ltd.	<u>1,239,841</u>
	<b>Food-Dairy Products: 6.4%</b>	
320,100	Chongqing Fuling Zhacai Group Co., Ltd. - A Shares	1,191,954
275,600	Inner Mongolia Yili Industrial Group Co., Ltd. - A Shares	<u>1,234,526</u>
		<u>2,426,480</u>
	<b>Home Furniture: 3.3%</b>	
476,500	Suofeiya Home Collection - A Shares	<u>1,250,369</u>

**GUINNESS ATKINSON CHINA & HONG KONG FUND**  
**Schedule of Investments**  
**at December 31, 2022**

Shares	Common Stocks: 100.1%	Value
	<b>Insurance: 6.4%</b>	
114,000	AIA Group Ltd.	\$ 1,267,713
175,500	Ping An Insurance Group Company of China Ltd. - H Shares	1,161,299
		<u>2,429,012</u>
	<b>Internet Application Software: 3.2%</b>	
28,400	Tencent Holdings Ltd.	<u>1,215,238</u>
	<b>Internet Content - Entertainment: 4.0%</b>	
20,875	NetEase Inc. - ADR	<u>1,516,151</u>
	<b>Machinery-General Industry: 11.1%</b>	
441,840	NARI Technology Co., Ltd. - A Shares	1,557,809
153,454	Shenzhen Inovance Technology Co., Ltd. - A Shares	1,541,070
501,697	Sany Heavy Industry Co., Ltd. - A Shares	1,145,402
		<u>4,244,281</u>
	<b>Pharmaceuticals: 11.1%</b>	
1,096,000	China Medical System Holdings	1,724,271
1,164,400	CSPC Pharmaceutical Group Ltd.	1,223,242
2,183,500	Sino Biopharmaceutical Ltd.	1,278,397
		<u>4,225,910</u>
	<b>Real Estate Operations/Development: 3.3%</b>	
476,000	China Overseas Land & Investments Ltd.	<u>1,256,234</u>
	<b>Retail - Apparel/Shoe: 3.3%</b>	
111,100	Shenzhou International Group Holdings Ltd.	<u>1,249,698</u>
	<b>Web Portals: 3.4%</b>	
11,400	Baidu Inc.*	<u>1,303,932</u>
	<b>Total Common Stocks</b>	<u>\$ 38,148,256</u>
	(cost \$38,508,806)	
	<b>Total Investments in Securities</b>	<u>38,148,256</u>
	(cost \$38,508,806): 100.1%	
	Liabilities less Other Assets: (0.1%)	<u>(27,996)</u>
	<b>Net Assets: 100.0%</b>	<u><u>\$ 38,120,260</u></u>

\* Non-income producing security.

ADR - American Depository Receipt

# GUINNESS ATKINSON GLOBAL ENERGY FUND

## ANNUAL REPORT FOR THE PERIOD ENDED DECEMBER 31, 2022

### 1. PERFORMANCE

AVERAGE ANNUALIZED TOTAL RETURNS	1 YEAR	3 YEARS	5 YEARS	10 YEARS
FUND	34.33%	8.86%	2.92%	0.60%
BENCHMARK INDEX:				
MSCI WORLD ENERGY INDEX (NET RETURN)	46.01%	11.92%	5.62%	3.48%

Gross 1.99% & Net 1.45%. The Adviser has contractually agreed to reduce its fees and/or pay Fund expenses in order to limit the Fund's Total Annual Operating Expenses to 1.45% through June 30, 2025.

For the Fund's current one-year expense ratio, please refer to the Financial Highlights section of this report.

*Performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment in the Fund 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. Performance data current to the most recent month-end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com), or calling (800) 915-6565.*

Strength in oil and gas prices (spot and long-dated) led to good returns for energy equities in 2022. As ever, the performance of the MSCI World Energy Index was only part of the story, with 2022 seeing divergence between the energy equity subsectors:

- US integrated oil and gas companies were mixed, depending on geography. US super majors (Exxon and Chevron) were exceptional performers, benefitting from the relative strength in the US economy and a valuation rerating well in excess of that enjoyed by international peers. European integrations lagged US peers despite reporting superior free cashflow yields well above 10-year averages.
- Exploration and production also saw mixed results. US E&Ps benefitted from the tightening of oil and gas markets, with the stock market rewarding those that maintained the strongest capital discipline. Higher commodity prices resulted in especially good returns for companies with lower growth but greater operational and financial leverage. International E&Ps were weaker, held back in some cases by the introduction of windfall taxes on extraordinary profits.
- Oil refiners in the US were outperformers, but underperformers internationally. US refiners enjoyed record refining margins, driven by a structural shortage of refining capacity and the knock-on impacts of a reduction of Russian oil and oil product in the market. European refiners also enjoyed record refining margins, though somewhat dampened by higher input natural gas costs.

- Midstream was an underperformer over the year. With revenues generally linked to pipeline capacity and throughput rather than commodity prices, most midstream companies were relative laggards versus producing companies. Pipeline companies exposed to gas generally performed better than those exposed to oil.
- Energy services generally outperformed. Large cap diversified service providers performed particularly well, with the announcement of higher international oil spending by core members of OPEC, the build out of new LNG export facilities in the US and Qatar, a shortage of service capacity in the US, plus an expected uptick in offshore spending, all proving positive news.

On a stock-by stock-basis in the fund, our US shale oil biased E&P companies (Conocophillips +72%; EOG Resources +57%; Devon Energy Corp +51%; Pioneer Natural Resources +39%) were strong performers, enjoying a high degree of operational leverage to rising oil prices. US integrators (Exxon +87%; Chevron +59%) and our US refining holding (Valero +75%), also outperformed, benefitting from exceptional returns in the US refining environment. Another subsector within the fund that outperformed over the year was Canadian integrators (Imperial Oil +38%; Canadian Natural Resources +40%), with high-cost oil sands operations enjoying oil price leverage and growing free cashflow profiles.

The fund's service exposure outperformed (Helix +136%; Schlumberger 81%), with the prospect of rising international oil and gas spending boosting earnings estimates.

European natural gas producers also did well, thanks to strength in the underlying commodity. Equinor, which controls a large portion of natural gas flows into the European market, was the stand-out larger cap gas name in the fund, up by 40%.

The underperformance of the fund versus the index, however, can be explained in broad terms by the global nature of our portfolio, and in particular the direct and indirect impacts of its exposure to Russia. Over the year, we saw:

- The exceptional decline in our holding in Gazprom (a 3.8% weight at the start of the year). Our position in Gazprom was sold on 1 March, post Russia's invasion of Ukraine but before the stock was suspended on the London GDR market on 3 March. The decision to sell was a painful one, with Gazprom one of our strongest holdings over the previous five years, but driven by a belief that little value was likely to accrue to Western shareholders of Gazprom in the foreseeable future.
- Higher exposure in the fund to European integrators (e.g. OMV -5%; ENI +10%), which as a group suffered versus North American peers thanks to Russian asset exposure/proximity to Russia.
- Very high weighting in the index to North America (in particular Exxon +87% and Chevron +59%), seen as an energy safe haven in 2022. We owned both companies in the Fund, but were structurally underweight their combined 27% weighting in the index.

Whilst our performance was behind the MSCI World Energy Index, which is developed market only, we take some comfort from our portfolio performing approximately in-line with the MSCI Energy (All Country) Index (+33.5%), which also includes developing markets in its composition.

## 2. PORTFOLIO POSITION

The sector and geographic weightings of the portfolio at 31 December 2022 were as follows:

Sector breakdown	Dec. 31, 2021	Dec. 31, 2022
Integrated	56.1	55.2
Exploration and production	26.2	23.6
Drilling	0.0	0.0
Equipment and services	4.2	8.8
Refining and marketing	6.8	5.9
Storage & Transportation	4.0	4.9
Solar	0.8	0.6
Cash	1.7	0.9
<b>Total</b>	<b>100</b>	<b>100</b>

Geographic breakdown	Dec. 31, 2021	Dec. 31, 2022
US	35.0	48.1
Canada	17.3	15.3
UK	6.5	10.5
Europe	26.7	22.7
Hong Kong	9.0	2.5
Russia	3.8	0
Other	0	0
Cash	1.7	0.9
<b>Total</b>	<b>100</b>	<b>100</b>

## 3. MARKET BACKGROUND

Fatih Birol, the head of the International Energy Agency, described the situation in 2022 as “the first global energy crisis”, worse than the oil shock of the 1970s because it encompassed oil, gas and electricity. Rising demand, a shortage of investment across the energy supply chain and the supply uncertainties brought by the Russia/Ukraine crisis have driven prices higher, more than offsetting demand concerns arising from slower economic growth. It was a positive environment for oil and gas equities, which significantly outperformed the broader equity market.

For much of 2021, the OPEC+ group enjoyed a successful period of oil inventory management, returning oil supply back into the market as the post-COVID demand trajectory allowed. Their ambition was to keep global inventories under control, whilst achieving an oil price which satisfies the fiscal needs of its members. By the start of 2022, however, the narrative was shifting to one of excessively tight inventories, and whether OPEC+ could continue to maintain market balance in the face of global oil demand reaching new highs.

The Brent oil price started the year at \$77/bl and, with inventories continuing to fall rapidly in January and February, prices rose above \$100/bl for the first time since mid-2014. An already tight market then saw major disruption at the end of February with the Russian invasion of Ukraine. Russia is normally the world's

second largest oil producer, supplying around 11m b/day (11% of the market), of which around 8m b/day is exported either as crude or refined products. The prospect of Russian oil being excluded from certain parts of the market, and uncertainty around how effective Russia would be in diverting that oil and oil product to other buyers, pushed prices in May to over \$120/bl. In the second half of the year, spot prices fell below \$100/bl, as global Gross Domestic Product (GDP) slowdown, China's zero COVID policy and the US's Strategic Reserve releases trumped concerns around Russian supply. Brent spot oil finished 2022 trading at \$86/bl, having averaged \$99/bl in the year.

**Global oil demand** in 2022 was forecasted in January by the IEA to be up 3.3m b/day versus 2021, putting demand on par with its previous peak in 2019. Today, that forecast for demand growth has been cut to 2.3m b/day, a function of higher prices causing demand destruction, economic slowdown, COVID resurgence in China and the impact of sanctions on the Russian economy, somewhat offset by natural gas to oil switching.

Despite the supply challenges thrown up by the Russia/Ukraine crisis, Organization of the Petroleum Exporting Countries (OPEC+) deviated little from their plan to increase production quotas by 0.4m b/day per month through to September 2022, thereby fully unwinding COVID quota reductions. A major challenge for the oil market, however, is that OPEC+ was unable to deliver the plan, even outside Russia. Indeed, the gap between actual production and production quotas increased consistently through the first nine months of the year. Quotas for September 2022 were 43.9m b/day versus actual supply of 40.5m b/day. Beyond Russia, several countries struggled to keep up with quota increases, in particular African members of OPEC that are seeing the effects of years of underinvestment in new oil capacity.

In October 2022, faced with a weakening demand picture, OPEC+ opted to reduce quotas by 2m b/day. The actual production cut associated with the announcement was around 1m b/day. Notably, the announcement came with Brent spot prices in the \$80s/bl, indicating a greater willingness on OPEC's part to defend a higher price than in previous cycles.

The one area of growth in supply has been **US shale oil**, which looks to be up by around 0.8m b/day in 2022. The number of 'horizontal' drilling rigs in the US has been on an increasing trend, though still around 10% down from the pre-pandemic level. Production in the US this year has also been supported by reliance on wells that were previously drilled but left uncompleted (DUCs), which have formed an unusually large proportion of completed wells. And whilst production is up, the growth rate is far lower than the 2016-19 cycle, driven by lower reinvestment rates and high unit cost inflation.

Faced with the prospect of spiraling oil prices, the US and most other IEA members announced plans to release a significant amount of oil from **strategic petroleum reserves** (SPRs). Combined SPR releases by the US and other IEA members for 2022 amounted to around 280m barrels, or nearly 20% of the IEA's 1.45 bn barrel crude and product SPR inventories. As such, it has been the biggest strategic release in oil market history. The releases have helped to prop up supply, and helped lower spot prices in the second half of the year. However, the oil market has also recognized that there is an element of 'kicking the can down the road' here, with a stated plan eventually to refill the SPR creating an additional oil demand burden in the future.

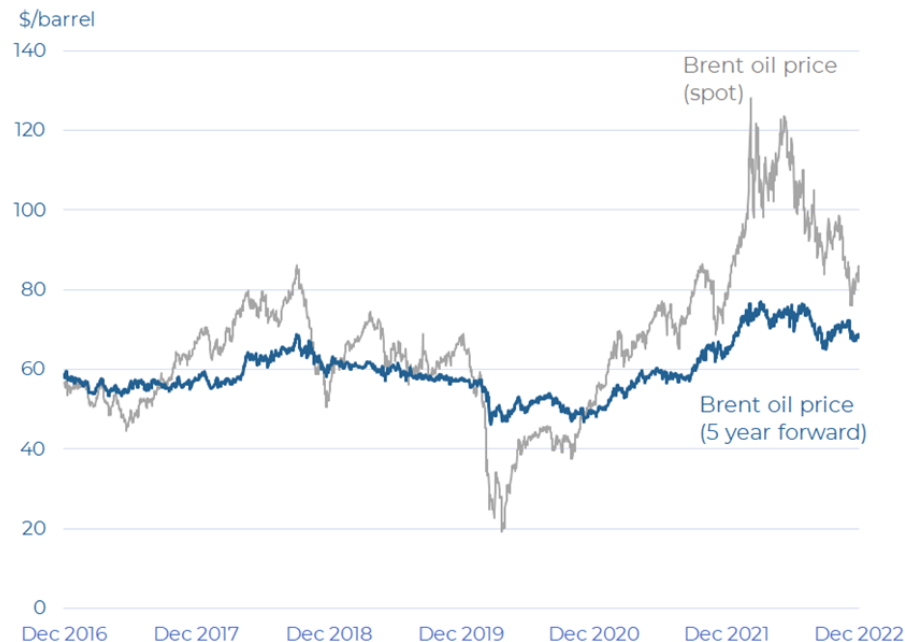
Much of the focus in energy markets this year has been on the rise in spot oil prices. However, for much of the year, there was also a notable increase in **refining margins**, causing the prices of refined products (e.g. gasoline and diesel) to rise faster than the price of crude oil. A combination of disruption of Russian oil and refined product exports, structural capacity constraints (thanks to recent refinery retirements) and low product inventories drove global refining margins to unusually high levels, though margins then moderated during the final three months of the year.

Moves in **long dated oil** were similar directionally to spot prices, though not as volatile. The five year forward Brent oil price rose over the year from \$64/bl to a high of \$76/bl, before settling back at \$69/bl. We



see the increase in longer dated prices reflecting a) the growing energy supply deficit that is emerging globally and the need to incentivise greater investment to close the gap; b) the unwillingness of some oil suppliers to increase CAPEX thanks to energy transition pressures; and c) the impact of inflation on future cost of oil supply.

### **Brent oil price: spot vs five year forward (\$/bl)**



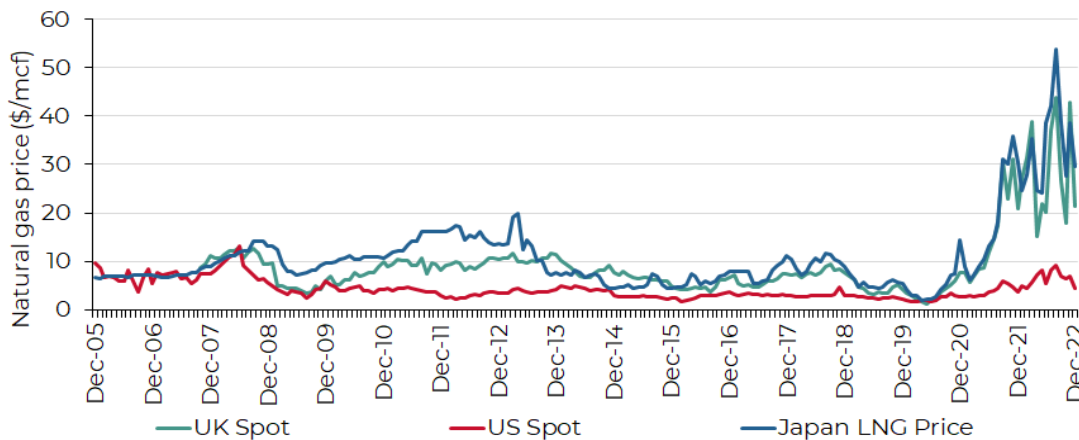
Source: Bloomberg; Guinness Global Investors

For natural gas, several factors came together across to globe in late 2021 to drive prices materially higher. Surging power demand as many economies recovered from COVID; cold winter weather in Europe; drought in Brazil and China curbing hydro output; higher European carbon prices and a shortage of coal in China all combined to create extraordinarily tight markets.

In 2022, many of these transitory issues improved, but were trumped by a far more precarious gas supply situation thanks to the Russia/Ukraine crisis. Post February's invasion, Russian gas still flowed into Europe over the summer, albeit less than normal. Supply then took a significant leg down in September with the sabotaging of the Nordstream 1 pipeline, which had been bringing Russian gas into Germany. Other pipelines importing Russian gas into Europe remain operational, but overall imports from Russia by the end of the year were running at about half the level reported in 2021.

Against this backdrop, international natural gas prices have remained exceptionally high, with Europe having to outbid other parts of the world for marginal LNG cargoes (Europe imported record levels of LNG in 2022), in an effort to fill gas storage by winter.

### Global natural gas prices (US\$/mcf)



Source: Bloomberg; Guinness Global Investors

## 4. OUTLOOK

Given the state of the world economy, and questions around Russian supply, the outcomes for spot oil prices in the short-term are hard to predict. What is clearer is that we are in a new cycle for oil, driven by several years of underinvestment. This cycle may be disrupted by recession, but if it is, oil prices will soon be pulled higher again, with the structural deficit that has emerged needing to be solved.

The path for oil demand will depend on three key components: the trajectory for Chinese consumption as its economy reopens; the outlook for global aviation as flight activity normalizes; and the resilience of demand to a global recession. Overall, the IEA forecasts demand in 2023 of 101.6m b/day, up by 1.7m b/day versus 2022. This would put global oil demand around 1m b/day above its previous peak in 2019, though still 3m b/day below the pre-pandemic run rate. The IEA's forecasts imply that OECD demand will still be around 3% lower than in 2019, versus non-OECD demand 4% ahead of 2019.

OPEC continues to signal a high degree of flexibility in 2023 to adjust their production, thereby attempting to put a 'soft' floor under oil prices should demand falter. We believe the oil price desired by OPEC is at around \$75-80/bl, though they will accept a higher outcome if it does not destabilize the global economy. Within the broader OPEC+ group, the trajectory for Russian oil supply will be critical. The range of outcomes from the EU embargo on Russian oil and oil products, plus the G7 price cap, is wide; we see good chance that around 1m b/day of Russian oil exports are lost due to these actions.

We believe moderate growth from US shale production, with average production rising 0.5m-0.75m b/day versus 2022. Capital discipline and deteriorating capital efficiency are capping growth versus previous cycles. Non-OPEC (ex US shale) will see no major roll-out of large new projects, the cycle having peaked in 2020.

For natural gas, Chinese re-opening and European security of supply should keep international gas prices elevated, relative to pre-invasion levels. With plentiful gas in storage, Europe is well placed to weather the 2022/23 winter, but the challenge will be refilling storage this summer, thanks to even lower Russian imports. Shortages will be addressed via expensive LNG imports and demand destruction. Looking further ahead, we see international gas prices deflating to a \$10-14/mcf range (vs \$7-9/ mcf pre-invasion) as new US and Qatari LNG supply comes online and allows Europe to displace almost all Russian gas imports.

Despite the strength of the energy sector in 2022, energy equity valuations remain attractive. The MSCI World Energy Index now trades on a price to book ratio of 2.0x, versus the S&P500 at 3.9x. The relative P/B of energy vs the S&P500 remains more than two standard deviations below the long-term relationship.

Oil and gas companies have demonstrated a meaningful shift towards capital discipline, manifested in lower levels of reinvestment, lower levels of debt and a return of free cash to shareholders. Assuming a \$80/bl Brent oil price, we forecast an average free cashflow yield for our portfolio in 2023 of around 12%.

Energy equities should offer good upside if our oil price, profitability and free cashflow scenarios play out. We believe energy equities currently discount an oil price of around \$63/bl. Adopting \$75/bl Brent as a long-term oil price (consistent with the bottom end of OPEC's desired range), we see 30-40% upside across the energy complex.

**Will Riley & Jonathan Waghorn**

**January 2023**

**The Fund invests in foreign securities, which involve political, economic, currency risks, greater volatility, and differences in accounting methods. These risks are greater for emerging markets. The Fund is non-diversified, meaning that its assets may be invested in fewer individual holdings than diversified funds. Therefore, the Fund is more exposed to individual stock volatility than diversified funds. The Fund invests in smaller companies, which involve additional risks such as limited liquidity and greater volatility. The Fund's focus on the energy sector to the exclusion of other sectors exposes the Fund to greater market risk and potential monetary losses than if the Fund's assets were diversified among various sectors.**

The MSCI World Energy Index is an unmanaged index composed of more than 1,400 stocks listed on exchanges in the U.S., Europe, Canada, Australia, New Zealand and the Far East. Net Return reflects deduction for withholding tax but reflects no deduction for fees and expenses. Net Return is net of local withholding taxes that any investor would pay. This index is unmanaged and is not available for investment, and do not incur expenses.

The S&P 500 is a stock market index that tracks the stocks of 500 large-cap U.S. companies.

MCF is an abbreviation denoting a thousand cubic feet of natural gas.

Price to Book Ratio (P/B Ratio) a ratio used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share.

P/E – Price to Earnings ratio is calculated by dividing current price of the stock by the company's trailing months' earnings per share.

Free cashflow – Represents the cash that a company is able to generate after laying out the money required to maintain or expand its asset base.

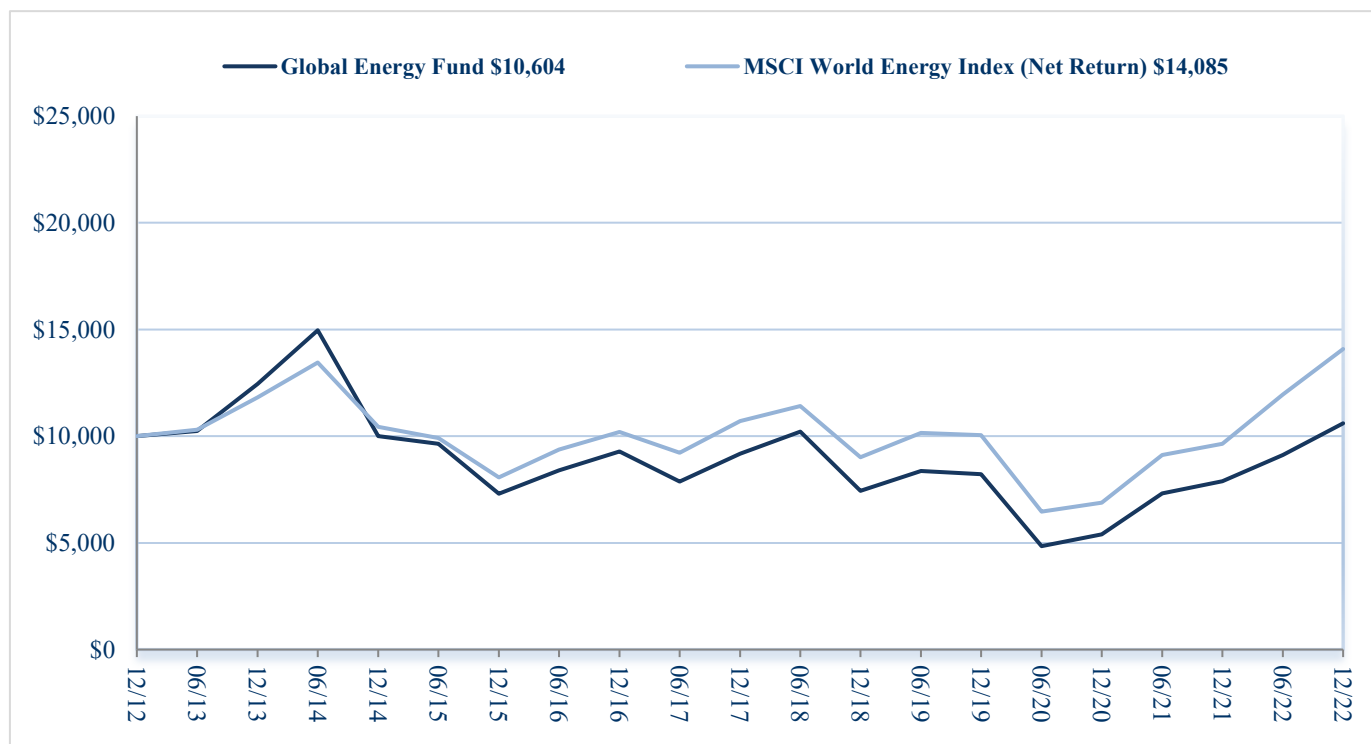
Please refer to the Schedule of Investments for details on Fund holdings. *Current and future portfolio holdings are subject to risk.*

The information provided herein represents the opinion of Guinness Atkinson Asset Management, Inc. for the period stated and it is not intended to be a forecast of future events, a guarantee of future results, or

investment advice. Opinions, Fund holdings and sector allocations are subject to change at any time, and are not recommendations to buy or sell any security.

## Global Energy Fund

### Growth of \$10,000 (Unaudited)



### Average Annual Total Return Periods Ended December 31, 2022

#### One Year

34.33%

#### Five Years

2.92%

#### Ten Years

0.60%

*Performance data quoted represents past performance and 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. Performance data current to the most recent month end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com).*

Total returns for certain periods reflect a fee waiver in effect and in the absence of this waiver, the total returns would be lower. Returns reflect the reinvestment of distributions made by the Fund, if any. The graph and the performance table above do not reflect the deduction of taxes that a shareholder would pay on Fund distribution or the redemption of Fund shares.

The MSCI World Energy Index is an unmanaged index composed of more than 1,400 stocks listed on exchanges in the U.S., Europe, Canada, Australia, New Zealand and the Far East. Net Return reflects deduction for withholding tax but reflects no deduction for fees and expenses. Net Return is net of local withholding taxes that any investor would pay. This index is unmanaged and is not available for investment, and do not incur expenses.

**FUND HIGHLIGHTS at December 31, 2022**  
**GUINNESS ATKINSON GLOBAL ENERGY FUND**

		<b>Fund Managers:</b>	
# of Holdings in Portfolio:	35	Tim Guinness	
Portfolio Turnover:	70.5%	Will Riley	
% of Stocks in Top 10:	49.3%	Jonathan Waghorn	

**Top 10 Holdings (% of net assets)**

Exxon Mobil Corp.	6.5%
Chevron Corp.	6.0%
Total Energies SE	5.3%
ConocoPhillips	4.9%
Valero Energy, Corp.	4.8%
BP PLC	4.6%
Equinor ASA	4.5%
Schlumberger Ltd.	4.5%
Shell PLC	4.3%
Repsol SA	3.9%

**Geographic Breakdown (% of net assets)**

United States	48.2%	Spain	3.9%
Canada	15.2%	Portugal	3.6%
United Kingdom	5.7%	Italy	2.7%
France	5.3%	Austria	2.6%
Norway	4.5%	China	2.5%
Netherlands	4.2%	Singapore	0.1%

**GUINNESS ATKINSON GLOBAL ENERGY FUND**
**Schedule of Investments**
**at December 31, 2022**

Shares	Common Stocks: 98.5%	Value
	<b>Energy - Alternate Sources: 0.6%</b>	
662	Maxeon Solar Technologies Ltd	\$ 10,632
4,717	SunPower Corp.*	85,048
		<u>95,680</u>
	<b>Oil &amp; Gas - Exploration &amp; Production: 23.5%</b>	
9,231	Canadian Natural Resources Ltd.	512,633
6,718	ConocoPhillips	792,724
2,074,051	Deltic Energy PLC	62,686
9,565	Devon Energy Corp.	588,343
4,160	Diamondback Energy Inc.	569,005
47,993	Diversified Energy Co., PLC	67,537
256,010	EnQuest PLC*	66,234
4,488	EOG Resources Inc.	581,286
137,690	Pharos Energy PLC	37,620
2,290	Pioneer Natural Resources Company	523,013
5,221,570	Reabold Resources PLC*	12,941
		<u>3,814,022</u>
	<b>Oil &amp; Gas - Field Services: 8.7%</b>	
7,487	Halliburton Company	294,613
21,418	Helix Energy Solutions Group, Inc.*	158,065
13,515	Schlumberger Ltd.	722,512
8,121	Baker Hughes Company	239,813
		<u>1,415,003</u>
	<b>Oil &amp; Gas - Integrated: 54.9%</b>	
131,403	BP PLC	754,424
27,320	Cenovus Energy Inc.	530,076
5,452	Chevron Corp.	978,580
30,548	Eni SpA	434,474
20,525	Equinor ASA	736,918
9,608	Exxon Mobil Corp.	1,059,762
42,921	Galp Energia Sgps Sa	579,391
11,163	Imperial Oil Ltd.	543,742
8,167	OMV AG	420,527
496,000	PetroChina Co., Ltd. - H Shares	226,854
39,561	Repsol SA	628,898
24,418	Shell PLC	692,173
14,718	Suncor Energy, Inc.	466,884
13,709	Total Energies SE	860,717
		<u>8,913,420</u>

The accompanying notes are an integral part of these financial statements.



**GUINNESS ATKINSON GLOBAL ENERGY FUND**

**Schedule of Investments**

**at December 31, 2022**

<b>Shares</b>	<b>Common Stocks: 98.5%</b>	<b>Value</b>
	<b>Oil &amp; Gas - Pipelines and Transportation: 4.9%</b>	
10,529	Enbridge Inc.	411,684
20,914	Kinder Morgan Inc.	378,125
		<u>\$ 789,809</u>
	<b>Oil Refining &amp; Marketing: 5.9%</b>	
372,000	China Petroleum & Chemical	179,672
6,113	Valero Energy, Corp.	775,495
		<u>955,167</u>
	<b>Total Common Stocks</b>	<u>\$ 15,983,101</u>
	(cost \$16,740,909)	
	<b>Total Investments in Securities</b>	<u>15,983,101</u>
	(cost \$16,740,909): 98.5%	
	Other Assets less Liabilities: 1.5%	<u>236,817</u>
	<b>Net Assets: 100.0%</b>	<u><u>\$ 16,219,918</u></u>

\* Non-income producing security.

ADR - American Depositary Receipt

PLC - Public Limited Company

**GUINNESS ATKINSON GLOBAL INNOVATORS FUND  
ANNUAL REPORT FOR THE PERIOD ENDED  
DECEMBER 31, 2022**

<b>AVERAGE ANNUAL TOTAL RETURNS</b>	<b>1 YEAR</b>	<b>3 YEARS</b>	<b>5 YEARS</b>	<b>10 YEARS</b>
<b>FUND</b>				
Investor Class	-29.67%	5.18%	5.81%	11.99%
Institutional Class*	-29.51%	5.44%	6.07%	12.19%
<b>BENCHMARK INDICES:</b>				
MSCI WORLD INDEX (Net Return)	-18.14%	4.94%	6.13%	8.85%
NASDAQ COMPOSITE INDEX	-32.54%	6.10%	9.66%	14.43%

**Fund performance (Total Return in USD). Bloomberg and Guinness Atkinson Asset Management**

\*Institutional Class shares commenced on December 31, 2015. The performance figures for the Institutional Class shares include the performance of Investor Class shares for the period prior to the inception date of the Institutional Class shares.

**Investor Class Gross 1.17% & Net 1.24%; Institutional Class Gross 0.99% & Net 0.99%. The Adviser has contractually agreed to reduce its fees and/or pay Fund expenses in order to limit the Fund's Total Annual Operating Expenses for Investor Class and for Institutional Class shares to 1.24% and 0.99% through June 30, 2025.**

For the Fund's current one-year expense ratios, please refer to the Financial Highlights section of this report.

*Performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment in the Fund 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. Performance data current to the most recent month-end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com), or calling (800) 915-6565.*

**Summary**

Over the year of 2022, the Guinness Atkinson Global Innovators Fund produced a total return of -29.67% (in USD) vs the MSCI World Index net total return of -18.14% (in USD). The fund therefore underperformed the benchmark by 11.53%.

**Performance**

Inflation, supply-chain shortages, Russia's invasion of Ukraine, and higher interest rate expectations dominated financial headlines for most of the year, leading equity markets to end 2022 significantly lower.

Over the course of 2022, high levels of inflation and a strong jobs market spurred global central banks to tighten monetary policy at historic rates. This drove markets towards 'value' orientated stocks, with the MSCI World Value Index outperforming the MSCI World Growth Index by 23.3% in USD terms over the course of 2022. This acted as a significant headwind to the Fund, which performed in-line with the MSCI World Growth Index (-29.0% USD).

In the context of tighter monetary policy, fears of an impending recession grew, and investors rotated towards more defensive areas of the market - particularly as the perceived chances of a 'soft landing' diminished and as equity analysts downgraded earnings forecasts. Whilst this was a headwind for the Fund's overweight position to typically more 'cyclical' sectors, such as Information Technology, the Fund's quality focus supported the Fund, as a significant divergence in performance emerged between more 'speculative' stocks with more extreme valuations, and 'quality growth' stocks, where current valuations place lower weight on future growth prospects. The Goldman Sachs Unprofitable Tech Index, an example of 'speculative' tech stocks, fell 62.3% (USD) over the period.

- Over 2022, fund performance relative to the MSCI World Net TR Index can be attributed to a number of factors:
  - IT, the fund's largest sector exposure, was the greatest detractor to relative Fund performance. The Fund's two largest overweight industries are both within the IT sector, Software & Services and Semiconductors & Semi-Equipment Manufacturers. These were the MSCI World's bottom performing over the year (-30.5% USD and -36.2% USD). This was a significant headwind for relative Fund performance from an attribution point of view.
  - Whilst not owning any Real Estate stocks benefitted the Fund over the year, not owning any Energy stocks (the best performing sector over 2022) Utilities, Materials or Consumer Staples all acted as a drag on performance. The Fund's underweight to Financials also contributed to underperformance.
  - The Fund's overweight position to Pharmaceuticals acted as a tailwind for relative Fund performance, as the MSCI World's third top performing sector. This was buoyed by performance from Bristol-Myers Squibb, which delivered +19.0% USD over the year, outperforming the MSCI World Healthcare Index by +24.0%.
  - The strong rotation towards 'value' and 'defensives' created a sizeable headwind for Fund performance over 2022. Whilst the Fund philosophy aims to identify 'growth' stocks that are subject to long-term secular trends and hence lower variability of revenue growth, these 'growth' stocks are often identified in perceivably more 'cyclical' sectors. Hence, these rotations impacted performance negatively from an attribution perspective.

### Activity

In the second quarter of 2022, we sold three positions, Cisco, Samsung Electronics and SAP, and initiated three new positions in Intuit, Salesforce and Zoom.

### Buys:

**Intuit Technologies** is a global technology platform which provides small businesses and self-employed customers with financial management and compliance products. Intuit's track record of innovation, quality attributes and growth potential make it a natural fit for the Fund. Whilst offering a higher-growth outlook than peers, Intuit is trading at similar P/E levels – an attractive entry point considering it traditionally trades at a significant premium.

**Salesforce** aims to increase the productivity and efficiency of sales representatives through a number of products of substantial scale and growth, their cloud-hosted customer relationship management technology being the outright market leader. Through margin expansion, cross-selling, end-market growth, market-

share gains, and both organic and inorganic opportunities, Salesforce has many levers to pull to maintain its strong growth trajectory.

**Zoom** was one of the beneficiaries of the Covid pandemic, with the firm's Zoom Meetings product offering a low-cost platform for friends, family and colleagues to keep in touch. The company executed an excellent strategy that built on the extreme growth it initially underwent and now holds a commanding position in the market. With a low-touch, 'freemium' model that lends itself to viral adoption, the firm has quickly become one of the best-known brands within video communications. Whilst it remains to be seen whether Zoom will be one of the 'winners' in the UCaaS space, we believe the firm has given itself every chance of doing so, with a superior product, strength in the brand name, and a strong, sensible strategy. We also note the significant cash buffer the company has built on its balance sheet.

### **Sells:**

**SAP** is a global software vendor which provides enterprise resource planning and database management software, among other products. The business has been transitioning away from licensing towards SaaS, and has disappointed the market by pushing back guidance and seeing slower and less profitable shift to cloud than expected. We felt there were better opportunities with clearer earnings growth potential elsewhere, considering the market sell-off in 2022.

**Cisco**, a leading supplier of network IT hardware, has been increasing its software capabilities and moving to capture a greater recurring revenue stream. The business is very well run and has been improving returns on capital over the past few years. Although we rate the company highly, we are cautious on the potential for macro headwinds in a lower-growth (or potentially recessionary) environment, and although the valuation has de-rated to reflect this, we felt there were better opportunities for high-quality companies offering potentially higher growth.

**Samsung Electronics** generates a significant proportion of revenues and earnings from its semiconductor business, alongside consumer electronics such as displays and smartphones. Although we are broadly constructive on the semiconductor market due to the expanding demand drivers versus history, we are conscious of the overall exposure of the Fund. Because of the strong run of the stock price through the pandemic period (some of which has been given back alongside the broader market sell-off this year), its exposure to lower-margin consumer electronics, and our significant exposure to the semiconductor industry, we felt it was an opportune time to take profits and invest in other companies that may offer greater secular growth opportunities that may be less susceptible to cyclical pressures.

### **Outlook**

The Guinness Global Innovators fund seeks to invest in quality, innovative growth companies trading at reasonable valuations. By doing so, we seek to invest in companies that are experiencing faster profit growth, larger margins and with less susceptibility to cyclical pressures. Whilst it has been a difficult year for the Fund due to the significant outperformance of 'value', we are pleased with how well the fund has performed despite the varying market conditions over the last 3 years. In particular, our focus on quality growth-at-a-reasonable-price has shown its strength in avoiding the highly valued non-profitable tech businesses that have swung between large rises and falls, but ultimately underperformed significantly over the period.

The table below illustrates how the portfolio at year-end reflects the four key tenets of our approach. The four key tenets of our approach are innovation, quality, growth, and conviction. The fund has superior characteristics to the broad market; higher spend on intellectual property through research and development (R&D), less capital intensiveness, higher cash flow returns on investment, with higher historic growth. The

fund currently trades at a 22.1% premium to the benchmark on a PE basis which we believe is a small price to pay for this attractive set of characteristics.

		Fund	MSCI World Index
Innovation	R&D / Sales	8.4%	6.8%
	CAPEX / Sales	6.1%	8.7%
Quality	Return-on-Capital	20.6%	7.0%
	Weighted average net debt / equity	29.5%	70.8%
Growth (& valuation)	Trailing 5-year sales growth (annualised)	14.1%	3.5%
	Estimated earnings growth (2023 vs 2022)	8.8%	7.7%
	PE (2023e)	19.1	15.5
Conviction	Number of stocks	30	1508
	Active share	84%	-

*Source: Guinness Atkinson Asset Management, Bloomberg, as of 12.31.2022*

In the current market environment where inflation concerns and slower growth remain top of mind, we are confident that the Fund's focus on high quality growth stocks, underpinned by structural changes stands us in good stead going forward.

With inflation seemingly moderating and global Central Banks appearing to slow the rate of growth hikes, and a significant de-rating in valuations having occurred, many of the 2022 headwinds for equity markets, and growth stocks in particular, are looking more positive. However, uncertainty remains as none of these issues have been resolved conclusively and second-order effects, or indeed new issues, may arise in the coming months. Indeed, with global growth expected to slow, the prospects of a recession remain high (particularly in Europe and Asia), potentially creating a meaningful dent into company earnings. In many respects, we believe these concerns have largely been 'priced-in' to earnings estimates, but this does not necessarily preclude further earnings downgrades to come. Indeed, we believe there is a good argument for high quality, secular growth stocks in this current market environment, especially in a recessionary and/or slower growth environment, as these companies should continue to be able to grow despite the market headwinds and have better fundamental characteristics in terms of margins and balance sheets. We continue to focus on these key tenets in the fund and remain confident of this process over the long term.

*Ian Mortimer & Matthew Page  
January 2023*

**The Fund invests in foreign securities, which involve political, economic and currency risks, greater volatility, and differences in accounting methods. These risks are greater for emerging markets. The Fund is non-diversified, meaning that its assets may be invested in fewer individual holdings than diversified funds. Therefore, the Fund is more exposed to individual stock volatility than diversified funds. The Fund invests in smaller companies, which involve additional risks such as limited liquidity and greater volatility.**

The approach of the Fund is not to provide access to the most innovative companies in the world but rather to look at companies using the 'prism' of innovation to highlight those we think might be winners in the future - and then only buy them if they are offering reasonable value compared to those future expectations.

We are firm believers that innovative companies may outperform in the future and that a value discipline to stock selection has the potential to add to that performance.

The MSCI World Index (Net Return) is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets. Net Return reflects deduction for withholding tax but reflects no deduction for fees and expenses. Net Return is net of local withholding taxes that any investor would pay. The NASDAQ Composite Index is a market capitalization-weighted index that is designed to represent the performance of the National Market System, which includes over 5,000 stocks traded only over-the-counter and not on an exchange. These indices are unmanaged and are not available for investment, and do not incur expenses. PER or P/E – Price to Earnings ratio is calculated by dividing current price of the stock by the company's trailing twelve months earnings per share.

Cash flow measures the cash generating capability of a company by adding non-cash charges (e.g. depreciation) and interest expense to pretax income.

A cash flow return on investment (CFROI) is a valuation metric that acts as a proxy for a company's economic return. This return is compared to the cost of capital, or discount rate, to determine value-added potential.

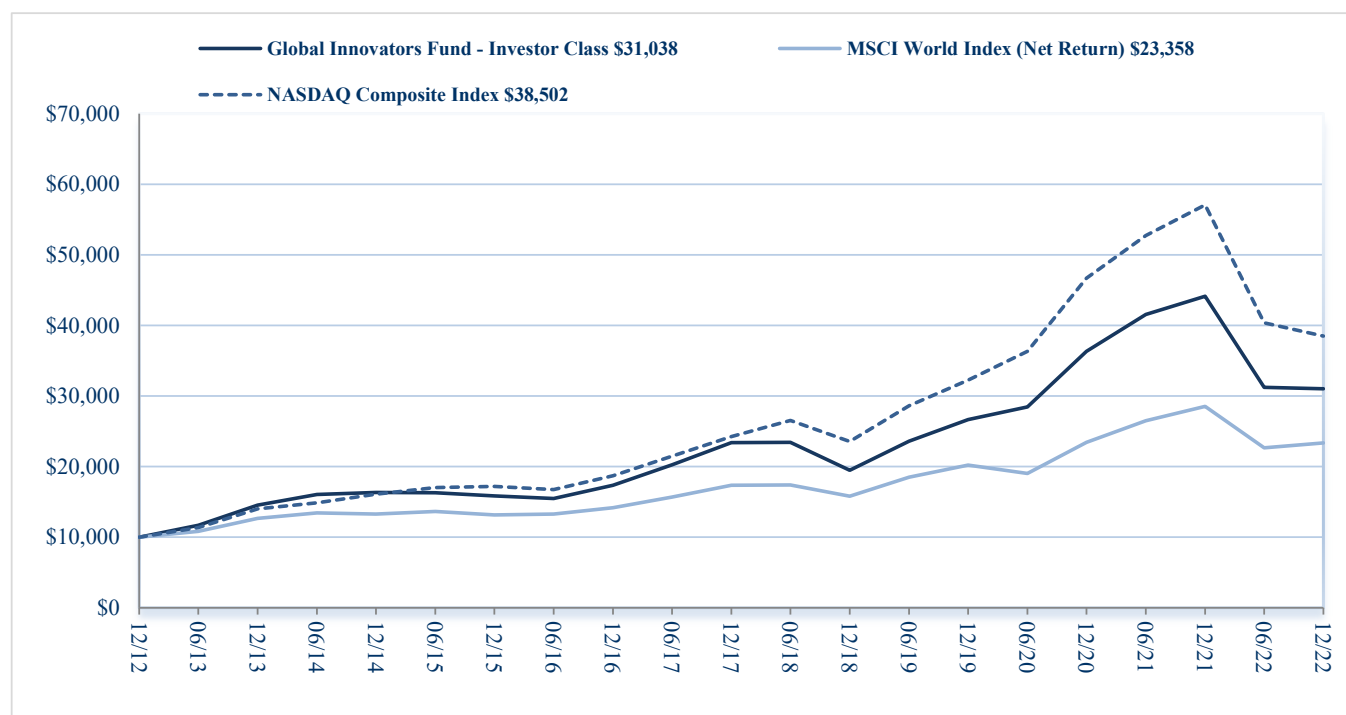
Earnings growth is not representative of the Fund's future performance.

Please refer to the Schedule of Investments for details on Fund holdings. *Current and future portfolio holdings are subject to risk.*

The information provided herein represents the opinion of Guinness Atkinson Asset Management, Inc. for the period stated and is not intended to be a forecast of future events, a guarantee of future results, or investment advice. Opinions, Fund holdings and sector allocations are subject to change at any time, and are not recommendations to buy or sell any security

## Global Innovators Fund

### Growth of \$10,000 (Unaudited)



### Average Annual Total Return Periods Ended December 31, 2022

	One Year	Five Years	Ten Years
Investor Class	-29.67%	5.81%	11.99%
Institutional Class <sup>1</sup>	-29.51%	6.07%	12.19%

Performance data quoted represents past performance and 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. Performance data current to the most recent month end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com).

The performance graph above is shown for the Fund's Investor Class shares; Institutional Class shares performance may vary.

Total returns for certain periods reflect a fee waiver in effect and in the absence of this waiver, the total returns would be lower. Returns reflect the reinvestment of distributions made by the Fund, if any. The graph and the performance table above do not reflect the deduction of taxes that a shareholder would pay on Fund distribution or the redemption of Fund shares.

The MSCI World Index (Net Return) is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets. Net Return reflects deduction for withholding tax but reflects no deduction for fees and expenses. Net Return is net of local withholding taxes that any investor would pay. The NASDAQ Composite Index is a market capitalization weighted index that is designed to represent the performance of the National Market System which includes over 5,000 stocks traded only over-the-counter and not on an exchange. The indices referenced in this chart are not available for investment and do not incur expenses.

<sup>1</sup> Performance information for the Institutional Class, prior to commencement of operations on December 31, 2015, is based on the performance of Investor Class, and adjusted for the lower expenses applicable to Institutional Class.



**FUND HIGHLIGHTS at December 31, 2022**  
**GUINNESS ATKINSON GLOBAL INNOVATORS FUND**

		<b>Fund Managers:</b>	
# of Holdings in Portfolio:	30	Dr. Ian Mortimer	
Portfolio Turnover:	14.7%	Matthew Page	
% of Stocks in Top 10:	40.5%		

**Top 10 Holdings (% of net assets)**

Amphenol Corporation	4.4%
Mastercard Inc.	4.4%
Thermo Fisher Scientific Inc.	4.2%
Roper Industries, Inc.	4.2%
Visa Inc.	4.1%
ABB Ltd.	4.0%
Intercontinental Exchange, Inc.	3.9%
Danaher Corp.	3.8%
KLA-Tencor Corp.	3.8%
Microsoft Corp.	3.7%

**Geographic Breakdown (% of net assets)**

United States	78.9%	Taiwan	3.0%
Switzerland	4.0%	China	2.9%
France	3.7%	Ireland	2.0%
Germany	3.2%		

**GUINNESS ATKINSON GLOBAL INNOVATORS FUND**  
**Schedule of Investments**  
**at December 31, 2022**

Shares	Common Stocks: 97.7%	Value
	<b>Application Software: 12.4%</b>	
12,382	Intuit Inc.	\$ 4,819,322
20,875	Microsoft Corp.	5,006,243
28,235	Salesforce Inc.*	3,743,679
45,740	Zoom Video Communications	3,098,428
		<u>16,667,672</u>
	<b>Athletic Footwear: 3.5%</b>	
40,737	NIKE Inc.	<u>4,766,636</u>
	<b>Cable/Satellite TV: 2.8%</b>	
107,932	Comcast Corp. - Class A	<u>3,774,382</u>
	<b>Commercial Services: 2.8%</b>	
52,470	PayPal Holdings, Inc.*	<u>3,736,913</u>
	<b>Computers: 3.1%</b>	
31,867	Apple Inc.	<u>4,140,479</u>
	<b>Diversified Manufacturing Operations: 8.0%</b>	
19,447	Danaher Corp.	5,161,623
10,267	Thermo Fisher Scientific Inc.	5,653,934
		<u>10,815,557</u>
	<b>E-Commerce: 2.2%</b>	
35,756	Amazon.com Inc.*	<u>3,003,504</u>
	<b>Electronic Components - Semiconductor: 10.0%</b>	
78,337	Amphenol Corporation	5,964,579
142,131	Infineon Technologies AG	4,325,660
21,186	NVIDIA Corp.	3,096,122
		<u>13,386,361</u>
	<b>Enterprise Software/Services: 2.6%</b>	
10,240	Adobe Inc.*	<u>3,446,067</u>
	<b>Finance - Other Services: 12.3%</b>	
50,731	Intercontinental Exchange, Inc.	5,204,493
16,847	Mastercard Inc.	5,858,207
26,190	Visa Inc.	5,441,234
		<u>16,503,934</u>
	<b>Internet Content: 1.7%</b>	
18,665	Meta Platforms Inc. - Class A*	<u>2,246,146</u>

The accompanying notes are an integral part of these financial statements.

**GUINNESS ATKINSON GLOBAL INNOVATORS FUND**  
**Schedule of Investments**  
**at December 31, 2022**

Shares	Common Stocks: 97.7%	Value
	<b>Machinery - Electric Utility: 4.0%</b>	
176,107	ABB Ltd.	\$ 5,343,385
	<b>Machinery: 4.2%</b>	
13,073	Roper Industries, Inc.	5,648,713
	<b>Metal Instrument: 2.0%</b>	
34,820	Medtronic PLC	2,706,210
	<b>Pharmaceutical: 3.5%</b>	
65,813	Bristol-Myers Squibb Co	4,735,245
	<b>Power Conversion/Supply Equipment: 3.7%</b>	
35,206	Schneider Electric SE	4,926,578
	<b>Retail - Apparel: 2.9%</b>	
296,000	ANTA Sports Products Ltd.	3,879,394
	<b>Semiconductor: 13.1%</b>	
44,521	Applied Materials Inc.	4,335,455
13,569	KLA-Tencor Corp.	5,115,920
10,095	Lam Research Corp.	4,242,929
52,937	Taiwan Semiconductor - ADR	3,943,277
		17,637,581
	<b>Web Portals: 2.9%</b>	
43,629	Alphabet Inc. - A Shares*	3,849,387
	<b>Total Common Stocks</b> (cost \$90,321,521)	\$ 131,214,144
	<b>Total Investments in Securities</b> (cost \$90,321,521): 97.7%	131,214,144
	Other Assets less Liabilities: 2.3%	3,142,900
	<b>Net Assets: 100.0%</b>	<b>\$ 134,357,044</b>

\* Non-income producing security.

ADR - American Depositary Receipt

GDR - Global Depositary Receipt

PLC - Public Limited Company

The accompanying notes are an integral part of these financial statements.

**GUINNESS ATKINSON RENMINBI YUAN & BOND FUND**  
**ANNUAL REPORT FOR THE PERIOD ENDED**  
**DECEMBER 31, 2022**

**1. PERFORMANCE**

<b>AVERAGE ANNUALIZED TOTAL RETURN</b>	<b>1 YEAR</b>	<b>3 YEARS</b>	<b>5 YEARS</b>	<b>10 YEARS</b>
Fund	-9.20%	0.64%	0.66%	0.92%
<b>Benchmark Indices:</b>				
Hang Seng Markit iBoxx Offshore RMB Overall Index	-6.58%	2.87%	2.44%	2.61%
RMB Cash Offshore (CNH)*	-8.16%	0.19%	-1.21%	-1.06%
RMB Cash Onshore (CNY)*	-7.86%	0.31%	-1.16%	-1.01%

\* Net change in exchange rate versus U.S. dollar.

Gross 2.29% & Net 0.90%. The Adviser has contractually agreed to reduce its fees and/or pay Fund expenses in order to limit the Fund's Total Annual Operating Expenses to 0.90% through June 30, 2025.

For the Fund's current one-year expense ratios, please refer to the Financial Highlights section of this report.

*Performance data quoted represents past performance and 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. Performance data current to the most recent month-end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com), or calling (800) 915-6565.*

In 2022 the Fund fell -9.20% compared to the Hang Seng Markit iBoxx Offshore RMB Overall Total Return Index which fell -6.58% in USD terms and the Offshore Renminbi (CNH) which fell 8.16% against the dollar.

Domestic China and international conditions have been challenging for fixed income in 2022. Domestically, China has been grappling with the impact of zero-Covid policies and a series of credit events associated with the policy-driven effort to restrict debt accumulation by the private real estate developers. International investors have in addition, been concerned that China's government is retreating from its former focus on economic growth and development; and furthermore, China's geopolitical stance has come under increased scrutiny. Global macro-economic conditions have had an additional effect on both the exchange rate and on China sovereign bond yields, as US dollar interest rates have surged to combat inflation in the US, conditions are not present in China's currently depressed economic state.

The domestic China story has shifted entirely in the last two months of the year and into 2023. Following Xi Jinping's confirmation as leader for a third term, and not by coincidence, Chinese policies on all these issues have moved. Tangible financial support has been made available to stabilise the real estate market; the focus on economic development has been reaffirmed in both actions and words; and dialogue retreated with the US at the G20 meeting, also not coincidentally, following the US mid-term elections. The biggest move has been the abandonment of the zero-Covid policies that have done so much damage to local confidence. The government now targets economic growth of over 5% in the coming year and is going all out to achieve it. The

World Bank forecasts 4.3% Gross Domestic Product (GDP) growth for this year and the range of estimates from some private forecasters exceeds 6%. Whatever the right number, the market consensus is that China's economic growth is set to accelerate while that of developed markets is expected to slow in the coming year.

China's exchange rate held up well against the US dollar for the first six months of the year before dropping in the second half following renewed covid-related lockdowns in August and September. However, following China's change in direction in November the currency recovered from its lows, and it ended the year having performed no worse than its Asian or developed market counterparts. At the same time China's sovereign bond yields are now lower than those of US Treasuries of equivalent maturities as investors look at the differing paths of interest rates: those in the US climbing in response to inflation pressure, those in China falling in response to economic weakness and low inflation.

The bonds in the portfolio held up well except for one, Zhenro Properties, which we discussed at the interim stage in 2022. To recap, the bond was issued by one of China's private real estate developers and is trading at distressed levels. The company itself is still building and selling residential units and while pricing has held up volume sales are sharply lower, as they are for the wider sector. The company is, therefore, not able to make payments of interest or principal and still have enough cash available to complete ongoing development projects which they must do if they are to raise sufficient funds to meet those payment eventually. We think there is a prospect of being repaid but we are realistic as to the challenges the company faces. Our confidence would increase if broader Chinese economic recovery were to translate into rising sales volume.

## **2. PORTFOLIO CHANGES**

We bought four new positions in 2022: a quasi-sovereign bond issued by Agricultural Development Bank of China 3.4% 11/06/24 and bonds issued by commercial banks Standard Chartered Bank 4.35% 03/18/26, Qatar National Bank Finance 3.9% 06/17/25 and Bank of Communications 3.2% 03/21/24. One holding matured, Bank of China/Macau 3.3% 04/17/22. Finally, we exchanged our holding in Zhenro Properties 7.125% 6/30/22 for Zhenro Properties 8% 03/06/23 in their debt extension program.

## **3. PORTFOLIO POSITION**

Bonds issued by Government/Supranational organizations accounted for 21% of the portfolio. China financials accounted for 27% of the portfolio, and foreign financials accounted for 18%. Non-financial corporations accounted for 24% of the Fund. The valuation of the portfolio as measured by the yield to maturity was 3.75% and the duration of the portfolio was 1.62 years.

## **4. OUTLOOK**

We expect to see US interest rates climb further in 2023 and then we expect them to stay at elevated levels, for longer than the market might expect. We see market expectations driven by the outlook for Consumer Price Inflation (CPI) in the US, which is expected to come down quite quickly but we think the Federal Reserve is looking at inflation pressure Core Personal Consumption Expenditure (PCE), especially in Services ex-Housing, which is proving more resistant. We expect interest rate cuts to come only once the Federal Reserve is convinced Core PCE inflation is coming down, which may not happen until 2024.

This would suggest the differential between US dollar and China Renminbi interest rates should remain wide. China's economy is expected to accelerate in the coming year, so this may not be a significant problem, but we also need to bear in mind that the trade surplus which reached an estimated 4.9% of GDP may narrow in the face of weaker demand from developed markets for exported goods. Nevertheless, we have already seen the Chinese

exchange rate move higher against the dollar, from an arguably oversold position, and it could move higher if we see firm evidence of renewed economic momentum.

*Edmund Harriss*

*January 2023*

**The Fund invests in foreign securities, which involve political, economic and currency risks, greater volatility, and differences in accounting methods. These risks are greater for emerging markets. The Fund is non-diversified, meaning that its assets may be concentrated in fewer individual holdings than diversified funds. Therefore, the Fund is more exposed to individual stock volatility than diversified funds. The Fund invests in smaller companies, which involve additional risks such as limited liquidity and greater volatility. Investments in debt securities typically decrease in value when interest rates rise, which can be greater for longer-term debt securities. The Fund may invest in derivatives, which involves risks different from, and in certain cases, greater than the risks presented by traditional investments.**

***Investments focused in a single geographic region may be exposed to greater risk than investments diversified among various geographic regions.***

The Hang Seng Markit iBoxx Offshore RMB Bond Index family (“HSM iBoxx”) is designed to track the performance of the offshore RMB bond market. This index is unmanaged and not available for investment, and does not incur expenses.

GDP – Gross domestic product (GDP) is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period.

Consumer Price Inflation – The change is the prices of a basket of goods and services that are typically purchased by specific groups of households.

The RMB Cash Offshore (CNH) is the currency code for renminbi traded outside China in the offshore market.

The RMB Cash Onshore (CNY) is the international currency code for the renminbi.

Yield to maturity is the total return anticipated on a bond if the bond is held until it matures.

SEC 30-day Yield: 2.99% (subsidized); 0.92% (unsubsidized). The unsubsidized SEC yield is calculated with a standardized formula mandated by the SEC. The formula is based on maximum offering price per share and does not reflect waivers in effect.

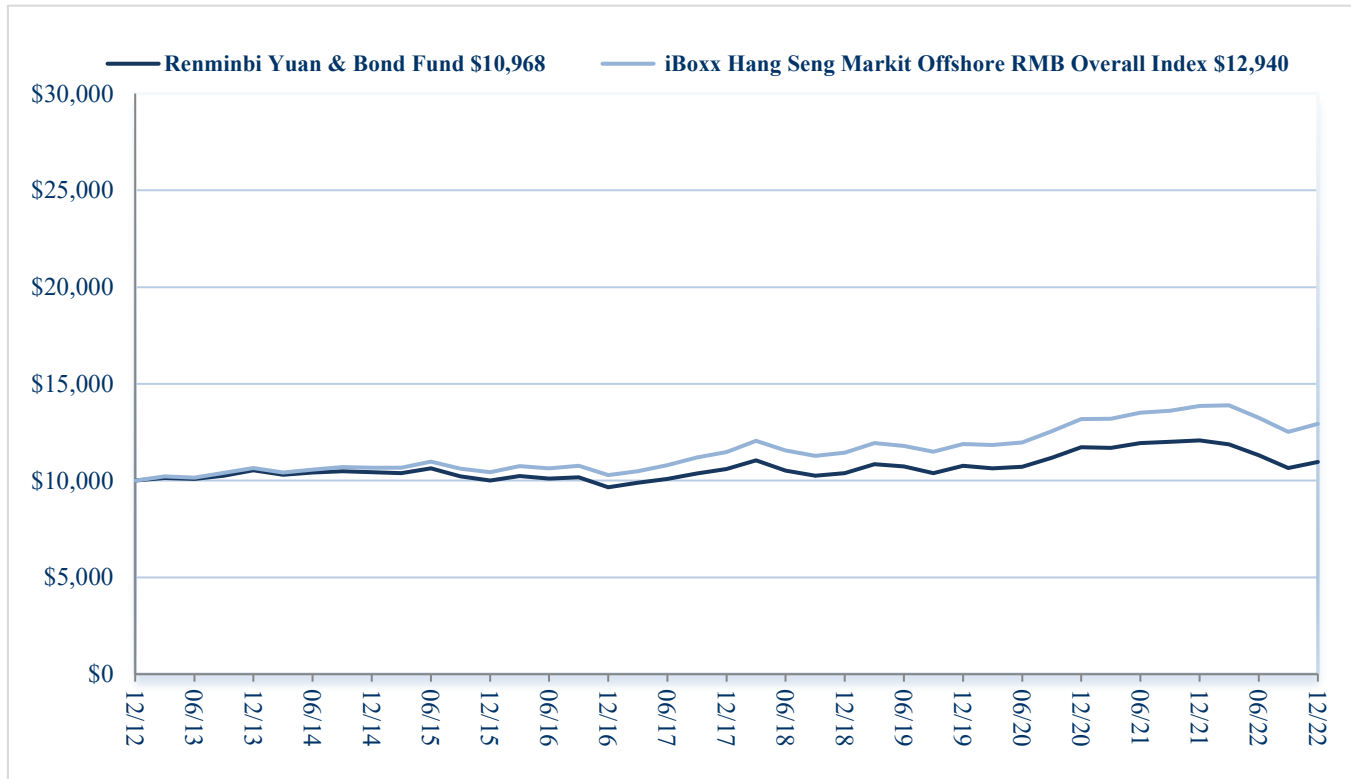
Duration is expressed in the form of number of years and measures a bond's sensitivity to change in interest rates. To be specific, it measures the change in market value of security due to 1% change in interest rates.

Please refer to the Schedule of Investments for details on Fund holdings. *Current and future portfolio holdings are subject to risk.*

The information provided herein represents the opinion of Guinness Atkinson Asset Management, Inc. for the period stated and is not intended to be a forecast of future events, a guarantee of future results, or investment advice. Opinions, Fund holdings and sector allocations are subject to change at any time, and are not recommendations to buy or sell any security.

## Renminbi Yuan & Bond Fund

### Growth of \$10,000 (Unaudited)



### Average Annual Total Return Periods Ended December 31, 2022

One Year	Five Years	Ten Years
-9.20%	0.66%	0.92%

*Performance data quoted represents past performance and 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. Performance data current to the most recent month end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com).*

Total returns for certain periods reflect a fee waiver in effect and in the absence of this waiver, the total returns would be lower. Returns reflect the reinvestment of distributions made by the Fund, if any. The graph and the performance table above do not reflect the deduction of taxes that a shareholder would pay on Fund distribution or the redemption of Fund shares.

The iBoxx Hang Seng Markit Offshore RMB Overall Index ("HSM iBoxx") captures the performance of debt denominated in Chinese yuan but issued and settled offshore. The index family offers a broad coverage of the offshore RMB bond universe.

**FUND HIGHLIGHTS at December 31, 2022**  
**GUINNESS ATKINSON RENMINBI YUAN & BOND FUND**

		<b>Fund Managers:</b>	
# of Holdings in Portfolio:	24	Edmund Harriss	
Portfolio Turnover:	3.8%		
% of Investments in Top 10:	52.2%		

**Top 10 Holdings (% of net assets)**

First Abu Dhabi Bank, 3.400%, 08/18/25	12.1%
BMW Finance, 2.800%, 8/11/23	9.2%
CBQ Finance Ltd., 4.000%, 08/05/23	6.2%
Standard Chartered PLC 4.350%, 03/18/26	6.1%
Export-Import Bank of Korea, 4.500%, 01/27/24	3.1%
Agriculture Development Bank of China 3.400%, 11/06/24	3.1%
China Development Bank, 3.230%, 11/27/25	3.1%
China Development Bank, 3.030%, 11/27/23	3.1%
China Construction Bank, 2.850%, 04/22/23	3.1%
Municipality of Shenzhen China, 2.900%, 10/19/26	3.1%

**Geographic Breakdown (% of net assets)**

China	21.7%	Cayman Islands	6.2%
Netherlands	12.3%	United Kingdom	6.1%
United Arab Emirates	12.0%	South Korea	3.1%
British Virgin Islands	9.1%	Germany	3.1%
Hong Kong	8.3%	Supranational	3.1%
Bermuda	6.2%		



**GUINNESS ATKINSON RENMINBI YUAN & BOND FUND**
**Schedule of Investments**
**at December 31, 2022**

Principal Amount (CNH)	Corporate Bonds: 91.2%	Value
	<b>Auto-Cars/Light Trucks: 12.3%</b>	
3,000,000	BMW Finance, 2.800%, 8/11/23	\$ 431,354
1,000,000	Volkswagen International Finance NV, 2.900%, 01/21/24	143,004
		<u>574,358</u>
	<b>Commercial Banks: 39.7%</b>	
1,000,000	Bank of China, 3.080%, 04/28/26	142,321
1,000,000	Bank of Communications Bank Co., Ltd., 3.200%, 3/21/24	144,494
2,000,000	CBQ Finance Ltd., 4.000%, 08/05/23	289,720
1,000,000	China Construction Bank, 2.850%, 04/22/23	144,678
4,000,000	First Abu Dhabi Bank, 3.400%, 08/18/25	562,678
1,000,000	QNB Finance Ltd., 3.800%, 06/17/25	142,694
1,000,000	QNB Finance Ltd., 3.900%, 06/17/25	141,882
2,000,000	Standard Chartered PLC 4.350%, 03/18/26	286,520
		<u>1,854,987</u>
	<b>Diversified Banks: 2.9%</b>	
1,000,000	HSBC Holding, 3.400%, 06/29/27	137,771
	<b>Diversified Operations: 3.1%</b>	
1,000,000	Wharf Finance Ltd., 3.250%, 01/14/24	143,853
	<b>Export/Import Bank: 18.6%</b>	
1,000,000	Agriculture Development Bank of China 3.400%, 11/06/24	145,683
1,000,000	China Development Bank, 3.030%, 11/27/23	144,723
1,000,000	China Development Bank, 3.230%, 11/27/25	145,016
1,000,000	European International Bank, 2.700%, 04/22/24	143,110
1,000,000	Export-Import Bank of Korea, 4.500%, 01/27/24	146,013
1,000,000	Kreditanstalt fuer Wiederaufbau, 2.700%, 03/25/24	144,416
		<u>868,961</u>
	<b>Finance-Mtg Loan/Banker: 3.1%</b>	
1,000,000	Hong Kong Mortgage Corp. Ltd., 2.700%, 02/09/24	143,941
	<b>Municipal City: 3.1%</b>	
1,000,000	Municipality of Shenzhen China, 2.900%, 10/19/26	144,519
	<b>Transportation Services: 2.3%</b>	
1,000,000	GLP China Holding Ltd., 4.000%, 02/7/24	106,450
	<b>Real Estate Operator/Developer: 6.1%</b>	
1,000,000	Sun Hung Kai Properties 3.200%, 08/14/27	137,660
1,000,000	Wharf Real Estate Investment Company Ltd., 3.200%, 09/15/23	144,262
1,000,000	Zhenro Properties Group Ltd., 8.000%, 03/06/23	3,612
		<u>285,534</u>
	<b>Total Corporate Bonds</b>	<u>\$ 4,260,374</u>
	(cost \$4,682,407)	
	<b>Total Investments in Securities</b>	<u>4,260,374</u>
	(cost 4,682,407): 91.2%	
	China Yuan (Offshore): 7.0%	329,358
	Other Assets less Liabilities: 1.8%	82,825
	<b>Net Assets: 100.0%</b>	<u><u>\$ 4,672,557</u></u>

CNH - The official currency of the People's Republic of China.

The accompanying notes are an integral part of these financial statements.

**GUINNESS ATKINSON™ FUNDS**  
**STATEMENTS OF ASSETS AND LIABILITIES**  
**at December 31, 2022**

	<b>Alternative Energy Fund</b>	<b>Asia Focus Fund</b>	<b>China &amp; Hong Kong Fund</b>
<b>Assets</b>			
Investments in securities, at cost	\$ 25,768,356	\$ 9,162,867	\$ 38,508,806
Investments in securities, at value	\$ 25,891,150	\$ 10,846,892	\$ 38,148,256
Cash	1,552,604	179,020	-
Cash denominated in foreign currency (cost of \$0, \$33,373 and \$296,780, respectively)	-	32,611	289,300
Receivables:			
Securities sold	-	-	148,722
Fund shares sold	65,990	-	-
Dividends and interest	23,445	8,849	207
Tax reclaim	17,953	-	-
Prepaid expenses	2,678	5,491	6,794
Total Assets	<u>27,553,820</u>	<u>11,072,863</u>	<u>38,593,279</u>
<b>Liabilities</b>			
Overdraft due to custodian bank	-	-	332,804
Payable for Fund shares redeemed	6,318	-	36,699
Due to Advisor, net	26,055	4,573	37,009
Accrued administration fees	1,076	559	1,209
Accrued shareholder servicing plan fees	8,840	2,869	7,725
Audit fees	18,595	25,082	25,236
CCO fees	721	885	1,479
Custody fees	3,762	5,760	5,238
Fund Accounting fees	5,237	6,251	6,210
Legal fees	348	267	433
Miscellaneous fees	961	1,047	1,136
Printing fees	5,830	2,827	5,413
Transfer Agent fees	7,547	5,950	12,075
Trustee fees	336	303	353
Total Liabilities	<u>85,626</u>	<u>56,373</u>	<u>473,019</u>
<b>Net Assets</b>	<u>\$ 27,468,194</u>	<u>\$ 11,016,490</u>	<u>\$ 38,120,260</u>
<b>Composition of Net Assets</b>			
Paid-in capital	\$ 58,142,057	\$ 9,465,646	\$ 38,841,023
Total distributable earnings (loss)	<u>(30,673,863)</u>	<u>1,550,844</u>	<u>(720,763)</u>
<b>Net Assets</b>	<u>\$ 27,468,194</u>	<u>\$ 11,016,490</u>	<u>\$ 38,120,260</u>
<b>Number of shares issued and outstanding</b> (unlimited shares authorized, no par value)	4,688,815	777,389	2,513,704
<b>Net asset value per share</b>	<u>\$ 5.86</u>	<u>\$ 14.17</u>	<u>\$ 15.16</u>

The accompanying notes are an integral part of these financial statements.

**GUINNESS ATKINSON™ FUNDS**  
**STATEMENTS OF ASSETS AND LIABILITIES**  
**at December 31, 2022**

	<b>Global Energy Fund</b>	<b>Global Innovators Fund</b>	<b>Renminbi Yuan &amp; Bond Fund</b>
<b>Assets</b>			
Investments in securities, at cost	\$ 16,740,909	\$ 90,321,521	\$ 4,682,407
Investments in securities, at value	\$ 15,983,101	\$ 131,214,144	\$ 4,260,374
Cash	172,971	3,217,829	30,799
Cash denominated in foreign currency (cost of \$1,783, \$0, and \$325,574, respectively)	1,783	-	329,358
Receivables:			
Fund shares sold	5,647	73,301	2,000
Dividends and interest	13,276	94,712	64,875
Tax reclaim	86,633	211,202	-
Due from Advisor, net	394	-	6,535
Prepaid expenses	4,028	16,566	4,288
Total Assets	<u>16,267,833</u>	<u>134,827,754</u>	<u>4,698,229</u>
<b>Liabilities</b>			
Payable for Fund shares redeemed	977	283,638	-
Due to Advisor, net	-	76,949	-
Accrued administration fees	227	2,815	172
Accrued shareholder servicing plan fees	1,872	38,583	826
Audit fees	25,502	25,238	12,719
CCO fees	458	2,759	519
Custody fees	3,223	5,998	662
Fund Accounting fees	4,509	5,770	5,856
Legal fees	274	157	116
Miscellaneous fees	913	1,344	521
Printing fees	2,419	6,629	1,135
Transfer Agent fees	7,054	20,580	2,983
Trustee fees	479	250	163
Other accrued expenses	8	-	-
Total Liabilities	<u>47,915</u>	<u>470,710</u>	<u>25,672</u>
<b>Net Assets</b>	<u>\$ 16,219,918</u>	<u>\$ 134,357,044</u>	<u>\$ 4,672,557</u>
<b>Composition of Net Assets</b>			
Paid-in capital	\$ 43,166,483	\$ 92,924,829	\$ 9,352,158
Total distributable earnings (loss)	(26,946,565)	41,432,215	(4,679,601)
<b>Net Assets</b>	<u>\$ 16,219,918</u>	<u>\$ 134,357,044</u>	<u>\$ 4,672,557</u>
<b>Number of shares issued and outstanding</b> (unlimited shares authorized, no par value)	681,943	-	414,733
<b>Net asset value per share</b>	<u>\$ 23.78</u>	<u>-</u>	<u>\$ 11.27</u>
<b>Net asset value per share per Class:</b>			
Investor Class shares:			
Net assets applicable to shares outstanding		\$ 100,721,867	
Shares of beneficial interest issued and outstanding		2,582,226	
<b>Net asset value per share</b>		<u>\$ 39.01</u>	
Institutional Class shares:			
Net assets applicable to shares outstanding		\$ 33,635,177	
Shares of beneficial interest issued and outstanding		850,251	
<b>Net asset value per share</b>		<u>\$ 39.56</u>	

The accompanying notes are an integral part of these financial statements.

**GUINNESS ATKINSON™ FUNDS**  
**STATEMENTS OF OPERATIONS**  
**For the Year Ended December 31, 2022**

	<b>Alternative Energy Fund</b>	<b>Asia Focus Fund</b>	<b>China &amp; Hong Kong Fund</b>
<b>Investment Income</b>			
Dividends*	\$ 295,064	\$ 266,591	\$ 950,596
Other Income	128	-	-
Total income	<u>295,192</u>	<u>266,591</u>	<u>950,596</u>
<b>Expenses</b>			
Advisory fees	266,699	126,838	441,276
Shareholder servicing plan fees	53,139	15,221	48,128
Transfer agent fees and expenses	33,339	23,784	49,249
Fund accounting fee and expenses	28,570	29,926	30,265
Administration fees	15,292	5,696	23,559
Custody fees and expenses	14,441	18,637	29,622
Audit fees	18,300	25,000	25,000
Legal fees	19,468	9,801	33,816
Registration fees	21,275	18,901	21,761
Printing	13,246	7,276	11,898
Trustees' fees and expenses	7,254	5,517	9,816
Insurance	2,122	1,296	4,462
CCO fees and expenses	9,955	7,088	12,925
Miscellaneous	4,330	4,011	4,816
Interest expense	105	152	5,421
Total expenses	<u>507,535</u>	<u>299,144</u>	<u>752,014</u>
Plus: fees and expenses recaptured	20,634	-	-
Less: fees waived and expenses absorbed	-	(47,853)	-
Net expenses	<u>528,169</u>	<u>251,291</u>	<u>752,014</u>
<b>Net investment income (loss)</b>	<u>(232,977)</u>	<u>15,300</u>	<u>198,582</u>
<b>Realized and Unrealized Gain (Loss) on Investments and Foreign Currency</b>			
Net realized gain (loss) on:			
Investments	1,091,948	318,401	(362,733)
Foreign currency	(13,678)	(1,433)	19,064
	<u>1,078,270</u>	<u>316,968</u>	<u>(343,669)</u>
Net change in unrealized appreciation (depreciation) on:			
Investments	(5,023,786)	(4,895,895)	(12,999,286)
Foreign currency	(456)	(726)	(7,446)
	<u>(5,024,242)</u>	<u>(4,896,621)</u>	<u>(13,006,732)</u>
Net realized and unrealized loss on investments and foreign currency	<u>(3,945,972)</u>	<u>(4,579,653)</u>	<u>(13,350,401)</u>
<b>Net decrease in Net Assets from Operations</b>	<u>\$ (4,178,949)</u>	<u>\$ (4,564,353)</u>	<u>\$ (13,151,819)</u>

\* Net of foreign tax withheld of \$29,272, \$22,563, and \$49,086, respectively.

**GUINNESS ATKINSON™ FUNDS**  
**STATEMENTS OF OPERATIONS**  
**For the Year Ended December 31, 2022**

	<b>Global Energy Fund</b>	<b>Global Innovators Fund</b>	<b>Renminbi Yuan &amp; Bond Fund</b>
<b>Investment Income</b>			
Dividends*	\$ 747,945	\$ 1,803,145	\$ -
Interest	-	-	142,287
Total income	<u>747,945</u>	<u>1,803,145</u>	<u>142,287</u>
<b>Expenses</b>			
Advisory fees	125,667	1,227,102	27,490
Shareholder servicing plan fees	30,559	-	1,999
Investor Class	-	238,490	-
Transfer agent fees and expenses	27,716	-	15,648
Investor Class	-	66,425	-
Institutional Class	-	26,313	-
Fund accounting fee and expenses	27,706	27,590	31,130
Administration fees	8,362	64,078	2,436
Institutional Class	-	28,039	-
Custody fees and expenses	16,219	17,508	2,443
Audit fees	25,000	25,000	13,000
Legal fees	12,737	129,186	3,644
Registration fees	17,888	-	17,645
Investor Class	-	23,584	-
Institutional Class	-	19,877	-
Printing	8,054	19,579	5,241
Trustees' fees and expenses	5,810	26,436	4,268
Insurance	1,394	15,918	416
CCO fees and expenses	7,754	34,222	5,397
Miscellaneous	3,048	9,326	4,067
Interest expense	1,702	2,584	154
Total expenses	<u>319,616</u>	<u>2,001,257</u>	<u>134,978</u>
Less: fees waived and expenses absorbed	<u>(74,959)</u>	<u>(78,183)</u>	<u>(89,841)</u>
Net expenses	<u>244,657</u>	<u>1,923,074</u>	<u>45,137</u>
<b>Net investment income (loss)</b>	<u>503,288</u>	<u>(119,929)</u>	<u>97,150</u>
<b>Realized and Unrealized Gain (Loss) on Investments and Foreign Currency</b>			
Net realized gain (loss) on:			
Investments	1,590,855	14,463,302	10,387
Foreign currency	628	(5,993)	(50,983)
	<u>1,591,483</u>	<u>14,457,309</u>	<u>(40,596)</u>
Net change in unrealized appreciation (depreciation) on:			
Investments	1,866,420	(78,803,732)	(542,927)
Foreign currency	(1,331)	(5,530)	(11,232)
	<u>1,865,089</u>	<u>(78,809,262)</u>	<u>(554,159)</u>
Net realized and unrealized gain (loss) on investments and foreign currency	<u>3,456,572</u>	<u>(64,351,953)</u>	<u>(594,755)</u>
<b>Net increase (decrease) in Net Assets from Operations</b>	<u>\$ 3,959,860</u>	<u>\$ (64,471,882)</u>	<u>\$ (497,605)</u>

\* Net of foreign tax withheld of \$60,777, \$116,392, and \$0, respectively.

**GUINNESS ATKINSON™ FUNDS**  
**STATEMENTS OF CHANGES IN NET ASSETS**

	<b>Alternative Energy Fund</b>		<b>Asia Focus Fund</b>	
	<b>Year Ended December 31, 2022</b>	<b>Year Ended December 31, 2021</b>	<b>Year Ended December 31, 2022</b>	<b>Year Ended December 31, 2021</b>
<b>INCREASE/(DECREASE) IN NET ASSETS FROM:</b>				
<b>Operations</b>				
Net investment income (loss)	\$ (232,977)	\$ (307,458)	\$ 15,300	\$ (64,930)
Net realized gain (loss) on:				
Investments	1,091,948	5,775,551	318,401	1,028,664
Foreign currency	(13,678)	924	(1,433)	(5,400)
Net change in unrealized appreciation (depreciation) on:				
Investments	(5,023,786)	(3,674,826)	(4,895,895)	(2,124,251)
Foreign currency	(456)	(1,813)	(726)	(278)
<b>Net increase (decrease) in net assets resulting from operations</b>	<b>(4,178,949)</b>	<b>1,792,378</b>	<b>(4,564,353)</b>	<b>(1,166,195)</b>
<b>Distributions to Shareholders</b>				
Net dividends and distributions	-	-	(366,871)	(1,421,534)
<b>Total distributions to shareholders</b>	<b>-</b>	<b>-</b>	<b>(366,871)</b>	<b>(1,421,534)</b>
<b>Capital Transactions</b>				
Proceeds from shares sold	7,259,952	28,957,121	396,192	240,038
Reinvestment of distributions	-	-	311,968	1,326,856
Cost of shares redeemed	(7,786,751)	(25,492,415)	(1,127,822)	(1,689,080)
<b>Net change in net assets from capital transactions</b>	<b>(526,799)</b>	<b>3,464,706</b>	<b>(419,662)</b>	<b>(122,186)</b>
<b>Total increase (decrease) in net assets</b>	<b>(4,705,748)</b>	<b>5,257,084</b>	<b>(5,350,886)</b>	<b>(2,709,915)</b>
<b>Net Assets</b>				
Beginning of period	32,173,942	26,916,858	16,367,376	19,077,291
End of period	<u>\$ 27,468,194</u>	<u>\$ 32,173,942</u>	<u>\$ 11,016,490</u>	<u>\$ 16,367,376</u>
<b>Capital Share Activity</b>				
Shares sold	1,235,680	4,346,328	22,713	9,627
Shares issued on reinvestment	-	-	22,016	66,442
Shares redeemed	(1,342,405)	(3,897,489)	(71,404)	(74,821)
<b>Net increase (decrease) in shares outstanding</b>	<b>(106,725)</b>	<b>448,839</b>	<b>(26,675)</b>	<b>1,248</b>

The accompanying notes are an integral part of these financial statements.

**GUINNESS ATKINSON™ FUNDS**  
**STATEMENTS OF CHANGES IN NET ASSETS**

	<b>China &amp; Hong Kong Fund</b>	
	<b>Year Ended December 31, 2022</b>	<b>Year Ended December 31, 2021</b>
INCREASE/(DECREASE) IN NET ASSETS FROM:		
<b>Operations</b>		
Net investment income	\$ 198,582	\$ 134,249
Net realized gain (loss) on:		
Investments	(362,733)	6,332,490
Foreign currency	19,064	(3,916)
Net change in unrealized appreciation (depreciation) on:		
Investments	(12,999,286)	(10,585,010)
Foreign currency	(7,446)	146
<b>Net decrease in net assets resulting from operations</b>	<b>(13,151,819)</b>	<b>(4,122,041)</b>
<b>Distributions to Shareholders</b>		
Net dividends and distributions	(348,093)	(9,872,790)
<b>Total distributions to shareholders</b>	<b>(348,093)</b>	<b>(9,872,790)</b>
<b>Capital Transactions</b>		
Proceeds from shares sold	1,846,506	622,987
Reinvestment of distributions	333,077	9,441,077
Cost of shares redeemed	(7,284,316)	(5,891,141)
Redemption fee proceeds	-	44
<b>Net change in net assets from capital transactions</b>	<b>(5,104,733)</b>	<b>4,172,967</b>
<b>Total decrease in net assets</b>	<b>(18,604,645)</b>	<b>(9,821,864)</b>
<b>Net Assets</b>		
Beginning of period	56,724,905	66,546,769
End of period	\$ 38,120,260	\$ 56,724,905
<b>Capital Share Activity</b>		
Shares sold	123,431	24,542
Shares issued on reinvestment	22,521	474,903
Shares redeemed	(461,441)	(237,628)
<b>Net increase (decrease) in shares outstanding</b>	<b>(315,489)</b>	<b>261,817</b>

The accompanying notes are an integral part of these financial statements.

**GUINNESS ATKINSON™ FUNDS**  
**STATEMENTS OF CHANGES IN NET ASSETS**

	<b>Global Energy Fund</b>	
	<b>Year Ended December 31, 2022</b>	<b>Year Ended December 31, 2021</b>
INCREASE/(DECREASE) IN NET ASSETS FROM:		
<b>Operations</b>		
Net investment income	\$ 503,288	\$ 341,483
Net realized gain (loss) on:		
Investments	1,590,855	(354,795)
Foreign currency	628	841
Net change in unrealized appreciation (depreciation) on:		
Investments	1,866,420	3,612,046
Foreign currency	(1,331)	(2,469)
<b>Net increase in net assets resulting from operations</b>	<b>3,959,860</b>	<b>3,597,106</b>
<b>Distributions to Shareholders</b>		
Net dividends and distributions	(25,242)	(320,289)
<b>Total distributions to shareholders</b>	<b>(25,242)</b>	<b>(320,289)</b>
<b>Capital Transactions</b>		
Proceeds from shares sold	12,503,360	9,011,904
Reinvestment of distributions	23,992	304,561
Cost of shares redeemed	(12,495,757)	(9,025,520)
<b>Net change in net assets from capital transactions</b>	<b>31,595</b>	<b>290,945</b>
<b>Total increase in net assets</b>	<b>3,966,213</b>	<b>3,567,762</b>
<b>Net Assets</b>		
Beginning of period	12,253,705	8,685,943
End of period	\$ 16,219,918	\$ 12,253,705
<b>Capital Share Activity</b>		
Shares sold	593,584	538,603
Shares issued on reinvestment	984	17,748
Shares redeemed	(603,899)	(561,717)
<b>Net decrease in shares outstanding</b>	<b>(9,331)</b>	<b>(5,366)</b>

The accompanying notes are an integral part of these financial statements.



**GUINNESS ATKINSON™ FUNDS**  
**STATEMENTS OF CHANGES IN NET ASSETS**

	<b>Global Innovators Fund</b>	
	<b>Year Ended December 31, 2022</b>	<b>Year Ended December 31, 2021</b>
INCREASE/(DECREASE) IN NET ASSETS FROM:		
<b>Operations</b>		
Net investment loss	\$ (119,929)	\$ (561,561)
Net realized gain (loss) on:		
Investments	14,463,302	30,073,427
Foreign currency	(5,993)	(20,551)
Net change in unrealized appreciation (depreciation) on:		
Investments	(78,803,732)	12,738,188
Foreign currency	(5,530)	(2,335)
<b>Net increase (decrease) in net assets resulting from operations</b>	<b>(64,471,882)</b>	<b>42,227,168</b>
<b>Distributions to Shareholders</b>		
Net dividends and distributions:		
Investor Class	(11,640,951)	(25,414,561)
Institutional Class	(3,927,457)	(9,400,513)
<b>Total distributions to shareholders</b>	<b>(15,568,408)</b>	<b>(34,815,074)</b>
<b>Capital Transactions</b>		
Proceeds from shares sold:		
Investor Class	7,460,710	11,115,435
Institutional Class	6,847,256	11,415,755
Reinvestment of distributions:		
Investor Class	11,284,764	24,718,056
Institutional Class	2,325,495	6,130,723
Cost of shares redeemed:		
Investor Class	(20,684,496)	(27,350,132)
Institutional Class	(18,781,950)	(10,485,347)
<b>Net change in net assets from capital transactions</b>	<b>(11,548,221)</b>	<b>15,544,490</b>
<b>Total increase (decrease) in net assets</b>	<b>(91,588,511)</b>	<b>22,956,584</b>
<b>Net Assets</b>		
Beginning of period	225,945,555	202,988,971
End of period	<u>\$ 134,357,044</u>	<u>\$ 225,945,555</u>
<b>Capital Share Activity</b>		
Shares sold:		
Investor Class	155,886	166,747
Institutional Class	146,265	178,278
Shares issued on reinvestment:		
Investor Class	273,702	415,011
Institutional Class	55,621	101,907
Shares redeemed:		
Investor Class	(448,632)	(421,610)
Institutional Class	(381,545)	(157,370)
<b>Net increase (decrease) in shares outstanding</b>	<b>(198,703)</b>	<b>282,963</b>

The accompanying notes are an integral part of these financial statements.

**GUINNESS ATKINSON™ FUNDS**  
**STATEMENTS OF CHANGES IN NET ASSETS**

	<b>Renminbi Yuan &amp; Bond Fund</b>	
	<b>Year Ended December 31, 2022</b>	<b>Year Ended December 31, 2021</b>
INCREASE/(DECREASE) IN NET ASSETS FROM:		
<b>Operations</b>		
Net investment income	\$ 97,150	\$ 85,599
Net realized gain (loss) on:		
Investments	10,387	105
Foreign currency	(50,983)	3,333
Net change in unrealized appreciation (depreciation) on:		
Investments	(542,927)	34,580
Foreign currency	(11,232)	10,704
<b>Net increase (decrease) in net assets resulting from operations</b>	<b>(497,605)</b>	<b>134,321</b>
<b>Distributions to Shareholders</b>		
Net dividends and distributions	(81,320)	(101,565)
<b>Total distributions to shareholders</b>	<b>(81,320)</b>	<b>(101,565)</b>
<b>Capital Transactions</b>		
Proceeds from shares sold	1,119,451	1,710,991
Reinvestment of distributions	72,156	89,554
Cost of shares redeemed	(1,346,936)	(336,024)
<b>Net change in net assets from capital transactions</b>	<b>(155,329)</b>	<b>1,464,521</b>
<b>Total increase (decrease) in net assets</b>	<b>(734,254)</b>	<b>1,497,277</b>
<b>Net Assets</b>		
Beginning of period	5,406,811	3,909,534
End of period	\$ 4,672,557	\$ 5,406,811
<b>Capital Share Activity</b>		
Shares sold	94,434	135,160
Shares issued on reinvestment	6,365	7,103
Shares redeemed	(114,479)	(26,598)
<b>Net increase (decrease) in shares outstanding</b>	<b>(13,680)</b>	<b>115,665</b>

The accompanying notes are an integral part of these financial statements.

## FINANCIAL HIGHLIGHTS

For a capital share outstanding throughout each period.

Alternative Energy Fund	Year Ended December 31,				
	2022	2021	2020	2019	2018
Net asset value, beginning of period	\$6.71	\$6.19	\$3.32	\$2.55	\$3.02
<b>Income from investment operations:</b>					
Net investment income (loss)	(0.05)	(0.06)	(0.03)	(0.01)	-
Net realized and unrealized gain (loss) on investments and foreign currency	(0.80)	0.58	2.90	0.78	(0.47)
Total from investment operations	(0.85)	0.52	2.87	0.77	(0.47)
<b>Less distributions:</b>					
From net investment income	-	-	-	-	- (1)
Total distributions	-	-	-	-	-
Net asset value, end of period	\$5.86	\$6.71	\$6.19	\$3.32	\$2.55
Total return	(12.67%)	8.40%	86.45%	30.20%	(15.49%)
<b>Ratios/supplemental data:</b>					
Net assets, end of period (millions)	\$27.5	\$32.2	\$26.9	\$9.2	\$7.9
<b>Ratio of expenses to average net assets:</b>					
Before fee waived/recaptured	1.90%	1.73%	2.46%	3.00%	2.57%
After fees waived/recaptured <sup>(2)</sup>	1.98%	1.98%	1.98%	1.98%	1.98%
<b>Ratio of net investment income (loss) to average net assets:</b>					
Before fees waived/recaptured	(0.79%)	(0.61%)	(1.40%)	(1.15%)	(0.43%)
After fees waived/recaptured	(0.87%)	(0.86%)	(0.92%)	(0.13%)	0.16%
Portfolio turnover rate	17.75%	29.03%	35.00%	43.19%	36.54%

<sup>(1)</sup> Amount represents less than \$0.01 per share.

<sup>(2)</sup> The Advisor has contractually agreed to limit the operating expenses of the Fund to 1.98%, excluding interest expense, expenses related to dividends on short positions, brokerage commissions, taxes and other extraordinary expenses. See Note 3.

The accompanying notes are an integral part of these financial statements.

## FINANCIAL HIGHLIGHTS

For a capital share outstanding throughout each period.

Asia Focus Fund	Year Ended December 31,				
	2022	2021	2020	2019	2018
Net asset value, beginning of period	\$20.36	\$23.76	\$20.03	\$16.58	\$22.58
<b>Income from investment operations:</b>					
Net investment income (loss)	0.02	(0.08)	0.01	0.21	0.26
Net realized and unrealized gain (loss) on investments and foreign currency	(5.73)	(1.46)	5.09	4.56	(4.83)
Total from investment operations	(5.71)	(1.54)	5.10	4.77	(4.57)
<b>Less distributions:</b>					
From net investment income	-	-	(0.10)	(0.12)	(0.26)
From net realized gain	(0.48)	(1.86)	(1.27)	(1.20)	(1.18)
Total distributions	(0.48)	(1.86)	(1.37)	(1.32)	(1.44)
Redemption fee proceeds	-	-	- (1)	- (1)	0.01
Net asset value, end of period	\$14.17	\$20.36	\$23.76	\$20.03	\$16.58
Total return	(28.03%)	(6.32%)	25.93%	29.20%	(20.45%)
<b>Ratios/supplemental data:</b>					
Net assets, end of period (millions)	\$11.0	\$16.4	\$19.1	\$17.4	\$15.1
<b>Ratio of expenses to average net assets:</b>					
Before fees waived	2.36%	1.89%	2.21%	2.27%	2.01%
After fees waived <sup>(2)</sup>	1.98%	1.98%	1.98%	1.98%	1.99% <sup>(3)</sup>
<b>Ratio of net investment income (loss) to average net assets:</b>					
Before fees waived	(0.26%)	(0.26%)	(0.24%)	0.85%	1.14%
After fees waived	0.12%	(0.35%)	(0.01%)	1.14%	1.16%
Portfolio turnover rate	6.00%	29.05%	30.24%	19.56%	31.97%

<sup>(1)</sup> Amount represents less than \$0.01 per share.

<sup>(2)</sup> The Advisor has contractually agreed to limit the operating expenses of the Fund to 1.98%, excluding interest expense, expenses related to dividends on short positions, brokerage commissions, taxes and other extraordinary expenses. See Note 3.

<sup>(3)</sup> If interest expense had been excluded, expenses would have been lowered by 0.01% for the year ended December 31, 2018.

## FINANCIAL HIGHLIGHTS

For a capital share outstanding throughout each period.

China & Hong Kong Fund	Year Ended December 31,				
	2022	2021	2020	2019	2018
Net asset value, beginning of period	\$20.05	\$25.92	\$23.49	\$18.92	\$26.55
<b>Income from investment operations:</b>					
Net investment income	0.08	0.05	0.16	0.37	0.33
Net realized and unrealized gain (loss) on investments and foreign currency	(4.84)	(1.83)	3.20	5.23	(5.59)
Total from investment operations	(4.76)	(1.78)	3.36	5.60	(5.26)
<b>Less distributions:</b>					
From net investment income	(0.05)	(0.07)	(0.20)	(0.43)	(0.31)
From net realized gain	(0.08)	(4.02)	(0.73)	(0.60)	(2.06)
Total distributions	(0.13)	(4.09)	(0.93)	(1.03)	(2.37)
Redemption fee proceeds	-	- (1)	- (1)	- (1)	- (1)
Net asset value, end of period	\$15.16	\$20.05	\$25.92	\$23.49	\$18.92
Total return	(23.71%)	(6.70%)	14.54%	30.00%	(20.21%)
<b>Ratios/supplemental data:</b>					
Net assets, end of period (millions)	\$38.1	\$56.7	\$66.5	\$67.6	\$56.6
<b>Ratio of expenses to average net assets: <sup>(2)</sup></b>	1.71%	1.50%	1.60% <sup>(3)</sup>	1.69%	1.54%
<b>Ratio of net investment income to average net assets:</b>	0.45%	0.20%	0.59%	1.61%	1.27%
Portfolio turnover rate	17.46%	29.82%	45.40%	24.18%	22.27%

<sup>(1)</sup> Amount represents less than \$0.01 per share.

<sup>(2)</sup> The Advisor has contractually agreed to limit the operating expenses of the Fund to 1.98%, excluding interest expense, expenses related to dividends on short positions, brokerage commissions, taxes and other extraordinary expenses. See Note 3.

<sup>(3)</sup> If interest expense had been excluded, expenses would have been lowered by 0.01% and 0.02% for the years ended December 31, 2022 and 2020, respectively.

The accompanying notes are an integral part of these financial statements.

## FINANCIAL HIGHLIGHTS

For a capital share outstanding throughout each period.

Global Energy Fund	Year Ended December 31,				
	2022	2021	2020	2019	2018
Net asset value, beginning of period	\$17.73	\$12.47	\$19.62	\$18.13	\$22.71
<b>Income from investment operations:</b>					
Net investment income	0.74	0.49	0.45	0.45	0.29
Net realized and unrealized gain (loss) on investments and foreign currency	5.35	5.23	(7.15)	1.42	(4.56)
Total from investment operations	6.09	5.72	(6.70)	1.87	(4.27)
<b>Less distributions:</b>					
From net investment income	(0.04)	(0.46)	(0.45)	(0.38)	(0.30)
From net realized gain	-	-	-	-	(0.01)
Total distributions	(0.04)	(0.46)	(0.45)	(0.38)	(0.31)
Net asset value, end of period	\$23.78	\$17.73	\$12.47	\$19.62	\$18.13
Total return	34.33%	45.98%	(34.22%)	10.40%	(18.92%)
<b>Ratios/supplemental data:</b>					
Net assets, end of period (millions)	\$16.2	\$12.3	\$8.7	\$16.8	\$19.6
<b>Ratio of expenses to average net assets</b>					
Before fees waived/recaptured	1.91%	1.99%	2.56%	1.91%	1.60%
After fees waived/recaptured <sup>(1)</sup>	1.46% <sup>(2)</sup>	1.46% <sup>(2)</sup>	1.46% <sup>(2)</sup>	1.45%	1.45%
<b>Ratio of net investment income to average net assets</b>					
Before fees waived/recaptured	2.55%	2.40%	2.39%	1.65%	1.04%
After fees waived/recaptured	3.00%	2.93%	3.49%	2.11%	1.19%
Portfolio turnover rate	70.54%	49.58%	15.49%	9.81%	14.39%

<sup>(1)</sup> The Advisor has contractually agreed to limit the operating expenses of the Fund to 1.45%, excluding interest expense, expenses related to dividends on short positions, brokerage commissions, taxes and other extraordinary expenses. See Note 3.

<sup>(2)</sup> If interest expense had been excluded, expenses would have been lowered by 0.01%, 0.01% and 0.01% for the years ended December 31, 2022, 2021 and 2020, respectively.

## FINANCIAL HIGHLIGHTS

For a capital share outstanding throughout each period.

Global Innovators Fund - Investor Class	Year Ended December 31,				
	2022	2021	2020	2019	2018
Net asset value, beginning of period	\$62.04	\$60.53	\$45.66	\$34.89	\$44.98
<b>Income from investment operations:</b>					
Net investment income (loss)	(0.07)	(0.20)	(0.06)	0.12	0.13
Net realized and unrealized gain (loss) on investments and foreign currency	(18.08)	12.77	16.53	12.73	(7.56)
Total from investment operations	(18.15)	12.57	16.47	12.85	(7.43)
<b>Less distributions:</b>					
From net investment income	-	-	-	(0.11)	(0.15)
From net realized gain	(4.88)	(11.06)	(1.60)	(1.97)	(2.51)
Total distributions	(4.88)	(11.06)	(1.60)	(2.08)	(2.66)
Net asset value, end of period	\$39.01	\$62.04	\$60.53	\$45.66	\$34.89
Total return	(29.67%)	21.52%	36.17%	37.00%	(16.80%)
<b>Ratios/supplemental data:</b>					
Net assets, end of period (millions)	\$100.7	\$161.4	\$147.8	\$134.8	\$131.2
<b>Ratio of expenses to average net assets:</b>					
Before fees waived/recaptured	1.27%	1.17%	1.24%	1.35%	1.30%
After fees waived/recaptured <sup>(1)</sup>	1.24%	1.24%	1.24%	1.24%	1.25% <sup>(2)</sup>
<b>Ratio of net investment income (loss) to average net assets:</b>					
Before fees waived/recaptured	(0.17%)	(0.25%)	(0.10%)	0.17%	0.23%
After fees waived/recaptured	(0.14%)	(0.32%)	(0.10%)	0.28%	0.28%
Portfolio turnover rate	14.66%	19.01%	14.44%	15.56%	28.93%

<sup>(1)</sup> The Advisor has contractually agreed to limit the operating expenses to 1.24% excluding interest expense, expenses related to dividends on short positions, brokerage commissions, taxes and other extraordinary expenses. See Note 3.

<sup>(2)</sup> If interest expense had been excluded, expenses would have been lowered by 0.01% for the year ended December 31, 2018.

## FINANCIAL HIGHLIGHTS

For a capital share outstanding throughout each period.

Global Innovators Fund - Institutional Class	Year Ended December 31,				
	2022	2021	2020	2019	2018
Net asset value, beginning of period	\$62.68	\$60.89	\$45.84	\$34.99	\$45.08
<b>Income from investment operations:</b>					
Net investment income (loss)	0.06	(0.04)	0.07	0.22	0.24
Net realized and unrealized gain (loss) on investments and foreign currency	(18.30)	12.89	16.60	12.79	(7.58)
Total from investment operations	(18.24)	12.85	16.67	13.01	(7.34)
<b>Less distributions:</b>					
From net investment income	-	-	(0.02)	(0.19)	(0.24)
From net realized gain	(4.88)	(11.06)	(1.60)	(1.97)	(2.51)
Total distributions	(4.88)	(11.06)	(1.62)	(2.16)	(2.75)
Net asset value, end of period	\$39.56	\$62.68	\$60.89	\$45.84	\$34.99
Total return	(29.51%)	21.86%	36.46%	37.35%	(16.59%)
<b>Ratios/supplemental data:</b>					
Net assets, end of period (millions)	\$33.6	\$64.6	\$55.2	\$45.9	\$33.6
<b>Ratio of expenses to average net assets:</b>					
Before fees waived	1.10%	0.99%	1.07%	1.21%	1.13%
After fees waived <sup>(1)</sup>	0.99%	0.99%	0.99%	0.99%	1.00% <sup>(2)</sup>
<b>Ratio of net investment income (loss) to average net assets:</b>					
Before fees waived	0.01%	(0.08%)	0.06%	0.31%	0.40%
After fees waived	0.12%	(0.08%)	0.14%	0.53%	0.53%
Portfolio turnover rate	14.66%	19.01%	14.44%	15.56%	28.93%

<sup>(1)</sup> The Advisor has contractually agreed to limit the operating expenses of the Fund's Institutional Class to 0.99%, excluding interest expense, expenses related to dividends on short positions, brokerage commissions, taxes and other extraordinary expenses. See Note 3.

<sup>(2)</sup> If interest expense had been excluded, expenses would have been lowered by 0.01% for the year ended December 31, 2018.



## FINANCIAL HIGHLIGHTS

For a capital share outstanding throughout each period.

Renminbi Yuan & Bond Fund	Year Ended December 31,				
	2022	2021	2020	2019	2018
Net asset value, beginning of period	\$12.62	\$12.50	\$11.53	\$11.25	\$12.00
<b>Income from investment operations:</b>					
Net investment income	0.23	0.21	0.24	0.34	0.29
Net realized and unrealized gain (loss) on investments and foreign currency	(1.39)	0.16	0.78	0.05	(0.54)
Total from investment operations	(1.16)	0.37	1.02	0.39	(0.25)
<b>Less distributions:</b>					
From net investment income	(0.19)	(0.25)	(0.05)	-	(0.49)
Return of capital	-	-	-	(0.13)	(0.01)
Total distributions	(0.19)	(0.25)	(0.05)	(0.13)	(0.50)
Redemption fee proceeds	-	-	- <sup>(1)</sup>	0.02	- <sup>(1)</sup>
Net asset value, end of period	\$11.27	\$12.62	\$12.50	\$11.53	\$11.25
Total return	(9.20%)	3.00%	8.89%	3.68%	(2.12%)
<b>Ratios/supplemental data:</b>					
Net assets, end of period (millions)	\$4.7	\$5.4	\$3.9	\$1.5	\$2.2
<b>Ratio of expenses to average net assets:</b>					
Before fees waived	2.70%	2.29%	5.26%	6.79%	3.52%
After fees waived <sup>(2)</sup>	0.90%	0.90%	0.91% <sup>(3)</sup>	0.90%	0.93% <sup>(3)</sup>
<b>Ratio of net investment income (loss) to average net assets:</b>					
Before fees waived/recaptured	0.14%	0.43%	(1.90%)	(1.95%)	0.34%
After fees waived/recaptured	1.94%	1.82%	2.45%	3.94%	2.93%
Portfolio turnover rate	3.78%	31.79%	36.26%	0.00%	34.93%

<sup>(1)</sup> Amount represents less than \$0.01 per share.

<sup>(2)</sup> The Advisor has contractually agreed to limit the operating expenses of the Fund to 0.90%, excluding interest expense, expenses related to dividends on short positions, brokerage commissions, taxes and other extraordinary expenses. See Note 3.

<sup>(3)</sup> If interest expense had been excluded, expenses would have been lowered by 0.01% and 0.03% for the years ended December 31, 2020 and 2018, respectively.

The accompanying notes are an integral part of these financial statements.

## NOTES TO FINANCIAL STATEMENTS

### December 31, 2022

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#### Note 1 - Organization

Guinness Atkinson™ Funds (the “Trust”), was organized on April 28, 1997 as a Delaware business trust and registered under the Investment Company Act of 1940, as amended (the “1940 Act”), as an open-end management investment company. Currently, the Trust offers eleven separate, series portfolios, each of which has a unique investment objective and strategies. This report covers the six open-end mutual funds: Guinness Atkinson Alternative Energy Fund (the “Alternative Energy Fund”), Guinness Atkinson Asia Focus Fund (the “Asia Focus Fund”), Guinness Atkinson China & Hong Kong Fund (the “China & Hong Kong Fund”), Guinness Atkinson Global Energy Fund (the “Global Energy Fund”), Guinness Atkinson Global Innovators Fund (the “Global Innovators Fund”) and Guinness Atkinson Renminbi Yuan & Bond Fund (the “Renminbi Yuan & Bond Fund”), all of which (each a “Fund” and collectively, the “Funds”) are covered by this report. Except for the Renminbi Yuan & Bond Fund, each Fund is a diversified Fund. The China & Hong Kong Fund began operations on June 30, 1994, the Asia Focus Fund began operations on April 29, 1996, the Global Innovators Fund began operations on December 15, 1998, the Global Energy Fund began operations on June 30, 2004, the Alternative Energy Fund began operations on March 31, 2006, and the Renminbi Yuan & Bond Fund began operations on June 30, 2011. Each of the Funds is authorized to issue a single class of shares except for the Global Innovators Fund. The Global Innovators Fund is authorized to issue two classes of shares: Investor Class shares and Institutional Class shares. Institutional Class shares of the Global Innovators Fund commenced operations on December 31, 2015.

The shares of each class represent an interest in the same portfolio of investments of the Global Innovators Fund and have equal rights as to voting, redemptions, dividends and liquidation, subject to the approval of the Trustees. Income and expenses (other than expenses attributable to a specific class) and realized and unrealized gains and losses on investments are allocated to each class of shares in proportion to their relative shares outstanding. Shareholders of a class that bears distribution and service expenses under the terms of a distribution plan have exclusive voting rights to that distribution plan.

The Alternative Energy Fund, Asia Focus Fund, Global Energy Fund, and Global Innovator Fund’s investment objective is long-term capital appreciation. The China & Hong Kong Fund’s investment objective is long-term capital appreciation primarily through investments in securities of China and Hong Kong. The Renminbi Yuan & Bond Fund’s investment objective is to seek total return. Total return means the combination of capital appreciation and investment income, which includes changes in the value of the renminbi, the currency of China of which the yuan is the unit.

#### Note 2 - Significant accounting policies

Each Fund is an investment company and accordingly follows the investment company accounting and reporting guidance of the Financial Accounting Standards Board (FASB) Accounting Standard Codification Topic 946 “Financial Services—Investment Companies”.

The following is a summary of significant accounting policies consistently followed by the Funds. These policies are in conformity with accounting principles generally accepted in the United States of America. (“GAAP”).

- A. **Security Valuation.** Securities of the Funds that are traded on a principal exchange (U.S. or foreign) or NASDAQ are valued at the official closing price on each day that the exchanges are open for trading. Securities traded on an exchange for which there have been no sales, and other over-the-counter securities are valued at the mean between the bid and asked prices. Debt securities are valued based on available market quotations received from an independent pricing service approved by the Trust’s Board of Trustees which may utilize both transaction data and market information such as yield, prices of securities of comparable quality, coupon rate, maturity, type of issue, trading characteristics and other market data. Securities for which quotations are not readily available are valued at their respective fair values as determined in good faith by the Funds’ Valuation Committee in accordance with procedures established by the Board of Trustees. In determining fair value, the Funds’ Valuation Committee take into account all relevant factors and available information. Consequently,

## NOTES TO FINANCIAL STATEMENTS

### December 31, 2022 - Continued

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the price of the security used to calculate its Net Asset Value may differ from quoted or published prices for the same security. Fair value pricing involves subjective judgments and there is no single standard for determining a security's fair value. As a result, different mutual funds could reasonably arrive at different fair value for the same security. It is possible that the fair value determined for a security is materially different from the value that could be realized upon the sale of that security or from the values that other mutual funds may determine. Short-term investments are stated at cost, combined with accrued interest, which approximates market value. Realized gains and losses from securities transactions are calculated using the identified cost method.

Foreign securities are recorded in the financial statements after translation to U.S. dollars based on the applicable exchange rate at the end of the period. The Funds do not isolate that portion of the results of operations resulting from changes in the currency exchange rate from the fluctuations resulting from changes in the market prices of investments.

Foreign exchange gain or loss resulting from holding of a foreign currency, expiration of a currency exchange contract, difference in exchange rates between the trade date and settlement date of an investment purchased or sold, and the difference between dividends actually received compared to the amount shown in a Fund's accounting records on the date of receipt are shown as net realized gains or losses on foreign currency transactions in the respective Fund's statement of operations.

- B. Forward Foreign Currency Exchange Contracts.** The Funds may utilize forward foreign currency exchange contracts ("forward contracts") to hedge against foreign exchange fluctuations on foreign-denominated investments under which they are obligated to exchange currencies at specific future dates and at specified rates. All commitments are "marked-to-market" daily and any resulting unrealized gains or losses are included as unrealized appreciation (depreciation) on foreign currency denominated assets and liabilities. The Funds record realized gains or losses at the time the forward contract is settled. Risks may arise upon entering these contracts from the potential inability of a counter party to meet the terms of their contracts and from unanticipated movements in the value of a foreign currency relative to the U.S. dollar or other currencies. Counterparties to these contracts are major U.S. financial institutions. Please refer to Note 8 for further information on forward foreign currency contracts held in each Fund.
- C. Restricted Securities.** A restricted security cannot be resold to the general public without prior registration under the Securities Act of 1933. If the security is subsequently registered and resold, the issuers would typically bear the expense of all registrations at no cost to the Fund. Restricted securities are valued according to the guidelines and procedures adopted by the Funds' Board of Trustees.
- D. Illiquid Securities.** Pursuant to Rule 22e-4 under the 1940 Act, the Funds have adopted a Liquidity Risk Management Program ("LRMP") that requires, among other things, that each Fund limits its illiquid investments that are assets to no more than 15% of net assets. An illiquid investment is any security which may not reasonably be expected to be sold or disposed of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment. If the Advisor, at any time determines that the value of illiquid securities held by a Fund exceeds 15% of its net asset value, the Advisor will take steps as it considers appropriate to reduce them as soon as reasonably practicable in accordance with the Funds' written LRMP.
- E. Security Transactions, Dividend Income and Distributions.** Security transactions are accounted for on the trade date. Realized gains and losses from securities transactions are calculated using the identified cost method. Dividend income is recorded net of applicable withholding taxes on the ex-dividend date and interest income is recorded on an accrual basis. Withholding taxes on foreign dividends, if applicable, are paid (a portion of which may be reclaimable) or provided for in accordance with the applicable country's tax rules and

## NOTES TO FINANCIAL STATEMENTS

### December 31, 2022 - Continued

rates and are disclosed in the Statement of Operations. Withholding tax reclaims are filed in certain countries to recover a portion of the amounts previously withheld. The Funds record a reclaim receivable based on a number of factors, including a jurisdiction's legal obligation to pay reclaims as well as payment history and market convention. The Funds may be subject to foreign taxation related to capital gains on the sale of securities in the foreign jurisdictions in which they invest. When a capital gain tax is determined to apply, the Funds record an estimated deferred tax liability in an amount that may be payable if securities were disposed of on the valuation date.

- F. **Allocation of Expenses.** Each Fund is charged for those expenses directly attributable to it. Expenses that are not directly attributable to a Fund are allocated among the Funds in proportion to their respective assets or another appropriate method. Expenses such as distribution and service fees, transfer agent fees and expenses with respect to the Global Innovators Fund, that are specific to individual share classes are accrued directly to the respective share class.
- G. **Cash overdraft.** Throughout the year, the Funds may have cash overdraft balances. A fee is incurred on these overdrafts, calculated by multiplying the overdraft by a rate plus London Interbank Offered Rate ("LIBOR"). Payables, if any, are reflected as Overdraft Due to Custodian Bank in the Statements of Assets and Liabilities. Expenses from cash overdrafts are included in Interest Expense in the Statements of Operations.
- H. **Concentration of Risk.** The Alternative Energy Fund invests substantially in the alternative energy or energy technology sectors. The Asia Focus Fund invests substantially all of its assets in the Asian continent. The China & Hong Kong Fund invests substantially all of its assets in securities that are traded in China or Hong Kong or that are issued by companies that do a substantial part of their business in China. The Global Energy Fund invests substantially in energy companies; the changes in the prices and supplies of oil and other energy fuels may affect the Fund's investments. The Renminbi Yuan & Bond Fund invests in securities issued by companies economically tied to China, which exposes the Fund to greater market risk and potential monetary losses than if the Fund's assets were diversified among other regions. The consequences of political, social, or economic changes in the countries or business sectors in which the securities are offered or the issuers conduct their operations may affect the market prices of the Funds' investments and any income generated, as well as the Funds' ability to repatriate such amounts.
- I. **Use of Estimates.** The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.
- J. **Reclassifications.** Accounting principles generally accepted in the United States require that certain components of net assets be reclassified between financial and tax reporting. These reclassifications have no effect on net assets or new asset value per share and were primarily attributed to differences in the treatment of foreign currency and net investment losses. For the year ended December 31, 2022, permanent differences in book and tax accounting have been reclassified as follows:

	Distributable Earnings /(Losses)	Paid in Capital
Alternative Energy Fund	\$243,548	\$ (243,548)
Asia Focus Fund	-	-
China & Hong Kong Fund	-	-
Global Energy Fund	-	-
Global Innovators Fund	130,362	(130,362)
Renminbi Yuan & Bond Fund	-	-

## NOTES TO FINANCIAL STATEMENTS

### December 31, 2022 - Continued

- K. **Indemnifications.** Under the Trust's organizational documents, its current and former officers and trustees are indemnified against certain liabilities arising out of the performance of their duties to the Funds. In addition, in the normal course of business, the Funds enter into contracts that contain a variety of representations and warranties that provide general indemnifications. The Funds' maximum exposure under these arrangements is unknown as this would involve future claims that may be made against the Funds that have not yet occurred or that would be covered by other parties.
- L. **Federal Income Taxes.** The Funds intend to comply with the requirements of Subchapter M of the Internal Revenue Code applicable to regulated investment companies and to distribute substantially all of their net investment income and any net realized gains to their shareholders. Therefore, no provision is made for federal income or excise taxes. Due to the timing of dividend distributions and the differences in accounting for income and realized gains and losses for financial statement and federal income tax purposes, the fiscal year in which amounts are distributed may differ from the year in which the income and realized gains and losses are recorded by the Funds.

*Accounting for Uncertainty in Income Taxes* (the "Income Tax Statement") requires an evaluation of tax positions taken (or expected to be taken) in the course of preparing a Funds' tax returns to determine whether these positions meet a "more-likely-than-not" standard that, based on the technical merits, have a more than fifty percent likelihood of being sustained by a taxing authority upon examination. A tax position that meets the "more-likely-than-not" recognition threshold is measured to determine the amount of benefit to recognize in the financial statements. The Funds recognize interest and penalties, if any, related to unrecognized tax benefits as income tax expense in the Statements of Operations. The Income Tax Statement requires management of the Funds to analyze tax positions taken in the prior three open tax years, if any, and tax positions expected to be taken in the Fund's current tax year, as defined by the IRS statute of limitations for all major jurisdictions, including federal tax authorities and certain state tax authorities. As of and during the open tax years ended December 2019 through 2022, the Funds did not have a liability for any unrecognized tax benefits. The Funds have no examination in progress and are not aware of any tax positions for which it is reasonably possible that the total amounts of unrecognized tax benefits will significantly change in the next twelve months.

### Note 3 - Investment Advisory and Other Agreements

The Trust, on behalf of each Fund, entered into an Investment Advisory Agreement with Guinness Atkinson Asset Management, Inc. (the "Advisor"), under which the Advisor provides the Funds with investment management services. The Advisor furnishes all investment advice, office space, facilities, and most of the personnel needed by the Funds. As compensation for its services, the Advisor is entitled to a monthly fee at the following annual rates based upon the average daily net assets of the Funds:

Alternative Energy Fund	1.00%
Asia Focus Fund	1.00%
China & Hong Kong Fund	1.00%
Global Energy Fund	0.75%
Global Innovators Fund	0.75% on the 1 <sup>st</sup> \$500 million, 0.60% thereafter
Renminbi Yuan & Bond Fund	0.55%

## NOTES TO FINANCIAL STATEMENTS

### December 31, 2022 - Continued

The Funds are responsible for their own operating expenses. The Advisor has contractually agreed to limit each Fund's total operating expenses (excluding interest, dividends on short positions, taxes and extraordinary expenses) by reducing all or a portion of its fees and reimbursing the Fund for expenses so that its ratio of expenses to average daily net assets will not exceed the following levels:

	Annual Expense Limit	Expiration Date
Alternative Energy Fund	1.98%	June 30, 2025
Asia Focus Fund	1.98%	June 30, 2025
China & Hong Kong Fund	1.98%	June 30, 2025
Global Energy Fund	1.45%	June 30, 2025
Global Innovators Fund - Investor Class	1.24%	June 30, 2025
Global Innovators Fund - Institutional Class	0.99%	June 30, 2025
Renminbi Yuan & Bond Fund	0.90%	June 30, 2025

The expense ratios shown in the financial highlights may exceed these levels due to expenses incurred, but not covered by the expense limitation agreement.

To the extent that the Advisor waives fees and/or absorbs expenses it may seek repayment of a portion or all of such amounts at any time within three fiscal years after the fiscal year in which such amounts were waived or absorbed and recaptured previously waived subject to the applicable cap. For the year ended December 31, 2022, the Advisor waived fees and absorbed expenses/recaptured previously waived fees as follows:

	Fees waived and Expenses Absorbed	Fees and Expenses Recaptured
Alternative Energy Fund	\$ -	\$20,634
Asia Focus Fund	47,853	-
Global Energy Fund	74,959	-
Global Innovators Fund	78,183	-
Renminbi Yuan & Bond Fund	89,841	-
Total	\$290,836	\$20,634

At December 31, 2022, the Advisor may recapture a portion of the following amounts that had been paid and/or waived on behalf of the Funds no later than the dates as stated below:

December 31,				
Fund	2023	2024	2025	Total
Alternative Energy Fund	\$56,176	\$ -	\$ -	\$56,176
Asia Focus Fund	37,318	-	47,853	85,171
Global Energy Fund	108,558	62,548	74,959	246,065
Global Innovators Fund	36,040	1,211	78,183	115,434
Renminbi Yuan & Bond Fund	98,235	65,641	89,841	253,717

Foreside Fund Services, LLC acts as the Funds' principal underwriter in a continuous public offering of the Funds' shares.

Mutual Fund Administration, LLC (the "Administrator") acts as the Funds' administrator under an administration



## NOTES TO FINANCIAL STATEMENTS

### December 31, 2022 - Continued

agreement. The fees paid to the Administrator for the year ended December 31, 2022, are reported on the Statements of Operations.

Foreside Fund Officer Services, LLC provides Chief Compliance Officer (“CCO”) services to the Funds. The fees paid for CCO services for the year ended December 31, 2022, are reported on the Statements of Operations.

The fees paid to non-interested Trustees for the year ended December 31, 2022, are reported on the Statements of Operations.

Certain officers of the Trust are also officers and/or Directors of the Advisor and the Administrator. None of these officers are compensated directly by the Funds.

#### Note 4 - Distribution Plan

The Trust has adopted a Distribution Plan under Rule 12b-1 of the 1940 Act. The Board of Trustees has not authorized the Funds to make payment under the Distribution Plan. Currently, no payment is being made by the Funds.

#### Note 5 - Shareholder Servicing Plan

Each Fund has adopted a Shareholder Servicing Plan to pay a fee at an annual rate of up to 0.25% of its daily average net assets of shares serviced by shareholder servicing agents who provide administrative and support services to their customers. The Global Innovators Fund – Institutional Class shares do not participate in the Shareholder Servicing Plan.

The fees paid under the Shareholder Servicing Plan for the year ended December 31, 2022, are reported on the Statements of Operations.

#### Note 6 - Investment Transactions

The following table presents purchases and sales of securities during the year ended December 31, 2022, excluding short-term investments, to indicate the volume of transactions in each Fund.

	Purchases	Sales
Alternative Energy Fund	4,613,835	6,818,955
Asia Focus Fund	758,373	1,751,805
China & Hong Kong Fund	7,736,789	13,150,443
Global Energy Fund	11,915,563	11,418,082
Global Innovators Fund	24,011,806	52,998,341
Renminbi Yuan & Bond Fund	752,538	156,696

The Funds did not purchase U.S. Government securities as a part of their long-term investment strategy during the year ended December 31, 2022.

#### Note 7 - Fair Value Measurements and Disclosures

*Fair Value Measurements and Disclosures* defines fair value, establishes a framework for measuring fair value in accordance with GAAP, and expands disclosure about fair value measurements. It also provides guidance on determining when there has been a significant decrease in the volume and level of activity for an asset or a liability, when a transaction is not orderly, and how that information must be incorporated into a fair value measurement.

Under *Fair Value Measurements and Disclosures*, various inputs are used in determining the value of each Fund’s

## NOTES TO FINANCIAL STATEMENTS

### December 31, 2022 - Continued

investments. These inputs are summarized into three broad Levels as described below:

- Level 1 – Unadjusted quoted prices in active markets for identical assets or liabilities that a Fund has the ability to access.
- Level 2 – Observable inputs other than quoted prices included in level 1 that are observable for the asset or liability, either directly or indirectly. These inputs may include quoted prices for the identical instrument on an inactive market, prices for similar instruments, interest rates, prepayment speeds, credit risk, yield curves, default rates and similar data.
- Level 3 – Unobservable inputs for the asset or liability, to the extent relevant observable inputs are not available, representing the Fund's own assumptions about the assumptions a market participant would use in valuing the asset or liability, and would be based on the best information available.

The availability of observable inputs can vary from security to security and is affected by a wide variety of factors, including for example, the type of security, whether the security is new and not yet established in the marketplace, the liquidity of markets, and other characteristics particular to the security. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised in determining fair value is greatest for instruments categorized in Level 3.

The inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for disclosure purposes, the level in the fair value hierarchy within which the fair value measurement falls in its entirety, is determined based on the lowest level input that is significant to the fair value measurement in its entirety.

The inputs or methodology used for valuing securities are not an indication of the risk associated with investing in those securities. The following is a summary of the inputs used, as of December 31, 2022, in valuing the Funds' assets carried at fair value:

<b>Alternative Energy Fund</b>				
Assets Table	Level 1	Level 2	Level 3	Total
Investments, at value				
Common Stocks:				
Basic Materials	\$1,874,059	\$-	\$-	\$1,874,059
Communication	1,078,646	-	-	1,078,646
Consumer, Cyclical	1,904,650	-	-	1,904,650
Energy	5,785,462	-	-	5,785,462
Industrial	7,044,996	-	-	7,044,996
Technology	2,187,196	-	-	2,187,196
Utilities	6,016,141	-	-	6,016,141
Total Investments, at value	25,891,150	-	-	25,891,150
Total Assets	\$25,891,150	\$-	\$-	\$25,891,150



## NOTES TO FINANCIAL STATEMENTS

December 31, 2022 - Continued

<b>Asia Focus Fund</b>				
Assets Table	Level 1	Level 2	Level 3	Total
Investments, at value				
Common Stocks:				
Communications	\$2,012,339	\$-	\$-	\$2,012,339
Consumer, Cyclical	1,334,295	-	-	1,334,295
Consumer, Non-cyclical	1,877,836	-	-	1,877,836
Financial	1,300,416	-	-	1,300,416
Industrial	1,717,948	-	-	1,717,948
Technology	2,604,058	-	-	2,604,058
Total Investments, at value	10,846,892	-	-	10,846,892
Total Assets	\$10,846,892	\$-	\$-	\$10,846,892

<b>China &amp; Hong Kong Fund</b>				
Assets Table	Level 1	Level 2	Level 3	Total
Investments, at value				
Common Stocks:				
Communications	\$5,441,711	\$-	\$-	\$5,441,711
Consumer, Cyclical	7,329,265	-	-	7,329,265
Consumer, Non-cyclical	6,652,390	-	-	6,652,390
Energy	2,618,398	-	-	2,618,398
Financial	6,116,220	-	-	6,116,220
Industrial	7,154,962	-	-	7,154,962
Technology	2,835,310	-	-	2,835,310
Total Investments, at value	38,148,256	-	-	38,148,256
Total Assets	\$38,148,256	\$-	\$-	\$38,148,256

<b>Global Energy Fund</b>				
Assets Table	Level 1	Level 2	Level 3	Total
Investments, at value				
Common Stocks:				
Energy	\$15,983,101	\$-	\$-	\$15,983,101
Total Investments, at value	15,983,101	-	-	15,983,101
Total Assets	\$15,983,101	\$-	\$-	\$15,983,101

<b>Global Innovators Fund</b>				
Assets Table	Level 1	Level 2	Level 3	Total
Investments, at value				
Common Stocks:				
Communications	\$12,873,419	\$-	\$-	\$12,873,419
Consumer, Cyclical	8,646,030	-	-	8,646,030
Consumer, Non-cyclical	21,993,926	-	-	21,993,926
Financial	16,503,935	-	-	16,503,935
Industrial	16,234,542	-	-	16,234,542
Technology	54,962,292	-	-	54,962,292
Total Investments, at value	131,214,144	-	-	131,214,144
Total Assets	\$131,214,144	\$-	\$-	\$131,214,144

**NOTES TO FINANCIAL STATEMENTS**  
**December 31, 2022 - Continued**

<b>Renminbi Yuan &amp; Bond Fund</b>				
<b>Assets Table</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>
Investments, at value				
Corporate Bonds:				
Consumer Cyclical	\$-	\$680,809	\$-	\$680,809
Diversified	-	143,853	-	143,853
Financial	-	3,002,070	-	3,002,070
Government	-	433,642	-	433,642
Total Investments, at value	-	4,260,374	-	4,260,374
Total Assets	\$-	\$4,260,374	\$-	\$4,260,374

**Note 8 - Forward Foreign Currency Contracts**

In order to hedge their portfolio and to protect them against possible fluctuations in foreign exchange rates pending the settlement of securities transactions, the Funds may enter into forward foreign currency contracts that obligate them to exchange currencies at specified future dates. At the maturity of a forward contract, a Fund may either make delivery of the foreign currency from currency held, if any, or from the proceeds of the portfolio securities sold. It may also terminate its obligation to deliver the foreign currency at any time by purchasing an offsetting contract. The forward values of amounts due are netted against the forward value of the currency to be delivered, and the net amount is shown as a receivable or payable in the financial statements. The Funds do not have any outstanding forward contracts as of December 31, 2022.

**Note 9 - Tax Matters**

As of December 31, 2022, the tax bases of investments were as follows:

	<b>Alternative Energy Fund</b>	<b>Asia Focus Fund</b>	<b>China &amp; Hong Kong Fund</b>
Cost of investments for tax purposes	\$ 25,768,356	\$ 9,421,685	\$ 38,508,806
Gross tax unrealized appreciation	2,779,000	2,942,849	7,308,347
Gross tax unrealized depreciation	(2,656,206)	(1,517,642)	(7,668,897)
Net tax unrealized appreciation (depreciation) on investments	122,794	1,425,207	(360,550)
Net tax unrealized appreciation (depreciation) on foreign-currency denominated assets and liabilities	(2,116)	(691)	(7,273)
Net tax unrealized appreciation (depreciation)*	120,678	1,424,516	(367,823)
Undistributed net ordinary income	-	13,850	217,313
Undistributed Long-Term Capital Gains	-	112,478	-
Post October loss **	(401,203)	-	(553,599)
Capital loss carryforward	(30,393,338)	-	(16,654)
Other accumulated gain/(loss)	-	-	-
Total accumulated gain/(loss)	\$ (30,673,863)	\$ 1,550,844	\$ (720,763)

**NOTES TO FINANCIAL STATEMENTS**  
**December 31, 2022 - Continued**

	<b>Global Energy Fund</b>		<b>Global Innovators Fund</b>		<b>Renminbi Yuan &amp; Bond Fund</b>	
Cost of investments for tax purposes	\$	16,773,281	\$	90,642,837	\$	4,682,407
Gross tax unrealized appreciation		1,675,133		48,068,440		752
Gross tax unrealized depreciation		(2,465,313)		(7,497,133)		(422,785)
Net tax unrealized appreciation (depreciation) on investments		(790,180)		40,571,307		(422,033)
Net tax unrealized appreciation on foreign-currency denominated assets and liabilities		(1,776)		2,100		4,173
Net tax unrealized appreciation (depreciation) *		(791,956)		40,573,407		(417,860)
Undistributed net ordinary income		503,870		-		328
Undistributed Long-Term Capital Gains		-		859,310		-
Post October loss **		-		(502)		(25,094)
Capital loss carryforward		(26,658,479)		-		(4,236,975)
Other accumulated gain/(loss)		-		-		-
Total accumulated gain/(loss)	\$	(26,946,565)	\$	41,432,215	\$	(4,679,601)

\* The differences between book-basis and tax-basis unrealized appreciation/(depreciation) is attributable primarily to the tax deferral of losses on wash sales and passive foreign investment company (PFIC) mark to market adjustments.

\*\* Under the current tax law, capital and currency losses realized after October 31 and prior to a Fund's fiscal year end may be deferred as occurring on the first day of the following year.

As of December 31, 2022, the Funds have the following capital loss carryforwards available to offset future realized capital gains:

<b>Capital losses expiring in:</b>	<b>Alternative Energy Fund</b>	<b>Asia Focus Fund</b>	<b>China &amp; Hong Kong Fund</b>	<b>Global Energy Fund</b>	<b>Global Innovators Fund</b>	<b>Renminbi Yuan &amp; Bond Fund</b>
No Expiration Long-term	\$ 30,393,338	\$ -	\$ -	\$ 23,214,220	\$ -	\$ 3,271,504
No Expiration Short-term	-	-	16,654	3,444,259	-	965,471
Total	\$ 30,393,338	\$ -	\$ 16,654	\$ 26,658,479	\$ -	\$ 4,236,975

For the year ended December 31, 2022, the Alternative Energy Fund and the Global Energy Fund utilized capital loss carryforwards of \$1,490,044 and \$1,616,768, respectively.

## NOTES TO FINANCIAL STATEMENTS

### December 31, 2022 - Continued

The tax character of distributions paid during 2022 and 2021 fiscal years are as follows:

	2022		2021	
	Ordinary Income	Long-term Capital Gain	Ordinary Income	Long-term Capital Gain
Alternative Energy Fund	\$ -	\$ -	\$ -	\$ -
Asia Focus Fund	25,640	341,231	193,255	1,228,279
China & Hong Kong Fund	210,910	137,183	3,366,912	6,505,878
Global Energy Fund	25,242	-	320,289	-
Global Innovators Fund	125,904	15,442,504	-	34,815,074
Renminbi Yuan & Bond Fund	81,320	-	101,565	-

#### Note 10 - Recently Issued Accounting Pronouncements

In March 2020, the FASB issued ASU No. 2020-04 (“ASU 2020-04”), Reference Rate Reform (Topic 848) - Facilitation of the Effects of Reference Rate Reform on Financial Reporting. The amendments in ASU 2020-04 provide optional temporary financial reporting relief from the effect of certain types of contract modifications due to the planned discontinuation of LIBOR and other interbank-offered based reference rates as of the end of 2021. ASU 2020-04 is effective for certain reference rate-related contract modifications that occur during the period March 12, 2020 through December 31, 2022. Management is currently evaluating the impact of the guidance.

#### Note 11 – Market Disruption and Geopolitical Risks

Certain local, regional or global events such as war, acts of terrorism, the spread of infectious illness or other public health issues, or other events could have a significant impact on a security or instrument. Since 2020, the novel strain of coronavirus (COVID-19) has negatively affected the worldwide economy, as well as the economies of individual countries, the financial health of individual companies and the market in general in significant and unforeseen ways. Following Russia’s large-scale invasion of Ukraine, the President of the United States signed an Executive Order in February 2022 prohibiting U.S. persons from entering transactions with the Central Bank of Russia and Executive Orders in March 2022 prohibiting U.S. persons from importing oil and gas from Russia as well as other popular Russian exports, such as diamonds, seafood and vodka. There may also be restrictions on investments in Chinese companies. For example, the President of the United States of America signed an Executive Order in June 2021 affirming and expanding the U.S. policy prohibiting U.S. persons from purchasing or investing in publicly-traded securities of companies identified by the U.S. Government as “Chinese Military-Industrial Complex Companies.” The list of such companies can change from time to time, and as a result of forced selling or an inability to participate in an investment the Advisor otherwise believes is attractive, the Funds may incur losses. The duration of the coronavirus outbreak and the Russian-Ukraine conflict could adversely affect the Funds’ performance, the performance of the securities in which the Funds invests and may lead to losses on your investment. The ultimate impact of COVID-19 and Russia Invasion on the financial performance of the Funds’ investments is not reasonably estimable at this time. Management is actively monitoring these events.

#### Note 12 - Events Subsequent to the Fiscal Period End

The Funds have adopted financial reporting rules regarding a subsequent event which requires an entity to recognize in the financial statements the effects of all subsequent events that provide additional evidence about conditions that existed at the date of the balance sheet. Management has evaluated the Funds’ related events and transactions and has determined that there were no events or transactions that occurred through the date of issuance of the Funds’ financial statements.

## NOTES TO FINANCIAL STATEMENTS

### December 31, 2022 - Continued

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#### Additional Information (Unaudited)

##### Proxy Voting Procedures

The Advisor votes proxies relating to portfolio securities in accordance with procedures that have been approved by the Board. You may obtain a description of these procedures, free of charge, by calling “toll-free” (800) 915-6565. This information is also available through the Securities and Exchange Commission’s website at [www.sec.gov](http://www.sec.gov).

##### Proxy Voting Records

Information regarding how the Advisor voted proxies relating to portfolio securities during the latest 12-month period ended June 30 is available, without charge, by calling toll-free, (800) 915-6565. This information is also available through the Securities and Exchange Commission’s website at [www.sec.gov](http://www.sec.gov).

##### Fund Portfolio Holdings

The Funds file their complete schedule of portfolio holdings with the SEC for the first and third quarters of each fiscal year on Form N-PORT within 60 days of the end of such fiscal quarter. Shareholders may obtain the Funds’ Form N-PORT on the SEC’s website at [www.sec.gov](http://www.sec.gov).

##### Householding Mailings

To reduce expenses, the Trust may mail only one copy of Funds’ prospectus and each annual and semi-annual report to those addresses shared by two or more accounts. If you wish to receive individual copies of these documents, please call us at (800) 915-6565 (or contact your financial institution). The Trust will be sending you individual copies thirty days after receiving your request.

##### Supplemental Tax Information

For the year ended December 31, 2022, certain dividends paid by the Funds may be subject to a maximum tax rate of 15%, as provided for by the Jobs and Growth Tax Relief Reconciliation Act of 2003. The percentage of dividends declared from ordinary income designated as qualified dividend income was as follows:

Alternative Energy Fund	N/A
Asia Focus Fund	64%
China & Hong Kong Fund	14%
Global Energy Fund	100%
Global Innovators Fund	100%
Renminbi Yuan & Bond Fund	N/A

For the year ended December 31, 2022, pursuant to Section 853(b)(3) of the Internal Revenue Code, the Asia Focus Fund, China & Hong Kong Fund, and the Global Innovators Fund designates \$341,231, \$137,043, and \$15,442,962 respectively, as long-term capital gains.

**NOTES TO FINANCIAL STATEMENTS**  
**December 31, 2022 - Continued**

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Pursuant to Section 853 of the Internal Revenue Code of 1986, as amended, the Funds designate the following income earned from foreign sources and foreign taxes paid for the year ended December 31, 2022:

	Foreign Sourced Income		Foreign Taxes Paid	
	Total Amount	Per Share Amount	Total Amount	Per Share Amount
Alternative Energy Fund	N/A	N/A	N/A	N/A
Asia Focus Fund	\$267,564	\$0.34	\$22,563	\$0.03
China & Hong Kong Fund	1,001,307	0.40	49,086	0.02
Global Energy Fund	N/A	N/A	N/A	N/A
Global Innovators Fund	N/A	N/A	N/A	N/A
Renminbi Yuan & Bond Fund	N/A	N/A	N/A	N/A

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

### To the Shareholders and Board of Trustees of Guinness Atkinson Funds

#### Opinion on the Financial Statements

We have audited the accompanying statements of assets and liabilities of Alternative Energy Fund, Asia Focus Fund, China & Hong Kong Fund, Global Energy Fund, Global Innovators Fund and Renminbi Yuan & Bond Fund (the “Funds”), each a series of Guinness Atkinson Funds (the “Trust”), including the schedules of investments, as of December 31, 2022, the related statements of operations for the year then ended, the statements of changes in net assets for each of the two years in the period then ended, and financial highlights for each of the five years in the period then ended, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Funds as of December 31, 2022, the results of their operations for the year then ended, the changes in their net assets for each of the two years in the period then ended, and their financial highlights for each of the five years in the period then ended, in conformity with accounting principles generally accepted in the United States of America.

#### Basis for Opinion

These financial statements are the responsibility of the Funds’ management. Our responsibility is to express an opinion on the Funds’ financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Funds in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We have served as the auditor of one or more of the funds in the Trust since 2003.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Funds are not required to have, nor were we engaged to perform, an audit of the Funds’ internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Funds’ internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our procedures included confirmation of securities owned as of December 31, 2022 by correspondence with the custodian. We believe that our audits provide a reasonable basis for our opinion.



Philadelphia, Pennsylvania  
March 1, 2023

TAIT, WELLER & BAKER LLP

### **Statement Regarding Liquidity Risk Management Program**

The Securities and Exchange Commission adopted Rule 22e-4 under the Investment Company Act of 1940, as amended (the “Liquidity Rule”), to promote effective liquidity risk management throughout the open-end investment company industry, thereby reducing the risk that funds will be unable to meet their redemption obligations and mitigating dilution of the interests of fund shareholders.

The Board of Trustees (the “Board”) of Guinness Atkinson Funds (the “Trust”) met on December 5, 2022 (the “Meeting”), to review the liquidity risk management program (the “Program”) applicable to the following series of the Trust (each, a “Fund” and together, the “Funds”) pursuant to the Liquidity Rule:

Guinness Atkinson Alternative Energy Fund

Guinness Atkinson Asia Focus Fund

Guinness Atkinson China & Hong Kong Fund

Guinness Atkinson Global Energy Fund

Guinness Atkinson Global Innovators Fund

Guinness Atkinson Renminbi Yuan & Bond Fund

The Board has appointed Guinness Atkinson Asset Management, Inc., the investment adviser to the Funds, as the liquidity program administrator (“LPA”) for the Program. At the Meeting, the LPA, provided the Board with a written report (the “Report”) that addressed the operation, adequacy, and effectiveness of implementation of the Program, and any material changes to it for the period from October 1, 2021 through September 30, 2022 (the “Program Reporting Period”).

In assessing the adequacy and effectiveness of implementation of the Program, the Report discussed the following, among other things:

1. Investment strategy and the liquidity of its portfolio investments,
2. Redemption history of each Fund,
3. Effect of pricing spreads on Fund liquidity, and
4. Other funding sources.

The Report stated that the LPA assessed the Funds and determined that the Funds continue to be excluded from the requirement for HLIM determination by virtue of the liquidity of their holdings. Highly liquid investments are defined as cash and any investment reasonably expected to be convertible to cash in current market conditions in three business days or less without the conversion to cash significantly changing the market value of the investment. The Report also stated that there were no material changes made to the Program during the Program Reporting Period.

In the Report, the LPA concluded that the Program is adequately designed and has been effective in managing each Fund’s Liquidity Risk and in implementing the requirements of the Liquidity Rule.

There can be no assurance that the Program will achieve its objectives in the future. Please refer to the Funds’ prospectus for more information regarding each Fund’s exposure to liquidity risk and other principal risks to which an investment in the Funds may be subject.



## TRUSTEE AND OFFICER INFORMATION (Unaudited)

Unless otherwise noted, each Trustee and officer's address is 251 South Lake Avenue, Suite 800, Pasadena, California 91101. Trustees and officers of the Trust serve until their resignation, removal or retirement. Additional information about the Trustees is included in the Funds' Statement of Additional Information which is available, without charge, upon request by calling toll-free, 1-800-915-6565 or by visiting the Funds' website at [www.gafunds.com](http://www.gafunds.com).

Name and Age	Position(s) Held with the Trust†	Length of Time Served	Principal Occupation(s) During the Past 5 Years	Number of Portfolios In Fund Complex Overseen by Trustee	Other Directorships Held by Trustee During the Past 5 Years
<b>Non-Interested Trustees</b>					
J. Brook Reece, Jr. (75)	Trustee and Chairman	Indefinite; Since April 1994	CEO, Adcole Corp, from 1989 to 2017.	11	None
James I. Fordwood (75)	Trustee, Audit Committee Chairman	Indefinite; Since April 1994	CFO and Managing Member of Prima Marketing LLC (network of convenience stores) since 1998; President, Balmacara Production Inc. since 1986 (holding company); Treasurer, Inverness21 LLC (owns and operates office buildings) since 2007; Treasurer, JL Energy Inc. (holding company) since 1985; Treasurer, Thistle, Inc. (seismic data management) since 1984.	11	None
Dr. Bret A. Herscher (64)	Trustee	Indefinite; Since April 1994	Self-employed Consultant, since 2018, to companies in the medical device sector. Chief Technology Officer, EARGO, Inc., a hearing aid company, from 2012 to 2018.	11	None
Susan Penry-Williams (76)	Trustee	Indefinite; Since February 2016	Retired; Partner, Kramer Levin Naftalis & Frankel LLP, from 1994 to 2014.	11	None
<b>Interested Trustee</b>					
Timothy W.N. Guinness* 18 Smith Square London, England SW1P 3HZ (74)	Trustee	Indefinite; Since April 1994	Chairman/CIO of Guinness Atkinson™ Asset Management since November 2002. Chairman of Guinness Asset Management Ltd., investment adviser in London, since 2003. Director of Guinness Capital Management Ltd. since 2010; Partner, Ekins Guinness LLP (investment research) since 2017; Non-Executive Director of Brompton Bicycle Ltd., since 2000.	11	None

<b>Name and Age</b>	<b>Position(s) Held with the Trust†</b>	<b>Length of Time Served</b>	<b>Principal Occupation(s) During the Past 5 Years</b>	<b>Number of Portfolios In Fund Complex Overseen by Trustee</b>	<b>Other Directorships Held by Trustee During the Past 5 Years</b>
<b>Officers</b>					
James Atkinson (64)	President	Since April 2003	Chief Executive Officer and Director of Guinness Atkinson™ Asset Management since 2002. Director of Guinness Asset Management Ltd. since 2003. Principal of Orbis Marketing, a mutual fund marketing and advertising firm, since 2001.	N/A	N/A
Patrick Keniston (58)	Chief Compliance Officer	Since May 2013	Managing Director, Foreside Fund Officer Services, LLC, since 2008.	N/A	N/A
Rita Dam (55)	Treasurer	Since September 2009	Co-Chief Executive Officer (2016 - present), and Vice President, Mutual Fund Administration, LLC (2006 - 2015). Co-President (2018 – present), Foothill Capital Management, LLC, a registered investment adviser.	N/A	N/A
Joy Ausili (55)	Secretary and Assistant Treasurer	Since September 2009	Co-Chief Executive Officer, Mutual Fund Administration, LLC (2016 - present), and Vice President, Mutual Fund Administration, LLC (2006 - 2015). Co-President (2018 – present), Foothill Capital Management, LLC, a registered investment advisor.	N/A	N/A
Lyna Phan (47)	Assistant Treasurer	Since September 2011	Managing Director (2018 – present), and Vice President, Mutual Fund Administration, LLC. (2008-2017).	N/A	N/A
Evan Robledo (34)	Assistant Treasurer	Since December 2021	Vice President (2020 – present), and Assistant Vice President, Mutual Fund Administration, LLC. (2018- 2020).	N/A	N/A

†“Interested person” (as defined in the 1940 Act) of the Funds because of his affiliation with Guinness Atkinson™.

## Privacy Notice

Guinness Atkinson<sup>TM</sup> Funds and Guinness Atkinson Asset Management, Inc. may collect non-public information about you from the following sources:

- Information we receive about you on applications or other forms;
- Information you give us orally; and
- Information about your transactions with us.

We do not disclose any non-public personal information about our shareholders or former shareholders without the shareholder's authorization, except as required by law or in response to inquiries from governmental authorities. We restrict access to your personal and account information to those employees who need to know that information to provide products and services to you. We also may disclose that information to unaffiliated third parties (such as to brokers or custodians) only as permitted by law and only as needed for us to provide agreed services to you. We maintain physical, electronic and procedural safeguards to guard your non-public personal information.

## Guinness Atkinson™ Funds Information

### Board of Trustees

J. Brooks Reece, Jr. Chairman  
James I. Fordwood  
Timothy W.N. Guinness  
Dr. Bret A. Herscher  
Susan Penry-Williams

### Contact Guinness Atkinson™ Funds

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Milwaukee, WI 53201-0701  
Shareholder Services: 800-915-6566  
Literature Request: 800-915-6565  
Website: [www.gafunds.com](http://www.gafunds.com)  
Email: [mail@gafunds.com](mailto:mail@gafunds.com)

Guinness Atkinson™ Funds			
Funds	Cusip	Ticker	Fund #
Alternative Energy Fund	402031 50 4	GAAEX	1298
Asia Focus Fund	402031 10 8	IASMX	1096
China & Hong Kong Fund	402031 20 7	ICHKX	1094
Global Energy Fund	402031 40 5	GAGEX	1098
Global Innovators Fund Investor Class	402031 30 6	IWIRX	1095
Global Innovators Fund Institutional Class	402031 88 4	GINNX	5323
Renminbi Yuan & Bond Fund	402031 70 2	GARBX	1099

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This report is intended for shareholders of the Guinness Atkinson™ Funds and may not be used as literature unless preceded or accompanied by a current prospectus.

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c/o U.S. Bancorp Fund Services, LLC  
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