

# Creating a Global Price for Carbon Emissions

An Overview of the KFA Global Carbon ETF  
(Ticker: KRBN)





*“One of the most powerful ways to reduce emissions... is to move toward carbon pricing that puts basic, free-market economics to work.”*

**– Secretary of State, John Kerry**

*“I’m a Republican. I believe that the greenhouse effect is real, that CO<sub>2</sub> emissions generated by man is creating our greenhouse gas effect that traps heat, and the planet is warming. A price on carbon—that’s the way to go in my view.”*

**– Senator Lindsey Graham**

*“My position is unchanging and unequivocal: international carbon markets— that put a price on carbon— are absolutely crucial if we’re to have any chance of stabilizing global temperature rise and avoid runaway climate change.”*

**– UN Climate Change Executive Secretary, Patricia Espinosa**

Secretary of State John Kerry, with his two-year-old granddaughter on his lap, signs the Paris Agreement on Climate Change on April 22, 2016 at the United Nations headquarters in New York.

## About KFA Funds and KFA Partners' for the first global carbon ETF (KRBN)



### About KFA Funds

Founded in 2012, Krane Funds Advisors, LLC is the investment manager for KFA Funds and KraneShares ETFs. We believe that investors should have cost-effective and transparent tools for attaining exposure to a wide variety of asset classes. The KFA Funds product suite delivers differentiated, high-conviction investment strategies to global investors. We are passionate about identifying groundbreaking capital market opportunities and developing them into investment vehicles that offer a source of non-traditional diversification to our clients. Krane Funds Advisors, LLC is majority owned by China International Capital Corporation (CICC).



### About Climate Finance Partners

KRBN is sub-advised by Climate Finance Partners (CLIFI). CLIFI delivers innovative climate finance solutions and investment products to address capital needs for emerging environmental challenges. CLIFI is led by a team of investment professionals with deep experience in the fields of traditional investment and environmental finance.



### About IHS Markit

KRBN's index was created by IHS Markit, global index provider and three-time winner of Index Product Creator & Developer of the Year. IHS Markit brings together the deepest intelligence across the widest set of capital-intensive industries and markets, including leading positions in energy and green finance.

## Climate Finance Partners Advisory Board



### **John Kerry, Chairman**

John Kerry served as the United States Secretary of State under the Obama administration and the Senator of Massachusetts for nearly two decades. He has been a long-time advocate of strong environmental policies and committed to The Paris Agreement in 2016 on behalf of the United States.



### **Robert Engle, Board Member**

Robert Engle is a Nobel Prize winning economist and expert in the field of volatility measurement within financial markets. He is a thought-leader in Climate Change Risk and Sustainable Investing and a professor at the NYU Stern School of Business.



### **Tensie Whelan, Board Member**

Tensie Whelan is the Director of NYU Stern School of Business's Center for Sustainable Business, where she brings her 25 years of experience working on local, national, and international environmental and sustainability issues to engage businesses in proactive and innovative mainstreaming of sustainability.



### **Ambassador David Thorne, Board Member**

David Thorne served as United States Ambassador to Italy from 2009-2013 and as the senior advisor to the Secretary of State during the Obama administration. Ambassador Thorne is co-founder of Adviser Investments, one of the nation's most highly regarded firms specializing in Vanguard and Fidelity mutual funds and exchange-traded funds.



### **Ambassador David Adelman, Advisor**

David Adelman is a partner with the global law firm Reed Smith LLP. Previously he was a Managing Director with Goldman Sachs and served as the 15th United States Ambassador to Singapore. He is a recipient of the U.S. Navy Distinguished Service Medal, the highest honor awarded by the Navy to non-uniformed personnel. Adelman is a member of the Council on Foreign Relations.

**KRBN****KFA Global Carbon ETF****Investment Strategy**

The KFA Global Carbon ETF (the “Fund”) seeks to provide a total return that, before fees and expenses, exceeds that of the IHS Markit Global Carbon Index (the “Index”) over a complete market cycle. KRBN is benchmarked to IHS Markit’s Global Carbon Index, which offers broad coverage of cap-and-trade carbon allowances by tracking the most traded carbon credit futures contracts. The index introduces a new measure for hedging risk and going long the price of carbon while supporting responsible investing.

Currently the index covers the major European and North American cap-and-trade programs: European Union Allowances (EUA), California Carbon Allowances (CCA) and the Regional Greenhouse Gas Initiative (RGGI).

**Global Carbon Allowance Market Highlights**

- According to IHS Markit, as of June 2020 the global price of carbon was \$19.30 per ton of CO<sub>2</sub>. It is estimated that carbon allowance prices need to reach a range of \$50 – \$100 per ton of CO<sub>2</sub> to achieve the emissions reductions goals of The Paris Agreement.<sup>1,2</sup>
- Tightening emissions regulation may provide a positive catalyst for the performance of the global carbon allowance market.
- As of December 2019, the three largest global carbon futures markets, tracked by IHS Markit’s Global Carbon Index, had a market size of \$155.82 billion.<sup>1</sup>
- In April 2019, *The Financial Times* reported that European carbon allowances within the European Union Emissions Trading System were the world’s top-performing commodity over the past two years.<sup>3</sup>
- China’s emissions trading market is expected to launch by end of 2020. Once fully implemented, it will be the largest carbon allowance market in the world, which may provide an additional catalyst for the performance of the global carbon allowance market.

**KRBN Features**

- Going long the price of carbon may support responsible investing and incentivize pollution reduction aligned with ESG investment goals.
- Can provide potential portfolio diversification due to the global carbon futures markets’ historically low correlation to other asset classes.<sup>1\*</sup>
- KRBN may be appropriate for investors who are concerned about the increase in cost of carbon emissions on their portfolios. As the cost of carbon emissions rise, KRBN typically benefits, while companies with heavy carbon footprints typically suffer.<sup>3</sup>
- May be a beneficiary of tightening carbon emissions regulation worldwide.

1.Data from IHS Markit as of 06/30/2020 (\*see page 13)

2. World Bank State and Trends of Carbon Pricing 2019

3. Financial Times, April 17, 2019 “Niche asset nears mainstream as investors warm to EU carbon market”

## KRBN supports environmental policy that seeks to reduce pollution to protect human health and the environment

- KRBN is benchmarked to IHS Markit's Global Carbon Index, which introduces a new measure for going long the price of carbon while supporting responsible investing.
- According to IHS Markit, as June 2020 the global price of carbon was \$19.30 per ton of CO<sub>2</sub>. It is estimated that carbon allowance prices need to reach a range of \$50 – \$100 per ton of CO<sub>2</sub> to achieve the emissions reductions goals of The Paris Agreement.<sup>1,2</sup>



### KRBN supports:

- **Environmental policy** by ensuring companies who reduce emissions are rewarded and those who do not must pay
- **Reduction in emissions** achieved through tying monetary incentive to reducing pollution
- **Climate impact** quantified and standardized

1. Data from IHS Markit as of 06/30/2020 (\*see page 13)

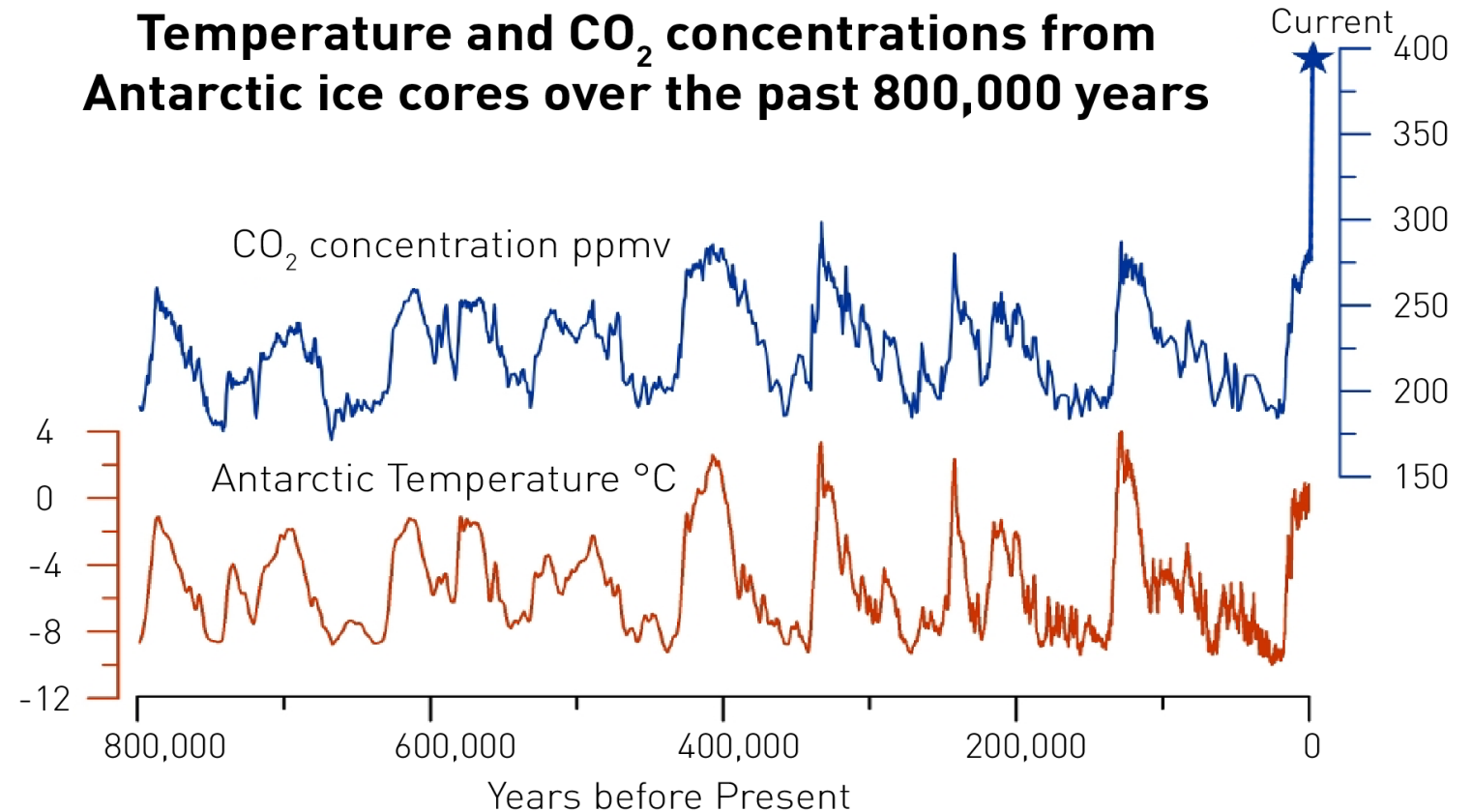
2. World Bank State and Trends of Carbon Pricing 2019

## A climate change crisis? A key indicator is signaling a million-year anomaly...

### Scientists are confident that humans are the primary cause of climate change:

- According to the Fourth National Climate Assessment, the US government's official report on the impact of climate change:
  - Many independent lines of evidence support the finding that human activities are the dominant cause of recent (since 1950) climate change.
  - Atmospheric carbon dioxide (CO<sub>2</sub>) levels have increased from approximately 270 parts per million (ppm) during preindustrial times to the current 408 ppm observed in levels that exceed any observed over the past 800,000 years.
  - A 40% increase in atmospheric CO<sub>2</sub> levels since the Industrial Revolution is due mainly to human activities (primarily the combustion of fossil fuels).

### Temperature and CO<sub>2</sub> concentrations from Antarctic ice cores over the past 800,000 years



Using Antarctic ice cores scientists can measure past concentrations of gases in the atmosphere. Antarctic ice cores contain distinct layers from snowfall accumulated over thousands of years. Using the air captured in the layers, scientists are able to measure historic atmospheric concentrations.



## Many sectors may be exposed to climate change risk

Extreme weather including heat wave, drought, wildfire, heavy rainfall, flooding, storms, and storm surge, may adversely affect:

- **Information Technology:** Tech sector rely on complex value chains that can be interrupted by extreme weather events. They also often produce expensive and water sensitive products using costly machinery and can incur costs and damages from extreme events on site.<sup>2</sup>
- **Health Care:** More frequent and/or more intense extreme weather events are expected to adversely affect population health. These events can exacerbate underlying medical conditions, increase stress, and lead to adverse mental health effects. Furthermore, extreme weather can disrupt critical public health, healthcare, and related systems in ways that can adversely affect health long after the event.<sup>1</sup>
- **Energy & Utilities:** Power plants rely on a steady supply of water for cooling, and operations are projected to be threatened when water availability decreases or water temperatures increase. Reduced water availability also affects the production and refining of petroleum, natural gas, and biofuels.<sup>1</sup>
- **Real Estate:** Although storms, floods, and erosion have always been hazards, with rising sea levels extreme weather events now threaten approximately \$1 trillion in national wealth held in coastal real estate and the continued viability of coastal communities that depend on coastal water, land, and other resources for economic health and cultural integrity.<sup>1</sup>

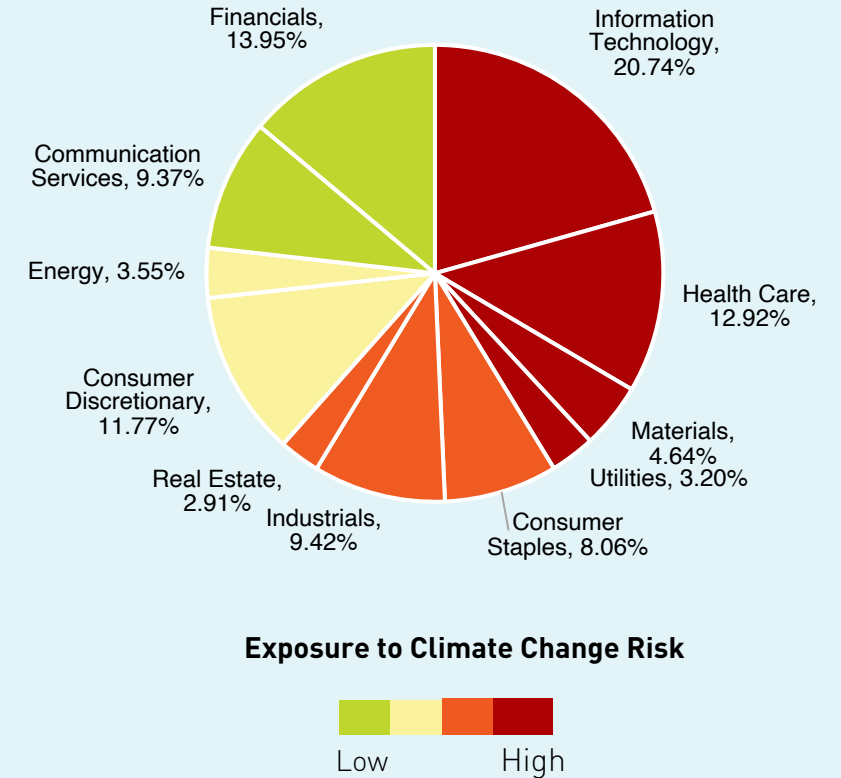


1. Fourth National Climate Assessment Report

2. Four Twenty Seven, Scenario Analysis for Physical Equity Markets, June 18, 2019

\* Based off Market and Supply Chain, and Operations Risk scores of MSCI ACWI industry groups from Four Twenty Seven. Industry group data aggregated to GICS sector..

### Exposure to Climate Change Risk\* by MSCI All Country World Index Sector<sup>3</sup>



Source: MSCI All Country World Index by sector as of June 2020 and Four Twenty Seven






## How emissions trading systems work to reduce carbon emissions

- Economists generally believe if there is an appropriate price of carbon emissions, the free market may optimally adjust to provide the best mix of goods and services while accounting for environmental damage caused by pollution from carbon emissions.<sup>1</sup>

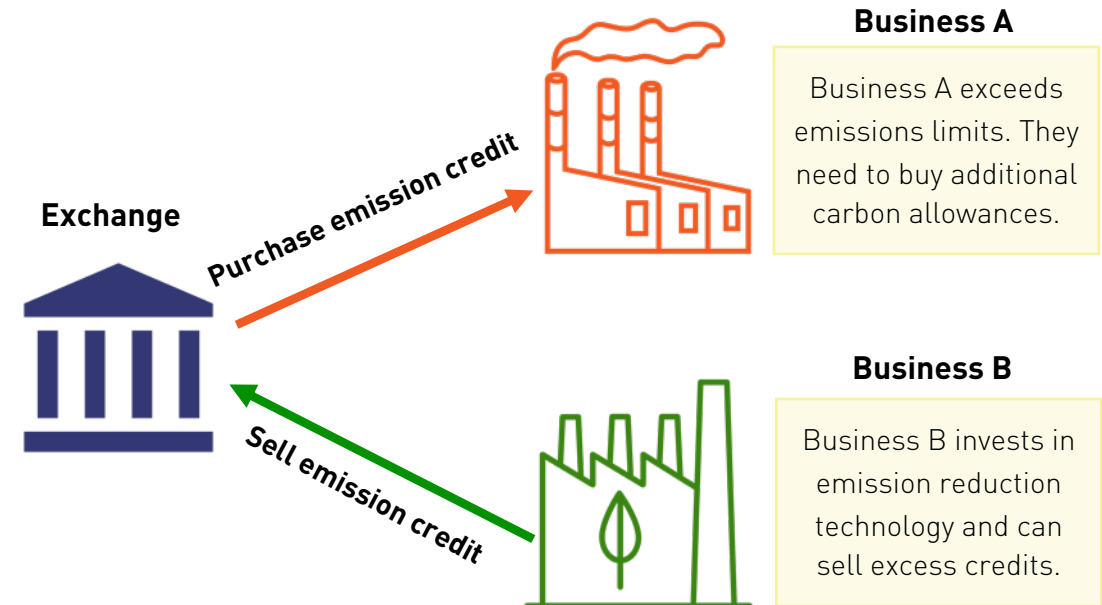
### Mechanics of Emissions Trading Systems (ETS)

- A carbon Emissions Trading Systems (ETS), also referred to as Cap and Trade, is a market for trading carbon allowances which are regulated by governmental organizations such as the European Union Emissions Trading System (EUA), the California Cap and Trade (CCA) and the Regional Greenhouse Gas Initiative (RGGI). The price of carbon is driven by emissions limits and the number of carbon allowances within circulation. A regulated entity must comply with emissions limits within its jurisdiction by buying carbon allowances. Emissions Trading Systems (ETS) create a price for the negative impact of carbon emissions while incentivizing investment into cleaner technology.

### Characteristics of Top 3 Emissions Trading Systems

Regional Bodies	European Union ETS	California Cap and Trade	Regional Greenhouse Gas Initiative (RGGI)
Logo			
# of Entities <sup>1</sup>	11,000+	450	165
Exchanges*			
Entity examples	Power plants, industrial plants and refineries, transportation and agricultural businesses. Sector coverage continues to expand as these exchanges mature.		

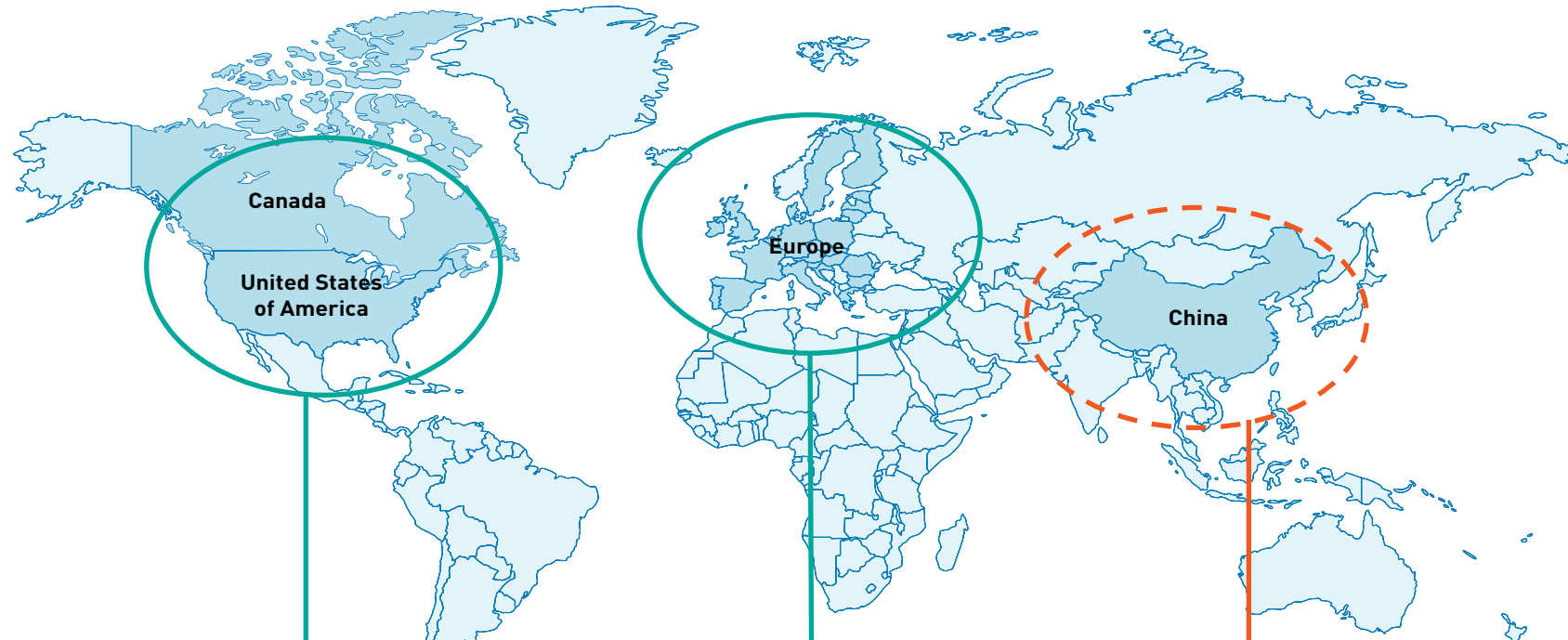
### How Emissions Trading Systems Work



1. Robert Engle, A Financial Approach to Climate Change Risk, March 2019 \*See page 23 for definitions.

## The global carbon allowance market

- Globally, Emissions Trading Systems and carbon taxes cover ~20% of greenhouse gas emissions, with nearly 40% of global GDP produced in locations with a carbon price.<sup>1</sup>
- In 2018 the top 3 emissions trading systems grew 331% and in 2019 they grew 41% by trading volume.<sup>2</sup>
- In the next five years more markets are expected to come online. China's carbon allowance market is expected to be the largest carbon allowance market in the world once it is fully implemented by the end of 2020.<sup>1</sup>



Most liquid markets in North America – California, Quebec, and US Northeast (US RGGI) – have ambitious emission reductions goals.

European Union Emissions Trading System (EUA) is the largest and most traded carbon market in the world, covering 2 billion tons CO<sub>2</sub> and a futures market value of \$45 billion.

China is expected to become the largest carbon market in the world when it fully implements its national emissions trading system expected to begin implementation in 2020.

1. World Bank State of Carbon Markets, June 2019

2. Data from IHS Markit as of 06/30/2020

## Evolution of the global carbon allowance market



**1997:** Kyoto Protocol sets the first legally binding emissions reduction goals on industrialized nations.



**2009:** The Regional Greenhouse Gas Initiative (RGGI) launches serving CT, DE, ME, MD, MA, NY, NH, RI and VT



**2016:** 197 countries sign the Paris Agreement with more than half of the countries submitting national plans to cut emissions through market mechanisms

Signing by John Kerry in United Nations General Assembly Hall for the United States



**2020:** China is expected to become the largest carbon allowance market in the world, covering ~3.3 billion CO<sub>2</sub>.<sup>2</sup>

**2005:** The European Union launches the first major Emissions Trading System by the 32 member states.



**2013:** California launches a “cap and trade” program covering 80% of the states emissions. Since a peak in 2004, emissions have been reduced by 25%.



**2019:** In 2018 the top 3 emissions trading systems grew 331% and in 2019 they grew 41%.<sup>1</sup>

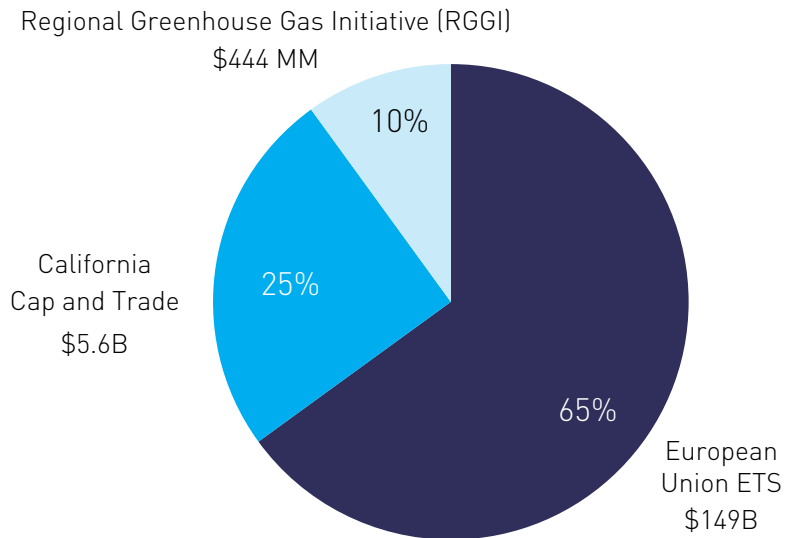
1. Data from IHS Markit as of 06/30/2020  
2. World Bank State of Carbon Markets, June 2019



## Why carbon allowance futures? Liquidity and market size

- As of December 2019, the three largest global carbon futures markets tracked by IHS Markit's Global Carbon Index, had an annual trading volume of of \$155.82 billion.<sup>1</sup>
- In 2018 the top 3 emissions trading systems grew 331% and in 2019 they grew 41% by trading volume.
- Transactions in the carbon allowance market are typically reserved for regulated entities within an Emissions Trading System.
- Carbon allowance futures can be freely traded on exchange with attractive market size and liquidity characteristics.

### IHS Markit's Global Carbon Index Weighting<sup>1,2</sup>



### Top 3 Carbon allowance futures markets annual trading volume and market growth by annual trading volume<sup>1\*</sup>

July 31, 2014 – December 31, 2019

Year	EUA volume (billions)	CA volume (billions)	RGGI volume (billions)	Total volume	EUA YoY growth	CA YoY growth	RGGI YoY growth	Total growth
2019	149.8	5.6	0.4	155.8	39.40%	120.38%	34.95%	41.23%
2018	107.5	2.5	0.3	110.3	348.83%	66.55%	134.80%	330.97%
2017	23.9	1.5	0.1	25.6	2.20%	36.62%	78.23%	3.99%
2016	23.4	1.1	0.1	24.6	-27.80%	3.13%	n/a	-26.57%
2015	32.5	1.1	-	33.5	-26.25%	267.38%	n/a	-24.31%
2014	44	0.3	-	44.3	n/a	n/a	n/a	-

1. Data from IHS Markit as of 12/31/2019, retrieved 06/30/2020

2. Weightings as of annual rebalance on 11/30/2019

\*See page 23 for definitions

## Carbon allowance futures exhibit low correlation to other asset classes

- Can provide potential portfolio diversification due to the global carbon futures markets' historically low correlation to other asset classes.<sup>2\*</sup>
- KRBN may be appropriate for investors who are concerned about the increase in cost of carbon emissions on their portfolios. As the cost of carbon emissions rises, KRBN typically benefits, while companies with heavy footprints typically suffer.<sup>3</sup>

### Top 3 carbon allowance markets (weighted by volume) correlation' to other asset classes<sup>1</sup>

July 31, 2014 to June 30, 2020

Correlation	Carbon allowances*	US Equities	Bonds	Commodities	Real Estate	Gold	Oil
Carbon allowances*	1.0000	0.307	0.026	0.1252	0.194	-0.109	0.287
US Equities	0.307	1.0000	-0.035	0.4153	0.638	-0.004	0.359
Bonds	0.026	-0.035	1.0000	-0.2721	0.408	0.540	-0.187
Commodities	0.312	0.530	-0.184	1.0000	0.241	0.049	0.889
Real Estate	0.194	0.638	0.408	0.241	1.0000	0.085	0.176
Gold	-0.109	-0.004	0.540	0.049	0.085	1.0000	-0.035
Oil	0.287	0.359	-0.187	0.889	0.176	-0.035	1.0000

- **US Equities:** S&P 500\*
- **Bonds:** Bloomberg Barclays US Aggregate Bond Index ("The Agg")\*
- **Commodities:** The S&P GSCI \*
- **Real Estate:** MSCI US REIT Index\*
- **Gold:** LBMA Gold Price PM Benchmark\*
- **Oil:** S&P GSCI Crude Oil Index\*

1. Data from Bloomberg as of 06/30/2020

2. World Bank State and Trends of Carbon Pricing 2019

3. Financial Times, April 17, 2019 "Niche asset nears mainstream as investors warm to EU carbon market"

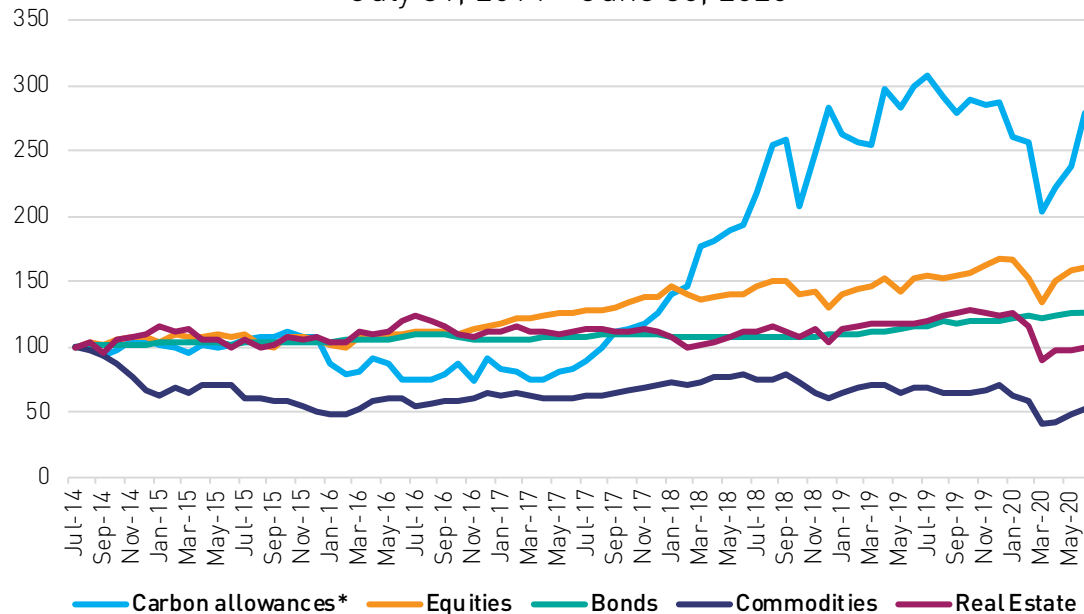
\*See page 23 for definitions

## The top 3 largest carbon allowance markets (weighted by volume) have exhibited strong performance

- Tightening emissions regulation may provide a positive catalyst for the performance of the global carbon allowance market.
- In April 2019, *The Financial Times* reported that European carbon allowances within the European Union Emissions Trading System were the world's top-performing commodity over the past two years.<sup>1</sup>
- China's carbon allowance market is expected to launch by end of 2020. Once fully implemented, it will be the largest carbon allowance market in the world, which may provide an additional catalyst for the performance of the global carbon allowance market.

### Top 3 carbon allowance markets (weighted by volume) versus major asset classes<sup>1</sup>

July 31, 2014 – June 30, 2020



### Top 3 carbon allowance markets (weighted by volume) versus major asset classes<sup>1</sup>

July 31, 2014 – June 30, 2020

Comparable	Carbon allowances	Equities	Bonds	Commodities	Real Estate
Annualized Return (%)	22.40%	9.01%	3.97%	-7.82%	1.38%
Annualized Volatility (%)	31.64%	14.01%	3.11%	24.30%	17.11%
Sharpe Ratio*	0.71	0.64	1.28	-0.32	0.08

Carbon allowances: See page 23 for definition; Equities: S&P 500 ; Bonds: The Agg; Commodities: The S&P GSCI ; Real Estate: MSCI US REIT Index.

**Index returns are for illustrative purposes only and do not represent actual Fund performance. Index returns do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Past performance does not guarantee future results.**

1. Data from Bloomberg and IHS Markit as of 06/30/2020

\*See page 23 for definitions



## How to Buy KRBN ETF



Ask your financial advisor about KRBN to find out if it may fit in your portfolio



Buy KRBN shares on the NYSE Exchange or with your brokerage firm

	NAV-Based Creates	Market Orders	
Investor	Large Institutions	RIA's	Individuals
Execution	Authorized Participants	Individual Brokerage Account	
Liquidity	Function of the value of the underlying asset that backs the ETF	Function of the value of ETF shares traded	
Shares	Flexible supply - shares can be "created" or "redeemed" to offset changes in demand	Trading the ETF shares that currently exist	

## Where does KRBN fit into portfolios?

As an alternative investment

As a non-correlated commodity

As an ESG investment

## KFA Global Carbon ETF

### Investment Strategy:

The KFA Global Carbon ETF (the “Fund”) seeks to provide a total return that, before fees and expenses, exceeds that of the IHS Markit Global Carbon Index (the “Index”) over a complete market cycle.”

KRBN tracks IHS Markit’s Global Carbon Index, which offers broad coverage of cap-and-trade carbon allowances by tracking the most traded carbon credit futures contracts. The index introduces a new measure for hedging risk and going long the price of carbon while supporting responsible investing.

Currently the index covers the major European and North American cap-and-trade programs: European Union Allowances (EUA), California Carbon Allowances (CCA) and the Regional Greenhouse Gas Initiative (RGGI).

### Key Fund Information:

Ticker	KRBN
Index Name	IHS Markit Global Carbon Index
Primary Exchange	NYSE
Total Annual Fund Operating Expense	0.79%
Inception Date	7/30/2020
Distribution Frequency	Annually

<b>Top Holdings</b> as of 8/25/2020 The Fund’s Holdings Are Subject to Change.		<b>% of Fund</b>
EURO		62.78%
KFA CARBON CFC (138000)		28.05%
SCHWAB SHORT-TER		8.86%
CASH		0.36%

### KRBN Performance History as of 6/30/2020

	Cumulative %			Average Annualized %			
	3 Mo	6 Mo	Since Inception	1 Yr	3 Yr	5 Yr	Since Inception
Fund NAV	–	–	–	–	–	–	–
Closing Price	–	–	–	–	–	–	–
Index	–	–	–	–	–	–	–

**The performance data quoted represents past performance. Past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor’s shares, when sold or redeemed, may be worth more or less than their original cost and current performance may be lower or higher than the performance quoted. For performance data current to the most recent month end, please visit [www.kfafunds.com](http://www.kfafunds.com)**

**Index returns are for illustrative purposes only. Index performance returns do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index.**

## KRBN risks

Potential Type of Risk	KRBN Potential Risks
<b>Loss of principal</b>	There are risks involved with investing, including possible loss of principal. There is no guarantee the Fund will achieve its investment objectives.
<b>Futures Market / Cap and Trade</b>	The Fund invests in futures tied to cap and trade markets. There is no assurance that cap and trade regimes will continue to exist. Regulatory changes may affect cap and trade with adverse impacts on the Fund.
<b>International</b>	The Fund invests internationally. In addition to the normal risks associated with investing, international investments may involve risk of capital loss from unfavorable fluctuations in currency values from differences in generally accepted accounting principles or from social, economic or political instability in other nations.
<b>Derivatives / Fixed Income</b>	The Fund invests in derivatives and fixed income instruments. The primary risk of derivative instruments is that changes in the market value of securities held by the Fund and of the derivative instruments relating to those securities may not be proportionate. Derivatives are also subject to illiquidity and counterparty risk. Fixed Income securities are subject to interest rate risk and will decline in value as interest rates rise.
<b>Subsidiary</b>	The Fund invests through a subsidiary. The subsidiary is organized in the Cayman Islands, and is not registered with the SEC under the Investment Company Act of 1940, The Fund will not receive all the protections offered shareholders of registered investment companies.
<b>Clearing broker</b>	The Fund's investment in exchange-traded futures contracts may expose the Fund to risks of a clearing broker. This broker maintains assets in a bulk segregated account. Fund assets deposited with this broker to serve as margin may be used to satisfy the broker's own obligations. In event of default, the Fund could experience lengthy delays in recovering some or all its assets or may not see any recovery.
<b>Not Diversified</b>	The Fund is not diversified.



## Climate Finance Partners & KFA Funds Leadership



### **Jonathan Krane, CEO and Founder of Krane Funds Advisors**

Jonathan Krane is the founder and Chief Executive Officer of Krane Funds Advisors, the investment advisor of KFA Funds and KraneShares ETFs. KFA Funds is the premier platform for developing and delivering differentiated, high-conviction investment strategies to global investors. KraneShares suite of China-focused exchange traded funds provide investors with solutions to capture China's importance as an essential element of a well-designed investment portfolio.



### **Jonathan Shelon, Chief Operating Officer, Krane Funds Advisors**

Jonathan is the Chief Operating Officer at KraneShares. Prior to KFA, he was the Chief Investment Officer of the Specialized Strategies Team at J.P. Morgan, overseeing \$40 billion in AUM and a Portfolio Manager at Fidelity Investments where he was responsible for \$150 billion in assets for over five million shareholders in Fidelity's target date strategies, the Freedom Funds.



### **James Maund, Head of Capital Markets, Krane Funds Advisors**

James Maund joined KraneShares as head of Capital Markets in January 2020. James has more than 15 years of experience in ETF trading and capital markets. Prior to joining KraneShares, James was a vice president in the Institutional ETF Group / ETF Capital Markets Group at State Street Global Advisors. Prior to State Street, James was an ETF trader at Goldman Sachs & Co.



### **Guy Ferrara, Managing Director, Krane Funds Advisors**

Guy has spent the last 20 years in the asset management industry. Prior to KFA, Guy worked for UBS in client education, portfolio construction, and asset retention. Over the course of his 20-year career his mission has always been improving real financial outcomes for client's and the financial advisors who serve them.



### **Eron Bloomgarden, Partner at CLIFI**

Eron Bloomgarden is an expert in environmental finance, green infrastructure, and impact investing. He is an Adjunct Professor at Columbia University's Earth Institute and adviser to governments and corporations on issues of environmental finance.



### **Richmond Mayo-Smith, Partner at CLIFI**

Richmond Mayo-Smith is a private investor who focuses on sustainable investments and emerging markets. He serves on the board of the NYU Stern School of Business and the NYU Stern Center for Sustainable Business.



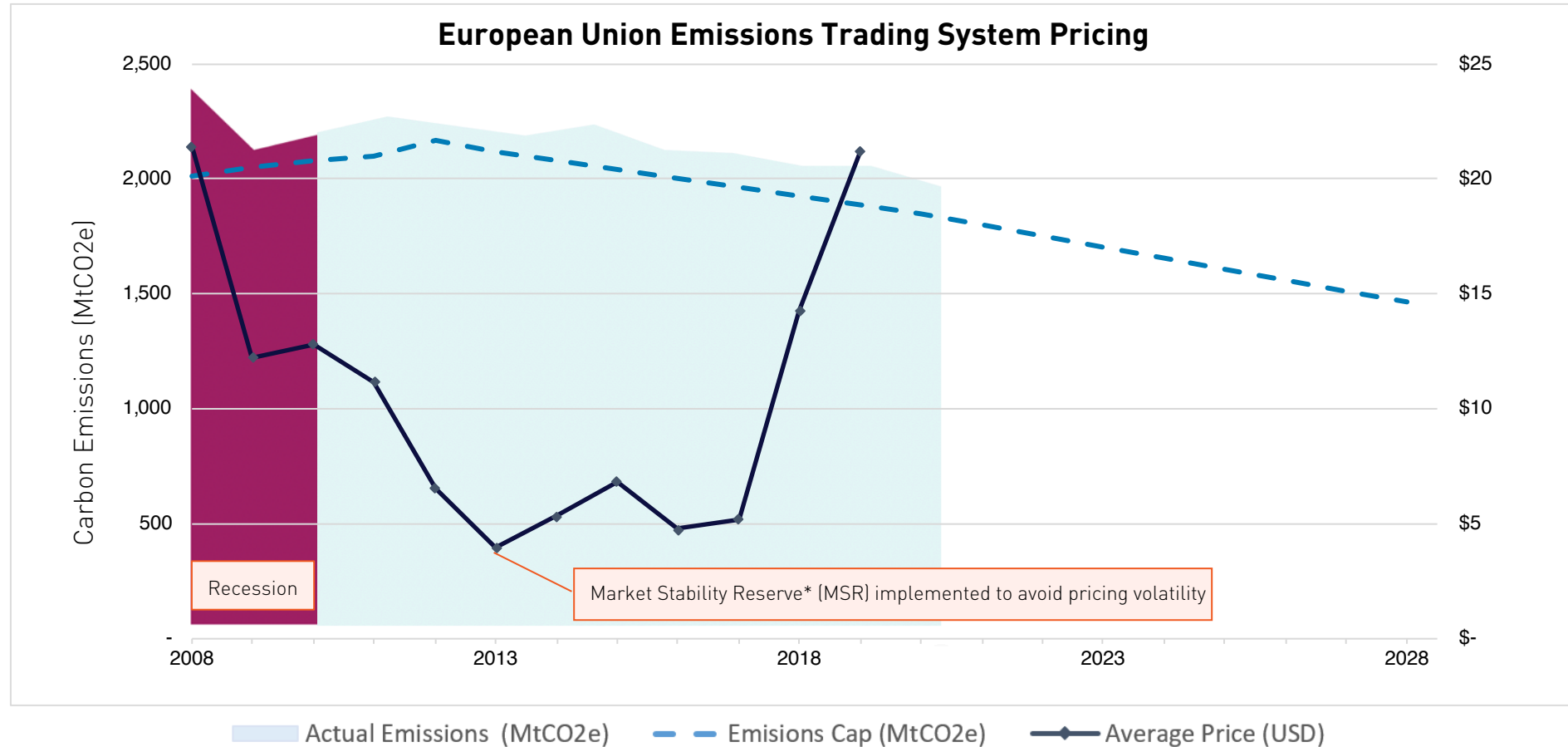
## Why are we emitting excessive amounts of greenhouse gas (GHGs) and CO<sub>2</sub>?

### Greenhouse gases and carbon emissions are negative externalities:

- Negative externalities are the cost incurred by a third party as an unintended outcome of an economic transaction.
- Without regulation around GHG's and carbon emissions, there is no incentive to decrease pollution despite the negative impact on society.
- In global warming the environment is the “third party” and the “economic transaction” is industry at large, releasing unlimited emissions without incurring any cost for degrading the environment.

## Carbon market overview: European Union Emissions Trading System (EUA)

- Emission reduction targets should continue to have a significant impact on prices across components of the carbon index
- Should regulations progressively become tighter, upward pricing pressure should occur from lower emissions limits and the carbon allowance price floor getting higher

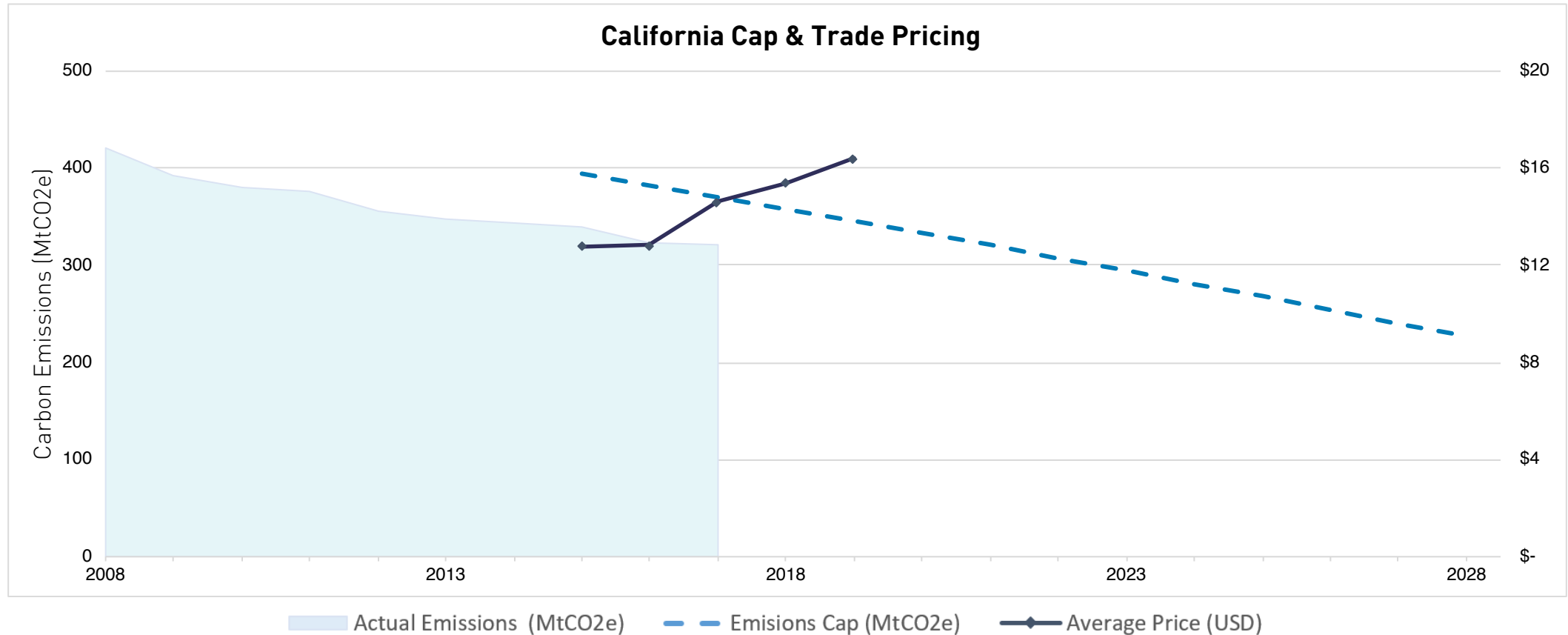


Source: IHS Markit, July 2019; European Environment Agency, July 2019; California Air Resources Board, July 2019; CO<sub>2</sub> Emissions from Electricity Generation and Imports in the Regional Greenhouse Gas Initiative: 2016 Monitoring Report, July 2019

\*See page 23 for definitions

## Carbon market overview: California Cap & Trade (CCA)

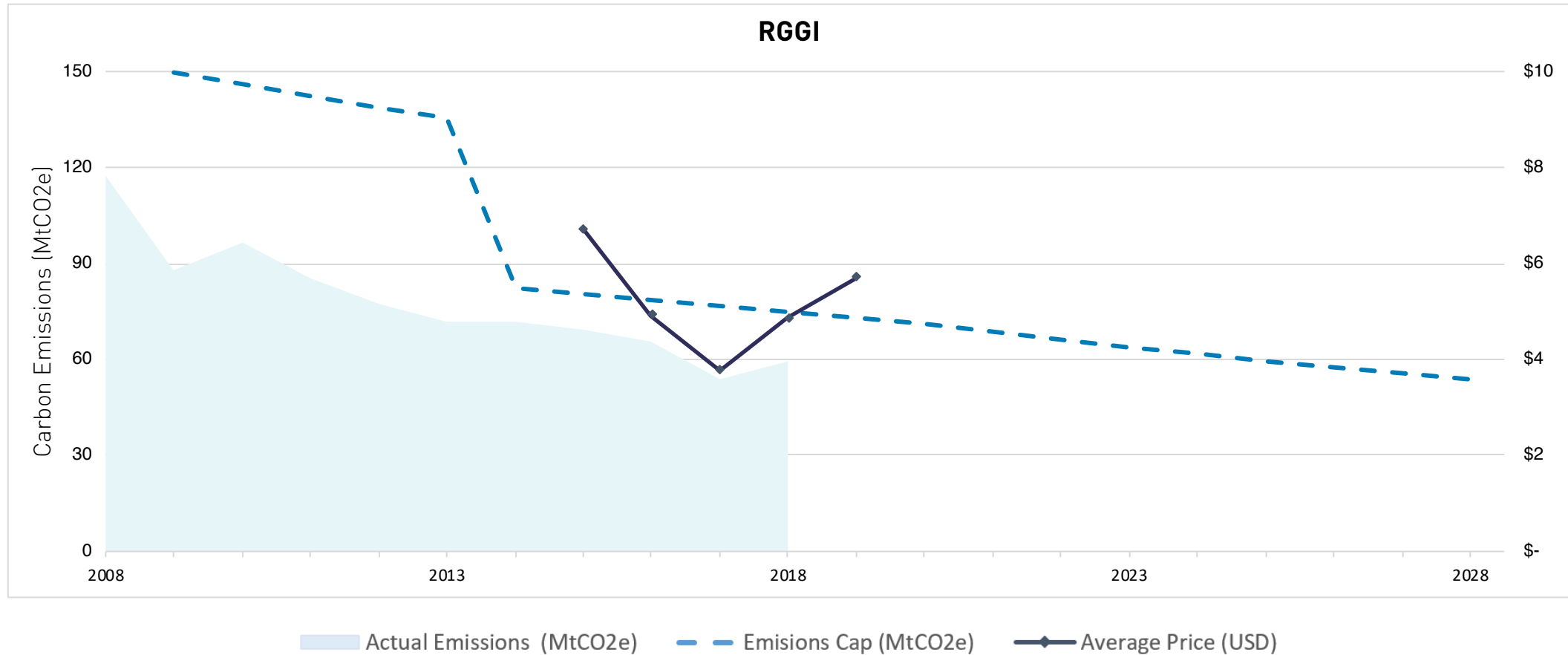
- A notable feature of the CCA market has been the considerable lack of downward volatility in price exhibited by its allowances over time.
- Liquidity has increased dramatically in the early months of 2019 as market makers and hedge funds have moved into the market, signaling increasing interest in carbon as an asset class.



Source: IHS Markit, July 2019; European Environment Agency, July 2019; California Air Resources Board, July 2019; CO<sub>2</sub> Emissions from Electricity Generation and Imports in the Regional Greenhouse Gas Initiative: 2016 Monitoring Report, July 2019

## Carbon market overview: Regional Greenhouse Gas Initiative (RGGI)

- Structural changes to the RGGI market, including the entrance of new states in the Northeast and a reduction in a surplus of outstanding allowances, have supported a strong uptick in the price of RGGI allowances since mid-2017.



Source: IHS Markit, July 2019; European Environment Agency, July 2019; California Air Resources Board, July 2019; CO<sub>2</sub> Emissions from Electricity Generation and Imports in the Regional Greenhouse Gas Initiative: 2016 Monitoring Report, July 2019



## Index Definitions

**S&P 500:** Standard & Poor's Index is a capitalization-weighted index of 500 stocks.

**Bloomberg Barclays US Aggregate Bond Index ("The Agg"):** A broad base, market capitalization-weighted bond market index representing intermediate term investment grade bonds traded in the United States. Inception date: January 1, 1986

**The S&P GSCI:** A composite index of commodities that measures the performance of the commodity market. Inception date: May 7, 2007

**MSCI US REIT Index (daily price return USD):** A free float-adjusted market capitalization weighted index that is comprised of equity Real Estate Investment Trusts (REITs). Inception date: June 20, 2005

**MSCI All Country World Index (Gross USD):** The MSCI All Country World Index is a market capitalization weighted index designed to provide a broad measure of equity-market performance throughout the world. Inception date: May 31, 1990

**LBMA Gold Price PM:** The global benchmark price for unallocated gold delivered, IBA operates electronic auctions for spot, unallocated loco London gold.

**Oil: S&P GSCI Crude Oil Index:** Provides a publicly available benchmark for investment performance in the crude oil market. Inception date: May 1, 1991

## Other Definitions.

**Intercontinental Exchange (ICE):** The Intercontinental Exchange is an American company that owns exchanges for financial and commodity markets and operates 12 regulated exchanges and marketplaces.

**Sharpe ratio:** Used to help investors understand the return of an investment compared to its risk. Generally, the greater the value of the Sharpe ratio, the more attractive the risk-adjusted return.

**Carbon allowances:** Top 3 carbon allowance markets by constituent trade volume. IHS Markit's Global Carbon Index is used through the index start date July 25, 2019. From 11/30/2016 to prior to the index start date, 60% and 5% were respectively assigned to EUA futures prices (current year and next year December vintages) using Intercontinental Exchange daily published settlement prices, 20% and 5% were respectively assigned to CCA futures (current year and next year December vintages) using IHS Markit OPIS's daily Carbon Market Report published prices, and 10% was assigned to RGGI (current year December vintage) using IHS Markit OPIS's daily Carbon Market Report published prices. Prior to 11/30/2016, 60% and 5% respectively were assigned to EUA futures prices (current year and next year December vintages) using Intercontinental Exchange daily published settlement prices and 35% was respectively assigned to CCA futures (current year December vintage) using IHS Markit OPIS's daily Carbon Market Report published prices. For the two ranges developed prior to the index start date, Intercontinental Exchange and IHS Markit OPIS's Daily Carbon Market Report publish daily pricing for each contract vintage for all relevant days when the futures trade.

**Market Stability Reserve:** The Market Stability Reserve (MSR) holds allowances out of the auction when excess volumes are available on the market and reinjects them when there is low circulation. There is no predetermined price floor or ceiling however this mechanism, creates stability in the market and improves resilience to future spikes in supply/demand.

## Important Notes

**Carefully consider the Funds' investment objectives, risk factors, charges and expenses before investing. This and additional information can be found in the Funds' full and summary prospectus, which may be obtained by visiting [www.kfafunds.com](http://www.kfafunds.com). Read the prospectus carefully before investing.**

Investing involves risk, including possible loss of principal. There can be no assurance that a Fund will achieve its stated objectives. ETF shares are not redeemable with the issuing fund other than in large Creation Unit aggregations. Instead, investors must buy or sell ETF Shares in the secondary market with the assistance of a stockbroker. In doing so, the investor may incur brokerage commissions and may pay more than net asset value when buying and receive less than net asset value when selling. The NAV of the Fund's shares is calculated each day the national securities exchanges are open for trading as of the close of regular trading on the New York Stock Exchange ("NYSE"), normally 4:00 p.m. Eastern time (the "NAV Calculation Time"). Shares are bought and sold at market price (closing price) not NAV. Market price returns are based on the midpoint of the bid/ask spread at 4:00 pm Eastern Time (when NAV is normally determined).

There can be no assurance that a Fund will achieve its stated objectives. There is no assurance that cap and trade regimes will continue to exist, or that they will prove to be an effective method of reduction in GHG emissions. Changes in U.S. law and related regulations may impact how the way the Fund operates, increase Fund costs and/or change the competitive landscape.

The Fund invests through a subsidiary, and is indirectly exposed to the risks associated with the Subsidiary's investments. Since the Subsidiary is organized under the law of the Cayman Islands and is not registered with the SEC under the Investment Company Act of 1940, as such the Fund will not receive all of the protections offered to shareholders of registered investment companies.

The value of a commodity-linked derivative investment typically is based upon the price movements of a physical commodity and may be affected by changes in overall market movements, volatility of the Index, changes in interest rates, or factors affecting a particular industry or commodity.

The Fund and the Subsidiary will be considered commodity pools upon commencement of operations, and each will be subject to regulation under the Commodity Exchange Act and CFTC rules. Commodity pools are subject to additional laws, regulations and enforcement policies, which may increase compliance costs and may affect the operations and performance of the Fund and the Subsidiary. Futures and other contracts may have to be liquidated at disadvantageous times or prices to prevent the Fund from exceeding any applicable position limits established by the CFTC. Additionally, the Fund's investments are subject to liquidity risk, which exists when an investment is or becomes difficult to purchase or sell at a reasonable time and price.

Investments in non-U.S. instruments may involve risk of loss due to foreign currency fluctuations and political or economic instability. The Fund's assets are expected to be concentrated in an industry or group of industries to the extent that the Index concentrates in a particular industry or group of industries. The Fund is non-diversified.

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