Q+A

TD Global Carbon Credit Index ETF

A Unique Investment Opportunity

At a glance

- The TD Global Carbon Credit Index ETF (Ticker: TCBN, or the "Fund") tracks the performance of the Solactive Global Carbon Credit TR CAD Hedged Index (the "Index") which measures the investment return of global cap-and-trade carbon credit emission credits
- The Fund seeks to track a carbon credit index and is designed for medium-to long-term investors looking to financially participate in the energy transition economy and to help mitigate against the negative investment portfolio impacts of rising carbon prices
- The Fund will initially provide exposure to carbon credits that trade on the European Union's Emissions Trading System (EU ETS) with the ability to expand its exposure to other global Emissions Trading Systems as those markets mature

Q: Why is TD Asset Management Inc. (TDAM) launching this Fund?

As investors increasingly look to mitigate climate risks within their portfolios, the TD Global Carbon Credit Index ETF (TCBN) offers investors a unique investment opportunity that benefits from the increase in the price of carbon, which is expected to occur with the proliferation of carbon pricing programs and as markets inherently transition from traditional carbon-emitting fossil fuels to more sustainable energy sources. The carbon credit market has quickly become one of the fastest growing markets in the world and is anticipated to continue to expand in the future.

Through TCBN, investors can gain exposure to an alternative asset class that has demonstrated a historically low correlation to traditional asset classes such as fixed income (-0.215), equity (0.182), oil (0.311), and gold (-0.158)[1], allowing for potential portfolio diversification and the potential for growth.

Investment

[1] Source: Bloomberg Finance L.P., as of December 31, 2021. Table is showing the correlation analysis of the last 10 years using monthly return data.

Q: What is the investment approach of the Fund?

Currently, TCBN seeks to track the performance of Solactive Global Carbon Credit TR CAD Hedged Index, an Index calculated by Solactive AG which intends to track the prices of global cap-and-trade carbon emission allocation markets that are accessible via futures contracts. Futures contracts linked to the value of carbon credits or carbon allowances are known as carbon credit futures. TCBN will invest directly in carbon credit futures and/or use swap agreements, to obtain economic exposure to carbon credits.

TCBN will initially obtain exposure to carbon credits that trade on the European Union Emissions Trading System (EU ETS) and in the future, may provide exposure based on carbon credits that trade on other global emissions trading systems (ETS) as they develop and offer sufficient liquidity to be included in the Index. TCBN does not intend to use leverage but may incur leverage from time to time based on its currency hedging strategy.

Q: What is the Fund's Management Fee?

At 0.65% MER, TCBN currently has one of the lowest management fees for this asset class in North America.

Q: What is the risk rating of the Fund?

The Fund is currently rated high-risk based on the volatility of the underlying asset.

Q: Who should invest in the Fund?

The Fund is designed for medium-term to long-term investors who are comfortable with some short-term volatility and want to financially participate in the energy transition economy while seeking to help mitigate against the negative impacts of rising carbon prices within their portfolio through exposure to publicly listed **carbon credits >.**

Q: Does the Fund expect to hedge foreign currency exposures?

Yes, the Fund tracks an Index that hedges currency exposure back to CAD on a one-month basis via foreign exchange forward contracts.

Q: What is the best time to trade shares of TCBN?

Shares of TCBN will be listed on the TSX and will be available to trade during normal trading hours (between 9:30 a.m. and 4:00 p.m. ET) on various Canadian markets, every day that Canadian markets are open for trading. However, it is important to understand where the underlying securities will be trading and at what time. TCBN will initially provide exposure to EU ETS European Union Allowance (EUA) carbon credit futures which trade on the Intercontinental Exchange (the "ICE").

EUA Futures will typically be traded on ICE between 2 a.m. and 12 p.m. ET. Therefore, TCBN will be most liquid when the two markets' trading time overlaps between 9:30 a.m. and 12:00 p.m. ET. Investors will still be able to trade shares of TCBN between 12 p.m. - 4 p.m. ET, however since the underlying market will be closed, it is expected that the bid-ask spread may widen during those hours.

Q: How big is the global carbon credit market?

As of 2021, **emissions trading systems >** operate in 38 countries covering over 40% of global gross domestic product (GDP). The three major ETS markets globally are the EU ETS, California/Quebec, and U.S. Eastern States (RGGI). Additionally, the carbon credit market has seen incredible growth in both trading volumes and carbon prices, with a current market size of US$851 Billion[2].

Q: What is carbon pricing?

Carbon pricing is a means of capturing the external costs of carbon dioxide (CO_2) and greenhouse gas (GHG) emissions and tying them back to their source via a charge. Putting a price on these emissions fundamentally shifts the economic incentives by making it more expensive to pollute.

As the **cost of carbon >** goes up, emitters have a clear signal to make operational and investment decisions that reduce their emissions. Carbon pricing is widely believed to be an efficient and effective tool to reduce GHG emissions.

There are two primary ways that governments can implement such pricing:

- Emission Trading Systems (ETS) – commonly referred to as "cap-and-trade"; or,
- Carbon Tax – Directly taxing emitters of CO_2 and other GHGs

TCBN will invest in markets that are involved in cap-and-trade programs.

Q: What is a Carbon Credit?

A carbon credit is a tradeable permit or certificate issued through a regulatory organization allowing the holder to emit CO_2 or other GHGs. One carbon credit typically represents the right to emit one tonne of CO_2 or GHGs – it can also be considered an allowance. Carbon credits have emerged as an important alternative asset class as global leaders have sought a meaningful way to reduce carbon emissions in an effective, market-friendly fashion.

Q: What is an Emissions Trading System ("ETS")?

In an Emissions Trading System – commonly referred to as "cap-and-trade" system – a government entity sets a policy objective to reduce emissions in their jurisdiction by establishing a regulatory authority that sets yearly targets for major carbon emitting companies.

One of the benefits of the ETS is that it allows the market to determine the price of carbon, as opposed to a tax which is known ahead of time and can be budgeted for. In the ETS the price of carbon will be a function of supply and demand, with the supply set to decrease over time. In the case of the EUA ETS market there are also large fines in place if companies emit more carbon then they have credits for, and in addition to the fine, they still have to buy credits, keeping demand elevated.

[2] Source: Refinitiv – An LSEG Business. "Carbon Markets Year in Review 2021".

Q: Why is an ETS also referred to as Cap-and-Trade?

ETS' operate under the cap-and-trade principle. Within an ETS, regulators set a cap on the total supply of carbon allowances that can be emitted by participants. The cap is reduced over time to ensure that emissions decline – typically based on emissions targets. To cover their carbon output, participants are required to redeem enough carbon credits (allowances) to cover their emissions or face heavy fines. A company (participant) regulated under a region's ETS can either obtain carbon credits from the regulator, purchase credits through a secondary market or reduce its carbon emissions. If a company has a surplus of carbon credits, they can be held for future use or traded on the secondary market at market price.

Q: What companies are typically monitored under an ETS?

Some of the companies and industries monitored by cap-and-trade systems at this time include:

- Fossil fuels such as coal, oil, and natural gas
- Power plants and utilities
- Manufacturing
- Aviation
- Pulp and Paper
- Agriculture
- Transportation

Q: Why does TCBN only focus on the European Union ETS?

The EU ETS is a cornerstone of the European Union's policy to combat climate change and a key tool for reducing emissions in regulated sectors. It is the world's first major carbon market and remains the largest one – currently, 77% of the global carbon credit trading volumes come from the EUA market. TCBN currently focuses only on the EUA market because it offers sufficient liquidity to be included in the Index. In the future, Solactive, will conduct a semi-annual review of other global cap-and-trade ETS' to potentially include these markets in the Index based on liquidity and transparency.

Q: Are Carbon Credits and Carbon Offsets the same?

No. Carbon credits represent a permit or the right to emit a specified amount of CO_2 or GHG per credit, while carbon offsets broadly refer to a reduction in GHG emissions or an increase in carbon storage that is used to compensate for GHGs emitted. For example, if a company emitted one tonne of CO_2, they would plant a sufficient number of trees that would be estimated to "offset" one tonne of CO_2. One concern is that these offset programs are not typically regulated, and most importantly, there is no limit to how much carbon can be emitted.

The benefit of Carbon Credits vs. Carbon Offsets is that within the cap-and-trade systems, the supply of carbon credits typically decreases every year, limiting the total amount of allowable carbon emissions.

Q: What drives the price of carbon credits?

The supply and demand of carbon credits, like other securities, is the main driver of the market price. What is interesting about carbon credits, specifically in the EUA, is that the supply is set to decrease on a yearly basis to help achieve carbon emission targets. If we assume the demand will be relatively constant and supply is decreasing, this is a tailwind for a rising carbon credits price.

Supply	Demand
Cap on allowable emissions	Energy prices
Carbon offsetting	Business activity
Technology based emission removal	Innovation and technology
Credits carried forward from previous periods	Weather conditions

Q: What is the cost for carbon credit non-compliance?

After each compliance period - typically 1 year - regulated companies must surrender sufficient carbon credits to offset their emissions. Companies unable to offset their emission can face heavy fines - in the EU, these fines are currently €100/tonne in addition to surrendering the equivalent amount of missing allowances. As at the end of 2021, the EU ETS was trading at approximately €75/tonne.

Q: Why is TCBN not considered an ESG investment?

While the objective of carbon credits is to encourage the reduction of carbon emissions in each respective jurisdiction, investment in carbon credit futures is generally viewed as being an investment view on the price appreciation potential of carbon credits over time, since the carbon credits in the ETF are not retired but rather TCBN rolls its investment in the current year's credits into the next year's credits.

TCBN invests entirely in a single commodity that is not considered to have any environmental, social or governance aspects. The trading of carbon credit futures alone does not result in physical reduction of carbon emissions. At the same time, one might consider that investments in futures may impact the prevailing price of the carbon credits, which can potentially act as a cost deterrent for companies that may need to buy credits to cover emissions over their allocated emissions. Therefore, notwithstanding some potentially positive outcomes of investing in carbon credits on carbon emissions and the objective of carbon credits more generally, TCBN is not categorized as an ESG fund.

carbon credit

Q: Who are the portfolio managers of the Fund?

The lead portfolio manager is Michael Craig and the co-portfolio manager is Hussein Allidina.

Michael Craig, CFA

Managing Director, Head of the Asset Allocation and Derivatives Team,
TD Asset Management Inc.

Michael is Head of the Asset Allocation and Derivatives Team. He serves as a Portfolio Manager for all fund of fund solutions at the firm. He previously gained experience as a Portfolio Manager at an alternative asset management firm responsible for unconstrained fixed income mandates. Michael holds a B. Comm. from the University of British Columbia and an M.A. from Simon Fraser University. He is also a member of the TD Wealth Asset Allocation Committee.

Re-joined the firm: 2015 | Began career: 2000

Hussein Allidina, CFA

Managing Director, Head of Commodities,
TD Asset Management Inc.

As Head of Commodities, Hussein leads commodity and inflation strategies within the Asset Allocation Team and provides expertise for concerns relating to commodity markets. He has extensive experience in commodities, having served as Director responsible for commodity value-add and inflation-sensitive commodity mandates at a major Canadian pension plan, and as the Global Head of Commodity Research at a major global investment bank. Hussein holds a B.A. with Honours in Economics from the University of Western Ontario.

Joined the firm: 2021 | Began career: 2002

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