**Horizons ReSolve Adaptive Asset Allocation ETF**

**Adaptive Asset Allocation**
Adaptive Asset Allocation is a globally diversified strategy that combines advanced diversification, systematic long/short global macro and dynamic tail protection to provide investors with an all-weather investment solution.

**ETF Snapshot**

- **Name:** Horizons ReSolve Adaptive Asset Allocation ETF
- **Inception Date:** July 30, 2020
- **Ticker:** HRAA
- **Management Fee:** 0.85% (Plus applicable sales tax)
- **Performance Fee:** 15% over high water mark and an annualized return of 3% (Please see the prospectus for more information)
- **Investment Manager:** Horizons ETFs Management (Canada) Inc.
- **Sub-Advisor:** ReSolve Asset Management SEZC (Cayman)
- **Currency:** CAD
- **Eligibility:** All Registered and Non-registered Investment Accounts
Adaptive Asset Allocation
The Horizons ReSolve Adaptive Asset Allocation ETF (“HRAA” or “the “ETF”) is an alternative fund designed to seek long-term capital appreciation by investing, directly or indirectly, in major global asset classes including, but not limited to equity indices, fixed income indices, interest rates, commodities, and currencies. The ETF provides exposure to these asset classes by investing in derivative instruments that may include futures contracts, forward agreements, and securities.

Horizons ReSolve Adaptive Asset Allocation ETF (HRAA) invests in a globally diversified portfolio that seeks to generate positive returns while targeting an average annualized volatility level of approximately 8%, with a very low correlation to the broader equity and fixed income markets.

The ETF's sub-advisor, ReSolve Asset Management SEZC (Cayman), (the “Sub-Advisor”), seeks to maximize diversification based on regularly updated estimates of volatility and correlations.

To complement the globally diversified portfolio, ReSolve employs machine learning tools to emphasize markets with a variety of characteristics. This includes total return momentum, trends, seasonal patterns, carry measures (relative yield differential), mean reversion, volatility surface, and sentiment, among others. HRAA can be long or short equity, bond, commodities, currencies, volatility indices, and other markets. The portfolio may be levered by as much as three times (3x).

Diversified Risk Balance
Many investors understand the benefits of diversification without truly appreciating how it is achieved. While a portfolio may be widely diversified across several asset classes, its risk profile might be highly concentrated.

HRAA uses Risk Parity, a properly diverse and balanced portfolio methodology that is designed to weather any economic storm. This approach seeks to ensure that each asset class contributes an equal amount of risk to the portfolio. It prioritizes diversity and balance to hedge exposures to the primary risks that drive capital markets: unexpected inflation and growth shocks.

All-Terrain Approach Designed to Thrive Across Most Market Environments
**Systematic Global Macro Dynamic Tail Protection**
While diversification and risk balance across asset classes, and a strong understanding of the data relationships that forecast returns are the first and second lines of defense against abrupt market dislocations, the Sub-Advisor rounds out the ETF’s risk management with a strategy – also derived through machine learning – that is designed to produce outsized returns during acute bouts of market volatility. ReSolve applies a proprietary dynamic volatility program that can go modestly long and short volatility futures to help protect against very large and rapid market selloffs, instances in which a long volatility exposure may be one of a few profitable alternatives.

**Machine Learning**
HRAA employs proprietary quantitative models (based on advanced machine learning techniques) to emphasize or de-emphasize market exposures in response to complex relationships and patterns that emerge from a variety of data sources. These data sources include many familiar metrics like momentum, trend, carry, and value, as well as new sources of information such as the volatility surface, dealer gamma, dark index flows, cross-market information, and other alternative data sources.
**Complementary Characteristics**

The charts below show the performance of three unique investment styles, represented by the S&P Risk Parity Index - 8% Target Volatility, HFRI Macro Systematic Diversified Index, CBOE Eurekahedge Long Volatility Hedge Fund Index. Prospective investors should note that ReSolve did not manage any account represented in these indices and that the charts are presented for illustrative purposes only to convey the performance of each style during different periods in contrast to equities, represented by the MSCI All Country World Index. Prospective investors should also note that the indices’ performances do not represent the performance of HRAA.

**Systematic Global Macro vs Equities (1990 - Q3 2022)**

![Chart showing the performance of MSCI All Country World Index and HFRI Macro Systematic Diversified Index from 1990 to Q3 2022.]

- MSCI All Country World Index: $39,653
- HFRI Macro Systematic Diversified Index: $151,381

**Risk Parity vs Equities (2004 - Q3 2022)**

![Chart showing the performance of MSCI All Country World Index and S&P Risk Parity Index - 8% Target Volatility from 2004 to Q3 2022.]

- MSCI All Country World Index: $21,687
- S&P Risk Parity Index - 8% Target Volatility: $35,310

**Long Volatility vs Equities (2005 - Q3 2022)**

![Chart showing the performance of MSCI All Country World Index and CBOE Eurekahedge Long Volatility Hedge Fund Index from 2005 to Q3 2022.]

- MSCI All Country World Index: $19,449
- CBOE Eurekahedge Long Volatility Hedge Fund Index: $20,995

# Investment Universe Available to Trade

## Bonds
- Canadian 10 Year Bond
- French 10 Year Bond
- German 10 Year Bund
- German 30 Year Buxl
- UK 10 Year Gilt
- US 5 Year Treasury
- US 10 Year Treasury
- US 30 Year Treasury

## Energy
- Brent Crude
- Carbon Emissions
- Crude Oil (WTI)
- Gas Oil
- Heating Oil
- Natural Gas
- RBOB Gasoline

## Equities
- Aussie 200
- Canadian S&P/TSX 60
- Dow Jones Industrial Average
- Dutch AEX
- Euro STOXX 50
- French CAC 40
- German DAX
- Hong Kong HSI
- Italian FTSE/MIB
- Japanese Nikkei 225
- Japanese Topix Nasdaq
- Russell 2000
- S&P 500
- Spanish IBEX
- UK FTSE

## Volatility
- VIX
- VSTOXX

## Foreign Exchange
- Australian Dollar
- British Pound
- Canadian Dollar
- Euro
- Japanese Yen
- New Zealand Dollar
- Swiss Franc

## Grains
- Bean Oil
- Corn
- KC Wheat
- Mill Wheat
- Soybeans
- Soy Meal
- Wheat

## Livestock
- Feeder Cattle
- Live Cattle
- Hogs

## Metal
- Copper
- Gold
- Platinum
- Silver

## Softs
- Cocoa
- Coffee
- Cotton
- Sugar
Horizons ReSolve Adaptive Asset Allocation ETF

Key Features

- **Globally Diversified:** Provides exposure to a global portfolio of equities, fixed income, and commodities

- **A Systematic Process:** HRAA uses a systematic strategy that combines prudent risk management and machine learning to formulate forward-looking views for key risk factors. This seeks to dynamically determine potentially favourable asset allocations under most market conditions. These factors include, but are not limited to seasonality, momentum, fundamentals, and counter-trend and carry

- **Risk Management:** HRAA uses a quantitative process to dynamically measure the sensitivities of major asset classes to a set of common risk factors over changing market conditions. By considering asset allocation from the perspective of systematic risks, it aims to keep the portfolio’s target level of volatility below a certain threshold and reduce the overall correlation to the broader equity and fixed income markets

- **Experienced Sub-Advisor:** Over 20 years of experience in institutional portfolio management techniques focused on global asset allocation

- **Tax-Efficient:** Net interest income from the settlement of any derivatives in the ETF is reflected in HRAA’s net asset value (“NAV”), but is not expected to be paid out to the shareholder

**Corporate Class**

HRAA is a class of shares in a corporate class structure that allows the ETF to deliver its returns in a tax-efficient manner. Within a Canadian mutual fund corporation structure, only capital gains and Canadian dividends can be distributed to investors. From a tax perspective, any income and foreign dividends generated within any one class of the corporation can potentially be offset by losses and expenses incurred in other classes, which generally makes the corporate class structure more tax-efficient than a traditional mutual fund trust. Due to this, investors in HRAA are not expected to receive any taxable distributions from the ETF.

This makes the ETF advantageous, particularly if its shares are held in a taxable account, where tax on interest income could potentially be in excess of 50%, depending on the marginal tax rate of the investor. With this ETF structure, investors can potentially defer incurring a tax liability until they sell the shares of the ETF, at which point they may realize a capital gain or loss.
### 16 worst quarters for S&P/TSX 60 since 1990

<table>
<thead>
<tr>
<th>Period</th>
<th>Event</th>
<th>S&amp;P/TSX 60 Index</th>
<th>S&amp;P Risk Parity Index - 8% Volatility</th>
<th>HFRI Macro Systematic Diversified Index</th>
<th>CBOE Eurekahedge Long Volatility Hedge Fund Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4 2008</td>
<td>Credit Crisis - Lehman Bankruptcy</td>
<td>-22.8%</td>
<td>-8.0%</td>
<td>9.9%</td>
<td>15.0%</td>
</tr>
<tr>
<td>Q1 2020</td>
<td>COVID-19 Global Pandemic</td>
<td>-20.8%</td>
<td>-11.0%</td>
<td>-0.5%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Q3 2002</td>
<td>WorldCom Scandal</td>
<td>-17.0%</td>
<td>N/A</td>
<td>-0.6%</td>
<td>N/A</td>
</tr>
<tr>
<td>Q3 2001</td>
<td>Terrorist Attack on the U.S.</td>
<td>-15.7%</td>
<td>N/A</td>
<td>-3.9%</td>
<td>N/A</td>
</tr>
<tr>
<td>Q3 2011</td>
<td>European Sovereign Debt Crisis</td>
<td>-15.2%</td>
<td>1.0%</td>
<td>3.6%</td>
<td>12.0%</td>
</tr>
<tr>
<td>Q3 1990</td>
<td>Iraq Invades Kuwait</td>
<td>-14.5%</td>
<td>N/A</td>
<td>-0.7%</td>
<td>N/A</td>
</tr>
<tr>
<td>Q4 2018</td>
<td>Fed Governor Powell Overtightening</td>
<td>-14.2%</td>
<td>-4.0%</td>
<td>-3.1%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Q2 2022</td>
<td>Russia Ukraine War</td>
<td>-12.8%</td>
<td>-8.0%</td>
<td>7.6%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Q2 2010</td>
<td>Sovereign Debt Crisis</td>
<td>-11.4%</td>
<td>2.0%</td>
<td>-0.9%</td>
<td>11.0%</td>
</tr>
<tr>
<td>Q1 2009</td>
<td>Capitulation of the Great Financial Crisis</td>
<td>-10.9%</td>
<td>-4.0%</td>
<td>-2.7%</td>
<td>-6.0%</td>
</tr>
<tr>
<td>Q1 2001</td>
<td>Tech Crisis</td>
<td>-10.8%</td>
<td>N/A</td>
<td>-4.9%</td>
<td>N/A</td>
</tr>
<tr>
<td>Q3 1998</td>
<td>Russia Defaults on Debt</td>
<td>-9.9%</td>
<td>N/A</td>
<td>0.3%</td>
<td>N/A</td>
</tr>
<tr>
<td>Q1 2008</td>
<td>Credit Crisis - Commodity Prices Rally</td>
<td>-9.3%</td>
<td>3.0%</td>
<td>8.6%</td>
<td>20%</td>
</tr>
<tr>
<td>Q3 2008</td>
<td>Credit Crisis - Bank Bailout</td>
<td>-8.5%</td>
<td>-9.0%</td>
<td>-4.0%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Q4 2000</td>
<td>Dot-Com Bubble Bursts</td>
<td>-8.4%</td>
<td>N/A</td>
<td>1.6%</td>
<td>N/A</td>
</tr>
<tr>
<td>Q3 2015</td>
<td>China Induced Turmoil</td>
<td>-7.3%</td>
<td>-4.9%</td>
<td>0.3%</td>
<td>-3.0%</td>
</tr>
</tbody>
</table>

Source: Bloomberg, HFRI Indexes.
Inception Date of S&P/TSX 60 Index: December 31, 1998.
Inception Date of S&P Risk Parity Index - 8% Volatility: December 31, 2003.
Inception Date of HFRI Macro: Systematic Diversified Index: January 1, 1990.
Inception Date of CBOE Eurekahedge Long Volatility Hedge Fund Index: August 18, 2015.
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