

# HRAA



**HORIZONS** ETFs  
by Mirae Asset

## Horizons ReSolve Adaptive Asset Allocation ETF

## ETF Snapshot

### 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.



### 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

# Horizons ReSolve Adaptive Asset Allocation ETF

## All-Terrain Approach

### 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.

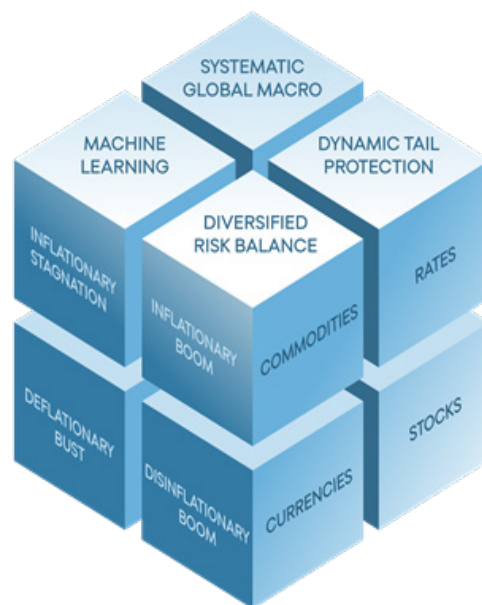
To complement the globally diversified portfolio, ReSolve employs machine learning tools to emphasize markets with a variety of characteristics. This includes total return momentum, trends, seasonal patterns, carry measures (relative yield differential), mean reversion, volatility surface, and sentiment, 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



# Horizons ReSolve Adaptive Asset Allocation ETF

## All-Terrain Approach

### **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.



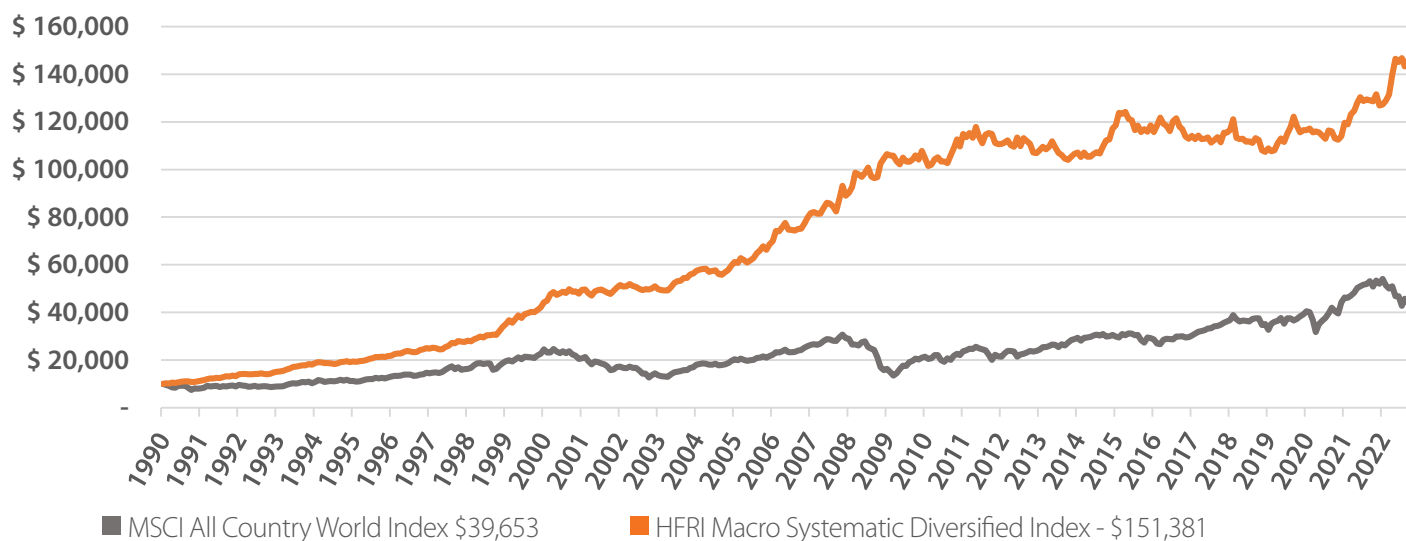
# Horizons ReResolve Adaptive Asset Allocation ETF

## Characteristics

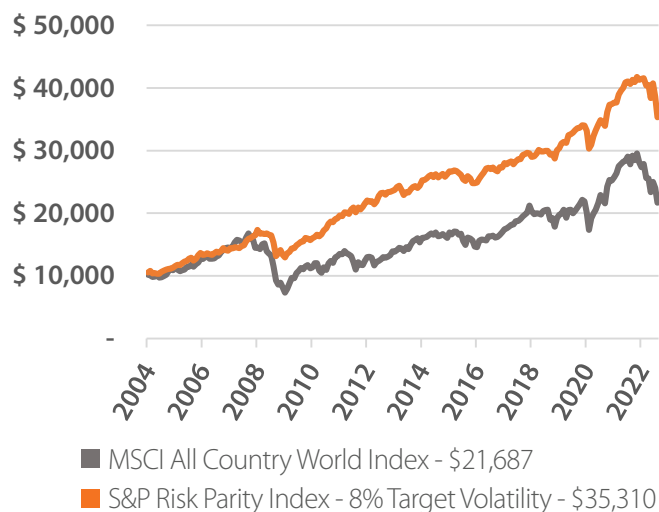
### Complementary Characteristics

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 ReResolve 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.

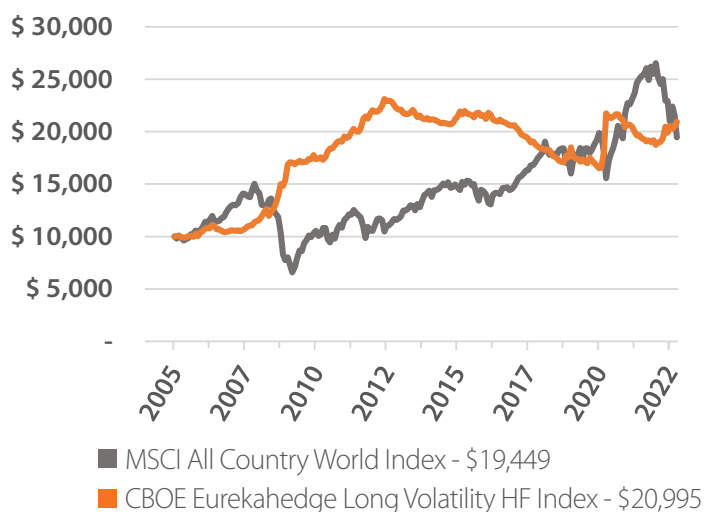
### Systematic Global Macro vs Equities (1990 - Q3 2022)



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



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



Source: Bloomberg, September 30th, 2022. S&P Risk Parity Index - 8% Target Volatility, MSCI All Country World Index (Ticker:ACWI), CBOE Eurekahedge Long Volatility Hedge Fund Index, HFRI Macro Systematic Diversified Index.

# Horizons ReSolve Adaptive Asset Allocation ETF

## Characteristics

### 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

### 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.

# Horizons ReSolve Adaptive Asset Allocation ETF

## 16 worst quarters for S&P/TSX 60 since 1990

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

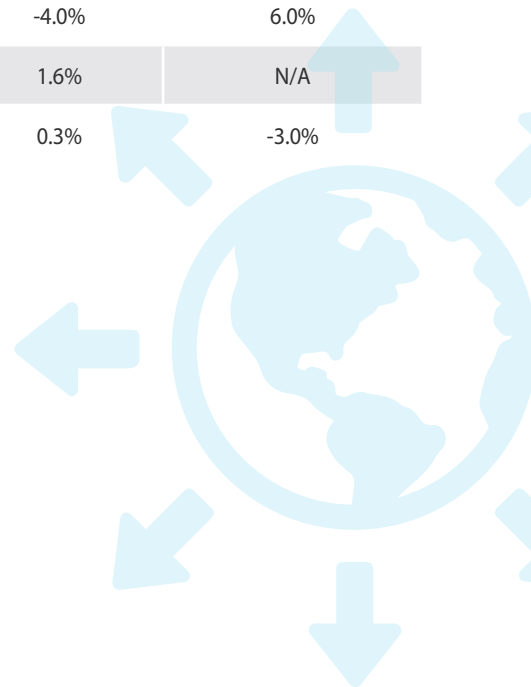
Source: Bloomberg, HFRI Indexes.

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.



# Horizons ReSolve Adaptive Asset Allocation ETF

To learn more, please visit [HorizonsETFs.com/HRAA](https://HorizonsETFs.com/HRAA)



Commissions, management fees (including performance fees) and expenses may all be associated with an investment in Horizons ReSolve Adaptive Asset Allocation ETF (“HRAA” or “the ETF”) managed by Horizons ETFs Management (Canada) Inc. The ETF is an alternative mutual fund within the meaning of National Instrument 81-102 Investment Funds, and is permitted to use strategies generally prohibited by conventional mutual funds and ETFs, such as borrowing cash, selling securities short, and employing leverage of up to 300%, amongst others. The use of these strategies may accelerate the risk associated with the ETF. The ETF is not guaranteed, its values change frequently and past performance may not be repeated. The prospectus contains important detailed information about the ETF. **Please read the prospectus and its risk disclosure before investing.**

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