

# **ENIGMA** - EASY TREND FOLLOWING

*SIMPLICITY, SAFETY AND OUTPERFORMANCE*



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CAPITAL  HEDGE

# AGENDA

- 1 Investment philosophy and objective
- 2 Core investment mechanics
- 3 Risk management
- 4 Hedging currency risk
- 5 Performance, return and risk stats
- 6 Conclusion

# 1.1

## Investment philosophy and objective

### Investing is simple but not easy:

- What to buy / sell: Asset selection
- When to buy / sell: Market timing
- What quantity: Position sizing

### Prime investment objective:

- enhance the likelihood of positive long term performance
- build the “smartest” portfolio, i.e. the portfolio with the highest expected real after costs total geometric absolute return for a given level of risk and time horizon in a particular investment currency

### What we need:

- rule-based investment approach for rigorous design, development and monitoring
- risk management focused on capital preservation and max drawdown control
- consistent returns and fast recovery from drawdowns
- effective and efficient position sizing for optimal portfolio construction

## 1.2

# Investment philosophy and objectives

### Three criteria for a true 'Total Portfolio Solution':

1. Simple: it provides a robust yet simple framework for portfolio management.
2. Safe: it reduces downside volatility by adapting quickly to all market conditions
3. Strong: it delivers significant historical outperformance vs. benchmark portfolios

## 1.3

# **ENIGMA - Easy Trend Following**

investment philosophy and objectives

### **Investing is Simple but not always Easy**

“**ENIGMA - Easy Trend Following**” does exactly what it says:

- ❑ simple to understand its underlying investment philosophy and easy to implement its investment logic.
- ❑ invests in no more than 20 liquid ETFs and avoids all complex, inverse or leveraged ETFs.
- ❑ manages a global ETF portfolio selected from our ShortList of 50+ ETFs that cover global equity, fixed income and alternatives markets,
- ❑ few but clear trading signals make the program’s implementation transparent, simple and effective.
- ❑ its very low trading frequency (on average only one portfolio adjustment per month) in a limited number of plain vanilla ETFs balances the simplicity of ‘buy & hold’ with the tactical benefits of a systematically managed portfolio.

## 1.4

# **ENIGMA - Easy Trend Following**

investment philosophy and objectives

### **Markets are Efficient but Momentum is Key**

- ❑ We believe that markets are efficient, but only over extended periods, not necessarily in the short term. Occasionally, investor behaviour becomes irrational and leads to excessive market prices.
- ❑ We specialize in identifying these periods in the market when human behaviour creates such mispricings.
- ❑ All investment decisions are driven by a systematic process searching for a **trend**, a timeless market inefficiency resulting from predictable emotional human behavior that never really changes.
- ❑ Over the last 20+ years academic studies have demonstrated momentum anomalies that exist in over 40 global markets across a dozen asset classes that can all be exploited by rule-based processes.
- ❑ Our mission with **ENIGMA - Easy Trend Following** is to use strict, rule-based, momentum-driven trading signals to build a balanced portfolio and outperform indexing while taking on less risk.

1.5

# **ENIGMA - Easy Trend Following**

investment philosophy and objectives

## **Trend Following sounds Easy but Requires Strict Discipline**

- ❑ To exploit these human created market inefficiencies two “non-natural” actions are required :
  - We buy asset classes that are showing strong momentum and we keep them until our rule-based quantitative process that is strictly based on mathematics, not emotion, tells us when to sell the positions.
  - When the assets we own are winning, we continue to hold on to these winning investments until our system tells us what and when to sell.
- ❑ To be able to expect large gains you have to accept many small losses: this is the real recipe for successful **ENIGMA - Easy Trend Following**. The small losses are offset by large gains. For the math to work and momentum investing to be profitable, we act solely by the system rules as we have designed, tested and traded them for many years. This requires strong discipline as it is also “non-natural”. But we know that the rules that we use will deliver the results that we are seeking.

# 2

## ENIGMA - Easy Trend Following

Core investment mechanics

### ENIGMA - Easy Trend Following uses Two Proprietary Algorithms

- ❑ To maximize the probability of positive investment performance the strategy uses state-of-the-art trading algorithms that time the allocation of capital between “risky assets” represented by 50+ ETFs that cover the global investment spectrum of equity, fixed income and alternatives
- ❑ To build a robust investment portfolio we use these two proprietary trading algorithms to generate all investment decisions that are to be made:
  - **SELECT**, the first algo, determines which ETFs will be selected from our ShortList of 50+ ETFs,
  - **SIZE**, the second algo, calculates the optimal initial allocation for every single ETF selected
- ❑ The clear, concise and complete trading signals guarantee a simple, yet effective implementation and this with only a very limited number of trades every year.



# 3

## ENIGMA - Easy Trend Following

### Risk Management

#### Risk-Control focused on Capital Preservation and Drawdown Management

- ❑ **ENIGMA - Easy Trend Following** is built around the most vital question facing *all investors, at all times*:  
*how much of a portfolio to invest in which instrument?*
- ❑ This essential element of the investment process, referred to as 'position sizing', is the only aspect that can be totally controlled by the investor.
- ❑ By calculating the optimal capital to be allocated to each element within the portfolio, position sizing also identifies the exact risk exposure for each individual portfolio component.
- ❑ Risk is defined and measured as drawdown and length of drawdown.
- ❑ Position sizing is done "anti-martingale" and reflects the volatility distribution of each ETF separately:  
behaving in a 'risk-averse' manner if the ETF is in a 'down mode' (negative momentum) or in a 'risk-seeking' manner if the ETF transitions to an 'up mode' (positive momentum)

# 4

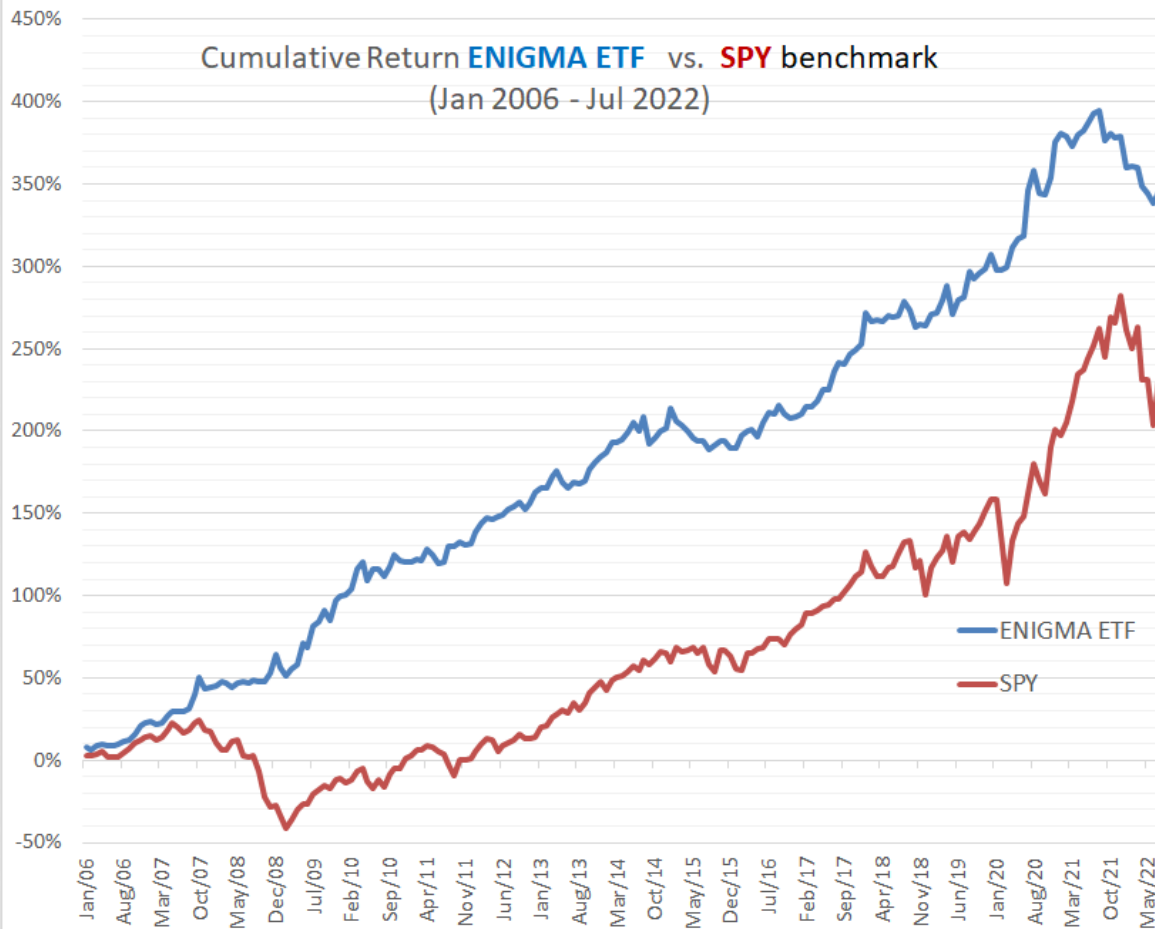
## *ENIGMA - Easy Trend Following*

### Hedging currency risk

#### **The impact of Currencies is Complex**

- ❑ Assembling the desired mix of domestic and international assets in the portfolio has never been easier thanks to the wide range of ETFs now available.
- ❑ While it might improve the portfolio's returns and lower volatility, it also introduces currency risk into the portfolio.
- ❑ Currency risk is determined solely by the currency in which the underlying assets are ultimately priced - not by the fund currency or the trading currency - and introduces opportunity and risk at the same time.
- ❑ Occasionally, currency hedged ETFs will be employed to reduce or remove currency risk from the portfolio when deemed necessary.
- ❑ The **ENIGMA - Easy Trend Following** program is available in USD but can be replicated in other currencies, e.g. EUR, by using the respective appropriate currency hedged ETFs.

## 5.1

Performance of *ENIGMA - Easy Trend Following (USD version)*[ENIGMA - Easy Trend Following \(USD\)](#)

The chart on the left shows the historical performance for the period from January 2006 to July 2022 for a prototype portfolio that implements the *ENIGMA - Easy Trend Following (USD)* program with monthly rebalancing.

For the period from Jan2006 to Dec2014 the historical performance is the result of a backtest (out-of-sample).

Real-time implementation of the *ENIGMA - Easy Trend Following* program only started in Jan2015.

The benchmark used for comparison purposes is SPY, the SPDR ETF (in USD) that tracks the S&P-500 index.

All performance results shown are gross trading results, i.e. before all transaction costs and other fees and also exclude dividends.

## 5.2

## Monthly return table (Jan 2006 – Jul 2022)

*ENIGMA - Easy Trend Following* (in USD)

ENIGMA ETF: Monthly Return % (JAN2006 - JUL2022)														
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	100% SPX
2006	8.3	-1.9	2.4	1.2	-1.4	0.1	0.7	1.9	0.9	2.9	4.3	1.4	22.44	13.62
2007	1.1	-1.3	0.7	2.9	2.3	0.0	-0.1	1.5	6.3	7.4	-4.6	0.7	17.65	3.53
2008	0.7	1.6	-0.1	-2.2	2.3	0.2	-0.2	0.8	-0.3	-0.4	3.6	7.6	14.10	-38.49
2009	-4.6	-3.8	2.9	1.7	8.3	-1.4	7.7	1.3	3.8	-2.9	6.4	1.2	21.43	23.45
2010	0.3	1.8	5.9	2.1	-5.0	3.1	0.1	-2.1	2.9	3.1	-1.4	-0.4	10.40	12.78
2011	-0.1	1.0	-0.4	2.9	-1.4	-2.1	0.4	4.3	-0.3	1.1	-0.6	0.2	4.94	-0.00
2012	3.1	2.2	1.5	-0.5	0.8	0.5	1.1	0.7	1.0	-1.5	1.4	2.5	13.48	13.41
2013	1.0	0.0	2.7	1.3	-2.5	-1.3	1.2	-0.2	0.5	2.8	1.6	1.2	8.50	29.60
2014	0.8	2.2	-0.0	0.5	1.5	2.0	-1.6	2.7	-5.1	1.1	1.4	0.6	6.00	11.39
2015	4.0	-2.4	-1.0	-1.1	-1.5	-0.6	0.0	-1.7	0.8	1.1	-0.2	-1.4	-4.07	-0.73
2016	0.0	2.6	0.9	0.4	-1.5	2.9	1.9	-0.1	1.5	-1.6	-0.7	0.2	6.58	9.54
2017	0.7	1.2	0.2	0.9	2.2	-0.0	3.4	1.6	-0.2	1.7	0.8	1.1	14.41	19.42
2018	5.3	-1.4	0.2	-0.2	0.9	-0.1	0.1	2.3	-1.3	-2.7	0.4	-0.3	3.02	-6.24
2019	2.1	0.2	2.1	2.2	-4.5	2.4	0.5	3.9	-0.9	0.9	0.5	2.2	11.95	28.88
2020	-2.3	-0.0	0.4	3.1	1.3	0.4	6.6	2.7	-3.1	-0.2	2.4	4.8	16.85	16.26
2021	1.1	-0.4	-1.3	1.4	0.6	0.9	1.3	0.4	-3.7	0.9	-0.6	0.2	0.69	26.89
2022	-3.9	0.1	-0.1	-2.4	-1.1	-1.4	1.7						-7.01	-13.34

**Notes:** Returns shown are gross returns before all fees and trading expenses.

For the period from Jan 2006 to Dec 2014 the historical performance shown is the result of a backtest (out-of-sample).

Real-time implementation of the *ENIGMA - Easy Trend Following* program only started in Jan 2015.

## 5.3

Return and risk statistics **ENIGMA** - *Easy Trend Following* (in USD)**ENIGMA ETF: Return / Risk Statistics (JAN2006 - JUL2022)**

Return Statistics		Risk Statistics		Reward/Risk Ratios	
Net annualized return	9.43%	Standard Dev	8.0%	Sharpe Ratio (SHR)	1.18
12-month rolling avg	9.9%	Downside Dev (0.0%)	4.7%	Sortino Ratio (SOR)	1.99
12-month rolling max	39.6%	Max. Drawdown (MDD)	11.5%	Capital Risk Ratio (CRR)	0.82
12-month rolling min	-10.0%	MDD Length (months)	19	Ulcer Performance Index (UPI)	2.13
Avg monthly return	0.8%	Underwater after 12 months	6.5%	Return Adj. for Drawdown (RAD)	8.2%
Avg winning month	1.9%	Avg losing month	-1.5%	Positive Months	64%
Best winning month	8.3%	Worst losing month	-5.1%	Gain-to-Pain Ratio (GPR)	2.59
Exp. CAGR P5	5.6%	Exp. STDEV P95	8.8%	CAGR P5 / STDEV P95	63%

*For the period from Jan 2006 to Dec 2014 the historical performance shown is the result of a backtest (out-of-sample).*

*Real-time implementation of the **ENIGMA** - *Easy Trend Following* program only started in Jan 2015.*

## 6.

# *ENIGMA - Easy Trend Following:* Conclusion

- With **SAFETY** and risk control as our prime objective we built a program that produces returns that historically **OUTPERFORM** those of common benchmarks, both in absolute and relative terms.
- We have tested the *ENIGMA – Easy Trend Following* program thoroughly over a lengthy and very volatile period (Jan06–Dec 2014) and have traded it in real-time from Jan2015 onwards.
- The program's low trading frequency in a very limited number of plain-vanilla ETFs balances the **SIMPLICITY** of buy-and-hold with the tactical benefits of a systematically managed global portfolio.
- The above framework provides a Total Portfolio Solution that can be implemented swiftly in an effective and efficient manner for both EUR and USD-based investors.

## App. 1

# CAPITAL HEDGE

- ❑ Completely independent investment research company
- ❑ Pioneer in R&D of systematic trading systems since 1990
- ❑ Building proprietary investment approaches that
  - ❑ deliver uncorrelated absolute returns
  - ❑ with robust risk management
- ❑ Dedicated to institutional clients, hedge funds, alternative investment managers and family offices



## App. 2

Luc Van Hof, Founder and CEO of  
CAPITAL  HEDGE



- ❑ Graduate degrees in finance, econometrics, and operational research from Brussels University (1981)
- ❑ Assistant treasurer of the European Commission (1985-1988) managing a € 2+ Bln portfolio in derivatives.
- ❑ Became Vice President equity derivatives at Bankers Trust and subsequently at Morgan Stanley (1988-1990).
- ❑ Established one of the first quant investment boutiques in Europe: Analytic Investment Management (A.I.M.) in 1990.
- ❑ Developed A.I.M to a \$300+ mln CTA, later acquired by Robeco Alternative Investments (Rabobank) in 2006-2010.
- ❑ Founded Capital Hedge in 2010, a research and consulting firm to institutional investors.
- ❑ Assistant professor of investment management at Brussels University and lecturer at the Belgian Bankers Academy (1986-2008), teaching Master Classes on hedge funds, algorithmic trading, derivatives and money management.



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