

# Millennium International, Ltd.

Primary: Multi-strategy

Secondary: Event Driven Multi-Strategy, Long Bias, Short Bias

BM1: S&P500

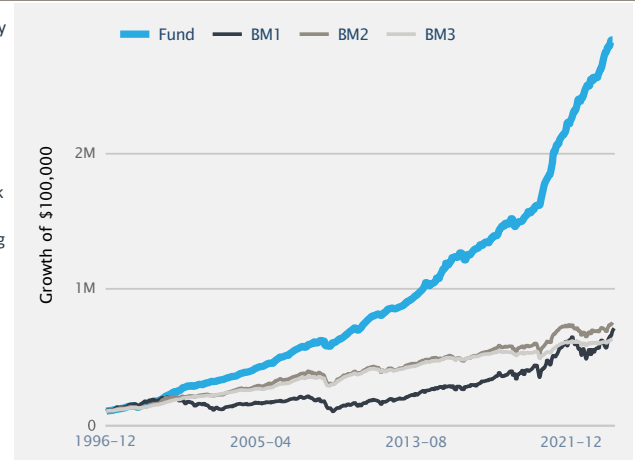
BM2: Barclay Hedge Fund Index

BM3: Barclay Multi Strategy Index

## Strategy Overview

Millennium International, Ltd ("International"), formed in December 1997, is a Cayman Islands exempted company and has a record of achieving significant returns from investing in a portfolio of diverse and substantially uncorrelated strategies while maintaining a tight risk management framework, significant liquidity and a high Sharpe ratio. International is a "feeder" fund that indirectly invests predominantly in Millennium Partners, L.P. ("MLP" or the "Firm"). Both International and MLP are managed by entities controlled by Israel A. Englander. To meet its objectives, MLP allocates capital across a diverse set of strategies and asset classes seeking the optimal mix of return and risk. Those strategies include Relative Value Fundamental Equity, Quantitative Strategies, Equity Arbitrage, Fixed Income Strategies, among others. Our aim is to achieve absolute returns with minimal risk rather than outperform a given benchmark or asset class. Disclaimer: Millennium International, Ltd ("International"), formed in December 1997, is a Cayman Islands exempted company and has a record of achieving significant returns from investing in a portfolio of diverse and substantially uncorrelated strategies while maintaining a tight risk management framework, significant liquidity and a high Sharpe ratio. International is a "feeder" fund that indirectly invests predominantly in Millennium Partners, L.P. ("MLP" or the "Firm"). Both International and MLP are managed by entities controlled by Israel A. Englander. To meet its objectives, MLP allocates capital across a diverse set of strategies and asset classes seeking the optimal mix of return and risk. Those strategies include Relative Value Fundamental Equity, Quantitative Strategies, Equity Arbitrage, Fixed Income Strategies, among others. Our aim is to achieve absolute returns with minimal risk rather than outperform a given benchmark or asset class.

## Growth of \$100,000



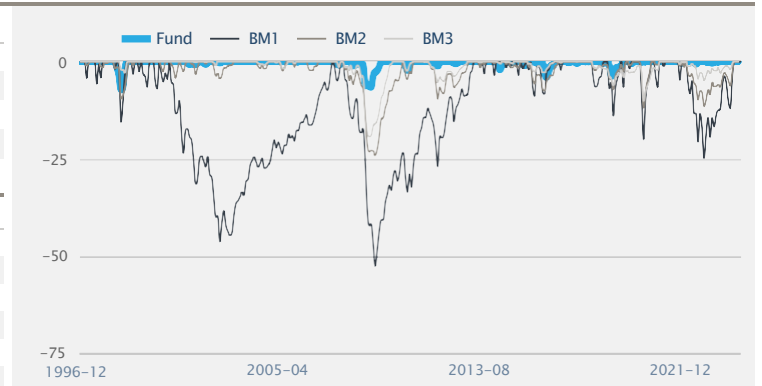
## Historical Performance, %

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	Ann. St.Dev.	Sharpe
2017	1.31	-0.27	1.10	0.37	0.43	-0.45	0.98	1.52	0.43	0.85	-0.04	0.70	7.13	2.14	3.33
2018	2.23	1.08	1.03	0.04	1.32	0.10	-0.44	1.47	1.16	-0.99	-2.80	0.71	4.92	4.67	1.05
2019	1.28	0.44	0.03	0.50	1.31	0.86	0.85	1.28	-0.50	1.18	0.17	1.45	9.20	2.13	4.32
2020	0.37	0.42	-0.12	3.01	3.00	2.99	1.60	1.18	1.13	1.01	2.63	5.38	24.93	5.41	4.6
2021	0.58	2.18	0.22	1.57	0.95	0.75	0.51	1.28	2.47	-0.41	1.08	1.20	13.07	2.78	4.7
2022	1.70	0.35	1.47	2.08	-0.64	1.02	0.44	1.63	1.12	0.65	-0.22	2.01	12.20	3.02	4.04
2023	-0.40	0.94	-0.14	0.06	1.09	1.12	0.87	1.93	1.67	0.62	1.21	0.23	9.57	2.48	3.86
2024	1.50	0.13											1.63	3.36	3.04

## Drawdown Analysis

Depth	Length	Recovery	Peak	Valley
-7.24	3	3	1998-05	1998-08
-6.61	6	5	2008-06	2008-12
-4.82	3	6	1992-08	1992-11
-4.05	3	5	2015-12	2016-03

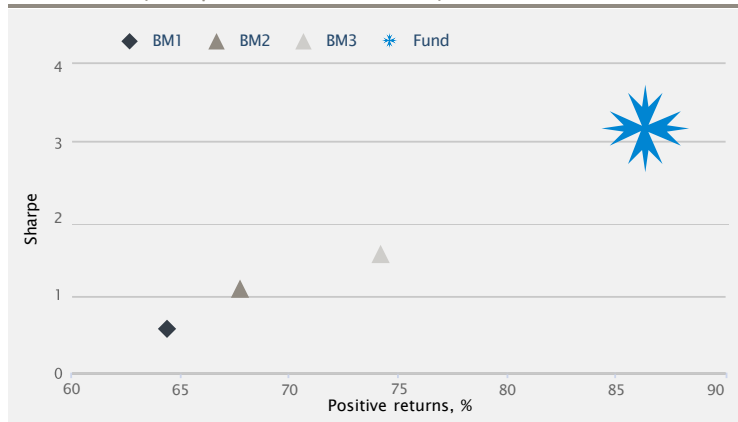
## Drawdowns



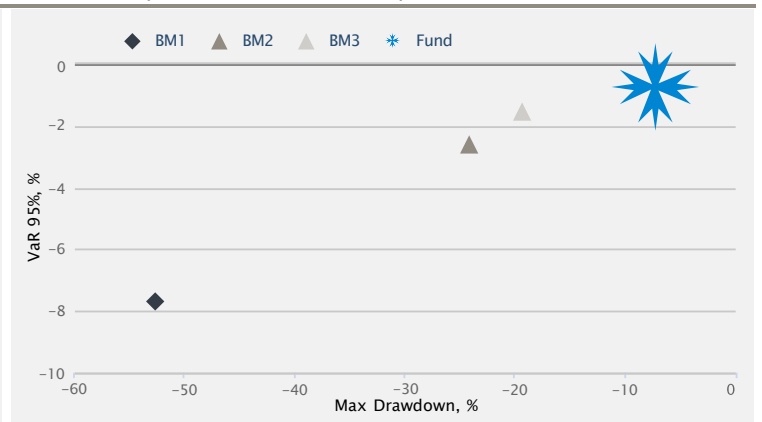
## Trailing Returns

	Fund	BM1	BM2	BM3
YTD	1.63	10.16	2.46	1.84
Last 6 mths	5.47	22.53	6.23	3.33
Last year	10.76	27.86	9.51	4.6
2 years	22.43	15.98	6.53	3.47
3 years	37.46	32.26	9.29	8.94
5 years	89.46	85.38	32.72	19.92

## Risk Profile (Sharpe - Positive Returns)



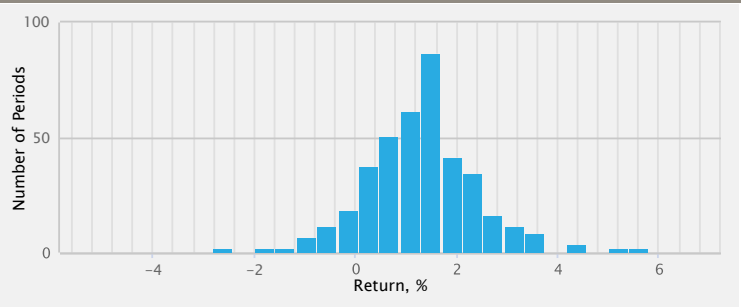
## Risk Profile (VaR - Max Drawdown)



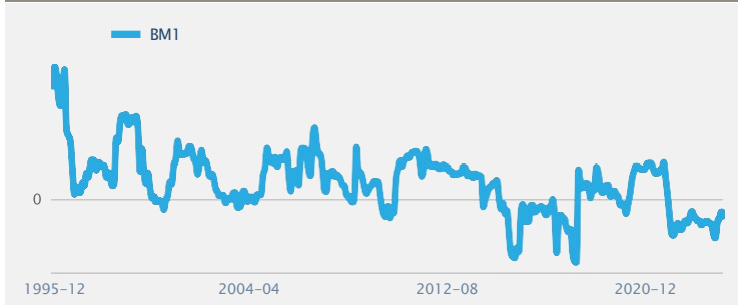
Risk-Return Statistics

	Fund	BM1	BM2	BM3
Positive, %	86.34	64.39	67.79	74.23
Annualized, %	13.38	8.69	7.71	7.00
VaR <sup>95</sup> , %	-0.74	-7.69	-2.61	-1.53
Ann. St.Dev., %	4.22	15.28	7.13	4.52
MaxDD, %	-7.24	-52.56	-24.09	-19.29
TUW	10.00	80.00	34.00	33.00
Sharpe Annual	3.17	0.57	1.08	1.55

Distribution of Monthly Returns

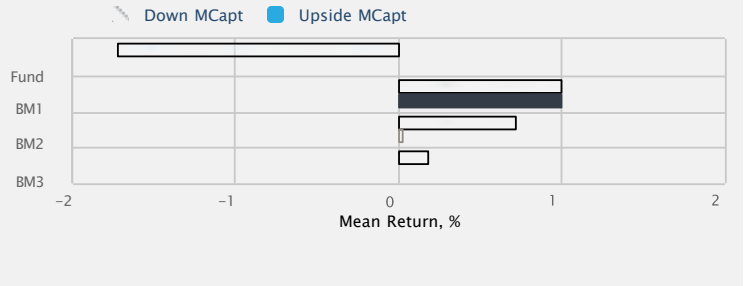


Rolling Beta

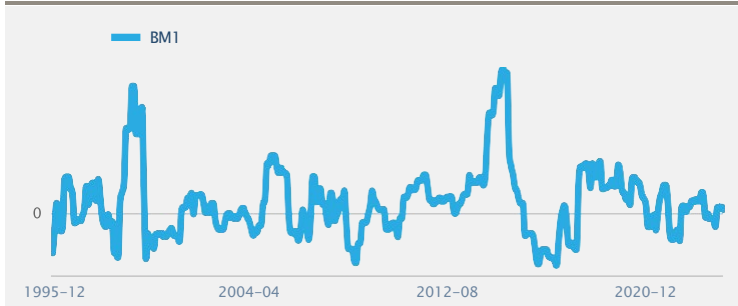


Up/Down Market Capture

S&P500

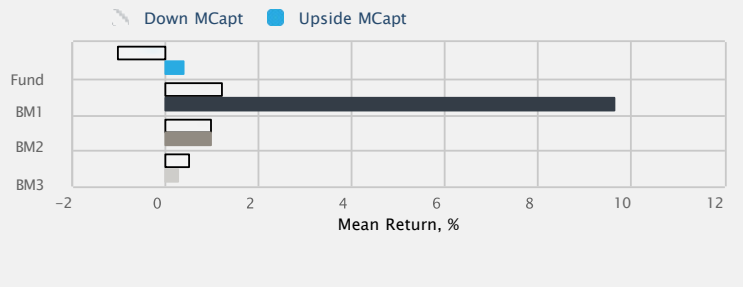


Rolling Beta+

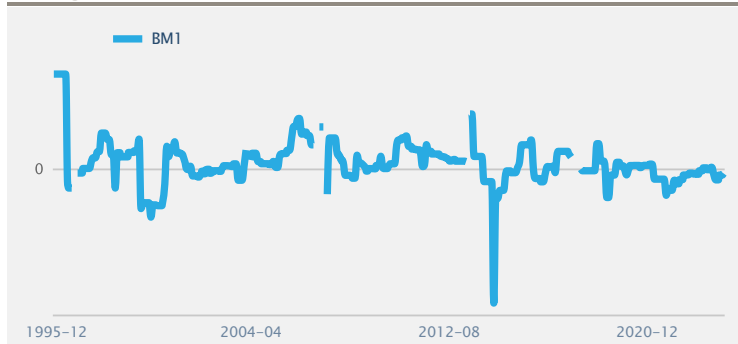


Up/Down Market Capture

Barclay Hedge Fund Index

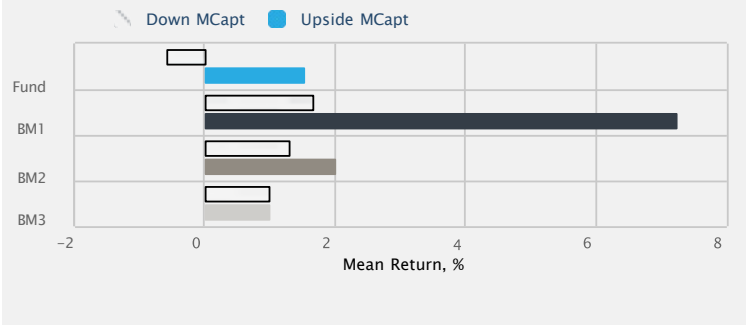


Rolling Beta-

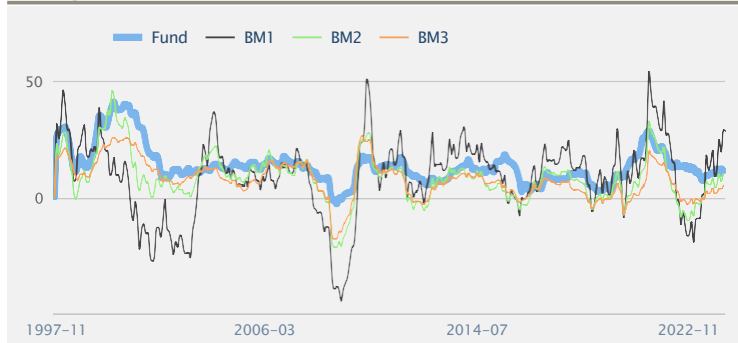


Up/Down Market Capture

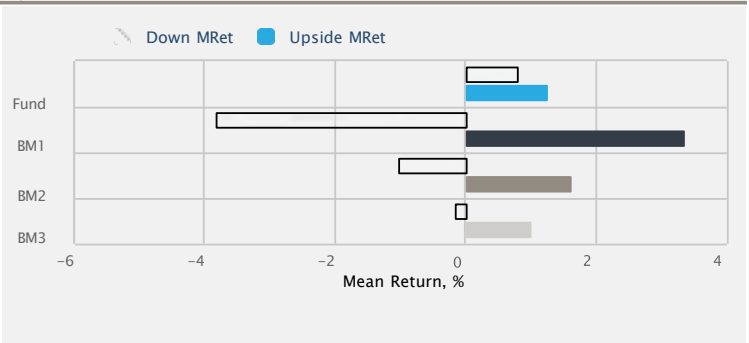
Barclay Multi Strategy Index



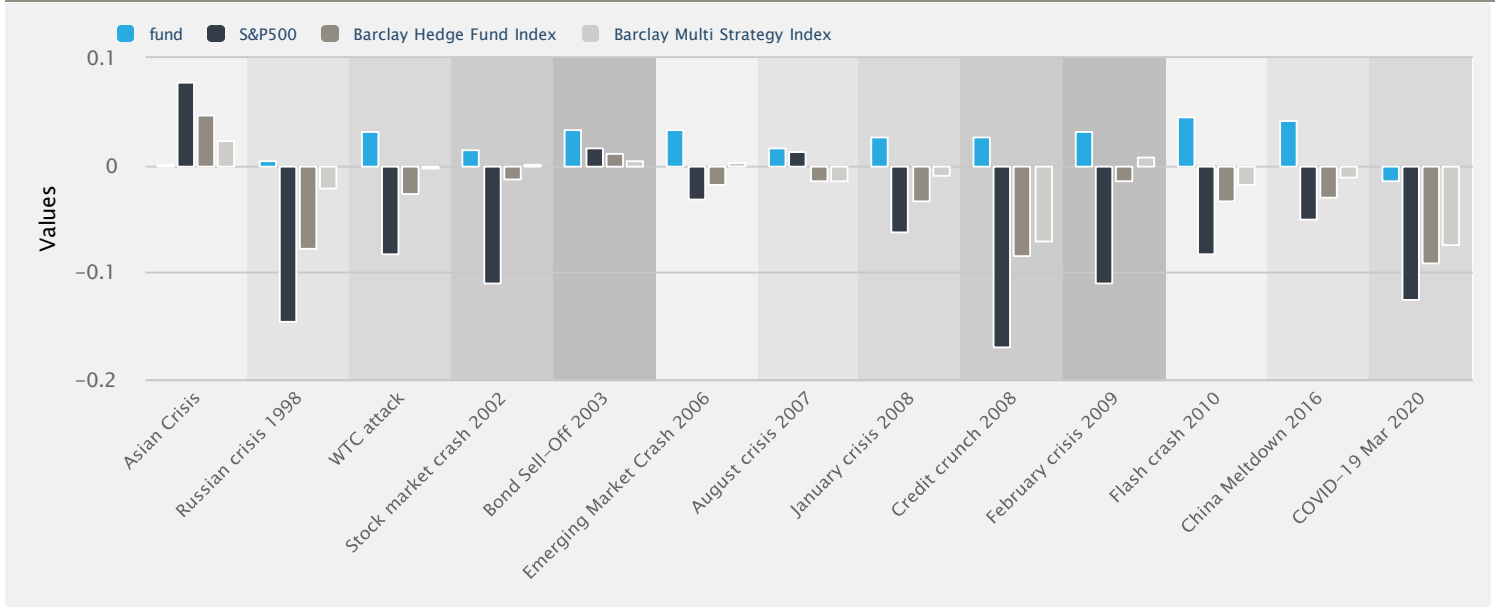
Rolling Cumulative Return



Up/Down Market Returns



### Stress Testing: Factor Model

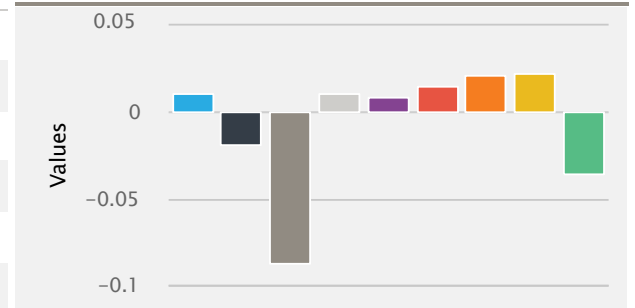


### Stress Testing: Factor Model

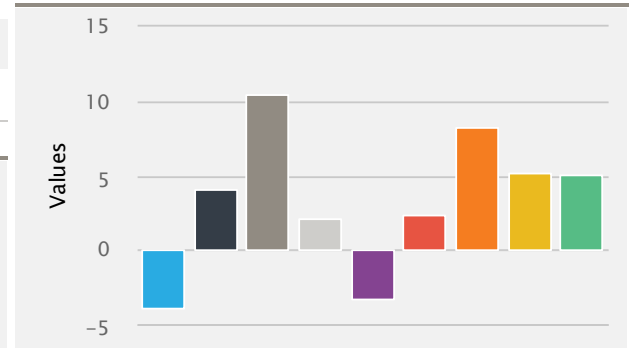
Leg	Attributes/Factors	Value	Current	Shift Type	Change by	Shift	New Level
	MSCI in \$	-0.05874	3437.76	RoR	Direct Value	-0.190445	2783.055797
	S&P500 P/E	-0.12392	0.3507	RoR	Direct Value	0.1526	0.152600
	Volatility VIX (S&P500)	-0.14501	0.1301	RoR	Direct Value	0.5989	0.598900
	VIX volatility change (S&P500)	0.02014	-0.0291	RoR	Direct Value	0.520437	0.520437
	Oil (Spot West Texas)	-0.03147	81.28	RoR	Direct Value	-0.264144	59.810376
	Term spread (10y-3m US)	0.49748	-0.0126	RoR	Direct Value	0.0313	0.031300
	Exchange Rate USD/CAD	0.17602	1.3536	RoR	Direct Value	0.119543	1.515413
	Exchange Rate USD/SEK	0.20211	10.4113	RoR	Direct Value	0.11403	11.598501
	Exchange Rate USD/NOK	-0.2513	10.6121	RoR	Direct Value	0.140718	12.105413

### Credit crunch 2008

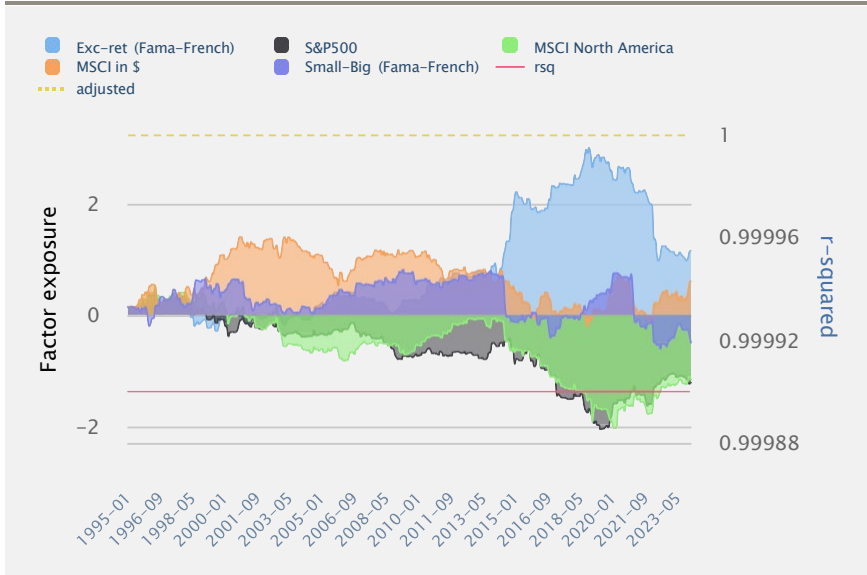
#### Stress Testing: Factor Contributions



#### Stress Testing: Factor Shifts



### Manager Style Drift (Kalman Filter, Top 5 Factors)



### Correlation Stress Testing

