

## SEF Entropics Cat Bond Fund – Class A

### Performance<sup>1</sup>

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2015	0.00%	-0.07%	0.05%	0.08%	-0.06%	-0.14%	0.20%	1.20%	1.13%	-5.84%	0.06%	0.10%	-3.42%
2016	-0.11%	3.22%	0.24%	0.31%	0.18%	0.41%	0.36%	0.91%	0.76%	0.07%	0.05%	-0.04%	6.50%
2017	0.05%	-0.09%	0.00%	0.03%	-0.09%	0.18%							0.09%

### Manager's Notes

Seasonal adjustments for the North American hurricane season and coupon returns contributed to the fund's returns. As the fund's assets are mainly denominated in USD, returns are also affected by differences between American and Swedish interest rates for those classes that are secured towards Swedish Krona.

In June we saw eleven new issuances in the market equivalent to more than 1.6 billion USD, which took volumes of new issuances for the first six months of the year to the new record level of 9.76 billion USD. This means that the figure of 10 billion USD in new issuances in a calendar year will probably be passed.

The fund has signed up for three new emissions during June. The first bond gives the Avatar Property and Casualty Insurance Company protection against claims from named storms in Florida. The bonds face value was 100 billion USD. The price was set in the upper part of the indicative price range. The second bond gives the Massachusetts Property Insurance Underwriting Association protection against claims from named storms, severe thunderstorm and winter storms in Massachusetts. The face value amounted to 350 billion USD and the price was set in the lower part of the indicative price range. The third bond gives the insurance company Assicurazioni Generali S.p.A protection against claims from European winter storms and floods, and earthquakes in Italy. The face volume was 200 million Euro and priced at the low end of the reduced indicative pricing. One of the fund's positions that covered named storms in Texas expired in June.

There has also been relatively high activity in the second hand market. According to FINRA's Trade Reporting and Compliance Engine (TRACE) approx. 65 bond classes have been traded and these include the majority of risks in the market. Prices have been stable or strengthened during the month as a consequence of strong demand.

The fund's total number of positions amounts to 53 and the YTM is 5.67%.

### Portfolio Summary<sup>2</sup>

Yield to Maturity	5.67%
NAV	102.95
YTD	0.09%
Last 3 months	0.13%
Last 12 months	2.21%
Since Inception 2/16/15	2.95%
Volatility	—
Active Share	60.7%
AUM (SEK M)	224
Cash Allocation	6.0%
Number of Cat Bond positions	53
Solvency Capital Requirement (SCR)	13.59%

### Maturity Profile

1) 0Mo - 6Mo Maturity	9.3%
2) 6Mo - 1.0Yr Maturity	13.4%
3) 1.0Yr - 2.0Yr Maturity	15.4%
4) 2.0Yr - 3.0Yr Maturity	43.1%
5) > 3.0Yr Maturity	18.7%

### Annualized Risk Characteristics

Portfolio Expected Loss	2.10%
VaR (90%)	4.95%
VaR (95%)	12.05%
VaR (99%)	34.55%
TVaR (99%)	39.64%
Probability of 0% PL	67.44%

### Historical Event Loss Analysis—

Most severe impact on the portfolio <sup>4</sup>	
1906 San Francisco CA	29.1%
1926 Great Miami	20.8%
1812 New Madrid MO	15.7%
1700 Cascadia Subduction	13.1%
Zone Offshore of BC	
1994 Northridge CA	10.6%

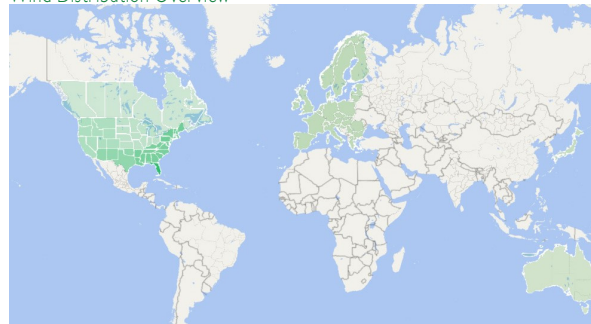
### Asset Class Financial Indicators<sup>5</sup>

	Annualized Volatility	Sharpe Ratio
Swiss Re Cat Bond Total	2.47%	3.05
Return Index		
Barclays BA US High Yield	8.58%	0.88
TR index value unhedged		
S&P 500	18.48%	0.46

### Portfolio Risk Profile<sup>3</sup>

Wind Exposure	Earthquake Exposure		
Australia	1.46%	Australia	0.23%
Canada	0.00%	Canada	0.63%
Europe	3.01%	Europe	0.00%
Japan	1.71%	Japan	1.06%
US Midwest	0.37%	US Midwest	0.76%
US Northeast	14.71%	US Northeast	0.42%
Florida	27.17%	US Southeast	1.75%
Other US Southeast	13.20%	US Southwest	0.00%
US Southwest	8.56%	California	17.59%
US West	3.20%	Other US West	2.90%
Other	0.51%	Other	0.77%
<b>Total</b>	<b>73.89%</b>	<b>Total</b>	<b>26.11%</b>

### Wind Distribution Overview



### Earthquake Distribution Overview



### Responsible investment key indicators<sup>6</sup>

Purpose	% of positions	Problematic Entities	% of positions
General property	67.8	Sponsor	0.0
Insurer of last resort	19.7	SPV domicile	0.0
Public services	4.1	Collateral currency	0.0
Mutual Insurance	3.2	Collateral instrument	0.0
Problematic purposes	0.0		

### SEF Entropics Cat Bond Fund

SEF Entropics Cat Bond Fund is an actively managed fund that invests in global reinsurance risks covering natural catastrophes (Cat Bonds). The Fund aims for a good risk adjusted return with very low correlation to other asset classes and good diversification among the underlying insurance risks.

The web site [en.entropics.se](http://en.entropics.se) provides additional information on the SEF Entropics Cat Bond Fund, including the Key Investor Information Document (KIID) and the Fund's prospectus.

Historical return is not a guarantee for future returns. The money you invest in the Fund can increase as well as decrease and you cannot be certain to have the full investment returned.

Share Class	A
Currency Class	SEK
Base Currency	SEK
Inception	2/16/15
Performance Target	4-6%
Fund Domicile	Luxembourg
Fund Structure	SICAV
Fund Regulation	UCITS
Liquidity	Fortnightly
Minimum Initial Investment	SEK 90 000
Minimum Subsequent Investment	SEK 1 000
Current Entry Charge	0%
Performance fee	10%
Hurdle Rate	SSVX90, High Watermark
Management Fee	1.00%
ISIN Number	LUI138350522

### Entropics Asset Management

Entropics Asset Management AB is the first Scandinavian asset manager specialised in Cat Bond investments.

The team has broad experience from asset management, underwriting, meteorology, underwriting, cat claims settlements and financial mathematics.

Entropics is licensed by and under the supervision of *Finansinspektionen*, the Swedish Financial Supervisory Authority.

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### Information on Risk Metrics

The risk measure for Cat Bonds and thus for Cat Bond portfolios is closely linked to reinsurance terminology. The following terms describe, briefly, the central portfolio risk metrics used by Entropics.

**PRINCIPAL ( $\Pi_0$ ):** The Principal of a Cat Bond is the amount deposited as collateral for the bond's reinsurance commitment. A portfolio's total principal ( $\Pi_0$ ) is the total amount exposed to damage events and, thus, generating returns.

**LOSS (L) AND LOSS RATIO ( $x=L/\Pi_0$ ):** The total loss (L) is a monetary value, and to the Loss Ratio  $x=L/\Pi_0$  is a relative measure of the loss size, with a range of 0–100%.

**PROBABILITY OF ATTACHMENT ( $P_{att}$ ):**  $P_{att}$  describes the probability that a portfolio will sustain any damage at all. This probability generally increases with the number of (uncorrelated) bonds in the portfolio.

**PROBABILITY OF 0% LOSS ( $P_0$ ):**  $P_0$  is simply the probability of no loss at all and its relation to  $P_{att}$  is thus  $P_0=1-P_{att}$ .

**PROBABILITY OF EXHAUSTION ( $P_{exh}$ ):** Indicates the probability that the portfolio sustains a damage equal to the entire principal  $\Pi_0$ .  $P_{exh}$  is only notable for portfolios with few bonds. For portfolios with many (uncorrelated) bonds, it is all but infinitesimal.

**EXPECTED LOSS (EL):** The mean loss of a Cat Bond or a portfolio of Cat Bonds. Actual losses will often be 0% (as described by  $P_{att}$ ), but losses, when occur-

ring, will often be considerably larger than EL. The loss thus in general shows considerable variation around the mean loss EL.

**STANDARD DEVIATION ( $\sigma$ ):** To express the volatility of loss around the mean EL, the standard deviation of the loss,  $\sigma$ , is used.

**VARIATION COEFFICIENT ( $\mu=\sigma/EL$ ):** The variation coefficient describes the volatility in relation to the mean loss, EL. The coefficient increases with the volatility of the portfolio.

**EXCEEDANCE PROBABILITY (EP):** Though the EL generally is low and the probability of no loss is high, actual losses have a wide spread.  $EP(x)$  is the probability that a loss is equal to or bigger than the loss ratio  $x$ . EP is usually on a yearly basis and is presented as a function of the loss ratio  $x$ .

**LOSS DISTRIBUTION ( $Q(x)$ ):**  $Q(x)$  is the probability distribution of the loss and is calculated as  $Q(x)=-EP'(x)$ .

**VALUE AT RISK (VaR):**  $VaR(Y)$  is the loss that with the probability  $Y$  is not exceeded on a yearly basis.

**TAIL VALUE AT RISK (TVaR):**  $TVaR(Y)$  is the mean of all losses exceeding  $VaR(Y)$ .

Mathematically, this means that  $TVaR(Y) = \frac{\int_{VaR(Y)}^{\infty} x \cdot Q(x) dx}{\int_{VaR(Y)}^{\infty} Q(x) dx}$

### Footnotes

1. Performance is reported by Swedbank AB and reflects the Fund's Net Asset Value after fees
2. Yield to Maturity is calculated before applicable fees. In accordance with the Solvency 2 directive, a cat bond investment is considered as an insurance risk on the asset side. The Solvency Capital Requirement, SCR (as a monetary amount) for this specific risk is calculated as a percentage of the Assets Under Management (AUM).
3. Risk distribution and profile are calculated by portfolio modelling in AIR

CATRADER, being the industry standard tool used by asset managers and re-insurers worldwide to model and analyse catastrophe bonds and other insurance linked securities.

4. The historical event loss analysis describes the loss as a percentage of the portfolio if these events were to occur today.

5. Financial key figures are based on ten years weekly data from Bloomberg.

6. A description of the RI indicators can be found at Entropics' blog:

<http://en.entropics.se/blog/how-to-interpret-entropics-indicators-for-responsible-investments/>