

SEF Entropics Cat Bond Fund – Class A

Performance¹

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2015		-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%	0.40%	0.52%	-5.55%	1.32%	-0.47%	0.01%	-3.78%
2018	0.88%	-1.32%	-0.50%	0.29%	-0.07%	0.33%							-0.41%

Manager's Notes

In June, the return was 0.33% for the retail class (A), hedged to the Swedish Krona (SEK). Coupons and slightly increasing market prices contributed positively. As the fund's assets are primarily nominated in US Dollars, the interest rate difference between Sweden and the US has contributed negatively for share classes hedged to SEK with 195 forward points for the month of June. During the month, we have received updated loss reports concerning the record breaking year 2017. The estimates are now more accurate, and for some affected positions, prices have recovered and for others, larger loss estimates have caused decreasing prices on the secondary market.

In June, the issuance volume amounted to \$1 billion from four bonds. The outstanding volume now amounts to the record-level \$35 billion compared to \$31 billion at the end of 2017.

The fund has acquired two positions on the primary market and seven positions on the secondary market. Of these, five have been settled in June, while the others will be settled in July. The fund has also liquidated one position, reduced one position and two have matured.

On the secondary market we saw 94 transactions covering most perils according to FINRA's Trade Reporting and Compliance Engine (TRACE).

The North Atlantic Hurricane Season started officially on June 1 and is expected to give positive contributions to returns in the coming months.

The indicators for responsible investments this month include 1.4% "problematic purposes". One new position covers several specialty insurance lines, some are problematic from an RI perspective, primarily concerning energy production. This position is what the RI policy describes as "complex instruments", which are to be dealt with using a cautionary principle. Hence we have assigned the bond a "problematic" status. Entropics' internal guidelines state that no more than 10% of the AUM may have this status and we remain well below that limit.

Portfolio Summary²

Yield to Maturity	8.01%
NAV	98.56
YTD	-0.41%
Last 3 months	0.54%
Last 12 months	-4.26%
Since Inception 2/16/15	-1.44%
Volatility	—
Active Share	54.5%
AUM (SEK M)	221
Cash Allocation	9.6%
Number of Cat Bond positions	67
Solvency Capital Requirement (SCR)	12.46%

Maturity Profile

1) 0Mo - 6Mo Maturity	14.2%
2) 6Mo - 1.0Yr Maturity	4.4%
3) 1.0Yr - 2.0Yr Maturity	40.4%
4) 2.0Yr - 3.0Yr Maturity	29.7%
5) > 3.0Yr Maturity	11.3%

Annualized Risk Characteristics

Portfolio Expected Loss	2.07%
VaR (90%)	4.49%
VaR (95%)	11.15%
VaR (99%)	36.83%
TVaR (99%)	41.90%
Probability of 0% PL	60.21%

Historical Event Loss Analysis—

Most severe impact on the portfolio ⁴	27.7%
1906 San Francisco CA	20.6%
1926 Great Miami	16.4%
1732 Montreal Region	14.2%
QC-Scenario 1	14.2%
1700 Cascadia Subduction	8.2%
Zone Offshore of BC	
1994 Northridge-Los Angeles CA	

Asset Class Financial Indicators⁵

	Annualized Volatility	Sharpe Ratio
Swiss Re Cat Bond Total	6.74%	1.03
Return Index		
Barclays BA US High Yield	8.39%	0.98
TR index value unhedged		
S&P 500	18.00%	0.65

Portfolio Risk Profile³

Wind Exposure	Earthquake Exposure		
Australia	0.00%	Australia	0.41%
Canada	0.00%	Canada	1.22%
Europe	3.33%	Europe	0.82%
Japan	2.04%	Japan	1.85%
US Midwest	0.23%	US Midwest	0.37%
US Northeast	14.81%	US Northeast	0.30%
Florida	26.37%	US Southeast	0.72%
Other US Southeast	10.15%	US Southwest	0.02%
US Southwest	8.94%	California	18.24%
US West	2.43%	Other US West	1.53%
Mexico	4.68%	Mexico	0.00%
Total	72.98%	Total	25.50%

Other perils 1.52%

Wind Distribution Overview



Earthquake Distribution Overview



Responsible investment key indicators⁶

Purpose	% of positions	Problematic Entities	% of positions
Disaster relief	2.3	Sponsor	0.0
General property	69.3	SPV domicile	0.0
Insurer of last resort	15.9	Collateral currency	0.0
Public services	4.5	Collateral instrument	0.0
Mutual Insurance	4.6		
Problematic purposes	1.4		

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 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	LU1138350522

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 (Π_0): The Principal of a Cat Bond is the amount deposited as collateral for the bond's reinsurance commitment. A portfolio's total principal (Π_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 Π_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 (σ): To express the volatility of loss around the mean EL, the standard deviation of the loss, σ , 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

- Performance is reported by Swedbank AB and reflects the Fund's Net Asset Value after fees
- 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).
- 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. "Other perils" includes perils other than wind and earthquake, e.g. wildfires and flooding. The portfolio can also include unmodelled risks, such as volcano eruptions and meteorite impacts, with extremely low and uncalculable frequency.

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/>