Single Name Exchange Default Swap (EDS)

Objective

The BitMEX Exchange Default Swap (EDS) is meant to allow traders thetо option of buying or selling insurance against leading Bitcoin exchanges being hacked or ceasing operations. Each EDS contract will be for a single Bitcoin exchange.

The exchanges to be listed at launch:

- Bitfinex
- Bitstamp
- OKCoin

Product Mechanics

Insurance Buyers (Buyers) pay a market determined Bitcoin amount to Insurance Sellers (Sellers) to insure a certain amount of Bitcoin. If a default event occurs, the buyers receive the insured Bitcoin notional amount.

Default Events

The following events qualify as default:

- A publically announced hack, loss, or theft of customer Bitcoins.
- The publically announced closure of the exchange at a future date within 6 months.

The default event trigger is based on the announcement of a hack or closure, not the effective date of the incident.

A public announcement is considered an announcement made by the exchange in question on their website, blog, official email, or verified statement to media outlets.

Commented [1]: Good, as opposed to reddit chatter.

If a default event is declared, trading will halt and buyers will be paid the full contract notional.

It is at BitMEX's discretion whether to declare a default event.

Contract Structure

Each EDS contract will have a notional amount of 1 Bitcoin.

The contract will be quoted as a percentage of the Bitcoin contract notional payable as a Bitcoin insurance premium from buyer to the seller over the duration of the swap.

Each EDS contract will trade for one calendar month.

The insurance premium will be paid to the seller each day at a specified time. For each EDS contract the Seller writes, he must place 1 Bitcoin in escrow with BitMEX to cover his obligation to the buyer if a default event occurs.

BitMEX will host a market for the amount of insurance premium to be paid. Traders may speculate on the probability of default through buying and selling the insurance premium.

Trading Motivations

Buyers use EDS contracts to insure funds held on exchanges against default events.

Sellers believe that default events are unlikely to occur and use EDS contracts to earn a return on their Bitcoin.

Speculators buy and sell EDS contracts based on their perception of the likelihood of a default event occurring.

General Contract Terms

Root Syntax	EDS_ExchangeShortName
Bitstamp EDS	EDS_BTMP
Listing Date	12:00 GMT Last Friday of Preceding Month
Expire Date	12:00 GMT Last Friday of Current Month
Contract Notional	1 XBT
Quote Currency	Percentage of Contract Notional
Total Premium	% Premium * Contract Notional * Number of Contracts
Daily Premium Received by Seller	Total Premium / Days until Expiry at Trade Date
Initial Margin	Protection Buyer: 100% Total Premium Protection Seller: 100% Contract Notional

Maintenance Margin	Same as initial margin, no leverage offered

Example Trade:

Trader A wishes to insure 10 XBT against a default event occurring on Bitfinex for 30 days. Trader B wishes to receive an insurance premium for insuring 10 Bitcoin against a default event occurring on Bitfinex for 30 days. The market price of insurance is currently 30%.

	Trader A	Trader B
EDS Contracts	+10	-10
Days Until Expiry	30	30
Insured Notional	+10 XBT	-10 XBT
Insurance Premium (Paid) Received	-3 XBT = 30% * 10 XBT	+3 XBT = 30% * 10 XBT
Initial Margin Insurance Premium	3 XBT	0 XBT
Initial Margin Insured Notional	0 XBT	10 XBT

Both the total premium stream (3 XBT) and insured notional (10 XBT) will be held by BitMEX in escrow. Each day Trader B will receive 0.1 XBT (`3 XBT / 30 days`). Trader B is free to withdraw or use the 0.1 XBT as margin for new positions on BitMEX.

After 10 days, the market price for insurance has changed. It now costs 25% of the contract notional for 20 days of insurance. Trader A decides to sell his 10 EDS contracts to Trader C receiving 0.25 XBT per contract of insurance premium.

	Trader C	Trader A
EDS Contracts	+10	-10
Days Until Expiry	20	20
Insured Notional	+10 XBT	-10 XBT
Insurance Premium (Paid) Received	-2.5 XBT = 25% * 10 XBT	+2.5 XBT = 25% * 10 XBT
Initial Margin Insurance Premium	2.5 XBT	0 XBT
Initial Margin Insured Notional	0 XBT	10 XBT

Both the total premium stream of 2.5 XBT and insured notional of 10 XBT will be held by BitMEX in escrow. Each day Trader A will receive 0.125 XBT (`2.5 XBT / 20 days`). Trader A is free to withdraw or use the 0.125 XBT as margin for new positions on BitMEX.

Trader A now has two EDS trades in opposing directions with two different counterparties. BitMEX will handle the netting of cash flows between A, B, and C. This process is called Novation.

Date	Days Until Expiry	Insurance Buyer	Insurance Seller	EDS Contracts	Insurance Premium
Day 0	30	Trader A	Trader B	10	30%
Day 10	20	Trader C	Trader A	10	25%

On day 10 (20 days until expiry), the following tables detail the cash flows for the first and second trades:

First Trade

Trader	Initial Premium Margin	Initial Insured Notional Margin	Total Interest Paid to Date	Total Interest to be Paid	Total Interest Received to Date	Total Interest to be Received
A	3 XBT	0 XBT	0.1 XBT * 10 = 1 XBT	0.1 XBT * 20 = 2 XBT	0 XBT	0 XBT
B	0 XBT	10 XBT	0 XBT	0 XBT	1 XBT	0.1 XBT * 20 = 2 XBT

Second Trade

Trader	Initial Premium Margin	Initial Insured Notional Margin	Total Interest Paid to Date	Total Interest to be Paid	Total Interest Received to Date	Total Interest to be Received
C	2.5 XBT	0 XBT	0 XBT	0.125 XBT * 20 = 2.5 XBT	0 XBT	0 XBT
A	0 XBT	10 XBT	0 XBT	0 XBT	0 XBT	0.125 XBT * 20 = 2.5 XBT

After ten days, Trader A still must pay Trader B a total of 2 XBT, but will receive 2.5 XBT from Trader C for a positive cash flow of 0.5 XBT. Trader C's initial margin covers the remaining 2 XBT that must be paid to Trader B; therefore, BitMEX will return 2 XBT of initial margin to Trader A. After netting, Trader A's initial insured notional margin of 10 XBT is returned. The net payout for Trader A is 12.5 XBT (`0.5 XBT + 2 XBT + 10 XBT`).

On a net cash flow basis, Trader A paid 0.5 XBT for 10 days of insurance on 10 Bitcoin against the default of the exchange.

On a percentage interest per annum basis, Trader A bought insurance from Trader B at 360% (`3 XBT / 10 XBT * 12`), and sold insurance to Trader C at 225% (`2.5 XBT / 10 XBT * 18`) per year.