## DISCOUNT BOND TOKEN

- Discount Bond Tokens are Yield Enhancement products
- The structure allows the holder to buy at a discount to the underlying asset
- The product provides enhanced yields in sideway- and slightly-upward markets
- Holders of the structure benefit from falling volatility expectations

- The structure is popular in many financial markets and is being traded on a diverse range of possible underlyings (Equities, FX, Commodities)

- Germany, as the most active derivative market in Europe, has a discount bond market volume standing at EUR 4.3 billion as of February 2019

Example

You buy BTC/USDC at a discount to the market price.
At expiry:
If BTC/USDC is above 10,000, you receive 10,000 USDC
If BTC/USDC is below 10,000, you receive the prevailing BTC/USDC rate
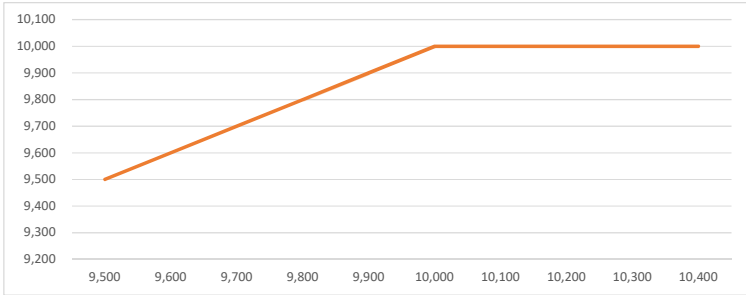
Strike	10,000		
BTC/USDC	**Collateral**	**Short put**	**Net**
9,500	10,000	(500)	9,500
9,600	10,000	(400)	9,600
9,700	10,000	(300)	9,700
9,800	10,000	(200)	9,800
9,900	10,000	(100)	9,900
10,000	10,000	-	10,000
10,100	10,000	-	10,000
10,200	10,000	-	10,000
10,300	10,000	-	10,000
10,400	10,000	-	10,000

BONUS TOKEN

- Bonus Tokens are Particiption Structures that offer limited downside protection
- The product benefits from a bonus coupon in slightly-downward and sideways- market
- Holders participate in the full upside of the underlying in upward markets
- This is a well established and popular product in many European Retail markets
- Germany, as the most active derivative market in Europe, has a market volume in this structure standing at EUR 2.3 billion as of February 2019

Example

You pay a premium for the following payoff on BTC denominated in USDC (BTC/USDC) at expiry.

If BTC/USDC is above 10,000, you receive the prevailing BTC/USDC rate

If BTC/USDC is between 9,500 and 10,000, you receive 10,000 USDC

If BTC/ETH is below 9,500, you receive the prevailing BTC/USDC rate
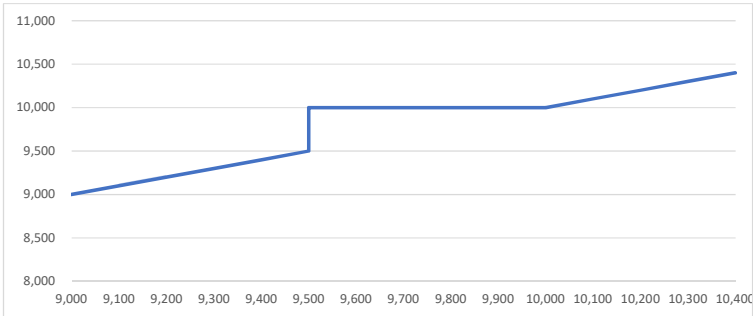
Strike	10,000
Binary strike	9,500

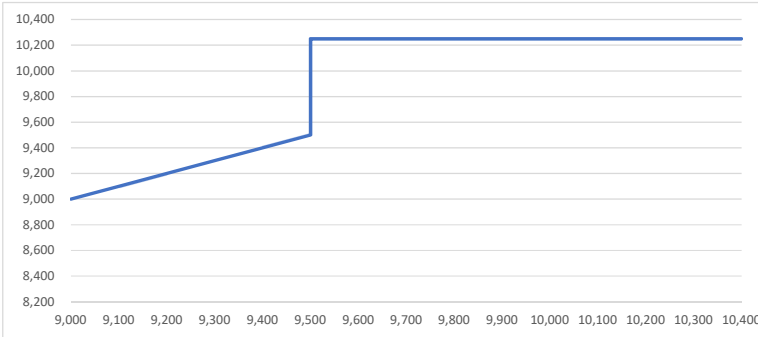| BTC/USDC	Collateral	Long Call	Short put	Long DAO P	Net
9,000	10,000	-	(1,000)	-	9,000
9,100	10,000	-	(900)	-	9,100
9,200	10,000	-	(800)	-	9,200
9,300	10,000	-	(700)	-	9,300
9,400	10,000	-	(600)	-	9,400
9,500	10,000	-	(500)	-	9,500
9,500	10,000	-	(500)	500	10,000
9,600	10,000	-	(400)	400	10,000
9,700	10,000	-	(300)	300	10,000
9,800	10,000	-	(200)	200	10,000
9,900	10,000	-	(100)	100	10,000
10,000	10,000	-	-	-	10,000
10,100	10,000	100	-	-	10,100
10,200	10,000	200	-	-	10,200
10,300	10,000	300	-	-	10,300
10,400	10,000	400	-	-	10,400

PARTIALLY-PROTECTED DISCOUNT TOKEN

- Partially-Protected Discount Tokens are **Yield Enhancement** products
- The structure combines the popular Discount structure with additional partial protection on the downside
- The product benefits from an enhanced fixed payout in sideway- and slightly-upward markets
- In downward markets the payoff mirrors the direct investment into the underlying asset
- This structure constituted approximately 10-20% of the total structured products market over the past few decades
- Germany, as the most active derivative market in Europe, has a market volume in this structure standing at EUR 8.4 billion as of February 2019

Example

You pay a premium for the following payoff on BTC denominated in USDC (BTC/USDC) at expiry.

If BTC/USDC is above 9,500, you receive a fixed return of 10,250 USDC

If BTC/USDC is at or below 9,500, you receive the prevailing BTC/USDC rate

Strike	10,000
Barrier	9,500
Bonus coupon	250

BTC/USDC	Collateral	Short Dal P	Long Binary	Net
9,000	10,000	(1,000)	-	9,000
9,100	10,000	(900)	-	9,100
9,200	10,000	(800)	-	9,200
9,300	10,000	(700)	-	9,300
9,400	10,000	(600)	-	9,400
9,500	10,000	(500)	-	9,500
9,500	10,000	-	250	10,250
9,600	10,000	-	250	10,250
9,700	10,000	-	250	10,250
9,800	10,000	-	250	10,250
9,900	10,000	-	250	10,250
10,000	10,000	-	250	10,250
10,100	10,000	-	250	10,250
10,200	10,000	-	250	10,250
10,300	10,000	-	250	10,250
10,400	10,000	-	250	10,250

INLINE WARRANT

Features:

- Upper and Lower Strikes, with no knockout barrier
- In-The-Range (ITR): fixed payment of [1 USDC]
- Out-of-The-Range (OTR): fixed payment of [0.25 USDC]
- Maximum upside and downside is known at the time of investment

Opportunities:

- Range trading vs directional trading
- Possibility to make profits in a sideway or flat market
- Investors may choose from different strike prices to express their views on the underlying price
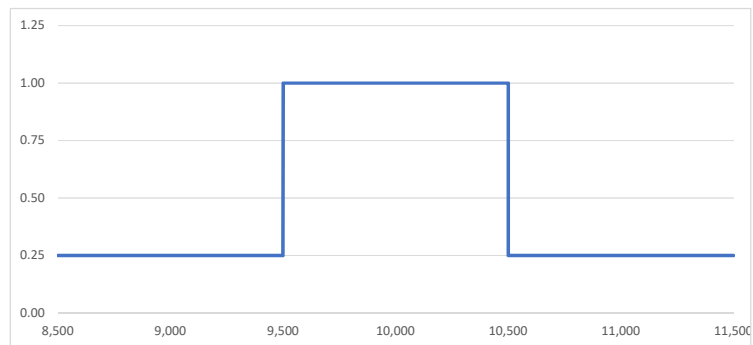
Risks:

- Profit potential is capped by the pre-determined payment
- Maximum loss is limited to initial investment

Example

You pay a premium for the following payoff on BTC denominated in USDC (BTC/USDC) at expiry.
If BTC/USDC is between 9,500 and 10,500, you receive 1 USDC
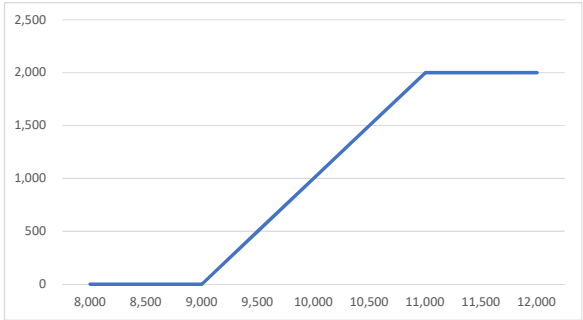If BTC/USDC is below 9,500 or above 10,500, you receive 0.25 USDC

Upper Strike	10,500	
Lower Strike	9,500	

BTC/USDC	Collateral	Long Binary	Short Binary	Net
8,500	0.25	-	-	0.25
8,750	0.25	-	-	0.25
9,000	0.25	-	-	0.25
9,250	0.25	-	-	0.25
9,500	0.25	-	-	0.25
9,500	0.25	0.75	-	1.00
9,750	0.25	0.75	-	1.00
10,000	0.25	0.75	-	1.00
10,250	0.25	0.75	-	1.00
10,500	0.25	0.75	-	1.00
10,500	0.25	0.75	(0.75)	0.25
10,750	0.25	0.75	(0.75)	0.25
11,000	0.25	0.75	(0.75)	0.25
11,250	0.25	0.75	(0.75)	0.25
11,500	0.25	0.75	(0.75)	0.25

RISK REWARD RATIO WARRANTS

Features:
- User enter orders as a risk reward ratio
- Leverage determined as a function of the risk reward ratio
- Upper and Lower Strikes, with no knockout barrier
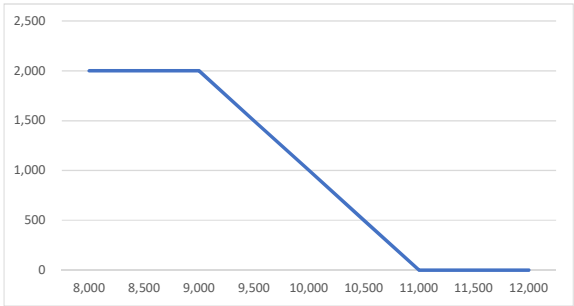- Maximum upside and downside is known at the time of investment

Example of long risk reward warrant

You pay a premium for a 1 to 1 risk reward ratio warrant on BTC/USDC

Spot rate: 1 BTC = 10,000 USDC

At expiry:

If BTC/USDC is below or equal to 9,000, you receive nothing

If BTC/USDC is between 9,000 and 11,000, you receive the prevailing BTC/USDC rate minus 9,000

If BTC/USDC is equal to or above 11,000, you receive 2,000 USDC

Upper Strike	11,000		
Lower Strike	9,000		

BTC/USDC	Long Call	Short Call	Net
8,000	0	0	0
8,500	0	0	0
9,000	0	0	0
9,500	500	0	500
10,000	1,000	0	1,000
10,500	1,500	0	1,500
11,000	2,000	0	2,000
11,500	2,500	(500)	2,000
12,000	3,000	(1,000)	2,000

Example of short risk reward warrant

You pay a premium for a 1 to 1 risk reward ratio warrant on BTC/USDC

Spot rate: 1 BTC = 10,000 USDC

At expiry:

If BTC/USDC is below or equal to 9,000, you receive 2,000 USDC

If BTC/USDC is between 9,000 and 11,000, you receive 11,000 minus the prevailing BTC/USDC rate

If BTC/USDC is equal to or above 11,000, you receive nothing

Upper Strike	11,000		
Lower Strike	9,000		

BTC/USDC	Long Put	Short Put	Net
8,000	3,000	(1,000)	2,000
8,500	2,500	(500)	2,000
9,000	2,000	0	2,000
9,500	1,500	0	1,500
10,000	1,000	0	1,000
10,500	500	0	500
11,000	0	0	0
11,500	0	0	0
12,000	0	0	0

CURRENCY-LINKED DEPOSITS

Features:

- Combines a time deposit with a currency option
- User enjoys enhanced yields

Example:

Deposit currency	USDC
Linked currency	BTC
Deposit amount	10,000 USDC
Deposit date	Today (T)
Maturity date	T + 1 month
Interest rate	20%
Spot rate	1 BTC = 10,000 USDC
Conversion rate	1 BTC = 10,000 USDC

Maturity amount: If at expiry, BTC/USDC is equal to or above 10,000, you will receive 10,000 * (1 + (20% * 30/365)) = 10,164 USDC
If at expiry, BTC/USDC is below 10,000, you will receive 10,164 / 10,000 = 1.0164 BTC
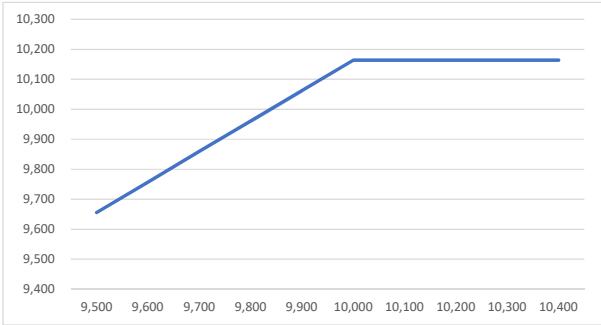
Strike	10,000

BTC/USDC	Collateral	Premium	Short put	Net (USDC)	Mat. Amt
9,500	10,000	164	(508)	9,656	1.0164 BTC
9,600	10,000	164	(407)	9,757	1.0164 BTC
9,700	10,000	164	(305)	9,859	1.0164 BTC
9,800	10,000	164	(203)	9,961	1.0164 BTC
9,900	10,000	164	(102)	10,062	1.0164 BTC
10,000	10,000	164	-	10,164	10,164 USDC
10,100	10,000	164	-	10,164	10,164 USDC
10,200	10,000	164	-	10,164	10,164 USDC
10,300	10,000	164	-	10,164	10,164 USDC
10,400	10,000	164	-	10,164	10,164 USDC

PRINCIPAL PROTECTED CURRENCY-LINKED DEPOSITS

**Features:**

- Combines a time deposit with a currency option
- User enjoys enhanced yields
- Principal protected

Example:

Deposit currency	USDC
Linked currency	BTC
Deposit amount	10,000 USDC
Deposit date	Today (T)
Maturity date	T + 1 month
Interest rate	10%
Spot rate	1 BTC = 10,000 USDC
Barrier	1 BTC = 10,000 USDC

Maturity amount   If at expiry, BTC/USDC is above 10,000, you will receive 10,000 * (1 + (10% * 30/365)) = 10,082 USDC
If at expiry, BTC/USDC is at or below 10,000, you will receive 10,000 USDC
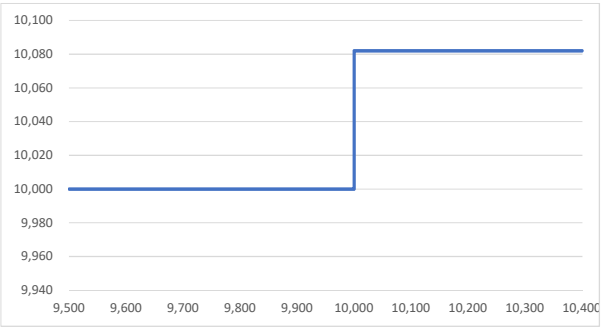
Strike	10,000

BTC/USDC	Collateral	Premium	Short binary	Net (USDC)
9,500	10,000	82	(82)	10,000
9,600	10,000	82	(82)	10,000
9,700	10,000	82	(82)	10,000
9,800	10,000	82	(82)	10,000
9,900	10,000	82	(82)	10,000
10,000	10,000	82	(82)	10,000
10,000	10,000	82	-	10,082
10,100	10,000	82	-	10,082
10,200	10,000	82	-	10,082
10,300	10,000	82	-	10,082
10,400	10,000	82	-	10,082