

Fixed income ESG index futures

Gaining exposure to Euro Investment Grade
credit premium



Use case to replicate the Euro IG Option-adjusted spread

- Eurex launched Futures on **Bloomberg MSCI EURO Corporate SRI Index (FECX)**, which track the total return of European investment grade credit.
- Together with Eurex's German government bond futures suite this allows traders to isolate the credit risk of the index.
- The Option adjusted Spread (OAS) is the measurement of the risk premium of a corporate bond from the risk-free rate, net of the return of embedded options.
- The OAS spread of a bond is a reliable proxy for the credit risk. Historically, credit risk has been primarily traded via credit default swaps (CDS), which are aggregated into CDS Indices (CDX).
- **We show that by removing the interest rate risk from FECX with a portfolio of Bund, Bobl and Schatz futures, we are able to replicate the Euro Corporate SRI Index OAS spread development**

OAS Spread replication via futures

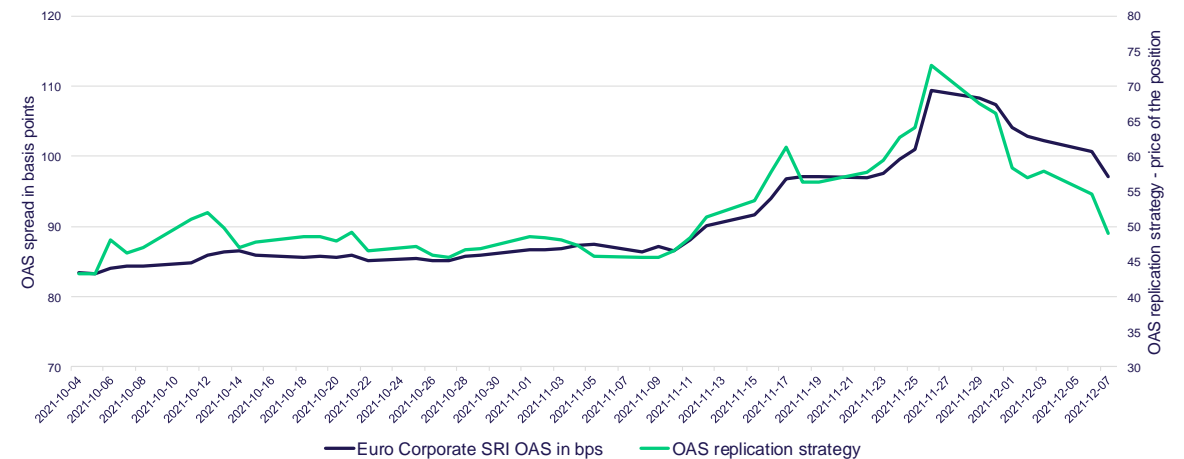
- **Step 1** – We calculate the number of contracts of Bund, Bobl and Schatz futures necessary to match the duration of FECX. The ratio between Bund, Bobl and Schatz is approximately 1:5:4*.
- **Step 2** – The second step consists of calculating the number of contracts of FECX necessary to match the notional amount of the Fixed Income futures portfolio
- **Step 3** – To implement the strategy, we take a short position in FECX and a long position in the Fixed Income Futures portfolio

Correlation of the replicating strategy

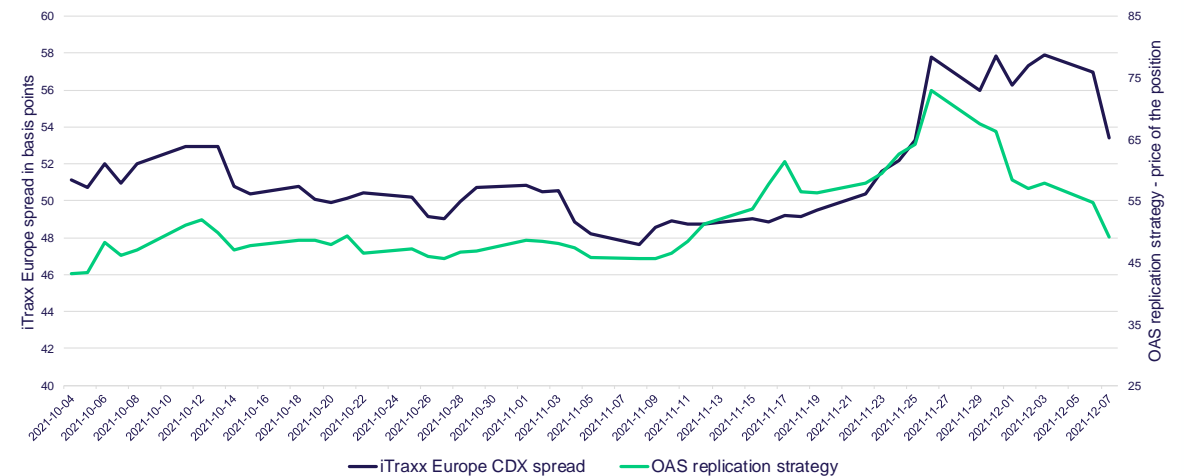
OAS vs Replication strategy	92%
CDX vs Replication strategy	61%

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Replication strategy against the OAS



Replication strategy against the CDX spread



*Data from Bloomberg. The ratio was estimated with data from 4th October 2021

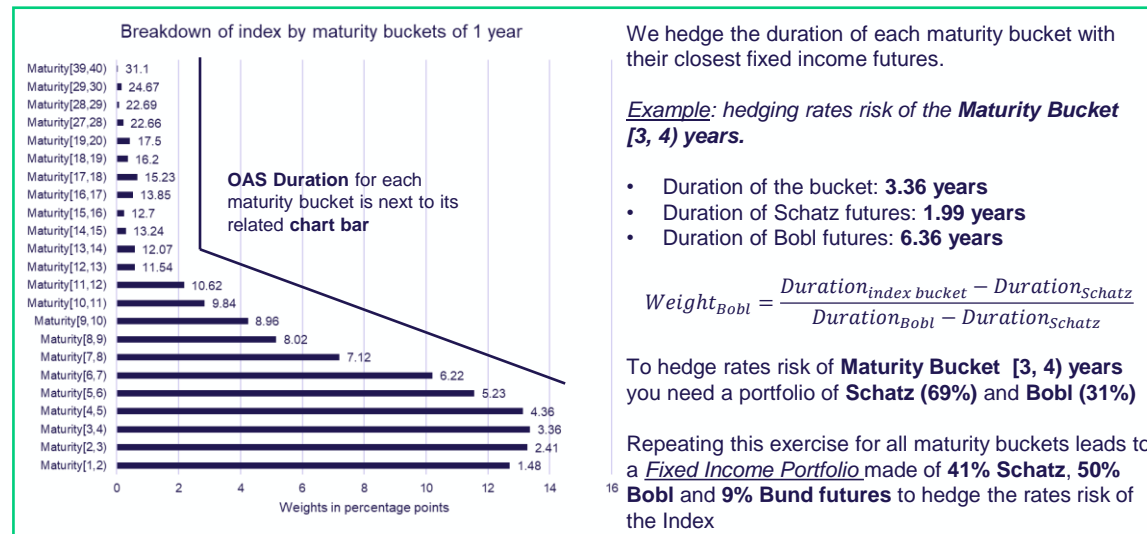
Use case to replicate the Euro IG Option-adjusted spread

1

Build the fixed income futures portfolio to hedge duration

Products	Modified Duration (in years)	Settlement price
Euro Corporate SRI Index futures	5.2	169.71
Schatz futures	1.99	112.25
Bobl futures	6.36	135.07
Bund Futures	14.81	170.11

To calculate the ratio of contracts needed to hedge the interest rates risk of FECX, we break down the index by maturity buckets



2

Match the notional exposure of the two legs of the strategy

We calculate the notional value of the *Fixed Income portfolio*. The notional value of a fixed income future is €100,000 multiplied by its price (which is expressed in % points)

$$\text{Fixed Income portfolio Notional} = 2 \times \text{Bund} + 10 \times \text{Bobl} + 8 \times \text{Schatz} \rightarrow \text{€ 2,588,880}$$

The Notional value of Euro Corporate SRI Index futures (FECX) is 1,000 x price. We now calculate the number of contracts of FECX to match the portfolio notional

$$\# \text{ contracts of FECX} = \frac{\text{Fixed Income portfolio notional}}{\text{FECX Notional value of 1 contract}} \rightarrow 15$$

3

Take opposite positions on the legs to implement the strategy

Buy the Fixed Income futures portfolio and sell the FECX to hedge the credit risk of the Euro Investment grade market

Sell the Fixed Income futures portfolio and Buy the FECX to gain long exposure on the risk premium of the Euro Investment grade market

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