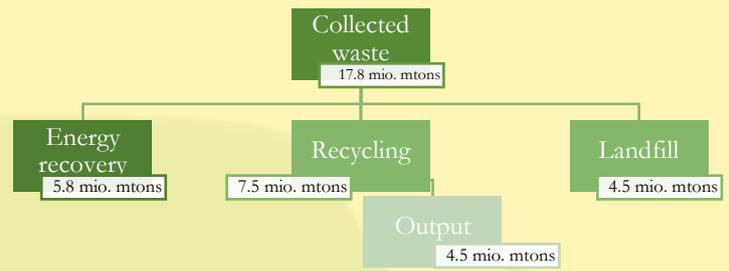


# European Circular Fund

## Problem

Plastic waste gained particular attention in the past 15 years all over the world and for a good reason. Within plastic waste, we target **plastic packaging** waste as it accounts for more than 60% of plastic waste generated in the European Union (EU). As this waste type accounts for more than 60% of plastic waste within the EU and as two-thirds of the rated plastic packaging manufacturers' revenue exposure is to food and beverage end markets, we focus primarily on these sectors. In 2018, 42% of plastic packaging waste had been recycled in the EU. From the collected 17.8 million metric tons of plastic packaging waste, 25% had been landfilled. We also observed that output quantity of recyclates was just half of the input's.



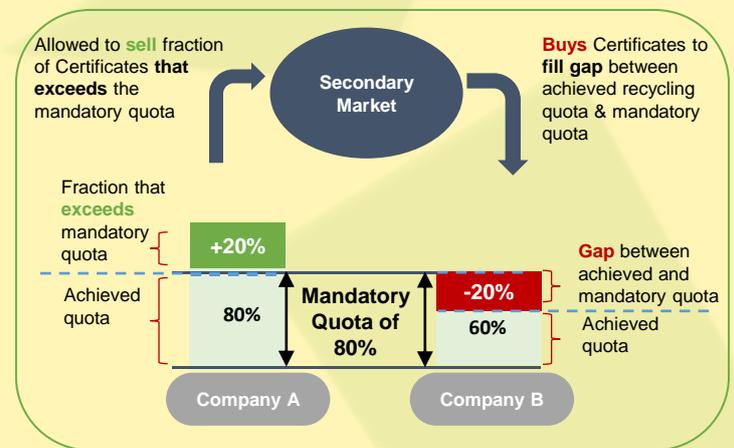
## Ultimate Goal

Prevent, reduce and remove 6.5 million metric tons of plastics waste yearly in the next five years from the environment by incentivising firms to collect, recycle and reuse more plastic and also to develop innovative solutions to increase the output of the recycled materials. In order to achieve this goal it is also essential to introduce a centralised legal framework on a European level.

## Solution Part 1: Recycling Certificates

Targeting the plastic packaging waste in the EU by introducing a cap-and-trade program to incentivise companies to increase the recycling quota by increasing overall demand. We identified that one of the main reasons of the low recycling quota is due to lack of recycling demand. The Companies in the targeted industry, primarily plastic packaging producers, will receive certificates based on their mandatory recycling quota. The pricing is based on at least 1/3 of the recycling costs, i.e. of mix plastics packaging will cost per ton. The calculated price is 600 EUR per ton. The addressable market could be therefore at approx. 10bn EUR.

Companies shall be incentivised to increase their respective recycling quota by selling their recycling certificates to the recycling certificates platform if the mandatory recycling quota is overfulfilled. To establish the program based on the recycling quota, best practices in the area of trading CO2 emissions are used as a broad framework.



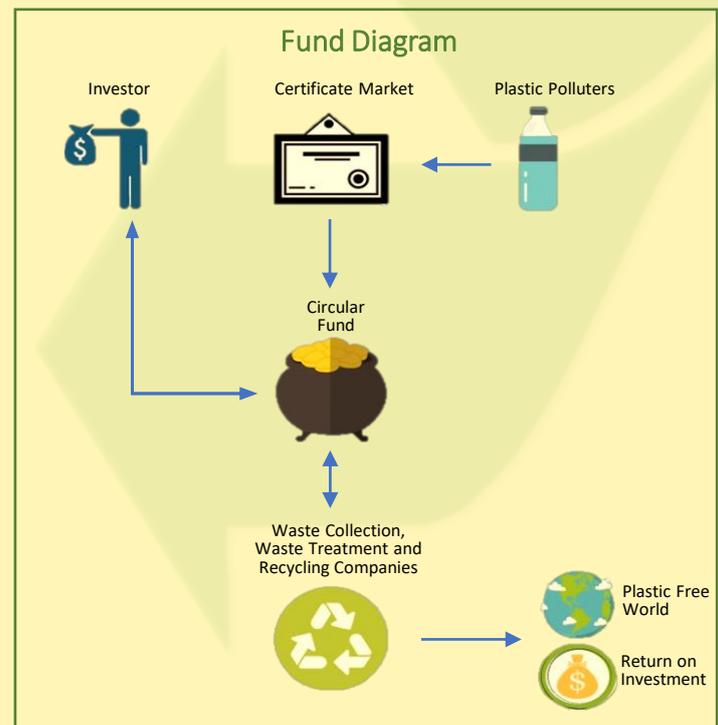
## Solution Part 2: Circular Fund

The Circular Fund will issue loans to waste collecting, waste treatment and recycling companies within the EU that carry out municipal waste treatment projects.

The Fund will receive trading fees of 4% for every plastic certificate traded at the market, which enables the fund to offer loans with a reduced risk premium without increasing its risk exposure. Institutional investors will be attracted by the reduced risk and potential borrowers will be incentivized by the low interest rate.

## Addressable Market & Scalability

The fund focuses on the EU, where investments into municipal waste treatment would bring recyclable plastic into the market and would therefore reduce plastic waste pollution within the EU. At least 7,000 companies meet the investment criteria. Having an additional cash inflow from the certificate market would cover potential credit defaults, making the fund attractive to institutional investors. The fund would be an alternative investment to government bonds, generate a positive return, which is very rare in the Euro area and would fulfil ESG criteria, a trend followed by investors and regulators. With almost 60%, the packaging industry represents by far the largest end-use market when it comes to plastic demand.



Therefore, we focused our analysis on plastic packaging so far, but once successfully implemented, this framework can be extended and applied to other plastic segments such as construction or automotive sectors as well as to other waste categories in general such as paper or glass. Since those resources can be categorized in many different subcategories, each segment requires different thresholds and different legislation. However, the product idea is not restricted to the EU. As more countries are adopting recycling benchmarks and strategies, the demand on recycled plastic for circular economies will increase.

## Tiering Potential Companies

To categorize companies that are eligible to receive funds, we will base our tiering approach on Moody's credit methodology for Environmental Services and Waste Management Companies. The goal of the circular fund is to give out the major part of funding to companies that will otherwise receive higher interest rates due to the lower ratings. Therefore, the circular fund admission committee will focus especially on companies that will receive a rating in the BBB – B range based on the below shown credit profile assessment:



## Key Fund Impacts

- Reduce the amount of unrecycled plastic packaging by up to 6.5 million metric tons per year
- Increase the recycling quota of plastic packaging to 70%
- Increase efficiency of recycling and thus, the output amount of recycled materials
- Increase the amount of waste collected and treated in the EU

## Innovative Elements

The Circular Fund and the Recycling Certificates are the first products that transfer the cost of non-recycled plastic into a fund that supports companies to make their contribution to the circular economy. Our product incentivizes plastic packaging companies to increase their recycling quota by making the right to produce plastic a tradable good since selling recycling certificates enables companies to make an additional profit. The trading fee, paid by the certificate buyer, is directly transferred into the circular fund, which empowers the fund to offer loans with a reduced risk premium without increasing its risk. This is generating a safe and continuous return for investors while it is delivering a sustainable solution to decrease the plastic pollution within the EU.

## Return on Investment



The ROI is positive in all scenarios. Thus, despite a low risk-profile, investors are guaranteed positive return in a low interest rate environment. The minor decrease over time is associated to the decrease of the balance of the trading fee, not used to cover management expenses and defaults, that is instead invested into equity. As the insolvencies increase in line to the fund size, a higher share of the trading fee is needed and not invested into equity, to cover the defaults.

## Fund Investment Profile

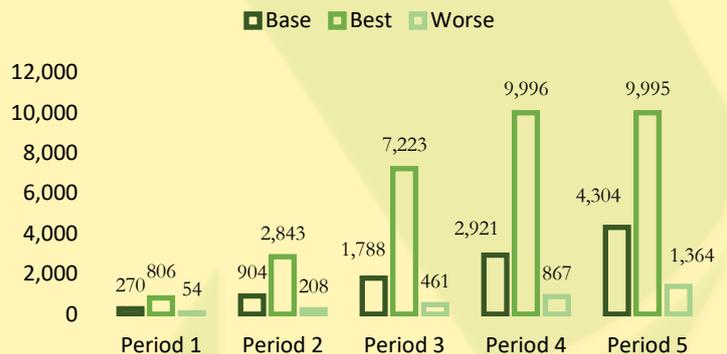
Fund Type	Loan Fund
Asset Class	Debt
Expected Fund Size	4,294 Mio. (Base Case)
Time Horizon	5 years
Addressable Mt Size	Approx. 10bn EUR
ROI (Base Case)	1.11%
Geographical Focus	European Union
General Attribute	Circular Economy
Expense Ratio	Mgmt Fee, Hedging
Fees	Fees based on fund size
Target Investors	Institutional Investors

## Risk Management

The Circular Fund grants loans primarily for small and medium sized, but also for large cap firms. In order to manage the **credit risk** of the fund efficiently we implement a two step risk management system.

1. **Managing** credit risk by
  - Monitoring key ratios and
  - Managing collateral.
2. **Hedging** credit risk by:
  - Buying CDSs for the exchange traded names
  - Using the iTraxx Europe Crossover (5Y maturity)
  - Using CLOs: sell the loans from different tranches

## Fund Size in Mio. EUR



Note: Only interest-bearing assets are considered

The fund size is ultimately determined by outside investments as the inflow from the trading fee is mostly used to cover management expenses and potential defaults. Due to profound hedging and significant inflows from the trading fee, provisions are minimal.

## Return & Composition (Base Case) in Year 5

