

Bucket Netting

A new regulation is about to come into effect which requires calculating a portfolio's exposure to future contracts. You've been tasked with implementing a solution to automate this piece of regulation for all our clients.

What we know:

- A **Portfolio** is a collection of assets held by a person / organisation.
- It holds two types of assets: **Equities** and **Futures**.
- **Equities** are shares that you can buy in a company.
- A **Future** is a contract to buy shares at a set price and date.
- We need to calculate the **exposure** to the **Futures** held at a snapshot in time.

Scope of work

Implement the following process to calculate the portfolio's exposure to the Futures:

1. Allocate each future into an appropriate 'bucket' based on the table below:

Bucket	Time until maturity
1	0 - 2 years
2	2 - 7 years
3	7 - 15 years
4	> 15 years

2. Calculate the total exposure of each bucket by summing the Market Value.

Sample Portfolio

Data date: 2024-06-30

Id	Class	Market Value	Maturity Date
Equity1	Equity	£10,000.00	-
Equity2	Equity	£5,000.00	-
Equity3	Equity	£3,000.00	-
Future1	Future	£20,000.00	2025-12-30
Future2	Future	-£15,000.00	2024-12-30
Future3	Future	-£30,000.00	2027-12-30
Future4	Future	£10,000.00	2030-12-30
Future5	Future	£20,000.00	2036-12-30
Future6	Future	£20,000.00	2045-12-30