

## Instructions for instructors

The simulation can be played without supervision. However, as an instructor you can guide the participants to ensure that they achieve the desired learning outcomes.

### Before the simulation

- Go to the website  
[https://oriroch.shinyapps.io/fund\\_game/](https://oriroch.shinyapps.io/fund_game/)  
or open an R session and execute the source code. You can download the code at [https://github.com/oriroch/fund\\_game](https://github.com/oriroch/fund_game).
- Gather the participants in small groups so that they can discuss and make decisions in a collaborative manner.

### During the simulation

- Choose a scenario. Ensure that all participants choose and play the same scenario simultaneously.
- Introduce the selected scenario by providing a comprehensive description of the economic, financial, and social background of the selected historical period.
- Establish a financial goal for participants, such as:
  - Maximizing the fund's Sharpe ratio,
  - Maximizing the fund's final return,
  - Outperforming the benchmark in risk-return terms,
  - Beating the benchmark while maintaining a tracking error below a given threshold (e.g., 2%)
- Encourage participants to discuss the results after each round and prepare for the next decision.
- Optionally, at the beginning of each round, you can disclose economic information that will affect the round. Historical information can be obtained from financial media or official publications.

The following example illustrates pieces of information that the instructor can use to introduce contextual information for the scenario “**The European Debt Crisis (2011)**”, guiding participants to analyse how each event may affect their portfolio decisions.

Sources for this material include sources for this material include BBC News<sup>1</sup>, France 24<sup>2</sup>, and ECB press releases<sup>3</sup>.

## **ROUND 1 – AUGUST 2011**

In early August 2011, the financial landscape in Europe witnessed significant shifts. Italian and Spanish government bond yields experienced a sudden and sharp increase, in stark contrast to the decreasing yields observed in German bonds, which reached historically low levels. Consequently, the risk premium associated with Italian and Spanish bonds surged in response to these developments.

On August 7, the European Central Bank (ECB) made a crucial announcement, unveiling its intention to intervene by purchasing Spanish and Italian government bonds. This strategic move was aimed at curbing the potential contagion of the ongoing financial crisis, which began in Greece in late 2009, particularly to these two major European economies.

## **ROUND 2 – SEPTEMBER 2011**

As an attempt to reassure creditors and investors of Spain's commitment to fiscal discipline, Spain passed a constitutional amendment (the first since the Spanish Constitution was amended in 1978) to enforce fiscal stability and prioritize the payment of debt over of any other expenditure. Meanwhile, in Italy, on July 15 the government approved an austerity package aimed at achieving a balanced budget in three years, including tax increases and spending cuts of €48 billion over three years.

The European economy was growing slowly, with forecasts of virtually zero growth and facing the risk of recession.

On September 20, the rating agency Standard & Poor downgraded Italy's sovereign debt to A from A+, citing political considerations as factors (in January 2012, it lowered it

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<sup>1</sup> <https://www.bbc.com/news/business-13856580> (Accessed on: 5 September 2023)

<sup>2</sup> <https://www.france24.com/en/archives/europe/2011/> (Accessed on: 5 September 2023)

<sup>3</sup> <https://www.ecb.europa.eu/press/pr/date/html/index.en.html> (Accessed on: 5 September 2023)

again to BBB+). Meanwhile, Greece was attempting to reach an agreement with the European Commission, the European Central Bank, and the International Monetary Fund (IMF), a group of entities known as the *Troika*.

### **ROUND 3 – OCTOBER 2011**

Greece continued to struggle with meeting the conditions of its bailout packages, leading to concerns about its potential exit from the Eurozone.

On October 6, the Bank of England announced a second round of quantitative easing with the injection of £75bn into the economy. The same day, the Governing Council of the European Central Bank (ECB) announced the details of new longer-term refinancing operations (LTROs) from October 2011 to July 2012, and a new covered bond purchase program (CBPP2).

On October 10, the Franco-Belgian bank Dexia received a new bailout of €4 billion from Belgium, primarily due to its holding of Greek debt.

On October 21, the Eurogroup finally agreed to endorse the disbursement of the next tranche (€8 billion) of Greek bailout loans, potentially saving the country from default. Other countries, such as Spain and Italy, were also dealing with high borrowing costs and the need for financial assistance.

On October 27, European leaders reached a deal on measures to help the economy: private banks agreed to settle a 50% loss on their Greek government debt and the European bailout fund would increase to around €1 trillion. According to José Manuel Durão Barroso, president of the European Commission, “Europe is closer to resolving its financial and economic crisis”.

### **ROUND 4 – NOVEMBER 2011**

No information is revealed for this round. Participants are encouraged to seek information from financial sources, if deemed appropriate.

### **ROUND 5 – DECEMBER 2011**

On December 8, the European Central Bank unveiled emergency credit measures to support bank lending and liquidity in the euro area.

On December 9, European Union leaders, after another round of talks, announced their willingness to join a new treaty to back tighter budgetary policies. The UK remained opposed.

#### **ROUND 6 – JANUARY 2012**

On January 5, the Euro plummets after Spain announced that banks would need €50 billion to cover bad loans.

On January 13, the agency Standard & Poor's downgraded the credit ratings of nine eurozone nations, including France, due to the disputes among European policymakers in addressing the debt crisis. On January 16, the same rating agency downgraded the EU bailout fund (European Financial Stability Facility, created in June 2010) to AA+ from AAA.

Also, on January 13, talks between Greece and its private creditors over the proposed 50% debt write-off broke down. The sides did not agree on the interest rate to be paid by Greece. The deal was urgent for Greece, which was facing a repayment of €14.5 billion on March 20. Fortunately, the talks resumed after 5 days.

The unemployment rate in Spain reached a rate of 22.8%.

On January 31, 25 EU state members sealed the fiscal pact agreement of December 2011. Only the UK and Czech Republic refused.

#### **ROUND 7 – FEBRUARY 2012**

On February 12, the Greek parliament passed the new controversial austerity measures, amid protests, to ensure a crucial €130 billion bailout.

On February 14, the agency Moody's downgraded the credit rating of six eurozone nations, citing weak economic prospects.

On February 21, the eurozone finance ministers ratified a second Greek bailout program, leading to a rally in the euro.

## **ROUND 8 – MARCH 2012**

On March 1, the Eurozone unemployment reached a new high, with a rate of 10.7%.

On March 3, the rating agency Moody's downgraded the Greek sovereign debt again, from C to Ca. On March 13, the rating agency Fitch upgraded the rating of the same debt by one notch to B-.

On March 12, the OECD saw "tentative" signs of recovery in the eurozone.

## **ROUND 9 – APRIL 2012**

The unemployment rate in the Eurozone continued to rise, reaching a rate of 10.8%.

On April 11, the Greek prime minister Lucas Papademos called a general election for 6 May, after months of implementing harsh austerity measures.

On April 18, Italian prime minister Mario Monti acknowledged the possibility of missing a balance budget by 2013 due to a higher-than-expected recession forecast. Italian borrowing costs increased as a result.

Spain's unemployment rate hit 24.4% by the end of March. On April 27, the rating agency S&P downgraded the credit score of Spain to BBB+. Spanish 10-year government bond yield rose to nearly 6%.

## **ROUND 10 – MAY 2012**

On May 2, the rating agency S&P downgraded the rating of Greek sovereign debt to CCC, in the junk category.

On May 6, the Greek general election was held. Voters punished the parties supporting the bailout agreement with the EU and the IMF. Efforts to form a government failed. On May 16, new elections were announced for June 17.

On May 25, Spain's fourth largest bank, Bankia, requested a €19 billion bailout after the rating agency S&P downgraded the bank's rating to a junk level.

### **ROUND 11 – JUNE 2012**

On June 9, Spain got a €100 billion in loans from the eurozone funds to help rescue its banks. Although stocks soared on the following trading day, the credit rating agency Moody's downgraded Spain's credit rating to Baa3, just above the junk category.

On June 17, the conservative pro-bailout party New Democracy won the Greek general elections.

### **ROUND 12 – JULY 2012**

No information is revealed for this round. Participants are encouraged to seek information from financial sources, if deemed appropriate.