

### **SETTING THE INTEREST RATE\***

Federatio and Uniona are two of the world's leading economic powers. They both try to keep up with Insula, the third major economic force in the world. Federatio and Uniona have had for some time a large growth deficit in comparison to Insula. In order to reinforce their position vis-a-vis Insula, Federatio and Uniona have each considered stimulating their gross domestic product (GDP) for the upcoming months.

As one of the directors of the Council at the Central Bank of either Federatio or Uniona, your goal is to maximize the GDP of your country. You hope that at the Board of Directors monthly meetings, which you attend and where the interest rates are set, you will reach your goal. Following regular market conditions, you will set interest rates for each month at a level of 2 %, 3 % or 4 %. The current interest rates for both Federatio and Uniona are at a level of 3%.

Interest rates modify the GDP of the considered country. Studies show that an increase in the short term interest rate will adversely affect consumption and investment, thus slowing down the economy. As a consequence, the monetary value will increase and the exports will decrease (as will investments), causing a decrease in long-term activity. On the contrary, a reduction in the interest rate provokes a growth in revenues which has a positive impact on the GDP. You are totally indifferent to the GDP of the other country.

Please note that in the short-run, a decrease in interest rates will only have negligible effects on the cost of imports or on prices. Interest rates may have an impact on other aspects of the economy, but your decision shall be strictly based on the impact on the GDP.

Other studies invariably show that for the last several months, net exports have not only been impacted by the principal interest rate set by the directors of the Council at the Central Bank in your country, but also by the rate set by the Central Bank's Council in the other country. This second factor, with other variables, has paradoxical effects on the level of the GDP of Federatio and Uniona. Whatever the outcome is, your goal is to maximize your GDP, considering that the next few months will be of the utmost importance.

In order for you to assess all the consequences of this set of interactions, which are complicated by other macroeconomic factors, you have asked an unbiased group of international experts, unanimously recognized, to conduct a study the results of which are summarized in the following table. It indicates the monthly projected GDP growth for Federatio and Uniona as a function of the principal interest rate. The number in the upper right corner preceded by a U in each box represents the GDP growth for Uniona; the number in the lower left corner preceded by an F represents the GDP growth for Federatio. All numbers are stated in billions of euros.

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### Interest Rate fixed by UNIONA

		2 %	3 %	4 %
Interest Rate fixed by FEDERATIO	2 %	U: 11 F: 11	U: 18 F: 2	U: 15 F: 2
	3 %	U: 2 F: 18	U: 8 F: 8	U: 15 F: 3
	4 %	U: 2 F: 15	U: 3 F: 15	U: 5 F: 5

Please be prepared for your first monthly meeting with the other directors of the Council of your Central Bank. You will have to determine the rate for the first month. In order to avoid market disturbances, new international regulations on interest rate fluctuations require that each Central Bank communicate simultaneously to the financial markets their principal interest rate at the beginning of each month.

The diplomatic relations between Federatio and Uniona are tense. It is not likely that the political leaders from either side authorize contacts between the two Central Banks.

### GDP GROWTHS

Month	Interest Rate <i>Federatio Uniona</i>		Monthly Growth <i>Federatio Uniona</i>		Cumulated Growth <i>Federatio Uniona</i>	
1	_____	_____	_____	_____	_____	_____
2	_____	_____	_____	_____	_____	_____
3	_____	_____	_____	_____	_____	_____
4	_____	_____	_____	_____	_____	_____
5	_____	_____	_____	_____	_____	_____
6	_____	_____	_____	_____	_____	_____
7	_____	_____	_____	_____	_____	_____
8	_____	_____	_____	_____	_____	_____
TOTAL					_____	_____