${}^{ullet}$ P<sub>3b</sub> < P<sub>1b</sub> it is natural to expect this given the definition of these probabilities (in other words it is normal to expect banking stability to be easier to achieve if there is effort in this direction on the part of the authority responsible);

•the lower  $P_{0b}$  and  $P_{3b}$ , or the higher the risk of banking crises;

• the higher  $P_{1p}$  is, the probability of price stability when the monetary agent makes an effort to attain this, in the presence of stability in the banking system.

## 9. Remarks and possible developments

The advantage of entrusting the roles to a single agent can however be conjectured using a simple thought process.

The minimum cost that the politician has to bear for incentives must at least cover the costs of effort and must therefore equal  $C_{bp}$ , if there is a single agent, and  $C_p + C_b$  if there are two. If  $C_{bp} < C_p + C_b$ , then it is clear that it is always more convenient to appoint a single agent.

In the election period, the politician's spending on incentives is even lower, in that as he does not want the central bank to be over-zealous, it will only equal  $C_b$  for two agents and  $C_{bp}$  -  $C_p$  for one agent. Therefore the minimum spending for the politician must be in the electoral period.

If however we introduce a reputation cost, R, in cases in which although the central bank wants to act, it refrains from doing so in order to please the politician, then in the electoral period if two agents are appointed, the politician's cost will be equivalent to

 $C_b + (R/2)$  if there are two agents and to

 $C_{bp}$  -  $C_p$  + R if there is one agent.

In the non-electoral period, the politician's costs will be equivalent to

 $C_b + C_p$  for two agents and to

C<sub>bp</sub> for one agent.

Comparing these costs shows that, if  $C_{bp} < C_p + C_b$  then, in the non-electoral period, it will certainly be more convenient to appoint a single agent. In the election period, it will all depend on the difference

$$C_{bp} - C_p + R - [C_b + (R/2)] = C_{bp} - (C_b + C_p) + (R/2)$$

If this difference is zero, it will not matter at all whether one or two agents are appointed. If the value is >0, then one agent costs more than two agents and therefore it is better to appoint two agents; if on the other hand  $C_{bp} - (C_b + C_p) + (R/2) < 0$ , it will be more suitable to appoint a single agent. The cost difference will rise in proportion to R, the reputation cost, assessed by the central governor.

Firstly, it would be interesting to identify proxies to measure the governor's reputation effect.

Secondly, an empirical analysis could be made of whether or not these indicators of reputation are connected to the outcome of monetary and supervision policy. It should be remembered that the problem of measurability also exists for the second function mentioned.

## 10. Conclusions

This paper analyses the advantage to be gained in entrusting the jobs of "banking supervision" and "monetary policy" to two agents, Banking Authority (BA) and Central Bank (CB), or to a single agent, CB. In examining the policy maker's choice between single or multiple authorities, the role of the political cycles was appraised. For this purpose, two periods were examined: electoral and non-electoral. The model is that of a principal with two agents, where the principal is the political group in power, while the agents are, as we have said, BA and CB.

The reached conclusion is that the political chooses the institutional design of regulatory authorities without being influenced by the electoral cycle. What is interesting is the importance of the costs of "capture", related to the different institutional hypotheses. The political will have convenience to choose a centralized setup, in the pre-electoral period, when the value that the head of the CB (governor) gives to his reputation is rather low. This will occur with higher probability when the