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“Moral-hazard” as a threat to real convergence in the European Union

Summary

The principal motive behind the whole process of Economic and Monetary Union is the idea of a faster real convergence of the living standards of the member countries, i.e. faster growth rates and augmenting productivity. But the real convergence is not a required criterion. The real convergence is a residual of the process of nominal convergence. In the Economic and Monetary Union, in an environment of “impossible trinity” where free capital movements are guaranteed, where currency union is a mid term obligation of every accession country and the monetary sovereignty is being seceded to the European Central Bank, the nominal convergence criteria from Maastricht promoting sustainable debts and deficits are supposed to be a guarantee of stability. The problem is further exacerbated by the possible “Balassa-Samuelson effects” and “inverse Balassa-Samuelson effects” in case of recession. Political internal and external “moral-hazard” of using the fiscal and monetary policies to promote short-term political goals has long-term consequences on central and eastern European countries wishing to join the European Union. It is a game theoretical problem as the governments incurring the deficits are not the same governments having to repay the debts. It is a situation of “moral-hazard” that left alone could lead to a vicious circle of an adverse selection of candidate countries for the Economic and Monetary Union: a “league of lemons”. The Maastricht debt and deficit criteria have been proven unsuccessful in curbing the external political “moral-hazard” because of the free-riding of some large countries in the past, especially Germany and France. The external “moral-hazard” is the consequence of the internal one. The problem may be exacerbated by the federal structure of some countries where there are no internal debt and deficit requirements, and potentially leading to systemic proportions. Furthermore, France announced to go on with the Keynesian (Stiglitz and Krugman) proposal of increased spending. On the other hand, Germany is putting pressure on Greece to balance its budget. Smaller countries are probably not going to endanger the monetary union, but it is rather a matter of principle. There are two tiers of countries: too big to fail countries and too small to endanger countries. In this way one of the equilibria could be a total break-up of the EMU. The “good” countries, are unable to exclude the “bad” countries: a typical problem of “adverse selection”. What are the possible equilibria of this game-theoretical problem, and what is the best behaviour of a country joining the EU and subsequently the EMU?

Keywords: EMU, economic convergence, moral-hazard, adverse selection, game theory.

JEL: H6, H7, Z18.

1. INTRODUCTION

If the incentives to take risks are strong enough, and there are no incentives to minimise the losses, then we should expect to see excessive risks being taken. Quoting Martin Wolf (2008), the Financial Times' chief economics commentator's statement regarding the finance industry that "no other industry has a comparable talent for privatising gains and socialising losses" it may be added that there is one such area: politics. In politics everything is done with other people's money, and one has several ways of privatising the gains. According to Milton Friedman there are only four ways to spend the money: one can either spend his own money on oneself; somebody else's money on oneself, his own money on somebody else; and somebody else's money on somebody else. The first example shows the best spent money and the last example shows the worst spent money. Politicians fall in the last group of people spending somebody else's money on somebody else, i.e. the worst spent money. Namely, they are spending the money of a large group of taxpayer's on a small group of clients. The political rewards may not only take the form of a re-election, but there is vast number of possible arrangements with the private sector during and after the political term. The political costs are small, as politicians can and do evade the accountability for their own mistakes. So, there is one sector, second to none where the gains get privatised and costs socialised: the political sector.

According to Kevin Dowd, writing about the sub-prime financial crisis, if risk-taking is so lucratively rewarded, then risk-taking activities will attract the talent and the risk-takers will have the edge over the risk managers (Dowd, 2009, p.149).

There has been an epidemic of European Union funds frauds. It seems that some countries have specialised themselves more than others in the segment of fraudulent behaviour, and some other countries' politicians to have turned a blind eye on the process, just for the sake of speeding-up the process of convergence, forgetting that the nominal convergence without the real convergence may in the future bring more problems than benefits.

The nominal convergence criteria do not impose any other real convergence requirements. This could possibly lead to the real convergence indicators as being the adjustment variables or so to speak the residuals of the adjustment process during the fulfilment of the nominal convergence criteria.

What hurts the ordinary people the most are the real factors and not the nominal ones.

The accession framework encompasses the political and economic environment in which the accession takes place. The economic environment is one of rapid economic convergence with the adherence to strict nominal convergence rules, formulated at Maastricht, promoting sustainable debts and deficits that are supposed to guarantee a level of stability and guarantee against beggar-thy-neighbour behaviour. Present debts grow out of past deficits. The best estimations of future actions are present actions played by the players, in an environment of the sufficient enforcement of adequate present rules.

In the Economic and Monetary Union, in an environment of “impossible trinity”, free capital movements are guaranteed, and currency union is a mid term obligation of every accession country and monetary sovereignty is being seceded to the European Central Bank.

The problem is further exacerbated by the possible “Balassa-Samuelson” and “Baumol-Bowen” effects and their inverse versions in case of recession. Political internal and external “moral-hazard” of using the fiscal and monetary policies to promote short-term political goals has long-term consequences on central and eastern European countries wishing to join the European Union. It is a game theoretical problem as the governments incurring the deficits are not the same governments having to repay the debts. It is a situation of “moral-hazard” that left to one’s own devices could lead to a vicious circle of an adverse selection of candidate countries for the Economic and Monetary Union: a “league of lemons”. The “*moral-hazard*” arises whenever a principle of limited liability is enacted between the acts of a principal and an agent, in this particular case, because a country does not take the full financial responsibility for its debt, and therefore has an incentive to act recklessly, leaving other EMU member countries to hold some responsibility for the consequences of those actions. The Maastricht debt and deficit criteria have been proven unsuccessful in curbing the external political “*moral-hazard*” because of the free-riding of some large countries, especially Germany and France (“the original sin”). The external “moral-hazard” is the consequence of the internal one. The problem may be exacerbated by the federal structure of some countries where there are no internal debt and deficit requirements, and potentially leading to systemic proportions. Furthermore, France announced to go on with the Keynesian (Stiglitz and Krugman) proposal of increased spending. On the other hand, Germany is putting pressure on Greece to balance its budget. Smaller countries are probably not going to endanger the monetary union, but it is rather a matter of principle. There are two tiers of countries: too big to fail countries and too small to endanger countries. In this way one of the equilibriums could be a total break-up of the EU. Countries like Switzerland and Norway calculate that they would be net contributors, and are reluctant to join, but Romania and Bulgaria calculated they would be net recipients and did join the EU. The “good” countries when already in, are unable to exclude the “bad” countries when they are already in: a typical problem of “adverse selection”. So what are the motives of the “good” to bail out the “bad”?

2. THE LEGISLATIVE FRAMEWORK OF THE EUROPEAN UNION

Article 125 of the Treaty on the Functioning of the European Union (TFEU) prohibits Member States from assuming the commitments of another Member State towards its creditors. The Bail-out can assume several forms. A default on debt with a complete write-off is just one of them.

Article 125 reads as following: ***“A Member State shall not be liable for or assume the commitments of central governments, regional, local or other public authorities, other***

bodies governed by public law, or public undertakings of another Member State, without prejudice to mutual financial guarantees for the joint execution of a specific project.”¹

Article 126 of the TFEU further states that member states shall avoid excessive government deficits, and the Commission shall monitor the compliance with budgetary discipline on the basis of the debt and deficit criteria specified in the Protocol on the excessive deficit procedure.

The enforcement policies that the TFEU has put in place can be summarised in one sentence: if a Member State persists in failing to put into practice the recommendations of the Council, then nothing will happen what otherwise would not have happened if these policies were not put in place.

The most severe of these punishing policies are:

1. Imposition of direct penalties by means of a declaration by the Court of Justice of the European Union (CJEU) that the conduct of a Member State infringes EU Law so that the Member State terminates that conduct, and/or that a Member State “has failed to fulfil an obligation under the Treaties” (art. 258 TFEU). The imposition of direct penalties is a process that takes a very long time to implement. It has several phases:
 - a. infringement detection
 - b. filing and documentation
 - c. negotiation
 - d. litigation
 - e. judgement (with or without time-frame)

If the Member country does not comply with the CJEU judgement than the whole process starts all over again for the infringement of the judgement. The process has no end. There are two types of sanctions:

- a. Penalty payments serve to induce a Member State to stop the breach of obligations (Persuasive function)
- b. Lump sum should punish for the failure to comply with the initial judgement (Dissuasive function)

In practice, there have been no payments for the breach of Maastricht criteria. Why is that so? Article 260 of the TFEU specifies that the Commission “shall specify the amount of the lump sum or penalty payment to be paid by the member state concerned which it considers appropriate to the circumstances”.

2. The public smearing (discrediting) of the non-complying country by making the information about the non-compliance public, decreasing its possibilities of refinancing, but also increasing the risk premium on, and decreasing the value of the euro. The punishment of the non-complying country has a form of “shooting oneself

¹ European Union (2008) “Consolidated version of the Treaty on the Functioning of the European Union” *Official Journal of the European Union*, 9.5.2008. (our bold and italics)
URL: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:115:0047:0199:en:PDF>

in the leg". The information provided by the policy has already been integrated into the financial markets.

3. The non-compliance penalties cannot be enforced, because there is no mechanism of enforcement, and none can ever be peacefully instituted.
4. To require the European Investment Bank to reconsider its lending policy towards the non-complying member state is to put it mildly: a cynical requirement, because the defaulting non-complying country is already not creditworthy.

So, instead of punishing policies, the EU has put forward the European Financial Stabilisation Mechanism (EFSM)² which allows the Commission to borrow on financial markets on behalf of the EU under an EU budget guarantee. The Commission then lends the proceeds on to the beneficiary Member State, increasing the financial capability of the non-complying EMU member at the expense of other EU members.

As the punishing policies show, they are not put in place to prevent the other member states to behave in a "beggar-thy-neighbour" manner. The question is does the lack of efficient policies encourage them to?

3. THE MORAL HAZARD AND THE COMMON GOOD

By not punishing the bigger states for breaking the rules in the past, a path of arising "*moral hazard*" has been shown for the smaller countries to follow.

The "*moral-hazard*" arises whenever a principle of limited liability is enacted between the acts of a principal and an agent, and in this particular case, because a country does not take the full financial responsibility for its debt, and therefore has an incentive to act irresponsibly, leaving other EMU member countries to hold some responsibility for the consequences of its actions. The one who shares the profits of an action ought also to be liable for its losses. But the lenders don't have an incentive to understand what the borrowers are doing, because of a structured principal-agent relationship. The principal are the European Union taxpayers, and the multiple agents are the politicians on the lenders' side lending other peoples' money to the borrowers who are fully aware of the rules of the game. The political transaction costs are larger than their infinitesimally small individual share of the costs of political risk-bearing. In political sense: the risk is only the one of a country default which is a systemic risk. On the borrower's side, diluting the problem into a large pool of countries, the incentive for individual country's responsibility is so diminished that it is no one's problem any more, until it becomes a systemic problem, i.e. everybody's problem.

The obvious question that arises is: should any of the EMU member countries write-off the debts or part of debts of any other EMU member country?

² The Council of the European Union (2010) Council Regulation (EU) No 407/2010 of 11 May 2010 establishing a European financial stabilisation mechanism. *Official Journal of the European Union* of 12.05.2010.
URL: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:118:0001:0004:EN:PDF>

The argument against forgiving debt is one of arising “*moral hazard*”, i.e. that it would motivate countries even-more to default on their debts, or to deliberately borrow more than they can afford, and that it would not prevent a recurrence of the problem but, instead it would magnify it in a self destructing vicious circle.

The official view of the problem from the EU perspective is somewhat different: *“Helping to stabilise the finances of one Member State helps to stabilise the finances of other countries in the euro area as well. Financial assistance is provided as a last resort, to counter any risk of contagion and to safeguard financial stability in the euro-area. It should be underlined that the financial assistance provided to euro area Member States in distress is not a fiscal transfer, but a loan to be repaid fully with interest. Taxpayers will not pay anything.”*³

Regarding the financial stability as a “common good” certainly has sense in a fractional reserve fiat money system. In the sense of reducible confidence in a common fiat currency, the financial stability is a “common”, rather than a “public good”. It fulfils the condition of non-excludability of countries in the EMU “club”, but it is perishable if the countries tend to not-follow the rules. Once a country is a member of the EMU “club”, it cannot be left out. So, instead of talking of a “club good“, we talk about a “common-good“, within a “club“. The problem arises when the club rules are not stated in sufficient detail and are insufficiently enforced. One way of solving the problem is to create a “pure private good“. Obviously, this is impossible, as no private investor is willing or capable of incurring such an amount of risk.

But, the “*moral hazard*” is an informational problem, arising from ex-ante and ex-post informational asymmetries about outstanding debts, present deficits, and future repayment capabilities. So, part of the blame is also on the investors, who knowingly or unknowingly misread and misinterpreted the information. Probably the best known tool to combat the financial moral hazard problem when default has already occurred is the loan refinancing. Other than that, any form of debt-forgiveness puts the EMU and the non-compliant country in a “*Samaritan’s dilemma*” where the charity is used to improve one’s situation, or becoming perpetually a tool of survival. The thesis that taxpayers are not going to pay anything is wrong. The Commission obviously does not see the difference between „That which is seen, and that which is not seen” – the lesson taught by Frederic Bastiat already in 1850. The taxpayers will have to pay for the difference between the lower interest rates provided by the European Union via the European Central Bank creating the money ab nihil and the market interest rates. The European Union taxpayers bear the costs of the additional risk in form of lower returns on their investments compared to the market returns on similar risky investments. The high-risk, low-return, bail-out investment is crowding-out some useful investments in the donor countries by increasing their domestic interest rates. The countries that follow the rules are being punished for doing so, by being forced into an underwriting

³ European Commission, (2012) Questions and answers on financial assistance to euro area member states.

URL:

http://ec.europa.eu/economy_finance/focuson/crisis/documents/question_answers_eu_financial_assistance_en.pdf

deal on behalf of the countries not following the rules. Moreover, the costs of additionally created money will come in form of higher inflation rates in the future.

4. THE GAME

How to know what is going to be the game-theoretical strategy after the entry of a country that behaved well before joining the EMU? What are the possible equilibria of this game-theoretical problem, and what is the best behaviour of a country joining the EU and subsequently the EMU?

The players: Germany and Greece.

The actions: for Germany – to bail out or not to bail out Greece, and for Greece – to repay or not to repay the debt.

The payoffs: Under the assumption that the game is being played only once (non-iterative, non-repetitive game), the pay-offs would resemble a classic “prisoner’s dilemma” case, although it is not a prisoner’s dilemma type game.

Figure 1: Greece and Germany in the quasi “prisoner’s dilemma” game

		Greece	
		To repay the debt	Not to repay the debt
Germany	To bail-out Greece	-1 , -1	-2 , 0
	Not to bail-out Greece	0 , -2	-3 , -3

The equilibrium: Figure 1 shows that in a single game, the equilibrium would occur in a position where each country follows its own selfish short term interest and where they are both stuck up with large negative outcomes.

The outcome: If the countries cooperate (to repay the debt), they can reach a Pareto superior outcome (of repaying the debt), by minimising their cumulative losses. If they don’t reach a common decision,

At a first glance, this game is similar to the “prisoner’s dilemma” where both sides, pursuing their own self-interest, could find themselves stuck in a position with huge losses. However, that outcome is not an equilibrium outcome because each country is motivated to make a move and cut part of its losses. First country that moves would therefore put itself in better position than by not doing so, but would in the same time put other country in much better position. The player making the first move out of a non-cooperative outcome will be relatively worse-off compared to the other player. The game shows the disadvantage for the first mover. We argue that the countries should, choose to collaborate, and the game should finish in the position where they are splitting the losses.

Germany seems to be in a better position with stable financial situation and could choose to discipline Greece in order to make an example for possible future iterations of this or similar games. If a few of the countries do test the system and try to disobey the convergence criteria, and are greeted with an aggressive strategy, causing more harm than good, following players will be deterred from trying the same policies. This solution may be viewed as a special case of a “*chain-store paradox*” game. On the other hand, if they are not met with an aggressive strategy, future “*moral-hazard*” could arise.

Germany is highly motivated to save the European joint market and the European monetary union from falling apart. As a major industrial and export force in the EU, it could suffer from an EMU meltdown. If Germany could find a way to “punish” Greece and throw it out of the EMU, without the risk of an EMU collapse, it could be motivated to do so. But, since there are no legal options to force any EMU member to leave the union voluntarily, an attempt to expel Greece could trigger a further ambiguity considering the future of the EMU. Germany gains from a monetary union because the less developed member states reduce the strength of the Euro and enhance the German export competitiveness. Germany is highly motivated to use all its economic, legal and lobbyist power to escape the worst scenario where Greece defaults and Germany loses the whole amount of Greek debt owed to Germany, but also the benefits of a common economic and currency area. That could lead to a conclusion that negotiations will lead to an outcome where Germany accepts a partial Greek bail-out. However, given that the game could be repeated between some other EMU countries, and that the solution of the first game will affect the expectations about the next one, Germany will do its best to induce Greece to repay a significant portion of its debt.

From the Greek point of view, an outright sovereign default without a partial German bail-out would lead to a possible economic disaster and a full loss of creditworthiness for Greece. So any Greek resistance to collaboration can only be viewed as bluffing to gain a negotiation position, and a partial bail-out from Germany. A total Greek bailout would mean a large loss of Greek’s credibility and creditworthiness.

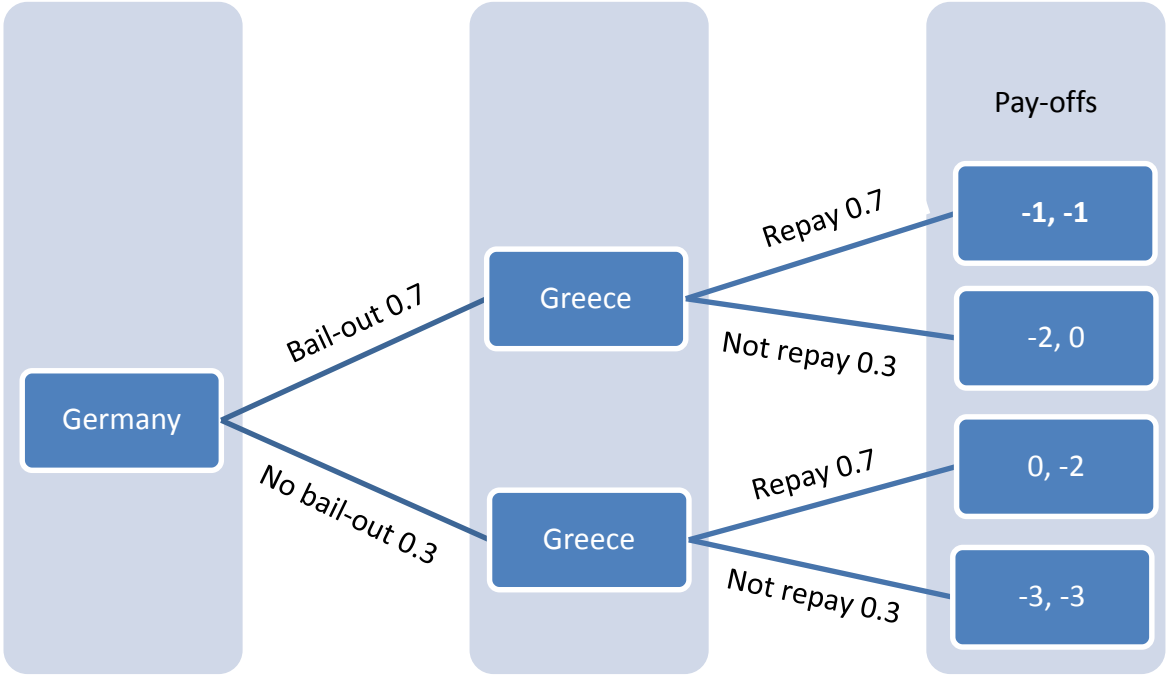
The game including the probabilities of specific moves is shown in extended form on Figure 3. We argue that although game theoretical argumentation could point to one of the outcomes where one of the countries endures, and other bends, this situation is more likely to finish in splitting the losses.

This is strengthened by the following facts:

1. this situation allows for collusion in problem solving,
2. this game tends to repeat itself, and it’s result will influence other iterations, and
3. players should be aware of future implications of present acts so short term utility should be sacrificed for long term prospects.

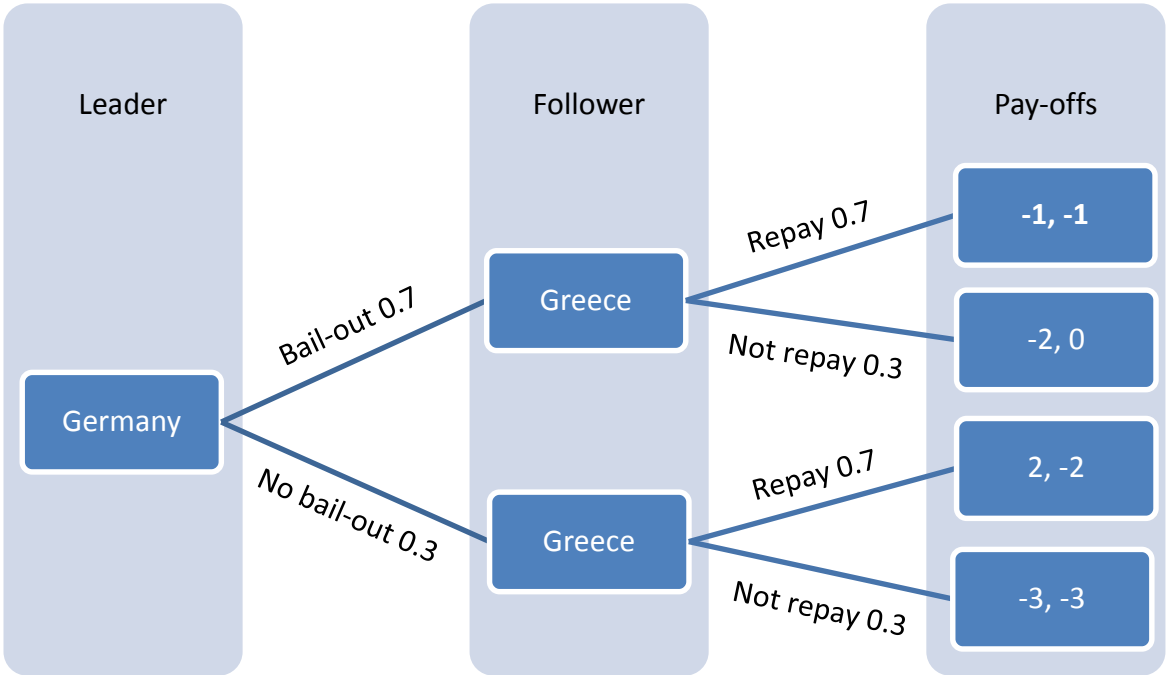
The following figure shows a simple form simultaneous game with no informational asymmetries. The solution is straightforward and known to both players simultaneously.

Figure 2: Simultaneous game with no informational asymmetries



In a follow-the-leader game with the Informational asymmetries in favour of Greece, the game tree is as follows. The outcome is same as in the previous example.

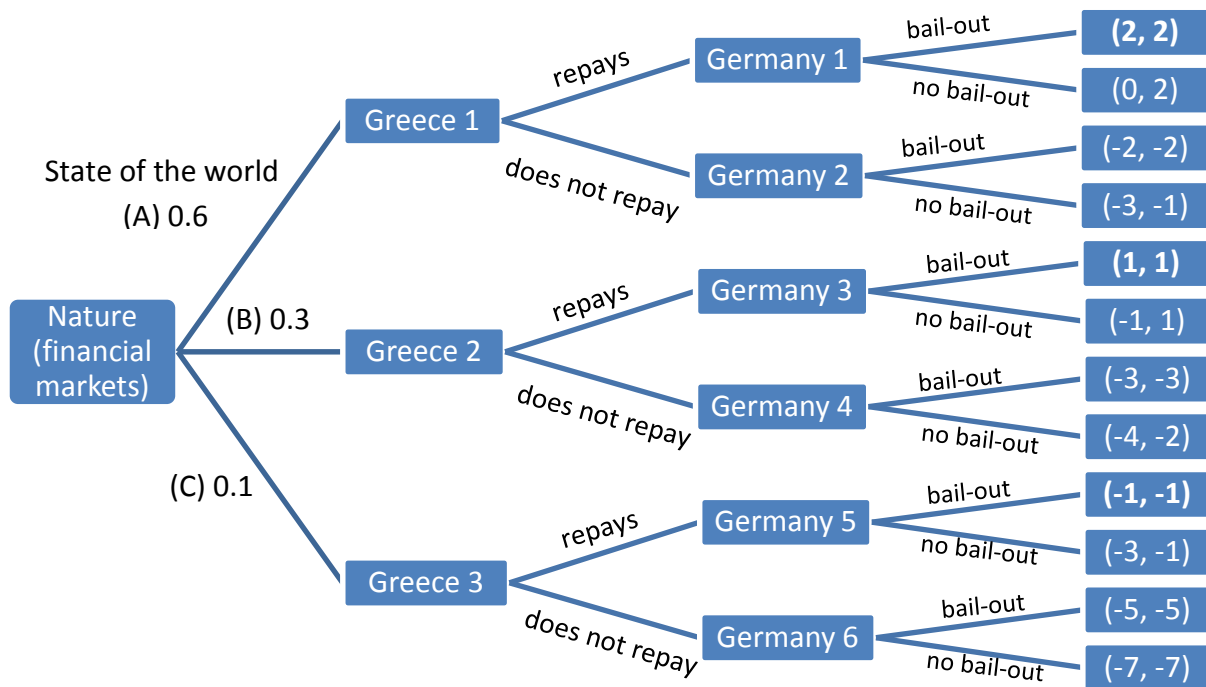
Figure 3: Sequential (leader-follower) game



Further variation of the game can be presented by introducing financial markets as a third party. Considering that the financial markets are not monolithic, in the sense that market response is a collection of individual responses of many parties, and the negotiation is possible only on individual level.

Therefore, the financial market's move is shown as a move of nature in . However, implications of that move can be of great importance on other players' payoffs.

Figure 4: Extensive form sequential iterative non-repetitive game



5. NEGOTIATIONS UNDER SURVEILLANCE

Although it can be shaped as a game theoretic problem, the EU dispute over helping troubled states has some issues that need to be viewed from a negotiation analysis point-of-view. According to Raiffa (2007, p.81), negotiation analysis differs from the game-theoretic perspective because it relies on joint decision making. In such, players can mutually agree upon joint decisions, payoffs depend either on consequences of the joint decision or on each party's go-it-alone alternatives, direct and reciprocal communication is possible, and so are creative solutions.

These real life differences could impact decision making and raise some new questions that would affect negotiation results. Some of the important issues addressed by Raiffa in his paper are:

- are the parties monolithic?
- is the game repetitive?
- are there linkage effects?
- are threats possible?
- are there time related costs?
- what are the group norms?
- and, are the negotiations private or public?

In the EU dispute over the means to help the troubled parties, the parties are surely not monolithic. Even if negotiation process is simplified and presented as a two players game (for instance, let us assume that parties are Germany and Greece), it is clear that each party comprises of people with differing values. It can than be expected that any decision made by a party, jointly or separately, will suffer strong opposition. Repetitiveness of the game and possible linkage effects further complicates the decision-making process because the outcome of the first step will be carried over to the next step in bargaining. For instance, German decisions on how to handle dispute with Greece could affect future negotiations and decision-making that Germany would encounter with Portugal, Ireland or, Croatia. As it can be seen on regular basis, threats are possible and conducted in this inter-EU game. Although, the dispute is not over yet, and it must be taken into account that threat doesn't have to be sincere (they can be just a part of negotiation strategy), so it is still to be seen if they are viable. However, that will be heavily influenced by expected payoffs for involved parties, and cannot be seen as costless disciplinary measures. The time related costs are important if one of the parties is in hurry to make fast deal. In these circumstances, that party could be in disadvantage. In perspective of EU dispute, the question that arises is there time related costs, and who will suffer if the problem is prolonged. Differences in group norms can be of importance in EU dispute because of expected differences in behaviour of northern and southern (Mediterranean) states. Probably one of most important characteristics of EU dispute is that it is public, meaning that there are plenty of others parties of interest observing the negotiation process, and anticipating the results. Those parties are not just other member EU states that expect possible linkage effects, but also numerous other parties as: non EU states and corporations coping with international business environment uncertainty, and financial institutions whit more direct interest in dispute. For instance, state that is hoping for bailout from other EU member states is most probably also in debt at some of big funds or banks. Actions that these institutions will make are directly influenced by their expectance of what EU members involved in dispute will do. For instance, decision if Germany will offer some further help to Greece will affect the odds for Greece to pay it's debt. We can say that the EU is dealing with negotiations under surveillance.

6. CONCLUSION

According to the present information about the available actions and their payoffs, the strategies' equilibrium results in coordination, partial pay-off of debts, partial bail-out, and mutual assistance. That could induce even more arising "moral-hazard" in the future that wishes for the Economic and Monetary Union (EMU) having different rules of the game.

The expected solution of this game is therefore, although probable, harmful in the long run because it motivates EU countries to engage in further "moral hazard" situations. The threat of future "moral hazard" is viable because opportunistic behavior is amplified when probable partial bail out is present as a "safety net" when things go wrong. The danger is

enhanced by an earlier explained hypothetical situation where a big economy like Italy, France or UK seeks the bail-out, and that bail-out would be harder to absorb.

Further research should be pointed towards stable solutions for decreasing probable “moral hazard” in the long run and in the same time developing sustainable mechanisms for helping troubled countries, or countries in troubled conditions. That kind of solution seems rather optimistic but a failure to find it is likely to present obstacles in the further development of the EU.

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