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Bank Rescues and Fiscal Policy in the European Union during the Great Recession

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Summary: The outbreak of the economic and financial crisis in 2008, the so-called Great Recession, has made that many European Union countries have made massive interventions in their banking and financial systems. These interventions have had a considerable impact in the public finances of these countries. The aim of the paper is to analyze the impact on the national public budgets of the measures of public support to problem financial institutions carried out between the years 2008 and 2013, and to study how this budgetary impact has affected to the fiscal imbalances and to the strategies of fiscal impulse and consolidation implemented along these years.

Key words: European Union, Fiscal policy, Great Recession, Financial crisis, Bank rescues.

JEL: E62, E65, H62, O52.

During the Great Recession, the fiscal policy has gained relevance both in advanced and emerging economies. Having been subordinated to the monetary policy before the crisis, since 2008 fiscal policy has adopted a more active role thanks to the co-existence of a set of exceptional circumstances, among others, the depth and length of the recession and economic stagnation, the decline of private spending, the credit and liquidity constraints suffered by the private agents resulting from the banking and financial crises, and the implementation of an expansionary monetary policy that have brought (official) interest rates to levels close to zero. These global elements, combined with some favorable domestic factors, like low previous levels of public debt, the lack of large external imbalances, high domestic saving rates, the existence of a deep and sound financial sector, have allowed that, at least in some economies, the fiscal activism has been deep and long-lasting (Jesús Ferreiro, Carmen Gómez, and Felipe Serrano 2013).

If we focus on the European Union (EU), we can see the existence of two different periods regarding the working of the fiscal policy during the Great Recession. Until the year 2010, expansionary fiscal policies were a generalized phenomenon, leading to a marked increase of fiscal imbalances. However, since 2010 many countries recorded unsustainable fiscal imbalances because of the combination of high primary fiscal deficits, rising interest rates applied to the new issuances of public debt, and low, even negative, nominal and real GDP growth rates. As a result, there was a sequence of sovereign debt crises and a generalization of fiscal policies strategies whose only objective was the reduction of fiscal deficits (Achim Truger 2015).

The extent of these patterns does not mean, however, that the EU countries have implemented identical strategies of fiscal policy. Existing studies (for instance, Ferreiro, Catalina Gálvez, and Ana González 2015), show that there are in the EU countries, regardless they belong or not to the euro zone, significant differences in terms of the expansionary-restrictive, pro-cyclical or counter-cyclical stances of the fiscal policies and the contributions of public revenues and expenditures to the fiscal impulses or adjustments.

These differences among national fiscal policies can be explained by different reasons. On the one hand, they can have an economic origin, related to the different depth and/or phase of the national business cycles. On the other hand, they can be explained by technical-instrumental factors, related to the choice of the optimal mix of changes in the revenues and the expenditures that (presumably) warrant the effectiveness and credibility of the fiscal impulses or adjustments. But, those differences could also be explained by socio-political factors, related to the social and political preferences of national constituencies about the desired size of the public sector and budget and the composition of public revenues and expenditures (Ferreiro, Maribel Garcia del Valle, and Gómez 2010, 2012, 2013; Paolo Mauro and Mauricio Villaverde 2013; Ferreiro, Carlos A. Carrasco, and Gómez 2014).

In any case, these explanations are based on an interpretation of the fiscal policy that is exclusively made on a macroeconomic perspective. It is implicitly assumed that the changes in the public revenues and expenditures, and therefore in the fiscal imbalances, are the direct consequence of the impact of the economic crisis on the public finances through the working of the built-in stabilizers, or the consequence of the discretionary fiscal measures adopted by the economic authorities to sustain (or rise) the economic activity, or even to adjust the existing fiscal imbalances.

This interpretation is excluding the possibility that the changes in the public finances be the answer to extraordinary causes, unrelated to the management of the macroeconomic activity. Some of these causes can have a non-economic nature, for instance related to a political or electoral cycle. But others can have an economic root. In this sense, the financial and bank crisis has obliged many European countries to make an intense direct intervention in problem banks and financial institutions with the objective, in some cases, of rescuing them, and, in others, to make an orderly restructuration or liquidation. These activities of rescue and financial support to national bank and financial sectors have had a direct and indirect impact on the public budget, impact that has not only affected to the corresponding annual budget but has also taken place in the subsequent annual public budgets.

Therefore, it is necessary that the study of the fiscal policies in the European Union during the Great Recession analyzes the size and the composition of the fiscal impulses and adjustments according to the evolution of the public revenues and expenditures. However, given that in many countries the financial crisis has led to an intense public intervention in the problem financial institutions with the consequent impact on the public finances, it is also necessary to analyze to what extent the evolution of the pubic revenues and expenditures and of the public budget balance, and, therefore, the strategies of fiscal policies, have been affected by the measures of public support to problem financial institutions.

We must have in mind the intense debate about the optimal design of the fiscal policy, either of a restrictive or expansionary fiscal policy, in terms of making a decision about whether such a policy must be expenditures-driven or revenues-driven (Ferreiro, Garcia del Valle, and Gómez 2010, 2012, 2013; Emanuele Baldacci, Sanjeev Gupta, and Carlos Mulas-Granados 2012; Nicoletta Batini, Giovanni Callegari, and Giovanni Melina 2012; Robert Hagemann 2012; Margit Molnar 2012; Douglas Sutherland, Peter Hoeller, and Rossana Merola 2012; Huixin Bi, Eric M. Leeper, and Campbell Leith 2013; Ferreiro, Gómez, and Serrano 2013, 2014; Pablo Hernández De Cos and Enrique Moral-Benito 2013; International Monetary Fund 2013; Mauro and Villaverde 2013; Ferreiro, Carrasco, and Gómez 2014; Pasquale Foresti and Ugo Marani 2014).

Regardless the validity of the conclusions reached in these studies, any strategy of fiscal policy, mainly those focused on the correction of the fiscal disequilibria, must take into account the origin of these disequilibria (in they were caused by changes in the expenditures and/or in the revenues) and the evolution in the short and medium-term of the rest of budgetary items in order to design the correct intensity of the fiscal consolidation (or impulse) measures.

Therefore, it is necessary to evaluate to which extent the bank rescues have had an impact on the generation of the fiscal disequilibria (or to their adjustment) in the European Union, and therefore, to which extent the measures of fiscal impulse or consolidation must be designed taking into account the foreseeable evolution of the volume of public revenues and expenditures caused by the public support to problem financial institutions.

The paper is structured as follows. First section analyzes the accumulated impact on public finances of the public support to problem financial institutions. Second section analyzes the impact of the public assistance to financial institutions on the public budget balance. Next section pays special attention to the composition by budgetary items of the fiscal impulses and consolidations and the role played in these processes by the budgetary impact of public support to problem financial institutions. Last section concludes.

1. The Impact on Public Budget Balances of Bank Rescues in the European Union

One of the main distinctive features of the Great Recession in the EU is the massive and generalized public interventions supporting problem financial institutions. These public interventions have had an impact on public finances, both in terms of the public budget balances and on the public debt. According to the Excessive Deficit Procedure, a large share of the public assistance to bank and financial institutions (guarantees, capital injections, etc.) must be included in the calculus of the public budget balance, affecting subsequent flows of revenues and expenditures registered after the public intervention. Eurostat, through data provided in the Supplementary Table for the Financial Crisis available in its website, provides information about the impact on public finances of the activities undertaken to support financial institutions, giving information about the incidence of these activities on the government deficit, the general government assets and liabilities and the public revenues and expenditures. Available data start in the year 2007.

We want to emphasize that our analysis only focus on those measures that have had a direct and current impact on government deficits, thus excluding measures that could have affected government assets or liabilities but not government deficit or those measures related to contingent liabilities that might contribute to government liabilities in the future (Eurostat 2015).

In this paper we have focused on the impact on public budget balances, that is, public non-financial revenues and expenditures and government deficit during the period 2008-2013, using the information given by Eurostat in October 2015. According to this information, the public support to problem financial institutions had affected the public finances in 19 countries along these six years. Data given by Eurostat are given in absolute values either in euros or national currencies. In the paper we have transformed these figures into percentages of the national GDP, thus estimating the annual impact on national public budget balances as percentage of national GDP.

For a valuation of the impact on public budget balances of the public assistance to financial institutions, we have calculated the accumulated impact on annual public budgets along the whole 6-years period. Table 1 shows these data.

The first column shows the impact on the public budget balance of bank rescues between 2008 and 2013. This impact is calculated as the difference between the accumulated effects on non-financial revenues and on non-financial expenditures. A negative sign implies that the public expenditures resulting of the bank rescues have been higher than revenues resulting of these rescues, and consequently that have contributed to generate a fiscal deficit, and *vice versa*.

The Table 1 allows to observing in a clear way the differences by countries of the fiscal impact of bank rescues in the European Union. In thirteen countries (Ireland, Greece, Slovenia, Lithuania, Spain, Latvia, Portugal, Austria, Germany, Netherlands, United Kingdom, Belgium and Cyprus) the public support to problem banks from 2008 to 2013 have contributed to generate a fiscal deficit, but in 6 countries (Hungary, France, Italy, Luxembourg, Sweden and Denmark) the accumulated impact on public finances has been positive, contributing to improve the situation of public finances.

This outcome is explained by the fact that although the public support to problem financial institutions implies a direct increase in public expenditure, in the same or in subsequent years has implied an increase of public revenues as a result of the refund of given public support, of the sale of intervened financial institutions, and of

Table 1 Accumulated Impact of Public Assistance to Problem Financial Institutions on Annual Public Budget Balances, 2008-2013 (Percentage of GDP)

	Public budget balance (1=2-3)	**Revenues** (2)	**Expenditures** (3)
Ireland	-25.93	6.10	32.03
Greece	-12.22	4.68	16.91
Slovenia	-10.91	0.96	11.87
Lithuania	-4.69	0.34	5.03
Spain	-4.29	0.59	4.88
Latvia	-3.86	1.52	5.40
Portugal	-2.71	0.81	3.52
Austria	-2.03	1.08	3.10
Germany	-1.58	1.27	2.85
Netherlands	-0.76	1.21	1.97
United Kingdom	-0.60	3.19	3.80
Belgium	-0.22	1.65	1.87
Cyprus	-0.06	0.67	0.72
Hungary	0.02	0.14	0.12
France	0.06	0.20	0.13
Italy	0.08	0.12	0.03
Luxembourg	0.09	1.39	1.30
Sweden	0.22	0.25	0.02
Denmark	0.56	1.44	0.99

Source: Our estimations based on Eurostat Supplementary Table for the Financial Crisis (Eurostat 2015).

the flow of revenues (interests or dividends) obtained through the loans given to financial institutions or the return to profits of intervened institutions. In sum, the gross impact of public support to problem financial institutions is given by the accumulated impact on public expenditures (column 3), and the net impact would be given by the accumulated impact on public budget balance (column 1).

It must be emphasized that the estimation of the accumulated fiscal impact of the bank rescues hides the fact that the negative consequences (higher public expenditures and higher fiscal deficits) have taken place in certain years when public interventions have been massive. In this sense, Table 2 shows the years when it has been recorded the largest negative impact on public finances of bank rescues in the EU countries analyzed. Hungary does not appear in this table because in the four years in which the public support to problem financial institutions has been positive (2009-2012) the revenues resulting of this support have been higher than the expenditures, and, therefore, the public support to problem banks have always contributed to improve the public finances.

From the above explained, it is clear that the impact of bank rescues on the national public finances has been dissimilar, and not only because the accumulated impact on revenues, expenditures or the public budget balance has been different, but also because the impact on annual public budget balances has also been very different. Thus, in a high number of countries the public support to problem banks has been concentrated in only one or two fiscal years: for instance, Ireland in 2010, Lithuania in 2011 or Greece and Slovenia in 2013. In these countries, above 80 percent

Table 2 Highest Negative Impact of Public Assistance to Problem Financial Institutions on Annual Public Budget Balances

Country (Year)	Percentage of GDP
Ireland (2010)	-21.44
Greece (2013)	-10.40
Slovenia (2013)	-10.15
Lithuania (2011)	-3.72
Spain (2012)	-3.63
Latvia (2010)	-2.23
Germany (2010)	-1.28
Portugal (2010)	-1.24
Austria (2009)	-0.95
Belgium (2012)	-0.55
United Kingdom (2009)	-0.49
Netherlands (2009)	-0.37
Cyprus (2012)	-0.21
Luxembourg (2009)	-0.19
France (2012)	-0.11
Denmark (2011)	-0.07
Italy (2009)	-0.001
Sweden (2008)	-0.0004

Source: Our estimations based on Eurostat Supplementary Table for the Financial Crisis (Eurostat 2015).

of the impact on public budget balances of bank rescues was concentrated in only one year. Moreover, in some years the fiscal impact of bank rescues can be very different in terms of the volume and sign in comparison to the effect on the whole period.

2. Fiscal Impulses and Adjustments and Bank Rescues during the Crisis in the European Union

The above data show the significant fiscal impact of bank rescues in the European Union during the Great Recession. These fiscal effects implies that we must take them into account when we try to analyze the different episodes of fiscal impulses and adjustments in the EU countries, because the changes in the public budget balance, the indicator used to analyze the fiscal policies, can be influenced by the fiscal impact of bank rescues

As mentioned, we will use the changes recorded in the total public budget balance (measured as percentage of the GDP) as indicator of existence of a fiscal impulse or a fiscal consolidation (along the paper we will use interchangeably the terms adjustment and consolidation). Data have been obtained at the AMECO database[1] (AMECO 2015) using the data that follow the methodology of the Excessive Deficit

[1] **Annual Macro-Economic Database (AMECO).** 2015. Economic and Financial Affairs. www.http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm (accessed March 01, 2015).

Procedure. With this source, data for Estonia and Poland are only available since 2010. Given that we are using the total public budget balance measured as a percentage of GDP, we will define a worsening recorded in one year in this budget balance (lower surplus or higher deficit) as a fiscal impulse, and an improvement in this budget (lower deficit or higher surplus) as a fiscal adjustment. Under this methodology, Table 3 shows the periods of fiscal impulses and consolidations in the European Union countries between 2008 and 2013.

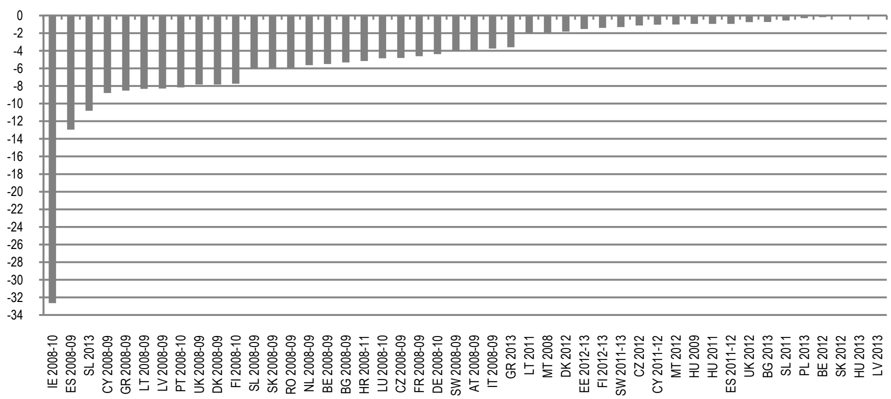
Table 3 Periods of Implementation of Fiscal Impulses and Adjustments

Countries	Fiscal impulses	Fiscal adjustments
Belgium (BE)	2008-2009, 2012	2010-2011, 2013
Bulgaria (BG)	2008-2009, 2013	2010-2012
Czceh Republic (CZ)	2008-2009, 2012	2010-2011, 2013
Denmark (DK)	2008-2009, 2012	2010-2011, 2013
Germany (DE)	2008-2010	2011-2013
Estonia (EE)	2012-2013	2011
Ireland (IE)	2008-2010	2011-2013
Greece (GR)	2008-2009, 2013	2010-2012
Spain (ES)	2008-2009, 2011-2012	2010, 2013
France (FR)	2008-2009	2010-2013
Croatia (HR)	2008-2011	2012-2013
Italy (IT)	2008-2009	2010-2013
Cyprus (CY)	2008-2009, 2011-2012	2010, 2013
Latvia (LV)	2008-2009, 2011	2010, 2012-2013
Lithuania (LT)	2008-2009, 2011	2010, 2012-2013
Luxembourg (LU)	2008-2010	2011-2013
Hungary (HU)	2009, 2011, 2013	2008, 2010, 2012
Malta (MT)	2008, 2012	2009-2011, 2013
Netherlands (NL)	2008-2009	2010-2013
Austria (AT)	2008-2009	2010-2013
Poland (PL)	2013	2011-2012
Portugal (PT)	2008-2010	2011-2013
Romania (RO)	2008-2009	2010-2013
Slovenia (SL)	2008-2009, 2011, 2013	2010, 2012
Slovakia (SK)	2008-2009, 2012	2010-2011, 2013
Finland (FI)	2008-2010, 2012-2013	2010
Sweden (SW)	2008-2009, 2011-2013	2010
United Kingdom (UK)	2008-2009, 2012	2010-2011, 2013

Source: Our estimations based on AMECO database (AMECO 2015).

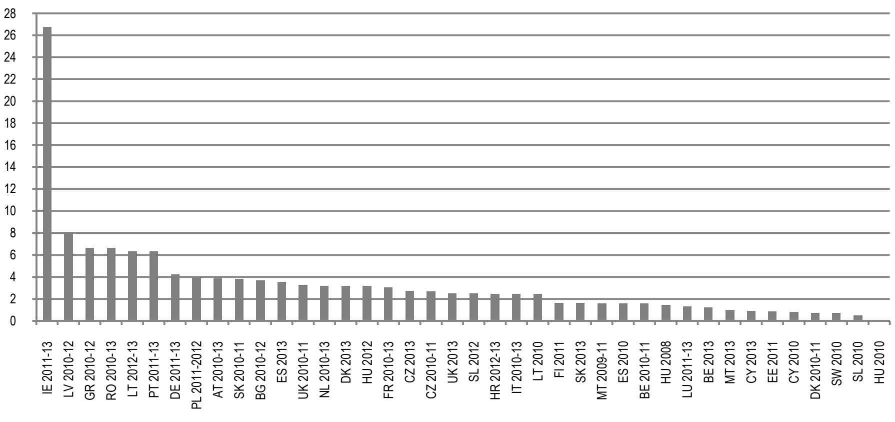
Our analysis shows that between 2008 and 2013 there have been 46 episodes of expansionary fiscal policies and 40 episodes of restrictive fiscal policies. Table 3 allows to detect, first, the existing differences in the length of the episodes of expansionary-restrictive fiscal policies, something that can influence the differences in the intensity of fiscal impulses or adjustments, and, second, the generalization of fiscal consolidation strategies in the EU since 2010.

Figure 1 and 2 show the deep differences in the sizes of fiscal impulses and adjustments. In 18 episodes the size of fiscal impulses exceeded 5 percent of GDP, standing out the cases of Ireland (2008 to 2010), Spain (2008 and 2009), and Slovenia (2013), whose fiscal impulses amounted to 32.6, 13 and 10.8% of GDP, respectively. In the case of fiscal adjustments, in 7 episodes they exceeded 4 percent of GDP, standing out the improvements of public budget balances of Ireland in 2011 to 2013 (26.7% of GDP) and Latvia in 2010 to 2012 (8% of GDP).



Source: Our estimations based on AMECO database (AMECO 2015).

Figure 1 Size of Fiscal Impulses (Percentage of GDP)



Source: Our estimations based on AMECO database (AMECO 2015).

Figure 2 Size of Fiscal Adjustments (Percentage of GDP)

However, as mentioned above, the public support to problem financial institutions have affected the volume of total public revenues and expenditures and, therefore, the annual public budget balances, thus affecting the fiscal policies positions in those (and subsequent) years where these interventions have happened. Tables 4 and 5 show, respectively, the size of fiscal impulses and adjustments including and excluding of the changes in the public budget balance the changes in the revenues and expenditures resulting of the bank and financial rescues.

Table 4 Size of Fiscal Impulses with and without the Impact on Public Finances of Public Assistance to Problem Financial Institutions (Percentage of GDP)

	Fiscal impulse	Fiscal impulse without assistance financial institutions
Belgium 2008-2009	-5.51	-5.50
Belgium 2012	-0.18	0.48
Denmark 2008-2009	-7.83	-7.90
Denmark 2012	-1.81	-2.09
Germany 2008-2010	-4.38	-3.10
Ireland 2008-2010	-32.65	-11.21
Greece 2008-2009	-8.53	-8.68
Greece 2013	-3.60	4.09
Spain 2008-2009	-12.96	-13.02
Spain 2011-2012	-0.94	2.76
France 2008-2009	-4.62	-4.69
Italy 2008-2009	-3.74	-3.74
Cyprus 2008-2009	-8.79	-8.84
Cyprus 2011-2012	-1.04	-0.69
Latvia 2008-2009	-8.28	-7.30
Latvia 2013	-0.02	-0.61
Lithuania 2008-2009	-8.33	-8.33
Lithuania 2011	-2.04	1.56
Luxembourg 2008-2010	-4.86	-4.99
Hungary 2009	-0.95	-0.96
Hungary 2011	-0.94	-0.94
Hungary 2013	-0.11	-0.10
Netherlands 2008-2009	-5.64	-5.27
Austria 2008-2009	-4.01	-3.06
Portugal 2008-2010	-8.16	-7.47
Slovenia 2008-2009	-6.06	-6.07
Slovenia 2011	-0.57	0.08
Slovenia 2013	-10.80	-0.83
Sweden 2008-2009	-4.06	-4.10
Sweden 2011-2013	-1.30	-1.26
United Kingdom 2008-2009	-7.84	-7.35
United Kingdom 2012	-0.74	-0.78

Source: Our estimations based on AMECO database and Eurostat Supplementary Table for the Financial Crisis (AMECO 2015; Eurostat 2015).

Table 4 shows that out of the 32 episodes of fiscal impulses, when we exclude the revenues and expenditures resulting of the public support to financial institutions in 5 cases (Belgium 2012, Greece 2013, Spain 2011-2012, Lithuania 2011, and Slovenia 2011) the variation of the budget balance changes of sign, resulting in fiscal consolidations, mainly in Greece, Spain and Lithuania. In 11 cases (Denmark 2008-2009 and 2012, Greece 2008-2009, Spain 2008-2009, France 2008-2009, Latvia 2013, Luxembourg 2008-2010, Slovenia 2008-2009, Sweden 2008-2009, and United Kingdom 2012), the fiscal impulses had been larger, because in these cases the public support to financial institutions had a positive net impact on the public budget balance. Out of these 11 cases, stand out those of Denmark 2012, Greece, Latvia and Luxembourg, where the fiscal impulse was, respectively, 0.28% of GDP, 0.16% of GDP, 0.6% of GDP and 0.13% of GDP, higher once we exclude the public assistance to financial institutions.

In the remaining episodes, the fiscal impulses would have been smaller, standing out the cases of Ireland (2008-2010), Slovenia (2013), Germany (2008-2010), Latvia (2008-2009) and Austria (2008-2009), where the fiscal impulses had declined, respectively, in 21.44, 9.98, 1.28, 0.98 and 0.95 percentage points of GDP.

On the contrary, in the case of the episodes of fiscal adjustment, in no episode the exclusion of the net impact of public support to financial institutions had changed the orientation of the fiscal policy, that is, in all the cases the existence of a fiscal consolidation remains (see Table 5). Therefore, the only changing variable is the size of the fiscal consolidation. Only in 8 episodes, the fiscal adjustment had been larger than that actually recorded (Hungary 2012, France 2010-2013, Lithuania 2010, Denmark 2010-2011, United Kingdom 2013, Denmark 2013 and Greece 2010-2012), although the only case in which the size of the fiscal adjustment had been significantly larger (2.9 percentage points of GDP) would have been Greece in 2010-12.

Table 5 Size of Fiscal Adjustments with and without the Impact on Public Finances of Public Assistance to Problem Financial Institutions (Percentage of GDP)

	Fiscal adjustment	Fiscal adjustment without assistance financial institutions
Belgium 2010-2011	1.55	1.42
Belgium 2013	1.20	0.50
Denmark 2010-2011	0.70	0.85
Denmark 2013	3.18	3.37
Germany 2011-2013	4.22	2.93
Ireland 2011-2013	26.72	5.10
Greece 2010-2012	6.64	9.51
Spain 2010	1.57	1.57
Spain 2013	3.53	0.36
France 2010-2013	3.04	3.10
Italy 2010-2013	2.43	2.39
Cyprus 2010	0.81	0.73
Cyprus 2013	0.90	0.87
Latvia 2010-2012	8.04	7.52

Lithuania 2010	2.42	2.54
Lithuania 2012-2013	6.33	3.31
Luxembourg 2011-2013	1.28	1.41
Hungary 2008	1.43	1.43
Hungary 2010	0.06	0.05
Hungary 2012	3.17	3.17
Netherlands 2010-2013	3.18	2.96
Austria 2010-2013	3.84	3.35
Portugal 2011-2013	6.32	5.46
Slovenia 2010	0.46	0.44
Slovenia 2012	2.49	2.02
Sweden 2010	0.69	0.66
United Kingdom 2010-2011	3.25	2.71
United Kingdom 2013	2.50	2.66

Source: Our estimations based on AMECO database and Eurostat Supplementary Table for the Financial Crisis (AMECO 2015; Eurostat 2015).

In the other 20 episodes of fiscal adjustment, its size would have been smaller, with 8 episodes in which the size of the fiscal consolidation had been at least 0.5 percent of GDP smaller (Ireland 2011-2013, Spain 2013, Lithuania 2012-2013, Germany 2011-2013, Portugal 2011-2013, Belgium 2013, United Kingdom 2010-2011 and Latvia 2010-2012). Out of these 8 episodes, we can emphasize the first 4 episodes, in which the size of the fiscal adjustment had been smaller for a volume equivalent to 21.6 (Ireland 2011-13), 3.2 (Spain 2013), 3.0 (Lithuania 2012-13) and 1.3 (Germany 2011-13) percent of GDP, respectively.

3. Composition of Fiscal Impulses and Adjustments and Public Support to Problem Financial Institutions

The analysis made in the previous section was based on the study of the total public budget balance and the net impact on this balance of the public support to financial institutions. One weakness of this analysis is that it does not allow knowing the items (revenues or expenditures) that drive the fiscal impulses or consolidations. Moreover, it does not allow a precise valuation of the impact of this public support to financial institutions on the total public budget balance, that is, how much it has influenced the evolution of public revenues and expenditures.

Therefore, the objective of this section is to analyze the main components of the changes of the public budget balance. Thus, we will break down the changes in the total public budget balance (measured as percentage of the GDP) into three components: changes in the revenues, in the expenditures and in the interest payment. We have obtained the values of these items at the AMECO database (AMECO 2015). However, given that the total public budget balance includes the impact on the public finances of the public support to problem financial institutions, we have excluded the impact of this public support on the public revenues and expenditures (according to the figures given by Eurostat) of the value of the total revenues and the primary expenditures. Consequently, the changes in the total public budget balance have been broken down into five elements:

- Revenues resulting from public assistance to financial institutions (RFI);
- Expenditures resulting from public assistance to financial institutions (EFI);
- Total revenues excluding those resulting from public assistance to financial institutions (TRnFI);
- Total primary expenditures excluding those resulting from public assistance to financial institutions (PEnFI);
- Interests of public debt (Interests).

Table 6 shows the changes in these five elements recorded in the different episodes of fiscal impulses since 2008. As can be observed, the impact of the public support to problem financial institutions on the total public expenditures and the fiscal deficits has not been very large. Thus, the increase recorded in the spending related to the support to financial institutions only exceeds 2 percent of the GDP in a low number of cases: Ireland (2008-2010), Greece (2013), Spain (2011-2012), Lithuania (2011) and Slovenia (2013). It is also remarkable that out of the 46 episodes of fiscal impulses, only in 8 episodes there has been a fall in the primary expenditures without the spending related to the public assistance to the financial institutions. It must also be highlighted that in 23 cases, the fiscal impulse came with an increase in public revenues, what implies that in these cases all the fiscal impulse was based on the increase in public expenditures.

Table 6 Change of Public Revenues and Expenditures in Fiscal Impulses

	Percentage of GDP					Percentage of total fiscal impulse				
	Interests	RFI	EFI	PEnFI	TRnFI	Interests	RFI	EFI	PEnFI	TRnFI
BE 2008-2009	-0,17	0,18	0,19	5,62	-0,24	-3,2	-3,3	3,5	102,0	4,3
BE 2012	-0,03	-0,05	0,62	0,88	1,44	-15,1	24,6	334,7	476,8	-779,4
BG 2008-2009	-0,38			2,72	-3,37	-7,2			51,1	63,4
BG 2013	-0,06			3,18	2,34	-8,0			437,7	-321,7
CZ 2008-2009	0,17			3,50	0,98	3,5			72,6	-20,4
CZ 2012	0,10			1,22	0,30	9,0			108,2	-26,1
DK 2008-2009	0,31	0,13	0,06	6,86	0,43	3,9	-1,6	0,7	87,6	-5,5
DK 2012	0,15	-0,33	-0,61	2,67	0,51	8,1	18,2	-33,5	147,6	-28,4
DE 2008-2010	-0,22	0,21	1,49	3,18	-0,38	-5,0	-4,7	33,9	72,6	8,6
EE 2012-2013	0,00			0,87	-0,64	0,3			57,6	41,9
IE 2008-2010	1,98	1,17	22,61	6,44	-1,75	6,1	-3,6	69,2	19,7	5,4
GR 2008-2009	0,43	0,18	0,03	6,70	-1,12	5,0	-2,2	0,3	78,6	13,2
GR 2013	-1,03	-1,02	6,66	0,89	1,81	-28,6	28,4	185,1	24,9	-50,3
ES 2008-2009	0,14	0,08	0,02	6,69	-6,06	1,1	-0,6	0,1	51,6	46,7
ES 2011-2012	1,06	0,00	3,70	-2,80	1,82	113,0	-0,1	395,5	-299,5	-194,5
FR 2008-2009	-0,22	0,08	0,01	4,75	-0,38	-4,8	-1,6	0,1	102,8	8,2
HR 2008-2011	1,33			2,21	-0,29	25,7			42,8	5,7
IT 2008-2009	-0,35		0,00	4,71	0,28	-9,3		0,0	125,9	-7,4
CY 2008-2009	-0,44	0,05		5,00	-4,73	-5,0	-0,6		56,8	53,8
CY 2011-2012	0,85	0,13	0,48	-0,63	-0,72	81,6	-12,2	45,9	-60,6	69,6

LV 2008-2009	1,15	0,33	1,32	7,19	2,07	13,9	-4,0	15,9	86,8	-25,0
LV 2013	-0,24	0,16	-0,43	-0,23	-1,34	-1421,1	-968,3	-2563,8	-1343,9	7977,5
LT 2008-2009	0,58			9,07	1,90	7,0			108,8	-22,9
LT 2011	0,03		3,60	-3,53	-1,86	1,3		176,3	-172,5	90,9
LU 2008-2010	0,15	0,38	0,25	5,45	0,75	3,0	-7,9	5,2	112,3	-15,5
HU 2009	0,45	0,05	0,05	1,41	1,34	46,7	-5,3	4,8	148,1	-140,8
HU 2011	0,04	-0,01	-0,01	0,15	-0,71	4,6	1,3	-1,5	15,6	75,2
HU 2013	-0,02	-0,01	-0,01	1,02	0,87	-20,0	8,2	-7,5	963,5	-823,9
MT 2008	-0,13			1,57	-0,65	-6,9			80,6	33,2
MT 2012	-0,15			1,71	0,38	-14,3			166,5	-36,6
NL 2008-2009	0,05	0,38	0,75	4,62	-0,56	0,9	-6,8	13,3	82,0	10,0
AT 2008-2009	0,01	0,04	0,99	4,03	0,95	0,2	-1,0	24,7	100,7	-23,8
PL 2013	-0,19			-0,49	-1,15	-65,9			-173,7	405,5
PT 2008-2010	-0,02	0,61	1,30	6,08	-0,91	-0,3	-7,4	15,9	74,5	11,2
RO 2008-2009	0,79			1,50	-2,88	13,3			25,2	48,2
SL 2008-2009	0,07	0,14	0,13	6,11	0,18	1,1	-2,3	2,1	100,9	-2,9
SL 2011	0,27	0,03	0,68	-0,37	0,29	47,9	-5,8	119,6	-64,3	-50,6
SL 2013	0,52	-0,05	9,93	1,34	1,37	4,8	0,5	91,9	12,4	-12,7
SK 2008-2009	0,06			7,06	1,83	1,1			117,6	-30,5
SK 2012	0,24			-0,60	-0,22	228,3			-567,0	210,3
FI 2008-2010	-0,09			8,05	0,13	-1,1			103,9	-1,7
FI 2012-2013	-0,13			3,61	1,95	-9,1			257,5	-139,3
SW 2008-2009	-0,51	0,05	0,01	3,95	-1,16	-12,5	-1,2	0,1	97,3	28,7
SW 2011-2013	-0,21	-0,05	0,00	1,48	-0,23	-15,8	3,7	-0,1	113,7	17,6
UK 2008-2009	-0,33	0,65	1,14	6,02	-2,07	-4,2	-8,3	14,5	76,8	26,5
UK 2012	-0,27	0,03	-0,01	0,55	-0,77	-37,1	-4,0	-1,5	74,2	105,1

Source: Our estimations based on AMECO database and Eurostat Supplementary Table for the Financial Crisis (AMECO 2015; Eurostat 2015).

These data show not only that the size of fiscal impulses in the European Union has been very dissimilar, but that their composition is also very different. In this sense, the Table 7 shows the amplitude of the range of the variations recorded in the items of public revenues and expenditures during the episodes of fiscal impulse.

The last five columns of Table 6 shows the contribution of each item of public revenues and expenditures to the different episodes of fiscal impulse, where these contributions are measured as the ratio between the variation of the items of revenues and expenditures and the variation of the total public budget balance during each episode of fiscal impulse. A positive contribution implies that the variation of the respective item has contributed to deteriorate the budget balance (and *vice versa*). If the absolute variation of each item is larger than the variation of the total budget balance, then contribution of this item is above 100%.

Out of the 46 episodes of fiscal expansion, in 30 cases the main engine of the deterioration of the public budget balance was the increase of primary expenditures, in 7 cases the engine was the higher spending resulting of the public support to financial institutions, in other 7 cases the main determinant was the decline in the revenues excluded those resulting of the public support to financial institutions, and finally, in 2 cases the deterioration of the public budget balance was mainly driven by the increase in interest payments.

Table 7 Highest and Lowest Changes of Public Revenues and Expenditures in Fiscal Impulses (Percentage of GDP)

Item	Range of variation	
Revenues resulting of public support to financial institutions	+2% (Ireland 2008-2010)	+-1% (Greece 2013)
Expenditures resulting of public support to financial institutions	+22.6% (Ireland 2008-2010)	-0.6% (Denmark 2012)
Total revenues excluding those resulting of public support to financial institutions	+2.3% (Bulgaria 2013)	-6.1% (Spain 2008-09)
Total primary expenditures excluding those resulting of public support to financial institutions	+9.1% (Lithuania 2008-2009)	--3.55 (Lithuania 2011)
Interests of public debt	2% (Ireland 2008-2010)	-1% (Greece 2013)

Source: Our estimations based on AMECO and Eurostat Supplementary Table for the Financial Crisis (AMECO 2015; Eurostat 2015).

These differences (in terms of the size and the composition) also happen during the episodes of fiscal adjustment (see Table 8). Out of the 40 fiscal consolidation episodes registered between 2008 and 2013, in 8 cases there was an increase in the primary expenditures excluded those resulting of the public support to financial institutions. In 7 cases, the fiscal consolidation came with a fall in the revenues excluded those resulting of the public support to financial institutions. Finally, in 7 episodes, the fiscal adjustment came in parallel to an increase in the volume of the expenditures related to the public support to financial institutions.

Table 8 Change of Public Revenues and Expenditures in Fiscal Adjustments

	Percentage of GDP					Percentage of total fiscal adjustment				
	Interests	RFI	EFI	PEnFI	TRnFI	Interests	RFI	EFI	PEnFI	TRnFI
BE 2010-2011	-0,24	0,26	0,13	0,12	1,08	15,4	16,9	-8,6	-7,8	69,7
BE 2013	-0,25	-0,04	-0,74	0,64	0,62	20,8	-3,5	61,9	-53,6	51,9
BG 2010-2012	0,07	0,00	0,00	-5,47	-1,64	-1,9	0,0	0,0	148,2	-44,4
CZ 2010-2011	0,10	0,00	0,00	-1,24	1,62	-3,7	0,0	0,0	46,6	60,9
CZ 2013	-0,09	0,00	0,00	-1,70	0,80	3,5	0,0	0,0	63,3	29,8
DK 2010-2011	0,06	0,51	0,65	-0,66	0,34	-8,4	72,4	-92,9	93,6	47,8
DK 2013	-0,13	-0,29	-0,09	-1,82	0,86	4,2	-9,0	2,9	57,2	26,9
DE 2011-2013	-0,45	0,07	-1,22	-1,21	0,85	10,7	1,6	28,9	28,7	20,1
EE 2011	0,00	0,00	0,00	-2,41	-1,54	-0,4	0,0	0,0	280,6	-179,8
IE 2011-2013	1,40	0,05	-21,57	-6,33	2,51	-5,2	0,2	80,7	23,7	9,4
GR 2010-2012	0,00	2,07	4,94	-4,52	4,40	0,0	31,2	-74,4	68,0	66,2
ES 2010	0,17	0,04	0,03	-0,35	1,56	-11,0	2,4	-2,0	22,4	99,0
ES 2013	0,33	-0,04	-3,21	-0,37	0,88	-9,3	-1,2	90,9	10,4	24,9
FR 2010-2013	-0,14	-0,06	0,00	0,51	3,32	4,6	-1,8	0,1	-16,7	109,2
HR 2012-2013	0,45	0,00	0,00	-1,69	1,66	-18,3	0,0	0,0	-68,9	67,7
IT 2010-2013	0,42	0,04	0,01	-1,06	2,16	-17,2	1,8	-0,3	43,7	89,2
CY 2010	-0,27	0,09	0,00	0,24	0,42	33,6	10,7	0,0	-29,1	51,1
CY 2013	0,19	-0,19	-0,23	-0,63	0,60	-21,2	-21,1	25,2	69,6	66,6
LV 2010-2012	0,19	-0,16	-0,68	-6,48	1,59	-2,3	-1,9	8,5	80,6	19,7

LT 2010	0,55	0,00	0,12	-3,24	0,39	-22,9	0,0	-4,8	133,9	16,2
LT 2012-2013	-0,09	0,34	-2,68	-4,32	-1,12	1,4	5,4	42,3	68,2	-17,7
LU 2011-2013	0,03	-0,18	-0,05	-0,11	1,38	-2,1	-14,2	3,6	8,3	107,9
HU 2008	0,01	0,00	0,00	-1,35	0,11	-1,0	0,0	0,0	94,5	7,5
HU 2010	-0,39	0,00	-0,01	-0,66	-1,39	691,6	-5,9	11,2	1176,5	-2462,3
HU 2012	0,42	-0,03	-0,02	-1,60	2,42	-13,3	-0,8	0,6	50,7	76,3
MT 2009-2011	-0,18	0,00	0,00	-1,48	-0,27	11,7	0,0	0,0	94,0	-17,3
MT 2013	-0,08	0,00	0,00	-0,05	0,76	8,4	0,0	0,0	4,7	78,3
NL 2010-2013	-0,50	-0,21	-0,43	-0,48	1,51	15,7	-6,6	13,5	14,9	47,5
AT 2010-2013	-0,59	0,17	-0,33	-2,32	-0,07	15,2	4,4	8,5	60,3	-1,9
PL 2011-2012	0,17	0,00	0,00	-3,16	1,08	-4,4	0,0	0,0	81,2	27,6
PT 2011-2013	2,05	0,32	-0,54	-3,24	6,31	-32,5	5,1	8,6	51,4	99,8
RO 2010-2013	0,24	0,00	0,00	-5,72	1,40	-3,6	0,0	0,0	86,1	21,1
SL 2010	0,31	0,07	0,05	0,41	1,46	-66,1	15,8	-10,0	-89,1	315,2
SL 2012	0,12	0,01	-0,46	-1,37	0,89	-4,9	0,5	18,5	54,9	35,6
SK 2010-2011	0,11	0,00	0,00	-3,39	0,65	-3,0	0,0	0,0	89,1	16,9
SK 2013	0,11	0,00	0,00	0,72	2,53	-6,9	0,0	0,0	-45,0	158,8
FI 2011	0,06	0,00	0,00	-0,47	1,25	-3,7	0,0	0,0	29,3	78,2
SW 2010	-0,13	0,03	0,00	-0,90	-0,51	19,4	4,2	0,1	131,2	-74,1
UK 2010-2011	1,29	-0,37	-0,92	-3,30	2,07	-39,8	-11,5	28,2	101,6	63,8
UK 2013	-0,03	-0,20	-0,04	-1,33	1,28	1,0	-8,0	1,6	53,3	51,2

Source: Our estimations based on AMECO database and Eurostat Supplementary Table for the Financial Crisis (AMECO 2015; Eurostat 2015).

Like in the fiscal expansions, the range of variation of the items of revenues and expenditures is very high, as Table 9 shows.

Table 9 Highest and Lowest Changes of Public Revenues and Expenditures in Fiscal Adjustments (Percentage of GDP)

Item	Range of variation	
Revenues resulting from public support to financial institutions	+2.1% (Greece 2010-2012)	-0.4% (United Kingdom 2010-2011)
Expenditures resulting from public support to financial institutions	+4.9% (Greece 2010-2012)	-21.6% (Ireland 2011-2013)
Total revenues excluding those resulting from public support to financial institutions	+6.3% (Portugal 2011-2013)	-1.6% (Bulgaria 2010-2012)
Total primary expenditures excluding those resulting from public support to financial institutions	+1.7% (Croatia 2012-2013)	-6.5% (Latvia 2010-2012)
Revenues resulting from public support to financial institutions	-2.1% (Portugal 2011-2013)	-0.6% (Austria 2010-2013)

Source: Our estimations based on AMECO database and Eurostat Supplementary Table for the Financial Crisis (AMECO 2015; Eurostat 2015).

Again, the last five columns of Table 8 show the contributions to fiscal consolidations of each item of revenues and expenditures. It is easy to observe the differences among the episodes, and, therefore, the different strategies of fiscal consolidations implemented in the European Union. Out of these 40 episodes of fiscal adjustment, the main engine was the decline in the primary expenditures in 21 cases; in 15 episodes, fiscal consolidation was mainly driven by the rise in the revenues excluding those caused by the support to financial institutions, and, finally, in 4 cases the main determinant of the improvement in the total public balance was the decline in the expenditures caused by the public support to financial institutions.

Table 10 and 11 show in a summarized way the different groups of the episodes of fiscal impulse and adjustment, classified by the sign of the changes in the five items analyzed of revenues and expenditures. It must be emphasized, besides the existence of a high number of groups (a reflection of the diversity of strategies of fiscal impulse and adjustment, that the countries that have registered more than one episode of fiscal impulse or adjustment have implement different strategies in each episode, basing their fiscal policies on different intensities and signs of the budget items.

Actually, if we focus on the episodes of fiscal impulses that have been generated as the sum of an increase in the primary expenditures excluded those caused by the support to financial institutions, an increase in the interest payment and a decline in the revenues excluded those due to the support to the financial institutions, these cases only amount to 7 out of the total 46 episodes of fiscal impulses. If we exclude the interest payment, there are only 18 cases in which the fiscal impulse is generated by the combination of an increase in the primary expenditures and a decline in the revenues excluding in both cases those due to the support to financial institutions.

Table 10 Variation of the Components of Public Budget Balance during Episodes of Expansionary Fiscal Policy

		+ PEnFI						- PEnFI					
		+ EFI		- EFI		No EFI		+ EFI		- EFI		No EFI	
		+ Interests	- Interests	+ Interests	- Interests	+ Interests	- Interests	+ Interests	- Interests	+ Interests	- Interests	+ Interests	- Interests
+ TRnFI	+ RFI	DK 08-09 LV 08-09 LU 08-10 HU 09 AT 08-09 SL 08-09	BE 12					ES 11-12 SL 11					
	- RFI	SL 13	GR 13	DK 12	HU 13								
	No RFI		IT 08-09			CZ 08-09 CZ 12 LT 08-09 SK 08-09	BG 13 MT 12 FI 08-10 FI 12-13					SK 12	
- TRnFI	+ RFI	IE 08-10 GR 08-09 ES 08-09 NL 08-09	BE 08-09 DE 08-10 FR 08-09 PT 08-10 SW 08-09 UK 08-09		UK 12		CY 08-09	CY 11-12			LV 13		
	- RFI			HU 11	SW 11-13			LT 11					
	No RFI					HR 08-11 RO 08-09	BG 08-09 MT 08					EE 10-11	PL 13

Source: Our estimations based on AMECO database and Eurostat Supplementary Table for the Financial Crisis (AMECO 2015; Eurostat 2015).

Table 11 Variation of the Components of Public Budget Balance during Episodes of Restricitive Fiscal Policy

		+ PEnFI						- PEnFI					
		+ EFI		- EFI		No EFI		+ EFI		- EFI		No EFI	
		+ Interests	- Interests	+ Interests	- Interests	+ Interests	- Interests	+ Interests	- Interests	+ Interests	- Interests	+ Interests	- Interests
+ TRnFI	+ RFI	SL 10	BE 10-11				CY 10	DK 10-11 ES 10 IT 10-13	GR 10-12	IE 11-13 PT 11-13 SL 12	DE 11-13		
	- RFI			BE 13	FR 10-13					ES 13 CY 13 LV 10-12 LU 11-13 HU 12 UK 10-11	DK 13 HU 10 NL 10-13 UK 13		
	No RFI					SK 13		LT 10				BG 10-12 CZ 10-11 HU 08 PL 11-12 RO 10-13 SK 10-11 FI 11	CZ 13 MT 13 HR 12-13
- TRnFI	+ RFI										LT 12-13 AT 10-13 SW 10		
	- RFI												
	No RFI					EE 12-13							MT 09-11

Source: Our estimations based on AMECO database and Eurostat Supplementary Table for the Financial Crisis (AMECO 2015; Eurostat 2015).

In the case of the episodes of fiscal consolidations (40), only in 29 cases the fiscal adjustment has been caused by the combination of higher revenues and lower primary revenues excluding in both cases those due to the support to financial institutions. Moreover, only in 19 cases the decline in the expenditures due to the support to finance institutions has contributed to the respective fiscal adjustments. In the case of fiscal impulses, the increase in the expenditures caused by the support to financial institutions happened in 24 cases (out of a total of 46 episodes). Therefore, although in most cases, the net impact on the public budget balance of the bank and financial rescues has not been substantial, their impact on the total volume of revenues and expenditures, and, consequently on the fiscal policy, has been very significant.

4. Conclusions

The paper has shown the significant impact of the bank rescues on the public finances of the European Union member states, an impact that is more evident when we look not to the net impact on the public budget balance but to the impact generated separately on the public revenues and expenditures.

The budgetary impact of the public support to problem financial institutions has also affected to the orientation of the fiscal policy during the crisis, because this public support has also affected to the intensity and the sign of the fiscal policy stances. Thus, in the case of the fiscal impulse episodes, when we exclude of the changes in the public budget balance the revenues and expenditures caused by the public assistance to the financial institutions, the fiscal policy changes of orientation in five cases, now resulting in a fiscal consolidation. On the contrary, in the case of the episodes of fiscal consolidation, the exclusion of the budgetary impact of the assistance to the financial institutions does not imply any change in the orientation of the fiscal policy, and, therefore, the only change affects to the higher or lower intensity of the fiscal adjustment.

Moreover, the consideration of the budgetary impact of the public support to financial institutions allows to detecting the significant differences among countries regarding the composition of the episodes of fiscal consolidation and adjustment, allowing to knowing in a more precise way the item or items that drive the changes in the fiscal position of the European countries.

In sum, that paper has shown the deep budgetary impact of the public assistance to the financial institutions during the Great Recession, and the strong influence exerted on the strategies of fiscal policy implemented in Europe during the Great Recession.

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