EXTRAORDINARY MECHANISMS FOR PAYMENT OF GENERAL GOVERNMENT SUPPLIERS IN SPAIN

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Abstract

The economic crisis was initially associated with an increase in regional and local government payment periods and trade debt. Since 2012, central government has approved various extraordinary mechanisms for the payment of local and regional government suppliers that have significantly reduced the stock of trade debt and the average supplier-payment periods attributable to these levels of government. Successive plans have helped unblock payments and channel funds of close to €67 billion towards the private sector in somewhat less than three years. And against a background of economic weakness, fiscal consolidation and difficult conditions of access to lending, it is believed this has provided a considerable impetus to activity that has helped mitigate some of the adverse effects of the economic crisis. In parallel, the roll-out of the plan has entailed a substantial increase in local and regional government debt vis-à-vis the State. To prevent inappropriate incentives for the conduct of local and regional government from arising, the funding mechanisms agreed on require compliance with certain adjustment plans.

Keywords: trade debt, payment to government suppliers, regional and local public finances, public spending.

JEL classification: E6, H12, H74, H81.

Resumen

La crisis económica estuvo asociada inicialmente a un incremento de los plazos de pago y de la deuda comercial de las Administraciones Territoriales. Desde 2012 la Administración Central ha aprobado distintos mecanismos extraordinarios para el pago a proveedores de CCAA y CCLL, que han reducido de forma significativa el *stock* de deuda comercial y el período medio de pago a proveedores de estas Administraciones. Los sucesivos planes han permitido desbloquear pagos y canalizar fondos hacia el sector privado por un total de cerca de 67 mm de euros en algo menos de tres años, que, en un contexto de debilidad económica, consolidación fiscal y dificultades de acceso al crédito, se estima han generado un estímulo significativo sobre la actividad, que habría ayudado a mitigar algunos de los efectos negativos de la crisis económica. En paralelo, la implementación del plan ha supuesto un incremento importante del endeudamiento de las CCAA y CCLL con el Estado. Para evitar que se generen incentivos inadecuados para las Administraciones Territoriales, los mecanismos de financiación acordados exigen el cumplimiento de unos planes de ajuste.

Palabras clave: deuda comercial, pago a proveedores de las AAPP, finanzas públicas regionales y locales, gasto público.

Códigos JEL: E6, H12, H74, H81.

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1 Introduction

The recent economic crisis has had a most adverse effect on Spanish general government finances, taking the form of a significant increase in the budget deficit and public debt. One phenomenon associated with this deterioration in public finances has been the significant increase in the time taken by general government to pay its suppliers and, therefore, in its trade debt. In particular, the total amount of consolidated general government payment obligations outstanding,[1] an accounting item that enables this type of debt to be approximated, amounted to €87.3 billion in 2011 (8.1% of GDP), according to the financial accounts of the Spanish economy, compared with €57.1 billion in 2007 (5.3% of GDP). The increase in trade debt over this period was extensive to all tiers of government, albeit concentrated most in local and regional government. Thus almost 75% of total trade debt in 2011 related to regional and local government.

Given this situation, Spain adopted various measures from 2012 geared to reducing local and regional government trade debt volumes, as part of the three phases of the so-called supplier payment plan and through the amounts made available by the regional government liquidity fund *(Fondo de Liquidez Autonómica* – "FLA" by its Spanish abbreviation) for payments to suppliers. At the same time, new regulations aimed at structurally reducing the time taken by general government to pay its suppliers have been approved.

These policies have had a significant impact on the stock of trade debt and the average supplier payment period. Hence, the consolidated general government payment obligations outstanding in 2013 stood at €58.7 billion (5.6% of GDP), significantly down on the 2011 figure. The reduction is apparently concentrated at the regional and local government level, whose weight in total outstanding general government payment obligations fell to around 50%. Also, on the data recently provided by the Ministry of Finance and General Government ("MHAP" by its Spanish abbreviation), the average payment period for supplier invoices issued between January and November 2014 was around 58 days and 27 days for regional government and local government, respectively, i.e. lower levels than observed in previous years.

These developments in general government trade credit in Spain may have exerted significant effects on economic activity. Deferred payment is a standard practice in trade relations. However, an excessive lengthening of the payment period may have harmful effects on creditor companies, which are obliged to resort to alternative sources of financing. In a setting of financial constraints such as that seen during the crisis, these alternatives may not be available or their cost may be very high. Countering this, the trade debt-reducing measures implemented have entailed an injection of liquidity for households and firms, against a backdrop of widespread economic weakness, fiscal consolidation and difficulties for economic agents in gaining access to credit.

1 Consolidated payment obligations are referred to throughout this paper, that is, outstanding debt of government units to other government units is excluded.

The aim of this paper is to describe the extraordinary mechanisms for payments to suppliers developed in Spain in recent years and to quantify their impact, at least approximately. The paper is structured as follows. Section 2 describes the trend of general government accounts payable in Spain and in other European countries. Section 3 reviews the various policies implemented to reduce both the stock of trade debt and general government payment periods. Section 4 looks at the main channels through which these policies might exert an influence on the economy's private sector and the potential effects are quantified using various analytical instruments. Section 5 draws the main conclusions.

2 Recent trend of general government accounts payable in Spain from an international perspective

The general government sector commonly uses private suppliers to provide public goods and services, and in doing so it incurs payment obligations with them under certain conditions. The payment of these obligations by general government, as in the case of the private sector, occasionally involves a time lag relative to when the services or goods were actually provided or delivered. Amounts whose payment has been deferred are statistically recorded in what are known as "accounts payable". This trade debt forms part of total general government liabilities, although under European statistical standards it is not part of the public debt for the purposes of the Excessive Deficit Protocol (EDP debt).[2] In Spain's case, the information on this debt is published by the Banco de España in its quarterly financial accounts.[3]

From 1997 to 2007, in the upturn prior to the economic crisis, consolidated accounts payable stood in Spain at around 4% of GDP or 10% of total public expenditure in annual average terms. In comparative terms (see Chart 1), this figure was slightly below the average for other European countries, which nonetheless show high heterogeneity, ranging from practically zero in Germany to percentages of around 10% of GDP in France, reflecting the different practices prevailing in relations between the general government sector and its suppliers in the different countries.

In terms of agents, most outstanding payment obligations in Spain's case were concentrated in local and regional government, which accounted for around 65% of such obligations in the 1997-2007 period, with somewhat more than 30% owed by regional government. By type of creditor, almost three-quarters of this debt was to non-financial corporations and the remainder to households.

A supplementary variable that allows for analysis of the volume of outstanding obligations is the average supplier payment period. According to data based on surveys of firms,[4] the general government payment period differs substantially from one country to another (see Chart 2), both in relation to the usual contractual practices prevailing and to the average delays observed with respect to those practices. Specifically, prior to the crisis, the usual contractually stipulated general government payment period was around 80 days in the case of

2 Non-recourse factoring and long-term trade credit are included in EDP debt.

3 Eurostat only publishes comparable cross-country data of the aggregate "Other accounts payable". Data on accounts payable to non-financial corporations and households are available for the Spanish general government sector. It should be borne in mind, however, that the definition of households includes sole proprietors. Moreover, the data for this distinction are based on estimates. Further, for each "Other accounts payable" figure, there is a breakdown into "Trade credits and advances" and "Other accounts receivable/payable, excluding trade credit and advances".

4 Source: *Intrum Justitia.* Written, national language survey conducted in 31 EU countries in the first quarter of the year. In terms of company size, the sample (2014 wave) is made up as follows: 40% of the companies have fewer than 19 employees, 27% between 20 and 49 employees, 27% between 50 and 249, 3% between 250 and 499, 2% between 500 and 2,499, and 1% more than 2,500.

Spain and Italy, while it stood at 31 days in Germany and the United Kingdom. According to the surveys, payment delays in relation to contractual commitments were especially high in Portugal and Italy, where they exceeded 80 and 60 days, respectively. In Spain's case, these delays stood at around 30 days on average.

The stocks of outstanding payment obligations of most EU countries generally tended to increase during the crisis. These increases were especially significant in Spain and particularly in Portugal and Greece. Specifically, in the case of Spain, accounts payable reached 8% of GDP at end-2011. This increase was seen in all tiers of government and, accordingly, the accounts payable in that period reached 2.4% of GDP in central government, 3.4% of GDP in regional government and 2.1% of GDP in local government. The increase was in payables to both companies and households. The average delays in payments relative to the contractually agreed period are estimated to have increased by approximately 30 days compared with those before the crisis.

Against this backdrop, several countries, including Spain, Italy and Portugal, implemented plans in 2011 and 2012 to reduce their general government trade debt. In general, these plans have managed to reduce or stabilise the trade debt of these countries. In the specific case of Spain, the accounts payable of Spanish general government as a whole to other economic sectors (firms and households) stood in 2013 at around €58 billion (5.5% of GDP), a decrease of 2.5 percentage points (pp) of GDP relative to 2011, which was apparently concentrated in regional government (1.8% of GDP between 2013 and 2011) and local government (0.8% of GDP in the same period). This reduction seemingly occurred in payables to both non-financial corporations and households (see Chart 3). The most recent data, relating to 2014 Q3, show that this trend has continued, taking the ratio of outstanding payment obligations down to 4.5%.

Although surveys of firms do not seem to show a significant decrease in the average delay in payment in the last few years (see Chart 2), the information published by the MHAP[5] indicates that the average time taken to pay suppliers of State, regional and local governments as at 31 December 2012 was 60, 181 and 109 days, respectively, while the average payment period of supplier invoices issued between January and November 2014 is estimated at around 11, 58 and 27 days for central government, regional government and local government, respectively.[7]

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5 See the MHAP website: http://www.minhap.gob.es/es-ES/CDI/PMP/Paginas/PMPdelasgeneral government.aspx.

6 Several partial sources give a similar picture. More detailed information is available for the State (see the MHAP website: http://www.igae.pap.minhap.gob.es/sitios/igae/es-ES/informacionEconomica/Paginas/itplazospago.aspx). According to that information, the average payment period of this sub-sector was 38.5 days at end-2011, it increased to 60 days in 2012 and it decreased to 30 days in 2013. The National Federation of the Self-Employed (the "ATA" by its Spanish abbreviation) regularly publishes the results of surveys of the self-employed (http://www.ata.es/), which show that the average payment periods of amounts owed to this group by the various general government units in December 2012 stood at 69, 149 and 177 days for central government, regional government and local government, respectively, whereas in December 2014 these periods were 45, 106 and 74 days, respectively. Lastly, the economic consultancy group SIELOCAL (Sistema de Transparencia Económica Municipal – Municipal Economic Transparency System) publishes an annual report on the average payment period of local government, which fell from its peak of 122 days in 2011 to 74 days in 2013 (http://www.sielocal.com/informe/327/Periodo-medio-de-pago).

As described in detail in the next section, the various plans to reduce general government trade debt in Spain were financed by the central government, which raised on the financial markets the funds needed to pay the suppliers of regional and local government. The settlement of regional and local government payables under these plans has meant that these tiers of government have replaced their trade debt with debt to central government. Consequently, the EDP debt of regional and local government to the State tripled in the period 2012-2013, such that the percentage of regional government debt which is owed to the State increased from zero to 37% in September 2014 (see Chart 4).

7 For an analysis of the implications of these operations for the debt of general government overall, as well as for the State, regional and local governments, see Gordo et al. (2013 and 2014).

3 Measures to reduce trade debt in Spain

Since early 2012 the central government has applied several measures to mitigate the liquidity problems of regional and local government. Thus, in response to the resolutions of the Fiscal and Financial Policy Council (Consejo de Política Fiscal y Financiera, the "CPFF" by its Spanish abbreviation) of 17 January 2012, two courses of action were undertaken. Firstly, in relation to the regional financing system, the system of advanced payments and deferrals on account[8] was modified. Secondly, the 2012 ICO-regional government facility[9] was set up to cover two tranches: one intended to provide regional governments with funds to meet their payment obligations associated with maturities of regional government financial debt incurred before 1 January 2012 and maturing up to or on 30 June 2012 (refinancing tranche), and another relating to outstanding payments to suppliers.

Subsequently, Royal Decree-Law 4/2012 of 24 February 2012 established an extraordinary financing plan for the payment of local government suppliers, which was later extended to regional governments. This plan set in place a temporary mechanism for the payment of certain trade accounts payable by local and regional governments as at December 2011. The plan was financed by a syndicated loan[10] taken out by the Supplier Payment Financing Fund (Fondo para la Financiación de Pago a Supplier, the "FFPP" by its Spanish abbreviation), created by the Government and 26 financial institutions, and endowed with €30 billion, extendable to €35 billion. The FFPP came into being as a public law entity with legal personality and capacity to issue and raise funds on the markets.[11] To draw on the FFPP, local and regional governments had to commit to an adjustment plan assessed by the MHAP.[12]

Royal Decree-Law 4/2013 of 22 February 2013 gave rise to a second phase of the supplier payment mechanism, which regulated the inclusion of the governments and invoices excluded in the first phase.[13] It was endowed with around €2.6 billion, the amount remaining

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8 The central government undertook to: (1) shift forward to the first half of 2012 50% of the estimated amount of the 2010 financing system settlements in favour of those regional governments which so request; (2) defer up to a maximum of 120 monthly instalments the outstanding amount of the negative settlements of the financing system relating to 2008 and 2009 for those regional governments which so request and which agree on an adjustment programme with the MHAP. The 2008 and 2009 settlements in favour of the State amounted to €5,922 million and €18,947 million, respectively, according to the MHAP.

9 It was set up in February 2012 to make special-purpose loans under which the ICO paid the financial creditor directly. The maximum interest rate was referenced to the ICO's cost of debt. Thus regional governments had to pay this interest rate plus the ICO's financial market search costs. However, the ICO's search costs and its limited ability to obtain financing on the markets meant that its borrowing conditions were worse than those of the financing obtained by the Treasury (see González, 2013). A total of €5,333 million of loans were granted (see ICO press release of 11 February 2013 reporting the 2012 results).

10 The syndicated loan was secured by a Treasury guarantee which in turn was secured by the share in State revenue of municipal and regional governments. The loan maturity initially set was 5 years, with a 2-year grace period. The cost for local and regional government is that of the syndicated loan plus operating costs of 0.3 pp and they had to repay the loan in 10 years with a 2-year grace period. These conditions are now softer for municipalities.

11 As stipulated in Royal Decree-Law 7/2012 of 9 March 2012.

12 A favourable assessment of the adjustment plan entailed the transformation of the trade debt of local and regional governments into financial debt to the State, while an unfavourable assessment or lack of an adjustment plan could entail retention of the share in State tax revenue.

13 Specifically, the expansion of the mechanism affected associations of municipalities, Navarre and Basque municipalities, and new types of contract (administrative licences, management contracts, agreements, property lease contracts and public-private sector cooperation contracts).

from the FFPP's initial endowment of €30 billion after deducting the amount of €27.4 billion finally used in 2012.[14]

Finally, in the fourth quarter of 2013 the third phase of the supplier payment plan was approved. It was implemented in two tranches, paid in November 2013 and February 2014, which extended not only the scope of the mechanism,[15, 16] but also the time horizon of the outstanding payment obligations covered by it. Hence this could be used by local and regional governments to settle due and payable obligations to 31 May 2013. In total, the FFPP has, in its three phases between 2012 and 2014, paid €30.2 billion to regional governments and €11.6 billion to local governments (see Table 1).

Simultaneously with the FFPP, the Government set in train a supplementary mechanism initially designed to provide liquidity to the regional governments so requesting. Its purpose was to cater for situations of strong need for financing at times of tight credit. To this end, Royal Decree-Law 21/2012 of 13 July 2012 on general government liquidity measures set up the regional government liquidity fund (Fondo de Liquidez Autonómica – "FLA" by its Spanish abbreviation). This is a fund from which regional governments can voluntarily obtain funds, which from the outset has been financed by Treasury debt issuance, so its cost is lower than that of the FFPP. Like the FFPP, the FLA directly services the security and loan maturities which regional governments are unable to refinance. Since it was set up, nine regional governments have joined it.[17] Despite its initial purpose, since the end of 2012 the FLA has devoted somewhat more than a quarter of its funds to paying outstanding invoices from suppliers, particularly those for works contracts, supplies and services, and health agreements and pharmacies. In total, between 2012 and 2014, the MHAP released €25.1 billion for supplier payments of regional governments belonging to the FLA (see Table 2).[18]

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14 For more information see the presentation of the MHAP of 15 November 2013 (http://www.minhap.gob.es/Documentacion/Publico/GabineteMinistro/Notas%20Prensa/2013/CONSEJO%20DE%20MINISTROS/15-11-13%20Presentaci%c3%b3n%20Endeudamiento%20Supplier.pdf).

15 The first tranche covered the following beneficiaries: (i) health, education and social service agreements; (ii) cooperation agreements; (iii) transfers to non-profit social welfare associations and institutions in the areas of children, the disabled and the elderly; (iv) grants for R+D+I activities of entities inscribed in the register of technological centres and innovation support centres of the Ministry of Economic Affairs and Competitiveness; (v) transfers to local governments, provided that they had outstanding payment obligations eligible for inclusion in this tranche; and (vi) suppliers of universities.

16 The second tranche covered the following beneficiaries: (i) works contracts, public works concessions, public services management, including the modalities of concession, services, supplies, cooperation between the public sector and the private sector; and private contracts for artistic and literary creation and interpretation or shows, in accordance with the consolidated text of the Public Sector Contracts Law; (ii) contracts under Law 31/2007 (water, energy, transport and postal services); (iii) property lease contracts; (iv) subsidies, within the framework of public procurement, for tariff rebates to the users of goods or services, in the portion financed by regional government; (v) management contracts in which the commissioned entity has the status of a resource and technical service of the government; (vi) administrative licences; and (vii) compensated seizures.

17 Andalusia, Asturias, the Balearic Islands, the Canary Islands, Cantabria, Castile-La Mancha, Catalonia, Murcia and the region of Valencia. Since December 2014 Extremadura has joined. The State can withhold financing system funds from any regional government that misses payments to the Fund. Access to the FLA is subject to strict conditions. The member regional governments have to draft an adjustment plan to ensure they meet their individual deficit and debt targets and repay the funds received. Disclosure requirements were also tightened, most notably to require regional governments to report more monthly information on their budget outturn and their treasury position and its impact on compliance with the adjustment plan. Control measures and plan monitoring were also strengthened.

18 The amount also included cofinanced subsidies and those for dependency, local government and universities, and taxes and other.

Thus, between 2012 and 2014, the FFPP and the FLA supplier facility paid outstanding invoices of local and regional governments amounting to €66.9 billion, of which €11.6 billion related to local government and €55.3 billion to regional government (see Tables 1 and 2 and Chart 5). Of the amounts disbursed by the FFPP, somewhat more than 50% was devoted to paying the invoices of large firms, nearly 50% to SMEs and 1% to the self-employed (see Chart 5, left-hand panel).

As a supplement to programmes of this type, different legislative measures were adopted to reduce structurally the payment periods of general government. Specifically, EU Directive 2011/7/EU aims to harmonise at European level the time taken by general government to pay companies and also shorten the payment periods between private sector firms. For dealings between general government and private sector firms it sets a payment period of 30 days from receipt of the invoice or, if none, from receipt of the goods or services. This period may be extended in certain circumstances to 60 days. The Directive also establishes minimum financial costs for general government if these deadlines are not met. In 2010 Spain enacted Law 15/2010 of 5 July 2010 amending Law 3/2004 of 29 December 2004 on measures to combat late payment of commercial transactions, which anticipated several of the measures subsequently included in the aforementioned Directive, particularly in relation to payment periods.[19] The transposition was completed by Royal Decree-Law 4/2013 of 22 February 2013 on measures to support entrepreneurs and stimulate growth and job creation.

Also, to strengthen compliance with this legislation, the law on control of trade debt in the public sector came into force in January 2014. This law amends the budgetary stability and financial sustainability law so as to broaden the meaning of the principle of financial sustainability to include trade debt in its scope, since under the budgetary stability and financial sustainability law as originally drafted, the limits on public indebtedness only included the control of public debt as defined in the Excessive Deficit Procedure, which as noted above, excludes trade credit. In addition, it obliges general government to make public its average supplier payment period and approves various measures which general government has to apply unilaterally when the permitted average payment periods are exceeded. Accordingly, the average payment period becomes a crucial tool within the framework of the budgetary stability and financial sustainability law, which establishes a detailed monitoring and sanctioning procedure in the event of non-compliance. Since September 2014 all tiers of general government have made public their average payment periods.

19 It came into force in January 2013.

4 Impact on activity of supplier payment funds

4.1 Channels

As noted in the introduction, the measures to reduce the government's trade debt have entailed an injection of liquidity into firms and households and a normalisation of the time taken by general government to pay its suppliers which, against a background of widespread economic weakness, fiscal consolidation and difficult access to credit by economic agents, may have had a not insignificant impact on economic activity.

Quantifying this impact is, however, complex and it is first necessary to identify the channels through which these effects act. For this purpose, it is useful to analyse the effect which may arise from default or late payment. Although deferred payment is normal in trade relationships, excessive lengthening of payment periods has harmful effects on the creditor company.[20] Specifically, delaying collection on goods and services supplied causes problems in the financing of the creditor company's operations. This obliges it to resort to alternative means of financing, including bank financing or it in turn delaying payment to its suppliers. Against a backdrop of financial constraint as in the recent crisis, these alternatives may not be available or they may be very costly, thus reducing firms' profitability and perhaps even jeopardising their liquidity, and ultimately resulting in lowered investment, delays in paying employees and, in extreme cases, closure of the firm.[21]

The impact of lengthening the time taken to pay suppliers probably depends on firm size. Large firms are generally better equipped to mitigate the effect of delays in customer payments by passing on the trade credit fully or partly to their own creditors and being in a better position to negotiate alternative financing with banks. Delayed payment is therefore probably more harmful when the creditors are small and medium-sized enterprises.

The macroeconomic effect of the various supplier payment programmes mentioned above thus comes about because they alleviate firms' liquidity constraints. The final effect will depend on whether the creditors take the plan as a mere early payment of amounts they expected to receive later, or whether this payment is unexpected, i.e. the economic agents did not expect to collect, at least partially, the trade accounts payable to them by general government. In this second case the expected multiplier effect will obviously be greater. The effect will also depend crucially on the use made by firms of the funds paid by the government. Generally firms will use these funds to repay bank loans, to pay possible arrears in their employees' wages, to undertake investment or working capital projects postponed due to the initial lag in government payment or simply to increase their saving for precautionary reasons. The multiplier effect on the

20 See Miranda Serrano (2008), Banco de España (2012) or Connel (2014).

21 Connel (2014) estimates that in a hypothetical scenario in which delays in general government payments to the business sector were reduced to zero, the firm shutdown rate would be reduced by somewhat more than 7%.

economic activity of each of these uses will also differ. Generally the effect can be expected to be larger when the funds are used for investment in fixed assets or working capital and smaller when they are used to repay bank loans, since in this case the effect on economic activity takes a more indirect path: the positive impact on investment will depend on the extent to which financial institutions used the amounts to grant new loans. Similarly, if the final use is to pay employees' wage arrears, its short-term impact will depend on whether the amounts are used for consumption or saving.

Furthermore, the effects of these extraordinary supplier payment mechanisms may depend crucially on the macroeconomic setting in which they arise. Specifically, the significant prior lengthening of regional and local government payment periods, against a backdrop of economic crisis and tight credit conditions in which general government was simultaneously engaged in a significant fiscal adjustment, acted to magnify the positive effects of the provision of liquidity to economic agents under the Plan.

A proper analysis of the macroeconomic impact of the supplier payment plans would therefore require individual data on the firms (and households) affected and a knowledge of their credit restrictions and their decisions before and after the supplier payment measures were implemented. That information is naturally not available. There is, however, some disaggregated information on the use of funds which may help to approximate these effects. Specifically, the data provided by the Ministry of Finance and Public Administration (MHAP) show that 55% of payments from the supplier payment fund were to large firms (€23 billion), 43% to SMEs (€18 billion) and the other 2% to self-employed persons (€0.8 billion). Those data also indicate that 20.3% of payments by the supplier payment fund (around €6.1 billion) and 13.5% of the total payments[22] from the FLA (around €3 billion) were made directly to financial institutions.

Based on this information, the macroeconomic impact of supplier payment programmes is estimated below using two analysis tools. First, an illustrative empirical exercise based on a VAR model is conducted. Second, a series of simulations, including quantitative estimates, is performed using the Quarterly Macroeconometric Model of the Banco de España. This enables us to characterise some of the channels through which the supplier payment mechanisms may have operated.

4.2 Estimation of the impact of supplier payment mechanisms using a VAR model

The most immediate effect of the various supplier payment plans has been to reduce the weight of general government trade credit relative to GDP. The impact of a change in trade credit as a proportion of the real GDP of the economy can be approximated, firstly, by a VAR model including the variables of interest in the analysis. A VAR model is a system of equations which takes each variable included as being endogeneous with respect to the others and is thus particularly appropriate for an analysis of these characteristics in which the causal relationships between the variables being analysed may run in different directions.

22 Percentage of the total payments from the FLA, and not just of the amounts used by it for supplier payments.

The fact that the sample has a sufficient, although not prolific, number of observations, would advise a gradual approach to the phenomenon under study. Hence the variables included in the basic VAR model used are general government trade credit, real GDP and government expenditure. The variable used to represent trade credit is general government accounts payable to non-financial corporations. The level of government expenditure (in logarithms) is also included in the model to control for the fact that an increase in government expenditure may be associated with increased trade credit, since the latter consists of a delay in payment of the former (see Checherita et al., 2015).[23] However, against a background in which general government has limited access to financial markets, the relationship between these variables could reverse if general government responded to this situation by simultaneously cutting government expenditure (fiscal adjustment) and delaying payment to suppliers.

The following additional variables are also included in alternative specifications: the inflation rate (measured by the GDP deflator), a measure of the cost of the financing needed to cover the operating needs it was intended to cover with the trade credit (for which a 3-year interest rate is used), a measure of the degree of financial tightness of the economy (through the volume of loans from the financial sector to the non-financial private sector, excluding house purchase loans to households) and a measure of the financial situation of the business sector (proxied by the real gross value added of the market economy). The sample available to estimate the models consists of quarterly data and covers the period 1995Q1-2013Q4.

The upper panels of Chart 6 show the impulse-response functions[24] of real GDP and trade credit (both variables are in logarithms) when there is an unexpected decrease (shock) in the latter variable.[25] The model dynamics behave as expected. GDP responds by increasing from the first quarter in which the shock occurs and continues to rise persistently in the ensuing periods.[26] Also, the decrease in trade credit is accompanied by increased government expenditure (bottom panels of the chart). Thus, according to this model, a (3-year cumulated) decrease of 1% in trade credit would give rise to an increase in real GDP of around 0.2 pp.[27] These estimates are subject to high uncertainty in view of the wide confidence bands. In terms of the ratio of trade credit to government expenditure (see lower right-hand panel of Chart 6), a shock of this size to trade credit would reduce that ratio by 2.5 pp to 9.9% in 3-year cumulated terms, if the starting point is taken as its value in 2011 Q4 (12.4%).

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23 Unlike real GDP, which is taken from the Quarterly National Accounts, trade credit and government expenditure are not seasonally adjusted. These two variables are thus seasonally adjusted using the TRAMO/SEATS program.

24 The Chart depicts the generalised impulse-response functions of Pesaran and Shin (1998), which are robust to the ordering of the variables in the VAR. The confidence bands are calculated by asymptotic methods. A constant and a linear trend are included in all specifications. The VAR lag structure is determined employing the usual statistical criteria (AIC and SIC).

25 The initial shock is equivalent to one standard deviation of the variable. The path of trade credit in Chart 6 has been normalised to show a cumulative change of 1% so that the panels are simpler to read.

26 In the model, moreover, trade credit exhibits high persistence, i.e. an initial reduction in trade credit generates decreases in the following quarters, so the total shock received by the economy is bigger than the initial one. For this reason the results should be analysed in cumulative terms, as in the chart.

27 The stock of trade credit is not significantly affected by a shock to GDP, in keeping with the results of the model.

Based on these results, an estimate can be made of how GDP would be affected by the decrease in trade credit associated with the supplier payment plan. Specifically, according to the information in Chart 3, the ratio of all general government accounts payable to non-financial corporations (our measure of trade credit in VAR) to government expenditure decreased by nearly 4.5 pp between 2011 Q4 and end-2013.[28] If it is assumed that all the change in this ratio is due to supplier payment programmes, based on the estimate obtained from the model and given that this is linear, the positive impact of these programmes on real GDP may be around 0.36 pp of GDP in 3-year cumulated terms. The most recent information, relating to 2014 Q3, shows general government accounts payable to non-financial corporations expressed as a percentage of government expenditure fell by 6.9 pp from 2011 Q4, which would raise the cumulative impact on GDP to 0.55 pp of GDP. These estimates do not, however, take into account the possibility that the funds made available may have had differing impacts on the economy, depending on whether they were paid directly to financial institutions, on the size of the recipient firms and on other factors. In addition, the dynamics of government expenditure in this period was determined by numerous factors.

If the VAR model is expanded to incorporate the additional variables mentioned above, the estimate of the impact generally remains valid.[29]

4.3 Estimation of the impact of supplier payment mechanisms through simulations with the Quarterly Macroeconometric Model of the Banco de España

As an alternative to the above VAR-based analysis, we estimate below the impact of the supplier payment plan on the main macroeconomic variables by making use of the Quarterly Macroeconometric Model of the Banco de España. Specifically, as a means of including the various channels mentioned in earlier sections, the supplier payment plan is simulated as an increase in transfers from the public sector to households and firms, and through an increase in the credit available in the economy, for the various quarters in which payments were made between 2012 Q2 and 2014 Q4.

Chart 6 shows the annual size of these payments in the period 2012-2014. The amounts reached around 3.2% of GDP in 2012, 1.2% of GDP in 2013 and 1.9% of GDP in 2014. To put these figures into perspective, the same chart also shows the reduction in the structural primary deficit by general government in the same period, according to European Commission estimates. Specifically, this reduction amounted to 3.1 pp, 1.6 pp and 0.2 pp of GDP in 2012, 2013 and 2014, respectively. The supplier payment plan was implemented in parallel with the process of fiscal consolidation. It can be expected that the implementation of the plan has helped to mitigate to some extent the adverse effects on short-term economic growth usually associated with the application of adjustment measures, irrespective of its positive long-term effects.

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28 Latest annual government expenditure figure available on the cut-off date of this article.

29 Also, it is found that reducing trade credit improves the financial situation of the business sector (as measured by the real gross value added of the market economy). The sign of the interest rate response is also as expected, as there is a cumulative decrease in response to a cumulative decrease in trade credit.

The difficulties in using a macroeconomic model to estimate the impact of the supplier payment fund are, however, numerous. In principle, we do not have an accurate knowledge of the final use of the funds or of how they are used by the various agents, so various assumptions have to be made to carry out the simulations.

An initial simulation (scenario 1) is performed under the following assumptions. First, it is necessary to allocate the amounts of the plan funds according to their use by economic agents (financial institutions, households and firms), given that, as indicated in Section 4.1, the expected impact depends crucially on this factor. Specifically, under scenario 1 it is assumed that all the amounts paid by supplier payment financing funds and the FLA directly to financial institutions do not increase household income, but rather raise the availability of credit in the economy. Specifically, on the available information it can be estimated that around 17.6% of the total funds, about €11,756 million, were paid directly to credit institutions. As noted above, the economic activity multiplier derived from this part of the funds is expected to be lower, given that the effect depends on the extent to which this higher available credit is used by financial institutions to grant more credit and, in turn, depends also on how firms and households used this fresh credit granted to them.

Under this first scenario it is also assumed that, disregarding the aforementioned amounts, all the payments of supplier payment financing funds to individuals and half of the payments of supplier payment financing funds and the FLA to SMEs correspond under the model to a transfer to households. The other payments of supplier payment financing funds and the FLA to SMEs and large firms are considered as injections into firms. According to these assumptions, around 60% of the total funds entailed a transfer to firms and the remainder to households.

Under this first scenario it is also assumed that the main effect of the plan is to bring forward the payment of amounts which creditors of general government expected to receive late but which they had not written off. Subsequently, this assumption, which has important implications in terms of the macroeconomic effects simulated with the model, will be relaxed. Additionally, it is assumed that after the transfer relating to payment of arrears, households keep their saving rate unchanged, i.e. that the percentage of these payments that they save is equal to what they were saving before the transfer. This assumption, which increases the consumer response to shocks which raise disposable income, is intended to describe the situation of economic crisis in which the plan was carried out and in which agents encountered more liquidity constraints.

Chart 8 summarises the estimated impact on GDP and employment for the period 2012-2014. The results obtained suggest that the supplier payment plan had a cumulative positive effect on GDP of 0.3 pp to 2014. The effect on employment was 0.4 pp. This resulted from increased consumption and, above all, from increased private productive investment. The increase in imports derived from the increase in domestic demand seems to have neutralised part of the expansionary effect of the plan.

In a second simulation (scenario 2), all the foregoing assumptions are maintained, with the difference that the impact of the plan is generated not only through the bringing-forward of the creditors' expected collection date, but also because a portion of this collection is unexpected, i.e. the economic agents expected that they would not collect a percentage of their trade accounts receivable from general government. An unexpected transfer from general government to private agents naturally has a higher multiplier effect on activity. Specifically, under this scenario 2, the positive effect of the plan increases to 0.6 pp of GDP in cumulative terms to 2014 and to 0.7 pp of employment.

In short, the above results confirm the plan's positive effects on activity, although they also illustrate the difficulty in accurately quantifying the size of these effects, given that the channels through which it presumably operates can only be captured imperfectly and approximately in the available macroeconomic models.[30]

30 In a similar exercise using the REMS model, the BBVA Research Department estimated that the impact of the first supplier payment plan ranged from 0.4 pp to 1 pp of GDP in the first year, depending of the use of the funds and on the percentage of constrained agents (See BBVA, 2012).

5 Conclusions

The initiatives taken by the central government from 2012 to reduce the trade debt of regional and local governments enabled their stock of outstanding debt and the time taken to pay suppliers to be restored to normal. Successive plans have unblocked payments and channelled nearly €67 billion of funds to the private sector in somewhat less than three years.

Since these mechanisms have were implemented after a significant increase in regional and local government payment periods and against a background of severe economic weakness, fiscal consolidation and tight credit, they seem to have acted as a stimulus on private agents and the economy as a whole, helping to mitigate some of the adverse effects of the economic crisis. The various estimates presented in this study confirm a significant positive impact on activity although it is complex to estimate its size accurately, given the variety of channels on which plans of this type may operate and the difficulty in capturing them with the available macroeconomic models.

As a whole, the measures implemented have proved highly effective in providing liquidity to the suppliers of local and regional government, the outstanding invoices payable of which increased significantly during the economic crisis. Simultaneously, they entailed a major increase in local and regional government indebtedness to the State. To prevent this kind of aid from generating inappropriate incentives in the behaviour of local and regional government, the financing mechanisms agreed envisage the fulfilment of adjustment plans. It is now crucial to require strict observance of those plans.

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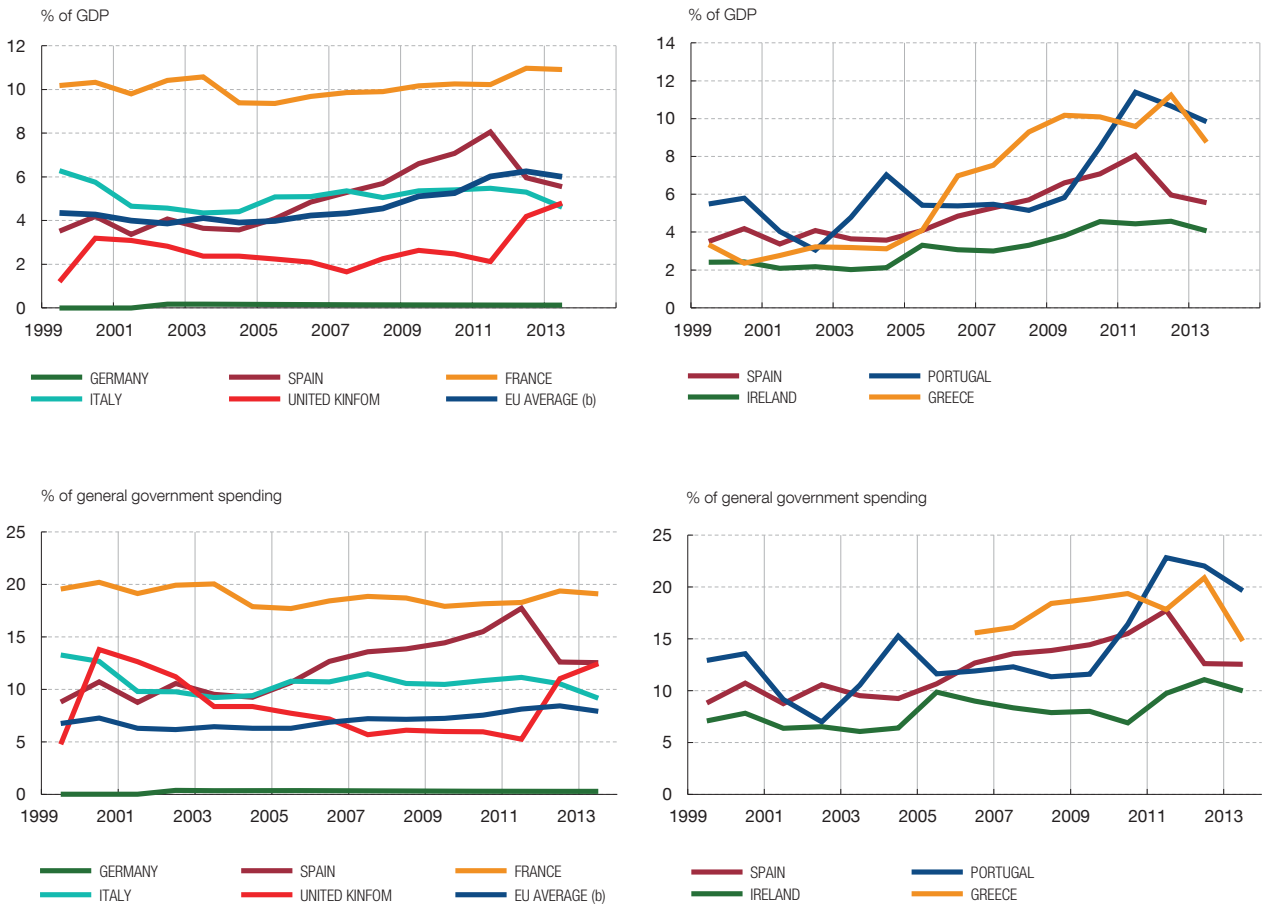
ACCOUNTS PAYABLE OF GENERAL GOVERNMENT: INTERNATIONAL COMPARISON (a)

CHART 1



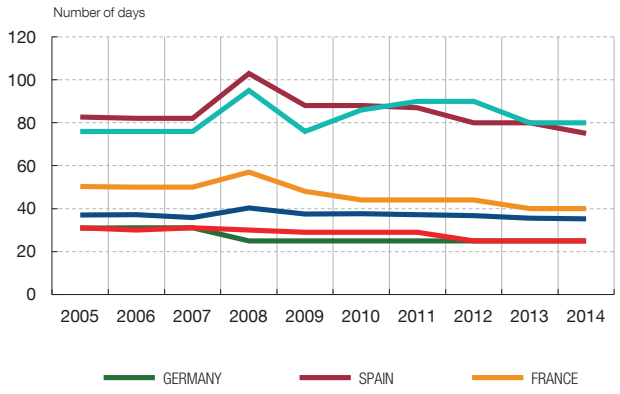
SOURCE: Eurostat.

a Does not include accounts payable to other general government units.
b EU average does not include Bulgaria, Estonia, Croatia, Lithuania, Latvia, Luxembourg, Malta, Poland and Slovenia because of the lack of data. Accounts payable as a percentage of public spending do not include Greece until 2006 because of non-availability of data on public spending in ESA 2010 methodology.

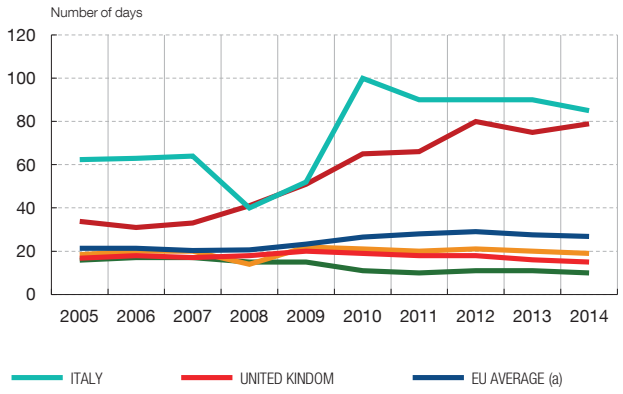
GENERAL GOVERNMENT'S AVERAGE SUPPLIER PAYMENT PERIOD: INTERNATIONAL COMPARISON

CHART 2

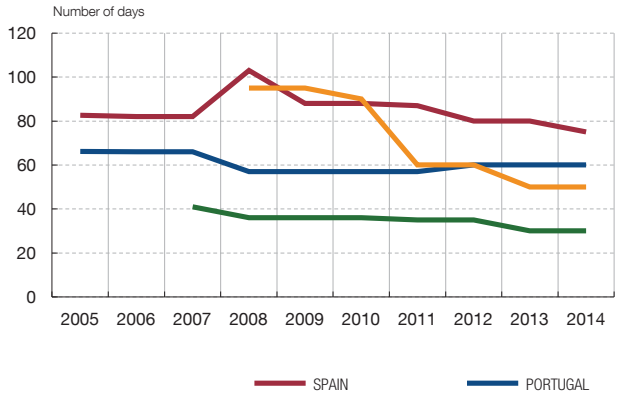
USUAL CONTRACTUAL PRACTICES PREVAILING



AVERAGE DELAY OBSERVED



USUAL CONTRACTUAL PRACTICES PREVAILING



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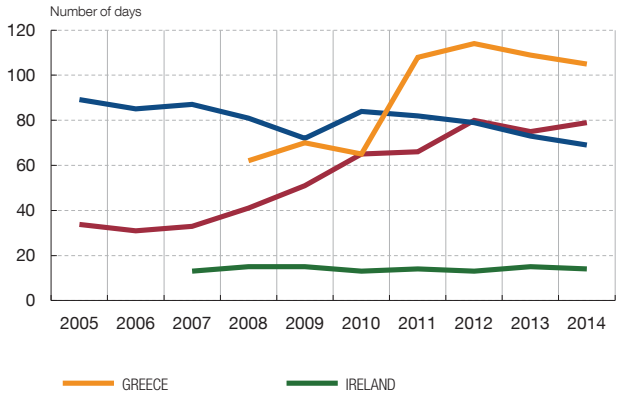


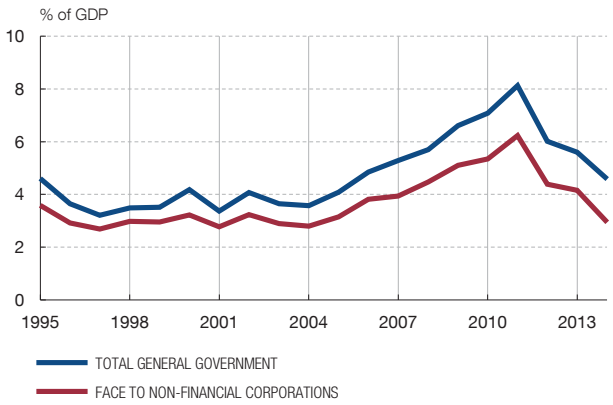
SOURCE: European Commission.

a Average of the EU-28 excluding Bulgaria, Croatia, Romania and Slovenia.

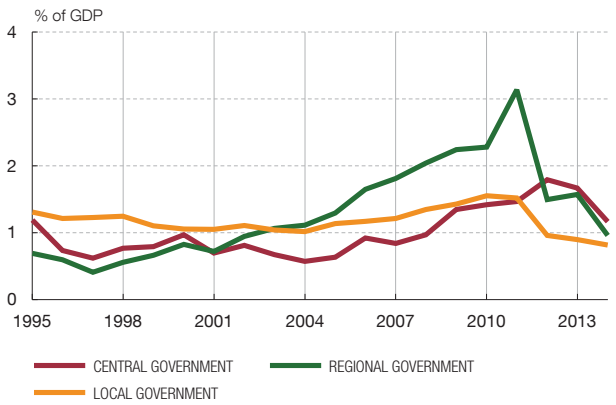
GENERAL GOVERNMENT: ACCOUNTS PAYABLE (a) (b)

CHART 3

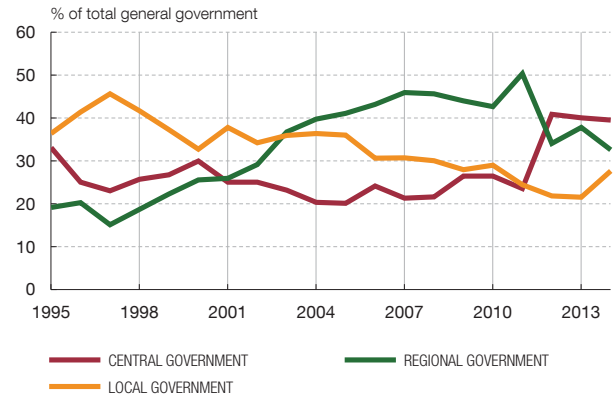
TOTAL PAYABLE TO NON-FINANCIAL CORPORATIONS



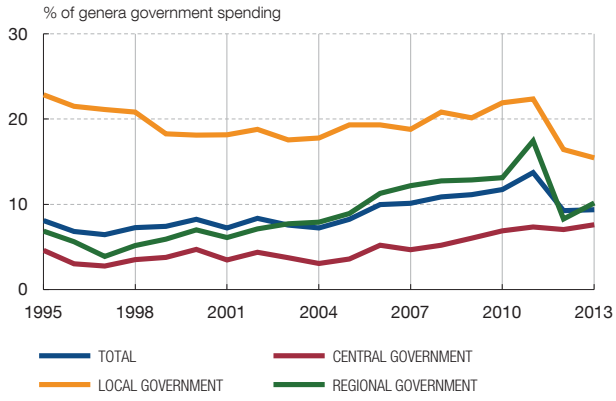
PAYABLE TO NON-FINANCIAL CORPORATIONS; AS % OF GDP



PAYABLE TO NON-FINANCIAL CORPORATIONS; AS % OF TOTAL



PAYABLE TO NON-FINANCIAL CORPORATIONS; AS % OF GDP

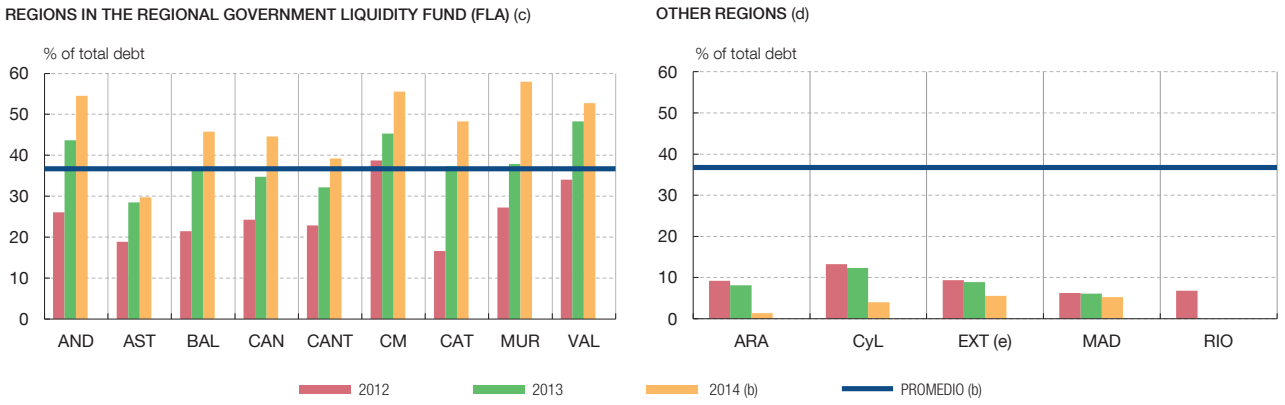


SOURCES: Banco de España and MHAP.

a 2014 data relates to the third quarter of the year. 2014 GDP is the aggregation of the quarterly GDP of the last four quarters available.
b Excluding accounts payable to other general government units.

WEIGHT OF LOANS FROM CENTRAL GOVERNMENT IN THE TOTAL DEBT OF REGIONAL GOVERNMENTS (a)

CHART 4

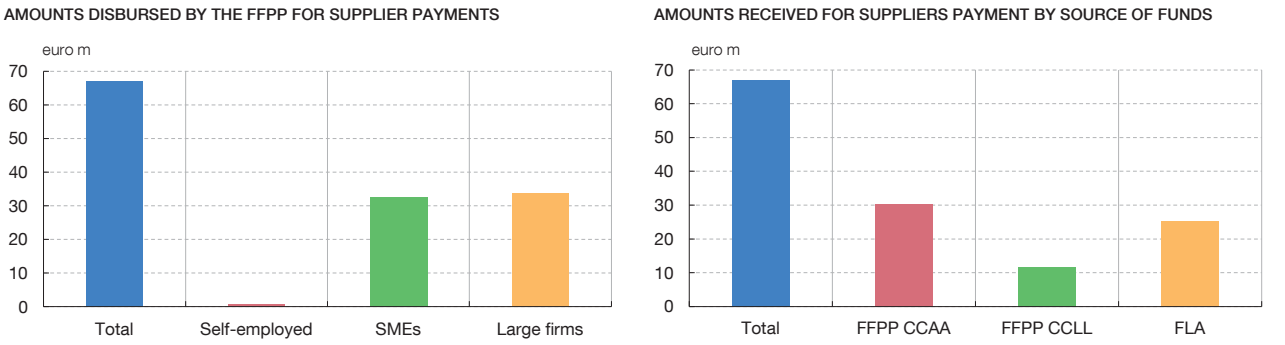


SOURCES: Banco de España and INE.

a The regions of Galicia, Navarre and Basque Country have not received any financing from Central Government loans.
b Figure for September 2014. The average is also the September figure; it is computed as the ratio of the aggregation of all financing received by the regional government from the FLA and FFPP to total regional debt.
c At 30 November the following regional governments were in the FLA programme: Andalusia (AND), Asturias (AST), Balearic Islands (BAL), Canary Islands (CAN), Cantabria (CANT), Catalonia (CAT), Castilla la Mancha (CM), Murcia (MUR) and Valencia (VAL).
d Aragon (ARA), Castilla y Leon (CyL), Extremadura (EXT), Madrid (MAD), La Rioja (RIO).
e Extremadura joined the FLA programme on 11 December 2014.

FUNDS RECEIVED BY THE REGIONAL AND LOCAL GOVERMENT FOR SUPPLIER PAYMENTS (a)

CHART 5

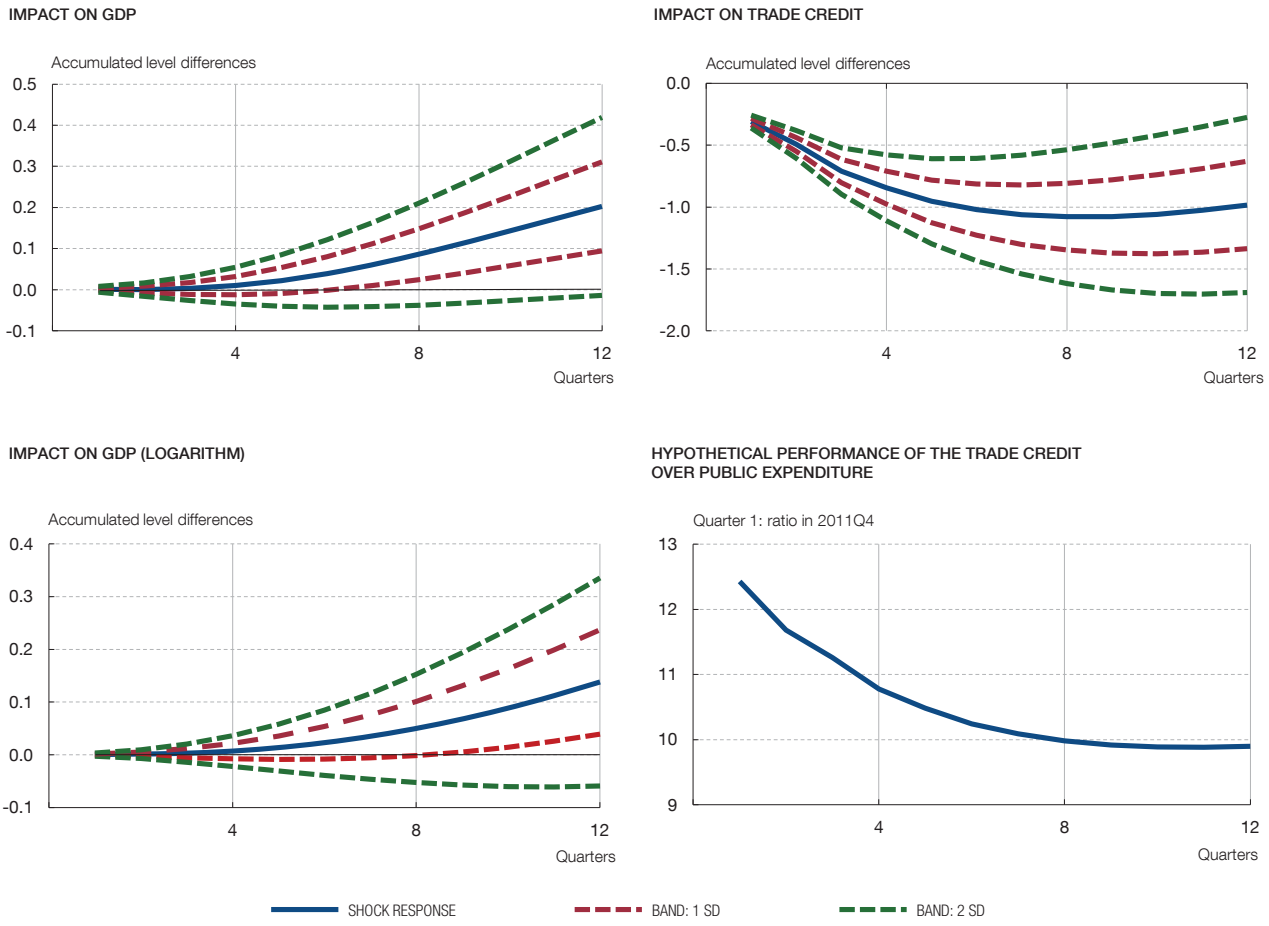


SOURCE: MHAP.

a Includes payments to suppliers, co-financed grants, dependency, subsidies or transfers to local authorities and universities and others. Therefore, it is the total amount of the FLA that is not used to pay the debt and interest thereon.

VAR MODEL: IMPACT OF A REDUCTION OF GENERAL GOVERNMENT'S TARDE DEBT (a)

CHART 6

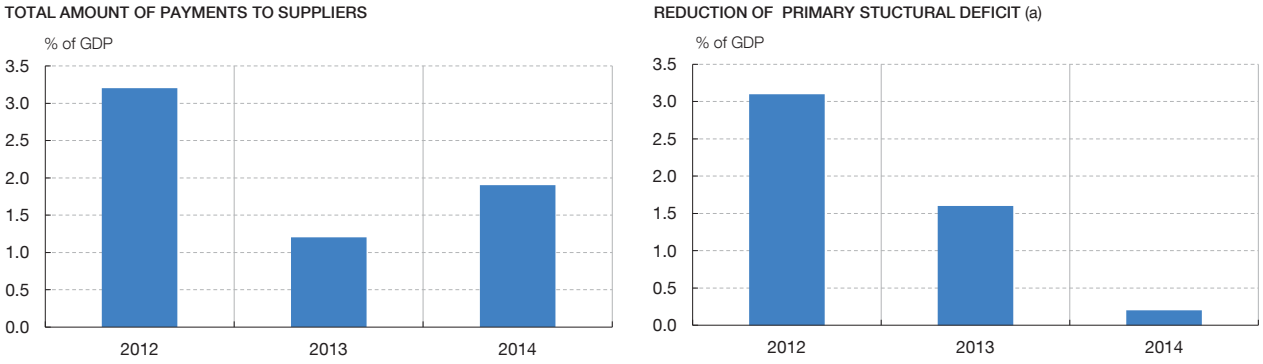


SOURCES: Banco de España and MHAP.

a Accounts payable by General Government to non-financial corporations.

ANNUAL AMOUNT OF SUPPLIER PAYMENTS AND STRUCTURAL BALANCE OF THE GENERAL GOVERMENT

CHART 7

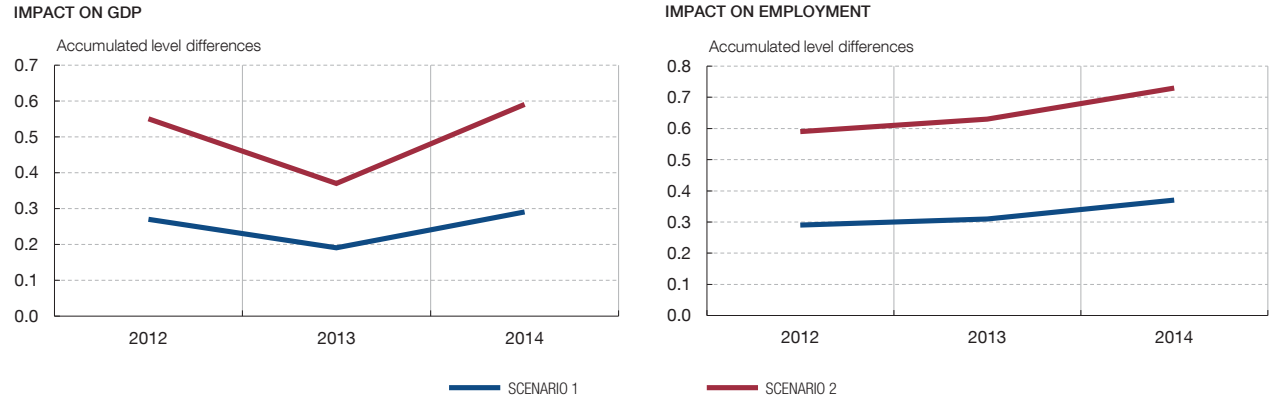


SOURCES: Banco de España and European Commission.

a According to the European Commission.

MTBE MODEL: SIMULATION OF IMPACT OF THE SUPPLIER PAYMENT MECHANISM ON GDP AND EMPLOYMENT

CHART 8



SOURCE: Banco de España.

FINANCING RECEIVED BY THE SUB-NATIONAL GOVERNMENTS FROM THE SUPPLIER PAYMENT FINANCING FUND (a) (b)

TABLE 1

Eur. Million	By regional governments				By municipalities
	Total	2012	2013	2014	Total
Total	**30,219**	**17,705**	**4,544**	**7,970**	**11,595**
Andalusia	4,955	2,694	634	1,628	3,405
Aragon	513	429	10	74	227
Asturias	243	243			82
Balearic Islands	1,274	842	85	347	450
Canary Islands	315	231	24	59	502
Cantabria	327	327			51
Castilla y Leon	1,052	1,052			453
Castilla La Mancha	3,957	2,918	339	699	569
Catalonia	6,466	2,020	2,169	2,277	820
Extremadura	392	228	7	157	153
Galicia					220
Madrid	1,347	1,257	89		2,882
Murcia	1,789	1,038	253	499	419
Navarre					1
La Rioja	71	71			7
Valencia	7,519	4,355	934	2,230	1,271

SOURCE: MHAP.

a The regional and municipal governments of the Basque Country have not received any financing form the FFPP.
b There have been 4 payments from the FFPP: Phase I in June 2012, Phase II in August 2013, Phase III Tranche I in November 2013 and Phase I, Tranche IIin February 2014. Phase II for municipalities took place in June 2013.

FINANCING RECEIVED BY THE SUB-NATIONAL GOVERNMENTS FROM THE REGIONAL GOVERNMENT LIQUIDITY FUND (a)

TABLE 2

Eur. Million	By regional governments			
	Total	2012	2013	2014
Total	**25,073**	**6,298**	**7,019**	**11,756**
Andalusia	5,997	1,729	1,661	2,607
Asturias	586	234	353	
Balearic Islands	1,328	343	533	452
Canary Islands	1,365	406	473	486
Cantabria	510	117	233	160
Castilla la Mancha	1,416	254	431	732
Catalonia	7,339	1,821	1,892	3,626
Extremadura	158			158
Murcia	1,306	241	318	747
Valencia	5,067	1,153	1,125	2,789

SOURCE: MHAP.

a Includes payments to suppliers, co-financed grants, dependency, subsidies or transfers to local authorities and universities and others. Therefore, it is the total amount of FLA financing that is not used to pay the debt and interest thereon. Extremadura joined the FLA in December 2014. Aragon, Castilla y Leon, Galicia, Madrid, Navarre, La Rioja and the Basque Country have not received any financing from the FLA.

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