REGIONAL GOVERNMENT ACCESS TO MARKET FUNDING: INTERNATIONAL EXPERIENCE AND RECENT DEVELOPMENTS

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Introduction

Regional and local public debt has grown in importance on international capital markets in recent decades. This development has mainly been due to wider progress in budgetary decentralisation in many advanced and emerging economies over the period, in conjunction with increased investor demand for this type of debt [see Canuto and Liu (2013)].

Spanish government has been no exception to this trend. Specifically, Spain's autonomous regions have regularly accessed the financial markets, in a process paralleling the transfer of budgetary authority that has been under way since the country's transition to democracy.[1] Between 1995 and 2007, Spanish autonomous regions' total debt[2] averaged around 6% of GDP. Half of this was in the form of debt securities and the rest in that of loans from resident and non-resident entities.

The economic and financial crisis that broke in 2007 caused a sharp deterioration in public finances affecting most countries and government sub-sectors. In the specific case of Spain's autonomous regions, debt more than doubled between 2007 and 2011, rising from 5.7% to 13.6% of GDP. The financial stress caused by the sovereign-debt crisis in the euro area from 2010 onwards made it particularly difficult for the autonomous regions to tap the financial markets. At the same time, they significantly extended the time taken to pay their suppliers.[3] State intervention was ultimately necessary to alleviate this situation, with successive extraordinary measures and additional liquidity support mechanisms for the autonomous regions being put in place in 2012. These instruments took the form of bilateral loans from central government to the autonomous regions. Thus, in 2015 Q3, 45% of autonomous-region debt (which then stood at 23.6% of GDP) was in the form of loans from central government, in contrast to a negligible level prior to 2012,[4] such that this became the main means of covering the funding requirements of the autonomous regions as a whole.

The mechanisms currently operate through the *"Fondo de Financiación a Comunidades Autónomas"* (Autonomous region financing fund), created on 1 January 2015, enabling the low financing costs currently enjoyed by the Spanish Treasury to be passed on to the autonomous regions. Nevertheless, keeping this fund indefinitely raises the question of what the permanent system for meeting the autonomous regions' financing requirements should be, particularly given the existence of a framework of budgetary discipline rules, such as those established in the Organic Law on Budgetary Stability and Financial Sustainability (LOEPSF).

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1 Article 157 of the Spanish Constitution establishes that the autonomous regions may finance themselves with debt. The Organic Law on the Financing of the Autonomous regions (LOFCA) implements this mandate, imposing certain limitations on the autonomous regions' long-term debt, in particular, requiring prior authorisation from central government.

2 Debt measured according to the excessive deficit procedure (EDP). For more on the definition of public debt in the EDP, see the Banco de España methodological note at: http://www.bde.es/webbde/es/estadis/infoest/htmls/notamet_pde.pdf.

3 Spain's recent experience is by no means an isolated case internationally. Sub-central governments have faced bouts of financial difficulties in the past, which have in some cases been remedied by central government intervention [Inman (2010) or Feibelman (2012)].

4 For an analysis of trends in public debt in Spain and its determinants during the economic crisis, see Gordo, Hernández de Cos and Pérez (2013) and Delgado, Gordo and Martí (2015).

This article aims to review the essential points found in the specialised literature and international experience on the subject of how sub-central governments' financing needs are met. It therefore describes the basic features of the recent global process of increased fiscal decentralisation, and reviews international experience with mechanisms of access to securities markets by sub-national governments, with a view to putting the Spanish case in context and drawing possible lessons.

Regional and local debt in the international context

Debt issues by local and regional governments have generally grown in significance in international financial markets in recent years. There is little uniformity, however, at the international level, in terms of the weight of sub-central debt in the economy as a whole and as a share of total government debt, as Chart 1 shows. Moreover, there are also differences in the way countries are organised into local and regional governments. The chart shows regional and local debt as a share of GDP (see upper panel) and relative to total government debt (lower panel) in a group of developed countries in 2007 and 2014, using Organisation for Economic Cooperation and Development (OECD) data. In Spain's case, the ratio of sub-central debt to GDP in 2014 was higher than that in some countries organised along federal lines, such as the United States, Switzerland or Germany. After Germany, Spain has the euro area's largest share of this type of debt in its total government debt.

According to the specialised literature, one of the main factors driving this upward trend in sub-central debt in recent decades has been the global process of budgetary decentralisation. This has led many countries, both advanced and emerging, to transfer a growing share of spending and tax raising powers to sub-central government levels, and it has made it possible in practice to take on debt by issuing debt securities on financial markets. In particular, rapid urbanisation in emerging countries has driven large-scale infrastructure projects, which it has been necessary to finance from the markets [Canuto and Liu (2010 and 2013)].

Decentralisation processes have also tended to be asymmetric as regards spending and revenue-raising powers, which, in "soft" budgetary constraint scenarios[5] may have encouraged sub-central governments to take on more debt than they would have done if there were more shared fiscal responsibility between government sub-sectors. In this regard, Chart 2 shows how the degree of decentralisation of public expenditure responsibilities (represented on the horizontal axis) has been higher than that of revenues (regional and local, taken as a whole) for which they have regulatory capacity[6] (on the vertical axis), for OECD member countries as a whole, for which comparable 2011 data are available. This reflects the fact that the points on the chart lie to the right of the main diagonal, even for the main federal countries, such as Canada, Switzerland, the United States and Germany. The chart also shows how that year Spain also had one of the highest levels of decentralisation of the 26 countries considered, viewed from both the sub-central expenditure and revenues viewpoint, ranking sixth in both cases.

A second driver of increased recourse to debt security issues by sub-central governments has been the way the market for this type of debt has developed [see Canuto and Liu (2010 and 2013)]. This trend, which has been particularly visible in emerging countries, has enabled a diversification away from traditional funding sources for sub-central debt, such

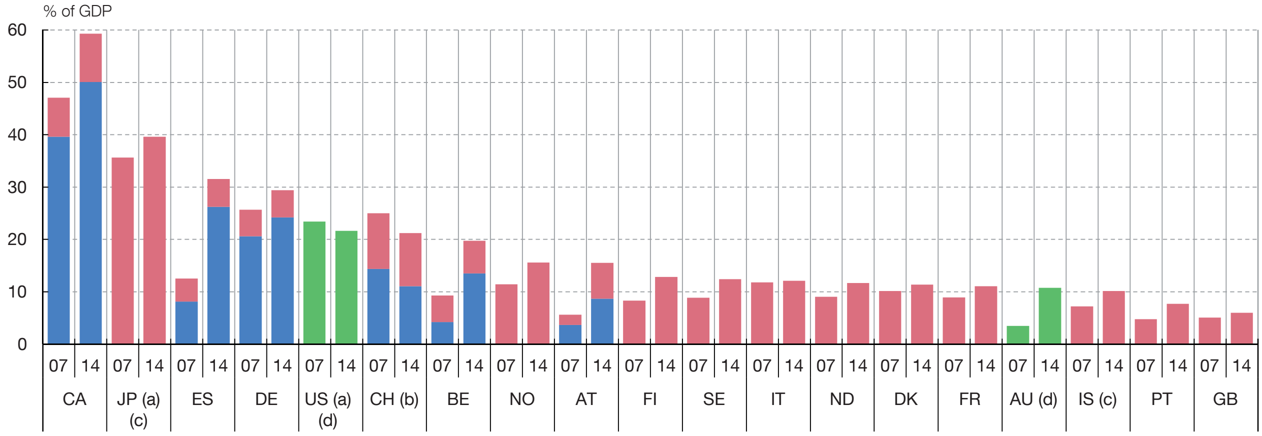
5 The specialised literature refers to a situation in which a sub-central level of government adopts fiscally irresponsible policies because it builds in expectations of a central government bail-out as "soft budgetary constraint". For more details and a discussion of the experience in Spain, see Fernández *et al.* (2013).

6 Revenues over which sub-central governments have regulatory authority as a proportion of total government revenues, against total sub-central government expenditure as a ratio of total government expenditure.

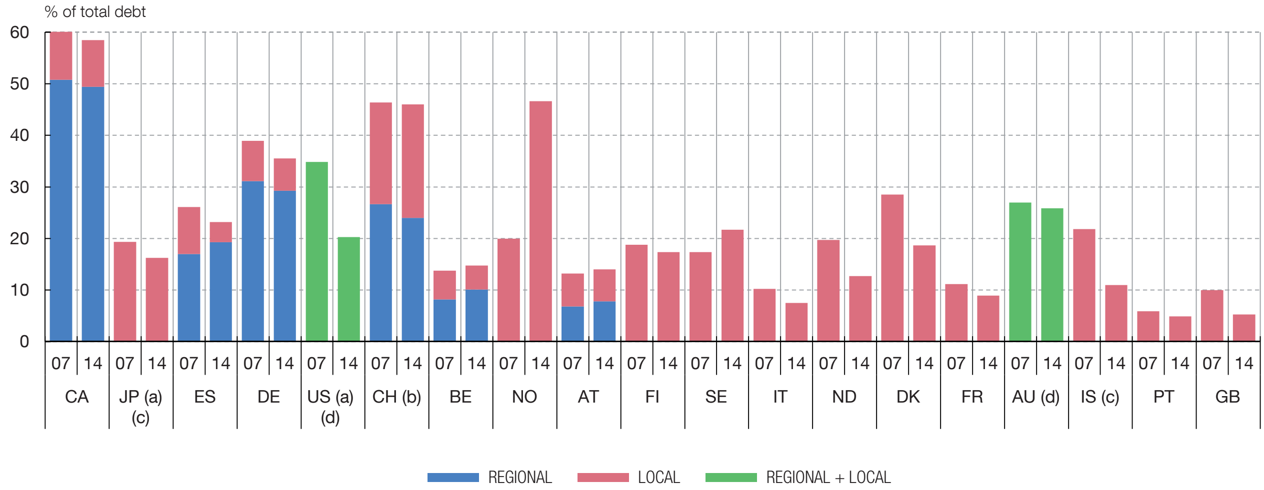
DEBT BY SUB-SECTORS (a)

CHART 1

1 SUB-NATIONAL DEBT



2 SUB-NATIONAL DEBT AS A SHARE OF TOTAL GOVT. DEBT

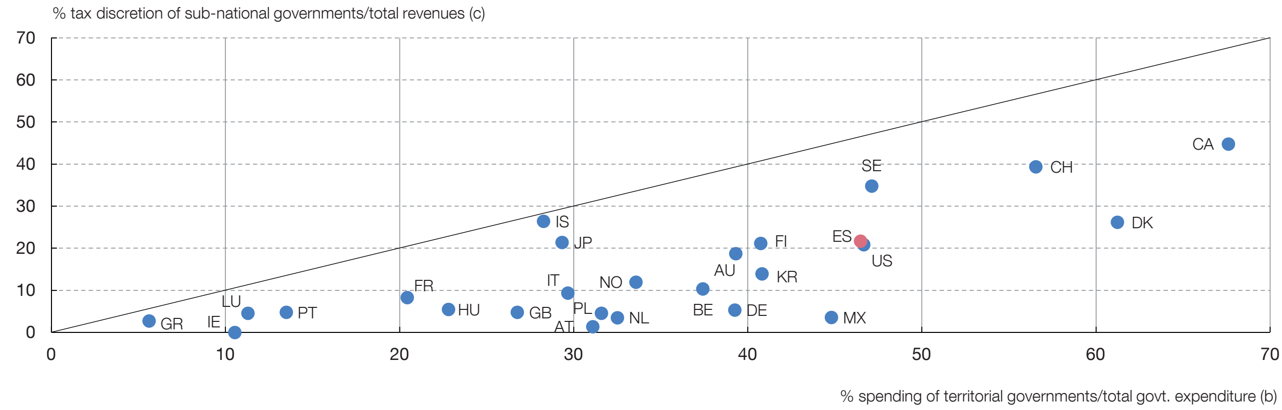


SOURCE: OECD.

a Total liabilities consolidated only within each sector (Central, including Social Security and Central government, Regional and Local), i.e. central govt. and the social security fund are consolidated with one another, but regional and local govt. are only consolidated with themselves. United States, Switzerland and Japan, not consolidated due to lack of data.
b 2012 data used for 2014 due to lack of data.
c 2013 data used for 2014 due to lack of data.
d Only sum of regional and local data available.

as bank loans. The development of new mechanisms of market access, such as project finance vehicles or special purpose vehicles (SPV) has also contributed. However, in most countries, recourse to bank loans (or central government) remains the dominant alternative. This is illustrated by Chart 3, showing data on the breakdown of regional and local debt into securities and loans, for a group of European countries for which uniform data are available. In Germany, Spain, Belgium and Austria, regional governments financed themselves through both loans and securities issues, the former being more significant in all cases except Germany, where around 60% of debt was obtained from capital markets. Bank finance predominated in the case of local government. Finland, Norway and Sweden have a higher relative volume of securities than the other countries. This is related to the existence of local funding agencies that are able to aggregate the borrowing requirements of numerous local government bodies to enable larger bond issues. The following section, AUTONOMY INDICATORS (2011) (a)

CHART 2

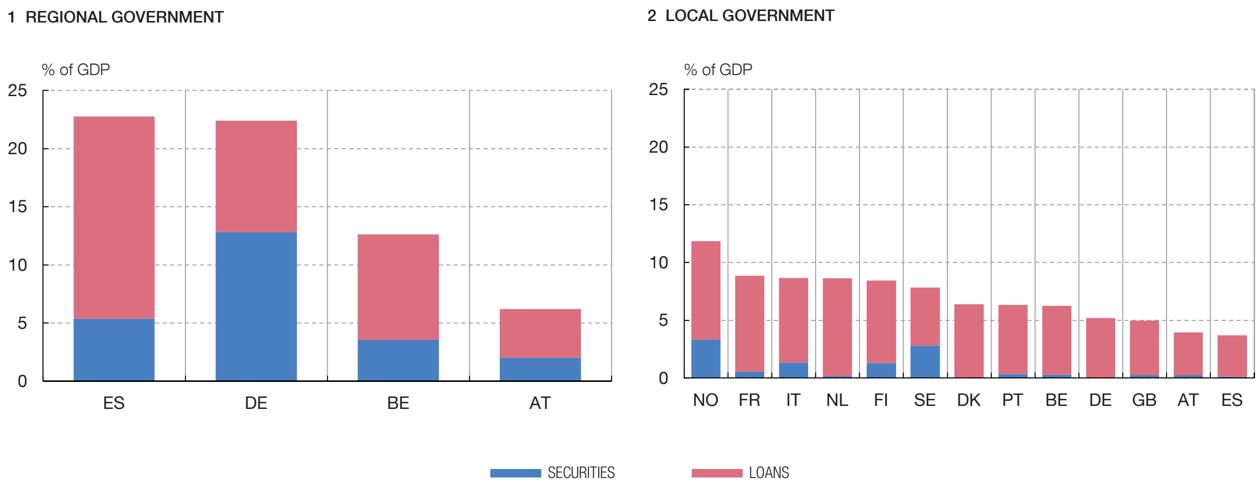


SOURCE: OECD.

a ISO 3166 standard country coding.
b Sum of government expenditure over total consolidated government expenditure (excluding transfers between government levels). No consolidated data available for Australia, Japan or Iceland.
c Sub-national revenues over which there is discretionary power.

STRUCTURE OF DEBT BY SUB-SECTOR IN 2014

CHART 3



SOURCE: Eurostat.

which describes the commonest means sub-central levels of government use to access market funding in developed economies, looks closer at this issue.

Sub-central governments' mechanisms for accessing markets on the international level

There are a series of common elements that determine market access capacity and conditions for sub-central administrations, such as issuer size and institutional framework. In this respect, one major determinant is whether or not the country has fiscal rules that set targets and limits for debt or other budgetary indicators. The role of central government as a guarantor (or not) for issues is another important factor, and in particular, whether there is a "no bail-out" clause. Clauses of this kind aim to avoid the cost of one government subsector's fiscal irresponsibility being passed on to the rest and are essential to ensure that the capital market keeps discipline by differentiating between government sub-sectors in terms of their risk premiums. Finally, having a credit rating is usually a requirement for market access. This imposes information requirements to promote standardisation and to meet the market's demands for more information transparency.

The way in which these elements are effectively combined determines the make-up of the issue mechanisms, which also differ in terms of the debt issuer's level of individual responsibility. First of all, it is possible to distinguish those cases in which regions or other sub-central bodies are able to issue individually and so are subject to a higher level of market discipline. Secondly, there are others that make joint issues, either at the same level of government or otherwise, such that a large part of the risk is pooled. Lastly, there are those cases in which central government assumes all the risk of the issue, for example when it taps the market for funds that, in turn, it channels towards sub-central governments, or when it guarantees issues by the latter.

The first group, in which sub-national governments issue debt directly, includes the cases of the United States, Canada, Belgium, Switzerland and Germany in particular. The United States presents one of the largest and most active sub-national debt markets, where the municipal bond market includes bonds issued by the states, municipalities and other government entities, such as publicly owned ports and airports. There is a wide variety of securities, in terms of types and yields,[7] and bankruptcy is only possible in the case of local governments.[8] Canada's provinces also have a long tradition of issuing debt on markets. In 2014, 25% of total private and public long-term bonds were issued by the provinces, slightly more than the federal government, which accounted for 23%.[9] As in the case of the United States, debt issues by Canadian provinces are not backed by the federal government [see Joffe (2012)]. In Belgium, where there are several interconnected levels of government, all regions and communities are authorised to issue debt and habitually tap the markets, although they require central government authorisation. In Switzerland, each sub-national government is responsible for its own debt. In the case of Germany, the federal states *(Länder)* usually issue bonds on the capital markets individually.

As regards the second group or type of issues described above, joint issues have also been common in Germany, involving either groups of *Länder* (to issue bonds known as *Jumbos*[10]) or the *Länder* and the federal government (through *Bund-Länder-Bonds*[11]). Joint issues also include those involving local financing agencies, which are specialist credit institutions for local bodies, part-owned by municipalities, and sometimes by central government. There is a long history of this type of agency in the Netherlands, Norway, Sweden, Finland and Denmark, where they date back furthest (created in 1898), and they usually have a high credit rating. Along similar lines, France and the United Kingdom have recently set up local financing agencies.[12] In France, Dexia's bankruptcy meant the loss of the largest lender to local authorities, making creating a local agency a way of keeping

7 Other common types of bonds include general obligation bonds (GOs, for short), where both the principal and interest are guaranteed by the issuer's credit and tax-raising capacity, and revenue bonds, which are paid with income generated by a specific project, such as tolls.

8 The Municipal Insolvency Act (Chapter 9 of the Bankruptcy Code) was passed by Congress in 1937 in response to the numerous municipal bankruptcies during the Great Depression. Although bankruptcies of local authorities have been relatively rare, the case of the city of Detroit in July 2013 stands out. See Canuto and Liu (2013) and Cuadro (2013) for examples of local- and state-government crisis resolution in the United States.

9 Report by the Ontario Securities Commission: "The Canadian Fixed Income Market 2014."

10 To date, 49 joint issues have been carried out, with varying numbers of states involved in each. The participants are usually between five and seven of the smaller *Länder* (in terms of size or population) although there have been issues in which a larger number of *Länder* have taken part, such as that in 1997, which had ten participants. The volume of *Jumbo* issues has usually been significantly higher than that of issues by individual *Länder*.

11 These bonds first came on the market in June 2013. This was a joint issue by ten states (with a share of 86.5% of the total issued) and the federal government. This issue obtained the maximum rating from Fitch (AAA), i.e. the same rating as the federal government [Unicredit (2013)].

12 The *Agence France Locale* was created in late 2013 and is 100% owned by a total of 91 local authorities. In the United Kingdom, the *Municipal Bonds Agency* was proposed as an independent agency in 2014. Outside Europe, for example in New Zealand, the *New Zealand Government Funding Agency* was set up in 2011.

local authorities' access to finance open. Outside Europe there are institutions of this kind in Canada, Japan and the United States.

Lastly, in some countries central government taps the markets to subsequently provide funds to sub-central governments, typically as bilateral loans. One example is that of Austria's *Länder,* which are authorised to access the market directly, but can also ask the "Federal Financing Agency" to tap the markets for them and subsequently make loans to each individual *Land.* This category could include those countries that have public financial institutions equivalent to a development bank to finance sub-national government projects, such as the *KFW* group in Germany[13] or *Kommunalkredit* in Austria (99.8% owned by the federal government).

In Spain's case, the system in effect until early 2012 was that of direct issuance on the markets, with no explicit central-government guarantee.[14] With the implementation of extraordinary measures and the additional liquidity support mechanisms incorporated in LOEPSF in April 2012, however, the current system is one in which it is mainly central government that taps the markets for funds and then channels them to the autonomous regions as loans. Although LOEPSF includes a "no bail-out" clause (Article 8), under which the State will not be answerable for the commitments of autonomous regions, local authorities or their linked or dependent bodies,[15] it does allow sub-national governments to apply to the State for access to these measures and mechanisms, in which case the law explicitly includes strict conditions on the budgetary activities of the sub-national government concerned.

The following section reviews the impact of the crisis on the autonomous regions' access to debt markets post-2012 in order to give a view of the reasons for the transition from one system for meeting borrowing requirements to another.

The impact of the crisis on the autonomous regions' access to the markets

As Chart 4 shows, since the start of Economic and Monetary Union the weight of securities and loans in total autonomous region debt remained stable at around 3% of GDP in both cases until late 2008. Thereafter, the volumes of both loans (excluding loans from other government subsectors) and securities rose significantly, stabilising in 2012. Chart 5 shows the annual volume of debt issues by the autonomous regions as a whole (see upper panel) and the annual number of issues (see lower panel) over the period 1995-2015. The chart shows the increase in volumes issued as a result of the economic crisis, and the subsequent reduction, as from 2012, in the average size and number of issues, this reduction occurring despite the autonomous regions' rising debt levels. However, it is worth noting that the aggregate figures shown in Chart 5 are consistent with considerable heterogeneity among the autonomous regions, with some regions issuing large volumes and others not issuing any debt on the markets during the period shown (see Chart 7).

The change in trend observed in 2012 is a reflection of central government's response to the autonomous regions' market access difficulties during the crisis and the high funding

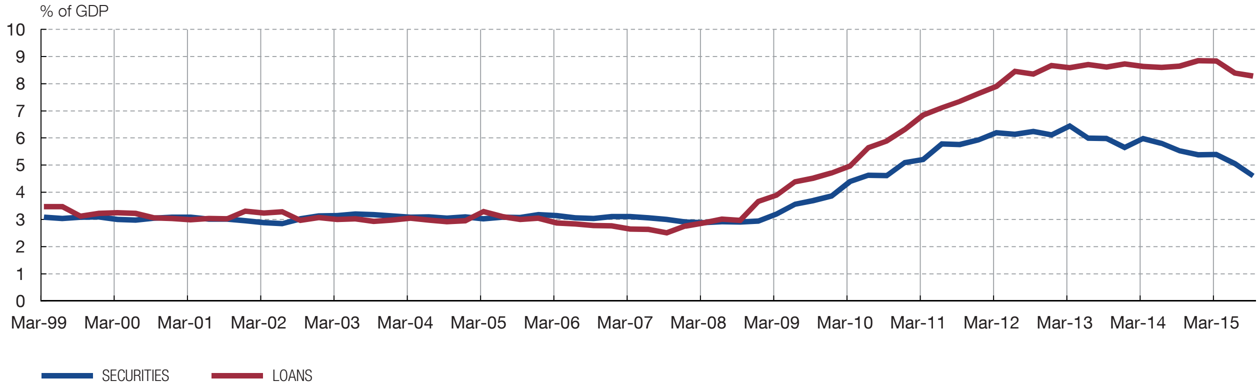
13 Created after the Second World War to channel Marshall Plan funds. Ownership is currently divided between the federal government (80%) and the *Länder* (20%). It finances specific housing, education and environment programmes. Its issues are fully guaranteed by the federal government.

14 Under Organic Law 3/2006 of 26 May 2006, reforming Organic Law 5/2001 of 13 December 2001 complementing the additional provision of the General Budgetary Stability Law.

15 Without prejudice to any mutual financial guarantees given when carrying out specific projects jointly. Also, under LOEPSF, autonomous regions are not answerable for local authorities' debts (or those of their dependent or linked bodies), without prejudice to any mutual financial guarantees given when carrying out specific projects jointly. This drafting is similar to that in the Treaty on European Union describing relationships between Member States (Article 125 of the consolidated version of treaty on the Functioning of the European Union).

AUTONOMOUS REGIONS' SECURITIES AND LOANS (a)
(EXCLUDING LOANS FROM OTHER GOVT. SUB-SECTORS)

CHART 4



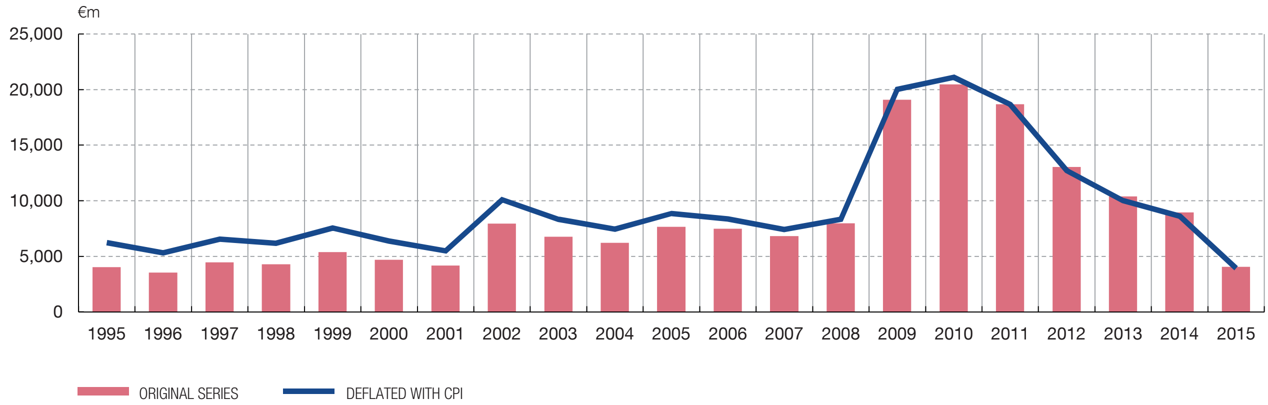
SOURCE: Banco de España.

a For more detailed information, see Chapter 13 of the *Boletín Estadístico,* http://www.bde.es/webbde/es/estadis/infoest/bolest13.html.

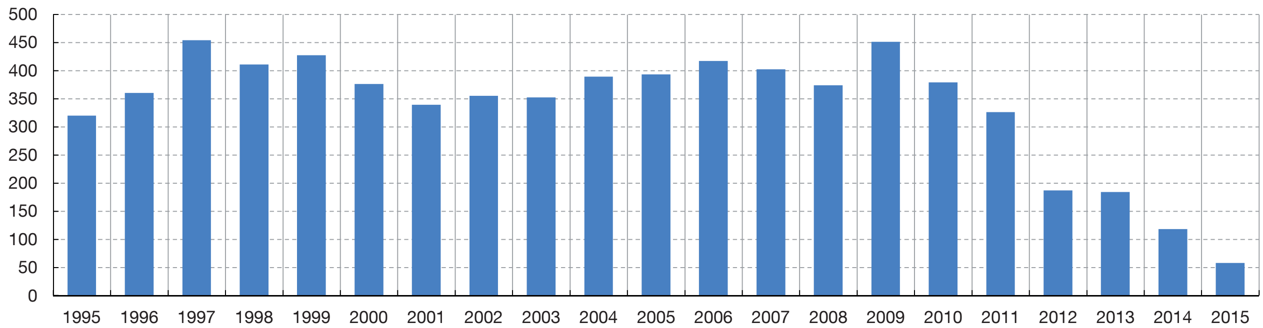
AUTONOMOUS REGIONS' DEBT ISSUES: 1995-2015

CHART 5

1 ANNUAL VOLUME OF ISSUES BY AUTONOMOUS REGIONS



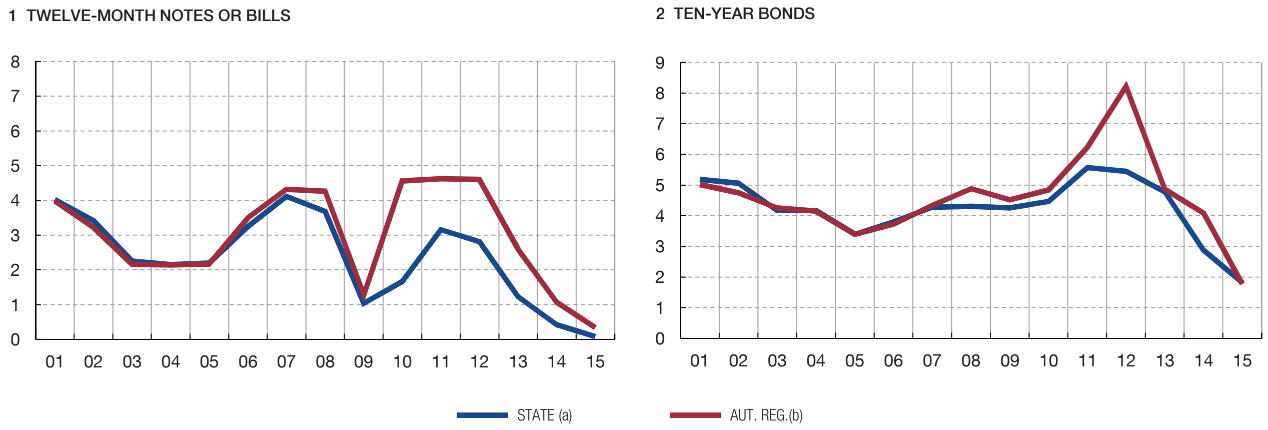
2 ANNUAL NUMBER OF ISSUES BY AUTONOMOUS REGIONS



SOURCE: Banco de España and INE.

AVERAGE ANNUAL YIELD OF DEBT ISSUED BY THE STATE AND THE AUTONOMOUS REGIONS

CHART 6

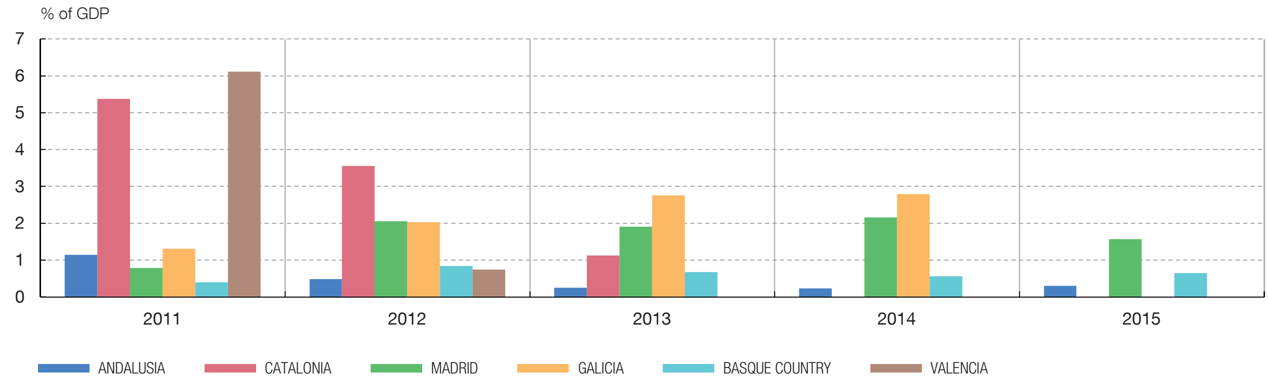


SOURCES: Directorate General of the Treasury and Financial Policy, Banco de España, National Securities Market Commission (CNMV), Bolsas y Mercados Españoles, official journals of the autonomous regions, and Instituto Valenciano de Finanzas.

a Effective marginal rates on new issues.
b Weighted average yield of autonomous regions' issues.

ANNUAL VOLUME OF SECURITIES ISSUED BY A SELECTED GROUP OF AUTONOMOUS REGIONS

CHART 7



SOURCES: Banco de España, National Securities Market Commission (CNMV), official journals of the autonomous regions, Instituto Valenciano de Finanzas, and Bolsas y Mercados Españoles.

costs they faced on their bond issues (see Chart 7). During the year central government set up a number of extraordinary financing measures,[16] such as the supplier payment fund, to pay outstanding commercial debt, and the regional liquidity fund (FLA).[17] The FLA was created to address autonomous regions' debt maturities and obtain the resources needed to fund the borrowing they were allowed under the stability regulations.[18] These were extraordinary liquidity support measures, and so originally intended to be temporary. The autonomous regions can access these funds voluntarily, and the funds made payments associated with their functions directly. This made central government a creditor to the autonomous regions, as the sums paid turned into long-term debts. Specifically, over the three years it has been in force, the FLA has disbursed a total of €62,773 million (6% of 2014 GDP),[19] of which 60% has been used to pay debt and interest maturities directly.

16 For a more detailed description, see Delgado, Hernández de Cos, Hurtado and Pérez (2015).
17 Created by Royal Decree-Law 21/2012 of 13 July 2012 on liquidity measures for General Government.
18 Subsequently, however, it was used to pay suppliers [see Delgado, Hernández de Cos, Hurtado and Pérez (2015)].
19 "Informe sobre los mecanismos de las CCAA. Balance 2012-2014" [Report on autonomous region mechanisms. 2012-2014 balance sheet] Ministry of Finance and Public Administration.

From the outset, taking part in the FLA meant accepting budgetary conditions in return for access to finance. Member autonomous regions had to draw up an adjustment plan requiring individual debt and deficit targets be met, and that the sums owing be repaid. Stricter reporting requirements were also imposed, in particular with the requirement for enhanced monthly information on the progress of budgetary outturn and treasury, and its impact on compliance with the adjustment plan. Within the scope of this programme, control and monitoring measures for the plans were strengthened, such that, for example, central government could withhold a given autonomous region's payments on account under the regional funding system in the event of non-payment of the FLA.

In 2015 these extraordinary funds were turned into the "regional financing fund", which, along with giving continued support to autonomous regions facing liquidity difficulties, added the objective that sub-national governments be able to benefit from the lower borrowing costs enjoyed by central government.[20] The fund is sub-divided into three sub-funds. The first sub-fund is equivalent to the former FLA, and retains its name. This fund is highly conditional, and membership is obligatory upon those autonomous regions that belonged to the former FLA and did not meet their budgetary stability, public debt and average supplier payment delay targets. The second fund is the Financial Facility, aimed at autonomous regions that are meeting their targets. And finally, the Social Fund, which is intended to pay autonomous regions' obligations to local authorities as a result of agreements on social spending. Five autonomous regions belong to the new FLA: Cantabria, Castile-La Mancha, Catalonia, Murcia and Valencia. The other autonomous regions in the common system (i.e. excluding the "foral" (specific-status) communities of the Basque Country and Navarre) belong to the Financial Facility, while the specific-status communities have decided not to join.

The varying degree of autonomous regions' participation in the financing mechanisms up until the end of 2014 has also resulted in differences in their ability to access capital markets. As is clear from Chart 7, which shows the autonomous regions with the greatest issuing activity, those regions taking part in the original FLA (Andalusia, Catalonia and Valencia) strongly reduced issuance from 2011 to 2014 to small amounts of debt or no debt at all, while those that did not take part (Madrid, Galicia and the Basque Country on the chart) maintained similar or higher levels than in 2011 between 2012 and 2014, reflecting high levels of public debt to refinance in more recent years. Finally, issues as a whole dropped in 2015, probably as a result of the implementation of the new regional financing fund, which all the regions in the common system have joined.[21]

Going forward, given the exceptional nature of the system and its intended role in boosting liquidity, the autonomous regions can be expected to gradually converge over the medium term on a system in which they again play a more active role in raising funds on capital markets. As mentioned above, the Spanish framework includes a central government "no bail-out" clause, which is necessary to ensure the potential market discipline effect, and when autonomous regions apply to access these measures and mechanisms, they are subject to conditions. The extension of these mechanisms over time highlights the need

20 Royal Decree-Law 17/2014 of 26 December 2014, on financial sustainability measures for the autonomous regions and local government bodies and other economic measures. The fund "implements new mechanisms allowing financial savings to be shared between levels of government, prioritising attention to social spending, continuing to assist governments with greatest financing difficulties, and boosting those that have managed to overcome them."

21 The Madrid region continued issuing in the first half of the year, until it decided to join the regional financing fund, receiving its first payment under the fund in August that year.

for the explicit conditionality components to be applied strictly to the budgetary actions of the governments concerned so as to prevent these support mechanisms from leading to inappropriate budget policies [Hernández de Cos and Pérez (2015)].

Additionally, given that markets do not always operate efficiently, and in some circumstances their role in deterring inappropriate fiscal policies can be small [see Lane (1993)], the Spanish framework also includes a set of budgetary rules setting limits on the ability of the various levels of government to produce fiscal imbalances. In particular, LOEPSF sets limits on the public deficit (budgetary equilibrium in structural terms), an expenditure control rule, and explicit objectives on the level of public debt.[22] LOEPSF also includes mechanisms enabling central government to oversee and monitor sub-central finances in detail, along with preventive and corrective mechanisms for any imbalances that arise from the preventive or corrective point of view [for more details, see Hernández de Cos (2011) and Hernández de Cos and Pérez (2013)]. These mechanisms have been bolstered by the creation of the “Independent Authority for Fiscal Responsibility” (AIReF), whose main remit is to ensure the principle of budgetary discipline is adhered to.

The fiscal rules in the stability law aim to achieve two purposes: enable sufficient room for manoeuvre *ex ante* to avoid fiscal crises arising, and defining the criteria for *ex post* correction of budgetary imbalances if they ultimately arise. In the case of the latter, the correction mechanism needs to be applied rigorously when imbalances arise if the rule is to be effective. As regards the *ex ante* margins, the possibility of designing reserve funds with regular contributions during periods of economic prosperity could be studied. This instrument (referred to as a “rainy day fund”) is used in many of the states of the United States, where it seems to be associated with a better credit rating [see Charles (2010) and Hernández de Cos and Pérez (2015)]. Finally, there is evidence that it is important for there to be a close relationship between income and expenditure powers in order to maintain fiscal discipline among sub-central governments [Rodden (2002)]. Therefore, from this point of view, it may be appropriate to strengthen the autonomous regions’ joint fiscal responsibility, although transferring taxes alone is insufficient to guarantee fiscal discipline and avoid the problem of soft budgetary constraint that may arise otherwise.[23]

18.2.2016.

REFERENCES

CANUTO, O., and L. LIU (2010). *Subnational debt finance and the global financial crisis,* Economic Premise, no.13, The World Bank, Washington DC.

— (eds.) (2013). *Until debt do us part: Subnational debt, insolvency, and markets,* World Bank Publications, Washington DC.

CHARLES, C. (2010). “The impact of budget stabilization funds on State General Obligation Bond Ratings”, *Public Budgeting and Finance,* 30, pp. 95-111.

CUADRO, I. (2013). “La gestión fiscal de los gobiernos estatales y locales en Estados Unidos. El caso de Detroit en perspectiva”, *Cuadernos de Información Económica,* 237, pp. 85-96.

DELGADO, M., L. GORDO and F. MARTÍ (2015). “La evolución de la deuda pública en España en 2014”, *Boletín Económico,* July-August, Banco de España, pp. 41-56.

DELGADO, M., P. HERNÁNDEZ DE COS, S. HURTADO and J. J. PÉREZ (2015). *Extraordinary mechanisms for payment of general government suppliers in Spain,* Occasional Paper, no. 1501, Banco de España.

FEIBELMAN, A. (2012). “American States and Sovereign Debt Restructuring”, in P. Conti-Brown and D. Skeel (eds.), *When States go Broke: the Origins, Context, and Solutions for the American State in Fiscal Crisis,* Cambridge University Press, cap. 7, pp. 146-187.

22 LOEPSF establishes a limit of 60% of GDP for government as a whole, which must be complied with as of 2020. This amount is distributed across the various levels of government in the following way: central government 44% of GDP; autonomous regions 13% of GDP (this limit also applies to each of them with respect to their regional GDP); and local authorities 3% of GDP.

23 On this argument, see Chapter IX of the “Informe de la Comisión de Expertos para la reforma del sistema tributario español” [Report of the expert committee for the reform of the Spanish tax system], February 2014: http://www.minhap.gob.es/es-ES/Prensa/En Portada/2014/Documents/Informe expertos.pdf.

FERNÁNDEZ, R., S. LAGO and J. MARTÍNEZ (2013). “La autonomía tributaria de las Comunidades Autónomas y su (des)uso: presencia de una restricción presupuestaria blanda”, Chapter 4 of *La consolidación fiscal en España: el papel de las Comunidades Autónomas y los municipios,* Colección Estudios de Hacienda Pública, Instituto de Estudios Fiscales.

GORDO, L., P. HERNÁNDEZ DE COS and J. J. PÉREZ (2013). “Developments in Spanish public debt since the start of the crisis”, *Economic Bulletin,* July-August, Banco de España, pp. 19-36.

HERNÁNDEZ DE COS, P. (2011). “The reform of the fiscal framework in Spain: constitutional limits and the new public spending growth rule”, *Economic Bulletin,* October, Banco de España, pp. 137-156.

HERNÁNDEZ DE COS, P., and J. J. PÉREZ (2013). “The new Budgetary Stability Law”, *Economic Bulletin,* April, Banco de España, pp. 13-26.

— (2015). “Reglas fiscales, disciplina presupuestaria y corresponsabilidad fiscal”, *Papeles de Economía Española,* 143 pp 174-184.

INMAN, R. P. (2010). *States in fiscal distress*, Federal Reserve Bank of St. Louis, Regional Economic Development, 6, pp. 65-80.

JOFFE, M. (2012). *Provincial Insolvency and Federal Obligations,* Macdonald-Laurier Institute Publication, October.

LANE, T. D. (1993). *Market discipline,* IMF Staff Papers, 40.

RODDEN, J. A. (2002). “The dilemma of fiscal federalism: grants and fiscal performance around the world”, *American Journal of Political Science,* 46, pp. 670-687.

UNICREDIT (2013). “Joint bond by German states and the Bund”, *Credit Research Sector Flash,* 20 June.