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Cutting down public sector debt or funding investment?

The fit-for-purpose perspective

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PhD Student:

Davide Eltrudis

Coordinator of the PhD Programme

Prof. Andrea Melis

Supervisor

Ass. Prof. Patrizio Monfardini

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to Stefania

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Summary of the PhD thesis

CONTEXT OF THE ANALYSIS

The reduction of public debt assumed primary significance in the European political and economic debate in the last decades, and only recently European Union member states agreed to sign the Fiscal Compact (part of the Stability and Growth Pact) to pursue progressive reduction of their public-sector debt as the over-riding strategy for “fiscal consolidation”. However, the attempts to reduce the debt have been accompanied by harsh austerity policies whose negative consequences seemed not compatible with European’s ideals of social justice, equity and solidarity (Bracci et al., 2015). Italy and other member countries with huge debts have been and still are forced into a trade-off between observing European strict financial rules and carrying out investments, which often results to relinquish the latter. These severe EU fiscal consolidation rules also compromised the devolution of political, fiscal and administrative powers to subnational levels of government. Several countries experienced the counter-movement towards the reassertion the role of the centre of the post-NPM era, but within the EU the reclaim of the control took place at the upper level of governance. This process flattened the decision making process to the centre, failing to take into account the local differences (Cepiku and Mussari, 2010). Because the criteria for monitoring the local indebtedness have been established by international agreements, they do not reflect the specific contexts in which Local Governments (LGs) operate.

This thesis deals with the Italian case because, given its considerable high public sector debt, the autonomy of local level (strong but fragmented) has been reduced by the governance at national state level as a result of its and membership at European Union (OECD, 2017). Indeed, since the ‘90s, the Italian public-sector finance has been involved in a process of reform which has gradually transformed a model based on government transfers to a system in which LGs raise local taxes and benefit from a range of possible options to fund and finance their investments. Per contra, the constraints imposed by the Stability and Growth Pact requested member countries to reduce the deficit spending, as well as the relationship between the amount of debt and the Gross Domestic Product, so the LGs have to realize a reduction of the debt by carrying a strict policy of controlling the debt.

The constraints on expenditures, the reduction in transfers and the acknowledging of financial and fiscal autonomy meant that LGs have to finance themselves almost exclusively through their own resources or by access to debt. Loans and innovative financial instruments (such as bonds, leasing, PPPs/PFIs, swaps) are currently used for financing investments: this PhD thesis focuses on bond issuing and buyback of municipal bonds, and aims to investigate their influence within the Italian context to finance investments and to cut down the sovereign debt. Bonds have been internationally issued over decades to finance investments, but due to the impact of the conventional funding methods on competitiveness and effectiveness levels they became obsolete (Bailey, 2009). Historically the Italian LGs debt market has never grown up, and the bank lending channel was prevalent, but since 2000s many alternative sources of funding represented the alternative to traditional banking funding methods.

THEORETICAL FRAMEWORK

Assuming that none of the policies is absolutely appropriate (or inappropriate), this work adopts the “fit for purpose” perspective, based on the contingency theory (Freeman, 1973; Hofer, 1975; Feldman, 1976; Khandwalla, 1977; Dewar and Hage, 1978; Otley, 1980; Van de Ven and Ferry, 1980; Marsh and Mannari, 1981; Schoonhoven, 1981; Drazin and Van de Ven, 1984, 1985; Donaldson, 2001; Chenhall, 2003, 2007; Otley, 2016). This theory assumes that there is no a best way to come to a decisions, but rather the “performance is a function of the fit or match between two or more factors” (Van de Ven and Drazin, 1985, p. 537), and therefore the optimal choice is contingent upon the existence of several feasible options. Contingency-based research in the accounting literature has been thoroughly reviewed firstly by Otley (1980) and then by Chenhall (2003, 2007) who identified its pros and cons: arguments in favour lead to think of this as a theory that exhibits an appropriate matching of specific aspects with certain defined circumstances; arguments against are based on the assumption that these specific aspects are so subjective to not have general applicative value. Actually, as Chenhall (2007) observed, “the term contingency means that something is true only under specified conditions. As such there is no ‘contingency theory’, rather a variety of theories may be used to explain and predict the conditions under which particular MCS [management control system] will be found or whether they will be associated with enhanced performance.” (p. 191). However, “a contingency-based approach attempts to map variables and demonstrate potential relationships between variables, which may include power and politics, and indicate potential links with outcomes” (p. 194).

Contingency theory derives from the study of organizational behaviour, and implies that the design and function of organizations are influenced by contingent factors such as technology,

culture and the external environment (Drazin and Van de Ven, 1984, 1985): its underlying assumption is that there is not a role model of organizational structure, but different solutions are equally acceptable. Van de Ven and Drazin (1984) have developed the key concept of fit in contingency theory on the basis of the selection, interaction, and systems approaches. Studies that adopt the selection approach aim to investigate the connection between the context features and the structure of an organization; studies that rely on the interaction approach analyse the effect of context and structure on performance. While the previous focused separately on contingencies, structural options and performance, studies that embrace systems approach address them simultaneous: this approach, rather than assuming that there is unique solution, agrees that “multiple, equally effective alternatives may exist” (Van de Ven and Drazin, 1984, p. 14). However, as Otley (2016) pointed out, “whereas initially it developed from the idea that no universal solution to the problems of control was feasible [...] research over the past four decades has come up with an extended list of possibly significant contingencies that are faced by organizations, many of which suggest conflicting recommendations” (p. 46).

Contingency theory has been widely used by management accounting researchers in order to address questions about the fit between organizational control and structure, the impact of such fits on performance, and to investigate of multiple contingencies and their impact on organizational design (Islam and Hu, 2012). Even if there is “a considerable body of literature, which while not without imperfections in method, has provided a basis for generalized propositions between elements of MCS and context” (Chenhall, 2007, p. 194), it has been highlighted a general lack of recognition of which form of fit are relevant to studies (Gerdin and Greve, 2004; Cadez and Guilding, 2008). However, Chenhall himself pointed out that although contingency-based research should adopt more interpretive and critical views rather than rely exclusively on traditional, functionalist theories, management accounting research might certainly pursue to use this theory by virtue of its potential strength that makes it possible to uncover generalizable findings.

On the other hand, despite contingency theory has not so much been applied in public management literature, Otley (2016) highlighted that the public sector is suffering from the failure of alignment of contrasting systems with each other suggesting that even in this sector the theory could be usefully applied, and therefore the fit for purpose perspective has been recently introduced in the academic debate (Gauld and Mays, 2006; Osborne, 2010; Radnor and Osborne, 2013; Osborne et al., 2013; Radnor et al., 2014; Osborne et al., 2015; Hiedemann et al., 2017). This thesis serves these two streams of literature, and in particular suggests to apply the fit-for-purpose theory to public finance.

According to Gerdin and Greve (2004) and Cadez and Guilding (2008) about the need to make clear which form of fit is relevant for the study, being aware that on this issue “research does not often lead to establishing what does or does not work in a specific organizational context.” (Saulpic and Zarlowski, 2014, p. 215), this work adopts the systems approach developed by Van de Ven and Drazin (1984). It might allow understanding whether funding - not just financing - methods and financial strategies fulfils the policy objectives for which the tools are used, and whether they are the most appropriate way of meeting the public financial objectives.

OUTLINE OF THE THESIS

The thesis is divided into three different papers, which consider different aspects of municipal bonds and bond buybacks, and the link between all the papers is represented by the fit-for-purpose perspective. The papers differ in the research design, by using quantitative, qualitative and mixed research method as appropriate.

In the first paper, an explanatory mixed research design (Creswell and Clark, 2011) has been used to analyse the rationale of municipal bonds. Before, it has been conducted a systematic quantitative analysis of each emission, determining the exact costs of bonds; then a survey explained the quant findings, also investigating qualitative features. Mixed-methods has been applied because neither quantitative nor qualitative methods, if used on its own, succeed in describe the reasons why LGs issued bond.

The second paper relies on econometrics analysis (Baltagi, 2008) of financial and accounting data of LGs which issued municipal bonds. Generalized Least Squares regressions of panel data have been carried out in order to establish whether bonds help LGs to improve their financial autonomy.

Finally in the third paper, through a qualitative exploratory case study (Yin, 2011), the 2015 Italian regional bond buyback has been analysed with the purpose to draw attention on eventual positive sides of bond buybacks, despite distinguished academics had warned about the negative consequences resulting from their use.

SOURCES OF DATA

The quantitative analysis developed in these articles rely upon financial secondary data of CEAM project, an “IT procedure for Local Authorities to collect and transmit quarterly data on borrowing and for their processing and aggregation by the Treasury Department” (from the website of Ministry of Economy and Finance - MEF): this dataset is courtesy of the Public Debt Directorate at MEF, and includes financial data (such as date of issuance, maturity date, amount, interest rate,

fixed or floating rate, currency, etc.) of all bonds issued by Italian municipalities. Accounting data have been gathered from OpenBilanci.it (an open source website for consultation of public budgets): accounting data collection involved current and capital revenues, current and capital expenses, as well as data related to debt. Blending of these types of data has resulted in a wide dataset that gives an overview of financial-accounting position of LGs which issued municipal bond over the last decades.

The qualitative analysis is based on the use of interviews with relevant people of interest at the MEF and at the regional financial offices, but also upon an online survey with the heads of the municipal financial sector. The survey took place between April and October 2017 as part of the first paper, and it has been designed and administered through the use of a platforms specialised in qualitative research. The use of such software make possible to contact 304 heads of financial sector from LGs which issued municipal bonds. The purpose of the survey was on the one hand to triangulate the findings of the quantitative stage, and on the other hand to understand the rationale of the issuing. The interviews regarding the third paper took place during 2016 and included an in-depth face-to-face interview which lasted 105 minutes with the director of the IV office of the second Directorate at MEF, and semi-structured email interviews with six heads of regional financial offices: all these were aimed to go into technical details of bond buyback accomplished few months ago.

SUMMARY OF THE THREE PAPERS

The first paper focuses on the use of municipal bond as a possible alternative to borrowing from banks. In fact, in the western Europe the bank lending channel has frequently employed to fund LGs, but over the last decades LGs in many countries experienced different market-based options in the attempt to expand and diversify their approach to funding. In this framework, municipal bonds have been internationally issued to finance investments, but because of the EU sovereign debt crisis, municipal bonds resulted progressively less attractive and today are no longer issued in Italy. However, whether LGs actually benefited choosing municipal bonds instead of bank loans still remains unclear. Thus, this paper tries to weight the bond's potential benefits against bank loans to answer the question of whether municipal bonds were suited within the Italian system: in particular, the paper aims at understanding the rationale behind municipal bond issuing in lieu of the conventional bank-lending channel. Addressing the research questions by means of quantitative analysis of secondary financial data since 1998, together with a qualitative survey, the paper looks more closely into LGs' decision to issue bond, attempting to find out if municipal bond were fit-for-purpose within the Italian context.

The second paper discusses the need to reduce the risks associated with municipal borrowing; in literature divergent models emerged, which embody different mechanisms intended to enforce the debt control taking into account the context differences. The Centralised and the Prudential discipline and control models envisage alternative methods for the governance of municipal borrowing granting different degree of financial autonomy to LGs. Several European countries adopted the first model because it relies on bureaucratic controls such as those required by the Stability and Growth Pact, but it is also associated with low financial autonomy. Conversely, the Prudential Model would concede more flexibility to LGs, but it is not appropriate during tough economic times. Therefore, the question of how to stimulate financial autonomy within the Centralised Discipline and Control Model rises. This article studies the effect of municipal bonds on financial autonomy of LGs, and whether their widespread use within the Centralised Discipline and Control Model is fit for purpose as part of an overall policy aimed to increase financial autonomy. Throughout statistical analysis, the paper highlighted that financial autonomy of LGs strictly depend on rising their own taxes, but bond issuing can be successful in improving it. However, Italian LGs did not entirely benefit from this positive relationship essentially due to the constraints of Centralised Model. Ultimately the Italian case makes clear that policymakers should pay particular attention to which model of control they should adopt.

The last paper considers the bond buybacks as strategy to reduce public debt. Bond buyback has evoked interest as a means to cut down the sovereign debt, not only in national governments but also at the supranational level. Buyback at the subnational level have not been previously studied, but in 2015 some Italian regions have engaged in bond buyback. This paper challenges the conventional wisdom that the practice of governments buying back their own bonds before maturity is a wasteful use of public finance. Buybacks have previously been analysed within a narrow economic and financial perspective, whereas this paper adopts a broader analytical framework that posits that the balance between the pros and cons of buyback depends upon the opportunity cost of buyback to citizens, not just to the financial market. This paper suggests that there may be other reasons, unacknowledged by preceding literature, to engage in buyback: our results demonstrate how new EU fiscal rules may legitimise bond buyback in its current austerity context, and how buyback might have a beneficial overall impact contrary to the negative boondoggle characterisation. Moreover, embodying considerations of morality within its more holistic analytical framework, the paper demonstrates how the social and economic implications of austerity-driven debt reduction in compliance with the EU Fiscal Compact schedule may not always necessitate the severe sacrifices associated with public sector austerity.

CONCLUSIONS

In conclusion, in accordance with the belief that there is no universal solution to the debt overhang matter, this thesis investigated different funding and debt reduction strategies for public governments. The innovative element of this work is to consider whether the different approaches fit-for-purpose from an enlarged point of view, which involved both the economic and financial standpoint, and the political and social sides. Even if the first two articles focused upon the use of municipal bonds to fund investments, and the last paper focused upon the bond buyback as a strategy to reduce the public-sector debt, each of these papers converge in saying that all depends on how the rules have been drawn up and on whether or not such rules have been modified. In the first, it emerged that the regulatory choices taken by central government restricted the approach to funding to the only banking channel making bonds unfit; in the second, it became clearer that the European approach to fiscal consolidation resulted in the recentralisation of powers limiting the financial autonomy of LGs; finally, the third paper has focused on European fiscal rules in order to show that bond buyback might be a way out to avoid negative consequences of austerity policies.

Italy and other member countries have to cope with the trade-off between to observe European financial rules and develop policy to encourage investments. The solution to this puzzle involves to find alternatives to finance investments which do not affect the compliance with the Stability and Growth Pact, therefore the fit-for-purpose perspective may suggest a more effective use of financial strategies to satisfy them both simultaneously, meeting at the same time the European's ideals in the austerity framework.

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Funding Local Governments through bonds: a feasible alternative to banks?

While Local Governments (LGs) in the USA have frequently engaged in municipal bond issues, in the EU the banking channel has been much more used. EU and US markets are substantially different and show peculiar traits on fiscal practices, structures, securities ownership and liquidity (Long, 2011). The emergence of specialty municipal banks (such as Dexia Credit Local of France, Public Works Loan Board in UK, BNG of the Netherlands, Banco de Credito of Spain, Credit Communal of Belgium, and Cassa Depositi e Prestiti on the Italian credit market) functional to grant funds to LGs confirms such differences.

The relationship with banks is so deeply rooted in western Europe to create durable partnership relations with LGs: in fact LGs rely on banks not just to get long-term low-cost loans, but also to be assisted by a series of services which range from accounting, financial expertise and design of investment projects, whose price is generally bundled into the interest-rate applied by the Bank (Peterson, 2003). Nevertheless, with the beginning of the devolution and decentralization processes, banks were no longer the exclusive source of funding (Bailey et al., 2009: 11): “for the past 20 years local governments have been looking for more ‘innovative’ methods of finance (Caperchione and Salvatori, 2011, p. 21)”. Thus, LGs in many countries experienced different market-based options in the attempt to expand and diversify their possibilities to funding. On the one hand, they entered the capital markets (i.e. issuing bonds), and on the other hand agreed to the private sector participation, notably PPPs/PFIs (Farvacque-Vitkovic and Kopanyi, 2014). Even if municipal bonds have been internationally issued over decades to finance investments their development has been relatively slow, and with the crisis of sovereign debt within EU, they resulted progressively less attractive to investors. This is due to the fact that financial markets are vulnerable to economic changes so, since public sector debt is no more risk-free, the cost of borrowing became unstable over time (Bailey et al., 2009, p. 12).

Moreover, the start of EU’s Stability and Growth Pact further hindered the widespread of municipal bond as alternative to bank lending - despite it restricts all the new debt - as a consequence of the restrictions imposed on national governments. Although only central governments must bear responsibility for compliance to Stability and Growth Pact, the “government debt to be reported to the Commission by the Member States has to be consolidated within the

government sector” (Council Regulation (EC) No 479/2009), entailing that the overall public sector debt must be taken into account: hence, since the beginning of the 2000s Domestic Stability Pacts have been adopted among EMU Member States, to make sub-sovereign government responsible for local debt and strengthen the control over their accounts (Monacelli et al., 2016). Nowadays, publicly-funded infrastructures are not a priority in developed countries, devoted to reduce budget deficits and high debt/GDP ratios. LGs do not issue bonds like before, because public finances become unsustainable when government borrowings are more expensive than the interest rate paid for borrowing from banks (Habitat, U. N., 2013).

This paper embraces this rule of thumb on the belief that complying with this prudential practice would prevent persistent budget deficits; failure to meet this principle would undermine the potential benefits of municipal bond, entailing their relinquishment to prefer conventional instruments. Therefore, after the assessment of the observance of this general requirement, this paper considers the following research questions. First, whether municipal bond is a technically and economically feasible alternative to borrowing from banks and whether they are fit-for-purpose within the Italian context. Second, whether LGs benefited by choosing municipal bonds and what is the rationale behind municipal bond issuing in lieu of the conventional bank-lending channel. Third, what should be the condition for a widespread use of municipal bond. Answering these research questions, this paper utilizes an explanatory mixed research design (Creswell and Clark, 2011) focusing upon municipal bonds issuing since 1998. First, it offers a systematic quantitative analysis of each emission, and then uses a qualitative empirical research method to explain the quant findings. Addressing the research questions by means of quantitative analysis of secondary financial data, together with a qualitative survey, allows to look more closely into LGs decisions to issue bond.

The paper focuses upon the analysis of the Italian case because it constitutes an example of the introduction of market-based funding method within a context where the banking channel was dominant. In fact, prior the political and administrative turmoil of the 1990s¹, Italian LGs predominantly borrowed via banks, but since then municipal bonds got trendy in the mid-2000s to fund investments; however, they were soon relinquished following substantial amendments² (Amatucci and Esposito, 2012; Amatucci et al., 2015) to the sector rules, and as of 2011 LGs did not issue bond anymore. Accordingly, detailing this case could make clear strengths and weaknesses of the use of advanced funding method by LGs, but also what are the reasons which lead to their ending.

¹ Shifting from a model based on government transfers to a system of decentralized finance and opening of the SGP's season;

² Affecting both the tax treatment of emissions and the system of reimbursement;

BANK LOANS AND BONDS IN THE ITALIAN FRAMEWORK

Traditionally, the Italian public sector finance was marked by central controls over capital expenditures and borrowings of LGs. LGs were allowed to borrow from Cassa Depositi e Prestiti, a specialty bank, but no particular expertise was required (Meola and Antonelli, 2005): a financial strategic plan was not the priority for Italian LGs at least until the acknowledgement of their financial autonomy. Even so, this increased financial autonomy should also be read in conjunction with the European integration process, which has resulted in a reduced State's influence over LGs.

The model based on specialty municipal bank has gradually been abandoned allowing market-based options: Cassa Depositi e Prestiti's monopoly has ceased in 1995³ and all banks could enter that market starting relationships with LGs by offering wider services, such as consulting (Maiardi, 2000). Simultaneously, LGs were attracted by the recently introduced⁴ municipal bonds in virtue of their financial and economic benefits (such as quick collection of the amount, favourable interest rates), but also on strategic grounds (e.g. withdrawing from Treasury services, no tender procedures) that bank loans cannot offer (Fiorita and Vecchi, 2009). However, even if municipal bonds became available to finance investments they have never really been the first choice: only the LGs able to face significant investment really benefit from the reduction of funding cost through bonds market (MEF 2004), so banks became the most important lender of LGs. The general director of the Italian Treasury during one of his hearing in the Senate (2004) claimed that the main reason for the predominance of bank loans over bonds arises from the preference of LGs for payment flows staggered over time. This also explains why LGs opted to issue several bonds with repayment plan rather than Bullet bonds, i.e. debt instruments whose entire value is paid to the bondholder on the date it matures.

The conclusion that the obstacle to the spread of municipal bond should be sought within the peculiar characteristics thereof stands in opposition to the hypothesis that the Central government hindered this option by “manipulating” critical variables, resulting in a reduced economic viability (Falini, 2000). According to this assumption LGs have been influenced in the choice among different funding channels: for example, the introduction of a double tax regime in accord with the bondholders' nature (Amatucci and Esposito, 2012; Amatucci et al., 2015), as well as the ban on derivatives, might be responsible of the diminished attractiveness of municipal bond. As pointed out in literature “a major problem for development of local financing of capital investments is how to eliminate the institutional disincentives that encourage local governments to remain on grants and continue using subsidized financing” (Martell and Guess, 2006).

³ Legislative Decree No 77/95;

⁴ Law No 724/1994;

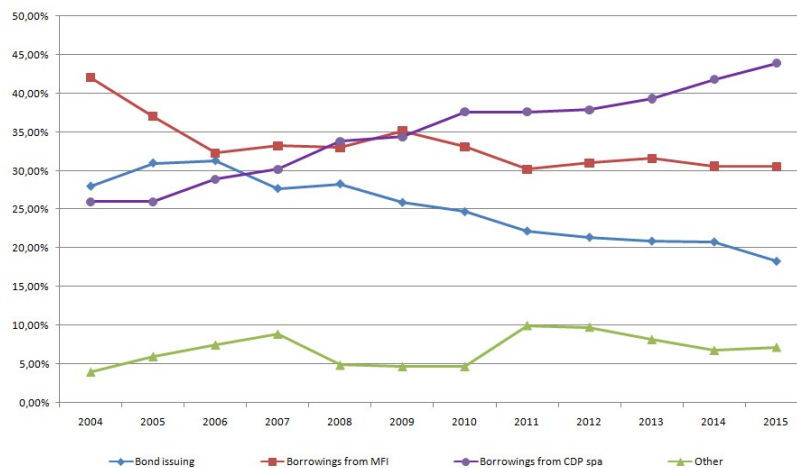


Figure 1: total debt of Italian Local Governments

Whatever happened, although a lot of projects around the world have been financed by issuing municipal bonds, this facility has not been used intensively in Italy. Figure 1 shows that during the last decade the composition of LGs debt has been shifting more towards the bank lending channel (both borrowings from resident and non-resident monetary financial institutions and borrowings from Cassa Depositi e Prestiti) at the expense of bond issuing, the latest of which occurred in October 2011 (MEF data). The figure is a personal elaboration of Bank of Italy’s data.

RESEARCH METHODOLOGY

This paper utilizes an explanatory mixed research design (Creswell and Clark, 2011) to understand the rationale behind municipal bond issuing in lieu of the conventional bank-lending channel within the wide framework outlined above. The choice of mixed-methods lies in the assumption that neither quantitative nor qualitative methods satisfactorily describe the reasons why LGs issued bond: however, “when used in combination, quantitative and qualitative methods complement each other and allow for a more robust analysis, taking advantage of the strengths of each” (Ivankova et al., 2006, p. 3). In this paper, the goal of the quantitative phase was to assess the “convenience” of bonds by using bank loans as benchmark, and then with the second qualitative phase, built on the first, investigates the reasons for bond issuing.

The quantitative analysis builds on financial data (e.g. date of issuance, maturity date, amount, interest rate, fixed or floating rate, currency, etc.) gathered from the Ministry of Economy and Finance (MEF). Fixed rate bond issued by LGs (in such case municipalities) from 1996 to 2011 have been considered; floating rate bond have been left aside because their details were not fully available. Moreover, the analysis does not consider bullet bonds⁵ but it is focused on those with a

⁵ Bonds whose principal is entirely repaid at maturity;

fixed repayment schedule in regular instalments (the so called French depreciation) so that these bonds are analogous to a normal mortgage (Amatucci and Esposito, 2012; Amatucci et al., 2015), making possible the comparison. In such a way, it was possible to draw up the amortizing plan and then determine the overall cost of the interest for each municipal bond. At once, the amortizing plan has been drawn up again by replacing the bond's interest rate with the maximum rates indicated for the bank loans to LGs, periodically determined by Minister of the Treasury. Although it is a mere simulation, this calculus allows carrying out a reliable comparative assessment with bank loans and provides evidences of inconvenient bond emissions: not only more expensive than available bank loans but also above the maximum rate threshold, such bonds should not have been issued because a similar (but cheaper) instrument existed.

The qualitative approach uses semi-structured interviews (see Appendix A) with the heads of the Financial Sector from LGs which issued fixed rate bonds⁶: the aim of the interviews was to interpret the quantitative finding, and understand why they issued bonds. From an epistemological point of view, this qualitative analysis is essential to become aware of what the numbers do not explain: in fact, since interviewees reported real experiences with potentially alternative financial instrument this phase provided understanding that transcend every quantitative analysis. Qualtrics, a qualitative research platform, was used to design and administer the survey that took place between April and October 2017.

QUANTITATIVE ANALYSIS AND FINDINGS

In this section, the main research questions will be addressed by recourse to quantitative analysis of 519 fixed rate municipal bonds, whose repayment is in constant instalments: while the share of interest decrease the principal increase over time, as envisaged by the French depreciation method. This is an important feature for the study, because it allows to determine the exact amount of bond's interests. Besides, the French depreciation method is also used by banks to draw up loans' amortization plans. Basically, it makes possible to compare bonds with loans. To carry out this simulation it has been sufficient to replace the interest rates to get the amount of interests as if bond was a mortgage. Therefore, it is abundantly clear that interest rate is a key factor in this model, so the decision concerning what rate of interest should be used is not a marginal issue. The relevant data for the estimation of the cost for bank interests are those that are periodically determined by Minister of the Treasury⁷ indicating the maximum rates for loans to LGs. Concerning to the assessment of bonds' interest costs the analysis relies on official MEF database; however, because

⁶ Both those who issued above the maximum rate threshold and those who issued below;

⁷ Decree law No. 66 del 1989;

the interest rate does not reflect the real cost, in accordance with Lombardo (1995), it has been increased by 0.4282% to take account of emissions and management charges. The spreads between them are shown in Figure 2.

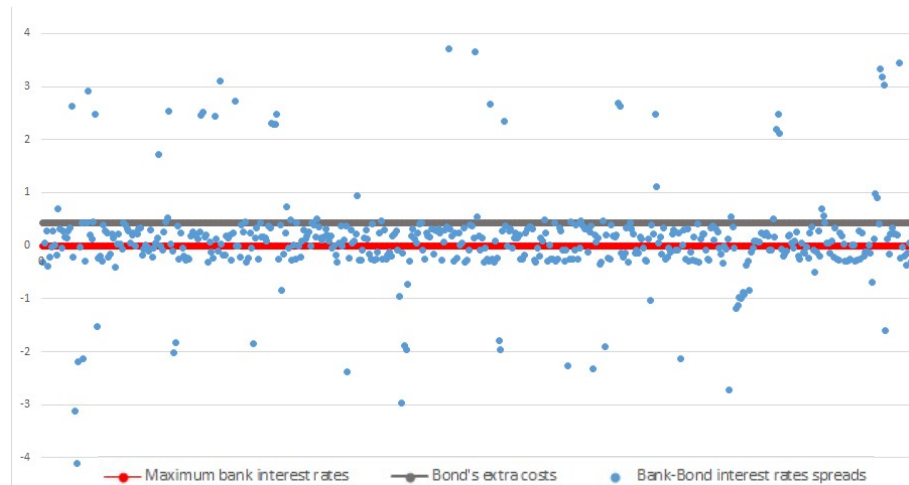


Figure 2: bank - bond interest rate spreads

The distance from the red line is the deviation from the maximum bank interest rates. The points above zero represent positive spreads and correspond to extra costs when selecting bond: approximately 56 percent of issued bonds lie beyond this limit. The emission rate of those bonds was lower than the maximum bank interest rates, but taking into account additional emissions and management expenses, their real cost rose above the rates applicable to LGs. Consequently, the maximum bank interest rates has been increased by the same percentage used for bonds, so that the grey line marks the boundary beyond which any point should be considered to be a damage to the Treasury. Ultimately, even if several bonds are between the red and grey lines, it has been calculated that roughly 11 percent of municipal bond exceed this threshold.

By drawing up the amortizing plan, it has been possible to determine the overall cost of the interest for each municipal bond, and then by replacing the bond's interest rate with the maximum bank interest rate, to simulate overall cost of the interest if bonds would have been loans. 281 out of 519 bonds revealed more expensive than the banking alternative, costing on the average 6.67 percent more. However, it should be borne in mind that several of those bonds have been issued at a time when LGs were entitled to receive back part of the revenues from taxes paid by bondholders⁸. Such tax retrocession was a compensation measure which allowed LGs to cut down the overall cost of bonds, but it has been revoked in 2006. If it were still in force bonds would cost 56.61 percent less.

⁸ This rule applied when bondholder were firms or corporations (including banks). Notably a large number of bonds have been underwritten by banks, in particular those issued by small and medium sized municipalities (Fiorita and Vecchi, 2009);

	Loan	Bond	Bond with Tax Benefits
min	10,12%	3,30%	3,14%
first quartile (25th percentile)	49,18%	47,74%	44,93%
mean	55,57%	56,69%	53,33%
median	52,97%	53,96%	50,64%
third quartile (75th percentile)	62,48%	62,44%	58,66%
max	108,62%	115,56%	108,34%
std. dev	16,62%	17,05%	16,03%

Table 1: distribution of interest costs (percentage)

The overall results of this comparison are summarised in table 1 whose reports the descriptive statistics of the costs in terms of interests expressed as percentages of the borrowing amounts. In general, it shows that the costs of bank loans and bonds is roughly comparable, but bonds have slight higher variance which resulted in a highest cost at the top. The third column at the right of the table describes the hypothesis that the revision of the tax retrocession had not carried out. In this case, the lowest statistical values mean that bonds would have been the cheapest funding method: in fact, the tax retrocession reduced the cost of funding of the LGs via bonds, because cleans up them from outliers on the top. These findings indicate that the changes in the fiscal framework precluded the competitive advantage of bonds compared to bank loans, meaning that municipal bonds are no longer suited for LGs.

FINDINGS FROM THE SURVEY

304 LGs (municipalities) issued the 519 bonds scrutinised in the quantitative stage. The chief financial officers of such entities have been identified and a questionnaire was sent to each of them: 36 participants out of 304 completed the survey (12 percent response rate). 57 bonds issuing relate to respondents; by appealing to the quantitative analysis, it is possible to realize that 34 of those bonds were more expensive. 23 questions were asked on two different areas: the first one aimed to get general information about financial skills of the people in charge, while in the second area, the interviewees were asked to provide specific information about loans and bonds their own LG issued. Contingency tables and frequency counts have been used to analyse the survey data.

The aim of the first set of question was to ascertain if interviewees possess of an appropriate level of expertise regarding use of bonds. This need is prompted by literature which envisaged a general lack of financial competence of the LGs and weak technical and administrative capacities (Livingston, 1999; Bailey et al., 2009; Dafflon and Beer-Tóth, 2009; Cepiku and Mussari, 2010; Caperchione and Salvatori, 2012; Farvacque-Vitkovic and Kopanyi, 2014). In order to investigate

whether that is the case, interviewees were asked about educational and professional skill. From their replies emerged that a large part of the Heads of the Financial Sector have strong accounting expertise (74%) but modest financial skills (17%), and are assisted by officers which have limited financial experience (i.e. only the 21% of the people in charge have had prior work experience in the banking sector). As a consequence, the large majority of bond have been issued and have been managed by work groups with poor ability to cope with financial markets. Considering that a considerable number of municipal bonds have been underwritten by banks (Fiorita and Vecchi, 2009) and the close relationships that banks developed with LGs (Maiardi, 2000; Peterson, 2003), the possibility that they have relied on banking consulting services is not remote. Besides, this group of questions has also revealed a correlation between the number of staff at the financial office and bonds. Figure 3 shows that with the increase of the size of financial office also the amount of bonds increase. The LGs whose financial office is managed by just the person in charge issued on the average 3.3 million €, while about larger ones the mean amount at 14 million €.

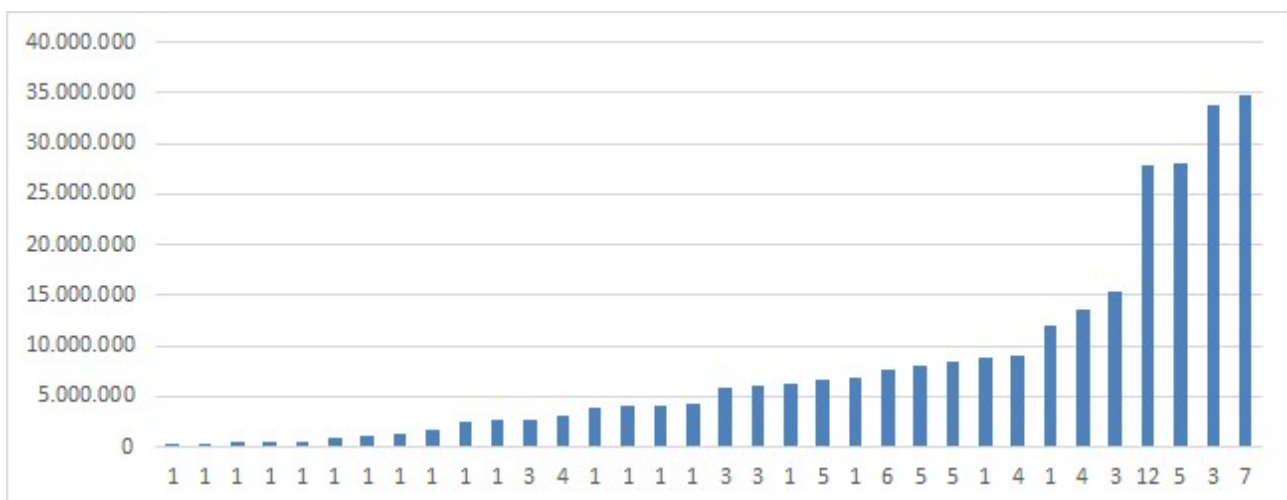


Figure 3: bond issuing and size of the financial office

The aim of the second set of questions was to make clear the rationale behind the choice of each financial instrument. The question about the reasons for their use has been anticipated by the request for details about which kind of investments have been funded through loans and bonds. From responses, it became evident that the LGs took new loans mainly to fund public works projects, while bonds have been issued to finance the financial restructuring of older mortgages as well as to fund capital expenditures. But, whilst the use of bonds for debt restructuring offers better economic conditions than the loan to replace, this does not ensure that the new bond provides the very best conditions. In other words, the bond might also be a second best but LGs opted for them

anyway⁹, as highlighted in the quantitative stage. That would suggest that the Italian mortgage market for LGs appears to be rigid, and that the refinancing of the old borrowing is challenging enough¹⁰. Following this preliminary check, interviewees were asked why bonds and bank loans have been chosen to fund these specific investments, and why bonds have been preferred to bank loans (i.e. choosing one or the other) and vice versa. Table 2 reports the relative percentages of this comparison.

	bond	loan
Provide more money	4.44%	8.11%
Cost-effectiveness	31.11%	24.32%
Lower costs	11.11%	10.81%
Lower risk	2.22%	16.22%
More flexibility	11.11%	0.00%
Less managerial skills	0.00%	2.70%
Less technical skills	2.22%	2.70%
Friendly financial context	17.78%	13.51%
Financial rules in favour	8.89%	2.70%
Advised by consultant	4.44%	0.00%
Other	6.67%	18.92%

Table 2: Reasons for use

All those interviewed assured that their choice offered the best cost-effectiveness compared to all possible alternatives: high cost-effectiveness and lower costs have been the primary criteria for choosing bond (42.22% in all) and loan (35.13% in all). Financial context and financial rules (26.67% in total) and flexibility (11.11%) constitute additional rationales for the use of bonds. In some cases (refers to “other”), they have been issued jointly with other LGs (so-called pooled bonds) to further cut the costs, or adopted as a mean to involve the citizens in the local development; occasionally bonds have been issued under advisement of consultant (4.44%). On the other hand, loans have been taken because ensure a higher funding (8.11%) but especially because considered less risky (16.22%), and financial context is less important compared to bonds (13.51%). Often (18.92%) respondents admitted that was easier to receive funding through loans, or that loan was the only possible funding source they had access.

DISCUSSION

Since the strategy proposal mixed the quantitative and qualitative approaches to address the main research questions, the results from the two stages should be integrated during the

⁹ Probably depending on unwillingness of banks to concede a renegotiating of the agreements;

¹⁰This can be done easily by private individuals through the practice of subrogation;

interpretation of the outcomes of the entire study: by combining the quantitative and qualitative findings will provide a more robust and accurate picture of the funding of LGs.

With regard to the first research question (bonds as alternative to banks) emerged that municipal bonds could be a feasible alternative to borrowing from banks, because in many cases the costs of interest is lower than loans ones, but their larger variance means that the overall cost may consequently become excessive. More than half of all issued bonds costed more than loans, and so, under this circumstance, their efficiency is no longer assured; however, it should be stressed that many of these more expensive bond would have costed less if tax retrocession has not been revoked. Consequently, even if the bank channel seemed to be the obvious choice, the rationale behind municipal bond issuing might be dependent upon the expectation that rules would not have changed, and hence bond made sense at the time of issuing. In fact, the vast majority of bonds have been issued within the old regulatory framework when the tax retrocession was in place and LGs were able to cut down the overall cost, but with the advent of new financial framework these bonds turned into excessively expensive. In this regard, it is imperative that the set of rules does not change so that the instrument is fit for purpose.

With regard to the second research question (rationale for municipal bond) has been shown that the choice to issue bonds has been made under favourable market conditions and mostly due to their perceived greater flexibility and the cost deemed to be the lowest. Bonds were viewed as a means to pay the capital required for investments less or sometimes a way to involve citizens into financial decisions. In fact, in contrast to bank loans, municipal bonds may be placed straight to the investing public by means of takeover bids¹¹, so that stakeholders (not merely banks but also retail investors and savers, including taxpayers and households) can finance directly the LGs. In that sense municipal bonds could became instruments of financial autonomy (understood in its broad sense), because they create a constructive relationship with the community and make responsible LGs of financial choices to the citizens. However the favourable tax treatment, as interviewees itself acknowledged, was a decisive factor in the selection of the funding method: once the right to receive back the part of revenues from taxes paid by bondholders ceased to be in force - 2006 – the municipal bonds lost their attractiveness. In other words, this basically means that the rationale for municipal bonds come from strategic and considerations, joined to a wide lack of competence among the financial officers might compromise the financial-economic assessment.

Finally, addressing the third research question (condition for a widespread use of bond), the joint analysis led to the identification of those factors which underpin the choice through finding sources. First, despite the fact that bank loans and fixed rate municipal bond are technically

¹¹ Public subscriptions.

equivalent, the existence of a maximum interest rate threshold to get a loan is reliant on Central government will to impose the banking channel as standard funding method. Secondly, the revision to tax retrocession has been a further obstacle to municipal bond spreading, because otherwise bonds were not such expensive. Hence, the combined effect of these measures actually closed the financial market to LGs, thus preventing to have a widespread use of bond.

CONCLUSIONS

Allowing the option to issue municipal bonds meant on the one hand widening the range of the sources of funding available to Italian LGs, but on the other hand the occurrence of extra costs in respect of the conventional price-controlled bank lending channel. In Italy 1587 municipal bonds were issued between 1996 and 2011 for a total amount of €12 billions, whose outstanding debt in 2017 is €6.3 billion and represent the 14.7% of the debt of LGs (MEF monitoring report). One third (550) of the emissions was at fixed rate and constitutes almost two thirds (€6.9 billions) of the stock.

The case of the spreading of municipal bond in Italy has been analysed both quantitatively and qualitatively, but some limitations regarding the qualitative stage should be highlighted. Firstly, the use of rigid instrument such as the survey could have curbed the emergence of further motivation besides referred in the questions. Secondly, the analysis has been confined to a few cases primarily due to the reluctance of the heads of the Financial Sector to reply to the survey. Bearing in mind these limitations, this paper reviewed them finding that bonds should be less expensive than bank loans to make public finances sustainable and prevent persistent budget deficits. Otherwise municipal bond may not be a technically and economically feasible alternative to borrowing from banks. But since then it has emerged that the rationale for bond issuing may also transcend economic arguments. This is the case, for example, when LGs use municipal bond to get the people involved in their financial choices. A public interest project is more likely to be accepted if funded by the community.

Based on these advantages, LGs were definitely interested in bonds. “The case for local governments to be able to finance much more of their borrowing programmes by issuing bonds is strong” (Bailey et al., 2009, p. 17). However, Italian LGS (municipalities) do not issue bonds up once the public sector debt has become the overarching objective. Due to the worrisome high level of Italian public sector debt to GDP (about 133%) emphasis shifted to fiscal consolidation, and municipal bonds were soon overlooked. As Member of European Union, Italy has to comply with the Stability and Growth Pact to ensure sustainability of its public sector debt. However, this approach to fiscal consolidation has resulted not just in a series restrictive measure to debt, but also

in the recentralization of powers at the expense of local autonomy. For example, when the central government assumed any rights upon the taxes paid by bondholders (withdrawing the tax retrocession), it twice affected LGs: both limiting their access to debt (reducing attractiveness of bonds) and their financial autonomy. This restricted the approach to funding to the only banking channel. “There is no need to choose a single instrument as the “right” way to handle local government credit. Many countries simultaneously use bank lending to municipalities and local bond issuance” (Peterson, 2003, p. 18).

Nevertheless, “the choice of financing method for a particular project depends on its specific requirements, the project risks, the amount of equity available, and the perceived quality” (Bailey et al., 2009, p. 12). This implies that the always appropriate investment tool does not exist, and that each activity has a particular risk profile (Wynant, 1980): some project attract the application of bonds while others do not. This paper demonstrated that, from both a quantitative and a qualitative point of view, in several cases municipal bonds were not the feasible alternative to borrowing from banks. But that all depends on the way the rule is constructed. In fact, the municipal credit market is heavily dependent on the legal and regulatory framework of local borrowing (Martell and Guess, 2006). This indicate that the need to increase to the largest extent possible the range of funding sources may be fulfilled by amending the institutional setting (Espinosa and Martell, 2015), but on the contrary Italy have had the consolidation of banking channel as sole mean to fund LGs.

Governments should also realize that borrowing “will also create a debt legacy for future generations, constraining development. Hence, where possible, a mixture of financing methods should be sought to fund flexible forms of infrastructure so as to avoid being locked into one means of financing” (Habitat, U. N., 2013, p. 58). Obviously, these are not limited to bank loan or municipal bond and may also include non-bank sources such as insurance and pension funds, public private partnerships (PPPs/PFIs), project bonds, social impact bonds (SIBs) and even mutual municipal banks. Making clear the differences among the financing facilities mentioned above, the policy makers may calibrate the strategies taking into account where, when and how these action are fit-for-purpose.

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The impact of a widespread use of municipal bonds on financial autonomy

Municipal bonds have been internationally issued over decades to finance investments, but either because of the advent of risk averse tendencies and of the changes in the global economy, the cost of investment became very sensitive for more than ten years (Bailey et al., 2009). Historically, the Italian Local Governments (LGs) debt market is very small scale (Monacelli et al., 2016), and the bank lending channel has always been prevalent (Peterson, 2003). In particular, municipal bonds became popular in the mid-2000s but they rapidly disappeared into oblivion as a result of substantial changes in legislation affecting both the tax treatment of emissions and the system of reimbursement. The rationale for these measures was to mitigate the risks arising from municipal bonds, but accidentally reduced their attractiveness and convenience.

In fact, though LGs have widely used this funding method earlier, seminal researches encouraged the debate about the need to reduce the risks associated with the municipal bond market. “There are certain general principles methods of financial administration which all cities should adopt and which [...] should be embodied in a general administrative code” (Hoyt, 1920, p. 105). Addressing these risks the literature, that Ter-Minassian and Craig (1997) pioneered, provided divergent models for the governance of municipal borrowing, which embody different mechanisms intended to enforce the debt control taking into account the context differences.

European and Italian context seem to be described by the Centralised Discipline and Control Model (CDCM), because they embody a form of bureaucratic control such as those laid down in this model. In fact, “European member states have been required to adhere to new governance parameters, comply with Fiscal Compact rules, accept debt consolidation processes, pursue balanced budgets while still being expected to respect Maastricht treaty requirements” (Bracci et al., 2015, p. 882). In this framework, LGs are faced with the restrictions imposed on national governments by the EU’s SGP. In other words, CDCM is associated with low financial autonomy. Actually, the CDCM existed in UK until 2004, but subsequently the devolution of borrowing decision to LGs the Professional Discipline and Control Model (PDCM) has been adopted throughout Great Britain, leading to the Prudential Borrowing Framework (PBF).

Previous studies proved that the PDCM grants a significant degree of freedom and flexibility to determine the capital expenditures of LGs (Bailey et al, 2009, 2012), throughout the use of Prudential Indicators, while ensuring the compliance with the balanced budget rule. These indicators allow sustainability and prudence in LGs' accounts, and meanwhile transcend the limitations of the CDCM. Before the adoption of PBF LGs had to meet severe financial limits imposed by central government, which had a detrimental effect on their freedom and flexibility. Therefore, the introduction of PBF allowed LGs to decide autonomously when, how and how much borrow, by ensuring prudence and sustainability in terms of financial consequences for future generations. But since it might be unsuitable during crisis, Bailey et al. assumed the return to the CDCM in such periods.

Like UK, Italy undertook a devolution process, but being a European member country, it adopts bureaucratic controls typical of CDCM that diminished financial autonomy of its LGs. By contrast, UK addressed the issue of limited financial autonomy by adopting the PDCM. Therefore, this paper deals with the Italian case because it reflects the features of those European countries that employ CDCM but struggle for a greater autonomy.

Some scholars investigated “the internal dynamics of public decision making in the choice of the financial instruments [...] in accordance with principles of autonomy and financial sustainability” (Amatucci et al., 2015, p. 3; Amatucci and Esposito, 2012), arguing that municipal bonds assist LGs in the pursuit of financial autonomy. However, they did not properly define the concept of financial autonomy, and the impact of bonds is not directly measurable. Actually, financial autonomy is clearly defined as a ratio between own revenues both generated by the right to levy own taxes and from tariffs upon the overall current revenues (which include the previous and the resourced transferred by the central government). By adopting this precise definition, this paper tries to improve the idea of the use of bonds to boost financial autonomy.

Therefore, this paper will address the questions of whether municipal bonds could qualify as an instrument of financial autonomy for LGs, and in particular whether bond issue can lead beneficial effects within the CDCM. Answering these questions, the paper focuses upon quantitative analysis of the bond issue's financial data embedded with municipal budgets from 2005 to 2011. The paper first provides an overview of the control models for municipal bond developed so far by literature. This is not just a case of whether the use of municipal bond granted financial autonomy to LGs, but rather if the CDCM and the measures activated in the mid-2000s are fit for purpose as part of an overall policy minded to support the development of financial autonomy.

MODELS FOR THE CONTROL OF MUNICIPAL BOND ISSUES

“Borrowing is seen as a risky venture that the centre needs to control to protect all stakeholders. It is recognised as a simple way of procuring the necessary funds for an investment project in the short term, but which imposes a burden on future taxpayers” (Dafflon and Beer-Tóth, 2009, p. 305). In fact, the risks related with the repayment of borrowed funds rests with taxpayers that ultimately bear the hazards of municipal borrowings (Bailey et al., 2009). Since its repayment is based on taxes, central governments would have reason for concern should such revenues have been lower than expected (Habitat, U. N., 2013). To minimise such risks, central governments impose rules and sanctions to decentralised governments when they borrow; however, the control model for local borrowing should be developed by balancing between decentralisation and central needs for direction and control. “The increasing worldwide trend toward devolution of spending and revenue-raising responsibilities to subnational governments seems likely to come into growing conflict with systems of administrative controls by the central government on subnational borrowing” (Ter-Minassian and Craig, 1997, p. 170).

The introduction of control measures is linked to the idea that LGs should adopt general principles of control of local borrowing. Taking into account context differences and different approaches of control (such as market discipline, local political discipline, centralised discipline and professional discipline), four models for the governance of municipal borrowing have been identified in literature (Ter-Minassian and Craig, 1997; Bailey et al., 2009, 2012; Cepiku and Mussari, 2010). The Market Discipline and Control Model (MDCM) is strongly based on technical evaluations (e.g. ratings) and strictly depend on the maturity of financial markets; therefore, in countries with high sovereign risk it is not able to impose debt discipline to LGs. This is because higher risk is generally associated with higher interest rates, and above a certain threshold, markets are unwilling to lend to over indebted LGs. By contrast, Political Discipline and Control Model (PolDCM) exclusively relies on soft factors such democratic mechanisms of accountability. Since the risk of unsustainably high debt falls on local voter-taxpayers, it is up to them establish whether the taxes required for the repayment rise to unacceptable levels. Being this the case they might not want to re-elect local politicians, which it is ultimately the control over debt. Therefore, this model is extremely unreliable in the short period, because politician may buy for votes by reducing taxes pre-empting the control of taxpayers. Whilst to face technical factors is easier than tackle soft factors (Bietenhader and Bergmann, 2010), a model based upon technical factors needs public sector accounting methods consistent with private practices (Ter-Minassian and Craig, 1997).

The CDCM postulates the need of bureaucratic controls and relies on detailed rules that LGs must meet to before they can borrow: Stability and Growth Pact is a prime example. Belonging to

the EU requires to member states, including Italy, to accept debt consolidation processes complying with Stability and Growth Pact rules. However, several criticisms emerged. For example, “this model is difficult to reconcile with the administrative and political decentralization processes adopted in many countries” (Cepiku and Mussari, 2010, p. 316). Moreover, precisely because the criteria for monitoring the local indebtedness have been decided by international agreements, it do not reflect the specific features of LGs. The Domestic Stability Pacts are the practical implementation of CDCM among European member countries: in fact, “the Stability and Growth Pact only holds central governments responsible for compliance, urging a strengthening of control over local government accounts” (Monacelli et al., 2016, p. 114). In other words, this model flattens the decision process to the central level failing to take into account the local and regional differences. These shortcomings are evident within the Italian context, mainly due to the European integration process, which overshadowed the devolution of powers to sub-national governments (Caperchione, 2002, 2003; Anessi Pessina and Steccolini, 2005; Liguori et al., 2009; Eltrudis, 2014).

Conversely, the PDCM is based on fiscal supervision rules as an alternative approach to the restrictive rules of CDCM. “Such rules are the public sector equivalent of bond ratings in private sector capital markets” (Bailey et al., 2009, p. 16). Therefore embodying technical factors developed for public sector this model meets the needs of the market while ensuring sustainability of borrowing. In addition, since LGs chief financial officers may contribute to establish these rules the concerns of LGs shall be taken into account. The UK’s Prudential Borrowing Framework is an example of this model of borrowing control. “Although the PBF increases local autonomy, it is tempered by professional financial advice from CFOs intended to ensure that all external borrowing is within prudent and sustainable limits, that capital expenditure plans are affordable and that treasury management decisions correspond with professional good practice” (Habitat, U. N., 2013, p. 11).

FINANCIAL AUTONOMY AND MUNICIPAL BOND ISSUING

“The normative classic public finance and fiscal federalism theory speaks for decentralization, and states that devolving political, fiscal and administrative powers to subnational units of government can increase the efficiency and responsiveness of government” (Oulasvirta and Turala, 2009, p. 311-312; see Tiebout, 1956; Oates, 1972, 2005; Musgrave and Musgrave, 1973). On this ground, since the ‘90s, the Italian public sector finance has been involved in a process of reform which has gradually shifted from a model based on government transfers to a system in which LGs decide autonomously how fund and finance their investments (Anessi-Pessina and Steccolini, 2005). The radical reorganization of the Constitution led to an administrative and fiscal

decentralization through a process of devolution of the legislative, administrative and financial functions to local administrations closer to citizens, enhancing the principle of financial autonomy. “The ideas of managing by results, of letting the managers manage, of the separation between elected roles and administrative ones, of introducing a managerial culture and a managerial model as opposed to the traditional and prevailing bureaucratic model” were widely discussed in the academic world (Steccolini, 2004, p. 328), and were inspired by the concept that financial autonomy is essential to give substance to the demand for responsibility of LGs (Mussari, 1996). This principle gave LGs the right to levy own taxes and revenues so that incomes and expenditures became less controlled by the central state.

Nevertheless, whilst the national Parliament was fostering the principle of financial autonomy, at supranational level the Stability and Growth Pact was starting. Such international agreements compelled member countries to reduce the deficit spending, as well as the amount of debt, involving all levels of government. This is the result of the internationally tendency towards the recentralization following the devolution process became prominent in the 2000s after NPM had peaked. “In the post-NPM era there has been a counter-movement towards reintegrating the fragmented state by focusing on government as a whole and joining up the parts through horizontal (and vertical) coordination” (Halligan, 2010, p. 235; see Halligan, 2006; Christensen and Lægreid, 2007; Lægreid and Verhoest, 2010; Christensen, 2012). Several countries around world reasserted the role of the centre, but in the EU the reclaim of the control as response to devolution took place at the upper level of governance. Therefore, the National governments strengthened the control over LGs accounts posing some limitations and drawing a framework to control both the amount of the debt and the aims for which it has been contracted.

The severe EU fiscal consolidation rules compromised the financial decision making of LGs, instead advocating a centralised model of control. Actually, to adhere to new governance parameters “implies not only upwards migration of standard setting to the European level, but also the centralization of standard setting within each EU Member State” (Heald and Hodges, 2015, p. 1009). The Italian system of control falls within the CDCM, but some points cannot be fitted into this model: the most striking example is the role of the principle of financial autonomy, its effective implementation and its extent on the local accounts (Cepiku and Mussari, 2010). By contrast, the introduction of PBF allowed UK LGs to decide autonomously about borrowings, by ensuring prudence and sustainability in terms of financial consequences for future generations. But, doubts have been raised with regard to the PDCM: in fact, “it now seems that the professional discipline and control model, which was deemed appropriate for the more relaxed economic environment of mid-2000s, is no longer entirely appropriate following the deep 2008-09 recession and there may

soon be a return to the centralised discipline and control model” (Bailey et al., 2012, p. 227). Therefore, the question of how to foster financial autonomy in the CDCM rises.

Understanding what is the actual degree of financial autonomy granted to LGs has been subject of many studies. These mainly focused on the relationship between accounting and LGs autonomy (Caperchione and Mussari, 2000; Caccia and Steccolini, 2006; Anessi-Pessina et al., 2008; Nasi and Steccolini, 2008; Du Boys et al., 2014). They clearly refers to the fundamental accounting principle that “the financial autonomy¹ of LGs must be guaranteed and based on the certainty of their own and allocated resources” (Caperchione and Mussari, 2000, p.177). In fact, the establishment of the property tax (ex ICI) in 1997 has given substance to financial autonomy. Before LGs were “mere spending centres of the State” (Gianni, 2003, p. 448), but later they have been developed into entities with autonomy. As long as ICI was applied financial autonomy was guaranteed, but following its temporary abandon² between 2007 and 2012, there has been an increase of government transfers associated to the decline of the local autonomy (Perez, 2010). Recently Amatucci et al. (2012, 2015) introduced the idea that municipal bond issuing would assist LGs in the pursuit of financial autonomy, but the restrictions imposed by Domestic Stability Pact reduced municipal bond attractiveness (Guarini, 2008; Amatucci and Vecchi, 2010; De Carlo, 2014).



Figure 1: financial autonomy trend

Figure 1 compares financial autonomy and municipal bond issuing revealing that they decreased simultaneously after 2006. This would suggest the existence of a link between them. However, although bonds were no longer issued, financial autonomy has been recovered since

¹ Financial autonomy is a ratio of tax revenues and other own revenues over current revenues (TR+OR)/CR;

² While the property tax on first house has been abolished, the residual property tax remained;

2011. This is the result of the reform of fiscal federalism³ and of the so-called “Save Italy” decree⁴: these amendments increased the share of revenues from own taxes⁵, but on the other hand did not remove the constraints on municipal bonds. The figure is a personal elaboration of Istat and Ministry of Economy and Finance. The recourse to municipal bond issuing to meet this objective was already suggested by Amatucci et al., but as discussed above, they related to a wider concept of financial autonomy not exactly consistent with the accounting literature. By using an indicator of financial autonomy built in accord with significant literature, this paper will try to fill the weakness of the previous researches while deal with the same research question. So, throughout the next section municipal bond are being statistically investigated to understand if LGs have benefited from their issuing within the CDCM, and whether bond issues are really an instruments of financial autonomy for LGs.

DATA AND METHODOLOGY

The purpose of this study is to empirically investigate the extent of financial autonomy granted to LGs by municipal bonds in Italy under the CDCM. In particular, it looks for evidences that bonds would assist LGs in the pursuit of financial autonomy as stated in literature. Addressing this goal, this paper relies upon Generalized Least Squares (GLS) regression of longitudinal (panel) data. In Italy 1587 municipal bonds were issued between 1996 and 2011 for a total amount of €12 billion, whose outstanding debt in 2017 is €6.3 billion and represent the 14.7% of the debt of LGs (MEF monitoring report 2017). The sample used in this study includes financial secondary data provided by the Ministry of Economy and Finance, and accounting data gathered from OpenBilanci.it (open source website for consultation and management of public budgets). It focuses on 322 bonds issued by 119 municipality county seats from 2005 to 2011 (7 years): the length of reference period depended on availability of the relevant data (subject to the accounting legislative changes previously described), and notably its end relates to the last bond issued. The accounting and fiscal data collection involved current and capital revenues, as well as current and capital expenses, and data related to debt. These data allowed the construction of indicators intended to be used as variables in the analysis. The final sample consisted of 801 observations for each variable.

Because of municipal bonds have not been issued in a systematic way among LGs, this paper focuses upon a subset which includes bonds issued only by municipality county seats. The

³ Law 42/2009;

⁴ Decree Law No. 201/2011;

⁵ Establishing the rebalancing experimental fund and reintroducing the property tax (now IMU). Note that the revenues from the rebalancing experimental fund flown into the taxes section, but basically it is a government transfer. This means that in 2011 financial autonomy fictitiously increased: it effectively improved only from 2012 with the introduction of IMU (with a tax base wider than the previous tax - ICI);

use of a convenience sample is justified on the grounds that within the whole sample the emissions were not uniformly distributed throughout Italy (notably in the south); secondly, several pooled bonds⁶ would have been included in the analysis, entailing several problems to distinguish the effects upon each municipality. The sample considers the vast majority (73%) of municipal bond placed on the market having regard to the amount expressed in euro. Additionally, there is statistical evidence that the subset and the full sample do not differ (t-test: p-value 0.3181).

CHOICE OF VARIABLES AND STATISTICS

Despite the vast empirical literature concerning municipal bond in the USA, not many researches on to European sub-sovereign bond market have been carried out, and even fewer are those based on the Italian municipal bond market. Recently Pinna (2015) investigated this market finding out that LGs still depend to a large extent on central government transfers, meaning that the principle of financial autonomy was largely unrecognised. This paper relies on Pinna's set of indicators. Therefore, such variables are used to estimate if and how much the resources funded throughout municipal bond induce improvements of financial autonomy. The final set of variables took account of accounting, fiscal and indebtedness aspects, and includes: a measure of the power to levy own taxes (Tax Autonomy⁷); an indicator of the ability to meet current expenditures with current revenues (Current Balance⁸); a measure of the share of current expenditures over the entire amount of the expenditure (Current Expenditures⁹); the extent of current revenues after debt reimbursements (Net Revenues¹⁰); a debt burden indicator (Debt to Revenues¹¹); a dummy variable meant to identify the municipal bond issuing (Issue¹²); a dummy variable which exposes the LGs which issued only once (Issue₁¹³); a dummy variable which reveals those which issued more than once (Issue₊¹⁴).

Because the analysis refers to linked budgetary items there is a likelihood that many of these variables could embody the same information, entailing multicollinearity whose leads to biased estimations. Therefore, to detect potential multicollinearity among independent variables the presence of any correlations has been tested with Spearman's correlation. Table 1 shows that among accounting variables no cross-correlation above 25 percent exists, meaning that multicollinearity is

⁶ A municipal bond issued by a number of LGs together;

⁷ Tax autonomy: tax revenues over current revenues TR/CR;

⁸ Current balance: current revenues minus current expenditures, over current revenues (CR-CE)/CR;

⁹ Current expenditures: current expenditures over the sum of current and capital expenditures CE/(CE+CaE);

¹⁰ Net revenues: current revenues minus debt reimbursement, over current revenues (CR-DR)/CR;

¹¹ Debt to revenues: total outstanding debt over the sum of current revenues and capital revenues D/(CR+CaR);

¹² Issue: takes value 1 if municipality issued bond, 0 otherwise;

¹³ Issue₁: takes value 1 if municipality issued bond only once, 0 otherwise;

¹⁴ Issue₊: takes value 1 if municipality issued bond more than once, 0 otherwise;

not a problem in this analysis; in addition, even if the dummy variables are correlated each other, it does not matter because these are considered in different models.

Variable	Issue	Issue+	Issue ₁	Tax Autonomy	Net Revenues	Current Balance	Debt To Revenues	Current Expenditure
Issue	1.0000							
Issue+	0.6654	1.0000						
Issue ₁	0.7136	-0.0481	1.0000					
Tax Autonomy	0.1133	0.0194	0.1333	1.0000				
Net Revenues	-0.2296	-0.1306	-0.1847	-0.1726	1.0000			
Current Balance	0.0302	0.0527	-0.0091	-0.0946	-0.0720	1.0000		
Debt To	0.0245	0.0515	-0.0156	0.1314	-0.3954	-0.0040	1.0000	
Current	-0.2245	-0.1873	-0.1247	-0.0355	-0.0052	-0.1146	0.1001	1.0000

Table 1: Correlation matrix

Table 2 reports the descriptive statistics of the dependent and independent variables in either the whole and restricted samples (which consider the LGs in the years that they issued and not issued); for each variable the average is displayed together with the standard deviation. Looking first at the variables that account of bond issuing, in approximately 9% of the years taken into consideration LGs used this source of funding, and in 54% of cases LGs issued only once per year (i.e. spot emission) while the remaining bonds were part of structured emission plan.

	Whole sample 801 obs		Restricted to Issuer 74 obs		Restricted to non-Issuer 727 obs	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Issue	.0923845	.0102378	-	-	-	-
Issue+	.0424469	.0071279	.4594595	.0583279	-	-
Issue ₁	.0499376	.007701	.5405405	.0583279	-	-
Financial Autonomy	.6523668	.0060089	.7515361	.0159687	.6422726	.0063014
Tax Autonomy	.4443896	.0053042	.4975212	.0157472	.4389814	.0055842
Net Revenues	.8525521	.007779	.7377355	.031514	.864239	.0078273
Current Balance	.0637081	.0017508	.0650359	.0045102	.0635729	.0018743
Debt To Revenues	.6174132	.0117416	.6294586	.0339194	.6161872	.0124732
Current expenditures	.76055	.0042592	.6786299	.0147191	.7688885	.0043324

Table 2: descriptive statistics

Since there are differences between the years in which LGs issued or not, and consequently series of statistical tests on averages have been ran to investigate these cases, as reported in table 3¹⁵. The result of this analysis reveals that both in the dependent variable (Financial Autonomy) and in many of independent variables (Tax Autonomy, Net Revenues, Current expenditures) a statistical difference exists; however this is not the case for other variables (Current Balance and Debt to Revenues), in respect of which there is no statistical difference among LGs. The reason behind this

¹⁵ According to normality tests, the non-parametric Wilcoxon test has been run, and t-test has been performed to robustness.

may lie in the fact that whilst there is a certain discretionary margin to set the first set of variables, LGs cannot decide about the determinants of the second set. Indeed, there are strict budgetary limits in accord with the CDCM, such as the financing of current expenditure with capital revenues and the indebtedness limit related to current revenues, which actually balance the values of these variables.

	Shapiro Wilk	Jarque Bera	t-Test		Wilcoxon / Mann Whitney	
	p-value	p-value	t-	p-value	z-statistic	p-value
Financial Autonomy	0.00000	0.0001	-5.6544	0.0000	-5.729	0.0000
Tax Autonomy	0.00000	0.00000	-3.4101	0.0007	-3.435	0.0006
Net Revenues	0.00000	0.00000	4.8952	0.0000	6.531	0.0000
Current Balance	0.00000	0.00000	0.2365	0.8131	-0.396	0.6918
Debt To Revenues	0.00000	0.00000	-0.3271	0.7437	-0.653	0.5138
Current expenditures	0.00000	0.00000	6.9324	0.0000	6.884	0.0000

Table 3: means analysis

REGRESSIONS AND DISCUSSION

Throughout this section, the research questions will be addressed by recourse of Generalized Least Squares regression for panel data, which allows the estimation under more general hypotheses than classical linear model. This applies when either heteroscedasticity (i.e. non-constant variance of errors) or serial correlation are present, implying that OLS and WLS estimators may be biased (Baltagi, 2008). Generally, the empirical analysis of panel data necessitates the decision on how to treat individual-specific effects, and usually would lead to use one among pooled OLS, fixed effect or random effects. All of these models have been performed in this study, and the table 4 shows their post-estimation tests making clear the rationale for GLS.

	Random Effect	Fixed Effect	Pooled OLS
Breusch Pagan test	1590.06 (0.0000)		
Hausman test	19.22 (0.0038)		
Wald test		9.7e+05 (0.0000)	
White test			170.62(0.0000)

Table 4: testing panel data

According to the Breusch and Pagan LM test there is evidence of significant differences across individual (i.e. LGs) that means that panel models should be undertaken; besides, consistently with the Hausman test fixed effects should be used. Afterward, the analysis relies on the Wald statistic and to look for heteroskedasticity in the residuals of the fixed effect regression model; White statistic try it out on pooled OLS model. In both cases the null hypothesis must be

rejected concluding for presence heteroskedastic disturbance, and this is condition for the use of GLS model.

Financial autonomy	Municipal bond	Structured emission	Spot emission
Issue	.0486374*** (.0109151)	-	-
Issue+	-	.0857575*** (.0151844)	-
Issue ₁	-	-	.0086354 (.014569)
Tax Autonomy	.9367825*** (.0206603)	.9447382*** (.0204302)	.943492*** (.0209669)
Net Revenues	.0306553** (.0140149)	.0216933 (.0137046)	.0215131 (.0142721)
Current Balance	.1495392** (.0619463)	.1414658** (.0615071)	.1489858** (.0627142)
Debt To Revenues	.0680706*** (.0092643)	.0653898*** (.0092196)	.0695532*** (.0093759)
Current expenditure	-.0946496*** (.026252)	-.093115*** (.0258616)	-.1194409*** (.026066)
cons	.2258732*** (.0274128)	.2318339*** (.0267289)	.2527227*** (.0273466)
Observations (groups)	801(119)	801(119)	801(119)
AIC	-1653.887	-1665.552	-1634.625
BIC	-1621.086	-1632.751	-1601.823
Mean VIF	1.06	1.04	1.05

Table 5: Regression results

***Significant at 1% level **Significant at 5% level *Significant at 10% level
Std. Err. in parenthesis

The estimates from the GLS analysis are presented in table 5. Different models have been conducted distinguishing between specific financial strategies, while accounting variables have constantly been included in the empirical specifications. Having first regard to the accounting facets, the results for all the regressions show that the autonomy to levy own taxes is extremely important (0.94473) in defining the extent of financial autonomy, whereas the current expenditures (with negative impact) and debt to revenues act on a smaller scale; current balance and net revenues have very low or no statistical significance. Above all, the regression labelled “municipal bond” examines the effects of bond issuing from a general point of view, revealing that there is indeed a positive effect (estimated at 0.04863) on financial autonomy. Then the scenarios of “structured emission” (two or more per year) and “spot emission” (that is only once per year) have been considered. This deepening revealed that when LGs issued only once, bonds are not relevant in

pursuit the financial autonomy, but when they issued intensively the size of the effect of bond emission increased to 0.08575. The selection of the better-fitting model builds on Akaike (AIC) and Bayesian (BIC) information criteria, under the rule that the smaller indicates the better model: consequently, the second should be preferred.

CONCLUSIONS

The CDCM has to be considered in part as the result of post-NPM reforms which implied an enhanced political control and recentralization (Christensen, 2012), and in part due to the fiscal constraints of Stability and Growth Pact it has been “reaffirmed the key role of traditional cameralistic accounting, whose main purpose has always been to centrally control government spending” (Anessi-Pessina and Steccolini, 2005, p. 11). Its introduction besides controlling municipal borrowing decisions may also have restricted the use of bonds (Bailey, 2009), undermining LGs’ financial autonomy.

The recourse to municipal bonds to finance capital expenditures has collapsed as a consequence of the fiscal choices of countries, which could be consequence of introduction of the CDCM. However, some studies on the Italian municipal bond market emphasised the substantial connection with the financial autonomy of LGs. So this paper focuses upon such market and reinstates the idea that municipal bond could qualify as an instrument of financial autonomy for LGs. However, it further states that it is not just whether the use of municipal bond granted financial autonomy to local autonomy, but rather that their use could be fit for purpose to encourage the growth and maintenance of financial autonomy within the CDCM of control.

Although its results are limited to a single country, this paper has provided statistical evidence of the relationship between financial autonomy and bond issuing. In fact, results show that a structured use of bond emission may generate a regular flow of certain revenues (at least in the short term) in addition to those deriving from taxes; at the same time, however, it is evident that occasional bond emissions fail in generating the positive effect in the financial position of LGs. This means that if municipal bonds are issued as of a broader financial strategy, they will be considered as an instrument of financial autonomy. Alongside, the paper shows that financial autonomy is strictly related LGs’ right to access their own taxes and resources. In other words, municipal bonds could have a considerable impact in the pursuit of financial autonomy, but tax autonomy should be deemed as its main driver. Looking at what happened to property tax will provide further confirms to this finding: financial autonomy fell year after year as the property tax

has not been levied, and has been recovered only when it has been re-introduced. Accordingly, if financial autonomy is a good thing, the share of own taxes should be raised.

However, the analysis showed that Italian LGs did not entirely benefit from the positive relationship between financial autonomy and bond issuing essentially due to the constraints of CDCM that gradually reduced bond convenience. Accordingly, until central government policies intended to “contain expenditures rather than to improve efficiency and effectiveness” (Anessi-Pessina and Steccolini, 2005) will be in place, it is not possible to make a widespread use of municipal bond in Italy. The Italian case makes clear that policymakers should pay particular attention to which model of control adopt, but even more to the degree of strictness of constraints.

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Strategies to Reduce Public Sector Debt: sub-sovereign bond buyback

In any organisation a considerable debt overhang (i.e. when the existing debt is so great as to undermine future financing operations) reduces the incentives for investment and so the reduction of debt incurred by public authorities has assumed a key role throughout the public debate in the vast majority of countries (Claessens and Dell’Ariccia, 2011). Although historically only developing countries have widely used bond buyback in order to reduce their sovereign debt, public authorities in the USA and EU have recently become interested, especially when the value on the financial markets of the outstanding debt of a sovereign borrower quotes significantly below its face value. In this case, a government may try to improve the financial position of its public sector by purchasing some of its own debt through a buyback transaction (Baglioni, 2014). Assuming *ceteris paribus*, repurchasing bonds in advance of their maturity reduces the costs governments face in servicing their debt, their payment of interest on the remaining stock of unredeemed bonds decreasing in line with the reduction of the stock of debt, but only as long as bond buyback is financed by revenue budgets (Marchesi, 2006). In cases where bond buyback is financed by further borrowing, the costs of servicing will fall only if the interest rate of the new debt is less than the relinquished debt; otherwise the debt servicing will either not fall (if interest rates remain unchanged) or rise (if the newly-incurred interest rates are higher than previously). Either of the last two scenarios would be the case if bond buyback is used to convert short-term debt into long-term debt in order to make redemption of debt more manageable. This will be the case when the purpose of bond buyback is to avoid too much short-term debt having to be redeemed at a particular point in time, rather than to take advantage of lower interest rates on debt.

The existing literature on bond buyback largely predates the ongoing post-2009 crisis of sovereign debt within European Union (EU) member states, particularly those in the Euro currency area, most notably Greece (Zandstra, 2011; Zettelmeyer et al., 2013; Bracci et al., 2015; McKinsey Global Institute report, 2016). This Eurozone crisis has revived the interest in bond buyback policy (Baglioni, 2014) amongst national, supranational and subnational governments. At the supranational level, the International Monetary Fund (IMF), European Commission (EC) and

European Central Bank (ECB) acted as one (the so-called Troika) to bailout the Greek government to avoid it defaulting on its debt repayment obligations. Bailed out by the Troika three times between 2010 and 2016 (the cumulative cost had by the latter year been €325 billion), default is nevertheless still possible, even though the Troika also enforced a Greek government bond buyback in 2012. Of course, sovereign debt is incurred by all levels of government and some Italian Regions (Campania, Lazio, Liguria, Lombardy, Marche, Puglia) have recently engaged in this financial practice, and so sub-sovereign buybacks are worthy of study. “While European partners helped with large loans, more use of innovative financial engineering solutions and better aggregate fiscal policy in Europe could have benefitted debtors and borrowers alike” (Honohan 2016, p. 156).

Buybacks have previously been analysed within an economic and financial framework, whereas this paper adopts a politico-social analytical framework that posits that the balance between the pros and cons of buyback depends upon the opportunity cost of buyback to citizens, not only to the financial market. That opportunity cost is what has to be foregone by using public money to buyback bonds instead of using it to finance improved public services.

Even though creditors (rather than debtors) apparently benefited disproportionately from bond buyback in previous decades (Bulow and Rogoff 1988 and 1991), this is not necessarily the case in the post-2009 fiscal crisis era, in which there are now other reasons for countries to engage in buyback that could not be foreseen by that previous research. The subsequent signing by member states of the EU’s Fiscal Compact provides the new context for researching the distribution of benefits between debtors and creditors of bond buyback. For heavily indebted EU countries there are profound benefits to be gained by avoiding the very considerable financial penalties of failing to conform with the Fiscal Compact’s debt reduction schedule, perhaps also reducing the possibility of leaving the EU by avoiding the coming to power of its internal anti-austerity/anti-EU political parties. These new European fiscal rules and austerity-engendered socio-political dimensions provide a very different analytical framework within which to study sovereign bond buybacks and whether they are fit for purpose.

This paper will try to fill this gap in the literature by considering three research questions. First, whether member states may be able to engage in bond buybacks to avoid or otherwise minimise the negative externalities (i.e. adverse social and economic effects) resulting from the EU-wide public sector austerity programme. Second, the options available to member states to finance buybacks of their bonds and the feasibility of those measures. Third, whether bond buybacks could actually help member states reduce their levels of outstanding governmental debt sufficiently in order for them to achieve the progressive debt reduction required by the Fiscal Compact and, more

generally, comply with Stability and Growth Pact (SGP) rules without being solely reliant upon spending cuts and/or tax increases. This may be possible under a debt management perspective and using creative accounting practices.

Answering these three questions focuses upon analysis of the Italian regional bond buyback at the end of 2015, using a qualitative empirical research method within a multidisciplinary approach. Italy's public sector is highly indebted and has to observe the Fiscal Compact. Before detailing that case study, however, the paper first provides a comprehensive critical literature review on bond buybacks.

STABILITY, AUSTERITY AND BOND BUYBACK

Bulow and Rogoff (1988) studied bond buyback schemes in developing countries, critically categorising them as a “boondoggle benefiting a country's creditors” (Bulow and Rogoff, 1988 p.676), meaning an unnecessary, wasteful or fraudulent project. This, they said, is because a rational bondholder will require a payment higher than the redemption value of the bond (or its market price) in order to sell back to the issuer. Hence, bond buyback raises the market value of the debt left outstanding, and consequently it may worsen - rather than improve - the net asset position of the sovereign (Claessens and Dell'Ariccia, 2011). For example, in 1987 Bolivia received \$34 million from donor countries¹ to buy back its sovereign bonds. The face (i.e. redemption) value of those bonds was \$670 million but their market value was only six percent of that (i.e. 6 cents on the dollar) and so the market value was just \$40.2 million. That being the case, Bolivia was supposed to be able to repurchase around 85% of its total sovereign debt. However, the 1988 buyback price raised up to 11 cents on the dollar and so Bolivia was able to buyback only 46% (Krugman, 1988, 1989; Bulow and Rogoff, 1988, 1991).

Although debtor country are attracted to the possibility to buy back their own debt instead of using the same money to pay interest, academics and experts concluded that “it is inadvisable for countries to try to buy out some of their creditors unilaterally through voluntary swaps and buybacks” (Bulow and Rogoff, 1988, p.698). Other scholars subsequently investigated buybacks from a broader economic (rather than narrow financial) standpoint (Krugman, 1988, 1989;

¹ “The resources for the buy-back were provided specially by official donors on concessionary terms; Bolivia's deal with the IMF (new World Bank loans were provided in 1988) was the first not to require full payment of interest arrears to private creditors - the buyback was a substitute [...] Bolivia is not being pressed on other loans” (Winters, 2003, p. 470);

Dornbusch, 1988; Sachs, 1989; Rotenberg, 1991; Acharya and Diwan, 1993; Claessens and Diwan, 1994; Thomas, 2004; Prokop and Wang, 1997; Marchesi and Thomas, 1999; Coe et al., 2000, 2005; Marchesi, 2004, Baglioni, 2015). The consensus of this stream of literature is that the increase in the market price caused by bond buyback could be compensated by reducing the debt overhang effect, reducing the overall cost of debt and future bargaining costs, reducing the default costs and the probability of default, and finally used as a signal of country's willingness to invest.

These other authors dispute Bulow and Rogoff's conclusion that although "buybacks stimulate investment they still are not likely to benefit debtors" because when "creditors believe that the buyback will stimulate growth, they will demand a higher price in order to sell" (Bulow and Rogoff, 1991, p. 1219). In particular Dornbusch (1988, p. 701) concluded that "the Bulow-Rogoff presumption, while basically right, oversimplifies the issue" and "buyback involves the trade-off between good and bad circumstances", therefore the consensus in the broader literature being that a reduced debt overhang effect could have mutual benefits for debtors as well as their creditors.

Even though banks holding bonds gained more than was expected, Sachs (1989) and Claessens and Diwan (1994) found that for six "Brady agreements" (Mexico, the Philippines, Costa Rica, Venezuela, Uruguay, and Argentina) the savings were on average 22.4% cheaper than the pure market approach. "These transfers to the banks represent a real cost to the debtor economies [but] there are many indications, however, which suggest that the deals were mutually advantageous" (Claessens and Diwan, 1994, p. 209). Emerging Markets² largely used Brady schemes to buy back their debt but whereas in 1994 the Brady's market share amounted to 61% (1.68 trillion \$) of total trading, by 2005 it had fallen to only some 2%.

About half of OECD countries³ have undertaken debt buyback operations since the 1990s but the research literature has remained predominantly focused on buybacks in developing countries. Most developed country research previously focused on the USA. During the "first buyback program for its long-term debt in 70 years" (Han et al., 2007, p. 2673), the USA Treasury retired \$67.5 billion of its debt in 45 separate buyback operations replacing very much older illiquid debt. Although the aim was to minimize the interest expense rather than the buyback costs, the authors found that the average buyback cost was only 4.38% higher than the ask price in the

² "In general, Emerging Markets countries are characterized by an underdeveloped or developing commercial and financial infrastructure, with significant potential for economic growth and increased capital market participation by foreign investors". Available at <http://www.emta.org/faq.aspx?id=71>;

³ Australia, Austria, Belgium, Denmark, Finland, France, Greece, Iceland, Ireland, Italy, Netherlands, New Zealand, Norway, Spain, Sweden, United Kingdom, United States;

secondary market. “These results suggest that the buyback auction structure was generally successful in minimizing the market-impact cost of buying back illiquid debt issues”, but it is nevertheless questionable “whether the Treasury was well served by the buyback” (Han et al., 2007, pp. 2674-75).

This caveat relates to the impact on the maturity profile of debt, perhaps resulting in too much debt having to be redeemed at a particular point of time in the future and so causing cash flow problems for governments. A study of the efficiency of the UK debt management authorities in managing the maturity structure of the government’s bond portfolio also showed that opportunistic use of debt exchange (i.e. replacement of bonds paying higher rates of interest with bonds paying less) could help reduce the cost of debt servicing (Coe et al., 2000). However, it also showed that this practice could have a negative impact on the public sector debt portfolio’s risk assessment since “a substantial reduction in interest costs required large monthly changes in the portfolio’s maturity structure which may have important undesirable risk and liquidity implications” (Coe et al., 2000, p. 17). Nevertheless, they showed that even with small changes in public debt portfolios, not exceeding 1% of total debt outstanding, large cost savings may result (Coe et al., 2005).

As regards European countries, a 1996 survey by the Bank of Italy jointly with the Italian Treasury found that the percentage of repurchased debt ranged from 0.3% in Italy, to 12% in Ireland (Marchesi, 2004). More recently (and as noted above), the Troika required a buyback by the Greek government in 2012 (Claessens and Dell’Ariccia, 2011; Baglioni, 2014). This “set a new world record in terms of restructured debt volume and aggregate creditor losses, easily surpassing previous high-water marks such as the default and restructuring of Argentina in 2001–2005” and that it could be considered “the first major debt restructuring in Europe since the defaults preceding World War II” (Zettelmeyer et al., 2013, pp. 515-516). The Greek government used €11.3 billion⁴ to retire €31.9 billion of Hellenic Republic’s bonds, reducing the debt by €20.6 billion. However, during the period May to December the average price rose from 0.13-0.18 cents trading range up to 33.8 cents per Euro (Xafa, 2013; Zettelmeyer et al., 2013).

	Bolivian Buyback	Greek Buyback
Average price debt before the buyback	0.06 \$	0.16 €
Average price debt included in the buyback	0.11 \$	0.34 €
Growth rate	83.3%	112.5%

Table 1: Increase in prices due to bond buyback

⁴ Funded by the European Financial Stability Facility (EFSF);

Table 1 reports consequences of the increase in prices due to bond buyback: the Greek and Bolivian cases are subject to the same limitation, namely that the higher bond prices induced by the buyback significantly reduces the financial benefits of this operation.

Many analysts recommend buyback by national governments as way of managing excessive debt by virtue of the considerable discount on the secondary market (e.g. Kirkegaard and Hufbauer, 2011; Baglioni, 2011; Claessens and Dell’Ariccia, 2011). Nevertheless, advocacy of this debt management practice revived the longstanding divisions regarding the efficacy of bond buybacks, i.e. whether the overall results are beneficial or harmful. Although in the case of the Greek buyback “the announcement [of bond buyback] had a positive impact on the price of the securities purchased through the transaction, as expected” (Baglioni, 2015, p. 96), this confirmed the undermining problem with voluntary buybacks that economists had been pointing out since the Bolivian experience of 1988 (Zettelmeyer et al., 2013).

Notwithstanding this difference of opinion, bond buyback has been regarded by the finance ministers within the Eurozone countries as an important success that, together with the other initiatives agreed (i.e. austerity programme), may put the Greek public finances on a sustainable route by leading to a substantial reduction of the Greek debt-to-GDP ratio (Eurogroup Statement on Greece, 13rd December 2012).

In fact, the support of the European Financial Stability Facility needed for that buyback operation was conditional upon implementation of the hardest austerity measures seen so far in the EU. This means that the Greek government buyback should be researched using a much broader analytical framework that extends beyond the conventional narrow technical and financial issues to also consider socioeconomic and politico-constitutional (including human rights) parameters. This much more holistic analytical framework should also be adopted by other countries whose debts are as high a proportion of GDP as was the case for Greece at the start of its Troika bailouts, including Italy.

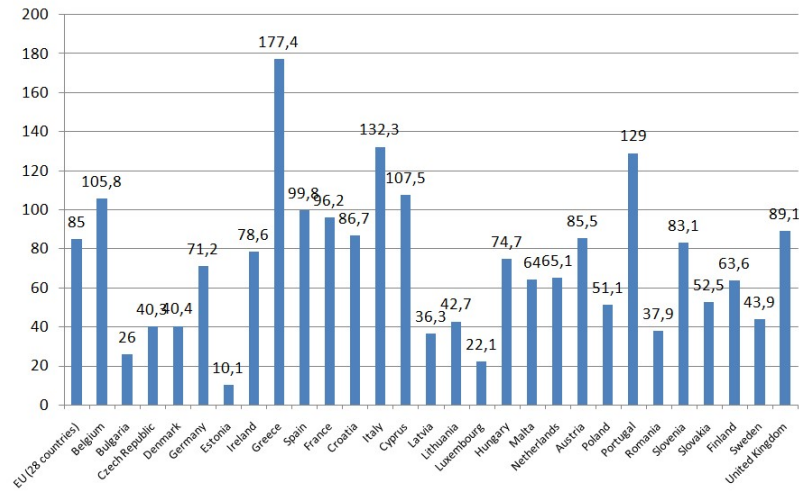


Figure 1: General government gross debt 2015- percentage of GDP

Figure 1 reveals that Italy's debt is second only to Greece and far greater than most EU member states, only three others exceeding 100% of GDP in 2015. Data source: Eurostat (last update 30.11.2016).

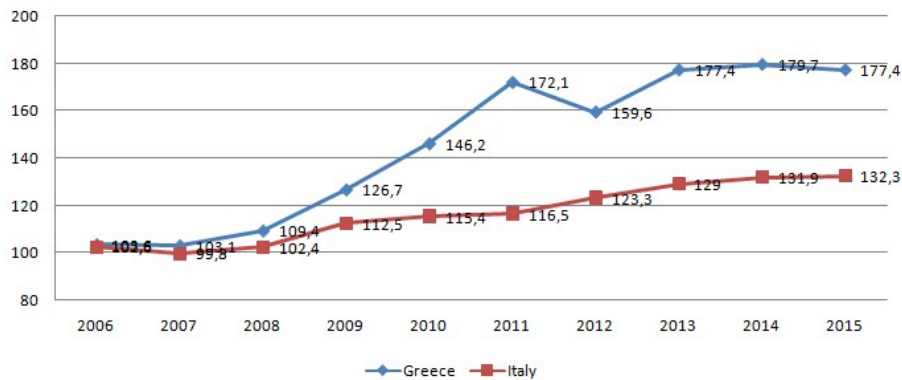


Figure 2: General government gross debt 2015 - debt/GDP ratios comparison

Figure 2 reveals that Italy's 2015 ratio is the same as that for Greece at the time of its first bailout, the latter's ratio having risen since then because its GDP fell year after year as austerity measures took effect. Data source: Eurostat (last update 30.11.2016).

Italy's GDP is much greater than that of Greece (€1642443.8 million and €175697.4 million respectively), meaning that although its debt ratio is the same as it was for Greece at the first bailout the absolute amount of debt is far greater (€2172673 million and €311673 million respectively).

Hence, a bailout by the Troika and/or the EFSF would not be financially feasible and a default on debt by the Italian government could be catastrophic for the Euro, for European banks holding much of Italian government debt (see below) and for the Eurozone economy. Moreover, the stagnation of Italy's GDP over the last few years means that there seems little chance of fast economic growth reducing the public sector debt to GDP ratio. The ECB has expanded the money

supply over the last several years in an effort to provide monetary stimulus (i.e. quantitative easing) across the Eurozone as a whole but any positive impact is not readily apparent. This suggests that the focus will continue to be on implementation of austerity measures by means of contractionary fiscal policy measures. Hence, all possible options for reduction of Italy's debt in both absolute and proportionate terms must be explored, bond buyback included.

This broader austerity context challenges Bulow and Rogoff's recommendation that highly indebted countries should not waste resources in buybacks because creditors will reap the efficiency gains. That and the other previous literature did not address the Fiscal Compact because it did not then exist. In this new EU scenario, bond buyback could become seen as very effective even if municipalities and governments do not make direct financial savings from a buyback deal itself, including when it involves some direct costs.

"The [Greek] crisis showed that it was possible to have a sovereign debt crisis in a European Member State and that earlier concerns related to non-compliance with the Stability and Growth Pact were pertinent and real" (Zandstra, 2011, p 287). The implementation of stronger financial rules (i.e. "Six Pack" and "Two Pack") became necessary because countries underestimated the risks arising from having current expenditures greater than tax revenues over decades (Fingland and Bailey, 2008; Bailey et al., 2014). Accordingly "European member states have been required to adhere to new governance parameters, comply with Fiscal Compact rules, accept debt consolidation processes, pursue balanced budgets while still being expected to respect Maastricht treaty requirements" (Bracci et al., 2015, p. 882).

Conversely, to adhere to new governance parameters "implies not only upwards migration of standard setting to the European level, but also the centralization of standard setting within each EU Member State" (Heald and Hodges, 2015, p. 1009). As well as cutting government spending, Greece has been required by the Troika to introduce a property tax, raise its VAT rate and privatise state-owned assets. The Republic of Ireland was the first EU economy that became subject to Troika assistance programmes (in 2012). Public opinion in Ireland was negative, believing that the Irish government's sovereign powers were overridden by the Bundestag's budget committee that debated first the key issues of the Irish national budget as a prerequisite for the Troika programme of support (Robbins and Lapsley, 2014).

Nevertheless, Greek governments experienced the greatest restriction of sovereign powers, perceived as a foreigners' "blackmail" (Featherstone, 2015). The Troika financial support for Greece came in successive tranches, the second and third being conditional upon positive periodic reviews of implementation by the Greek Parliament of specific actions capable of ensuring

measurable outcomes. Without these three tranches of financial support, the Greek government would not have been able to meet its short-term debt-repayment obligations and so it would have defaulted on debt repayment, proving its dependency upon the Troika's resources (Agostino and Lapsley, 2013). However, "the conditions attached to each tranche of finance have included extreme austerity programmes, such that the dependent economies have experienced increased unemployment, severe economic downturns, social unrest and the migration of skilled workers" (Cohen et al., 2015, p. 985; see also Zandstra, 2011); Bracci et al. (2015) provided a detailed overview of the negative economic and social consequences of austerity measures, which are in stark contrast with the EU's welfare model inspired by social justice, equity and solidarity (Petmesidou and Guillén, 2014). Austerity is widely regarded as having led to increased inequality and injustice as a result of the fall in state intervention (Demetriou, 2014; Windebank and Whitworth, 2014). "There would seem to be strong arguments to suggest that financially austere governments have not only failed to foster economic growth but have failed to take appropriate account of the increasing inequalities, social exclusions and general unhappiness brought about by their austerity policies. Fiscal and financial matters have been dominant, while issues such as poverty, fairness and inequality have rarely featured in the Troika "financial assistance" (i.e. austerity) programs" (Bracci et al., 2015, p. 883; see also Sapir et al., 2014).

This outcome would appear to be incompatible with the expectations of many countries when they joined the EU, envisaging benefits of sharing economic prosperity, national security and improved social welfare that far outweighed any possible risks. Within the Eurozone there would be no more exchange-rate fluctuations and lower inflation and interest rates, all of which were supposed to reduce the risk premia within nominal interest rates and so reduce the costs of servicing public sector debt (Gibson et al., 2012).

The McKinsey Global Institute report (2016) analysed wages and income from capital of households in 25 advanced economies, including relevant European countries, finding that up to 70% of those experienced a flattening or a falling of their incomes during the previous decade, compared to less than 2% between 1993 and 2005. The younger generation felt their economic positions had deteriorated and there is a real risk that they will be poorer than their parents' generation. The primary cause is the deep recession and slow recovery after the 2008 financial crisis, but the report shows that government policies and labour-market practices have also been key factors in determining the extent of flat or falling incomes. In contrast, in the pre-recession period the United States' and Europe's GDP growth contributed about 18% to household income growth. It is not surprising, therefore, that anti-austerity movements grew across Europe.

The Greek experience is now a benchmark against which to assess fiscal policy for the whole EU. Its fiscal consolidation approach to debt management applied over such an extended period has revealed its financial, socioeconomic, constitutional and other limitations, disappointing the populace and destabilizing the political scene. At the same time, however, this state of affairs revealed a mutual reliance between Greece and the Eurozone. Greece needed Troika support to prevent its financial ruin and the EU needed to prevent unsustainable debt contagion that would have spread to other EU member states in the event of a Greek government debt default. Debt contagion would have compromised the stability of the Euro “and so there is a Greek paradox: Europe does not want Greece to leave the Eurozone. But at the same time it will not tolerate a behaviour that is contrary to the rules of legitimation which keeps Eurozone countries united” (Cohen et al., 2015, p. 981).

Unsustainable debt was previously only a matter for creditors and debtors but nowadays Eurozone countries have to fulfil their debt obligations to maintain the integrity of the EU. The Greek bailouts serve this purpose. Consequently, within this much broader context, assessment of the effectiveness of bond buybacks goes far beyond the financial parameters. Buybacks are beneficial for highly indebted countries to the extent that they help them meet Fiscal Compact requirements, reduce the pressure on their debt-to-GDP ratios and free up financial resources for public services in the long term. Financial crisis and austerity measures have arguably led to economic stagnation across Europe, causing adverse effects for its citizens that cannot be ignored and which require a solution in the near future.

RESEARCH METHODOLOGY

The three main research questions outlined above cannot be addressed by recourse to EU-wide quantitative data because member states have not yet systematically engaged in bond buyback and so sufficient Eurostat or other data sources are not yet available. Moreover, previous experience of bond buyback by private sector organisations has little if any relevance for buyback by non-trading public sector bodies whose main purpose is not to seek profits on behalf of shareholders. This dearth of available and relevant data means that empirical research seeking to answer the three research questions must be initially small-scale, based on what very limited quantitative data is available and whose analysis is embedded in qualitative research methods specifically designed to take account of the EU-wide fiscal consolidation. As already noted, this EU-wide austerity context was not the reason for the bond buybacks considered in the literature reviewed above.

This paper utilizes a qualitative exploratory case study methodology (Yin, 2011) to analyse the 2015 Italian regional government bond buyback within the holistic analytical framework outlined above. The case study investigates the experience of regional municipalities buying back their own debt, as well as the coordinating role played by the Ministry of Economy and Finance (MEF). This methodology allows inferences to be drawn about the bondholders' decisions to sell.

The comprehensive scrutiny of the Italian buyback's detail required consideration of its financial, economic, political and social dimensions. The analysis covered relevant national and regional legislation (regional laws sometimes diverge), regional council decisions, official documentation and press releases issued by the MEF. In addition, to integrate and understand the information gathered throughout the preliminary documentary analysis, a series of interviews subsequently took place during 2016 including a long-lasting in-depth face-to-face interview with the managing director of the operation at MEF and (later) virtual interviews (i.e. by email) with operational officers in the regional financial offices. The MEF interview (see Appendix B) lasted 105 minutes, the intention being to verify the hypothesis expressed in the research questions. Thereafter, a series of virtual interviews (i.e. questionnaires via email) took place with the heads of finance in the 6 involved Regions of which Italy has 20 (see Appendix C), with the aim of understanding the reasons underpinning the participation at the bond buyback.

THE 2015 ITALIAN REGIONAL GOVERNMENT BOND BUYBACK

The Italian regional bond buyback of 2015 took place within a particularly complex framework. Historically the Italian Local Governments (LGs) debt market remained relatively undeveloped. Instead of direct access to financial markets, Italian municipalities predominantly borrowed via banks⁵ and supported by Cassa Depositi e Prestiti (CDP), a joint-stock company under public control that finances activities to support national investments. However, in the early 2000s accentuated financial autonomy in respect of Regions' financial operations simultaneously with a reduction in financial transfers from national to sub-national governments paved the way to alternative sources of capital funding. This new financial autonomy led to overuse⁶ and sometimes

⁵ The outstanding debt of regional and LGs amounted to €123 billion in 2015, of which around 84% was bank loans, the remaining 16% being made up by other types of funding including bond issues (MEF monitoring report 2015);

⁶ The (notional) value of the local and regional bodies' financial derivatives is about €25 billion (60% of which relates to regions), those derivatives adding considerable annual operational costs to the debt stock (Corte dei Conti, 2015);

abuse⁷ of financial derivatives⁸. Hence, in 2008 a temporary ban⁹ on derivatives was imposed, followed by an absolute ban in 2013¹⁰.

Accordingly, local and regional administrations cannot issue bullet bonds¹¹ and bonds in foreign currency (which are used to hedge exchange rate risk). Moreover, those administrations are effectively unable to incur additional debt due to the restrictions imposed on national governments by the EU's SGP: "The Stability and Growth Pact only holds central governments responsible for compliance, urging a strengthening of control over local government accounts. Since the early 2000s this has led to the adoption of Domestic Stability Pacts among the different levels of government by a large group of EMU Member States" (Monacelli et al., 2016, p. 114), including Italy. Consequently, Italy's municipalities must now seek to reduce their levels of debt so that the national government can comply with the Fiscal Compact's progressive debt reduction schedule.

Finally, constitutional law No. 243/2012 reinforced that ban by adding a break-even budget rule in the constitution, meaning that current (i.e. operational) expenditures must be fully financed by current incomes (i.e. revenues from taxes, grants, fees and charges). That rule therefore prohibits borrowing to pay wages and salaries and the other running costs of services and welfare payments. Hence, borrowing can only fund capital expenditures (i.e. physical infrastructure such as school buildings). Given the very high level of public sector debt relative to Italy's GDP, the effect of this law is that municipalities cannot issue new debt on the financial markets. The Consolidated Act of Public Debt allows debt management only for government bonds and so a new Law¹² ensures the sustainable management of outstanding debt relating to previously issued regional bullet bonds greater than or equal to €250 million and with more than five years to maturity (i.e. redemption).

⁷ The courts of auditors detected breaches of the legislation, contractual imbalances, incorrect accounting practices, failure to assess value-for-money, inadequate managers, and brokers with conflicts of interest (Corte dei Conti, 2015);

⁸ In this context, a financial derivative is a form of municipal debt whose market price is derived from the value of the underlying asset(s) which comprise that local or regional bond;

⁹ Law No. 133/2008;

¹⁰ Law No. 147/2013;

¹¹ Debt instruments whose entire value (sometimes including the accumulated interest as well as the principal) is paid to the bondholder on the date it matures. They cannot be redeemed before that date;

¹² Art. 45 Decree-Law No. 66/2014;

FEATURES

The bonds involved in the 2015 regional government buyback operation were bullet bonds issued between 1998 and 2006, characterized by high fixed rate coupon¹³. They were “hedged” either by a sinking fund or by an amortizing swap to guarantee sufficient money would be available to redeem the bond upon maturity¹⁴. These “hedging” derivatives have to be terminated simultaneously with the underlying bullet bonds. Consequently, the repurchase decision had to be taken into account together with the derivative’s mark to market. The final cost reflects the bond repurchase cost and the mark to market value. When the mark to market is negative the final cost is increased so the level of public debt is increased. When the mark to market is positive the final cost is decreased so the level of public debt is reduced. The MEF opted to dismiss only the bond-derivative combinations which guaranteed the debt reduction (i.e. those with positive mark to market).

	Rating Moody's	Year of issue	Coupon rate	Spread at	Acquisition price	Face value	Repurchased amount
Campania 2026 €	Ba1	2006	4.849%	30	1.33826	1090	765
Campania 2036 \$	Ba1	2006	6.262%	39	1.51032	913.24	650.23
Lazio 2028 €	Ba2	1998/2002	5.695%	32	1.46729	1050	842
Liguria 2034 €	Baa2	2004	4.795%	22	1.48756	420	80
Lombardy 2032 \$	Baa1	2002	5.804%	30	1.37958	913.24	522.58
Marche 2023 €	Ba1	2003	4.648%	19	1.26978	382.51	33.32
Puglia 2023 €	Baa2	2003	0.298%	40	0.99	870	810
Totals						5638.99	3703.13

Table 2: Features of repurchased bonds

Table 2 gives an overview of the main features of the repurchased bonds. The figures into the fifth column are particularly important because they reveal the spread (that is N basis points over mid swap) which bondholders recorded in their books. Figures into the seventh and eighth columns are expressed in millions of Euros. The table is a personal elaboration of MEF data.

Around 90% of bondholders were foreign financial institutions, mostly large German and French banks (or Italian branches of those institutions) which purchased the fixed rate bonds and swapped them into floating rate bonds, recording the latter in their account books at historical values computed using the spread at issuance method.

According to IAS and IFRS principles the titles can be budgeted at amortized historical cost if allocated in held-to-maturity portfolios, or budgeted at “fair value” if allocated in available-for-

¹³ Puglia was a floater rate bond;

¹⁴ Law No. 448/2001;

sale portfolios. Swapping a fixed rate investment into a variable rate is a very common hedging practice. Furthermore, “investors apply different pricing schemes to the different types of local governments” (Pinna 2015, p. 86) and in general yields paid by Italian Regions are mainly driven by book values rather than market values. The relevant value pertaining to buyback is not the issue price but the corresponding mid-swap value calculated at the issuance, plus N basis points.

Given the number of basis points over mid-swap established at issuance, and given the current mid-swap value, the MEF calculated the cash price¹⁵ and on it charged a 1% discount. Whilst proportionately small, this 1% loss imposed on bondholders is substantial in monetary terms given the high values of bonds possessed, amounting to hundreds of millions of Euros. So why did bondholders sell at a loss? One reason was the precarious financial condition of some of those players, some of which have been receiving specific attention from European Commission. For example in 2012 the Commission approved a resolution plan for the Dexia Group¹⁶ resulting in a run-off procedure. For this reason, Dexia Crediop “participated in the repurchase proposals which led to the early repayment of a portfolio of regional bullet bonds with a nominal value of €734 million” (Dexia Crediop 2015, p. 23). There is no information about the other bondholders¹⁷, but it is reasonable to assume that after the 2007-09 banking crisis many European banks, although not directly involved in the run-off procedure, went through a critical financial phase or radical corporate restructuring, in turn leading to portfolios being reconfigured. In other words, the banks “actively choose whether, how much, and which sovereign bonds to hold”, these decisions being conditional upon banks’ assessments of the sovereign risk, of regulatory costs, and of bank-level characteristics (Buch et al., 2016, pp. 1-2).

Another plausible interpretation is a change in the accounting strategy due to the Basel agreement, which required banks to meet the minimum capital requirements intended to mitigate credit risk, operational risk, and market risk. If bondholders experienced financial difficulties, they may have sold bonds to minimise the collaterals. For example, “during the sovereign debt crisis, German commercial banks reduced their exposure to Eurozone peripheral debt issued by governments in Greece, Italy, Ireland, Portugal, or Spain, and they largely replaced these investments with domestic German sovereign debt” (Buch et al., 2016, p. 2).

¹⁵ Puglia quoted already at par;

¹⁶ For its failure in the restructuring plan (approved by the EC in 2010) despite significant public support measures;

¹⁷ In view of the strictly confidential nature, neither the MEF nor the Regions would comment in respect of financial market regulation and the compliance banking regulation;

Although these hypotheses are weak and uncorroborated, they facilitate interpretation of the bondholder decision to sell. In fact, those banks and institutional investors sold prematurely at a loss the regional bonds originally classified in held-to-maturity portfolios (i.e. the rationale of the investment is to hold the security up to maturity).

RESULTS

During 2014 the MEF provided €8.7 billion to fund the regional bond buyback: the average rate of those issues was 1.35%. This funding¹⁸ made possible a mortgage at a fixed rate of 2.26% and a subvention to facilitate the buyback.

Repurchased value (€)	Funding from MEF (€ billions)		Saves (€ billions)
	mortgage	subvention	Debt reduction
3.7	2.8	0.4	0.5*
Operation cost	mortgage	subvention	Derivative closure
4.9	2.8	0.4	1.7*

Table 3: Results and savings

Table 3 show the main results of the bond buyback in absolute numbers: they may be interpreted in two different ways. With regard to the face value, the repurchased amount was €3.7 billion financed with a €2.8 billion mortgage and a €403 million subvention, leading to a debt reduction of about €440 million. An alternative interpretation looks at the cost of the operation - i.e. the repurchased amount multiplied by the acquisition price - the final amount was about €5 billion. The entire closure of derivatives provided another €1.7 billion. In other words, the Regions were able to buy back their bonds by monetizing the derivatives with positive mark to market, without which the buyback would not have been financially viable. * values rounded up; The table is a personal elaboration of MEF data.

	residual debt	repurchased value	mortgage	funding	debt reduction
sovereign debt	2167*	-	0.17%	0.17%	-
aggregated Regions' debt	65*	5.69%	5.69%	-	0.68%
cumulative debt	2232*	0.17%	-	-	0.02%

Table 4: Impact of bond buyback

¹⁸ After having granted mortgage and subvention about €5 billion was left over;

Table 4 shows the impact of funding operation and debt reduction, working out the percentages respectively on sovereign debt and on regional government debt. Despite the fact that the total debt reduction is very limited (0.02%), constituting a very small proportion of sovereign debt (0.17%), the reduction of regional debt has been significant (0.68%). Note that the funding operation is neutral for national government, since its negative effect on books is balanced by the mortgage positive effect; similarly, considering regional government debt, the positive effect of buyback is balanced by the mortgage negative effect. * billions of Euro; The table is a personal elaboration of MEF data.

Accordingly, the debt reduction that resulted from debt management and creative accounting practices aimed to reduce the costs of servicing public sector debt and the derivatives. In fact, the buyback not only reduced the Regions' public debt but also simplified their debt structure by extinguishing derivatives¹⁹: the MEF's ten-year prospectus²⁰ shows that the expected savings are €1.1 billion²¹. In addition, the operation generates a constant income for the State resulting from the spread between the mortgage and the funding operation: the revenues from the difference between funding average rate and mortgage rate allowed a series of measures in the field of competitiveness and social justice to be financed²². In that sense the effects of the operation went far beyond the buyback itself.

Moreover, the “government debt to be reported to the Commission by the Member States has to be consolidated within the government sector” (Council Regulation (EC) No 479/2009), meaning that the debt of the whole public administration is taken into consideration by the SGP rules. Furthermore, the local debt has to be “calculated excluding financial liabilities held by other public administrations” (Banca d'Italia, 2016). Hence, the buyback operation is relevant also for avoiding the excessive deficit procedure.

RESULTS OF THE EMPIRICAL FIELDWORK

The interviews during 2016 were to explore the 2015 Italian regional government bond buyback in detail. Accordingly, the questioning focused upon the three central themes: bonds,

¹⁹ Puglia, less 92%, had the best performance;

²⁰ Available at http://www.mef.gov.it/inevidenza/article_0179.html;

²¹ The year-average savings are about €110 million per year: Campania €37m., Lazio €46m., Liguria €2.3m., Lombardy €295k., Marche €1m., Puglia €22.6m;

²² Article 45 generated a surplus that supported the entire Decree;

derivatives and buyback. In this section the relevant information from the empirical fieldwork is scrutinized and debated in order to answer the research questions.

With regard to the bonds, from the questionnaire returns it became evident that the bonds had been issued mainly to finance investments and for the financial restructuring of older mortgages marked by high interest rates. In only one case the bond issuance was intended to pay off the health sector deficits. The respondents were broadly in agreement that at that time the conditions offered by capital market were better than the mortgage market. This high attractiveness has resulted from a greater liquidity and less risk (e.g. Region Lombardy's rating was even higher than that of Italy) of bonds compared to other funding methods. In addition, the constraints of Domestic Stability Pacts did not affect bond issuing, leaving the Regions free to decide about using it.

With respect to the issue of derivatives, the field research revealed that in all cases the Regional Government (authorised by the regional political leaders) itself decided the subscription of derivatives. In making that decision, the executives were supported by qualified internal staff and by the regional in-house structure (i.e. companies controlled by the Region). Sometimes external consultancy provided subsidiary support. Nevertheless, different approaches about the number of derivatives to hedge a single bond emerged. In one particular case, it was revealed that there were up to 5 derivatives covering a single bond. Significant annual costs are the effect of this variety: in one particular case it has been estimated as about 12% per year of the underlying bond. Sometimes, the derivatives' riskiness has also been stressed by the Court of Auditors, which focused especially upon the collateral structure and the composition of sinking fund; other risk factors are attributable to "extremely dangerous" (i.e. as defined by the interviewee) legal disputes.

Finally, with reference to the buyback they agreed with the conclusion that the Regions largely benefited from it: the repurchase operation was accepted enthusiastically and there was no political resistance. The "substantial" (in the words of the respondents) regional public debt relief and the elimination of risks related to the bullet bond structure have been the main reasons that prompted the Regions to participate. Furthermore, in terms of economic viability, from the returned questionnaires it emerged that the buyback was extensively funded with the closure of derivatives (up to 50% of the total cost).

Summarizing the information obtained from the empirical fieldwork, it became clear that when bonds have been issued (namely since 1998 up to 2006) bond issuing constituted an effective funding method. Despite this, they have proved to be vulnerable to changes in the market: in particular the structure of bullet bonds exposed the Regions to excessive risks until maturity of the bond. Referring to the three research questions stated in the introduction, the Italian experience

makes clear that member states can use feasible measures to engage in bond buybacks and so reduce their levels of outstanding governmental debt.

“It is important to do something to relieve public sector debt, and we need constantly to devise solutions aimed at reducing its amount. This provision²³ is still working, consequently other bond buyback cannot be excluded; but if it does not occur the unspent funding will be allocated to the debt sinking fund, since the rationale of this provision is debt reduction.” - [name withheld for anonymity]

Clearly, the MEF discovered a new feasible option to finance bond buybacks and was able to achieve a reduction in public debt that, together with reduction in debt servicing costs, was capable of reducing to some extent the need for austerity-induced cutbacks in public spending and tax increases.

“The great strength of this operation is that it made sense not just per se, but it has also allowed a series of measures to promote competitiveness and social justice laid down in the Decree Law No. 66/2014.” - [name withheld for anonymity]

This means that engaging in bond buybacks may reduce the likelihood and extent of adverse economic and social impacts of austerity programmes and/or financial penalties imposed for failure to abide by the progressive debt reduction schedule of the Fiscal Compact.

“In my opinion, the high public debt level is one of the burning issues for Italian public financial management, not in absolute terms but rather with respect to the debt/GDP ratio; therefore, to reduce the debt volume compared to GDP is a decisive factor.” - [name withheld for anonymity]

POLICY

The results presented above suggest that a small increase of sovereign debt may lead to a significant decrease of sub-sovereign debt. This means that the bond buyback initiative could be extended to include buyback of bullet bonds issued by the whole sub-governmental level²⁴, not just the Regions. Rather than cover all such bonds, it could apply only to those with more than 5 years residual life (amounting to about €9.5 billion) since this is the legislative term of office of Italian governments. This could be easily undertaken because the total amount is restricted to only a few bonds. For instance, Piedmont Region has €1.8 billion, Milan city €1.6 billion, Rome city €1.4

²³ Authors' note: Art. 45 Decree-Law No. 66/2014 converted into law;

²⁴ However, would be appropriate that the small municipalities be coordinated by upper government level;

billion - totalling €4.8 billion²⁵. The combined debt of these institutions is more than €24 billion²⁶, and a buyback would work for about one fifth of this amount. Indeed, the unspent funding of €5 billion (noted above) could be used for this purpose.

Rather than simply reducing debt, improving the efficiency of debt management should be the real target. This implies substantial changes to the Consolidated Act of Public Debt to make possible direct purchase on the market to buy at the best price. However, to amend the Consolidated Act of Public Debt involves technical and political issues that are relatively difficult to resolve, any such modifications perhaps leading to considerable political conflict between the State and Regions.

CONCLUDING THOUGHTS

Although its results are provisional and limited to a single case, this paper has provided preliminary evidence of how bond buyback can support member states' compliance with the EU Fiscal Compact. Moreover, it also demonstrated how that compliance may not always necessitate the severe social and economic sacrifices some countries (not only Greece) are having to incur as a condition of their unsustainable public finances being bailed-out by the Troika. The conclusion is that bond buybacks could be fit-for-purpose as one particular approach to fiscal consolidation within the current EU context.

It is not just a case of whether the Treasury is well served by the buyback. The innovative element of this work has been to consider whether bond buybacks are fit-for-purpose from a much more comprehensive perspective that includes economic, social and political parameters in addition to the financial criteria of the conventional perspective. Contrary to the narrowly technical Bulow and Rogoff conclusion in respect of individual developing countries, EU member states individually and in concert must observe the SGP and Fiscal Compact if profoundly adverse austerity-driven consequences are to be avoided and so those highly indebted countries would not necessarily waste resources engaging in bond buyback. Of course, the unsustainably high levels of debt are the result of current expenses greater than (mostly tax) revenues over decades and a “debt brake” is now being applied in many European countries, albeit leading to a decrease in investments and the centralization of power (La finanza territoriale: Rapporto 2014).

²⁵ Secondary data CEAM project April 2016;

²⁶ Budgetary data (available at <http://www.comune.milano.it/> and <http://www.comune.roma.it/>) and MEF data (last update 2016).

The objective of the preventive arm of the SGP is to promote sound public finances and ensure the sustainability of public finances to avoid the occurrence of excessive budget deficits - and debt - (Vade Mecum on the Stability and Growth Pact, 2016), and through which to restore economic growth conditions. Fiscally conservative hardliners are confident that reduction of public deficits and debt overhangs leads to economic growth but others do not believe growth will occur automatically as debt falls and also emphasise the incompatibility of austerity's outcomes with the EU's welfare model. Instead, economic growth may require infrastructural investments, financed by prudential borrowing. The burden of austerity is borne by the general community and so, for them, whether austerity-driven fiscal policy is good or bad depends upon the opportunity costs they face.

Both financial stability and compliance with the SGP could be addressed by adopting policies aligned towards more discretionary fiscal measures (Masten and Gnip, 2016) and also use of innovative financial engineering solutions (Honohan, 2016). The new analytical framework for bond buyback developed in this paper is based on this fundamental consideration and, for this reason, buyback oriented towards the EU's fiscal rules could become seen as very effective as an alternative to spending cuts and tax increases.

Italy and other member countries have to cope with the trade-off between observing the fiscal consolidation rules and encouraging growth-promoting infrastructural investments. The Italian bond buyback case is pertinent for the signal sent, notwithstanding the relatively limited amount repurchased. The MEF successfully involved the Regions in debt reduction to observe the EU constraints whilst avoiding in tandem cuts in public services and/or raising taxes. Favourable financial conditions played a key role in facilitating the Italian regional bond buyback of 2015 (i.e. low interest rates, presence of derivatives and bondholders in financial difficulties). However, judging the success of buyback is not simply a financial matter and the financial market cannot assess its overall effectiveness. Instead, the role of the market is to provide the conditions for buyback to operate.

Like Greece, Italy is highly indebted and reducing its public debt is the new challenge both to observe the Fiscal Compact and to avoid the negative economic and social consequences of austerity measures. Nevertheless, bond buyback could also be beneficial for other countries. The new German balanced-budget rule written into the federal constitution in 2009 (just before the onset of the Euro crisis) imposes limits on structural deficits in the budgets of the federal and regional governments. However, this rule has been widely criticised for being neither simple nor transparent (Deutsche Bundesbank, 2011; Truger and Will, 2013; Burret et al., 2013; Hein and Truger, 2014; Thiele, 2015; Potrafke, 2016). The Bund must meet the requirements within 2016 but Länders are

be allowed to deviate from that debt-brake until 2020 and it is not certain that all will be able to reach budget balance by then (Deutsche Bundesbank, 2011). In fact, legal restrictions on the accumulation of public deficits in Germany have been evaded since the Kaiserreich, and the sustainability of public finances remains questionable (Burret et al., 2013, p. 306). In other words, even the countries supposed to be virtuous should be interested in subnational bond buyback to meet the fiscal limits required by the fiscal compact.

Addressing the three research questions by means of documentary analysis, secondary (financial) data, and both face-to-face and virtual interviews and analysing the results of this triangulation of research methods yields the following conclusions. First, within relatively modest limits, member states could engage in bond buybacks to avoid or otherwise minimise the adverse social and economic effects resulting from public sector austerity programmes, otherwise disproportionately focused on cutting spending, whilst also improving the efficiency of their debt management policy and practice. Second, there is a range of both financially and politically feasible options available to member states to finance buybacks of their bonds, including use of grants-in-aid and loans from higher levels of government, internal balances, privatisation receipts, refinancing to reduce debt servicing costs, and rescheduling debt. Third, bond buybacks can help, in some relatively small way, to support member states efforts to reduce their levels of outstanding governmental debt in order for them to achieve the progressive debt reduction required by the Fiscal Compact and, thereby, avoid punitive financial penalties being imposed by the EU.

The dearth of available and relevant data means that further empirical research must also be country-specific and initially small-scale, again utilising qualitative research methods and facing the same methodological caveats and limitations as the research results reported here. It can reasonably be expected that the results of such further research will also find that bond buybacks are fit-for-purpose as one particular approach to fiscal consolidation within the current EU context.

The Italian case study makes clear that when considering buyback, countries have to take into account a range of contextual factors and possible future developments. Contextual factors include how bond buyback can be financed, who holds those bonds (e.g. pension and insurance funds, domestic or foreign banks, investment trusts, financial speculators and other investors) and for what purposes they hold bonds, the split of bonds between levels of government, the terms of bonds (short, medium, long) etc. Looking forward, the potential for bond buyback may be affected by ECB quantitative easing, ratings agencies downgrading of economies and any conditions set on assistance from IMF and other funding bodies that could restrict buyback's effectiveness. Some issues have become relevant since the regional government buyback (ECB quantitative easing for

example) and others are yet to become relevant (inclusion of sub-national government debt in the Fiscal Compact rules in 2020). All these parameters must be considered in coming to a decision whether buyback is sustainable in EU member states.

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Appendix A

Survey with chief financial officers of municipalities which issued municipal bonds.

Subject line of interview: Municipal bonds and bank loans

Method of implementation: online questionnaire.

The survey took place between August and October 2017.

Dear Head of the Financial Office,

This questionnaire is part of a research intended to understand what factors are behind financial choices. This study focused on the use of bonds and borrowings from banks.

Our research team considers it a priority to consult municipalities which issued municipal bond in the past. The questionnaire takes just 5/10 minutes; your contribution is highly valued in order to have a complete overview. Your answers will be anonymized.

Thank you for participating at this research

Regards

A.I Preliminary information

1. Please, can you indicate the municipality which you represent?

2. Please, can you indicate your education level?

Undergraduate (high school) Graduate (university) Post-graduate

3. Please, can you indicate your area of expertise?

Management Accounting Finance

4. Have you had prior work experience in the banking or financial sector?

Yes No

5. Please, can you indicate when you started working as head of the financial sector?

- Before 1998 1998 1999 2000
 2001 2002 2003 2004
 2005 2006 2007 2008
 2009 2010 2011 After 2011

6. How many officers were involved in the financial area of your municipality besides you?

- It is just me 1 2 3
 4 5 6 7
 8 9 10 More than 10

7. Please, can you indicate their education level?

- Undergraduate (high school) Graduate (university) Post-graduate

8. Please, can you indicate their area of expertise?

- Management Accounting Finance

A.II Financial information

9. What sort of debt instruments did your municipality active?

- Municipal bond Bank loan Both

10. When your municipality issued bonds, were you head of the financial sector yet?

- Yes No

11. Please, provide a short description of the features of loans.

12. Please, provide a short description of the features of bonds.

A.III Specific information on Bonds and Loans

13. Which investments did bonds fund?

14. Why did you preferred bonds to fund these specific investments?

- | | | |
|--|---|--|
| <input type="radio"/> Advised by consultant | <input type="radio"/> Provide more money | <input type="radio"/> Lower costs |
| <input type="radio"/> Less managerial skills | <input type="radio"/> Lower risk | <input type="radio"/> More flexibility |
| <input type="radio"/> Friendly financial context | <input type="radio"/> Less technical skills | <input type="radio"/> Value for money |
| <input type="radio"/> Financial rules in favour | <input type="radio"/> Other | |

15. Please, make clear what the other factors are.

16. Did the Stability and Growth Pact influence the choice to issue bond?

17. Do you think it was a decision correct from a technical viewpoint?

18. Which investments did loans fund?

19. Why did you preferred loans to fund these specific investments?

- | | | |
|--|---|--|
| <input type="radio"/> Advised by consultant | <input type="radio"/> Provide more money | <input type="radio"/> Lower costs |
| <input type="radio"/> Less managerial skills | <input type="radio"/> Lower risk | <input type="radio"/> More flexibility |
| <input type="radio"/> Friendly financial context | <input type="radio"/> Less technical skills | <input type="radio"/> Value for money |
| <input type="radio"/> Financial rules in favour | <input type="radio"/> Other | |

20. Please, make clear what the other factors are.

21. Did the Stability and Growth Pact influence the choice to take loans?

22. Do you think it was a decision correct from a technical viewpoint?

23. Please, make clear what factors influenced the choice to issue bond or to take loan (comparative assessment).

	Bond	Loan
Cost	<input type="radio"/>	<input type="radio"/>
Risk	<input type="radio"/>	<input type="radio"/>
Maturity	<input type="radio"/>	<input type="radio"/>
Managerial skills	<input type="radio"/>	<input type="radio"/>
Technical skills	<input type="radio"/>	<input type="radio"/>
Financial context	<input type="radio"/>	<input type="radio"/>
Financial rules	<input type="radio"/>	<input type="radio"/>
Ability to get into debt	<input type="radio"/>	<input type="radio"/>

Appendix B

Interview of 20 April 2016 with Dr. Fabrizio Tesseri, director of IV office, Directorate II - Public Debt - Ministry of Economy and Finance.

Subject line of interview: 2015 Italian regional government bond buyback.

Method of implementation: long-lasting in-depth face-to-face interview.

Audio interview recorded.

Dear Doctor,

This interview constitutes part of a wide research project aimed to analyse investment tools and debt reduction strategies in a “fit-for-purpose” perspective. It is the result of a collaboration between the University of Cagliari and Glasgow Caledonian University, United Kingdom.

Our research team considers the 2015 Italian regional government bond buyback worthy of study; this interview is designed to explore it in detail: your contribution is highly valued in order to have a complete overview.

Thank you for participating at this research

Regards

Buyback summary:

- News 28 November 2014: buyback's draft;
- Press Release No 232: buyback's announcement;
- Press Release No 244: disclosure of attendance at buyback;
- Press Release No 245: disclosure of Acquisition Prices and Repurchased amount;
- News 17 December 2015: disclosure of buyback's results.

B.I Legal and political background

1. The Art. 45 Decree-Law No. 66/2014 is the reference legislative framework for the Regional Bond buyback.
 - a. Please, can you explain how and why the buyback design was conceived?
 - b. What led the MEF to propose the buyback?
2. Have there been supranational obstructions (i.e. Stability and Growth Pact) to buyback?
3. Have there been national obstructions (i.e. Domestic Stability Pact) to buyback?
4. Have there been political resistances to buyback? Who resisted?

B.II Relevant financial features

5. Please, can you explain the buyback technically?
6. What were the main features of bonds bought back?
7. What criteria were used to select which were the bonds to buyback?
8. Please, can you describe the price setting mechanism?
9. Why did not you calculate the present value of the future cash flows instead of the spread at issuance method?
10. The interest rate of bond issued by Puglia was 0.28%, and its maturity was 8 years; the 30-year mortgage interest rate is 2.26%, worsening the economic conditions.
 - a. Why was Puglia considered eligible?

B.III Regions' features

11. What are the main features of involved Regions?
12. On 28 November 2010, the MEF declared that among the targeted Regions were also Abruzzi and Piedmont.
 - a. Why didn't these Regions participate at the buyback?

B.IV Bondholders' features

13. Who were the bondholders?
 - a. Were there banks among bondholders?
 - b. Were there foreign investors?
14. What were the reasons for selling the bonds?
15. According to IFRS/IAS principles, the fair-value principle should be adopted for the valuation of financial asset assets.
 - a. Why has the historical cost principle been adopted to evaluate these financial assets?

B.V Funding

16. During 2014 the MEF got the resources to fund the regional bond buyback.
 - a. Can you explain how the funding has been managed?
17. Has new government debt been issued?
 - a. If so, has the national government undertaken to guarantee regional debt?
18. Have special accounts been used? Which was the purpose?
19. The average rate of issues intended for funding the buyback was 1.35%, facilitating a mortgage at a fixed rate of 2.26%.
 - a. Is difference between the two interest rates a government income?
 - b. How can this income be used?

B.VI Results

20. €2.8 billion euro has been provided as mortgage, and €403 million as subvention. The corresponding debt reduction amounted to €440 million: the total value of buyback has been about €3.7 billion.
 - a. Can you explain the exact role that the government played?
21. Nevertheless, the total cost (i.e. the repurchased amount multiplied with the acquisition price) has been about €5 billion.
 - a. How has the part exceeding the funding been financed?
22. Who benefited from the buyback?

B.VII Future prospects

23. Please, can you summarize the strengths and weaknesses of regional buyback?
24. Do you see any room for new buyback operations?
25. What could be done to improve buyback's effectiveness and efficiency?

Appendix C

Interview with regional Directors in charge of public debt department

Subject line of interview: 2015 Italian regional government bond buyback.

Method of implementation: virtual interviews using email form

The interviews took place during autumn 2016.

Dear [names withheld for anonymity]

Thank you for participating at this research: your contribution is highly relevant in order to have a full re-enactment of 2015 Italian regional government bond buyback.

Our research team considers it a priority to consult all actors involved, including Regions, for the purpose of explaining the buyback's impact on public finance.

For this reason we consider your point of view essential to the research comprehensiveness.

Regards

Please, can you indicate the Region which you represent?

C.I Bonds

1. Can you indicate what have been the exact reasons for bond issuing?

2. What policies were intended to cover?

3. Have you taken into account other funding methods? Why did you prefer bond issuing?

4. What impact has the Domestic Stability Pact had on bond issuing?

C.II Derivatives

5. How much did you pay annually in derivatives to hedge the bond bought back?

6. Please, can you describe the political mechanism which led to derivatives' subscription? Have Regional council opposition criticised the derivatives' subscription?

7. Who managed the derivatives once they have been subscribed? Internal staff or external consultancy?

8. Please, can you indicate occupation and level of education of internal staff who managed derivatives?

9. Did the Court of Auditors detect critical issues related to derivatives?

C.III Bond buyback

10. Can you indicate what have been the reasons for bond buy-back?

11. Have there been cases of resistance to buyback? Who resisted?

12. What impact has the buy-back had on regional budget?