

Conseil Scientifique de l'AMF

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Comments on Noémie Pinardon-Touati's paper titled

« The Crowding Out Effect of Local Government Debt:
Micro- and Macro-Estimates »

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1. Overview

- ❑ This paper is an impressive and successful attempt at understanding and measuring a not so often studied (especially in France) phenomenon relative to the crowding out (CO hereafter) of the private sector by *local* governments' spending and financing. In its macro dimension, it echoes and complements in some way Patrick Artus's paper ("Qui doit porter le risque économique ?"), presented here less than one year ago and that I also commented in absentia, which focused on the economic risks that should not be borne by the State.
- ❑ Using an amazing (and welcome) amount of processed data, and various theoretical models, the paper brings about numerous results at the micro- and macro-levels which are mostly intuitive but still enhances our understanding of how, why and to what extent local governments' debt impinges on private debt with real effects on global output.
- ❑ Based on a theoretical model leading to testable propositions, it examines and tests 2 assumptions/mechanisms:
 - i) The aggregate supply of loanable funds by banks is *constrained*, thus imperfectly elastic, hence an increase in *effective* Local Government Debt (LGD hereafter, meaning *bank* debts) should decrease *effective* aggregate corporate credit entailing a relative decrease in global output;
 - ii) *Segmentation* across banks (due to a specific quadratic cost faced by a bank in the interbank market) in presence of *heterogeneous* firms (who face idiosyncratic technological shocks) has a second, negative impact on global output through a distributional effect on corporate credit (private CO is variously detrimental), as misallocation of scarce resources may occur and thereby the efficiency of corporate investments and expenses may be impaired.

1. Overview

- ❑ The 5 main results (for France, over the 2006-2018 period) are:
 - i) A *marginal* increase in LGD by a bank reduces that bank's lending to private firms by 54% of this amount.
 - ii) CO affects corporate investment and employment: Firms more affected by CO invest significantly less and experience a lesser wage growth.
 - iii) CO reduces the *output* multiplier of debt-financed local government spending by 0.3. There are 2 channels to this result: an effect on aggregate investment and employment and an effect on allocative efficiency (due to wedges in input prices affecting firms variously).
 - iv) These results are ascribable to frictions preventing banks from increasing the total credit supply.
 - v) These results cast serious doubts on the relative efficiency of debt-financed LG spending in stimulating the overall economy.
- ❑ The main challenge is *identification* as we observe *actual* quantities, not supply and demand functions. The paper addresses competently the various endogeneity or identification issues by introducing firm×time fixed effects and instrumental and control variables, exploiting the Dexia collapse in 2008 as a natural experiment, and performing numerous robustness checks. Globally, results seem robust to changes in model specifications.

2. Comments and remarks

❑ Beware that G Spending (local and central) and G Debt (local and central) are to be distinguished, as there are other means of financing expenses (notably taxes and tariffs in France). This elicits the following 2 questions:

- i) LGD/GDP increases steadily since 1990. What about Central GD/GDP? Maybe LGD crowds out Central GD!
- ii) What about LG Spending/GDP and G Spending/GDP?

❑ Let me spell out 2 caveats:

- i) As CO of private credit and output is effective through an increase in interest rates (the supply curve not being horizontal), this could increase aggregate welfare if the risk-return tradeoff of LG spending is (marginally) better than that of the private sector. In other words, *financial* CO is distinct from both allocation inefficiency and real CO. This paper suggests that financial CO leads to (indirect) real CO, although direct real CO (through G spending) may be massive;
- ii) More realistically, if Central G spending is crowded out by LG spending, the risk-return tradeoff could be better as LGs presumably have more information regarding the quality of local investment projects. A study of this interplay between these 2 forms of spending would be relevant to the message of this paper. (see below my remark on the Quantitative Easing period starting in 2015).

2. Comments and remarks

- Another question is why banks would lend to LG rather than to private firms in the first place. One reason you find is the implicit guarantee given by the Central State, which betters the risk-return tradeoff for the bank (claims on LG are safer assets). You could also investigate the effect of (social and/or) political pressure, which locally may be important to business.
- In the same vein of political maneuvering, bundling LGs with public hospitals, state-owned public services and public housing is understandably convenient but may generate a slight, but interesting, issue as the former are elected, and the latter are not.
- As to the analysis of aggregate TFP, output and employment, and allocative efficiency, the paper starts by providing a financial, partial equilibrium model defined by the solution to banks' maximization problem along with the market clearing conditions for the corporate credit, the LG credit, the deposit and the interbank markets. It then uses reduced forms which aggregate quantities found in the micro analysis and are amenable to empirical testing.

2. Comments and remarks

- This is understandable but the reader should be aware that the results cannot be taken so literally to the extent that they are not derived in a genuine *general equilibrium* model. What is required is a true DSGE (Dynamic Stochastic General Equilibrium) model, but this would be extremely demanding. So, one can see Noémie's results as second bests.
- One serious limitation of this otherwise remarkable work is the absence of a *Central Bank* (particularly in the interbank market). This precludes any analysis of monetary policy and its impact on the money and credit supplies, the level of interest rates and the real sector (output and unemployment). This may be fine at the micro level where individual (atomistic) banks have no multiplicative power of money creation, but not at the macro level (where total money is a multiple of the high-powered (hot) money issued by the monetary authorities). This omission reinforces my "caveat" remark in the preceding paragraph.

3. Suggestions

- ❑ I am not sure that the claim (on p 2) that the paper “also test(s) a theory relevant for any government debt “(as opposed to *LGD*) is substantiated, as the ways the central G obtains financing (international and national financial markets, taxation) may be fundamentally different from *LGD*.
- ❑ Credit rationing, the main mechanism described in this paper, is at odds with the Quantitative Easing that characterized the ECB’s policy after January 2015. Indeed, the CO effect due to *LGD* is significant for the period 2006-2013 but not for the period 2014-2018 (5 years out of 13. Incidentally, I would have started the last period in 2015, not 2014. Do you have any reason?). Would it be possible in this framework without a Central Bank to sort out and quantify the specific role of QE in the last period?
- ❑ The empirical study ignores credit with initial maturity above 1 year, to mitigate the rather strong assumption that firm-level demand shocks affecting firms with multiple lending relationships are “symmetric” across lenders. I wonder whether re-introducing this short-term credit (whose relative importance vis-a-vis longer maturity credit is not mentioned in the paper) would make a sizeable difference in the results, as short-term credit is presumably well suited to take care of unexpected shocks.

3. Suggestions

- ❑ In Table 2, re the statistically significant CO effect on corporate credit, you use a convincing set of controls which include the length of the bank-firm relationship, a variable known to be important in the literature on banking. In the same vein, you could try to introduce additionally a dummy reflecting the fact that the firm has either one bank only or more than one. In the former case, the firm is more vulnerable to credit rationing.
- ❑ Footnotes 33 and 41 are clumsy or faulty and must be rewritten.

4. Conclusion

- ❑ It is impossible, in such a limited time frame, to do full justice to this very long, relevant, interesting, and rich paper.
- ❑ Congratulations and many thanks to Noémie for this impressive piece, at both the theoretical and empirical levels.