

### **COMMENTS ON SESSION 3: FISCAL SUSTAINABILITY**

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First of all, I would like to thank to Banca d'Italia and especially to Daniele for inviting me to this important conference. This is a very special moment for me, since I am going to do the discussion for the first time in my life.

The three discussants of the third session are Jean-Luc Schneider, Ludger Schuknecht and myself. I will discuss first two papers that were presented this morning. The first paper is called "Debt Sustainability in Emerging Market Countries: A 'Fan-chart' Approach" and the second one is the one projecting OECD health and long-term expenditures. Both papers are an important extension of the fiscal sustainability analysis; the first one by involving fiscal policy actions and combining them with economic variables and the second one by making in-depth analysis of the long-term and health care expenditures with clear division of the main drivers. They are both evaluating and adding various scenarios. The first paper makes a risk analysis of debt dynamics. It incorporates fiscal behavior to the pattern of joint economic shocks, resulting in a more complete, objective and realistic assessment of the risks to fiscal sustainability. The second paper on the other hand extends both health and long-term care expenditures. An extension, which is introduced in the analysis, is a division on demographic and non-demographic drivers of the health care expenditures. With this the authors offer a new, more transparent framework for the projections of long-term and health care expenditures. So, the results in both working papers are more credible and realistic comparing to the approaches used up to now.

First, I will discuss the paper on debt sustainability analysis. The IMF paper makes the analysis in three building blocks: first, they make a joint distribution of shocks of the main economic variables. This means that they do not only include a change of the interest rate but also combine the effect of a change of the interest rate on the GDP growth, for example, or on the exchange rate. In the second block they analyze the fiscal reaction function. Finally, they make a combination of the previous two blocks and apply it for the debt sustainability analysis. The main part is the second block, where they analyze the fiscal reaction function. They estimate it in a panel of emerging countries, but they allow for country specific factors by applying dummy variables. In their framework they also include institutional fundamentals and, as we have seen in the morning presentation, they provide a very sophisticated VAR model, with which they can simulate up to 10,000 different debt paths. Indeed, in their case of 5 emerging countries they have provided up to 1,000 different debt paths. In the first block they do not analyze each economic variable

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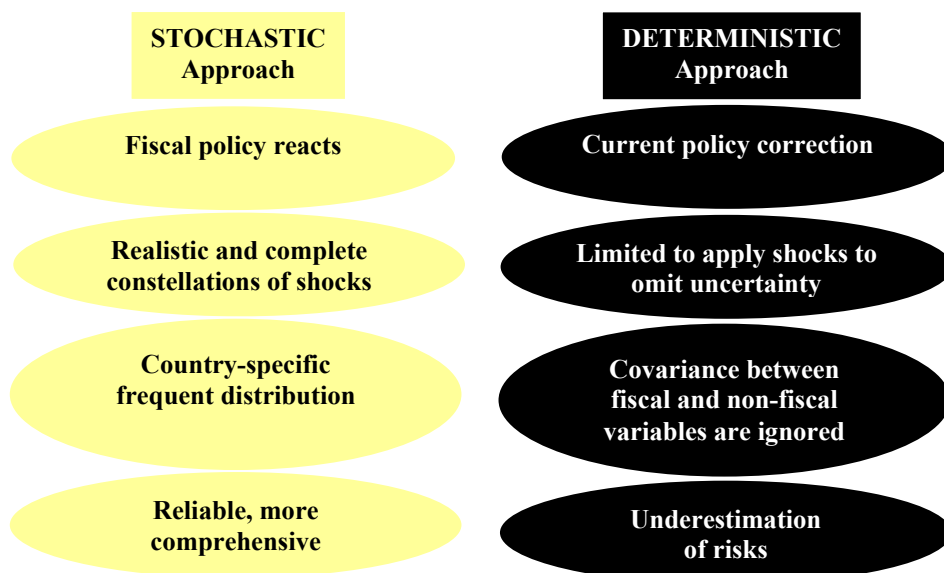
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separately, as in the analyses up to now, but they make co-variances of the shocks in their projections. Finally, they end up with devising an algorithm for generating the explicit analysis of debt dynamics where they allow for the fiscal policy to act as a source of risks.

As the estimation of the fiscal reaction function is a very important part of their analysis, I would like to draw some attention on technical shortcomings, which in some part were also recognized by the authors themselves. First, in the estimation of the fiscal reaction function, the occurrence of fiscal crises has a low probability. Hence, in the case of crisis, some other approach of the sustainability analysis would be more appropriate. The second uncertainty is that there is no feedback of the fiscal policy on the economic variables. There exists an impact of the joint economic variables on the fiscal policy ones but not vice versa. Third, there is a lack of the long-term time series data, so the authors use panel data. Finally, this estimation of the fiscal reaction function assumes that the past government behavior will continue. In such analysis, if I was doing the projections as an optimistic person, I would rather avoid some “mistakes” that past governments committed. For example, last year, in Slovenia, the government indexed pensions fully with wages and for the projections of fiscal sustainability I would rather exclude this reaction in my reaction function for projections of the future debt developments.

The main results that the IMF paper present with LIML and GMM model are:

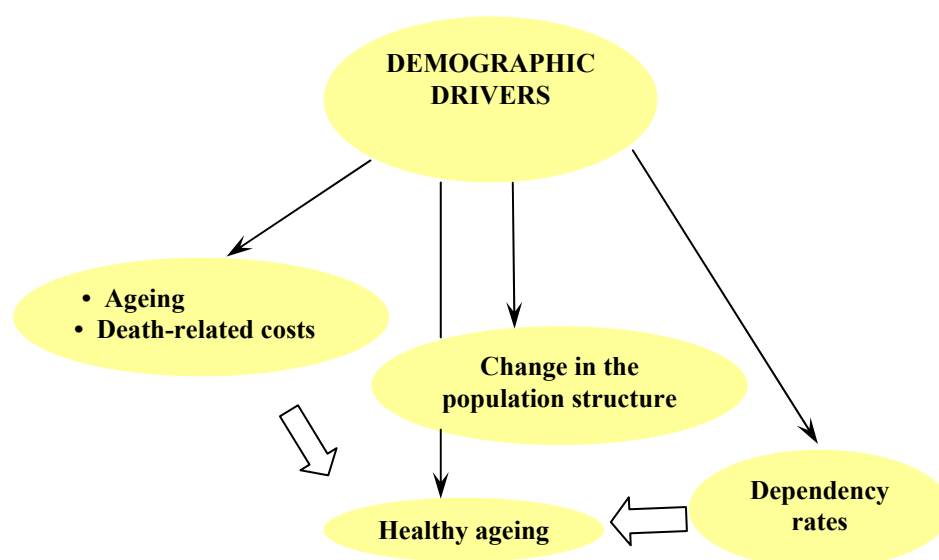
- fiscal response to debt is stronger when debt is lower than 50 per cent of GDP.
- response to booms and recessions is asymmetric.



- worsening of primary balance is larger during contractions than its improvements during booms.

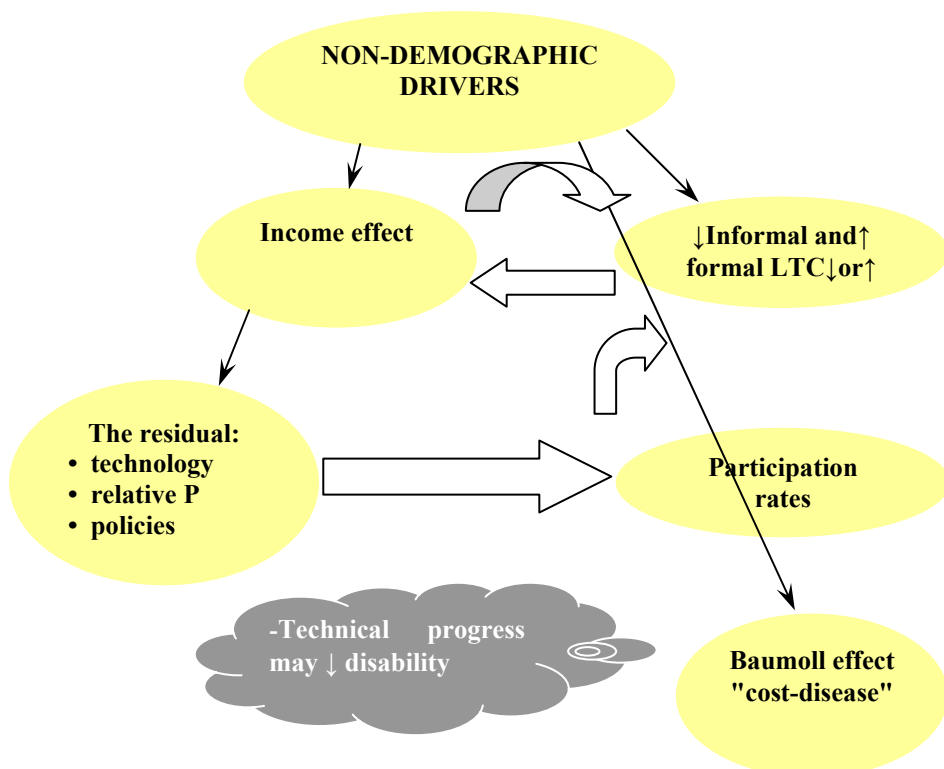
To finish with the first paper, I would like to stress what is the main value added of the paper. Traditionally, deterministic approach was used in the analysis of fiscal sustainability, now this paper introduces a new stochastic approach. First, with the deterministic approach, the analysis includes only current policies and then makes simulations using the current policy corrections. Second, the deterministic approach is limited to applying the shocks to overcome uncertainties. Third, co-variances between fiscal and non-fiscal variables are ignored. Overall, this has resulted in underestimation of risks. Now, with the stochastic approach, we have more realistic and complete constellation of shocks, which allow for country specific fiscal paths. The analysis of fiscal sustainability becomes more reliable and comprehensive. And finally, but most importantly, fiscal policy actually reacts to economic shocks and developments of the debt in the certain macroeconomic environment.

I turn now to the second paper, which is dealing with projections on the health and long-term care expenditures. As the authors already stressed, health expenditures are also very important for the projections of fiscal sustainability. In fact, last year when I made the projections of fiscal sustainability for Slovenia, I also ended up with double health care expenditures by 2050; however I only included the ageing effect. This working paper separates health and long-term care expenditures and then, what is very interesting; it further separates demographic and non-demographic determinants of the long-term and health care expenditures.



First, let's see the demographic drivers of the future health care costs. The main demographic drivers of the health care expenditures are related to ageing and to death related costs. This paper takes into account healthy ageing, which means that if people are going to live longer, they will also be healthier. The authors assume that the biggest health care costs come at the end of the life-time. With this assumption the authors smooth the effect of ageing. In addition, dependency ratio is the most important determinant of the long-term care costs. It rises with ageing but it is again mitigated with the assumption of healthy ageing.

Second, among the most important non-demographic drivers of the health care expenditures authors select the income effect. Basically, what we can expect and what the authors stress is that the development of technology will be accompanied by a big demand shock. Maybe we could compare this with the development of the computer technology, where the same thing happened. The authors provide two scenarios: cost-pressure and cost-containment scenario. What they get is that at the end of 2050, health care expenditures will increase in the first scenario to 13 per cent of GDP and in the second one to 10 per cent of GDP.



Developments in technology also have some positive impact on the long-term care cost, that it is much smaller than on the health care costs and it has rather an increasing effect on the long-term care costs. With the overall development of the economy and economic growth, there will be an increase in employment and participation rates. What the authors expect is that this would decrease informal long-term care and thus foster a need to increase formal long-term care. Therefore, technological development would be a determinant of the increasing long-term care costs. The last one but not least one, actually a very important effect is the so-called “Baumoll effect” or cost disease effect. This effect arises as consequence of the equalization of the wages among sectors, and what the authors expect is that wages in the health sector are going to increase faster than the productivity. From this effect we can expect a big increase in the long-term care expenditures.

In conclusion, what have we learned from this second paper? We discover a new, transparent framework, dealing separately with health and long-term care and with demographic and non-demographic factors. This paper I read after reading the paper with the fancy “fan-charts”, so immediately after finishing, I got the idea of having “fan-charts” also for the health expenditure projections. In addition, for the further, more sophisticated analysis, it would be very interesting to actually calculate variances and co-variances between the factors of the health and long-term care and do also some risk analysis as it was done in the first case. Maybe in the future the two authors could make a common working paper, incorporating “fan-charts” into the health care projections.

I would really like to thank both authors for providing some new methods in the analyses of the fiscal sustainability. Actually when I read these two papers, I felt it is a critique of the approach that I used last year, when I was doing the analyses of debt sustainability for Slovenia, where I end up with debt level of 500 per cent of GDP in 2050, which is of course not very likely to happen. With the framework of “fan-charts” I would most probably end up with more realistic results. So, thank you for your attention, hvala lepa za pozornost!

