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Natalie A. Jaresko

Executive Director of the Financial Oversight and Management Board for Puerto Rico

BY ELECTRONIC MAIL

Dear Ms. Jaresko,

Thank you for your kind invitation to participate at the experts meeting that Puerto Rico Oversight, Management and Economic Stability Act will hold on December 11 in Washington, DC. to discuss and receive commentary on the new baseline of the Revised Fiscal Plans in light of the devastation caused by Hurricanes Irma and Maria. Although I am delighted and honored to receive your invitation, I will be unable to attend the meeting due to prior commitments.

However, it is my pleasure to use this opportunity to share a number of insights regarding the current economic and debt situation of Puerto Rico that are based on a study on the territory's debt relief needs to restore debt sustainability, that I have conducted during the last year joint with my colleagues Pablo Gluzmann (Professor of Economics at University of La Plata and Researcher at CEDLAS and CONICET) and Joseph Stiglitz (University Professor at Columbia University and Chief Economist of the Roosevelt Institute), that will be published by *Espacios Abiertos* and the *Center for a New Economy* of Puerto Rico in January 2018. I believe the results of our study can provide guidance for understanding a set of complex issues that are of crucial relevance for the task of the Financial Oversight and Management Board for Puerto Rico in which you serve as the Executive Director.

Our study makes two main contributions. First, we examine the macroeconomic implications of Puerto Rico's Fiscal Plan that has been approved for fiscal years 2017-18 to 2026-27 (henceforth "the Fiscal Plan"), as it is a crucial element for a computation of Puerto Rico's debt restructuring needs. Second, we perform a Debt Sustainability Analysis (DSA) that incorporates the expected macroeconomic dynamics implied by the Fiscal Plan in order to compute Puerto Rico's restructuring needs.

Our analysis of the Fiscal Plan detects a number of core flaws in its design. First, we argue that the Fiscal Plan is based on assumptions that are not sensible, thus it fails to appropriately recognize the magnitude of the destabilizing macroeconomic dynamics that it will create. Specifically:

(i) The values of fiscal multipliers used for the GNP projections are unjustifiably optimistic: they assume that the fiscal contractions scheduled in the Fiscal Plan will be associated with output contractions that fall on the lower bound of the range of estimates provided by the empirical literature.

(ii) The GNP projections ignore the feedback effects that the fall in economic activity would have on fiscal revenues, leading to an underestimation of the contractionary impact of the proposed fiscal policies.

(iii) The plan's assumption that structural reforms that affect mostly the formation of aggregate supply will be the driver of economic recovery by as early as 2022 is inconsistent with sound macroeconomic theory, given that Puerto Rico's economy is projected to continue being in a demand-constrained regime, i.e. in a situation where there will be underutilization of the factors of production of the economy.

(iv) The plan is silent about how a deeper depression would likely intensify migratory outflows.

Second, the plan falls short on presenting a debt restructuring and sustainability analysis. Instead, it simply specifies what is the amount that must be repaid to creditors during the next decade, without being explicit about the longer-term obligations that the island will face and their sustainability. This has negative consequences in the short term, because the uncertainty about the island's long-term obligations will reduce the attractiveness of investing in the island in the present, thus harming the recovery prospects.

Our study also conducts a sensitivity analysis of the expected macroeconomic dynamics implied by Puerto Rico's Fiscal Plan. This allows us to construct more realistic scenarios of Puerto Rico's debt restructuring needs. We perform alternative projections using a range of fiscal multipliers that is aligned with the findings of the empirical macroeconomics literature. The GNP projections of the Fiscal Plan lie on the upper-bound of our range of projections, as depicted in figures 1 to 4.

**Figure 1**

(assuming the Fiscal Plan's assumption on structural reforms hold)

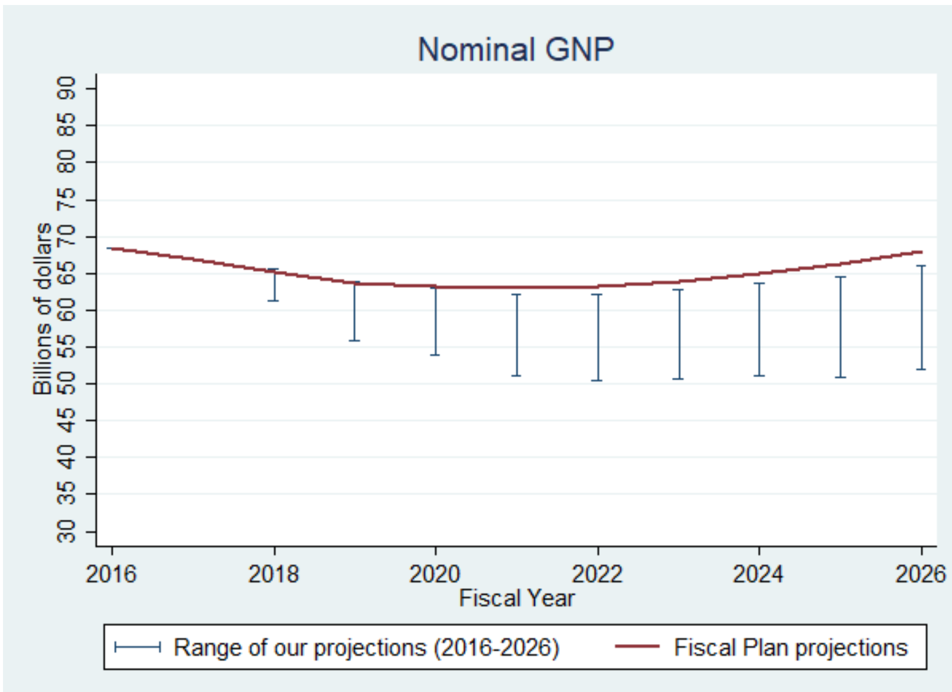


**Figure 2**

(assuming the Fiscal Plan's assumption on structural reforms hold)

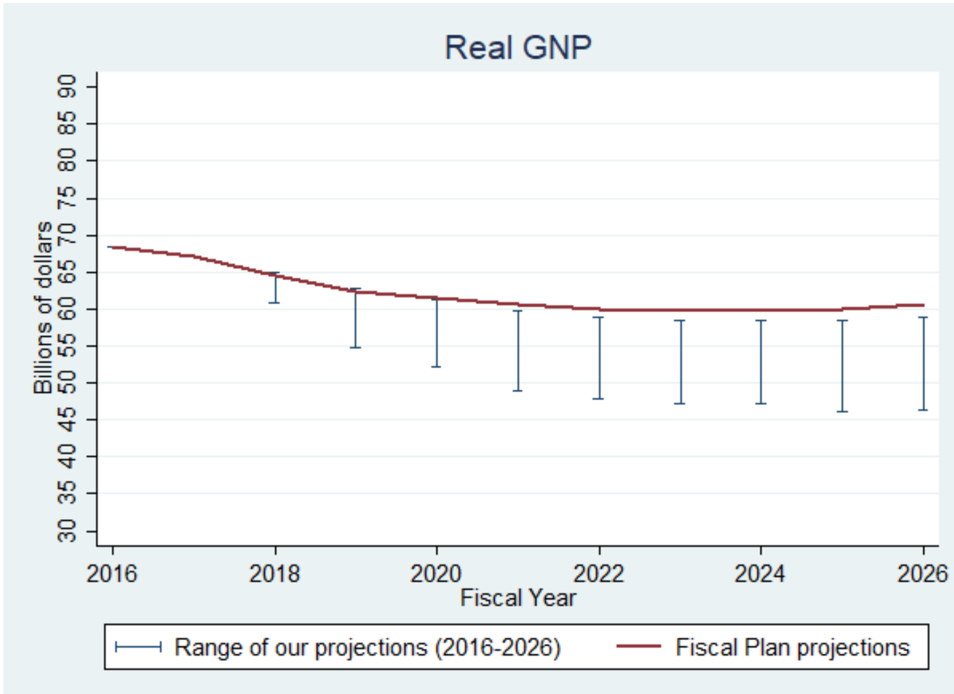



**Figure 3**

(assuming structural reforms have no effect on GNP)

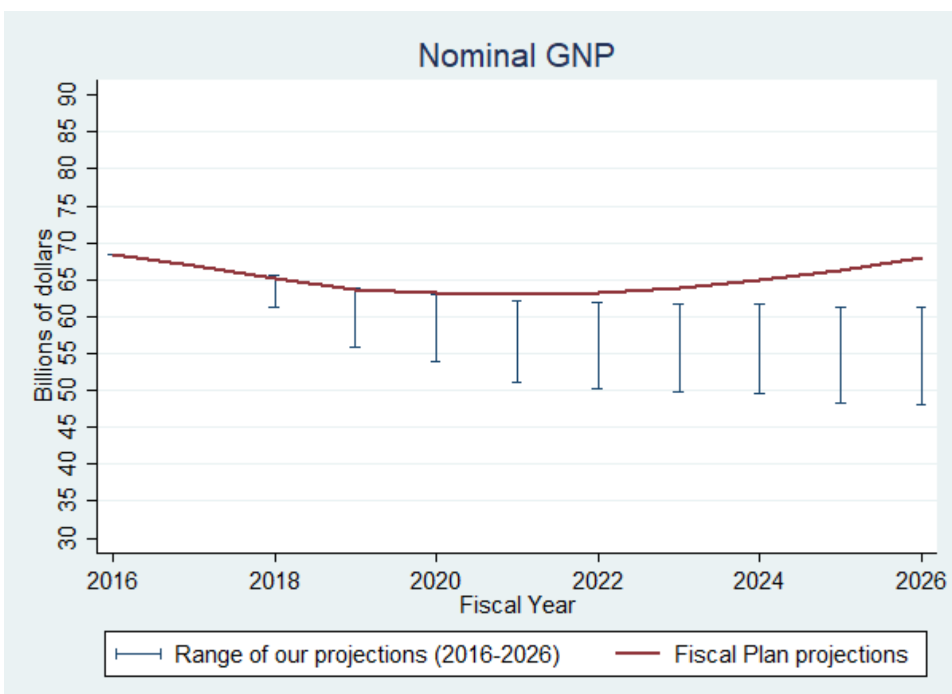
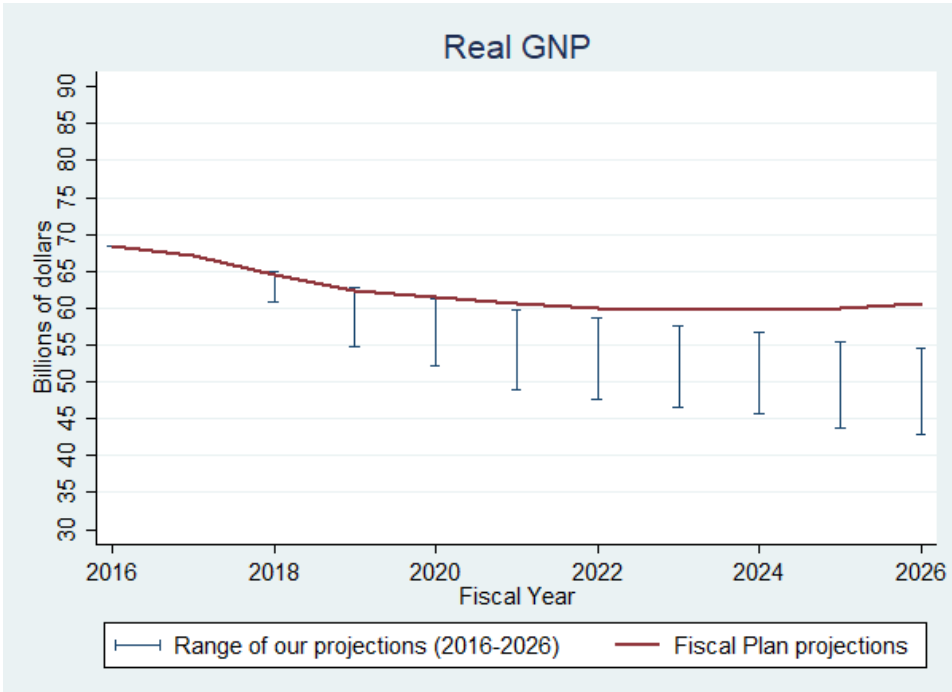


**Figure 4**

(assuming structural reforms have no effect on GNP)




Our projections strongly suggest that the Fiscal Plan's projections are overoptimistic. They lie on the most optimistic bound within the range of assumptions on the values of multipliers that are aligned with the empirical evidence. The magnitude of the differences between our range of projections and the projections of the Fiscal Plan is noticeably larger if we dismiss the presumably positive effects that the structural reforms will have on GNP. This has implications for the computation of Puerto Rico's debt restructuring needs.

Subsequently, we report the results of a Debt Sustainability Analysis (DSA) that incorporates our sensitivity analysis of the expected macroeconomic dynamics implied by Fiscal Plan. We believe it is important to share three main conclusions of this exercise:

(I) Assuming the Fiscal Plan will be respected, and absent a debt restructuring that reduces the current public debt stock, the territory would have to *permanently* sustain primary fiscal surpluses between approximately 3.5 and 7.4 percent of GNP, from 2027 onwards. Such a target is economically and socially infeasible. As a result, Puerto Rico's current debt position is unsustainable.

(II.A) When we maintain the assumptions of the Fiscal Plan, we obtain that the necessary reduction of Puerto Rico's debt (including face value reduction and forgiven interest) to restore debt sustainability should lie roughly between 65 and 80 percent of the current debt stock of $51.9 billions included in the Fiscal Plan. For instance, if we respect all the assumptions of the Fiscal Plan and assume that Puerto Rico will be able to sustain the primary fiscal surplus to GNP ratio that the Fiscal Plan projects for fiscal year 2026-2027 from 2027 onwards, forever, the necessary debt reduction would be 81.7 percent of the $51.9 billions included in the Fiscal Plan.

(II.B) However, we note that the relevant universe of the public sector's debt obligations may go beyond the debts included in the Fiscal Plan, as the sustainability of the public sector's debt may also depend on the sustainability of a large part of debt issued by other public entities that is not included in the Fiscal Plan. When we compute the necessary relief assuming that the relevant stock of debt corresponds to the total debt of the public sector[1], which increases the relevant stock to $72.2 billions, we obtain that the necessary reduction lies between 72 and 84 percent of this alternative relevant stock of public debt. For instance, if we respect all the assumptions of the Fiscal Plan and assume that Puerto Rico will be able to sustain the primary fiscal surplus to GNP ratio that the Fiscal Plan projects for fiscal year 2026-2027 from 2027 onwards, forever, the necessary debt reduction would be 83.8 percent of the alternative measure of relevant debt stock of $72.2 billions.

(III.A) Under a range of more realistic assumptions for fiscal multipliers and dismissing the unjustifiably optimistic positive assumed effects of the structural reforms on GNP growth for the period 2017-2026, we conclude that if the fiscal plan is implemented, the territory would need a debt reduction that lies between roughly 70 and 90 percent to restore debt sustainability – and again, the necessary reduction is larger if we take $72.2 billions instead of the just $51.9 billions included in the Fiscal Plan as the relevant universe of debt obligations.

(III.B) These computations remain conservative, as we are not addressing how migration flows will be affected by the deeper depression that the Fiscal Plan is projected to generate, and we are

[1] Net of Children's Trust's and HFA's debts.

also maintaining the Fiscal Plan's assumption that the territory will achieve a nominal GNP growth rate of 2.6 percent in 2026 without implementing any expansionary aggregate demand policies, and will settle on a steady state of real GNP growth of 1 percent after that year. Thus, the 70-90 percent range must be considered as a *lower-bound*, i.e. as the *most conservative* estimate of the territory's relief needs.

Our analysis does not study how the debt write-off will be distributed among bondholders but simply provides a perspective on the aggregate relief needs. The seniority structure will imply that not all bondholders will get the same discount, but the distribution of creditor losses will be determined by legal considerations that go beyond the objective of our analysis. What our pre-hurricane Maria computations inform is that no matter how the creditor losses are distributed, depending on the fiscal policies that are implemented and on the assumptions that are used for the computations, out of the current stock of $51.9 billions of public debt, approximately between $36.3 to $46.7 billions will have to be forgiven (including face value reduction plus written-off interest) in order to restore debt sustainability. And if we consider that the relevant value of debt obligations is $72.2 billions, the necessary debt reduction increases to $50.5 to $65 billions.

The restructuring proposal must also take into account that decisions will be made under uncertainty. There are different layers of uncertainty, both in terms of the parameters that are used for the computations and in terms of the exogenous shocks to which Puerto Rico will be exposed over the coming decades. To deal with the underlying uncertainty, our view is that the restructuring process could be improved by the inclusion of GNP linked bonds that align debt payments with Puerto Rico's capacity to pay. By definition, these bonds improve the sustainability of the restructured debt, and they align the incentives of the debtor and the creditors such that the creditors would also benefit from a stronger recovery.

Hurricane Maria has obviously had a significant impact on the necessary debt relief for restoring Puerto Rico's debt sustainability. I still do not have precise estimates of the economic costs imposed by Maria, but I expect to update the computations that I have shared in this letter when more precise information on those costs becomes available. However, let me share that my preliminary computations indicate that after hurricane Maria the entire stock of public debt will have to be written-off in order to take the island back to a sustainable position that seeds the basis of economic recovery. Indeed, the only way in which Puerto Rico will be able to pay something to its creditors – even a small amount in the distant future – is through economic recovery. More specifically, my preliminary analysis suggests that there should not be non-contingent debt payments but that any future debt payments should be linked to Puerto Rico's future GNP. But the design of contingent bonds should ensure that the benefits of recovery flow substantially to the people of Puerto Rico and are not syphoned off by legacy creditors.

The future macroeconomic dynamics of the Puerto Rican economy will hinge upon the fiscal and debt restructuring plan that is adopted. While it is clear that debt restructuring will not be a *sufficient* but just a *necessary* condition for economic recovery, it is also clear that if the territory's public debt is not appropriately restructured, no new growth strategy will be feasible.

My and my co-authors' research efforts have led me to conclude that the Fiscal Plan approved last March does not promote the economic recovery of Puerto Rico nor the sustainability of its debt position. Instead, the implementation of that Fiscal Plan would have almost certainly led to an additional decade of depressed economic activity and would have worsened the island's debt sustainability, perpetuating a crisis that all parties would like to end. Its projections would have also led to flawed estimates of the restructuring needs of the island.

I am delighted to observe your current efforts for revising that Fiscal Plan. Finally, I shall inform you that in order to favor a transparent debate, *Espacios Abiertos* will make this letter available to the public. Please do not hesitate to contact me if I can be of any help to improve the understanding on what needs to be done to resolve the current social, economic, and debt crisis of Puerto Rico. I very much hope that this response provides useful methodological guidance and information for your work, and I very much wish that your efforts result in the design and implementation of policy proposals that seed the basis for a recovery that lifts Puerto Rico's economy out of recession, that attract families back to the island and that restore hope to the lives of the 3.4 million citizens who call Puerto Rico home.

Sincerely,

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