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Before the:

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"Puerto Rico's Debt Crisis and Its Impact on the Bond Market"

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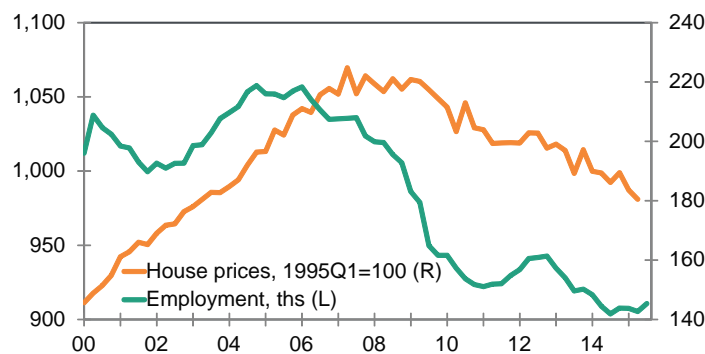
Mr. Chairman and members of the committee, thank you for the opportunity to provide this testimony regarding Puerto Rico's daunting economic and fiscal crisis. More specifically, I will document the extent of the crisis and identify its causes, consider what policymakers should do to address the crisis, and assess the implications of those policies on Puerto Rico's economy and the municipal bond market.

Never-ending recession

The Puerto Rican economy has been engulfed in a severe recession for the past decade. By most measures, the island economy peaked in the mid-2000s, slid sharply during the financial crisis of 2008-2009, and has continued to slump ever since.

Employment, which hit an all-time high of well more than 1 million in 2005, has steadily declined to near 900,000 (see Chart 1). Jobs have been lost in a range of industries, including in construction, manufacturing, financial services, and most notably in state and local government, where employment is down a stunning more than 25%.

Chart 1: Puerto Rico's Severe Recession



Sources: BLS, FHFA, Moody's Analytics

Unemployment remains extraordinarily high at more than 12%, but even this masks the economic suffering, as many of those losing their jobs are leaving the workforce and the island. Puerto Rico's labor force has contracted by 300,000 workers since peaking in the mid-2000s, a decline of 20%. The island's labor force is as small as it has been in more than a quarter century. Labor force participation is the lowest in the nation.

The depopulation of Puerto Rico has intensified. On net, each year more than 50,000 more people give up their Puerto Rican residence than take up residency. Those that are leaving are more highly skilled and educated. Only 24% of Puerto Ricans have earned at least a college degree, compared with more than 30% nationally.

Declining population is hitting the housing market hard. Approximately 6,000 new homes are being constructed each year, down from 16,000 before the recession. House prices also continue to slide, declining by almost 20% since the peak during the housing boom. Foreclosures remain among the highest in the country, with 6.5% of mortgage loans somewhere in the foreclosure process. This compares with only 2% nationally.

Puerto Rico's economy is far and away the weakest of any state in the country. By many measures, including the loss of output, GDP and wealth, it is already suffering a depression. Even more disconcerting, there is no prospect of the economic slide ending soon.

The island's important tourism industry is barely holding its own, as competition is intense and the strong U.S. dollar is not helping. The cost of doing business on the island is high, and since a lucrative tax break provided to American businesses operating on the island expired a decade ago, business investment has flagged. In the mid-2000s, businesses invested some \$9 billion a year; in 2014, investment had fallen to \$7 billion. Not surprisingly, public investment has declined even more sharply.

Fiscal crisis

The crushing economic downturn combined with poor fiscal management has resulted in a fiscal crisis. The territory's government, other public corporations it backstops, and municipalities collectively owe more than \$70 billion in debt (see Table 1).ⁱ This is equal to approximately 100% of the territory's gross national product—the island's financial resources to pay on that debt.ⁱⁱ

	Commonwealth	Municipalities	Public corporations	Total*
2009	9,939	2,997	40,044	52,980
2010	10,303	3,231	43,289	56,823
2011	10,363	3,537	45,284	59,184
2012	11,844	3,872	49,045	64,760
2013	12,329	3,882	48,746	64,957
2014	14,336	4,193	48,744	67,273
2015	14,077	4,126	47,980	66,183
2016**	13,771	3,907	47,305	64,983

*Ex \$2.9 bil in Senior Pension Funding Bonds issued by the Employees Retirement System, \$1.2 bil in Chil

**First 3 mo only of fiscal 2016

Sources: Government Development Bank, Moody's Analytics

The principal and interest payments on these debts require the government to devote a high and rising share of its tax and other revenues to meet them. In fiscal 2015, the debt service of the territory and agencies amounted to almost 40% of the revenues available to the government for these payments. For context, the average debt payment as a share of revenues across U.S. states is closer to 5%.

Puerto Rico struggled mightily to make its debt payments last year. It was able to raise some more money from investors in early 2014, at a high interest rate, and it stopped paying on many of its other bills. This will not work any longer. Creditors are no longer willing to extend any additional cash to the government, at any interest rate. Puerto Rico is locked out of capital markets.

The budget arithmetic is overwhelming. In the current fiscal year, which started in July, the government must make \$4.1 billion in debt payments to remain current on that debt. This amounts to 36% of expected available revenue. The debt payments over the next five years total \$18.1 billion, equal to a crushing nearly one-third of projected revenues.

Adding to the territory's fiscal woes are its troubled pension funds. Contributions to government pension funds have already been severely curtailed, and the funds are selling assets to meet their obligations to beneficiaries. They will run out of funds by the end of the decade unless the courts require the government to resume its pension contributions.

The government now has the grim choice of either slashing government services and jobs or making its debt payments on time. Odds are high that the government will not make its debt payments; the next significant payment is due by the Government Development Bank in May. The commonwealth has already warned that there may be a moratorium on the May payment if there is no consensual agreement with its creditors.ⁱⁱⁱ

The rating agencies concur, as Moody’s Investors Service has put a Caa rating—consistent with a very high probability of default—on most of the island’s debt (see Table 2). Bond investors also recognize this reality, with Puerto Rican debt trading on average at less than 50 cents on the dollar.

Table 2: Moody's Investors Service Ratings of Puerto Rican Bonds

Puerto Rican government bonds	Ratings	Outlook
General obligation and guaranteed	Caa3	Negative
Puerto Rico Industrial Development Co.	Caa3	Negative
Puerto Rico Aqueduct and Sewer Authority	Caa3	Negative
Sales Tax Financing Corp. (COFINA) Senior	Caa3	Negative
Puerto Rico Electric Power Authority	Caa3	Negative
Sales Tax Financing Corp. (COFINA) Junior	Ca	Negative
Government Development Bank for Puerto Rico	Ca	Negative
Municipal Finance Agency	Ca	Negative
University of Puerto Rico (system and facilities)	Ca	Negative
Highways and Transportation Authority	Ca	Negative
Infrastructure Financing Authority	Ca	No Outlook
Pension funding bonds	Ca	Negative
Convention Center District Authority	Ca	No Outlook
Appropriation debt of the commonwealth	C	Negative

Sources: MIS, Moody's Analytics

Adding to the fiscal mess are the numerous parties involved, including 18 different debt issuers and 20 creditor committees, and the government’s opaque accounting and record-keeping. Simply getting the information needed to assess how bad Puerto Rico’s fiscal situation is has been a significant challenge. However, even with the poor information, it is clear that the territory’s finances are in tatters.

Puerto Rico thus threatens to descend into an economic abyss. Odds are high and rising that the territory will default on much of the debt it owes, and suffer an economic depression, if U.S. lawmakers do not act soon to address this problem.

Debt restructuring

Recently proposed legislation in the U.S. Congress to address Puerto Rico’s fiscal crisis is encouraging. Subcommittee Chairman Duffy’s legislation on this issue, [H.R. 4199](#), is important in that it provides Chapter 9 bankruptcy protection to the island’s municipalities and public corporations. This would allow for an orderly restructuring of approximately 30% of the island’s outstanding debt. Some of the island’s other debt may also be impacted, although this would likely have to be adjudicated and would take a significant amount of time.

For this change in bankruptcy law to occur, Puerto Rico's government must choose to accept the establishment of a Financial Stability Council. This entity would have the authority to oversee the island's financial planning and annual budget. This is a reasonable step to ensure that Puerto Rico is managing its finances appropriately to meet the needs of the island's population and creditors. Other U.S. jurisdictions that have struggled with serious fiscal problems have had similar oversight boards, to good effect.

While H.R. 4199 is a positive step, lawmakers should consider shifting from Chapter 9 bankruptcy for the island's municipalities and public corporations to adopting a broader restructuring framework for all of the island's debts. The Financial Stability Council would be empowered to implement a temporary stay (say 12 to 18 months) of all debt payments, to use this time to fashion a sustainable restructuring.

Without this broader restructuring framework, it is likely that Chapter 9 will not be sufficient to put Puerto Rico on a sustainable fiscal path. With the broader framework in place, the council would have the tools it needs to restructure as much or as little of the island's debt as required. Moreover, this would create significant pressure on creditors, perhaps even leading to a voluntary agreement over the island's debts.

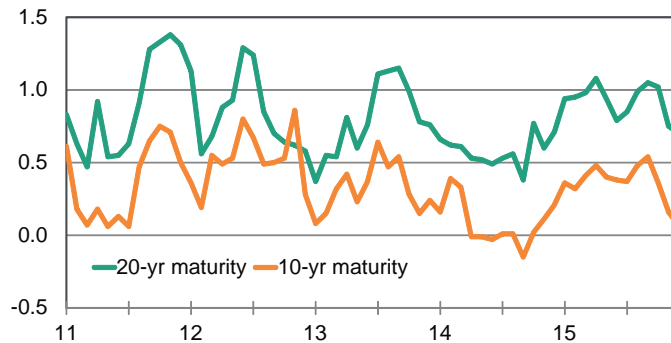
There are potential costs involved in allowing Puerto Rico to restructure its debts, most notable being it raises the possibility that other fiscally pressed states will want similar relief.^{iv} This would significantly disrupt the municipal bond market, increasing borrowing costs for all public entities.

However, it seems a stretch to argue that allowing Puerto Rico to restructure its debt will lead other states to demand the same authority. The 10th amendment of the U.S. Constitution, which explicitly sets forth our country's constitutional principle of federalism, precludes the ability of states to use federal bankruptcy court. Moreover, Puerto Rico is a territory, and not a state. The island should thus be treated like Detroit, which represents the nation's largest municipal bankruptcy, and not like the state of Michigan.

Worries that borrowing costs for all municipal borrowers will increase also appear overdone. Puerto Rico has been in severe financial distress for more than two years, but there has been no discernible impact on the municipal bond market. Yield spreads between munis and risk-free Treasuries have fluctuated in a narrow range, and flows into muni bond funds have not been affected (see Chart 2). It is also instructive that municipal bond insurers do not charge an explicit premium for their insurance for municipalities that have access to Chapter 9. If there is an impact, it will be modest, as academic research indicates that municipalities that have unfettered access to bankruptcy court pay no more than 7 basis points more in yield.^v

Chart 2: Puerto Rico Doesn't Impact Muni Spreads

Difference between muni yields and Treasury yields, %



Sources: MIS, Federal Reserve

Puerto Rican bondholders also argue that the rules on which they based their investment decisions are being changed. Future investors, fearful that the rules could change once more, will require a higher interest rate to compensate them for this risk. But although bankruptcy law should not be changed frequently, it should not be immutable, and it has been changed in times past. Even Puerto Rico had access to Chapter 9 bankruptcy prior to the 1980s, when the law was changed.

There is also the moral hazard concern: If Puerto Rico is given a break on its debts, it might then turn around and leverage back up again, thinking that another bailout will be forthcoming. These concerns should be allayed by the council, which will ensure that the island puts its finances in order and adopts sound fiscal management practices. The council will determine when it is appropriate to fully hand back fiscal management to the territory.

Economic policy

Of course, Puerto Rico's crisis will not be resolved until the island's economy is able to grow consistently. Lawmakers should help in this regard as well.

Stronger economic growth is possible only if additional policy steps are adopted to lower the territory's high business costs. Allowing Puerto Rico to freeze its minimum wage, which is high compared with the productivity of island workers, would be beneficial in the long run. Flexibility with the implementation of the Jones Act would help to reduce shipping costs.^{vi} And pension reform, the consolidation of municipalities, and reforms to public sector corporations, including privatization, would also be helpful.^{vii}

Lawmakers should also ensure that Puerto Rico is reimbursed for Medicaid at the same rate as governments on the mainland by ensuring that current federal funding under the Affordable Care Act is not scaled back beginning in 2018 as is currently legislated. Federal funding for Medicaid should be sufficient to allow Puerto Rico to provide benefits to its residents that are the

same as those received by other Americans on the mainland. This is critically important to the island since nearly one-half of its residents rely on Medicaid for their healthcare benefits.

The implementation of an earned income tax credit would also provide a meaningful boost to the Puerto Rican economy. The EITC is an effective way to provide income support to low-income workers. The credit is available only to those that work, which encourages labor force participation, something that is much needed to restart Puerto Rican economic growth. By requiring recipients to file a tax return, the EITC has the added benefit of drawing workers out of the island's large underground economy. Although the benefits of an EITC would not be felt until the next decade, Puerto Rico's economy will surely still need the help.

Of course, the expansion of the Medicaid program and introduction of the EITC are not free, and would need to be covered by U.S. taxpayers. I would expect the cost of these proposals when fully operational to be close to \$2 billion per annum in today's dollars.

Two scenarios^{viii}

Puerto Rico's crisis can unfold along many paths, but let us consider two scenarios that roughly bookend the possibilities. In the first scenario, U.S. lawmakers do nothing to address the crisis, and Puerto Rico defaults on its debt; the next payment is due in May. Since the territory, like the states, is not permitted to file for bankruptcy, bondholders haul the territory, the various public corporations it backstops, and the island's financially troubled municipalities to court. This results in a prolonged period of messy legal wrangling.

This pessimistic scenario is devastating for Puerto Rico's economy and residents. Based on simulations of the Moody's Analytics econometric model of the Puerto Rican economy, the downturn that began a decade ago rages on into the next decade.^{ix} By 2020, the end of the scenario, the island's employment declines by an additional 13% and the unemployment rate increases to more than 14% (see Table 3). Unemployment would be even higher if not for the mass out-migration of disenfranchised workers to the mainland. The island's population is expected to fall to 3.3 million by 2020, compared with its peak of well more than 3.8 million in 2004.

Table 3: Puerto Rico Economic Outlook Under the Default Scenario

	2015	2016	2017	2018	2019	2020	Avg annual growth 2015-2020
Nonfarm employment, ths	910	906	885	851	817	788	-2.8
% change	0.1	-0.4	-2.3	-3.9	-4.0	-3.6	
Gross state product, 2009\$ bil	95.8	94.4	91.8	88.1	84.6	81.8	-3.1
% change	0.0	-1.5	-2.8	-4.1	-4.0	-3.3	
Unemployment rate, %	12.0	12.1	12.5	13.0	13.6	14.1	
Civilian labor force, ths	1,131	1,120	1,110	1,098	1,086	1,075	-1.0
% change	-1.2	-1.0	-0.9	-1.1	-1.1	-1.0	
Population, ths	3,511	3,483	3,448	3,410	3,372	3,335	-1.0
% change	-0.9	-0.8	-1.0	-1.1	-1.1	-1.1	
Net migration, ths	-38.4	-41.7	-47.2	-49.4	-48.6	-46.9	
Disposable personal income, 2009\$ mil	56,688	55,239	53,001	50,939	49,255	47,797	-3.4
% change	1.0	-2.6	-4.1	-3.9	-3.3	-3.0	
Wages and salaries, \$ mil	26,694	27,865	28,552	28,613	28,370	28,110	1.0
% change	3.9	4.4	2.5	0.2	-0.9	-0.9	

Sources: BLS, BEA, Census Bureau, FHFA, Moody's Analytics

Under an alternative, more optimistic scenario, U.S. lawmakers act quickly to address Puerto Rico's problems. Most important, Puerto Rico is given access to an orderly restructuring regime. The quid pro quo is the establishment of an oversight board, such as the Financial Stability Council, to improve government accounting, enhance transparency, and impose fiscal discipline. The council is independent and remains in place until it determines that the territory is back to fiscal health and has fully implemented any required fiscal controls and governance structures. It is assumed in this scenario that the council sets debt payments such that they account for a high but sustainable percent of government revenues.^x This scenario also assumes that the economic policy steps previously outlined are adopted.

The Puerto Rican economy performs much better under this scenario. Though the island suffers more job losses over the coming year, they are modest, and employment growth resumes in earnest by the end of the decade (see Table 4). Unemployment declines, and by 2020 it is back to where it was prior to the start of the recession. Although net out-migration continues, it occurs at a much more modest pace.

Table 4: Puerto Rico Economic Outlook Under the Restructuring Scenario

	2015	2016	2017	2018	2019	2020	Avg annual growth 2015-2020
Nonfarm employment, ths	909	906	907	913	922	931	0.5
<i>% change</i>	0.0	-0.3	0.2	0.6	1.0	1.0	
Gross state product, 2009\$ bil	95.7	94.3	93.7	93.8	94.3	95.0	-0.1
<i>% change</i>	-0.1	-1.5	-0.6	0.1	0.6	0.8	
Unemployment rate, %	12.0	11.8	11.7	11.5	11.3	11.1	
Civilian labor force, ths	1,131	1,120	1,115	1,111	1,109	1,108	-0.4
<i>% change</i>	-1.3	-1.0	-0.5	-0.3	-0.2	-0.1	
Population, ths	3,511	3,483	3,452	3,421	3,394	3,370	-0.8
<i>% change</i>	-0.9	-0.8	-0.9	-0.9	-0.8	-0.7	
Net migration, ths	-38.4	-40.1	-42.4	-41.0	-36.9	-33.6	
Disposable personal income, 2009\$ mil	56,703	55,577	54,427	54,170	54,288	54,741	-0.7
<i>% change</i>	1.0	-2.0	-2.1	-0.5	0.2	0.8	
Wages and salaries, \$ mil	26,666	27,835	29,185	30,547	31,776	32,890	4.3
<i>% change</i>	3.8	4.4	4.9	4.7	4.0	3.5	

Sources: BLS, BEA, Census Bureau, FHFA, Moody's Analytics

Under any scenario, Puerto Rico has a difficult road ahead. For sure, this is in part the island's own making. But the problems are also due to the long shadow of the Great Recession. What U.S. lawmakers decide to do or not do to help Puerto Rico out of its fiscal bind in coming weeks will determine the island's economic path for years to come. Doing nothing will ensure that the decade-long recession will continue to deepen through the remainder of this decade. Puerto Rico will suffer an economic depression. Allowing the territory to restructure its debts and expand Medicaid benefits will break the economic downturn and provide a basis for a more stable fiscal situation. U.S. lawmakers should act.

ⁱ This is as of September 2015, according to the [Commonwealth's Financial Information and Operating Data Report](#), November 6, 2015.

ⁱⁱ Gross national product differs from gross domestic product by the difference between net income that flows into an economy and net income that flows out. Puerto Rico GNP is about 25% smaller than GDP, as the island experiences significant net outflows of income, primarily because of income earned at multinational pharmaceutical and tourism-related companies operating on the island.

ⁱⁱⁱ The commonwealth presented a [proposal](#) for debt restructuring to its creditors on February 1, 2016.

^{iv} This view is expressed in "[The Budget and Economic Outlook for Puerto Rico](#)," testimony before the Senate Finance Committee by Douglas Holtz-Eakins, September 29, 2015.

^v See "[Bankruptcy Risk Premium in the Municipal Securities Market](#)," Tima T. Moldogaziev, Sharon N. Kioko, and W. Bartley Hildreth, paper for the 2014 Municipal Finance Conference.

^{vi} The Merchant Marine Act of 1920, also known as the Jones Act, regulates maritime commerce in U.S. waters and between U.S. ports. The law requires that all transport between U.S. ports is done on U.S.-built ships. This significantly raises costs of shipping between the U.S. mainland and Puerto Rico.

^{vii} Various potential structural reforms that if implemented would increase the island's long-term growth are presented in "[Puerto Rico Fiscal and Economic Growth Plan](#)," September 9, 2015. The plan was prepared by a working group appointed by Puerto Rico's governor.

^{viii} A detailed description of these scenarios is available in [Puerto Rico Looks Into the Abyss](#), Mark Zandi, Dan White and Bernard Yaros, Moody's Analytics white paper, November 2015.

^{ix} A description of the Moody's Analytics regional economic models is available upon request.

^x This scenario is based on a set of policy steps recently proposed by the Obama administration. The administration's proposals are presented in [testimony by Antonio Weiss](#), Counselor to the U.S. Treasury Secretary to the Senate Committee on Energy and Natural Resources on October 22, 2015.