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Before the Senate Judiciary Committee

"Puerto Rico's Fiscal Problems: Examining the Source and Exploring the Solution"

December 1, 2015

Mr. Chairman and members of the committee, thank you for the opportunity to submit this testimony regarding Puerto Rico's daunting fiscal and economic challenges, and how to address them.[i]

Puerto Rico threatens to fall into an economic abyss. Odds are high and rising that the territory will soon default on some of the $70 billion in debt it owes. If U.S. lawmakers do not act soon to address this problem, Puerto Rico will suffer an economic depression.

The territory's economy is already in a decade-long slide. The island's real gross product has declined by a stunning 9% since its peak in late 2003, and employment has fallen by close to 14%. For context, during the Great Recession, the U.S. economy experienced losses that were less than half as severe, and the downturn ended 6½ years ago.

Puerto Rico is trapped in a vicious cycle. As the island's residents lose jobs they are leaving for the U.S. mainland. The population is rapidly declining and those that remain are less skilled and older. The loss of jobs and people is undermining the tax base. Combined with poor fiscal management, this has resulted in a fiscal disaster. The government can no longer borrow and has exhausted its options for raising more cash. It faces the Hobson's choice of defaulting on its debt or severely slashing government services and jobs. Either choice will cause the economy to sink deeper and force even more people to leave.

The developing crisis can unfold along many paths. In this testimony, I consider two scenarios. In the first scenario, U.S. lawmakers do nothing to address the crisis, and Puerto Rico defaults on its debt, beginning with a missed payment that is due imminently. Since the territory, like U.S. 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.[ii] By 2020, the end of the scenario, the island's employment declines by another 13% and the unemployment rate increases to more than 14%. 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.

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. One, among a range of such regimes, is to allow Puerto Rico to use the bankruptcy courts to restructure its debt via a new chapter in the U.S. bankruptcy code for use solely by U.S. territories. It is assumed in this scenario that the court sets debt payments such that they account for a high, but sustainable percent of government revenues.[iii]

Some worry that hard-pressed state governments will want the same relief in bankruptcy court, pushing up interest rates for all municipal borrowers.[iv] This seems a stretched argument. Puerto Rico is clearly an outlier and has taken a fiscal course that other states will not want to go down. Puerto Rico's story is a sobering one.

Having said this, a quid pro quo for allowing the territory to use the bankruptcy court to restructure its debt should be the establishment of an oversight board to improve government accounting, enhance transparency, and impose fiscal discipline. Such a board can be effective only if it 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.

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. 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.

Although the vicious cycle plaguing Puerto Rico's economy and budget is broken in this scenario, the island's economy continues to struggle. Stronger 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.[v] And pension reform, the consolidation of municipalities, and reforms to public-sector corporations, including privatization, would also be helpful.[vi]

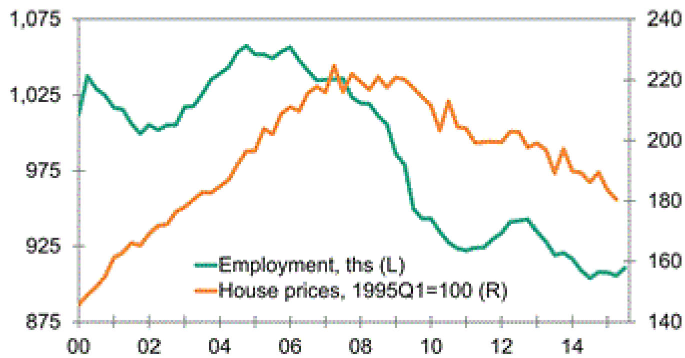
Under any scenario, Puerto Rico has a difficult road ahead. But unless U.S. lawmakers act to allow the territory to restructure its debts reasonably in bankruptcy court, that road will be an interminably dark one.

Never-ending recession

The Puerto Rican economy has been engulfed in a 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 currently (see Chart 1). Jobs have been lost in a range of industries, including in construction, manufacturing, financial services, and most notably at state and local governments, where employment is down a stunning more than 25%.

Chart 1: Puerto Rico's Decade-Long Recession



Sources: BLS, FHFA, Moody's Analytics

Unemployment remains extraordinarily high at near 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.

The depopulation of Puerto Rico has intensified. On net, each year over 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 an economic depression. Even more disconcerting, there is no prospect of the economic slide ending any time 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 $70 billion in debt (see Table 1).[vii] This is equal to approximately 100% of the territory's gross national product—the island's financial resources to pay on that debt.[viii]

Table 1: Commonwealth of Puerto Rico Public Sector Debt

$ mil

	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

*Excludes $2.9 bil in Senior Pension Funding bonds issued by the Employees Retirement System, $1.2 bil in Children's Trust bonds, and approximately $1 bil in numerous other small bonds.

**Only first three mo 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, average debt payments 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 more than 40% of the $10.2 billion in expected available revenue. The debt payments over the next five years total $18.2 billion, equal to a crushing 35% 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 their 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 payment due December 1. 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 Authority	Ca	Negative
Appropriation debt of the commonwealth	Ca	Negative
University of Puerto Rico (system and facilities)	Ca	Negative
Highways and Transportation Authority	Ca	Negative
Infrastructure Finance Authority	Ca	No Outlook
Pension funding bonds	Ca	Negative
Convention Center District Authority	Ca	Negative

Sources: Moody's Investors Service, 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 has become is a significant challenge. However, even with the poor information, it is clear that the territory's finances are in tatters.

Default scenario

Puerto Rico's fiscal and economic crisis can unfold in many different ways. To gauge the possible outcomes, two scenarios using the Moody's Analytics econometric model of the Puerto Rico economy are considered. In the default scenario, U.S. lawmakers fail to respond to the developing crisis, forcing the territory to default on its debts, beginning with the December payment. In an alternative restructuring scenario, lawmakers establish a new chapter in the U.S. bankruptcy code for territories, which allows Puerto Rico to restructure its debts and thus avoid default.

More specific, in the default scenario, bondholders sue the government for payment, setting off a messy litigation process that takes more than a year to work through. The courts ultimately require the government to make good on its general obligation and COFINA (a government-owned corporation that uses sales tax revenues to finance government spending) debts, and to pay 50 cents on the dollar on debts owed by the agencies. Troubled Puerto Rican municipalities use Chapter 9 of the bankruptcy code to restructure their debts.

It is further assumed in this scenario that current federal funding for Medicaid payments under the Affordable Care Act is scaled back as currently legislated beginning in 2018. Puerto Rico must either increase its Medicaid spending to replace the lost federal funding or opt out of the program's expansion under the ACA. It is expected to increase its Medicaid spending, forcing further cuts to other government spending.

This default scenario would be costly for the commonwealth. The island would ultimately need to make $14.1 billion in debt payments over the next five years. While much less than the $18.2 billion in payments the commonwealth is currently scheduled to make, the debt payments still gobble up an onerous nearly 35% of the government's revenues (see Table 3).

The government would have no choice but to severely cut spending and jobs, pushing the economy deeper into recession and further undermining revenues and the government's fiscal situation. This vicious cycle currently plaguing Puerto Rico will only intensify. Moreover, the territory's standing in capital markets would be irreparably harmed.

Puerto Rico's creditors would also pay a heavy price in the default scenario. There would be extraordinary legal costs and delays in reaching an eventual settlement and the resumption of regular debt payments. There would also be considerable uncertainty around all of this.

Table 3: Puerto Rico Budget Assumptions Under the Default Scenario

$ mil, Jul-Jun fiscal yrs

	2015	2016	2017	2018	2019	2020	2016-2020 Total
Government nondebt, nonfederal outlays	9,272	10,246	6,994	6,814	5,817	5,828	35,700
% change		*10.5*	*-31.7*	*-2.6*	*-14.6*	*0.2*	
Total nonfederal revenue	10,025	10,246	10,399	10,098	9,714	9,355	49,811
% change	*2.3%*	*2.2%*	*1.5%*	*-2.9%*	*-3.8%*	*-3.7%*	
Net borrowing	-753	0	-3,405	-3,283	-3,897	-3,526	-14,111
Debt issuance	2,700	0	0	0	0	0	-
Accounts payable	447	0	0	0	0	0	-
Debt service	3,900	0	3,405	3,283	3,897	3,526	14,111
% of revenue	*38.9%*	*0.0%*	*32.7%*	*32.5%*	*40.1%*	*37.7%*	*28.3%*

Source: Moody's Analytics

The default scenario would be devastating for Puerto Rico's economy. The territory's decade-long downturn would continue at least through the end of the current decade (see Table 4). By 2020, employment will have declined by an additional 125,000 jobs on top of the 150,000 jobs already lost since the downturn began. Unemployment will rise back over 14%, despite a large decline in the labor force; labor force participation falls below 40%, the lowest by far across all states.

Table 4: 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

As Puerto Ricans lose jobs, they leave the island for work in the rest of the U.S. The draw of the mainland will only grow stronger as the national economy returns to full employment and wage growth picks up. An average of more than 45,000 net migrants leave Puerto Rico each year over the next five years in the default scenario. Population slides from 3.5 million currently to 3.3 million by 2020.

Puerto Rico faces a range of economic headwinds that blow much harder in the default scenario. Most obvious are the cuts in government spending and jobs, which decline from $9.2 billion in fiscal 2015 to only $5.8 billion in 2020. This fiscal austerity amounts to approximately 5% of the island's GNP. Non-federal government employment falls to one-fifth of all jobs, down from one-fourth of jobs currently, and close to one-third of jobs in the early 1990s.

The political and legal uncertainty created by the crisis is also sure to further undermine outside business investment in the island's economy. The cost of doing business in Puerto Rico is already high, and will only increase with the government looking to raise revenues and cutting back on services and much needed infrastructure investment. Less investment in travel and other basic infrastructure, police and other security services, and healthcare facilities will also hamper tourism.

Investors in Puerto Rican debt, which also includes Puerto Rico's pension funds, banks and individuals, will also suffer in the default scenario. Two of the island's large banks, Banco Popular and FirstBank, have direct exposures through loans and securities of the commonwealth that are more than one-fifth of their total common tangible equity capital.[ix] Fortunately, the banks are well capitalized and should be able to reasonably manage any write-downs on their exposures. Nonetheless, they are also likely to turn more cautious in extending credit to the island's businesses and households, further exacerbating the downturn.

The default scenario presents a stark economic future for Puerto Rico, and while the government and its creditors may not push their impasse as far as the scenario envisages, it is conceivable that they will.

Restructuring scenario

To ensure that Puerto Rico does not go down such a dark path, U.S. lawmakers must act quickly. Most important, Congress and the Obama administration must pass legislation that would lead to a much more orderly restructuring of the territory's debts. This could be accomplished by allowing the Puerto Rican government to use Chapter 9 of the bankruptcy code. Under current law, Puerto Rico, like all U.S. states, is not permitted to file for bankruptcy.

I assume that if Puerto Rico's debts were restructured in bankruptcy court, the government would still need to pay on its general obligation and COFINA bonds, and about 25 cents on the dollar of the debt owed by other public corporations. Over the next five years, the territory would make $10.8 billion in debt payments, equal to 20% of its revenues (see Table 5). This is still a heavy debt load to carry, but it is manageable, and thus sustainable.

Table 5: Puerto Rico Budget Assumptions Under the Restructuring Scenario
$ mil, Jul-Jun fiscal yrs

	2015	2016	2017	2018	2019	2020	2016-2020 Total
Government nondebt, nonfederal outlays	9,272	8,417	8,613	8,909	8,530	8,554	43,023
% change		*-9.2*	*2.3*	*3.4*	*-4.2*	*0.3*	
Total nonfederal revenue	10,025	10,226	10,450	10,712	11,022	11,397	53,807
% change	*2.3%*	*2.0%*	*2.2%*	*2.5%*	*2.9%*	*3.4%*	
Net borrowing	-753	-1,809	-1,837	-1,803	-2,492	-2,843	-10,784
Debt issuance	2,700	0	0	0	0	0	-
Accounts payable	447	0	0	0	0	0	-
Debt service	3,900	1,809	1,837	1,803	2,492	2,843	10,784
% of revenue	*38.9%*	*17.7%*	*17.6%*	*16.8%*	*22.6%*	*24.9%*	*20.0%*

Source: Moody's Analytics

The restructuring scenario also assumes an expansion of Medicaid funding to the island's residents beginning in 2018. Puerto Rico currently provides Medicaid benefits to its residents that fall well short of those received by other Americans on the mainland. This is especially important to the island since nearly one-half of its residents rely on Medicaid for their healthcare benefits.

Puerto Rico also benefits in this scenario from the implementation of an earned income tax credit, although the benefits are not meaningful until after the simulation horizon of 2020. 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.

Of course, the expansion of the Medicaid program and introduction of the EITC is 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.

If adopted in its entirety, the restructuring proposal would provide a substantial boost to the Puerto Rican economy. The employment declines would end sometime next year, and job growth would begin in earnest toward the end of the decade (see Table 6). Unemployment would stabilize next year, and then drift lower, ending at close to 11% by 2020. Net out-migration remains substantial, but does abate, allowing the population declines to moderate.

Table 6: Puerto Rico Economic Outlook Under the Restructuring Scenario

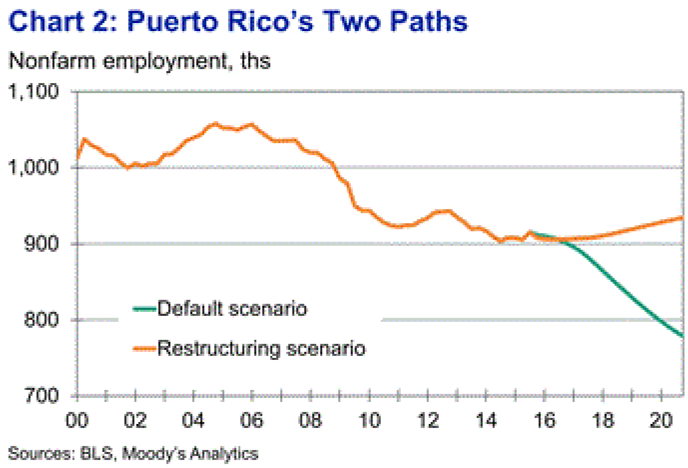
	2015	2016	2017	2018	2019	2020	Avg annual growth 2015-2020
Nonfarm employment, ths	909	906	907	913	922	931	0.5
% change	*0.0*	*-0.3*	*0.2*	*0.6*	*1.0*	*1.0*	
Gross state product, 2009$ bil	95.7	94.3	93.7	93.8	94.3	95.0	-0.1
% change	*-0.1*	*-1.5*	*-0.6*	*0.1*	*0.6*	*0.8*	
Unemployment rate	*12.0*	*11.8*	*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
% change	*-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
% change	*-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
% change	*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
% change	*3.8*	*4.4*	*4.9*	*4.7*	*4.0*	*3.5*	

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

Despite all that is done for Puerto Rico in this scenario, it is not enough to jump-start a robust Puerto Rican economy. It is clear that a long and arduous road lay ahead for the island's residents under any scenario, particularly if Puerto Rico is unable to find the political will to implement the substantive economic reforms needed to make the island an attractive place to do business.

Two paths diverge

What U.S. lawmakers decide to do or not do to help Puerto Rico out of its fiscal bind in coming days will determine the island's economic path for years to come. Doing nothing will ensure that its decade-long recession will continue to deepen through the remainder of this decade. Puerto Rico will suffer an economic depression. Allowing the territory to go through bankruptcy court and expanding Medicaid benefits will break the economic downturn and provide a basis for a more stable fiscal situation (see Chart 2).



There are potential costs involved in allowing Puerto Rico to use U.S. bankruptcy courts. Changing bankruptcy law to allow territories like Puerto Rico to use Chapter 9 raises the possibility that other fiscally pressed states will want to do the same thing. This would significantly disrupt the municipal bond market, increasing borrowing costs for all public entities. Bondholders in Puerto Rican debt also have the complaint that the rules on which they based their investment decisions are being changed. Future investors will require a higher interest rate to compensate them for the risk that the rules get changed again. 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.

While these costs cannot be dismissed, they can be significantly mitigated. Puerto Rico's finances should be managed by an independent oversight board, tasked with ensuring that the island puts its finances in order and adopts sound fiscal management practices. This board should determine when it is appropriate to hand back fiscal management to the territory, and should reserve the right to intervene again if it appears the island is once more going off the fiscal rails.

It seems a stretch to argue that allowing Puerto Rico into Chapter 9 bankruptcy will cause other states to demand the same relief and borrowing costs for all municipal borrowers will increase. Puerto Rico is clearly an outlier and has taken a fiscal course that other states will not want to go down. Puerto Rico's story is a sobering one.

Puerto Rico is looking into an economic abyss that is, in part, of its own making. But its problems are also due to the long shadow of the Great Recession. Letting the island's economy fall into the abyss would be a serious error. U.S. lawmakers should act.

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[i] This testimony is based on Puerto Rico Looks Into the Abyss, Mark Zandi, Dan White and Bernard Yaros, Moody's Analytics white paper, November 2015.
[ii] A description of the Moody's Analytics regional economic models is available upon request.
[iii] 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.

[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] 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.

[vi] 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.

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

[viii] 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 due to income earned at multinational pharmaceutical and tourism-related companies operating on the island.

[ix] See "Banks Can Absorb Puerto Rico Default, but Vulnerable to Its Economic Woes," Moody's Investors Service report, September, 28, 2015.