

The Costs of (sub)Sovereign Default Risk: Evidence from Puerto Rico: Online Appendix

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1 Events

Table 1: Events

Date	Event Type	Rating Type	Rating/Description	Outlook	Agency
01/08/2010	COFINA Ratings Action	Neutral	A	Stable	Fitch
03/10/2010	PREPA Ratings Action	Negative	BBB+	Stable	Fitch
04/05/2010	PRASA Ratings Action	Positive	Senior BBB+, Guaranteed BBB+	Senior Stable, Guaranteed Stable	Fitch
04/13/2010	PREPA Ratings Action	Neutral	BBB+	Stable	Fitch
04/16/2010	PRASA Ratings Action	Positive	Senior Baa1, Guaranteed A3	Senior Stable, Guaranteed Stable	Moody's
04/19/2010	GO Ratings Action	Positive	A3	Stable	Moody's
04/28/2010	PREPA Ratings Action	Neutral	BBB+	Stable	Fitch
05/14/2010	PREPA Ratings Action	Negative	BBB	Stable	Fitch
06/16/2010	COFINA Ratings Action	Positive	A+	Stable	Fitch
08/03/2010	PRASA Ratings Action	Negative	Senior BBB, Guaranteed BBB+	Senior Stable, Guaranteed Stable	Fitch
08/10/2010	GO Ratings Action	Negative	A3	Negative	Moody's
09/24/2010	PREPA Ratings Action	Neutral	BBB+	Stable	Fitch
11/09/2010	PRASA Ratings Action	Negative	Senior Baa1, Guaranteed A3	Senior Negative, Guaranteed Negative	Moody's
11/29/2010	GO Ratings Action	Negative	BBB-	Positive	S&P
12/20/2010	PREPA Ratings Action	Neutral	BBB+	Stable	Fitch
01/19/2011	GO Ratings Action	Positive	BBB+	Stable	Fitch
03/03/2011	Municipal Event	Municipal	Boise County Idaho files for bankruptcy protection		
03/07/2011	GO Ratings Action	Positive	BBB	Stable	S&P
03/31/2011	PRASA Ratings Action	Positive	Senior BBB-, Guaranteed BBB	Senior Stable, Guaranteed Stable	S&P
08/01/2011	Municipal Event	Municipal	Central Falls Rhode Island files for bankruptcy protection		

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Date	Event Type	Event Sign	Rating/Description	Outlook	Agency
08/08/2011	GO Ratings Action	Negative	Baa1	Negative	Moody's
08/08/2011	PRASA Ratings Action	Negative	Senior Baa2, Guaranteed Baa1	Senior Negative, Guaranteed Negative	Moody's
08/15/2011	PRERS Ratings Action	Positive	BBB+	Stable	Fitch
09/06/2011	Municipal Event	Municipal	Boise County Idaho filing for bankruptcy protection dismissed		
09/27/2011	GDB Ratings Action	Negative	Baa1	Negative	Moody's
10/12/2011	Municipal Event	Municipal	Harrisburg Pennsylvania files for bankruptcy protection		
10/28/2011	GDB Ratings Action	Negative	Baa1	Negative	Moody's
11/04/2011	COFINA Ratings Action	Positive	A1	Stable	Moody's
11/08/2011	COFINA Ratings Action	Neutral	A+	Stable	Fitch
11/09/2011	Municipal Event	Municipal	Jefferson County Alabama filed for bankruptcy protection		
11/18/2011	PRPFC Ratings Action	Negative	Baa2	Negative	Moody's
11/22/2011	COFINA Ratings Action	Positive	AA-	Stable	Fitch
11/22/2011	UPR Ratings Action	Negative	Baa2	Negative/Review	Moody's
11/23/2011	COFINA Ratings Action	Positive	Aa2	Stable	Moody's
12/09/2011	GDB Ratings Action	Negative	Baa1	Negative	Moody's
12/16/2011	PREPA Ratings Action	Neutral	BBB+	Stable	Fitch
01/27/2012	GDB Ratings Action	Negative	Baa1	Negative	Moody's
03/12/2012	Municipal Event	Municipal	Harrisburg Pennsylvania filing for bankruptcy protection dismissed		
03/28/2012	PREPA Ratings Action	Negative	BBB+	Negative	Fitch
03/28/2012	PREPA Ratings Action	Negative	Baa1	Stable	Moody's

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Date	Event Type	Event Sign	Rating/Description	Outlook	Agency
05/02/2012	PRHFA Ratings Action	Negative	Baa3	Negative	Moody's
06/08/2012	PRPFC Ratings Action	Neutral	Baa2	Negative	Moody's
06/25/2012	GDB Ratings Action	Negative	BBB	Negative	S&P
06/30/2012	Municipal Event	Municipal	Stockton California files for bankruptcy protection		
07/02/2012	Municipal Event	Municipal	Mammoth Lakes California files for bankruptcy protection		
07/18/2012	COFINA Ratings Action	Negative	Aa3	Stable	Moody's
08/01/2012	Municipal Event	Municipal	San Bernardino County California files for bankruptcy protection		
08/08/2012	PRERS Ratings Action	Neutral	BBB+	Stable	Fitch
11/14/2012	PRHTA Ratings Action	Negative	A2 GARVEE	Negative	Moody's
11/16/2012	Municipal Event	Municipal	Mammoth Lakes California filing for bankruptcy protection dismissed		
12/13/2012	GDB Ratings Action	Negative	Baa3	Negative	Moody's
12/13/2012	GO Ratings Action	Negative	Baa3	Negative	Moody's
12/13/2012	PRASA Ratings Action	Negative	Senior Ba1, Guaranteed Baa3	Senior Negative, Guaranteed Negative	Moody's
12/13/2012	PRERS Ratings Action	Negative	Baa3	Negative	Moody's
12/13/2012	PRHTA Ratings Action	Negative	Baa3	Negative	Moody's
12/13/2012	PRPFC Ratings Action	Negative	Ba1	Negative	Moody's
12/14/2012	UPR Ratings Action	Negative	Ba1	Negative/Review	Moody's
12/17/2012	PREPA Ratings Action	Negative	Baa2	Negative/Review	Moody's
12/28/2012	PRHTA Ratings Action	Negative	BBB+	Neg Watch	S&P

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Date	Event Type	Event Sign	Rating/Description	Outlook	Agency
02/21/2013	GO Ratings Action	Negative	BBB+	Rating Watch Negative	Fitch
02/21/2013	PRERS Ratings Action	Negative	BBB+	Neg Watch	Fitch
03/11/2013	UPR Ratings Action	Positive	Ba1	Negative	Moody's
03/13/2013	GO Ratings Action	Negative	BBB-	Negative	S&P
03/14/2013	PREPA Ratings Action	Negative	BBB+	Neg Watch	Fitch
03/20/2013	GO Ratings Action	Negative	BBB-	Negative	Fitch
03/20/2013	PRASA Ratings Action	Negative	Senior BBB, Guaranteed BBB-	Senior Stable, Guaranteed Negative	Fitch
03/20/2013	PRERS Ratings Action	Negative	BBB-	Negative	Fitch
03/26/2013	PRASA Ratings Action	Negative	Senior BB+, Guaranteed BBB-	Senior Stable, Guaranteed Negative	S&P
03/26/2013	PRERS Ratings Action	Negative	BBB-	Neg Watch	S&P
04/01/2013	Municipal Event	Municipal	Stockton California granted bankruptcy protection		
04/18/2013	PRASA Ratings Action	Negative	Senior BBB-, Guaranteed BBB-	Senior Negative, Guaranteed Negative	Fitch
05/29/2013	PRHTA Ratings Action	Negative	A2 GARVEE	Negative/Review	Moody's
05/31/2013	PRHTA Ratings Action	Negative	A GARVEE	Neg Watch	S&P
06/19/2013	PREPA Ratings Action	Negative	Baa3	Negative	Moody's
06/21/2013	PREPA Ratings Action	Negative	BBB	Stable	S&P
07/01/2013	PREPA Ratings Action	Negative	BBB-	Stable	Fitch
07/18/2013	Municipal Event	Municipal	Detroit files for bankruptcy protection		
07/25/2013	PREPA Ratings Action	Neutral	Baa3	Negative	Moody's
07/26/2013	PREPA Ratings Action	Neutral	BBB-	Stable	Fitch
08/28/2013	Municipal Event	Municipal	San Bernardino County California granted bankruptcy protection		

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Date	Event Type	Event Sign	Rating/Description	Outlook	Agency
09/30/2013	COFINA Ratings Action	Negative	AA-	Negative	S&P
10/03/2013	COFINA Ratings Action	Negative	A2	Negative	Moody's
11/14/2013	COFINA Ratings Action	Positive	AA-	Stable	Fitch
11/14/2013	PRERS Ratings Action	Negative	BBB-	Neg Watch	Fitch
12/03/2013	Municipal Event	Municipal	Detroit granted bankruptcy protection		
12/11/2013	COFINA Ratings Action	Negative	A2	Negative/Review	Moody's
12/11/2013	GO Ratings Action	Negative	Baa3	Negative/Review	Moody's
12/19/2013	UPR Ratings Action	Negative	Ba1	Negative/Review	Moody's
12/20/2013	PREPA Ratings Action	Negative	Baa3	Negative/Review	Moody's
02/04/2014	GDB Ratings Action	Negative	BB	Neg Watch	S&P
02/04/2014	GO Ratings Action	Negative	BB+	Negative	S&P
02/04/2014	PRASA Ratings Action	Negative	Senior BB+, Guaranteed BB+	Senior Neg Watch, Guaranteed Neg Watch	S&P
02/07/2014	COFINA Ratings Action	Negative	Baa1	Negative	Moody's
02/07/2014	GDB Ratings Action	Negative	Ba2	Negative	Moody's
02/07/2014	GO Ratings Action	Negative	Ba2	Negative	Moody's
02/07/2014	PRASA Ratings Action	Negative	Senior Ba2, Guaranteed Ba2	Senior Negative, Guaranteed Negative	Moody's
02/07/2014	PREPA Ratings Action	Negative	Ba2	Negative	Moody's
02/07/2014	PRERS Ratings Action	Negative	Ba2	Negative	Moody's
02/07/2014	PRHTA Ratings Action	Negative	Ba2	Negative	Moody's
02/07/2014	PRPFC Ratings Action	Negative	Ba3	Negative	Moody's
02/10/2014	UPR Ratings Action	Negative	Ba3	Negative	Moody's
02/11/2014	GO Ratings Action	Negative	BB	Negative	Fitch

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Date	Event Type	Event Sign	Rating/Description	Outlook	Agency
02/11/2014	PRASA Ratings Action	Negative	Senior BBB-, Guaranteed BB	Senior Negative, Guaranteed Negative	Fitch
02/11/2014	PRERS Ratings Action	Negative	BB	Negative	Fitch
02/18/2014	PRASA Ratings Action	Negative	Senior BB+, Guaranteed BB	Senior Negative, Guaranteed Negative	Fitch
02/18/2014	PREPA Ratings Action	Negative	BB+	Negative	Fitch
02/27/2014	PIR	Negative	A1	Negative	Moody's
03/14/2014	PRASA Ratings Action	Neutral	Senior BB+, Guaranteed BB+	Senior Neg Watch, Guaranteed Negative	S&P
06/11/2014	PREPA Ratings Action	Negative	BB	Neg Watch	Fitch
06/18/2014	PREPA Ratings Action	Negative	BBB-	Neg Watch	S&P
06/26/2014	PREPA Ratings Action	Negative	CC	Neg Watch	Fitch
06/26/2014	PREPA Ratings Action	Negative	Ba3	Negative/Review	Moody's
06/27/2014	PRASA Ratings Action	Negative	Senior Ba3, Guaranteed Ba2	Senior Negative, Guaranteed Negative	Moody's
06/27/2014	PREPA Ratings Action	Negative	BB	Neg Watch	S&P
06/27/2014	PRHTA Ratings Action	Negative	Ba3	Negative/Review	Moody's
06/30/2014	Legal Event	Negative	PR passes "Puerto Rico Public Corporations Debt Enforcement and Recovery Act." (aka Recovery Act) Oppenheimer Rochester and Franklin Templeton sue		
06/30/2014	PRASA Ratings Action	Negative	Senior BB+, Guaranteed BB+	Senior Neg Watch, Guaranteed Neg Watch	S&P
07/01/2014	COFINA Ratings Action	Negative	Ba3	Negative	Moody's

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Date	Event Type	Event Sign	Rating/Description	Outlook	Agency
07/01/2014	GDB Ratings Action	Negative	B3	Negative	Moody's
07/01/2014	GO Ratings Action	Negative	B2	Negative	Moody's
07/01/2014	PRASA Ratings Action	Negative	Senior Caa1, Guaranteed B2	Senior Negative, Guaranteed Negative	Moody's
07/01/2014	PREPA Ratings Action	Negative	Caa2	Negative/Review	Moody's
07/01/2014	PRERS Ratings Action	Negative	B3	Negative	Moody's
07/01/2014	PRHTA Ratings Action	Negative	Caa1	Negative/Review	Moody's
07/01/2014	PRPFC Ratings Action	Negative	B3	Negative	Moody's
07/01/2014	UPR Ratings Action	Negative	Caa1	Negative	Moody's
07/09/2014	COFINA Ratings Action	Negative	BB-	Negative	Fitch
07/09/2014	GO Ratings Action	Negative	BB-	Negative	S&P
07/09/2014	PRASA Ratings Action	Negative	Senior B+, Guaranteed BB-	Senior Neg Watch, Guaranteed Negative	Fitch
07/09/2014	PREPA Ratings Action	Negative	B-	Neg Watch	S&P
07/09/2014	PRERS Ratings Action	Negative	BB-	Negative	Fitch
07/11/2014	COFINA Ratings Action	Negative	BBB	Negative	S&P
07/11/2014	GO Ratings Action	Negative	BB	Negative	S&P
07/14/2014	GDB Ratings Action	Negative	CC	Negative	S&P
07/14/2014	PRASA Ratings Action	Negative	Senior BB-, Guaranteed BB	Senior Negative, Guaranteed Negative	S&P
07/21/2014	Legal Event	Negative	PR motion to dismiss		
08/11/2014	Legal Event	Positive	Motion for summary judgment filed by plaintiffs		
09/12/2014	Legal Event	Negative	Memo supporting motion to dismiss		

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Date	Event Type	Event Sign	Rating/Description	Outlook	Agency
09/15/2014	PREPA Ratings Action	Neutral	CC	Neg Watch	Fitch
09/17/2014	PREPA Ratings Action	Negative	Caa3	Negative	Moody's
09/17/2014	PRHTA Ratings Action	Positive	Caa1	Negative	Moody's
12/11/2014	PREPA Ratings Action	Neutral	CC	Neg Watch	Fitch
02/06/2015	Legal Event	Positive	U.S. District Court in PR ruled that the Recovery Act violated the constitution. Rules against motions to dismiss. Puerto Rico appeals.		
02/12/2015	GO Ratings Action	Negative	B	Negative	S&P
02/12/2015	PREPA Ratings Action	Negative	B	Negative	S&P
02/13/2015	PRASA Ratings Action	Negative	Senior B, Guaranteed B	Senior Negative, Guaranteed Negative	S&P
02/19/2015	COFINA Ratings Action	Negative	B3	Negative	Moody's
02/19/2015	GDB Ratings Action	Negative	Caa1	Negative	Moody's
02/19/2015	GO Ratings Action	Negative	Caa1	Negative	Moody's
02/19/2015	PRASA Ratings Action	Negative	Senior Caa1, Guaranteed Caa1	Senior Negative, Guaranteed Negative	Moody's
02/19/2015	PRERS Ratings Action	Negative	Caa2	Negative	Moody's
02/19/2015	PRHTA Ratings Action	Negative	Caa2	Negative	Moody's
02/19/2015	PRPFC Ratings Action	Negative	Caa2	Negative	Moody's
02/20/2015	UPR Ratings Action	Negative	Caa1	Negative/Review	Moody's
03/12/2015	UPR Ratings Action	Negative	Caa2	Negative	Moody's
03/20/2015	Legal Event	Neutral	PREPA amicus brief 1st circuit		
03/26/2015	COFINA Ratings Action	Negative	B	Neg Watch	Fitch
03/26/2015	GO Ratings Action	Negative	B	Negative	Fitch

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Date	Event Type	Event Sign	Rating/Description	Outlook	Agency
03/26/2015	PRASA Ratings Action	Negative	Senior B, Guaranteed B	Senior Neg Watch, Guaranteed Neg Watch	Fitch
03/26/2015	PRERS Ratings Action	Negative	B	Neg Watch	Fitch
04/24/2015	GO Ratings Action	Negative	CCC+	Negative/CreditWatch	S&P
04/24/2015	PREPA Ratings Action	Negative	CCC-	Neg Watch	S&P
04/27/2015	COFINA Ratings Action	Negative	CCC+	Neg Watch	S&P
04/27/2015	PRASA Ratings Action	Negative	Senior CCC+, Guaranteed CCC+	Senior Neg Watch, Guaranteed Neg Watch	S&P
05/06/2015	Legal Event	Positive	Oral arguments before 1st circuit. Questions, legal publications indicate all 3 judges side with bondholders.		
05/21/2015	COFINA Ratings Action	Negative	Caa2	Negative	Moody's
05/21/2015	GDB Ratings Action	Negative	Ca	Negative	Moody's
05/21/2015	GO Ratings Action	Negative	Caa2	Negative	Moody's
05/21/2015	PRASA Ratings Action	Negative	Senior Caa2, Guaranteed Caa2	Senior Negative, Guaranteed Negative	Moody's
05/21/2015	PRERS Ratings Action	Negative	Ca	Negative	Moody's
05/21/2015	PRHTA Ratings Action	Negative	Ca	Negative	Moody's
05/21/2015	PRPFC Ratings Action	Negative	Ca	Negative	Moody's
05/21/2015	UPR Ratings Action	Negative	Caa3	Negative	Moody's
06/29/2015	COFINA Ratings Action	Negative	CC	Neg Watch	Fitch
06/29/2015	GO Ratings Action	Negative	CC	Rating Watch Negative	S&P
06/29/2015	PRASA Ratings Action	Negative	Senior CC, Guaranteed CC	Senior Neg Watch, Guaranteed Neg Watch	Fitch

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Date	Event Type	Event Sign	Rating/Description	Outlook	Agency
06/29/2015	PRERS Ratings Action	Negative	CC	Neg Watch	Fitch
06/30/2015	GO Ratings Action	Negative	CCC-	Negative	S&P
07/01/2015	COFINA Ratings Action	Negative	Caa3	Negative	Moody's
07/01/2015	GO Ratings Action	Negative	Caa3	Negative	S&P
07/01/2015	PRASA Ratings Action	Negative	Senior Caa3, Guaranteed Caa3	Senior Negative, Guaranteed Negative	Moody's
07/02/2015	PRASA Ratings Action	Negative	Senior CCC-, Guaranteed CCC-	Senior Negative, Guaranteed Negative	S&P
07/06/2015	Legal Event	Positive	U.S. 1st Circuit Court of Appeals affirmed the Feb 6 ruling regarding the Recovery Act		
08/20/2015	Municipal Event	Municipal	Hillview Kentucky files for bankruptcy protection		
08/21/2015	Legal Event	Negative	PR requests SCOTUS to hear the case		
09/10/2015	PREPA Ratings Action	Negative	CC	Negative	S&P
09/11/2015	GO Ratings Action	Negative	CC	Negative	S&P
09/11/2015	UPR Ratings Action	Negative	CC	Negative	S&P
09/14/2015	Legal Event	Neutral	SCOTUS order extended time to petition		
09/23/2015	Legal Event	Neutral	Request for AMICUS CURIAE filing (SCOTUS)		
10/23/2015	Legal Event	Neutral	Creditors file their brief (SCOTUS)		
11/09/2015	Legal Event	Neutral	Puerto Rico files reply to respondents (SCOTUS)		

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Date	Event Type	Event Sign	Rating/Description	Outlook	Agency
12/04/2015	Legal Event	Negative	SCOTUS grants AMICUS CURIAE and decides to hear case		
12/10/2015	Legal Event	Neutral	Request for AMICUS CURIAE filing (SCOTUS)		
12/11/2015	COFINA Ratings Action	Neutral	CC	Neg Watch	Fitch
12/11/2015	PRASA Ratings Action	Neutral	Senior CC, Guaranteed CC	Senior Neg Watch, Guaranteed Neg Watch	Fitch
12/11/2015	PREPA Ratings Action	Neutral	CC	Neg Watch	Fitch
12/11/2015	PRERS Ratings Action	Neutral	CC	Neg Watch	Fitch
12/16/2015	PREPA Ratings Action	Negative	CC	Neg Watch	S&P
12/22/2015	PRPFC Ratings Action	Negative	C	Negative	Moody's
01/06/2016	Legal Event	Neutral	Request for AMICUS CURIAE filing (SCOTUS)		
01/07/2016	Legal Event	Positive	Assured and Ambac sue over claw back from agency bonds for GO bonds		
01/15/2016	Legal Event	Neutral	AMICUS CURIAE filing (SCOTUS)		
01/19/2016	Legal Event	Positive	Financial Guaranty Insurance Co. sues over clawback		
01/19/2016	Legal Event	Neutral	Brief of petitioners filed (SCOTUS)		
01/25/2016	Legal Event	Neutral	AMICUS CURIAE filing (SCOTUS)		
01/26/2016	Legal Event	Neutral	AMICUS CURIAE filings (SCOTUS)		

Table 1 – *Continued from previous page*

Date	Event Type	Event Sign	Rating/Description	Outlook	Agency
02/25/2016	Legal Event	Neutral	AMICUS CURIAE filing (SCOTUS)		
03/14/2016	Legal Event	Neutral	PR reply (SCOTUS)		
03/15/2016	Legal Event	Neutral	PR reply (SCOTUS)		
03/22/2016	Legal Event	Negative	SCOTUS Oral arguments. Questions indicate Sotomayor and Ginsburg support PR while Roberts sides with bondholders. Breyer and Kegan asked mixed questions. Kennedy, Thomas silent. Alito recused. Legal press indicate court either neutral or siding with P.R.		
04/04/2016	Legal Event	Positive	Several hedge funds sue over GDB revenue diversion		
04/05/2016	Legal Event	Negative	Puerto Rican Senate passes "Debt moratorium and Financial Recovery Act"		
04/06/2016	Legal Event	Negative	Puerto Rican House passes "Debt moratorium and Financial Recovery Act". Governor Padilla Signs.		
05/10/2016	Legal Event	Positive	Ambac Assurance Corp. sues over PRHTA revenue diversion		
05/20/2016	Legal Event	Positive	4/4/2016 suit amended to include debt moratorium law		

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Date	Event Type	Event Sign	Rating/Description	Outlook	Agency
06/09/2016	Legal Event	Positive	House passes PROMESA, providing a framework for PR to restructure its debt.		
06/13/2016	Legal Event	Positive	SCOTUS Upholds 1st Circuit Decision		
06/15/2016	Legal Event	Positive	National Public Finance Guarantee Corp. sues over debt moratorium law		
06/21/2016	Legal Event	Positive	GO bondholders sue over "Debt moratorium and Financial Recovery Act"		
06/24/2016	COFINA Ratings Action	Negative	C	Neg Watch	Fitch
06/24/2016	GO Ratings Action	Negative	C	Rating Watch Negative	Fitch
06/24/2016	PRERS Ratings Action	Negative	C	Neg Watch	Fitch
06/27/2016	PREPA Ratings Action	Negative	C	Neg Watch	Fitch
06/30/2016	Legal Event	Positive	Senate passes PROMESA. President Obama Signs.		
06/30/2016	PREPA Ratings Action	Negative	D	N/A	S&P
07/01/2016	COFINA Ratings Action	Positive	Caa3	Developing	Moody's
07/01/2016	GO Ratings Action	Positive	Caa3	Developing	Moody's
07/01/2016	PRASA Ratings Action	Positive	Senior Caa3, Guaranteed Caa3	Senior Developing, Guaranteed Developing	Moody's
07/01/2016	UPR Ratings Action	Positive	Ca	Developing	Moody's
07/06/2016	GO Ratings Action	Negative	D	N/A	Fitch
07/07/2016	GO Ratings Action	Negative	D	N/A	S&P

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Date	Event Type	Event Sign	Rating/Description	Outlook	Agency
07/12/2016	PRASA Ratings Action	Negative	Senior CC, Guaranteed D	Senior Negative, Guaranteed N/A	S&P
07/13/2016	PREPA Ratings Action	Positive	Caa3	Developing	Moody's
07/20/2016	Legal Event	Positive	Several hedge funds sue over revenue diversion		
07/25/2016	Legal Event	Positive	Assured Guaranty Corp sues over diversion of PRHTA revenues		

2 Benchmark Three Day Window Event List

Table 2: Events: Three Day Window Benchmark

Event #	Window Size	Included Event Descriptions	Overall Type	Included Event Signs	Overall Sign	Date
1	3	COFINA Ratings Action		Neutral	Neutral	01/07/2010
2	3	PREPA Ratings Action		Neutral	Neutral	03/09/2010
3	3	PRASA Ratings Action	Ratings	Positive	Positive	04/01/2010
4	3	PREPA Ratings Action		Neutral	Neutral	04/12/2010
5	4	GO Ratings Action , PRASA Ratings Action	Ratings	Positive, Positive	Positive	04/15/2010
6	3	PREPA Ratings Action		Neutral	Neutral	04/27/2010
7	3	PREPA Ratings Action	Ratings	Negative	Negative	05/13/2010
8	3	COFINA Ratings Action	Ratings	Positive	Positive	06/15/2010
9	3	PRASA Ratings Action	Ratings	Negative	Negative	08/02/2010
10	3	GO Ratings Action	Ratings	Negative	Negative	08/09/2010
11	3	PREPA Ratings Action		Neutral	Neutral	09/23/2010
12	3	PRASA Ratings Action	Ratings	Negative	Negative	11/08/2010
13	3	GO Ratings Action	Ratings	Negative	Negative	11/26/2010
14	3	PREPA Ratings Action		Neutral	Neutral	12/17/2010
15	3	GO Ratings Action	Ratings	Positive	Positive	01/18/2011
16	3	PRASA Ratings Action	Ratings	Positive	Positive	03/30/2011
17	3	PRASA Ratings Action , GO Ratings Action	Ratings	Negative, Negative	Negative	08/05/2011
18	3	PRERS Ratings Action	Ratings	Positive	Positive	08/12/2011
19	3	GDB Ratings Action	Ratings	Negative	Negative	09/26/2011
20	3	GDB Ratings Action	Ratings	Negative	Negative	10/27/2011
21	6	COFINA Ratings Action , UPR Ratings Action , COFINA Ratings Action , , PRPFC Ratings Action		Neutral, Negative, Positive, , Negative	Mixed	11/17/2011
22	3	GDB Ratings Action	Ratings	Negative	Negative	12/08/2011
23	3	PREPA Ratings Action		Neutral	Neutral	12/15/2011
24	3	GDB Ratings Action	Ratings	Negative	Negative	01/26/2012
25	3	PREPA Ratings Action , PREPA Ratings Action	Ratings	Negative, Negative	negative	03/27/2012

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Event #	Window Size	Included Event Descriptions	Overall Type	Included Event Signs	Overall Sign	Date
26	3	PRHFA Ratings Action	Ratings	Negative	Negative	05/01/2012
27	3	PRPFC Ratings Action		Neutral	Neutral	06/07/2012
28	3	GDB Ratings Action	Ratings	Negative	Negative	06/22/2012
29	3	COFINA Ratings Action	Ratings	Negative	Negative	07/17/2012
30	3	PRERS Ratings Action		Neutral	Neutral	08/07/2012
31	5	PREPA Ratings Action , UPR Ratings Action , PRPFC Ratings Action , PRHTA Ratings Action , PRERS Ratings Action , PRASA Ratings Action , GO Ratings Action , GDB Ratings Action	Ratings	Negative, Negative, Negative, Negative, Negative, Negative, Negative, Negative	Negative	12/12/2012
32	3	PRHTA Ratings Action	Ratings	Negative	Negative	12/27/2012
33	3	PRERS Ratings Action , GO Ratings Action	Ratings	Negative, Negative	Negative	02/20/2013
34	6	PREPA Ratings Action , GO Ratings Action , , UPR Ratings Action	Ratings	Negative	Negative	03/08/2013
35	3	PRERS Ratings Action , PRASA Ratings Action , GO Ratings Action	Ratings	Negative	Negative	03/19/2013
36	3	PRERS Ratings Action , PRASA Ratings Action	Ratings	Negative	Negative	03/25/2013
37	3	PRASA Ratings Action	Ratings	Negative	Negative	04/17/2013
38	5	PRHTA Ratings Action , , PRHTA Ratings Action	Ratings	Negative	Negative	05/28/2013
39	5	PREPA Ratings Action , , PREPA Ratings Action	Ratings	Negative	Negative	06/18/2013
40	3	PREPA Ratings Action	Ratings	Negative	Negative	06/28/2013
41	4	PREPA Ratings Action , PREPA Ratings Action		Neutral	Neutral	07/24/2013
42	3	COFINA Ratings Action	Ratings	Negative	Negative	09/27/2013
43	3	COFINA Ratings Action	Ratings	Negative	Negative	10/02/2013

Table 2 – *Continued from previous page*

Event #	Window Size	Included Event Descriptions	Overall Type	Included Event Signs	Overall Sign	Date
44	3	PRERS Ratings Action , COFINA Ratings Action		Mixed	Mixed	11/13/2013
45	3	GO Ratings Action , CO- FINA Ratings Action	Ratings	Negative	Negative	12/10/2013
46	4	PREPA Ratings Action , UPR Ratings Action	Ratings	Negative	Negative	12/18/2013
47	3	PRASA Ratings Action , GO Ratings Action , GDB Ratings Action	Ratings	Negative	Negative	02/03/2014
48	5	PRERS Ratings Action , PRASA Ratings Action , GO Ratings Action , UPR Ratings Action , PRPFC Ratings Action , PRHTA Ratings Action , PRERS Ratings Action , PREPA Ratings Action , PRASA Ratings Action , GO Ratings Action , GDB Ratings Action , COFINA Ratings Action	Ratings	Negative	Negative	02/06/2014
49	3	PREPA Ratings Action , PRASA Ratings Action	Ratings	Negative	Negative	02/14/2014
50	3	PIR	Ratings	Negative	Negative	02/26/2014
51	3	PRASA Ratings Action		Neutral	Neutral	03/13/2014
52	3	PREPA Ratings Action	Ratings	Negative	Negative	06/10/2014
53	3	PREPA Ratings Action	Ratings	Negative	Negative	06/17/2014

Table 2 – *Continued from previous page*

Event #	Window Size	Included Event Descriptions	Overall Type	Included Event Signs	Overall Sign	Date
54	6	UPR Ratings Action , PRPFC Ratings Action , PRHTA Ratings Action , PRERS Ratings Action , PREPA Ratings Action , PRASA Ratings Action , GO Ratings Action , GDB Ratings Action , COFINA Ratings Action , PRASA Ratings Action , PR passes Puerto Rico Public Corpo- rations Debt Enforcement and Recovery Act. (aka Re- covery Act) Oppenheimer Rochester and Franklin Tem- pleton sue , PRHTA Ratings Action , PREPA Ratings Ac- tion , PRASA Ratings Action , PREPA Ratings Action , PREPA Ratings Action	Legal	Negative	Negative	06/25/2014
55	6	PRASA Ratings Action , GDB Ratings Action , GO Ratings Action , COFINA Ratings Action , , PRERS Ratings Action , PREPA Ratings Action , PRASA Ratings Action , GO Ratings Action , COFINA Ratings Action	Ratings	Negative	Negative	07/08/2014
56	3	PR motion to dismiss	Legal	Negative	Negative	07/18/2014
57	6	Motion for summary judg- ment filed by plaintiffs	Legal	Positive	Positive	08/08/2014

Table 2 – Continued from previous page

Event #	Window Size	Included Event Descriptions	Overall Type	Included Event Signs	Overall Sign	Date
58	3	PRHTA Ratings Action , PREPA Ratings Action , , PREPA Ratings Action , Memo supporting motion to dismiss		Mixed	Mixed	09/11/2014
59	3	PREPA Ratings Action		Neutral	Neutral	12/10/2014
60	4	U.S. District Court in PR ruled that the Recovery Act violated the constitution. Rules against motions to dismiss. Puerto Rico appeals.	Legal	Positive	Positive	02/05/2015
61	4	PRASA Ratings Action , PREPA Ratings Action , GO Ratings Action	Ratings	Negative	Negative	02/11/2015
62	3	UPR Ratings Action , PRPFC Ratings Action , PRHTA Ratings Action , PRERS Ratings Action , PRASA Ratings Action , GO Ratings Action , GDB Ratings Action , COFINA Ratings Action	Ratings	Negative	Negative	02/18/2015
63	3	UPR Ratings Action	Ratings	Negative	Negative	03/11/2015
64	3	Prepa amicus brief 1st circuit		Neutral	Neutral	03/19/2015
65	4	PRERS Ratings Action , PRASA Ratings Action , GO Ratings Action , COFINA Ratings Action	Ratings	Negative	Negative	03/25/2015
66	3	PRASA Ratings Action , COFINA Ratings Action , PREPA Ratings Action , GO Ratings Action	Ratings	Negative	Negative	04/23/2015

Table 2 – *Continued from previous page*

Event #	Window Size	Included Event Descriptions	Overall Type	Included Event Signs	Overall Sign	Date
67	3	Oral arguments before 1st circuit. Questions, legal publications indicate all 3 judges side with bondholders.	Legal	Positive	Positive	05/05/2015
68	8	UPR Ratings Action , PRPFC Ratings Action , PRHTA Ratings Action , PRERS Ratings Action , PRASA Ratings Action , GO Ratings Action , GDB Ratings Action , COFINA Ratings Action	Ratings	Negative	Negative	05/20/2015
69	5	U.S. 1st Circuit Court of Appeals affirmed the Feb 6 ruling regarding the Recovery Act, , PRASA Ratings Action , PRASA Ratings Action , GO Ratings Action , COFINA Ratings Action , GO Ratings Action , PRERS Ratings Action , PRASA Ratings Action , GO Ratings Action , COFINA Ratings Action	Ratings	Negative	Negative	06/26/2015
70	3	SCOTUS order extended time to petition, UPR Ratings Action , GO Ratings Action , PREPA Ratings Action		Mixed	Mixed	09/09/2015
71	3	Request for AMICUS CURIAE filing (SCOTUS)		Neutral	Neutral	09/22/2015
72	3	Creditors file their brief (SCOTUS)		Neutral	Neutral	10/22/2015

Table 2 – *Continued from previous page*

Event #	Window Size	Included Event Descriptions	Overall Type	Included Event Signs	Overall Sign	Date
73	3	Puerto Rico files reply to respondents (SCOTUS)		Neutral	Neutral	11/06/2015
74	4	SCOTUS grants AMICUS CURIAE and decides to hear case	Legal	Negative	Negative	12/03/2015
75	3	PRERS Ratings Action , PREPA Ratings Action , PRASA Ratings Action , COFINA Ratings Action , Request for AMICUS CURIAE filing (SCOTUS)		Neutral	Neutral	12/09/2015
76	3	PREPA Ratings Action	Ratings	Negative	Negative	12/15/2015
77	4	PRPFC Ratings Action	Ratings	Negative	Negative	12/21/2015
78	4	Assured and Ambac sue over claw back from agency bonds for GO bonds, Request for AMICUS CURIAE filing (SCOTUS)		Mixed	Mixed	01/05/2016
79	4	Brief of petitioners filed (SCOTUS), Financial Guaranty Insurance Co. sues over clawback, AMICUS CURIAE filing (SCOTUS)		Mixed	Mixed	01/14/2016
80	3	AMICUS CURIAE filings (SCOTUS), Brief amici curiae of Colegio de Abogados y Abogadas de Puerto Rico, et al. filed. (SCOTUS)		Neutral	Neutral	01/22/2016
81	3	AMICUS CURIAE filing (SCOTUS)		Neutral	Neutral	02/24/2016
82	4	PR reply (SCOTUS), PR reply (SCOTUS)		Neutral	Neutral	03/11/2016

Table 2 – *Continued from previous page*

Event #	Window Size	Included Event Descriptions	Overall Type	Included Event Signs	Overall Sign	Date
83	3	SCOTUS Oral arguments. Questions indicate Sotomayor and Ginsburg support PR while Roberts sides with bondholders. Breyer and Kegan asked mixed questions. Kennedy, Thomas silent. Alito recused. Legal press indicate court either neutral or siding with P.R.	Legal	Negative	Negative	03/21/2016
84	5	Puerto Rican House passes "Debt moratorium and Financial Recovery Act". Governor Padilla Signs., Puerto Rican Senate passes "Debt moratorium and Financial Recovery Act", Several hedge funds sue over GDB revenue diversion	Legal	Negative	Negative	04/01/2016
85	3	Ambac Assurance Corp. sues over PRHTA revenue diversion	Legal	Positive	Positive	05/09/2016
86	3	4/4/2016 suit amended to include debt moratorium law	Legal	Positive	Positive	05/19/2016
87	7	National Public Finance Guarantee Corp. sues over debt moratorium law, , SCOTUS Upholds 1st Circuit Decision, , House passes PROMESA, providing a framework for PR to restructure its debt.	Legal	Positive, , Positive, , Positive	Positive	06/08/2016

Table 2 – *Continued from previous page*

Event #	Window Size	Included Event Descriptions	Overall Type	Included Event Signs	Overall Sign	Date
88	3	GO bondholders sue over "Debt moratorium and Financial Recovery Act"	Legal	Positive	Positive	06/20/2016
89	4	PREPA Ratings Action , PRERS Ratings Action , GO Ratings Action , COFINA Ratings Action	Ratings	Negative, Negative, Negative, Negative	Negative	06/23/2016
90	7	GO Ratings Action , GO Ratings Action , , UPR Ratings Action , PRASA Ratings Action , GO Ratings Action , COFINA Ratings Action , PREPA Ratings Action , Senate passes PROMESA. Obama Signs.		Negative, Negative, , Positive, Positive, Positive, Positive, Negative, Positive	Mixed	06/29/2016
91	4	PREPA Ratings Action , PRASA Ratings Action		Positive, Negative	Mixed	07/11/2016
92	3	Several hedge funds sue over revenue diversion	Legal	Positive	Positive	07/19/2016
93	3	Assured Guaranty Corp sues over diversion of PRHTA revenues	Legal	Positive	Positive	07/22/2016

3 Robustness Tables

Table 3: Substituting the Change in the 5-Year Yield Spread for the Change in Default Probability: The Credit Channel

	(1)	(2)	(3)
Constant	-0.0040*** (0.0005)	-0.0007 (0.0028)	-0.0007 (0.0034)
SH_{t-1}	0.0419 (0.0373)	-0.4118 (0.3894)	-0.6198 (0.4764)
$\sum_{j=1}^{12} EXTFIN^{US} * \Delta S_{t-j}$			-0.0109
Observations	3,268	3,268	3,268
Sector Fixed Effects	N	Y	Y
Time Fixed Effects	N	N	Y
F test $EXTFIN^{US} * \Delta DEF$ jointly significant			8.81***
Prob> F			0.0000

Notes: ΔS is the change in the monthly average of the five-year yield spread for the Commonwealth of Puerto Rico. $EXTFIN^{US}$ is the Rajan and Zingales (1998) measure of sector-level dependence on external finance, calculated for the 2000-2015 period. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 4: Substituting the Change in the 5-Year Yield Spread for the Change in Default Probability: The Government Spending Channel

	(1)	(2)	(3)
Constant	0.0000 (0.0051)	0.0024 (0.0035)	0.0052 (0.0062)
SH_{t-1}	-0.3868 (0.4002)	-.3906 (0.4102)	-0.5111 (0.4266)
$GOV * \Delta capb_{prioryear}$		-4.1315*** (1.7557)	-2.9087 (1.8668)
$\sum_{j=1}^{12} GOV * \Delta S_{t-j}$	-0.2872		-0.4051
$\sum_{j=1}^{12} GOV * \Delta S_{t-j} * \Delta capb_{prioryear}$			-20.6295
Observations	2,924	2,907	2,703
Sector Fixed Effects	Y	Y	Y
Time Fixed Effects	Y	Y	Y
F test $GOV * \Delta S_{t-j}$ jointly significant	13.04***		28.75***
Prob > F	0.0000		0.0000
F test $GOV * \Delta S_{t-j} * \Delta capb_{prioryear}$ jointly significant			25.77***
Prob > F			0.0000

Notes: ΔS is the change in the monthly average of the five-year yield spread for the Commonwealth of Puerto Rico. GOV measures sector-level dependence on government sales from the 2012 Economic Census. $\Delta capb_{prioryear}$ is the prior year first difference in the cyclically adjusted primary balance, expressed as a percentage of potential output. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 5: Restricting the Sample to the Post-U.S. Financial Crisis Period: The Credit Channel

	(1)	(2)	(3)
Constant	-0.0034*** (0.0010)	0.0132** (0.0050)	0.0229*** (0.0078)
SH_{t-1}	0.0422 (0.0871)	-2.6276*** (0.8036)	-3.4668*** (0.8362)
$\sum_{j=1}^{12} EXTFIN^{US} * \Delta DEF_{t-j}$			-0.0350
Observations	1,368	1,368	1,368
Sector Fixed Effects	N	Y	Y
Time Fixed Effects	N	N	Y
F test $EXTFIN^{US} * \Delta DEF$ jointly significant			30.14***
Prob> F			0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico. $EXTFIN^{US}$ is the Rajan and Zingales (1998) measure of sector-level dependence on external finance, calculated for the 2000-2015 period. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 6: Restricting the Sample to the Post-U.S. Financial Crisis Period: The Government Spending Channel

	(1)	(2)	(3)
Constant	0.0152*	0.0160***	0.0205**
	(0.0072)	(0.0042)	(0.0090)
SH_{t-1}	-2.8999***	-3.1448***	-3.0260***
	(0.7453)	(0.6988)	(0.7323)
$GOV * \Delta capb_{prioryear}$		0.2424	3.2054
		(2.4066)	(2.4360)
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j}$	-5.0744***		-13.3428
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j} * \Delta capb_{prioryear}$			-821.5306
Observations	1,224	1,275	1,224
Sector Fixed Effects	Y	Y	Y
Time Fixed Effects	Y	Y	Y
F test $GOV * \Delta DEF$ jointly significant	13.81***		75.71***
Prob> F	0.0000		0.0000
F test $GOV * \Delta DEF * \Delta capb_{prioryear}$ jointly significant			114.60***
Prob> F			0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico and runs from June 2008 to November 2015. GOV measures sector-level dependence on government sales from the 2012 Economic Census. $\Delta capb_{prioryear}$ is the prior year first difference in the cyclically adjusted primary balance, expressed as a percentage of potential output. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 7: Alternative Calculation Periods for External Dependence

	(1)	(2)	(3)	(4)	(5)
			External Dependence 2000-2015	External Dependence 2005-2015	External Dependence 1995-2005
Constant	-0.0037** (0.0009)	0.0110** (0.0044)	0.0189** (0.0078)	0.0179** (0.0077)	0.0190** (0.0079)
SH_{t-1}	0.0301 (0.0877)	-2.3129*** (0.7042)	-2.7585*** (0.7085)	-2.7471*** (0.7069)	-2.6574*** (0.7028)
$\sum_{j=1}^{12} EXTFIN^{US} * \Delta DEF_{t-j}$			-0.0313	-0.0321	-0.0383
Observations	1,501	1,501	1,501	1,501	1,501
Sector Fixed Effects	N	Y	Y	Y	Y
Time Fixed Effects	N	N	Y	Y	Y
F test $EXTFIN^{US} * \Delta DEF$ jointly significant			25.90****	45.08***	5.60***
Prob> F			0.0000	0.0000	0.0006

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico. $EXTFIN^{US}$ is the Rajan and Zingales (1998) measure of sector-level dependence on external finance, calculated for the 2000-2015 period. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 8: Alternative Calculation Period for Dependence on Government Spending

	(1)	(2)	(3)
Constant	0.0144 (0.0087)	0.0039 (0.0039)	0.0179* (0.0101)
SH_{t-1}	-2.3845*** (0.6360)	-0.4988 (0.4390)	-2.4367*** (0.5921)
$GOV * \Delta capb_{prioryear}$		-3.1218 (2.5135)	4.0786* (2.3127)
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j}$	-2.2133		-5.8766
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j} * \Delta capb_{prioryear}$			-248.2638
Observations	1,185	2,565	1,185
Sector Fixed Effects	Y	Y	Y
Time Fixed Effects	Y	Y	Y
F test $GOV * \Delta DEF$ jointly significant	17.02***		38.68***
Prob > F	0.0000		0.0000
F test $GOV * \Delta DEF * \Delta capb_{prioryear}$ jointly significant			33.55***
Prob > F			0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico and runs from June 2008 to November 2015. GOV measures sector-level dependence on government sales from the average of the 2007 and 2012 Economic Census. $\Delta capb_{prioryear}$ is the prior year first difference in the cyclically adjusted primary balance, expressed as a percentage of potential output. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 9: Controlling for Recession Risk: The Credit Channel

	(1)	(2)	(3)
Constant	-0.0037*** (0.0009)	0.0110** (0.0044)	0.0209** (0.0084)
SH_{t-1}	0.0301 (0.0877)	-2.3129*** (0.7042)	-2.8586*** (0.7608)
$\sum_{j=1}^{12} EXTFIN^{US} * \Delta DEF_{t-j}$			-0.0461
$\sum_{j=1}^{12} CYC * \Delta DEF_{t-j}$			0.1763
Observations	1,501	1,501	1,501
Sector Fixed Effects	N	Y	Y
Time Fixed Effects	N	N	Y
F test $EXTFIN^{US} * \Delta DEF$ jointly significant			34.51***
Prob> F			0.0000
F test $CYC * \Delta DEF$ jointly significant			12.66***
Prob> F			0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico. $EXTFIN^{US}$ is the Rajan and Zingales (1998) measure of sector-level dependence on external finance, calculated for the 2000-2015 period. CYC is sector level sensitivity to Puerto Rican economic growth. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 10: Controlling for Recession Risk: The Government Spending Channel

	(1)	(2)	(3)
Constant	0.0130 (0.0081)	0.0144 (0.0085)	0.0169* (0.0091)
SH_{t-1}	-2.2314*** (0.6529)	-2.3372 (0.6441)	-2.2461*** (0.6283)
$GOV * \Delta capb_{prioryear}$		0.1143 (2.6460)	2.1790 (1.9967)
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j}$	-3.3912		-6.8128
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j} * \Delta capb_{prioryear}$			-283.8122
$\sum_{j=1}^{12} CYC * \Delta DEF_{t-j}$	-0.0005	0.0683	-0.0002
Observations	1,343	1,343	1,343
Sector Fixed Effects	Y	Y	Y
Time Fixed Effects	Y	Y	Y
F test $GOV * \Delta DEF$ jointly significant	27.72***		14.08***
Prob> F	0.0000		0.0000
F test $GOV * \Delta DEF * \Delta capb_{prioryear}$ jointly significant			108.65***
Prob> F			0.0000
F test $CYC * \Delta DEF$ jointly significant	54.84***	50.96***	54.77***
Prob> F	0.0000	0.0000	0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico and runs from June 2008 to November 2015. GOV measures sector-level dependence on government sales from the 2012 Economic Census. $\Delta capb_{prioryear}$ is the prior year first difference in the cyclically adjusted primary balance, expressed as a percentage of potential output. SH_{t-1} is the lagged sector-level share of total private employment. CYC is sector level sensitivity to Puerto Rican economic growth. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 11: Controlling for Industry-Specific Shocks: The Credit Channel

	(1)	(2)	(3)
Constant	-0.0037*** (0.0009)	0.0110** (0.0044)	0.0197** (0.0090)
SH_{t-1}	0.0301 (0.0877)	-2.3129*** (0.7042)	-2.7518*** (0.6304)
$\sum_{j=1}^{12} EXTFIN^{US} * \Delta DEF_{t-j}$			-0.0714
$\sum_{j=1}^{12} \Delta E_{t-j}^{US}$			-0.0098
$\sum_{j=1}^{12} \Delta INDPRO_{t-j}^{US}$			0.4826
Observations	1,501	1,501	1,343
Sector Fixed Effects	N	Y	Y
Time Fixed Effects	N	N	Y
F test $EXTFIN^{US} * \Delta DEF$ jointly significant			12.35***
Prob> F			0.0000
F test ΔE^{US} jointly significant			3.04**
Prob> F			0.0200
F test $INDPRO^{US}$ jointly significant			14.34***
Prob> F			0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico. $EXTFIN^{US}$ is the Rajan and Zingales (1998) measure of sector-level dependence on external finance, calculated for the 2000-2015 period. Δ^{US} is employment growth in the relevant industrial sector in the U.S. $\Delta INDPRO^{US}$ is growth in industrial production in the relevant industrial sector in the U.S. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 12: Controlling for Industry-Specific Shocks: The Government Spending Channel

	(1)	(2)	(3)
Constant	0.0112 (0.0078)	0.0118** (0.0049)	0.0157 (0.0090)
SH_{t-1}	-2.3728*** (0.5098)	-2.1261*** (0.6764)	-2.3556*** (0.4787)
$GOV * \Delta capb_{prioryear}$		1.4063 (2.4186)	0.1807 (2.0225)
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j}$	-4.174		-6.8195
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j} * \Delta capb_{prioryear}$			-270.9299
$\sum_{j=1}^{12} \Delta E_{t-j}^{US}$	-0.1575	-0.1187	-0.2252
$\sum_{j=1}^{12} \Delta INDPRO_{t-j}^{US}$	0.6882	0.3883	0.7267
Observations	1,264	1,376	1,264
Sector Fixed Effects	Y	Y	Y
Time Fixed Effects	Y	Y	Y
F test ΔE^{US} jointly significant	26.84***	34.48***	19.62***
Prob> F	0.0000	0.0000	0.0000
F test $INDPRO^{US}$ jointly significant	6.94***	9.92***	12.26***
Prob> F	0.0004	0.0000	0.0000
F test $GOV * \Delta DEF$ jointly significant	11.65***		12.95***
Prob> F	0.0000		0.0000
F test $GOV * \Delta DEF * \Delta capb_{prioryear}$ jointly significant			23.06***
Prob> F			0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico and runs from June 2008 to November 2015. GOV measures sector-level dependence on government sales from the 2012 Economic Census. $\Delta capb_{prioryear}$ is the prior year first difference in the cyclically adjusted primary balance, expressed as a percentage of potential output. ΔE^{US} is employment growth in the relevant industrial sector in the U.S. $\Delta INDPRO^{US}$ is growth in industrial production in the relevant industrial sector in the U.S. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 13: Controlling for Puerto Rican Industry-Specific Shocks: The Credit Channel

	(1)	(2)	(3)
Constant	-0.0037*** (0.0009)	0.0110** (0.0044)	0.0186** (0.0080)
SH_{t-1}	0.0301 (0.0877)	-2.3129*** (0.7042)	-2.7069*** (0.7733)
$\sum_{j=1}^{12} EXTFIN^{US} * \Delta DEF_{t-j}$			-0.1683
$\sum_{j=1}^{12} H * EXTFIN^{US} * \Delta DEF_{t-j}$			0.2857
Observations	1,501	1,501	1,501
Sector Fixed Effects	N	Y	Y
Time Fixed Effects	N	N	Y
F test $EXTFIN^{US} * \Delta DEF$ jointly significant			4.20***
Prob> F			0.0032
F test $H * EXTFIN^{US} * \Delta DEF$ jointly significant			9.69***
Prob> F			0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico. $EXTFIN^{US}$ is the Rajan and Zingales (1998) measure of sector-level dependence on external finance, calculated for the 2000-2015 period. H is a dummy variable indicating if a sector is both above the median in dependence on external finance and above the median in share of total private employment. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 14: Controlling for Puerto Rican Industry-Specific Shocks: The Government Spending Channel

	(1)	(2)	(3)
Constant	0.0152*	0.0174**	0.0205**
	(0.0072)	(0.0082)	(0.0090)
SH_{t-1}	-2.8794***	-3.0625***	-3.0002***
	(0.7236)	(0.6854)	(0.7110)
$GOV * \Delta capb_{prioryear}$		-0.0863	3.1854
		(2.8087)	(2.4807)
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j}$	-5.9083		-13.4721
$\sum_{j=1}^{12} H * GOV * \Delta DEF_{t-j}$	3.9477	0.5734	2.5229
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j} * \Delta capb_{prioryear}$			-772.5044
Observations	1,224	1,224	1,224
Sector Fixed Effects	Y	Y	Y
Time Fixed Effects	Y	Y	Y
F test $GOV * \Delta DEF$ jointly significant	138.04***		64.12***
Prob> F	0.0000		0.0000
F test $H * GOV * \Delta DEF$ jointly significant	69.05***	15.99***	36.04***
Prob> F	0.0000	0.0000	0.0000
F test $GOV * \Delta DEF * \Delta capb_{prioryear}$ jointly significant			193.18***
Prob> F			0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico and runs from June 2008 to November 2015. GOV measures sector-level dependence on government sales from the 2012 Economic Census. $\Delta capb_{prioryear}$ is the prior year first difference in the cyclically adjusted primary balance, expressed as a percentage of potential output. H is a dummy variable indicating if a sector is both above the median in dependence on government demand and above the median in share of total private employment. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 15: Controlling for Population Shocks: The Credit Channel

	(1)	(2)	(3)
Constant	-0.0037*** (0.0009)	0.0110** (0.0044)	0.0179** (0.0070)
SH_{t-1}	0.0301 (0.0877)	-2.3129*** (0.7042)	-3.0987** (1.2225)
$\sum_{j=1}^{12} EXTFIN^{US} * \Delta DEF_{t-j}$			-0.0077
$\sum_{j=1}^{12} EXTFIN^{US} * \Delta POP_{prioriyear}$			0.4646 (0.8411)
Observations	1,501	1,501	1,501
Sector Fixed Effects	N	Y	Y
Time Fixed Effects	N	N	Y
F test $EXTFIN^{US} * \Delta DEF$ jointly significant			32.22***
Prob> F			0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico. $EXTFIN^{US}$ is the Rajan and Zingales (1998) measure of sector-level dependence on external finance, calculated for the 2000-2015 period. ΔPOP is the annual growth rate in Puerto Rico's population. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 16: Controlling for Population Shocks: The Government Spending Channel

	(1)	(2)	(3)
Constant	0.0116 (0.0076)	0.0024 (0.0035)	0.0148 (0.0097)
SH_{t-1}	-2.2381*** (0.6420)	-0.3906 (0.4102)	-2.2794*** (0.6370)
$GOV * \Delta capb_{prioryear}$		-4.1315** (1.7557)	1.3652 (2.4848)
$GOV * \Delta POP_{prioryear}$			-3.6795 (12.6429)
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j}$	-3.3875		-6.8725
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j} * \Delta capb_{prioryear}$			-287.8828
Observations	1,343	2,907	1,343
Sector Fixed Effects	Y	Y	Y
Time Fixed Effects	Y	Y	Y
F test $GOV * \Delta DEF$ jointly significant	5.67***		7.80***
Prob> F	0.0009		0.0001
F test $GOV * \Delta DEF * \Delta capb_{prioryear}$ jointly significant			120.33***
Prob> F			0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico and runs from June 2008 to November 2015. GOV measures sector-level dependence on government sales from the 2012 Economic Census. $\Delta capb_{prioryear}$ is the prior year first difference in the cyclically adjusted primary balance, expressed as a percentage of potential output. ΔPOP is the annual growth rate in Puerto Rico's population. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 17: Controlling for Housing Shocks: The Credit Channel

	(1)	(2)	(3)
Constant	-0.0037*** (0.0009)	0.0110** (0.0044)	0.0183** (0.0080)
SH_{t-1}	0.0301 (0.0877)	-2.3129*** (0.7042)	-2.8125*** (0.7140)
$\sum_{j=1}^{12} EXTFIN^{US} * \Delta DEF_{t-j}$			-0.0526
$\sum_{k=1}^4 EXTFIN^{US} * \Delta HP_{t-k}$			-0.0082
Observations	1,501	1,501	1,501
Sector Fixed Effects	N	Y	Y
Time Fixed Effects	N	N	Y
F test $EXTFIN^{US} * \Delta DEF$ jointly significant			20.11***
Prob> F			0.0000
F test $EXTFIN^{US} * \Delta HP$ jointly significant			3.73**
Prob> F			0.0222

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico. $EXTFIN^{US}$ is the Rajan and Zingales (1998) measure of sector-level dependence on external finance, calculated for the 2000-2015 period. ΔHP_{t-k} is the quarterly growth rate of Puerto Rico's housing price index k quarters ago. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 18: Controlling for Housing Shocks: The Government Spending Channel

	(1)	(2)	(3)
Constant	0.0116 (0.0076)	0.0024 (0.0035)	0.0102 (0.0076)
SH_{t-1}	-2.2381*** (0.6420)	-0.3906 (0.4102)	-2.3022*** (0.6128)
$GOV * \Delta capb_{prioryear}$		-4.1315** (1.7557)	3.7822* (1.9707)
$\sum_{k=1}^4 GOV * \Delta H P_{t-k}$			1.4019
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j}$	-3.3875		-7.6895
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j} * \Delta capb_{prioryear}$			-392.1055
Observations	1,343	2,907	1,343
Sector Fixed Effects	Y	Y	Y
Time Fixed Effects	Y	Y	Y
F test $GOV * \Delta DEF$ jointly significant	5.67***		18.62***
Prob> F	0.0009		0.0000
F test $GOV * \Delta H P$ jointly significant			7.48***
Prob> F	0.0009		0.0013
F test $GOV * \Delta DEF * \Delta capb_{prioryear}$ jointly significant			84.01***
Prob> F			0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico and runs from June 2008 to November 2015. GOV measures sector-level dependence on government sales from the 2012 Economic Census. $\Delta capb_{prioryear}$ is the prior year first difference in the cyclically adjusted primary balance, expressed as a percentage of potential output. $\Delta H P_{t-k}$ is the quarterly growth rate of Puerto Rico's housing price index k quarters ago SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 19: Controlling for the Credit Channel

	(1)	(2)	(3)
Constant	0.0130 (0.0075)	0.0145* (0.0083)	0.0169* (0.0084)
SH_{t-1}	-2.3845*** (0.6360)	-0.4988 (0.4390)	-2.4367*** (0.5921)
$GOV * \Delta capb_{prioryear}$		-0.0173 (2.7753)	2.2279 (2.0010)
$\sum_{j=1}^{12} EXTFIN^{US} * \Delta DEF_{t-j}$	-0.0997	-0.0951	-0.0995
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j}$	-3.8411		-7.2628
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j} * \Delta capb_{prioryear}$			-288.6512
Observations	1,343	1,343	1,343
Sector Fixed Effects	Y	Y	Y
Time Fixed Effects	Y	Y	Y
F test $GOV * \Delta DEF$ jointly significant	6.23***		19.23***
Prob> F	0.0005		0.0000
F test $GOV * \Delta DEF * \Delta capb_{prioryear}$ jointly significant			120.40***
Prob> F			0.0000
F test $EXTFIN^{US} * \Delta DEF$ jointly significant	50.52***	31.26***	43.22***
Prob> F	0.0000	0.0000	0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico and runs from June 2008 to November 2015. $EXTFIN^{US}$ is the Rajan and Zingales (1998) measure of sector-level dependence on external finance, calculated for the 2000-2015 period. GOV measures sector-level dependence on government sales from the average of the 2007 and 2012 Economic Census. $\Delta capb_{prioryear}$ is the prior year first difference in the cyclically adjusted primary balance, expressed as a percentage of potential output. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 20: Controlling for Autocorrelation of Employment Growth: The Credit Channel

	(1)	(2)	(3)
Constant	0.0189** (0.0078)	0.0177** (0.0076)	0.0177** (0.0076)
SH_{t-1}	-2.7585*** (0.7085)	-2.6338*** (0.6176)	-2.6208*** (0.6072)
ΔE_{t-1}	-0.0914** (0.0428)	-0.0924** (0.0419)	-0.0927** (0.0421)
ΔE_{t-2}		-0.0094 (0.0263)	-0.0122 (0.0255)
ΔE_{t-3}			-0.0261 (0.0533)
$\sum_{j=1}^{12} EXTFIN^{US} * \Delta DEF_{t-j}$	-0.0346	-0.0356	-0.0389
Observations	1,501	1,501	1,501
Sector Fixed Effects	N	Y	Y
Time Fixed Effects	N	N	Y
F test $EXTFIN^{US} * \Delta DEF$ jointly significant	22.51***	19.40***	19.52***
Prob> F	0.0000	0.0000	0.0000

Notes: ΔE_t is employment growth, the dependent variable. ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico. $EXTFIN^{US}$ is the Rajan and Zingales (1998) measure of sector-level dependence on external finance, calculated for the 2000-2015 period. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 21: Controlling for Autocorrelation of Employment Growth: The Government Spending Channel

	(1)	(2)	(3)
Constant	0.0151 (0.0087)	0.0150* (0.0086)	0.0152* (0.0086)
SH_{t-1}	-2.1933*** (0.5820)	-2.147 (0.5495)	-2.176 (0.5596)
ΔE_{t-1}	-0.0487 (0.0527)	-0.0508 (0.0540)	-0.0501 (0.0559)
ΔE_{t-2}		-0.0357 (0.0304)	-0.0344 (0.0311)
ΔE_{t-3}			0.0204 (0.0654)
$GOV * \Delta capb_{prioryear}$	2.0677 (2.1540)	2.0096 (2.2484)	2.0007 (2.1928)
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j}$	-7.0533	-7.2867	-7.1615
$\sum_{j=1}^{12} GOV * \Delta DEF_{t-j} * \Delta capb_{prioryear}$	-286.6169	-296.7561	-294.2137
Observations	1,343	1,343	1,343
Sector Fixed Effects	Y	Y	Y
Time Fixed Effects	Y	Y	Y
F test $GOV * \Delta DEF$ jointly significant	10.02***	8.99***	8.55***
Prob> F	0.0000	0.0001	0.0001
F test $GOV * \Delta DEF * \Delta capb_{prioryear}$ jointly significant	83.58***	75.38***	77.44***
Prob> F	0.0000	0.0000	0.0000

Notes: ΔDEF is the change in the monthly average of the five-year cumulative default probability for the Commonwealth of Puerto Rico and runs from June 2008 to November 2015. GOV measures sector-level dependence on government sales from the 2012 Economic Census. $\Delta capb_{prioryear}$ is the prior year first difference in the cyclically adjusted primary balance, expressed as a percentage of potential output. SH_{t-1} is the lagged sector-level share of total private employment. The model is estimated using OLS. ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Standard errors are in parentheses and are clustered by industry.

Table 22: 3 Day Window: Overlap Allowed

	<i>CAR</i>	<i>CΔS</i>	Observations
All Events	-0.0127** (0.0024)	11.3958*** (1.0069)	544:21,210
Negative Events	-0.0178*** (0.0028)	11.9747*** (0.7874)	312:12,798
Negative Ratings Events	-0.0168** (0.0024)	10.6593*** (0.6722)	268:11,042
Negative Non-GO Ratings Events	0.0049 (0.004)	2.9952*** (0.7053)	132:5,424
Negative GO Ratings Events	-0.0356** (0.0076)	18.0587*** (1.0898)	144:5,618
Negative Legal Events	-0.0240* (0.0086)	20.2462*** (2.9972)	44:1,756
Positive Events	-0.0047** (0.0009)	6.8562*** (2.0743)	88:3,103
Neutral Events	-0.0039 (0.0029)	12.4128*** (1.6357)	96:3,551
Mixed Events	-0.0111 (0.0066)	13.1395*** (2.6791)	48:1,758

Notes: ***, **, and * indicate significance at the 99%, 95%, and 90% levels, respectively. Each variable is a regression on a constant for the indicated stratum of events. Standard errors are clustered by firm for *CAR* and by bond for *CΔS*. *CAR* is expressed as the sum of log differences in stock price and *CΔS* is expressed in basis points.

Table 23: 1 Day Window

	<i>CAR</i>	<i>CΔS</i>	Observations
All Events	-0.0038*** (0.0005)	4.986*** (0.4714)	564:16,370
Negative Events	-0.0069*** (0.0007)	5.5393*** (0.4484)	320:9,948
Negative Ratings Events	-0.0075*** (0.0008)	4.8365*** (0.4409)	288:8,993
Negative Non-GO Ratings Events	-0.0035* (0.0012)	1.6196*** (0.5345)	184:5,647
Negative GO Ratings Events	-0.0144*** (0.0022)	10.2656*** (0.8084)	104:3,346
Negative Legal Events	-0.0016+ (0.0007)	12.1573*** (1.8263)	32:955
Positive Events	0.0004 (0.0020)	2.7351** (1.0707)	104:2,679
Neutral Events	0.0011 (0.0009)	5.4560*** (0.9464)	124:3,271
Mixed Events	-0.0095 (0.0048)	2.8375 (2.0687)	16:472

Notes: ***, **, *, and + indicate significance at the 99%, 95%, 90%, and 85% levels, respectively. Each variable is a regression on a constant for the indicated stratum of events. Standard errors are clustered by firm for *CAR* and by bond for *CΔS*. *CAR* is expressed as the sum of log differences in stock price and *CΔS* is expressed in basis points.

References

Rajan, R. and Zingales, L. (1998). Financial dependence and growth. *The American Economic Review*, 88(3):559–586.