Online Appendix to "The Home Bias in Sovereign Ratings"

May 2015

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Main Results

Home bias in sovereign ratings (all agencies pooled, yearly averages)								
eterminants of sovereign ratings (only control variables, all agencies pooled)								
Determinants of sovereign ratings (control variables of models in Table 3, column 1)								
Adj. R-squared and number of observations of OLS models in Table 3								
Home bias in sovereign ratings (OLS, pre- and post-GFC onset)								
Home bias in sovereign ratings (all agencies pooled, additional control for same legal origin)								

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Appendix A21:

Additional References

Appendix A22: Detailed sources of overview tables

СІ	Dagong	DBRS	Feri	Fitch	Moody's	JCR	R&I	S&P	Numerical
CYP (KWT)	CHN	CAN	DEU	USA (FRA)	USA	JPN	JPN	USA	Scale
AAA	AAA	ΑΑΑ	ΑΑΑ	ΑΑΑ	Aaa	ΑΑΑ	AAA	ΑΑΑ	21
AA+	AA+	ААН	AA+	AA+	Aa1	AA+	AA+	AA+	20
AA	AA	AA	AA	AA	Aa2	AA	AA	AA	19
AA-	AA-	AAL	AA-	AA-	Aa3	AA-	AA-	AA-	18
A+	A+	АН	A+	A+	A1	A+	A+	A+	17
А	А	А	А	А	A2	А	А	А	16
A-	A-	AL	A-	A-	A3	A-	A-	A-	15
BBB+	BBB+	вввн	BBB+	BBB+	Baa1	BBB+	BBB+	BBB+	14
BBB	BBB	BBB	BBB	BBB	Baa2	BBB	BBB	BBB	13
BBB-	BBB-	BBBL	BBB-	BBB-	Baa3	BBB-	BBB-	BBB-	12
BB+	BB+	ввн	BB+	BB+	Ba1	BB+	BB+	BB+	11
BB	BB	BB	BB	BB	Ba2	BB	BB	BB	10
BB-	BB-	BBL	BB-	BB-	Ba3	BB-	BB-	BB-	9
B+	B+	вн	B+	B+	B1	B+	B+	B+	8
В	В	В	В	В	B2	В	В	В	7
В-	B-	BL	В-	B-	В3	В-	B-	B-	6
CCC+	CCC+	СССН	CCC+	CCC+	Caa1	CCC+	CCC+	CCC+	5
ссс	ссс	ссс	ссс	ссс	Caa2	ссс	ссс	ссс	4
CCC-	CCC-	CCCL	CCC-	CCC-	Caa3	CCC-	CCC-	CCC-	3
СС	сс	СС	СС	СС	Ca	СС	СС	СС	2
С	С	С		С	С	С	СС	С	1
DDD				DDD		DDD		SD	1
DD				DD		DD			1
D	D	D	D	D		D	D	D	1
				RD		RD			1

<u>Sources:</u> Rating scales from company webpages, except DBRS and Feri. DBRS and Feri scales were obtained from the agencies via personal e-mail communication.

Appendix A1: Sovereign ratings by agency and country (as of 28 June 2013)

Legend: 21 (AAA) 18 - 20 (AA-/AA/A+) 15 - 17 (A-/A/A+) 12 - 14 (BBB-/BB/BB+) 9 - 11 (BB-/BB/BB+) 6 - 8 (B-/B/B+) 3 - 5 (CCC-/CCC/+) 1 - 2 (CC//CD) Not rated

(a) CI (Cyprus/Kuwait)

(b) Dagong (China)



(c) DBRS (Canada)



Appendix A1 (continued): Sovereign ratings by agency and country (as of 28 June 2013)



(d) Feri (Germany)



Appendix A1 (continued): Sovereign ratings by agency and country (as of 28 June 2013)



(g) Moody's (USA)

(i) S&P (USA)





Appendix A2: Schematic illustration of the rating process

Agency	CI	Dagong	DBRS	Feri	Fitch	JCR	Moody's	R&I	S&P
Home country (location)	Cyprus	China	Canada	Germany	USA	Japan	USA	Japan	USA
Home country (ownership)	Kuwait	China	Canada	Germany	France	Japan	USA	Japan	USA
Does the agency provide - solicited ratings?	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
- unsolicited rating?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
How long does a typical rating process take?	Unspecified	Unspecified	No information	10-30 days 30-60 days		60 days	60-90 days	Unspecified	30-45 days
How many analysts are involved in the rating process (per sovereign rating)?	One analyst	Project team (several analysts)	One analyst	One/two analysts and compliance officer	Two analysts	Two analysts	One analyst	Several analysts	Two analysts
Does the agency collect and analyze publically available data?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Does the agency make an official cooperation offer to the sovereign?	Yes	Yes	Yes*	No	Yes	Yes*	Yes	Yes*	Yes
Does an interview with the sovereign take place?	No*	No*	Yes*	No*	Yes*	Yes*	Yes*	Yes*	Yes*
Does the lead analyst submit a rating proposal to the rating committee?	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes
Who is part of the rating committee responsible for the final rating decision?	Several analysts and chairperson	Project team, external experts and compliance officer	No information	Three or four	At least five analysts and senior director	At least four	Unspecified	Several analysts and chairperson	Five to seven analysts and chairperson
Are the issuers notified prior to the publication of the rating?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Can sovereigns appeal against a rating publication?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Surveillance: Is there a regular updating interval?	Unspecified	At least annually	Monthly	Monthly	At least annually	Monthly	Quarterly	Unspecified	Unspecified
Who initiates an update?	Lead analyst	Project team	Surveillance analysts	Lead analyst(s) and rating committee	All analysts	Unspecified	Lead analyst	Lead analyst	All analysts

Appendix A3: Comparison of credit rating process (sovereign ratings)

Sources: Personal communication with Moody's Client Services (28 February 2013, 4 March 2013, 22 March 2013, 25 March 2013), Feri EuroRating Services AG (14 March 2013, 21 March 2013), Dagong Global Credit Rating (5 April 2013, 3 June 2013), and internet research (see Online Appendix A22 for a detailed list of sources).

Note: *: for solicited ratings only

Appendix A4: Construction of the rating database

Data on sovereign ratings assigned by CI, Dagong, DBRS, JCR, Moody's, R&I, and S&P have been obtained from Bloomberg. Hence, everybody with access to Bloomberg can replicate the data easily. We downloaded the data in late September 2012 in the library at Princeton University and updated all information on June 28, 2013.¹

The approach was the following:

(1) To access the data, we logged on to a Bloomberg terminal and typed "CSDR." The variables selected are *Foreign Long Term* for CI, *FC LT Sovereign Ratings* for Dagong, *Foreign Currency LT Debt* for DBRS, JCR, Moody's and S&P, and *Foreign Curr Issuer Rtg* for R&I. We followed Bloomberg and collected Moody's foreign currency issuer rating if Moody's had not assigned a foreign-currency debt rating to a country. We took screenshots for each page displaying sovereign ratings.

<pre></pre>	lanation.			
91) Cc	mpany Tree	Ratings	 Page 1/2 	Credit Profile
Kingdom of Belgium				
			Fitch Foreign Currency LT Debt	
MOODY'S				
1) Outlook	Rating	Watch	Effective	STABLE
2) CC LT Foreign Bar				AA
3) CC LT Foreign Cur				AA
4) CC ST Foreign Bar	AA+		05/02/2006	AA
5) CC ST Foreign Cur	AA		06/17/2002	AA
6) Long Term Rating				F1+
7) LC Curr Issuer Ra	AA+		08/10/1994	F1+
8) FC Curr Issuer Ra				
9) Foreign Currency				
10) Local Currency LT				NEG
11) Local Currency S1				AAH
				AAH
12) STANDARD & POOF				– R-1H
13) Outlook	Up /	Down /	No Change 🖊 Initial	R-1H
14) Foreign Currency				
15) Local Currency LT			Close	
16) Foreign Currency				
17) Local Currency ST	Debt	A-1+u		
Australia 61 2 9777 8600 Japan 81 3 3201 8900) Brazil 5511 30 Singapore 65	048 4500 Europe 44 6212 1000 U.	20 7330 7500 Germany 49 69 9204 1210 S. 1 212 318 2000 Copyright 201 SN 251633 EDT GMT-4:00 H435-220	Hong Kong 852 2977 6000 3 Bloomberg Finance L.P. 2-0 27-Jun-2013 17:41:32

Example of screenshot for Fitch Foreign Currency Long Term Debt ratings.

¹ The ratings from Feri and Fitch have been obtained from the companies directly.

2) Using these screenshots, two student assistants entered the letter-ratings into a database. The double coding was used to identify and correct typing errors.

3) The three-letter ratings were translated to numerical values according to the 21-point scale presented in Appendix A0.

4) We checked the data for potential errors, for example by examining rating changes by more than two steps. Two obvious mistakes in the R&I data from Bloomberg have been corrected after e-mail correspondence with the agency's chief analyst.

Country	CI	Dagong	DBRS	Feri	Fitch	JCR	Moody's	R&I	S&P
Albania				06/1999-06/2013			11/2010-06/2013		04/2010-06/2013
Andorra									05/2003-06/2013
Angola		05/2013-06/2013			05/2010-06/2013		05/2010-06/2013		05/2010-06/2013
Argentina		07/2010-06/2013	09/2007-06/2013	06/1999-06/2013	05/1997-06/2013		01/1990-06/2013		08/1993-06/2013
Armenia					05/2006-06/2013		07/2006-06/2013		
Aruba					04/2002-06/2013				05/2008-06/2013
Australia		07/2010-06/2013		06/1999-06/2013	01/1996-06/2013	05/1998-06/2013	01/1990-06/2013	12/1999-06/2013	01/1990-06/2013
Austria		10/2010-06/2013	06/2011-06/2013	06/1999-06/2013	08/1994-06/2013		01/1990-06/2013	11/1999-09/2005	01/1990-06/2013
Azerbaijan					07/2000-06/2013		09/2006-06/2013		12/2008-06/2013
Bahamas							04/1997-06/2013		12/2003-06/2013
Bahrain	06/2008-06/2013				02/2000-06/2013		08/2002-06/2013		07/2002-06/2013
Bangladesh							04/2010-06/2013		04/2010-06/2013
Barbados							12/1994-06/2013		12/1999-06/2013
Belarus		04/2012-06/2013					07/2010-06/2013		08/2007-06/2013
Belgium		07/2010-06/2013	11/2011-06/2013	06/1999-06/2013	08/1994-06/2013	04/1998-06/2013	01/1990-06/2013	12/2000-06/2013	12/1992-06/2013
Belize						i i i	01/1999-06/2013		08/2000-06/2013
Benin					09/2004-01/2012				12/2003-06/2013
Bermuda					08/1994-06/2013		07/2010-06/2013		06/1995-06/2013
Bolivia		05/2013-06/2013			03/2004-06/2013		05/1998-06/2013		07/1998-06/2013
Bosnia & Herzegovina							04/2006-06/2013		12/2008-06/2013
Botswana		04/2013-06/2013					03/2001-06/2013		04/2001-06/2013
Brazil		07/2010-06/2013	07/2006-06/2013	06/1999-06/2013	12/1994-06/2013	06/2007-06/2013	01/1990-06/2013	04/1998-06/2013	11/1994-06/2013
Bulgaria				06/1999-06/2013	04/1998-06/2013	10/2002-06/2011	09/1996-06/2013		11/1998-06/2013
Burkina Faso									03/2004-06/2013
Cambodia	07/2010-06/2013						05/2007-06/2013		04/2007-06/2013
Cameroon					09/2003-06/2013				11/2003-06/2013
Canada		07/2010-06/2013	01/2000-06/2013	06/1999-06/2013	08/1994-06/2013	07/2000-06/2013	01/1990-06/2013	03/2000-09/2012	01/1990-06/2013
Cape Verde					08/2003-06/2013				12/2008-06/2013
Cayman Islands		02/2012-06/2013					11/2009-06/2013		
Chile		07/2010-06/2013	05/2006-06/2013	06/1999-06/2013	11/1994-06/2013		05/1999-06/2013		12/1992-06/2013
China	10/2007-06/2013	07/2010-06/2013		06/1999-06/2013	12/1997-06/2013		01/1990-06/2013	04/1998-06/2013	12/1992-06/2013
Colombia		03/2012-06/2013	12/2006-06/2013	06/1999-06/2013	08/1994-06/2013		08/1993-06/2013	12/2012-06/2013	06/1993-06/2013
Cook Is									01/1998-06/2013
Costa Rica					05/1998-06/2013		05/1997-06/2013		07/1997-06/2013
Croatia		04/2012-06/2013		06/1999-06/2013	01/1997-06/2013		01/1997-06/2013	04/1998-06/2013	01/1997-06/2013
Cuba							07/1999-06/2013		
Cyprus	11/2007-06/2013				02/2002-06/2013		01/1998-06/2013		02/1994-06/2013
Czech Rep	09/2008-06/2013	11/2011-06/2013		06/1999-06/2013	08/1995-06/2013	05/2001-06/2013	06/1998-06/2013	04/1998-06/2013	07/1993-06/2013
Denmark		07/2010-06/2013	09/2012-06/2013	06/1999-06/2013	08/1994-06/2013	10/2001-06/2013	01/1990-06/2013	05/2001-06/2013	01/1990-06/2013
Dominican Rep					08/2003-06/2013		05/2001-06/2013		02/1997-06/2013
Ecuador		07/2010-06/2013			11/2002-06/2013		07/1997-06/2013		07/2000-06/2013
Egypt	09/2007-06/2013	07/2010-06/2013		06/1999-06/2013	08/1997-06/2013		07/2001-06/2013		01/1997-06/2013
El Salvador					09/1996-06/2013		02/2002-06/2013		08/1996-06/2013
Estonia		07/2010-06/2013		06/1999-06/2013	09/1997-06/2013		06/2002-06/2007		12/1997-06/2013
Fiji							08/2006-06/2013		08/2006-06/2013
Finland		12/2010-06/2013	08/2012-06/2013	06/1999-06/2013	08/1994-06/2013	02/2001-06/2013	01/1990-06/2013	05/2001-06/2013	01/1990-06/2013
France		07/2010-06/2013	05/2011-06/2013	06/1999-06/2013	08/1994-06/2013	11/2000-06/2013	02/1992-06/2013	03/2000-06/2013	01/1990-06/2013

Appendix A5: Date of first and last rating assigned to sovereigns by agency (01/1990-06/2013)

Country	CI	Dagong	DBRS	Feri	Fitch	JCR	Moody's	R&I	S&P
Gabon					10/2007-06/2013				11/2007-06/2013
Gambia					11/2002-07/2007				
Georgia					07/2007-06/2013		10/2010-06/2013		12/2005-06/2013
Germany		07/2010-06/2013	06/2011-06/2013	06/1999-06/2013	08/1994-06/2013	11/2000-06/2013	04/1993-06/2013	03/2000-06/2013	01/1990-06/2013
Ghana		04/2013-06/2013			12/2003-06/2013		12/2012-06/2013		09/2003-06/2013
Greece	02/2010-06/2013	07/2010-06/2013		06/1999-06/2013	11/1995-06/2013		05/1994-06/2013	06/2000-06/2013	12/1992-06/2013
Grenada									03/2002-06/2013
Guatemala					02/2006-06/2013		08/1997-06/2013		10/2001-06/2013
Honduras							03/2013-06/2013		10/2008-06/2013
Hong Kong (China)	11/2007-06/2013	10/2010-06/2013		06/1999-06/2013	08/1994-06/2013	04/1998-06/2013	07/2004-06/2013	04/1998-06/2013	12/1992-06/2013
Hungary	11/2008-06/2013	07/2010-06/2013		06/1999-06/2013	04/1996-06/2013	11/1999-06/2013	12/1993-06/2013	11/2000-06/2013	04/1992-06/2013
Iceland		07/2010-06/2013			02/2000-06/2013		01/1990-06/2013	06/2007-09/2012	12/1992-06/2013
India	02/2007-06/2013	07/2010-06/2013	06/2007-06/2013	06/1999-06/2013	03/2000-06/2013	06/1998-06/2013	07/1999-06/2013	06/1998-06/2013	12/1992-06/2013
Indonesia	02/2009-06/2013	07/2010-06/2013		06/1999-06/2013	06/1997-06/2013	10/2002-06/2013	03/1994-06/2013	04/1998-06/2013	12/1992-06/2013
Iran	02/2010-06/2013				05/2002-04/2008				
Ireland		12/2010-06/2013	07/2010-06/2013	06/1999-06/2013	10/1994-06/2013		01/1990-06/2013	04/1998-06/2013	01/1990-06/2013
Isle of Man							04/2003-06/2013		02/2000-06/2013
Israel		07/2010-06/2013		06/1999-06/2013	11/1995-06/2013		12/1995-06/2013		12/1992-06/2013
Italy		07/2010-06/2013	02/2011-06/2013	06/1999-06/2013	08/1994-06/2013	04/1998-06/2013	01/1990-06/2013	04/1998-06/2013	12/1992-06/2013
Jamaica					08/2006-06/2013		03/1998-06/2013		11/1999-06/2013
Japan		07/2010-06/2013		06/1999-06/2013	08/1994-06/2013	10/2000-06/2013	12/2002-06/2013	03/2000-06/2013	01/1990-06/2013
Jordan	10/2008-06/2013	05/2013-06/2013					11/2010-06/2013		10/1995-06/2013
Kazakhstan		07/2010-06/2013			11/1996-06/2013		11/1996-05/2007		11/1996-06/2013
Kenya		12/2010-06/2013			12/2007-06/2013		11/2012-06/2013		09/2006-06/2013
Korea	06/2007-06/2013	07/2010-06/2013		06/1999-06/2013	06/1996-06/2013	04/1998-06/2013	04/1998-06/2013	04/1998-06/2013	01/1990-06/2013
Kuwait	04/2007-06/2013	05/2012-06/2013			12/1995-06/2013		07/1999-06/2013		10/1997-06/2013
Latvia	11/2008-06/2013	10/2010-06/2013		06/1999-06/2013	06/1998-06/2013		08/1999-06/2013	09/2008-06/2013	01/1997-06/2013
Lebanon					02/1997-06/2013		02/1997-06/2013	04/1998-01/2011	02/1997-06/2013
Lesotho					09/2002-06/2013				
Libya					05/2009-04/2011				03/2009-03/2011
Liechtenstein									12/1996-06/2013
Lithuania		03/2011-06/2013		06/1999-06/2013	01/1997-06/2013		09/1996-06/2013		06/1997-06/2013
Luxembourg		07/2010-06/2013			08/1994-06/2013		07/1999-06/2013	12/2000-09/2012	04/1994-06/2013
Macau	09/2008-06/2013	10/2010-06/2013			05/2013-06/2013		07/1999-06/2013		
Macedonia					11/2005-06/2013	09/2007-01/2012			08/2005-06/2013
Malawi					05/2003-08/2009				
Malaysia	09/2006-06/2013	07/2010-06/2013		06/1999-06/2013	08/1998-06/2013	10/2001-06/2013	01/1990-06/2013	04/1998-06/2013	09/1990-06/2013
Mali					04/2004-12/2009				05/2004-07/2008
Malta					07/1996-06/2013		07/2000-06/2013		03/1994-06/2013
Mauritius		07/2012-06/2013					03/1996-10/2000		
Mexico		07/2010-06/2013	07/2006-06/2013	06/1999-06/2013	08/1995-06/2013	06/1998-06/2013	02/1991-06/2013	11/2000-06/2013	07/1992-06/2013
Moldova					07/1998-12/2009		01/1997-09/2009		
Mongolia		07/2010-06/2013			07/2005-06/2013		10/2005-06/2013		12/1999-06/2013
Montenegro							03/2008-06/2013		12/2004-06/2013
Montserrat									10/2004-06/2013
Morocco	10/2007-06/2013	10/2010-06/2013			04/2007-06/2013		07/1999-06/2013	05/2000-12/2005	03/1998-06/2013
Mozambique					07/2003-06/2013				07/2004-06/2013
Namibia					12/2005-06/2013		09/2011-06/2013		
Netherlands		07/2010-06/2013	05/2011-06/2013	06/1999-06/2013	08/1994-06/2013	02/2001-06/2013	02/2012-06/2013	12/2000-06/2013	12/1992-06/2013

Country	CI	Dagong	DBRS	Feri	Fitch	JCR	Moody's	R&I	S&P
New Zealand		07/2010-06/2013		06/1999-06/2013	03/2002-06/2013		01/1990-06/2013	12/1999-09/2012	01/1990-06/2013
Nicaragua							07/1999-06/2013		
Nigeria		07/2010-06/2013			01/2006-06/2013		11/2012-06/2013		02/2006-06/2013
Norway		07/2010-06/2013	03/2012-06/2013	06/1999-06/2013	03/1995-06/2013	02/2000-06/2013	01/1990-06/2013	05/2001-06/2013	01/1990-06/2013
Oman	04/2008-06/2013						07/1999-06/2013		02/1996-06/2013
Pakistan	10/2008-06/2013	07/2010-06/2013		06/1999-06/2013			11/1994-06/2013		11/1994-06/2013
Panama		07/2012-06/2013			09/1998-06/2013		01/1997-06/2013		01/1997-06/2013
Papua New Guinea					01/1999-01/2010		07/1999-06/2013		01/1999-06/2013
Paraguay					01/2013-06/2013		07/1999-06/2013		10/1995-06/2013
Peru		10/2010-06/2013	10/2007-06/2013	06/1999-06/2013	10/1999-06/2013		07/1999-06/2013		12/1997-06/2013
Philippines	12/2006-06/2013	07/2010-06/2013		06/1999-06/2013	07/1999-06/2013	04/1998-06/2013	07/1993-06/2013	04/1999-06/2013	06/1993-06/2013
Poland	12/2007-06/2013	07/2010-06/2013		06/1999-06/2013	10/1995-06/2013	05/2002-06/2013	06/1995-06/2013	07/2000-06/2013	06/1995-06/2013
Portugal		07/2010-06/2013	11/2010-06/2013	06/1999-06/2013	08/1994-06/2013	01/2000-06/2013	01/1990-06/2013	06/2000-06/2013	12/1992-06/2013
Qatar	01/2008-06/2013						09/1999-06/2013		02/1996-06/2013
Romania	11/2008-06/2013	07/2010-06/2013		06/1999-06/2013	03/1996-06/2013	04/1998-06/2013	06/1997-06/2013		04/1997-06/2013
Russia		07/2010-06/2013		06/1999-06/2013	10/1996-06/2013	03/2007-06/2013	11/1996-06/2013		10/1996-06/2013
Rwanda					12/2006-06/2013				12/2011-06/2013
Saint Vincent and the Grenadines							03/2008-06/2013		
San Marino					01/2001-06/2013				
Saudi Arabia	02/2008-06/2013	07/2010-06/2013			11/2004-06/2013		07/1999-06/2013		07/2003-06/2013
Senegal							03/2011-06/2013		12/2000-06/2013
Serbia				01/2005-06/2013	05/2005-06/2013				11/2004-06/2013
Seychelles					02/2010-06/2013				09/2006-08/2009
Singapore	08/2002-06/2013	07/2010-06/2013		06/1999-06/2013	11/1998-06/2013	04/1998-06/2013	07/1999-06/2013	04/1998-06/2013	12/1992-06/2013
Slovak Republic	09/2008-06/2013			06/1999-06/2013	08/1996-06/2013	03/2001-06/2013	05/1995-06/2013	04/1998-06/2013	02/1994-06/2013
Slovenia	12/2006-06/2013			06/1999-06/2013	05/1996-06/2013	04/2005-06/2013	05/1996-06/2013	11/2000-06/2013	05/1996-06/2013
South Africa	01/2006-06/2013	07/2010-06/2013			09/1994-06/2013		10/1994-06/2013	04/1998-06/2013	10/1994-06/2013
Spain		07/2010-06/2013	10/2010-06/2013	06/1999-06/2013	08/1994-06/2013	06/2006-06/2013	01/1990-06/2013	07/1998-06/2013	01/1990-06/2013
Sri Lanka	12/2006-06/2013	03/2011-06/2013			12/2005-06/2013		07/2011-06/2013		12/2005-06/2013
Suriname					06/2004-06/2013		02/2004-06/2013		11/1999-06/2013
Sweden		10/2010-06/2013	04/2012-06/2013	06/1999-06/2013	08/1994-06/2013		01/1990-06/2013	03/1999-06/2013	01/1990-06/2013
Switzerland		07/2010-06/2013	07/2011-06/2013	06/1999-06/2013	08/1994-06/2013		01/1990-06/2013		12/1992-06/2013
Taiwan	11/2003-06/2013	10/2010-06/2013		06/1999-06/2013	11/2001-06/2013		07/1999-06/2013	12/1998-06/2013	12/1992-06/2013
Thailand	04/2005-06/2013	07/2010-06/2013		06/1999-06/2013	05/1998-06/2013	04/1998-06/2013	01/1990-06/2013	04/1998-06/2013	01/1990-06/2013
Trinidad & Tobago							02/1993-06/2013		03/1996-06/2013
Tunisia	09/2004-06/2013	10/2010-06/2013			09/1995-06/2013		04/2003-06/2013	04/1998-06/2013	04/1997-06/2013
Turkey	07/2005-06/2013	07/2010-06/2013		06/1999-06/2013	08/1994-06/2013	04/1998-06/2013	05/1992-06/2013	09/2012-06/2013	04/1994-06/2013
Turkmenistan					01/1998-02/2005		07/1999-09/2010		
Uganda					03/2005-06/2013				12/2008-06/2013
Ukraine		07/2010-06/2013		06/1999-06/2013	06/2001-06/2013		02/1998-06/2013	04/1998-06/2013	12/2001-06/2013
United Arab Emirates	05/2007-06/2013						10/2000-06/2013	01/2011-06/2013	07/2007-06/2013
United Kingdom		07/2010-06/2013	07/2010-06/2013	06/1999-06/2013	08/1994-06/2013	11/2000-06/2013	01/1990-06/2013	03/2000-06/2013	01/1990-06/2013
United States		07/2010-06/2013	09/2011-06/2013	06/1999-06/2013	08/1994-06/2013	11/2000-06/2013	01/1990-06/2013	03/2000-06/2013	09/1991-06/2013
Uruguay		12/2010-06/2013	02/2008-06/2013		01/1995-06/2013		10/1993-06/2013	04/1998-06/2013	02/1994-06/2013
Venezuela		07/2010-06/2013			09/1997-06/2013		01/1990-06/2013		01/1990-06/2013
Viet Nam	09/2008-06/2013	07/2010-06/2013			06/2002-06/2013		04/1997-06/2013	02/2008-06/2013	05/2002-06/2013
Zambia					03/2011-06/2013		11/2012-06/2013		03/2011-06/2013

Note: Each cell lists the first end last month in which a particular agency has assigned a rating to a particular country. There may be gaps in between.

Appendix A6: Pair-wise correlation of sovereign ratings from different agencies (1990-2013)

	CI	Dagong	DBRS	Feri	Fitch	JCR	Moody's	R&I	S&P
сі	1.000								
Dagong	0.918	1.000							
DBRS		0.902	1.000						
Feri	0.784	0.888	0.851	1.000					
Fitch	0.957	0.932	0.977	0.794	1.000				
JCRA	0.974	0.846	0.965	0.841	0.971	1.000			
Moody's	0.956	0.937	0.975	0.805	0.981	0.962	1.000		
R&I	0.927	0.918	0.982	0.837	0.973	0.981	0.972	1.000	
S&P	0.966	0.938	0.986	0.815	0.987	0.970	0.981	0.971	1.000

Note: No correlation between CI and DBRS is displayed since there is not enough overlap between the sovereigns rated by both agencies.

Agency	CI	Dagong	DBRS	Feri	Fitch	JCR	Moody's	R&I	S&P
Indicators	Cyprus (Kuwait)	China	Canada	Germany	USA (France)	Japan	USA	Japan	USA
Domestic economic performance	-Economic growth prospects	-Economic strength -Economic structure -Total GDP	-Historical growth and prospects -Inflation -Demographics and social structure	-Economic growth -Price stability	-Demographic, educational and structural factors -Labor market analysis -Structure of output and trade -Dynamism of the private sector -Balance of supply and demand	-Industrial structure -Fundamentals of economic development -Growth potential -Economic achievements	-GDP per capita -Diversification and size -Long-term trends	-Economic fundamentals -Growth	-Economic structure and growth prospects
Political and institutional performance	-Level of political risk	-Political risks -Institutional strength	-Political environment -Government policy management	-Rule of law -Economic freedom -Political condition	-Foreign investment policy -Policies and the state -Macroeconomic policy	-Political and social stability -Policy effectiveness and recognition -State of governance	-Rule of law -Governance -Transparency -Regulatory developments	-Socio-political fundamentals -Policy management capacity	-Institutional effectiveness -Political risks
Financial stability and fiscal performance	-Sustainability of public finances	-Financial risks -Governments debt repayment capability -Banking system	-Expenditure -Revenues -Fiscal balance -Budget planning -Monetary policy -Financial system stability	-Public finance -Capital market structure	-Banking and finance -Analysis of medium- term growth constraints	-Trends in the fiscal balance -Financial system -Framework of financial regulations and supervision	-Government balance sheet	-Fiscal conditions -Funding structure	-Fiscal performance and flexibility -Debt burden -Monetary flexibility
External performance	-Country's external growth position	-International reserves -External debt -Short-term foreign debt -Currency reserve system	-International economic integration -External debt & liquidity	-Net external position -Current account -Capital account	-External assets -External liabilities -International position -Balance of payments	-External debt structure -Trends in balance of payments -Management of foreign exchange reserves	-Financial risk (external debts) -Susceptibility to external risk -Balance of payments		-External liquidity -International investment position

Appendix A7: Analytical key factors of sovereign rating assignments

Sources: Personal communication with Moody's Client Services (28 February 2013, 4 March 2013, 22 March 2013, 25 March 2013), Feri EuroRating Services AG (14 March 2013, 21 March 2013), Dagong Global Credit Rating (5 April 2013, 3 June 2013), and internet research (see Online Appendix A22 for detailed list of sources)

Appendix A8: Variables, definitions and sources

Variable	Definition	Source
Dependent variable		
Sovereign rating	Sovereign rating on a 21-point scale (see Appendix A0 and A4 for details; monthly average)	Bloomberg (via terminal); Feri (via e-mail); Fitch (http://www.fitchratings.com)
Variables of interest		
Same country	1 if rated country is the country where the headquarters of the rating agency is located [alternative definition: 1 if rated country is the country of the rating agency's main shareholders]	Own construction
Export interests	Home-country exports (in % of total home-country exports), 3-year average, lag	UN Comtrade via WITS (<u>https://wits.worldbank.org/</u>)
Bank exposure	Overall claims of home-country banks to the rated country (in % of home country's total foreign claims; all sectors; private and public banks; guarantees extended and credit commitments; all on ultimate risk basis), 1-year average, lag	Bank for International Settlements (<u>http://www.bis.org/statistics/consstats.htm</u>)
Geopolitical alignment (UN)	Voting alignment between home country and rated country in the United Nations General Assembly (in % of total votes), 3-year average, lag	Strezhnev and Voeten (2012)
US military interests (aid)	Military aid provided by the United States to the rated country (in % of US total military aid), 3-year average, lag	USAID (<u>http://gbk.eads.usaidalInet.gov</u>)
Common language	1 if common official or primary language in home country and rated country	CEPII (Mayer and Zignago 2011)
Cultural distance (language)	Language dissimilarity between home and rated country (values between 0 and 100)	Kolo (2012)
Cultural distance (ethno-racial)	Ethno-racial dissimilarity between home and rated country (values between 0 and 100)	Kolo (2012)
Control variables: Domestic Econ	omic Performance	
GDP per capita* [#]	Log GDP per capita (constant 2000 US\$), 1-year average, lag	World Development Indicators 2014 (<u>http://data.worldbank.org/</u>)
GDP growth* [#]	GDP growth (annual %), 3-year average, lag	World Development Indicators 2014 (<u>http://data.worldbank.org/</u>)
GDP growth squared [#]	GDP growth (annual %) squared, 3-year average, lag	World Development Indicators 2014 (<u>http://data.worldbank.org/</u>)
Inflation* [#]	Inflation, consumer prices (annual %), 3-year average, lag	World Development Indicators 2014 (<u>http://data.worldbank.org/</u>)
Natural resources*	Sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents (in % of GDP), 3-year average lag	World Development Indicators 2014 (<u>http://data.worldbank.org/</u>)
Population	Log total population size, 1-year average, lag	World Development Indicators 2014 (<u>http://data.worldbank.org/</u>)
Control variables: Financial Stabi	lity and Fiscal Performance	
Change in government debt $^{\#}$	Change in gross government debt-to-GDP ratio (in %), 3-year average, lag	IMF Historical Public Debt Database 2013 (Abbas et al. 2010)
Government debt	Gross government debt-to-GDP ratio (in %), 3-year average, lag	IMF Historical Public Debt Database 2013 (Abbas et al. 2010)
Default (since 1970) [#]	1 if country has experienced a sovereign debt crisis or restructuring since 1970	Laeven and Valencia (2012)
Default (last 5 years)*	1 if country has experienced a sovereign debt crisis or restructuring in the last five years	Laeven and Valencia (2012)
Control variables: External Perfor	rmance	
Trade openness*	Sum of exports and imports of goods and services (in % of GDP), 3-year average lag	World Development Indicators 2014 (<u>http://data.worldbank.org/</u>)
Current account balance* [#]	Sum of net exports of goods and services, net primary income, and net secondary income (% of GDP), 3-year average, lag	World Development Indicators 2012, 2014 (<u>http://data.worldbank.org/</u>)
External debt* [#]	Debt owed to nonresidents repayable in foreign currency, goods, or services (% of GDP), 3-year average, lag (all missing values set to zero if rated country is at least an upper-middle-income country, see Afonso 2003 and Hill et al. 2010 for a similar approach)	World Development Indicators 2012, 2014 (<u>http://data.worldbank.org/</u>)

Control variables: Political and Ins	stitutional Performance	
tule of law	Assessment of both the strength and impartiality of the legal system and of popular observance of the law on a 6-point scale, 1-year average, lag	International Country Risk Guide (<u>http://www.prsgroup.com/ICRG.aspx</u>)
olity*	Regime authority on a 21-point scale ranging from -10 (hereditary monarchy) to +10 (consolidated democracy), 3-year average, lag	Polity IV dataset version 2012 (Marshall et al. 2013)
lection*	1 if presidential elections (for presidential or assembly-elected systems) or parliamentary elections (for parliamentary systems) were held in rated country during the last 12 months (DPI variables DATEEXEC, DATELEG and SYSTEM)	Database of Political Institutions 2012 (Beck et al. 2001)
'ears in office*	Number of years the chief executive has been in office as of January 1 st , lag (DPI variable YRSOFFC; some errors corrected), 1-year average, lag	Database of Political Institutions 2012 (Beck et al. 2001)
eft government*	1 if the chief executive's party is defined as communist, socialist, social democratic or left-wing, 1- year average, lag	Database of Political Institutions 2012 (Beck et al. 2001)
bsence of internal conflict	Assessment of both political violence in the country and its actual or potential impact on governance on a 12-point scale, 1-year average, lag	International Country Risk Guide (<u>http://www.prsgroup.com/ICRG.aspx</u>)
bsence of external conflict	Assessment of the risk to the incumbent government from foreign action on a 12-point scale, 1- year average, lag	International Country Risk Guide (<u>http://www.prsgroup.com/ICRG.aspx</u>)
bsence of military in Politics	Assessment of the degree of military participation in politics on a 6-point scale, 1-year average, lag	International Country Risk Guide (<u>http://www.prsgroup.com/ICRG.aspx</u>)
uro area	1 if rated country is a member of the euro area	Own construction
Other variables		
Office in rated country	1 if an agency has a subsidiary/office in a rated country	Own construction, gathered from company websites
Insolicited ratings	1 if a rated country receives an unsolicited rating by S&P	S&P website (<u>http://www.standardandpoors.com/</u>)
ame legal origin		
silateral trust	Trust level of a representative citizen towards a randomly selected individual of the rated country (based on the following Eurobarometer question on a 4-point scale: "I would like to ask you a question about how much trust you have in people from various countries. For each, please tell me whether you have a lot of trust, some trust, not very much trust, or no trust at all.")	Yu et al. (2015)

Appendix A8 (continued): Variables, definitions and sources

Notes: * - variable included in Archer et al. (2007), # - variable included in Hill et al. (2010). The next page provides a detailed description of the computation of lagged moving averages of the explanatory variables.

Appendix A8 (continued): Variables, definitions and sources

Computation of moving averages: Our econometric specification contains explanatory variables in the form of lagged moving averages. By doing so, we model a rating methodology in which agencies update their belief over the course of a year by gradually incorporating new information. The "1-year average, lag," as indicated in the table above, refers to the moving average of each variable over the previous 12 months:

$$x_{j,i,t} = \frac{1}{12} \sum_{t=-12}^{-1} x_{i,j,t}$$

where x is the respective explanatory variable, j stands for the home country, i for the rated country, and t is time in monthly frequency in the format MM/YYYY. In cases where the observed variable is only available at a yearly frequency, it becomes a weighted average of the existing information and new information. This implies that, over the course of a year, the weight of "new" information gradually increases. We make the implicit assumption that the final, actual value published for a particular year is a reliable proxy for the information that was available to the agencies during that year, for example, from news and other information sources.

For example, assume an agency wants to assess the per-capita GDP of country *i* in July 2011. Per-capita GDP data by the World Bank is only available on a yearly basis, i.e., for the year 2010. However, within a year there will be new information that indicates whether a country's per-capita GDP has improved, stayed constant or deteriorated. Hence, it makes sense for an agency to assess per-capita GDP within a year as a weighted average of the verified information from 2010 and the updated but still unverified new information. We will thus compute the moving average of the "GDP p.c." variable for July 2011 as follows:

$$GDP \ p. \ c_{\cdot i,07/2011} = \frac{1}{12} \sum_{t=07/2010}^{06/2011} GDP \ p. \ c_{\cdot i,t} = \frac{1}{2} GDP \ p. \ c_{\cdot i,2010} + \frac{1}{2} GDP \ p. \ c_{\cdot i,2011}$$

We use a longer lag structure for more volatile variables such as GDP growth and inflation (as indicated by "3-year average, lag" in the table above). This means that we calculate the average over the last 36 months to cancel out pure business-cycle effects and random short-term fluctuations that should not influence long-term debt repayment abilities (see Block and Vaaler 2004 for a similar approach). The formula does then becomes

$$x_{i,j,t} = \frac{1}{36} \sum_{t=-36}^{-1} x_{j,i,t}.$$

Appendix A9: Descriptive statistics

Variable	Observations	Mean	Std.dev.	Min.	Max.
Dependent variable		•	•	•	
Sovereign rating	75438	14.79	4.95	1	21
Variables of interest	•	·			
Same country	75438	0.02	0.14	0	1
Export interests	73919	1.47	3.48	0	76.37
Bank exposure	37949	1.47	4.38	0	70.49
Geopolitical alignment (UN)	75048	52.97	23.67	12.33	95.72
US military interests (aid)	36923	1.21	5.6	0	51.24
Common language	75438	0.16	0.37	0	1
Cultural distance (language)	75438	89.63	14.84	3.23	100
Cultural distance (ethno-racial)	75438	76.79	24.87	1.1	100
Control variables: Domestic Economic Per	formance				
GDP per capita (log)	75438	9.09	1.33	5.33	11.38
GDP growth	75438	3.57	2.92	-7.75	28.65
GDP growth squared	75438	21.26	31.67	0	820.8
Inflation	75438	0.05	0.07	-0.03	0.94
Natural resources	75438	6.03	10.53	0	65.37
Population (log)	75438	16.76	1.61	12.91	21.02
Control variables: Financial Stability and F	iscal Performance				
Change in government debt	75438	3.35	5.1	-62.19	50.07
Government debt	75438	51.71	30.81	0	233.11
Default (since 1970)	75438	0.3	0.46	0	1
Default (last 5 years)	75438	0.05	0.23	0	1
Control variables: External Performance					
Trade openness	75438	87.66	58.27	14.49	428.14
Current account balance	75438	0.02	7.31	-29.87	40.5
External debt	75438	0.19	0.28	0	1.71
Control variables: Political and Institution	al Performance				
Rule of law	75438	4.34	1.28	1	6
Polity	75438	16.83	5.15	0	20
Election	75438	0.23	0.42	0	1
Years in office	75438	5.11	5.48	1	46
Left government	75438	0.33	0.46	0	1
Absence of internal conflict	75438	9.83	1.59	3.38	12
Absence of external conflict	75438	10.37	1.22	4	12
Absence of military in politics	75438	4.69	1.36	0	6
Euro area	75438	0.14	0.35	0	1
Other variables					
Office in rated country	75438	0.23	0.42	0	1
Unsolicited rating	75438	0.20	0.40	0	1
Bilateral trust	2334	2.75	0.20	2.36	2.99

<u>Notes:</u> This table shows descriptive statistics for the full sample used in Online Appendix A12, column 1. It contains data from January 1990 to June 2013.

Appendix A10: Correlation between sovereign rating and variables of interest (1990-2013)

	Correlation	Partial correlation (conditional on <i>GDP per</i> <i>capita</i>)	Partial correlation (conditional on <i>Government debt</i>)	Number of observations
Same country	0.16	2.06	6.29	110,298
Export interests	0.30	0.17	0.49	107,619
Bank exposure	0.32	0.12	0.44	53,896
Political alignment (UN)	-0.19	0.20	-0.54	107,924
US military interests (aid)	0.36	0.02	0.08	104,991
Common language	0.06	0.01	0.06	44,125
Cultural distance (language)	0.34	0.40	4.33	61,470
Cultural distance (ethno-racial)	0.07	0.64	0.77	110,298

Note: The full sample contains data from January 1990 to June 2013.

	(1)	(2)
	Full sample	GFC sample
(a) Same country	0.980**	1.713***
	[0.017]	[0.000]
(b) Export interests	0.018	0.029
	[0.290]	[0.132]
(c) Bank exposure	0.038*	0.044*
	[0.067]	[0.087]
(d) Geopolitical alignment (UN)	0.006	0.015**
	[0.310]	[0.018]
(e) US military interests (aid)	0.030	0.108***
	[0.240]	[0.007]
(f) Common language	0.734***	0.809***
	[0.001]	[0.002]
(g) Cultural distance (language)	-0.022***	-0.028***
	[0.000]	[0.000]
(h) Cultural distance (ethno-racial)	0.001	0.003
	[0.569]	[0.342]

Appendix A11: Home bias in sovereign ratings (OLS, all agencies pooled, yearly averages)

Notes: This table shows the results when we replicate the OLS regressions of Table 3 (columns 1 and 2) with yearly data by collapsing the monthly data. The dependent variable is a country's sovereign rating on a 21-point scale. Each cell refers to a separate regression. The table displays only the coefficients on the respective variable of interest of each regression. All regressions contain the control variables as specified in Online Appendix A12, time- and agency-fixed effects. The full sample contains data from 1990 to 2013 (column 1). The GFC sample runs from 2009 to 2013 (column 2). Standard errors are clustered at both the agency-time and the sovereign level. ***,**,* indicate significance at the one-percent, five-percent or ten-percent level. P-values are displayed in brackets.

	(1)	(2)	(3)
		Least	squares		Ordered	l Probit
	Full sa	Full sample		imple	Full sample	
GDP per capita (log)	2.048***	[0.000]	2.045***	[0.000]	1.101***	[0.000]
GDP growth	0.272***	[0.001]	0.143***	[0.006]	0.140***	[0.000]
GDP growth squared	-0.013**	[0.042]	-0.002	[0.477]	-0.007**	[0.043]
Inflation	-9.354***	[0.000]	-9.598***	[0.000]	-5.011***	[0.000]
Natural resources	-0.028***	[0.009]	-0.031**	[0.011]	-0.016**	[0.021]
Population (log)	0.723***	[0.000]	0.698***	[0.000]	0.416***	[0.000]
Change in government debt	-0.019	[0.238]	-0.021*	[0.095]	-0.006	[0.466]
Government debt	-0.010**	[0.020]	-0.002	[0.622]	-0.007**	[0.011]
Default (since 1970)	-1.387***	[0.000]	-1.612***	[0.000]	-0.659***	[0.000]
Default (last 5 years)	-1.847***	[0.000]	-1.537***	[0.000]	-0.983***	[0.000]
Trade openness	0.004*	[0.096]	0.006***	[0.009]	0.003*	[0.062]
Current account balance	0.077***	[0.004]	0.047	[0.114]	0.045***	[0.000]
External debt	-0.704	[0.172]	-0.581	[0.290]	-0.265	[0.367]
Rule of law	0.513***	[0.000]	0.639***	[0.000]	0.279***	[0.000]
Polity	0.013	[0.529]	0.026	[0.255]	0.017	[0.153]
Election	-0.101**	[0.021]	-0.122***	[0.007]	-0.069**	[0.020]
Years in office	0.017	[0.276]	0.026	[0.156]	0.015	[0.108]
Left government	-0.052	[0.776]	-0.030	[0.855]	-0.032	[0.797]
Absence of internal conflict	-0.037	[0.646]	-0.147**	[0.030]	-0.003	[0.952]
Absence of external conflict	0.235**	[0.017]	0.304***	[0.000]	0.108	[0.106]
Absence of military in politics	0.355***	[0.001]	0.227**	[0.024]	0.163**	[0.023]
Euro area	0.620***	[0.007]	0.778***	[0.000]	0.401**	[0.036]
Adj. R-Squared	0.8	6	0.8	6		
Number of observations	75,4	38	26,9	061	75,4	16
Number of rated countries	10	7	10	4	10	7

Appendix A12: Determinants of sovereign ratings (only control variables, all agencies pooled)

Notes: The dependent variable is a country's sovereign rating on a 21-point scale. All regressions include time- and agency-fixed effects. The full sample contains data from January 1990 to June 2013. The GFC sample runs from September 2008 to June 2013. Standard errors are clustered at both the agency-time and the sovereign level. ***,**,* indicate significance at the one-percent, five-percent or tenpercent level. P-values are displayed in brackets.

We run regressions that include only our control variables, i.e., exclude our variables of interest $x_{j,i,t}$. Since the previous literature has focused mainly on ratings from the big U.S.-based agencies, this exercise shows us whether our estimations with a larger set of agencies yield similar results. As can be seen from column 1 of the table above, the results are in line with former studies focusing on fewer agencies and shorter time periods. Both *GDP per capita* and *Inflation* show the expected signs and are statistically significant at the one-percent level. In line with Hill et al. (2010), the positive effect of *GDP growth* is diminishing as indicated by the significant negative squared term. *Natural resources* shows a negative coefficient which is significant at the one-percent level in line with the idea of a natural resource curse. *Population* is positive and significant at the one-percent level; larger countries thus receive better ratings on average.

Turning to fiscal stability, we find that *change in government debt* and *government debt* both have the expected negative coefficients, but only the latter reaches statistical significance at conventional levels. Even conditional on the other variable, both *default* variables turn out to be negative and significant at the one-percent level. The fact that a country has defaulted since 1970 leads to a rating that is lower by 1.4 points on our 21-point scale. Countries that have defaulted over the last five years are further downgraded by 1.8 points on average. With regard to a country's external performance, *trade openness* and *current account balance* have a positive and significant effect on ratings as expected. *External debt* does not seem to further affect sovereign ratings conditional on the other factors.

Most political and institutional factors show the expected signs. The coefficient on *rule of law* is positive in agreement with Biglaiser and Staats (2012) and statistically significant at the onepercent level. In line with political-business-cycle considerations (Block and Vaaler 2004), rating levels in times of *elections* seem to be related to more uncertainty about future government policy, as indicated by the respective negative coefficient (significant at the five-percent level). Rating agencies also provide better ratings to countries characterized by *absence of external conflict* and *absence of military in politics*. All other political variables (*polity, years in office, left government*, and *absence of internal conflict*) do not reach statistical significance at conventional levels. As the "implicit bailout" guarantee would suggest, the coefficient on *euro area* is positive and significant at the one-percent level. Our results are similar when we restrict the observation period to the time after the onset of the GFC (column 2).

The objective country-specific controls alone explain 86 percent of the variation in sovereign ratings, as indicated by the R-squared value. Our model thus explains a large share of the variation in sovereign ratings from this broad set of agencies.

We also show in column 3 the results of an ordered probit model estimated with maximum likelihood estimation for the discrete 21-step rating at the end of a month. As expected, the results are qualitatively similar to the least squares estimation results in columns 1 and 2.

	(a)	(b)	(c)		(d)
GDP per capita (log)	2.069***	[0.000]	2.048***	[0.000]	2.022***	[0.000]	1.969***	[0.000]
GDP growth	0.272***	[0.002]	0.272***	[0.001]	0.273***	[0.001]	0.294***	[0.004]
GDP growth squared	-0.013*	[0.056]	-0.013**	[0.042]	-0.013**	[0.040]	-0.014**	[0.038]
Inflation	-9.365***	[0.000]	-9.354***	[0.000]	-9.392***	[0.000]	-16.101***	[0.000]
Natural resources	-0.027**	[0.030]	-0.028***	[0.009]	-0.028***	[0.009]	-0.021*	[0.067]
Population (log)	0.744***	[0.000]	0.723***	[0.000]	0.708***	[0.000]	0.799***	[0.000]
Change in government debt	-0.018	[0.273]	-0.019	[0.238]	-0.019	[0.218]	-0.004	[0.883]
Government debt	-0.009**	[0.048]	-0.010**	[0.020]	-0.011**	[0.014]	-0.017***	[0.001]
Default (ever)	-1.391***	[0.000]	-1.387***	[0.000]	-1.371***	[0.000]	-1.407***	[0.000]
Default (last 5 years)	-1.847***	[0.000]	-1.847***	[0.000]	-1.854***	[0.000]	-2.400***	[0.000]
Trade openness	0.004*	[0.095]	0.004*	[0.096]	0.004*	[0.084]	0.004	[0.141]
Current account balance	0.075***	[0.000]	0.077***	[0.004]	0.078***	[0.003]	0.072**	[0.015]
External debt	-0.710	[0.202]	-0.704	[0.172]	-0.674	[0.186]	-1.041*	[0.054]
Rule of law	0.513***	[0.000]	0.513***	[0.000]	0.520***	[0.000]	0.412***	[0.002]
Polity	0.015	[0.479]	0.013	[0.529]	0.015	[0.453]	0.019	[0.364]
Election	-0.101*	[0.052]	-0.101**	[0.021]	-0.105**	[0.016]	-0.076	[0.149]
Years in office	0.018	[0.316]	0.017	[0.276]	0.017	[0.280]	0.022	[0.258]
Left government	-0.059	[0.780]	-0.052	[0.776]	-0.033	[0.857]	0.009	[0.968]
Absence of internal conflict	-0.016	[0.859]	-0.037	[0.646]	-0.047	[0.559]	0.069	[0.594]
Absence of external conflict	0.221**	[0.040]	0.235**	[0.017]	0.227**	[0.025]	0.154	[0.241]
Absence of military in politics	0.343***	[0.006]	0.355***	[0.001]	0.370***	[0.000]	0.510***	[0.000]
Euro area	0.595**	[0.030]	0.620***	[0.007]	0.690***	[0.003]	0.529*	[0.076]
Adjusted R-squared	0.0	36	0.8	36	0.8	7	3.0	37
Observations	75,4	138	73,9	919	37,9	49	73,2	264

Appendix A13: Determinants of sovereign ratings (control variables of models in Table 3, column 1)

	(e	·)	(f)	(g)		(۲	ו)
GDP per capita (log)	2.091***	[0.000]	2.053***	[0.000]	2.036***	[0.000]	2.087***	[0.000]
GDP growth	0.247***	[0.001]	0.274***	[0.001]	0.242***	[0.000]	0.231***	[0.000]
GDP growth squared	-0.012**	[0.046]	-0.013**	[0.039]	-0.009**	[0.019]	-0.009**	[0.033]
Inflation	-9.488***	[0.000]	-9.369***	[0.000]	-8.846***	[0.000]	-9.192***	[0.000]
Natural resources	-0.027**	[0.014]	-0.027**	[0.018]	-0.021**	[0.041]	-0.025**	[0.011]
Population (log)	0.734***	[0.000]	0.743***	[0.000]	0.719***	[0.000]	0.687***	[0.000]
Change in government debt	-0.019	[0.195]	-0.018	[0.244]	-0.023*	[0.070]	-0.030**	[0.013]
Government debt	-0.009**	[0.038]	-0.009**	[0.034]	-0.013***	[0.004]	-0.012***	[0.001]
Default (ever)	-1.411***	[0.000]	-1.394***	[0.000]	-1.506***	[0.000]	-1.525***	[0.000]
Default (last 5 years)	-1.852***	[0.000]	-1.837***	[0.000]	-1.929***	[0.000]	-1.914***	[0.000]
Trade openness	0.004*	[0.082]	0.004	[0.101]	0.009***	[0.004]	0.006***	[0.007]
Current account balance	0.072***	[0.007]	0.076***	[0.004]	0.033*	[0.051]	0.048***	[0.000]
External debt	-0.652	[0.216]	-0.717	[0.172]	-0.979**	[0.038]	-1.022**	[0.031]
Rule of law	0.513***	[0.000]	0.502***	[0.000]	0.370***	[0.000]	0.529***	[0.000]
Polity	0.017	[0.426]	0.012	[0.570]	0.022	[0.298]	0.032	[0.107]
Election	-0.101**	[0.018]	-0.103**	[0.020]	-0.155**	[0.014]	-0.101**	[0.029]
Years in office	0.018	[0.225]	0.018	[0.242]	0.021*	[0.079]	0.012	[0.332]
Left government	-0.051	[0.769]	-0.049	[0.788]	-0.059	[0.751]	-0.071	[0.649]
Absence of internal conflict	-0.010	[0.898]	-0.019	[0.811]	-0.045	[0.581]	-0.020	[0.790]
Absence of external conflict	0.234**	[0.013]	0.225**	[0.021]	0.245**	[0.012]	0.260***	[0.001]
Absence of military in politics	0.342***	[0.001]	0.340***	[0.001]	0.384***	[0.000]	0.317***	[0.001]
Euro area	0.622***	[0.007]	0.596**	[0.011]	1.200***	[0.002]	0.614**	[0.020]
Adjusted R-squared	0.0	36	0.0	35	0.8	9	0.8	87
Observations	75,0)48	36,9	923	49,4	18	75,4	438

Appendix A13 (continued): Determinants of sovereign ratings (control variables of models in Table 3, column 1)

	(1)	(2)
	Full sample	GFC sample
(a) Same country	0.86	0.87
	75438	26961
(b) Export interests	0.86	0.86
	73919	26461
(c) Bank exposure	0.87	0.87
	37949	22426
(d) Geopolitical alignment (UN)	0.86	0.86
	75048	26961
(e) US military interests (aid)	0.85	0.88
	36923	12405
(f) Common language	0.87	0.87
	75438	26961
(g) Cultural distance (language)	0.87	0.87
	75438	26961
(h) Cultural distance (ethno-racial)	0.86	0.86
	75438	26961

Appendix A14: Adjusted R-squared and number of observations of OLS models in Table 3

<u>Note:</u> The number of observations are identical in the corresponding ordered probit regressions.

	1					
	(1)	(2)	(3)	(4)	(5)	(6)
				Con	trolled for same cou	intry
	Full sample	Pre-GFC sample	GFC sample	Full sample	Pre-GFC sample	GFC sample
(a) Same country	0.950**	0.619*	1.704***		•	
	[0.018]	[0.079]	[0.001]			
(b) Export interests	0.017	0.004	0.030			
	[0.345]	[0.830]	[0.142]			
(c) Bank exposure	0.038*	0.026	0.045*			
	[0.054]	[0.152]	[0.070]			
(d) Geopolitical alignment (UN)	0.005	-0.007	0.013	0.000	-0.013*	0.008
	[0.518]	[0.265]	[0.183]	[0.964]	[0.077]	[0.467]
(e) US military interests (aid)	0.034*	0.021	0.116***	0.034*	0.021	0.116***
	[0.082]	[0.322]	[0.001]	[0.082]	[0.322]	[0.001]
(f) Common language	0.742***	0.699***	0.810***	0.695***	0.689***	0.653**
	[0.000]	[0.000]	[0.001]	[0.000]	[0.001]	[0.015]
(g) Cultural distance (language)	-0.021***	-0.017***	-0.027***	-0.021***	-0.017***	-0.025***
	[0.000]	[0.004]	[0.000]	[0.000]	[0.002]	[0.000]
(h) Cultural distance (ethno-racial)	0.001	0.000	0.003	0.002	0.001	0.005
	[0.718]	[0.900]	[0.472]	[0.499]	[0.757]	[0.172]

Appendix A15: Home bias in sovereign ratings (OLS, pre- and post-GFC onset)

Notes: The dependent variable is a country's sovereign rating on a 21-point scale. Each cell refers to a separate regression. The table displays only the coefficients on the respective variable of interest of each regression. All regressions contain the control variables as specified in Online Appendix A12, time- and agency-fixed effects. The full sample contains data from January 1990 to June 2013 (columns 1 and 4). The pre-GFC sample runs from January 1990 to August 2008 (columns 2 and 5). The GFC sample runs from September 2008 to June 2013 (columns 3 and 6). Controlling for the *same country* dummy (columns 4-6) is not necessary in the case of *export interests* and *bank exposure* as these variables are not coded for the home country. Standard errors are clustered at both the agency-time and the sovereign level. ***,**,* indicate significance at the one-percent, five-percent or ten-percent level. P-values are displayed in brackets.

(1) (2) Full sample GFC sample 0.940** 1.520*** (a) Same country [0.031] [0.006] (b) Export interests 0.017 0.027 [0.390] [0.222] (c) Bank exposure 0.038* 0.050* [0.094] [0.074] 0.015*** (d) Geopolitical alignment (UN) 0.005 [0.375] [0.002] 0.138*** (e) US military interests (aid) 0.042* [0.091] [0.001] 0.839*** 0.957*** (f) Common language [0.001] [0.006] -0.021*** -0.030*** (g) Cultural distance (language) [0.000] [0.000] (h) Cultural distance (ethno-racial) 0.001 0.006 [0.630] [0.124]

Appendix A16: Home bias in sovereign ratings (all agencies pooled, additional control for same legal origin)

<u>Notes:</u> The dependent variable is a country's sovereign rating on a 21-point scale. Each cell refers to a separate regression. The table displays only the coefficients on the respective variable of interest of each regression. All regressions contain the control variables as specified in Online Appendix A12, time- and agency-fixed effects, and a dummy variable that takes a value of one if the home country and the rated country have the same legal origin. The full sample contains data from January 1990 to June 2013 (columns 1 and 2). The GFC sample runs from September 2008 to June 2013 (columns 3 and 4). Standard errors are clustered at both the agency-time and the sovereign level. ***, **, * indicate significance at the one-percent, five-percent or ten-percent level. P-values are displayed in brackets.

	CI	Dagong	DBRS	Feri	Fitch	JCR	Moody's	R&I	S&P
GDP per capita (log)	1.504***	1.980***	3.629***	1.843***	2.102***	1.658***	2.161***	2.113***	2.106***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
GDP growth	0.158	0.514***	0.630***	0.396***	0.189***	0.064	0.239***	0.420**	0.299***
	[0.164]	[0.000]	[0.000]	[0.005]	[0.008]	[0.492]	[0.001]	[0.024]	[0.000]
GDP growth squared	-0.018**	-0.015	-0.002	-0.027*	-0.007	-0.022	-0.008*	-0.037**	-0.018**
	[0.021]	[0.199]	[0.876]	[0.055]	[0.103]	[0.183]	[0.096]	[0.041]	[0.010]
Inflation	-14.319**	-12.909*	2.546	-6.759	-8.368***	-14.374***	-7.992***	-9.191	-11.360***
	[0.037]	[0.058]	[0.815]	[0.194]	[0.000]	[0.000]	[0.000]	[0.106]	[0.000]
Natural resources	-0.029	-0.042	0.107**	-0.061	-0.030**	0.086*	-0.030**	-0.056	-0.016
	[0.260]	[0.126]	[0.010]	[0.190]	[0.026]	[0.056]	[0.028]	[0.264]	[0.210]
Population (log)	0.651***	0.724***	1.389***	0.752***	0.718***	0.391*	0.706***	0.759***	0.681***
	[0.000]	[0.001]	[0.000]	[0.000]	[0.000]	[0.073]	[0.000]	[0.000]	[0.000]
Change in government debt	0.027	0.082	0.006	0.005	-0.037**	-0.025	-0.017	0.012	-0.035**
	[0.579]	[0.208]	[0.855]	[0.870]	[0.041]	[0.372]	[0.299]	[0.716]	[0.022]
Government debt	-0.02	-0.038***	-0.072***	-0.004	-0.010**	0.013*	-0.011**	-0.008	-0.012**
	[0.155]	[0.000]	[0.000]	[0.431]	[0.027]	[0.060]	[0.024]	[0.252]	[0.011]
Default (since 1970)	-1.157***	-0.684	-3.759***	-0.773	-1.564***	-1.534**	-1.814***	-1.682***	-1.376***
	[0.000]	[0.249]	[0.000]	[0.227]	[0.000]	[0.022]	[0.000]	[0.008]	[0.000]
Default (last 5 years)	-1.703	-4.852***	0.701	-0.286	-2.168***	-2.880***	-1.751***	-2.214***	-1.793***
	[0.524]	[0.000]	[0.229]	[0.687]	[0.000]	[0.000]	[0.000]	[0.001]	[0.000]
Trade openness	0.006*	-0.004	0.006	-0.008**	0.005*	0.013*	0.005*	-0.002	0.007**
	[0.074]	[0.441]	[0.307]	[0.033]	[0.079]	[0.068]	[0.071]	[0.623]	[0.011]
Current account balance	0.056*	0.145***	-0.089**	0.248***	0.040**	-0.032	0.051***	0.103***	0.048**
	[0.064]	[0.001]	[0.027]	[0.000]	[0.033]	[0.464]	[0.006]	[0.005]	[0.010]

Appendix A17: Determinants of sovereign ratings (only control variables, by agency)

	CI	Dagong	DBRS	Feri	Fitch	JCR	Moody's	R&I	S&P
External debt	-1.639***	-2.015*	-10.539***	0.923	-1.088	-1.551*	-0.778	-0.567	-1.064*
	[0.002]	[0.077]	[0.000]	[0.469]	[0.104]	[0.069]	[0.193]	[0.334]	[0.073]
Rule of law	-0.426	0.124	-0.094	0.514**	0.564***	0.575*	0.480***	0.665***	0.545***
	[0.102]	[0.669]	[0.748]	[0.014]	[0.000]	[0.063]	[0.000]	[0.006]	[0.000]
Polity	-0.129***	-0.035	-0.421*	-0.082	-0.005	0.127	0.038	-0.03	0.043*
	[0.002]	[0.514]	[0.065]	[0.127]	[0.842]	[0.394]	[0.177]	[0.459]	[0.076]
Election	-0.057	-0.154	-0.055	-0.168**	-0.09	-0.008	-0.081	-0.161*	-0.136**
	[0.574]	[0.400]	[0.575]	[0.048]	[0.162]	[0.896]	[0.221]	[0.052]	[0.021]
Years in office	0.035	0.063*	-0.186***	0.073**	0.018	0.027	-0.001	0.022	0.015
	[0.252]	[0.088]	[0.000]	[0.020]	[0.327]	[0.325]	[0.948]	[0.429]	[0.271]
Left government	0.055	0.273	0.441*	-0.093	-0.109	0.13	-0.094	0.225	-0.024
	[0.889]	[0.532]	[0.056]	[0.699]	[0.610]	[0.541]	[0.685]	[0.509]	[0.903]
Absence of internal conflict	0.201	0.511*	0.439**	-0.042	-0.089	-0.350**	0.044	-0.117	-0.056
	[0.436]	[0.057]	[0.044]	[0.736]	[0.366]	[0.026]	[0.646]	[0.446]	[0.485]
Absence of external conflict	-0.073	-0.29	-0.016	0.118	0.279***	0.142	0.230**	0.292*	0.286***
	[0.746]	[0.338]	[0.903]	[0.440]	[0.005]	[0.360]	[0.032]	[0.095]	[0.005]
Absence of military in politics	1.010***	0.728**	0.966***	0.424*	0.340**	0.133	0.321**	0.312	0.303**
	[0.000]	[0.015]	[0.000]	[0.079]	[0.023]	[0.618]	[0.025]	[0.125]	[0.019]
Euro area	1.116	0.339	1.181***	0.696**	0.720**	0.820*	0.477	0.531*	0.589*
	[0.204]	[0.566]	[0.001]	[0.044]	[0.019]	[0.053]	[0.161]	[0.088]	[0.074]

Appendix A17 (continued): Determinants of sovereign ratings (only control variables, by agency)

Notes: The dependent variable is a country's sovereign rating on a 21-point scale. All regressions contain time- and agency-fixed effects. Data are from January 1990 to June 2013. Standard errors are clustered at both the sovereign and the time level. ***, ** , * indicate significance at the one-percent, five-percent or ten-percent level. P-values are displayed in brackets.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		CI	Dagong	DBRS	Feri	Fitch	JCR	Moody's	R&I	S&P	CI	Fitch
		СҮР	CHN	CAN	DEU	USA	JPN	USA	JPN	USA	KWT	FRA
(a) Same country	Adj. R2	0.90	0.86	0.97	0.79	0.89	0.91	0.88	0.87	0.90	0.90	0.89
	Obs.	2,176	2,174	1,047	8,730	14,814	4,940	16,374	6,953	18,230	2,176	14,814
(b) Export interests	Adj. R2	0.91	0.86	0.97	0.79	0.90	0.91	0.88	0.87	0.90	0.90	0.90
	Obs.	2,176	2,174	1,047	8,730	14,814	4,940	16,374	6,953	18,230	2,176	14,814
(c) Bank exposure	Adj. R2	0.93	0.86	0.97	0.79	0.89	0.91	0.88	0.86	0.90	0.91	0.89
	Obs.	2,108	2,138	885	8,561	14,587	4,787	16,092	6,793	17,968	1,897	14,587
(d) Geopolitical alignment (UN)	Adj. R2	0.97	0.92	0.98	0.81	0.90	0.92	0.89	0.89	0.90	0.97	0.90
	Obs.	1,179	783	643	5,125	8,218	3,136	7,926	4,016	8,885	1,179	7,758
(e) US military interests (aid)	Adj. R2	0.90	0.92	0.97	0.79	0.90	0.91	0.88	0.87	0.90	0.91	0.89
	Obs.	2,176	783	1,047	8,730	14,814	4,940	16,374	6,953	18,230	2,176	14,814
(f) Common language	Adj. R2	0.90	0.87	0.97	0.80	0.89	0.91	0.88	0.87	0.90	0.90	0.89
	Obs.	2,176	2,174	1,047	8,698	14,724	4,940	16,229	6,953	18,107	2,176	14,724
(g) Cultural distance (language)	Adj. R2	0.97	0.92	1.00	0.81	0.85	0.90	0.84	0.88	0.85	0.97	0.89
	Obs.	1,179	783	423	5,203	11,216	2,672	12,041	3,942	13,666	1,179	10,236
(h) Cultural distance (ethno-racial)	Adj. R2	0.97	0.92	1.00	0.81	0.90	0.90	0.88	0.88	0.90	0.97	0.89
	Obs.	1,179	783	423	5,203	14,814	2,672	16,374	3,942	18,230	1,179	10,236

Appendix A18: Adjusted R-squared and number of observations of OLS models in Table 6

Appendix A19: Marginal effect of cultural distance language at different levels of bilateral trust (Feri only)



Note: Dotted lines show ninety-percent confidence interval.

	(1	.)	(2	2)	(3)	(4)	
(a) Same country	0.979**	[0.022]	0.961**	[0.023]	0.942**	[0.025]	0.936**	[0.025]
Rho	0.196		0.145		0.109		0.082	
Wald test Chi2 (p-value)	16.880	0.000	7.091	0.008	2.053	0.152	1.070	0.301
(b) Export interests	0.009	[0.624]	0.010	[0.559]	0.012	[0.475]	0.013	[0.451]
Rho	0.209		0.000		0.000		0.000	
Wald test Chi2 (p-value)	18.365	0.000	7.071	0.008	2.042	0.153	1.045	0.000
(c) Bank exposure	0.038*	[0.069]	0.038*	[0.070]	0.039*	[0.067]	0.039*	[0.068]
Rho	0.126		0.000		0.000		0.000	
Wald test Chi2 (p-value)	3.659	0.056	1.829	0.176	2.128	0.145	1.665	0.000
(d) Geopolitical alignment (UN)	0.004	[0.421]	0.004	[0.407]	0.004	[0.418]	0.004	[0.408]
Rho	0.205		0.000		0.000		0.000	
Wald test Chi2 (p-value)	19.166	0.000	7.968	0.005	2.578	0.108	1.447	0.000
(e) US military interests (aid)	0.043	[0.107]	0.043	[0.109]	0.038	[0.147]	0.038	[0.146]
Rho	0.341		0.000		0.000		0.000	
Wald test Chi2 (p-value)	12.474	0.000	12.378	0.000	6.641	0.010	6.908	0.000
(f) Common language	0.704***	[0.001]	0.712***	[0.001]	0.718***	[0.001]	0.722***	[0.001]
Rho	0.181		0.000		0.000		0.000	
Wald test Chi2 (p-value)	15.823	0.000	5.974	0.015	1.636	0.201	0.805	0.000
(g) Cultural distance (language)	-0.021***	[0.000]	-0.021***	[0.000]	-0.021***	[0.000]	-0.021***	[0.000]
Rho	0.180		0.000		0.000		0.000	
Wald test Chi2 (p-value)	16.478	0.000	6.389	0.011	1.692	0.193	0.860	0.000
(h) Cultural distance (ethno-racial)	0.001	[0.586]	0.001	[0.594]	0.001	[0.580]	0.001	[0.585]
Rho	0.211		0.000		0.000		0.000	
Wald test Chi2 (p-value)	21.403	0.000	9.598	0.002	2.574	0.109	1.416	0.000
Exclusion variable None		ne	Number of rated Number of "Big T countries in the rating a partic previous period (by country in the pr gagency) period (by sover		"Big Three" articular he previous sovereign)	Во	th	

Appendix A20: Home bias in sovereign ratings (all agencies pooled, Heckman selection model)

Notes: The dependent variable of the second stage is a country's sovereign rating on a 21-point scale. The dependent variable of the first stage is a dummy variable that takes a value of one if the sovereign receives a rating from a particular agency. Each cell refers to a separate regression. The table displays only the coefficients on the respective variable of interest of each regression of the second stage. All regressions include control variables, time- and agency-fixed effects. The last row indicates the respective exclusion variables that are only included in the first-stage regression. The full sample contains data from February 1990 to June 2013. Standard errors are clustered at sovereign level. ***, **, * indicate significance at the one-percent, five-percent or ten-percent level. P-values are displayed in brackets.

	l. Variable of interest		II. Unsolicited ratin	g	III.		
(a) Same country	0.738	[0.137]	0.054	[0.896]			
(b) Export interests	0.038	[0.176]	-0.237	[0.662]	0.142	[0.228]	(0.135)
(c) Bank exposure	-0.005	[0.964]	-0.264	[0.609]	0.169	[0.140]	(0.001)
(d) Geopolitical alignment (UN)	-0.015	[0.296]	-1.618	[0.111]	0.035**	[0.033]	(0.108)
(e) US military interests (aid)	0.034	[0.272]	0.098	[0.875]	-0.243*	[0.058]	(0.100)
(f) Common language	0.738**	[0.014]	-0.217	[0.687]	0.384	[0.530]	(0.034)
(g) Cultural distance (language)	-0.027**	[0.027]	0.233	[0.852]	-0.004	[0.806]	(0.023)
(h) Cultural distance (ethno-racial)	0.011	[0.372]	2.692**	[0.018]	-0.037**	[0.038]	(0.116)

Appendix A21: Unsolicited ratings and home bias in sovereign ratings (S&P only)

<u>Notes:</u> The dependent variable is a country's sovereign rating on a 21-point scale. Each row refers to a separate regression. All regressions contain the control variables as specified in Online Appendix A12 and time-fixed effects. The full sample contains data from January 1990 to June 2013. Standard errors are clustered at both the sovereign and the time level. ***, **, * indicate significance at the one-percent, five-percent or ten-percent level. P-values are displayed in brackets. The final column displays the p-values of a Wald test for significance of the sum of the respective variable of interest and its interaction with the dummy for unsolicited ratings.

Interpretation: In most cases, we find no statistically significant relationship between the fact that a rating is unsolicited and the size of the bias. There are three cases where we find a significant interaction between a variable of interest and the dummy for unsolicited ratings. In all three cases, however, the main effect (column I., for solicited ratings) and the marginal effect (column I. + III., for unsolicited ratings) of the variables *geopolitical alignment (UN)*, *US military interests (aid)* and *cultural distance (ethno-racial)* do not reach statistical significance at conventional levels.

Appendix A22: Detailed sources of overview tables

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