

Supplementary Appendix for “Sovereign Bond Prices and Interstate War”

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Data Construction

One of the major empirical contributions of this short article is causally identifying the effect of interstate war on sovereign bond prices using newly cleaned data on the monthly prices of the universe of sovereign debt instruments traded in London from 1869 to 1929. In this section I more fully describe the process for cleaning these data and report descriptive statistics.

These data come from *The Investors Monthly Manual* (IMM), a historical industry publication published in London from 1869-1930 that cataloged price data for a variety of securities traded in London financial markets. William Goetzmann and K. Geert Rouwenhorst of Yale University’s International Center for Finance (ICF) compiled these data from high quality image scans of the original, hard-copy IMM issues and utilized third party data consulting services to assemble the final data set.¹

Although ICF provides pre-cleaned data on a number of types of securities, including stocks, railway investments, and Banks, Finance and Insurance Companies, compiling a dataset

¹ Author communication with Milad Nozari, Research Coordinator, International Center for Finance, November 2019.

of sovereign debt instruments required starting with the full IMM data set, available via the following link: <http://community.som.yale.edu/IMM/Totaldata.txt>. Reading this comma delimited text file into R yielded a dataset with nearly 2.4 million observations of monthly prices for 12,428 unique securities. Filtering this raw data to only include “government bonds” removed observations of a number of other security types, including corporate stocks and bonds that are outside the scope of my analysis of wartime sovereign debt markets. This new filtered data contains approximately 375,000 observations of monthly government bond prices for 1,997 unique bond instruments.

The ICF data codes both sovereign and municipal bonds as “government bonds,” so I filtered this data set further to include only those bonds issued by sovereign, state governments and—to mitigate currency convertibility concerns—denominated in British pounds. This left me with a new data set containing nearly 100,000 observations of monthly sovereign bond prices for 551 bond instruments issued by 45 sovereign states. Table A.1 reports the ISO codes for all sovereign bond issuers in this newly cleaned data set:

Table A.1: ISO Codes of Sovereign Bond Issuers

<u>ISO</u>	<u>Country</u>
ARG	Argentina
AUT	Austria
BEL	Belgium
BRA	Brazil
CHL	Chile
CHN	China
COL	Colombia
CRI	Costa Rica
CUB	Cuba
CZK	Czech Republic
DEU	Germany
DNK	Denmark
ECU	Ecuador
EGY	Egypt
ESP	Spain
EST	Estonia
FIN	Finland
FRA	France
GBR	Great Britain
GRE	Greece
GUA	Guatemala
HON	Honduras
HUN	Hungary
ISL	Iceland

ITA	Italy
JPN	Japan
LBR	Liberia
MAR	Morocco
MEX	Mexico
MNE	Montenegro
NIC	Nicaragua
NLD	Netherlands
NOR	Norway
PER	Peru
POL	Poland
PRT	Portugal
PRY	Paraguay
ROU	Romania
RUS	Russia
SLV	El Salvador
SRB	Serbia
SWE	Sweden
TUR	Turkey
URY	Uruguay
VEN	Venezuela

Table A.2 reports the name of all sovereign bond instruments in the data set and the ISO code of the issuer.

Table A.2: Sovereign Bond Instruments

<u>ISO</u>	<u>Bond Name</u>	<u>NewID</u>
ARG	Argentina 4% Railway Guaranteed Restoration Bonds	10025
ARG	Argentina 6% Funding Loan	10032
ARG	Argentina 3.50% External Loan of 1889	10039
ARG	Argentina 4% Bonds of 1898 Redeemable 1901	10045
ARG	Argentina 4% Bonds of 1898	10046
ARG	Argentina 4% Bonds of 1897 (Law 3378)	10047
ARG	Argentina 4% Bonds of 1897 (Law 3378 and 3783)	10048
ARG	Argentina 4% Bonds of 1897 (Law 3655 and 3750)	10049
ARG	Argentina 4.50% Sterling Bonds	10051
ARG	Argentina 5% Bonds of 1886-1887	10052
ARG	Argentina 5% Bonds of 1890	10053
ARG	Argentina 5% Irrigation Bonds	10054

ARG	Argentina 5% North Central Railway External Government Mortgage Bonds	10055
ARG	Argentina 5% Treasury Consolidation Bonds	10064
ARG	Argentina 5% Bonds of 1884	10066
ARG	Argentina 6% Public Works Loan of 1871	10068
ARG	Argentina 6% Railway Loan of 1881	10069
ARG	Argentina 6% Bonds of 1866-1868	10071
ARG	Argentina 6% Bonds of 1882	10075
ARG	Argentina 6% Treasury Bonds of 1915	10077
ARG	Argentina 7% National Cedulas	10080
ARG	Argentina 6% Treasury Bonds of 1881	10082
ARG	Argentina 5% Santa Fe and Reconquista Railway Mortgage Bonds	10114
AUT	Austria 4% Gold Rentes	10125
AUT	Austria 5% Sterling Bonds of 1859 (Payable January July)	10796
AUT	Austria 5% Sterling Bonds of 1859 (Payable May November)	10797
AUT	Austria 4.50% Treasury Notes	10801
AUT	Austria 4% Bonds of 1906	10805
AUT	Austria Anglo-Austrian Committee's Certificates	10807
AUT	Austria 6% Guaranteed Sterling Bonds Redeemable 1923-1943	10809
BEL	Belgium 2.50% Rentes	10818
BEL	Belgium 3% Rentes	10820
BEL	Belgium 3% Bonds of 1874	10821
BEL	Belgium 3% Loan of 1914	10822
BEL	Belgium 4% Rentes	10823
BEL	Belgium 4.5% Rentes	10825
BEL	Belgium 7% Stabilization Loan	10826
BRA	Brazil 4.50% Gold Loan of 1879	10828
BRA	Brazil 4.50% Bonds of 1883	10830
BRA	Brazil 4.50% Bonds of 1888	10831
BRA	Brazil 4% Railway Guaranteed Res. Bonds of 1901-1902	10832
BRA	Brazil 4% Bonds of 1889	10834
BRA	Brazil 5% Funding Bonds of 1898	10835
BRA	Brazil 5% Funding Bonds of 1914	10836
BRA	Brazil 5% Loan of 1903	10837
BRA	Brazil 5% Loan of 1907 Scrip	10840
BRA	Brazil 5% Loan of 1908	10841

BRA	Brazil 5% Loan of 1895	10842
BRA	Brazil Com. Lloyd Brazilian 5% Bonds	10852
BRA	Brazil Com. Lloyd Brazilian 4% Sterling Bonds	10853
BRA	Brazil 4.50% Bonds of 1860	10873
BRA	Brazil 4.50% Bonds of 1863	10874
BRA	Brazil 4.50% Bonds of 1852-1858	10877
BRA	Brazil 4% Bonds Redeemable 1916	10878
BRA	Brazil 4% Loan of 1910	10880
BRA	Brazil 4% Loan of 1911	10881
BRA	Brazil 4% Loan of 1902	10883
BRA	Brazil 5% Loan of 1875	10884
BRA	Brazil 5% Loan of 1913	10885
BRA	Brazil 5% Loan of 1865	10886
BRA	Brazil 5% Loan of 1871	10887
BRA	Brazil 5% Loan of 1859	10888
BRA	Brazil 5% Loan of 1886	10889
BRA	Brazil 6.50% Sterling Loan of 1927	10890
BRA	Brazil 7.50% Coffee Security Loan	10891
BRA	Brazil 4% Lloyd Bonds Redeemable 1933	10893
CHL	Chile 4.50% Gold Loan of 1906	11488
CHL	Chile 4.50% Loan of 1886	11489
CHL	Chile 4.50% Loan of 1889	11491
CHL	Chile 4.50% Loan of 1895	11492
CHL	Chile 4.50% Loan of 1887	11493
CHL	Chile 5% Annuity Series A	11494
CHL	Chile 5% Annuity Series B	11495
CHL	Chile 5% Annuity Series C	11496
CHL	Chile 5% Loan of 1909	11497
CHL	Chile 5% Loan of 1905	11497
CHL	Chile 5% Loan of 1910	11498
CHL	Chile 5% Loan of 1911 (January July)	11499
CHL	Chile 5% Loan of 1911 (May November)	11500
CHL	Chile 5% Loan of 1892	11501
CHL	Chile 5% Loan of 1896	11502
CHL	Chile 5% Loan of 1905	11504
CHL	Chile 8% Loan of 1922	11505
CHL	Chile 7.50% Loan of 1922	11506
CHL	Chile 6% Loan of 1928	11508
CHL	Chile 6% Bond of 1926	11509

CHL	Chile 3% Stock	11510
CHL	Chile 3% Bond of 1842	11511
CHL	Chile 4.50% Bond of 1858	11512
CHL	Chile 5% Loan of 1870 (2% Sinking Fund for First 5 Years)	11515
CHL	Chile 5% Loan of 1873	11516
CHL	Chile 4.50% Bond of 1893	11517
CHL	Chile 4.50% Bond of 1885	11519
CHL	Chile 4.50% Stock Redeemable 1867-1870	11520
CHL	Chile 5% Loan of 1875	11521
CHL	Chile 5% Coquimbo Railway Bond	11523
CHL	Chile 4.50% Conversion Loan Scrip	11524
CHL	Chile 6% Bond of 1867	11525
CHL	Chile 6% Redeemable Bond	11526
CHL	Chile 6% Bond of 1822	11527
CHL	Chile 7% Bond of 1866	11528
CHL	Chile 6% Loan of 1929	12540
CHN	China 4.50% Gold Bonds of 1898	11452
CHN	China 4.50% Gold Bonds of 1908	11453
CHN	China 5% Shanghai-Hangchow Railway Bond	11454
CHN	China 5% Shanghai-Nanking Railway Bond	11455
CHN	China 5% Bond of 1896	11456
CHN	China 5% Registered Bond of 1896	11458
CHN	China 5% Imperial Railway Loan	11460
CHN	China 5% Canton-Kowloon Railway Loan	11462
CHN	China 5% Gold Loan of 1912	11463
CHN	China 5% Supplemental Loan	11464
CHN	China 5% Gold Loan of 1908	11465
CHN	China 5% Gold Loan of 1905	11466
CHN	China 5% Hukuang Railways Bond	11467
CHN	China 5% Tientsien-Pukow Railway Bond	11469
CHN	China 5% Hunan Railway Bond	11470
CHN	China 5% Reorganization Loan of 1913	11471
CHN	China 6% Gold Bond of April 1895 Redeemable 1901-1915	11472
CHN	China 6% Gold Bond of 1895	11473
CHN	China 7% Silver Bond	11476
CHN	China 8% Bond of 1874-1876	11477
CHN	China 8% Bond of 1877	11478

CHN	China 8% Sterling Treasury Notes	11480
CHN	China 8% Treasury Bills	11481
CHN	China 7% Bond Series A	11484
CHN	China 6% Bond of 1885 Series A	11485
CHN	China 6% Bond of 1885 Series B	11486
CHN	China 7% Bond Series B	11487
COL	Colombia 1.50% to 3% External Loan of 1896	11529
COL	Colombia 3% External Loan	11530
COL	Colombia 4.75% Bond of 1873	11533
COL	Colombia 4.50% New Granada Debt Converted Bond	11534
COL	Colombia 6% Bond of 1863 Secured on 15% Salt River & Panama Railway	11536
CRI	"Costa Rica 5% ""A"" Bonds"	11538
CRI	"Costa Rica 5% ""B"" Bonds"	11540
CRI	Costa Rica 4% Bond of 1911	11545
CRI	Costa Rica 6% Bond of 1871 Secured on Customs Duties First Issue	11549
CRI	Costa Rica 6% Bond of 1871 Secured on Customs Duties Second Issue	11550
CRI	Costa Rica 7% Bond of 1872	11551
CUB	Cuba 4.50% Gold External Debt Gold Bond of 1913	11555
CUB	Cuba 5% Gold Bond of 1904	11556
CUB	Cuba 4.50% Gold External Debt Gold Bond of 1911	11557
CUB	Cuba 6% Bond	11559
CUB	Cuba 7% Matanzas and Sabanilla Bond	11561
CUB	Cuba 7% Bay of Havana & Matanzas 1st Issue	11564
CUB	Cuba 7% Bay of Havana & Matanzas Bond of 1865	11565
CUB	Cuba 7% Bay of Havana & Matanzas 2nd Issue	11566
CZK	Czechoslovakia 8% Sterling Bonds Reddemable 1951	11567
CZK	"Czechoslovakia 8% Sterling ""B"" Bonds Redeemable 1932-1952"	11568
DEU	Germany 7% Sterling Loan	11687
DEU	North German Confederation 5% Loan 1st Issue	12021
DEU	North German Confederation 5% Loan 2nd Issue	12022
DNK	Denmark 3.50% Gold Loan of 1887 Redeemable 1900	10021
DNK	Denmark 5% Debenture of 1864 Redeemable 1869-1872	10369
DNK	Denmark 3% Amortisable Bonds of 1897	11570
DNK	Denmark 3% Gold Bond of 1894	11574
DNK	Denmark 3% Stock of 1825	11578

DNK	Denmark 4% Stock of 1862	11579
DNK	Denmark 4% Loan of 1912	11580
DNK	Denmark 4% Bond of 1850-1861	11581
DNK	Denmark 4% International Bond of 1887	11582
DNK	Denmark 5% Debenture of 1864 Redeemable 1873-1877	11586
DNK	Denmark 5% Debenture of 1864 Redeemable by Sinking Fund Beginning 1865	11587
DNK	Denmark 5% Debenture	12494
ECU	Equador 1% New Consolidated Bond	11608
ECU	Equador 4.50% New External Bonds Increasing to 5%	11609
EGY	Egypt 4.50% Bonds of 1888	10058
EGY	Egypt 3% Bonds (Guaranteed by Great Britain)	11022
EGY	Egypt 3.50% Preferred Government Bond Reduced from 5%	11612
EGY	Egypt 3.50% Inscribed Bond Liable from Stamp Duty	11613
EGY	Egypt 5% State Minimum Mortgage Bond (Reduced from 7%) of 1878	11616
EGY	Egypt 4% Unified Bond	11618
EGY	Egypt 7% Bond of 1864	11620
EGY	Egypt 7% ?100 Bond of 1864	11621
EGY	Egypt 7% Bond of 1863	11623
EGY	Egypt 7% ?100 Bond of 1868	11624
EGY	Egypt 7% Bond of 1873	11626
EGY	Egypt 7% Khedive's Mortgage Bond	11627
EGY	Egypt 5% Khedive's Minimum Bond of 1870 (original 7 %)	11628
EGY	Egypt 7% Viceroy's Bond of 1866 (secured on private mains)	11630
EGY	Egypt 7% Bond of 1866	11631
EGY	Egypt 7% Bond of 1862 1st Issue	11632
EGY	Egypt 7% Bond of 1862 2nd Issue	11633
EGY	Egypt 7% ?100 Bond of 1862	11634
EGY	Egypt 3% Guaranteed Loan	11636
EGY	Egypt 3.50% Bond of 1894	11637
EGY	Egypt 4% Daira Sanieh Bond	11638
EGY	Egypt 5% Daira Sanieh Bond (now 4%)	11641
EGY	Egypt 5% Preferred Bond of 1877-1880	11643
EGY	Egypt 6% Unified Loan of 1877 (now 4%)	11647
EGY	Egypt 7% Railway Debentures of 1866	11648

EGY	Egypt 9% Loan of 1867	11649
EGY	Egypt Diara Khassa Loan	11651
ESP	Spain 2% Bonds (overdue coupons)	12229
ESP	Spain 3% External Bonds (1% in Cash)	12232
ESP	Spain 3% Deferred Bonds	12233
ESP	Spain 3% External Bonds of 1872	12238
ESP	Spain 3% External Bonds of 1871	12239
ESP	Spain 3% Stock	12240
ESP	Spain 3% Bonds of 1869	12241
ESP	Spain 4% Unsealed Bonds	12248
ESP	Spain 4% Sealed Bonds	12249
ESP	Spain 5% Quicksilver Mortgage of 1870	12250
ESP	Spain 6% Land Mortgage Bond of 1871	12251
EST	Estonia 7% Loan of 1927	11653
FIN	Finland 4.50% Government Railway Bond	11654
FIN	Finland 6% Bond of 1923	11657
FIN	Finland 6.50% Municipal Mortgage Bank Bond	11658
FRA	France 3% Bond of 1886	11659
FRA	France 3% Bond of 1878	11660
FRA	France 3.50% Redeemable Bond of 1878	11661
FRA	France 3% Rentes	11662
FRA	France 5% Rentes (London New issue)	11664
FRA	France 4% Rentes Redeemable 1943	11665
FRA	France 4% Rentes Redeemable 1944	11666
FRA	France 3.50% Rentes	11668
FRA	France 3% Stock	11669
FRA	France 3% Bond of 1881	11670
FRA	France 4% Treasury Bonds	11671
FRA	France 4.50% Bond of 1878	11674
FRA	France 4.50% Bond of 1852	11675
FRA	France 4.50% Treasury bonds	11676
FRA	France 5% National Loan of 1871 Reduced to 4.50% in 1883	11677
FRA	France 5% National Loan of 1872 Reduced to 4.50% in 1883	11678
FRA	France 5% Rentes (London issue)	11683
FRA	France 6 % New Redemable Sterling Loan	11684
GBR	United Kingdom 4% War Loan Scrip	10018
GBR	United Kingdom 5% War Loan Scrip	10024

GBR	"United Kingdom 4.50% War Loan ""B"" Stock"	10031
GBR	United Kingdom Savings Bank Annuities	10033
GBR	United Kingdom 5% Conversion Treasury Bonds	10036
GBR	United Kingdom 4% War Loans Transferable by Deed	10037
GBR	United Kingdom 5% War Loans Transferable by Deed	10042
GBR	"United Kingdom 4.50% War Loan ""C"" Stock"	10065
GBR	United Kingdom 2.50% Treasury Annuities	10911
GBR	United Kingdom 2.75% Consols until 1903 then 2.50%	10912
GBR	United Kingdom 2.75% Annuities	10913
GBR	United Kingdom 3.50% Conversion Loan	10915
GBR	United Kingdom 3.50% First Loan	10917
GBR	United Kingdom 3% Reduced Loan	10918
GBR	United Kingdom 3% Consols	10919
GBR	United Kingdom 3% Exchequer Bonds Redeemable 1905	10920
GBR	United Kingdom 3% Exchequer Bonds Redeemable 1920	10921
GBR	United Kingdom 3% Exchequer Bonds Redeemable 1907	10922
GBR	United Kingdom 3% Exchequer Bonds Redeemable 1903	10923
GBR	United Kingdom 3% Exchequer Bonds Redeemable 1909	10924
GBR	United Kingdom 3% Exchequer Bonds Redeemable 01/01/1930	10926
GBR	United Kingdom 3% Exchequer Bonds Redeemable 01/28/1930	10927
GBR	United Kingdom 4% Bonds of 1878 Redeemable 1910 (guaranteed by Great Britain.)	10929
GBR	United Kingdom 4% Bonds of 1878 Redeemable 1913 (guaranteed by Great Britain.)	10930
GBR	United Kingdom 4 % Consolidated Loan	10932
GBR	United Kingdom 4 % Funding Loan	10933
GBR	United Kingdom 4 % Victory Bonds Redeemable by Drawings 1920-1976	10934
GBR	United Kingdom 4 % Victory Bonds 4th War Loan	10937
GBR	United Kingdom 4% Tax-Free National War Bonds 1st Series	10938
GBR	United Kingdom 5% National War Bonds 2nd Series Repayable at 102	10942

GBR	United Kingdom 5% National War Bonds 2nd Series Repayable at 103	10943
GBR	United Kingdom 5% National War Bonds 2nd Series Repayable at 105	10944
GBR	United Kingdom 5% National War Bonds 3rd Series Repayable at 102	10945
GBR	United Kingdom 5% National War Bonds 3rd Series Repayable at 103	10946
GBR	United Kingdom 5% National War Bonds 3rd Series Repayable at 105	10947
GBR	United Kingdom 5% National War Bonds 4th Series Repayable at 102	10948
GBR	United Kingdom 5% National War Bonds 4th Series Repayable at 105	10949
GBR	United Kingdom 4 % Funding Bonds 4th War Loan	10950
GBR	United Kingdom 4% Tax-Free National War Bonds 4th Series	10951
GBR	United Kingdom 4% Tax-Free National War Bonds 3rd Series	10952
GBR	United Kingdom 4% Tax-Free National War Bonds 2nd Series	10953
GBR	United Kingdom 4% War Loan	10954
GBR	United Kingdom 4.50% Conversion Loan	10955
GBR	"United Kingdom 4.50% War Loan "A" Stock"	10956
GBR	United Kingdom 5% War Loan	10959
GBR	United Kingdom 5% Treasury Bonds 5 to 15 Years	10960
GBR	United Kingdom 5% National War Bonds 1st Series Repayable at 105	10964
GBR	United Kingdom 5% National War Bonds 1st Series Repayable at 103	10965
GBR	United Kingdom 5% National War Bonds 1st Series Repayable at 102	10966
GBR	United Kingdom 5% Exchequer Bonds Redeemable 1919-1922	10967
GBR	United Kingdom 5% Exchequer Bonds Redeemable 1921	10968
GBR	United Kingdom 5% Exchequer Bonds Redeemable 1920	10969
GBR	United Kingdom 5.75% Exchequer Bonds Redeemable 1925	10975
GBR	United Kingdom 5.75% Exchequer Bonds Redeemable 1922	10976
GBR	United Kingdom Red Sea Telegraph ?1 Annuities expiring 1908	10979

GBR	United Kingdom Annuities Expiring 1885	10980
GBR	United Kingdom Annuities Expiring 1880	10981
GBR	United Kingdom Annuities Expiring 1903	10985
GBR	United Kingdom 2.50% Exchequer Funded Bonds	11025
GBR	United Kingdom 2.50% Exchequer Unfunded Bonds	11026
GBR	United Kingdom 0.75% Exchequer Bills	11027
GBR	United Kingdom 1.00% Exchequer Bills	11028
GBR	United Kingdom 2.50% Exchequer Bills from ?100 to ?1000	11029
GBR	United Kingdom 2.75% Exchequer Bonds Redeemable 1906-1915	11042
GBR	United Kingdom 3% Exchequer Bonds Redeemable 1912	11043
GBR	United Kingdom 3% Exchequer Bonds Redeemable 1915	11044
GBR	United Kingdom 6% Exchequer Bonds	11058
GBR	United Kingdom 5% Exchequer Bonds of 1918	11062
GBR	United Kingdom 2.75% Bonds of 1890	11070
GBR	United Kingdom 3% Local Loans	11088
GBR	United Kingdom 3% Metropolitan Police Debenture	11092
GBR	United Kingdom 2.75% National War Loan of 1900	11111
GBR	United Kingdom 2.50% New Stock Redeemable 1894	11112
GBR	United Kingdom 2.75% New Stock Redeemable after 1905	11114
GBR	United Kingdom 3.50% New Stock Redeemable 1894	11115
GBR	United Kingdom 3% New Stock as of 1867	11117
GBR	United Kingdom 5% New Stock Redeemable January 1873	11120
GBR	United Kingdom 4% Treasury Bonds	11144
GBR	United Kingdom 4.50% Treasury Bonds Redeemable 1932	11145
GBR	United Kingdom 4.50% Treasury Bonds Redeemable 1934	11146
GBR	United Kingdom 5% Treasury Bonds Redeemable 1927	11147
GBR	United Kingdom 5.50% Treasury Bonds Redeemable 1930	11148
GBR	United Kingdom 5.50% Treasury Bonds Redeemable 1929	11149
GBR	United Kingdom 4.50% Treasury Bonds of 1929 1st Series	11150
GBR	United Kingdom 5% Treasury Bonds Redeemable 1933-1935	11151

GBR	United Kingdom 4.50% Treasury Bonds of 1928	11152
GBR	United Kingdom 2.75% Guaranteed Stock (Created under the Irish Land Act 1903)	12533
GBR	United Kingdom 4.50% Treasury Bonds of 1929 2nd Series	12539
GRE	Greece 4% Rentes	10079
GRE	Greece 2.50% Loan of 1898 Scrip (Guaranteed by Great Britain)	11064
GRE	Greece 5% Bonds of 1824-1825 ex. Coupons	11553
GRE	Greece 5% Bonds of 1824-1825 with Coupons	11554
GRE	Greece 4% Bonds	11699
GRE	Greece 4% Monopoly Loan	11700
GRE	Greece 4% Railway Loan of 1902	11703
GRE	Greece 5% Loan of 1890	11704
GRE	Greece 5% Loan of 1881	11705
GRE	Greece 5% Loan of 1884	11706
GRE	Greece 5% Funding Loan of 1893	11707
GRE	Greece 5% Independence Loan of 1879	11708
GRE	Greece 5% Loan of 1914	11709
GRE	Greece 5% National Loan of 1907	11710
GRE	Greece 6% Stabilization Loan	11712
GRE	Greece 6% Public Works Loan of 1928	11713
GRE	Greece 6% Loan of 1888	11714
GRE	Greece 7% Refugee Loan of 1924	11715
GUA	Guatemala 5% Bond	11718
GUA	Guatemala 4% Bond	11719
GUA	Guatemala 6% Internal Bonds Series A B C	11720
GUA	Guatemala 4% External Loan	11722
GUA	Guatemala 6% Loan of 1869	11726
HON	Honduras 10% Railway Loan of 1870	11734
HON	Honduras 5% Bond	11737
HON	Honduras 10% Railway Loan of 1867	11738
HON	Honduras 10% ?100 Railway Loan	11740
HUN	Hungary 4.50% Loan of 1914	11741
HUN	Hungary 4% Gold Rentes	11742
HUN	Hungary 3% State Loan of 1895	11743
HUN	Hungary (Counties of) 7.50% Bond	11744
HUN	Hungary (Counties of) 6% Bond	11745
HUN	Hungary 6% Gold Rentes	11748
HUN	Hungary 5% Bond of 1871	11750

HUN	Hungary 5% Bond of 1873	11751
HUN	Hungary 6% Treasury Bond of 1873	11752
HUN	Hungary 6% Treasury Bond of 1874	11753
HUN	Hungary 7.50% Sterling Bonds of 1924	11754
ISL	Iceland 7% Loan	11755
ITA	Italy 3.50% Rentes	11813
ITA	Italy 5% Maremmana Railway Bonds of 1862	11815
ITA	Italy 4% Rentes	11816
ITA	Italy 5% State Domain Bonds of 1865	11817
ITA	Italy 5% State Domain Bonds of 1869 2nd Issue	11818
ITA	Italy 5% Bonds of 1881	11819
ITA	Italy 5% Rentes of 1861	11820
ITA	Italy 6% Tobacco Loan of 1868	11822
ITA	Italy 7% Cred. Constm. for Public Works Redeemable 1937	11823
ITA	Italy 7% Cred. Constm. for Public Works Redeemable 1947	11824
JPN	Japan 4% bonds of 1905	11835
JPN	Japan 6% Bonds of 1924	11839
JPN	Japan 4% Bonds of 1910	11840
JPN	Japan 4% Sterling Bonds of 1899	11841
JPN	Japan 4.50% Sterling Bonds of 1905 1st Series	11845
JPN	Japan 4.50% Sterling Bonds of 1905 2nd Series	11846
JPN	Japan 6% Sterling Loan 1st Series	11853
JPN	Japan 6% Sterling Loan 2nd Series	11854
JPN	Japan 7% Bond of 1873	11855
JPN	Japan 9% Customs Loan (for Railwa purposes) of 1870	11856
JPN	Japan 5% South Manchuria Railway Bonds Redeemable 1932	11857
JPN	Japan 4.50% South Manchuria Railway Bonds	11858
JPN	Japan 5% South Manchuria Railway Bonds Redeemable 1948	11860
LBR	Liberia 7% Loan of 1871	11867
LBR	Liberia 7% External Loan	11868
MAR	Morocco 5% Bonds of 1862	11920
MEX	Mexico 3% Bond of 1851	11888
MEX	Mexico 3% Bond of 1864 (issued in arrears)	11889
MEX	Mexico 3% Consolidated Loan of 1886	11890
MEX	Mexico 5% National Railway Bond of Tehuantepec	11896

MEX	Mexico 6% Silver Currency Loan of 1893	11897
MEX	Mexico 5% Consolidated External Loan of 1899	11903
MEX	Mexico 6% 10-year Treasury Bonds	11906
MEX	Mexico 6% Consolidated Bonds	11907
MEX	Mexico 6% Silver Currency Loan of 1890	11909
MEX	Mexico 6% External Bonds of 1890	11910
MEX	Mexico 6% Anglo-French Loan	11913
MNE	Montenegro 5% Government Loan	11915
NIC	Nicaragua 6% Bonds reduced to 4%	12011
NIC	Nicaragua 6% Sterling Loan of 1909	12014
NIC	Nicaragua 6% Bonds Reduced to 5%	12245
NLD	Netherlands 3.50% Government Direct Issue Bonds	10022
NLD	Netherlands 2.50% Stock	11596
NLD	Netherlands 4% India Debt	11597
NLD	Netherlands 3% Stock	11599
NLD	Netherlands 3% Bonds of 1896	11600
NLD	Netherlands 3% Bonds of 1898	11601
NLD	Netherlands 3% Inscribed Stock	11602
NLD	Netherlands 4% Stock	11603
NLD	Netherlands 4% Bonds of 1883	11604
NOR	Norway 3.50% Non-Assenting Bonds of 1886	10060
NOR	Norway 3.50% Assenting Bonds of 1886	12024
NOR	Norway 3% Bonds of 1888	12027
NOR	Norway 3.50% Bonds English Scrip	12032
NOR	Norway 4% Bonds of 1880	12033
NOR	Norway 4% Bonds of 1911	12034
NOR	Norway 4.50% Bonds of 1876	12035
NOR	Norway 4.50% Bonds of 1878	12036
NOR	Norway 6% Bonds of 1921	12037
PER	Peru 5% Gold Bonds	12055
PER	Peru 5.50% Salt Loan	12056
PER	Peru 6% National Loan	12057
PER	Peru 7.50% Guano Loan	12058
PER	Peru 5% Consolidated Loan of 1872	12060
PER	Peru 6% Railway Loan of 1870	12062
PER	Peru 5% Pisco to Ayacucho Railway Loan	12063
PER	Peru 5% Bonds of 1865	12122
PER	Peru 4.50% Bonds of 1862	12123
POL	Poland 7% Stabilization Loan	12064

PRT	Portugal 3% Irredeemable Loan	12065
PRT	Portugal 3% Irredeemable New Loan of 1874	12068
PRT	Portugal 3% Irredeemable New Loan of 1880	12071
PRT	Portugal 3% Irredeemable Loan 1st Series Stamped	12072
PRT	Portugal 3% Irredeemable New Loan of 1867	12073
PRT	Portugal 3% Irredeemable New Loan of 1869	12074
PRT	Portugal 3% Irredeemable New Loan of 1877	12076
PRT	Portugal 3% Irredeemable New Loan of 1884	12077
PRT	Portugal 5% Minho and Douro Railway Bonds of 1881	12078
PRY	Paraguay 3% Bonds of 1886	12042
PRY	Paraguay 2% Bonds of 1886	12043
PRY	Paraguay Land Warrants	12045
PRY	Paraguay 8% Public Works Bonds of 1871	12047
PRY	Paraguay 8% Public Works Bonds of 1872	12048
ROU	Roumania 7% Iron Bridges Association Loan of 1870	11591
ROU	Roumania 4.50% Bonds of 1913	12124
ROU	Roumania 4% External Sterling Bonds of 1922	12125
ROU	Roumania 4% Consolidated Loan of 1922	12126
ROU	Roumania 7% Monopoly Inscribed Bonds	12127
ROU	Roumania 4% Bonds of 1891	12129
ROU	Roumania 4% Bonds of 1890	12130
RUS	Russia 4% Rentes	10092
RUS	Russia 3% Trans-Caucasian Bond	12131
RUS	Russia 3.50% Bond	12132
RUS	Russia 3% Imperial Land Mortgage Bank for the Nobility Bond	12133
RUS	Russia 3% Bonds of 1859	12134
RUS	Russia 4.50% Bonds of 1850	12135
RUS	Russia 4.50% Bonds of 1860	12136
RUS	Russia 4.50% Bonds of 1909	12137
RUS	Russia 4.50% Bonds of 1875	12139
RUS	Russia 4% Nicholas railway bonds of 1867-1869 Redeemable 1951	12140
RUS	Russia 4% Nicholas Railway bonds of 1867-1869 Redeemable 1949	12142
RUS	Russia 4% Conversion Railroad Bonds Series II	12147
RUS	Russia 4% Conversion Railroad Bonds Series III	12148
RUS	Russia 4% Conversion Railroad Bonds Series I	12150
RUS	Russia 4% Consolidated Railway Series of 1880	12159

RUS	Russia 5% Bonds of 1822	12162
RUS	Russia 5% Bonds of 1862	12163
RUS	Russia 5% English Scrip of 1906	12164
RUS	Russia 5% Bonds of 1878 - 2nd Oriental	12165
RUS	Russia 5% Bonds of 1879 - 3rd Oriental	12166
RUS	Russia 4% Consolidated Railway Series of 1877	12167
RUS	Russia 5% Anglo Dutch Loan of 1864 issued at ?100	12168
RUS	Russia 5% Anglo Dutch Loan of 1864 issued at ?100/1000 fl	12169
RUS	Russia 5% Anglo Dutch Loan of 1866 issued at ?100	12171
RUS	Russia 5% Anglo Dutch Loan of 1866 issued at ?100/1000 fl	12172
RUS	Russia 5% Consolidated Railway Series Bonds of 1870	12174
RUS	Russia 5% Consolidated Railway Series Bonds of 1871	12175
RUS	Russia 5% Consolidated Railway Series Bonds of 1872	12176
RUS	Russia 5% Consolidated Railway Series Bonds of 1873	12177
RUS	Russia 6.25% Dunaberg-Vitepsk Railway Bonds	12186
SLV	El Salvador 6% Bonds Redeemable 1914	12202
SLV	El Salvador 6% Sterling Bonds Scrip	12203
SLV	El Salvador 7% Sterling Fund Bonds	12204
SRB	Serbia 4% Unified Bonds	12209
SWE	Sweden 3% Bonds of 1889	12265
SWE	Sweden 3% Consolidated English Scrip of 1894	12266
SWE	Sweden 4% Bonds of 1880 1st Issue	12268
SWE	Sweden 3.50% Bonds of 1908	12270
SWE	Sweden 4% Bonds of 1878	12272
SWE	Sweden 4% Provincial Mortgage Bonds of 1853	12273
SWE	Sweden 3.50% Bonds of 1900	12275
SWE	Sweden 4.50% Funding State Loan of 1875	12278
SWE	Sweden 4.50% Government Loan of 1864	12279
SWE	Sweden 4.50% Bonds of 1876	12280
SWE	Sweden 5% Bonds of 1868	12281
SWE	Sweden 4% Bonds of 1880 2nd Issue	12531
TUR	Turkey 4% Bonds of 1855 (Guaranteed by England and France)	11158
TUR	Turkey 4% Bond of 1891	11650
TUR	Turkey 3.50% Scrip of 1894	12294

TUR	Turkey 5% Customs Loan	12297
TUR	Turkey 4% Loan of 1909	12299
TUR	Turkey 4% Loan of 1908	12300
TUR	Turkey 4% Priority Loan of 1890	12302
TUR	Turkey 4% Unified Bonds	12303
TUR	Turkey 4% Loan of 1902	12305
TUR	Turkey 5% General Debt of 1865	12310
TUR	Turkey 5% General Debt Registered at 1%	12311
TUR	Turkey 5% Stamped Bonds	12312
TUR	Turkey 5% Ottoman Deferred Bonds of 1877	12313
TUR	Turkey 5% Secured Egyptian Tribute Bond of 1854	12315
TUR	Turkey 5% Priority Bonds	12319
TUR	Turkey 6% Bonds of 1873	12321
TUR	Turkey 6% Bonds of 1873 Registered at 1%	12322
TUR	Turkey 6% Bonds of 1873 Stamped	12323
TUR	Turkey 6% Mires Loan of 1860	12324
TUR	Turkey 6% Loan of 1868 (Secured on Customs of Constantinople)	12326
TUR	Turkey 6% ?100 Loan of 1868 (Secured on Customs of Constantinople)	12327
TUR	Turkey 6% Loan of 1862 (Secured on Tobacco Salt and Stamp Duties)	12328
TUR	Turkey 6% ?100 Bonds of 1862 (Secured on Tobacco Salt and Stamp Duties)	12329
TUR	Turkey 6% Loan of 1863-1864 (Secured on Specie Revenue)	12330
TUR	Turkey 6% Loan of 1862 (Secured on Sheep Taxes Tokah Mines and Syrian Industry)	12331
TUR	Turkey 6% Bonds of 1869	12332
TUR	Turkey 1871 Egypt Trust now 4.25%	12333
TUR	Turkey 6% ?100 Bonds of 1859 (Secured on Customs of Constantinople)	12334
TUR	Turkey 6% ?100 Bonds of 1859 (Secured on Tobacco Salt and Stamp Duties)	12336
TUR	Turkey 9% Treasury Bonds of 1872 Series A	12338
TUR	Turkey 9% Treasury Bonds of 1872 Series B	12339
TUR	Turkey 9% Treasury Bonds of 1872 Series C	12340
TUR	Turkey Converted Bonds - Series A 1 %	12342
TUR	Turkey Converted Bonds - Series B 1 %	12343
TUR	Turkey Converted Bonds - Series C 1 %	12344
TUR	Turkey Converted Bonds - Series D 1 %	12345

TUR	Turkey 6% Bonds of 1862 now 1%	12372
TUR	Turkey 6% Egyptian Trust Bonds of 1871 now 4.25%	12496
TUR	Turkey 5% General Debt of 1874	12498
TUR	Turkey 6% Bonds of 1858 Registered 1%	12499
TUR	Turkey 6% Bonds of 1858 Stamped	12500
TUR	Turkey 6% Bonds of 1862 Registered 1%	12504
TUR	Turkey 6% Bonds of 1862 Stamped	12505
TUR	Turkey 6% Bonds of 1865 Treasury Registered	12509
TUR	Turkey 6% Bonds of 1865 Registered 1%	12510
TUR	Turkey 6% Bonds of 1865 Stamped	12511
TUR	Turkey 6% Bonds of 1869 Registered 1%	12513
TUR	Turkey 6% Bonds of 1869 Stamped	12514
URY	Uruguay 3.50% Bonds	12448
URY	Uruguay 5% Bonds of 1896	12450
URY	Uruguay 5% Consolidated bonds of 1905	12451
URY	Uruguay 5% Gold Bonds of 1914	12452
URY	Uruguay 5% External Bonds of 1919	12454
URY	Uruguay 5% Unifed Bonds of 1883	12455
URY	Uruguay 6% Bonds of 1871 (now 2.50%)	12456
URY	Uruguay 1.25% Interest Bonds	12457
URY	Uruguay 6% Sterling Loan of 1888	12458
VEN	Venezuela 1.50% Bond	10001
VEN	Venezuela 3% Bond	10002
VEN	Venezuela 3% Diplomatic Debt	12466
VEN	Venezuela 4% New Consolidated Bonds	12468

The next step in the data construction process was to merge this sovereign bond price data with data on wartime events. I code war initiation and termination events at the monthly level using the Correlates of War (COW) data set (Sarkees and Wayman 2010). Not all COW war participants issued sovereign bonds, such as 19th century German and Italian states, so these conflicts do not appear in my final analysis. I then coded the number of battles, battle victories, and battle defeats at the monthly level using the Interstate War Battle (IWB) dataset (Min 2021). Although the IWB dataset primarily codes battle events at the country level, it curiously codes them at the coalition level for World War I, which necessitates dropping this conflict from my analysis. I coded a battle as occurring for all subsequent months following its start until an outcome was reached. I coded “inconclusive” battle outcomes as victories (defeats) for the defenders (attackers) to reflect the successful defense of a position. Table A.3 reports descriptive statistics for all variables included in my final analysis.

Table A.3: Descriptive Statistics

Variable	Description	Type	Mean	Median	Minimum	Maximum
NewID	Bond Instrument ID	Factor	.	.	.	.
Name	Instrument Name	Character	.	.	.	.
ISO	ISO Country Code	Factor	.	.	.	.
Year	Year	Numeric	1901	1902	1869	1929
Month	Month	Numeric	6.496	6	1	12
Date	Date	Date	.	.	1869-01-01	1929-12-01
Month_Fix	Month Fixed Effect	Factor	.	.	.	.
PriceMonthOpen	Opening Monthly Price	Numeric	75.3	84	0	159
PriceMonthHigh	High Monthly Price	Numeric	74.94	84.5	0	195
War	War Indicator	Binary	.0512	0	0	1
Warlead	War Indicator (Lead)	Binary	.0512	0	0	1
Price MonthOpen_lagN	Lagged Opening Monthly Price (N months)	Numeric	75.3	84	0	159
PriceMonthHigh_lagN	Lagged High Monthly Price (N months)	Numeric	74.94	84.5	0	195
Battles	# of Battles	Numeric	.1109	0	0	21
Victories	# of Battle Victories	Numeric	.03488	0	0	22
War_victor	War Termination: Victory	Binary	.0019	0	0	1
War_loser	War Termination: Defeat	Binary	.0015	0	0	1
Defeats	# of Battle Defeats	Numeric	.037	0	0	1
Any_victory	Victory Indicator	Binary	.008	0	0	1
Any_defeat	Defeat Indicator	Binary	.009	0	0	1
Wartime_bond	Bond Traded During Wartime	Binary	.347	0	0	1

Auto Correlation Function (ACF) Plots

I include a lagged dependent variable in my dynamic panel models in order to control for the autocorrelation between sovereign bond prices in adjacent months (Wilkins 2018). There is no clear answer, however, to the question of how many lagged dependent variables should be included in a given regression analysis. Theoretically, lagged dependent variables should be included for as many time periods whereby past outcomes may affect current outcomes yet including too many lagged variables can also result in model mis-specification. As a result, I

include a single lagged dependent variable in my core analysis in Table 1 in the body of the article and report robustness checks using additional lagged variables below.

ACF plots are another way of visually justifying the inclusion of lagged dependent variables. These plots depicts visually the correlation between a variable and lags of that variable. It is also helpful to look at partial autocorrelation (PACF) plots when analyzing time series with a high degree of autocorrelation. PACF plots depict the correlation between time series observations at a set interval only after the correlation between intervening lags is controlled for (Box-Steffensmeier et. al. 2014). ACF and PACF plots can help justify the inclusion of a certain number of lagged variables when there is a steep drop in the ACF or PACF after a set number of lags.

While the ACF plots of the monthly opening (Figure A.1) and high (Figure A.3) sovereign bond prices depict a steadily decreasing ACF, the relative PACF plots (Figures A.2 and A.4) show a stark decrease in PACF after the first lag. As a result, I include a single lagged dependent variable in my initial models in Table 1.

Figure A.1: ACF, Monthly Opening Bond Price

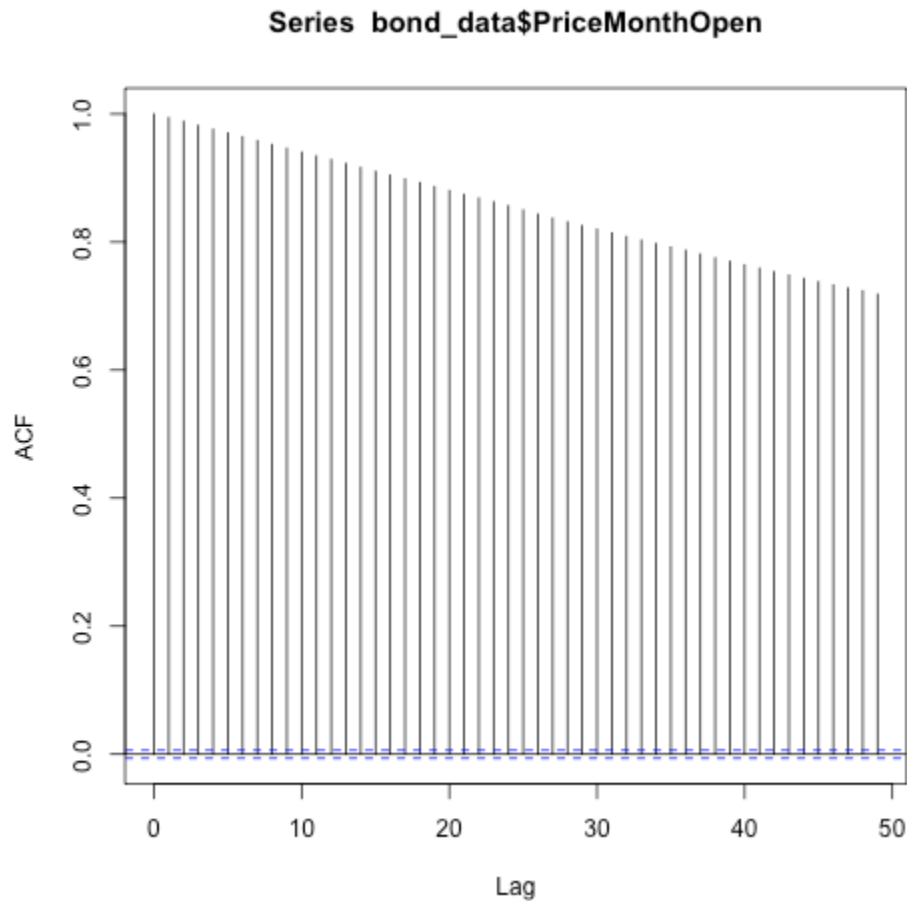


Figure A.2: PACF, Monthly Opening Bond Price

Series bond_data\$PriceMonthOpen

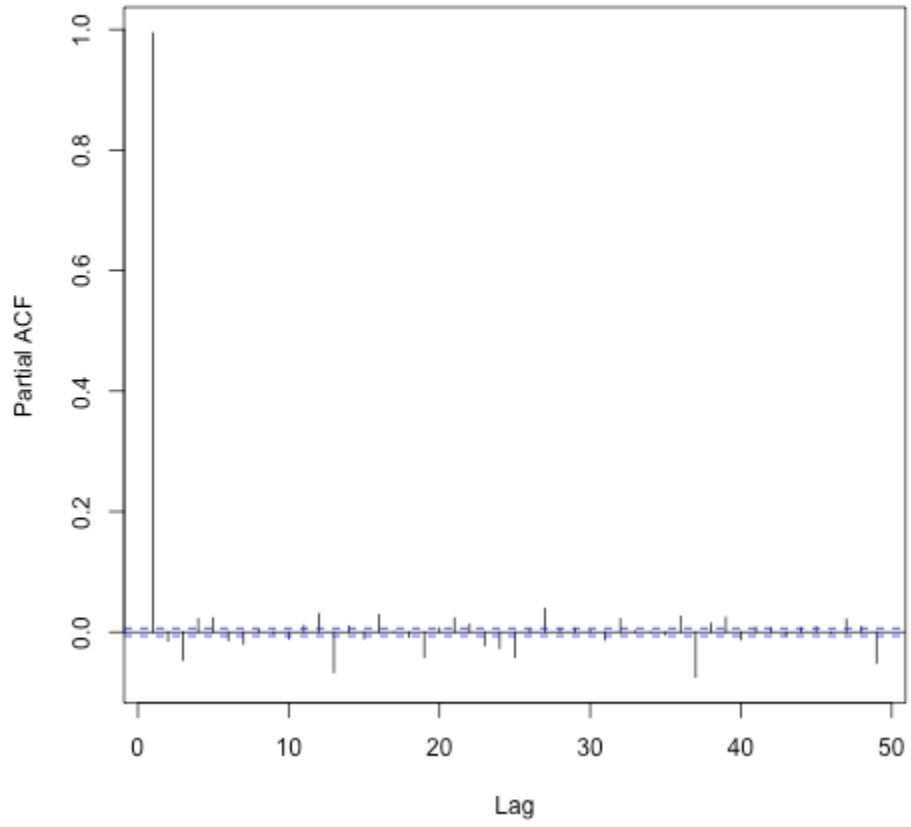


Figure A.3: ACF, Monthly High Bond Price

Series bond_data\$PriceMonthHigh

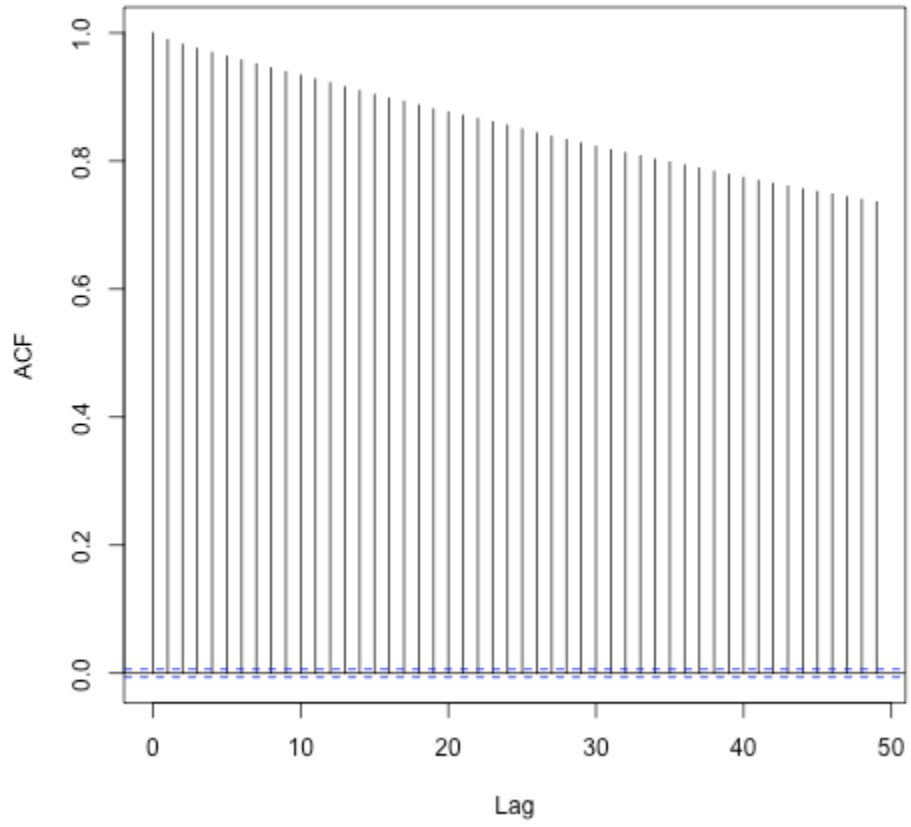
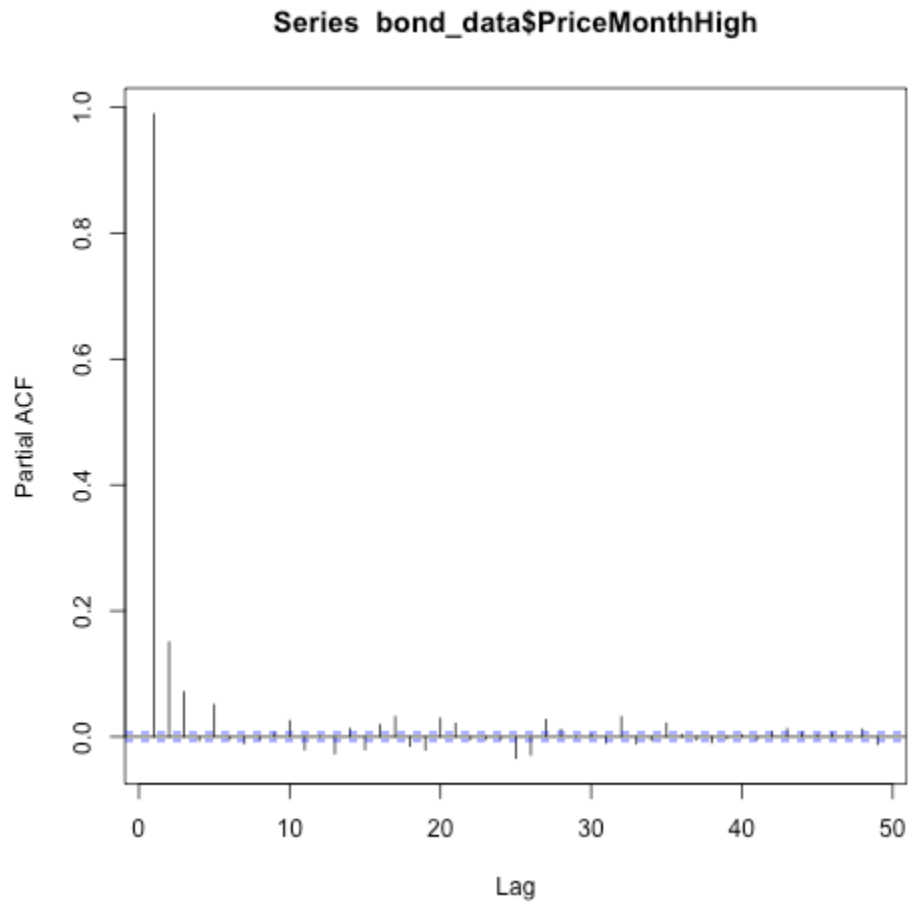


Figure A.4: PACF, Monthly Opening Bond Price



Sensitivity Analysis

As noted in the body of the article, the main threat to my causal identification strategy is the presence of unobserved confounders that may be correlated with wartime events and sovereign bond prices. Sensitivity analysis, or analyzing whether estimated coefficients are stable to the inclusion of different sets of control variables, can mitigate concerns about unobserved confounders (Altonji, Elder, and Taber 2005). Specifically, I use a sensitivity test statistic (δ) proposed by Emily Oster (2019) that assesses the relative causal weight of unobservable confounders relative to observed variables that would be necessary to render a proposed causal relationship statistically insignificant. If δ is greater than one we can be relatively confident that causal estimates are not being driven by unobserved confounders. These confounders would have to have a larger causal effect than the observed effect in order to make it statistically significant.

Table A.4 reports the estimated coefficients from Table 1 alongside Oster’s δ statistic and β^* s, or “bias corrected coefficients” that account for potential bias from unobserved confounders. The β^* values are similar in direction and magnitude to the estimated coefficients from Table 1 and the δ values suggest that any unobserved confounders would need to be between 2.5 and 25

times as important as wartime events in explaining sovereign bond prices to explain away the measured causal effect.

The exceptions are the β^* and δ values for Model 3. These negative β^* and δ values imply that the true causal effect of battle victories on sovereign bond prices may be negative if we were able to account for unobserved confounders. This should slightly lessen our confidence that battle victories increase sovereign bond prices, but importantly don't contradict my findings in Table 1. Namely, the fact that the β^* and δ values for Model 4 are positive means that the results of this model aren't sensitive to unobserved confounders. We therefore can remain reasonably confident that battle victories do increase sovereign bond prices yet should scrutinize this effect more fully in future research.

Table A.4: Sensitivity Analysis

MODELS	BETA	OBETA	ODELTA
Model 1	-.314	-0.368	6.97
Model 2	-.227	-0.240	3.88
Model 3	.218	-.243	-16.1
Model 4	.218	.043	11.9
Model 5	-.181	-.339	25.5
Model 6	-.162	-.056	2.88

Robustness Tests

Robustness tests, assessing whether empirical findings are consistent across various model specifications and alternate coding decisions, is another way to bolster confidence in the results presented in Table 1 in the body of the article. Tables A.5, A.6, and A.7 demonstrate that the results of Table 1 are robust to the inclusion of no, two, and three lagged dependent variables. All estimated causal effects are in the same direction and only one (Model 1, no lagged dependent variables) is not statistically significant.

Table A.5: Results, No Lagged Dependent Variables

	Opening Price (1)	High Price (2)	Opening Price (3)	High Price (4)	Opening Price (5)	High Price (6)
War	-0.199 (-0.706, 0.308)	-1.888*** (-2.367, -1.410)				
Victories			2.062*** (1.378, 2.746)	1.842*** (1.186, 2.497)		
Defeats					-0.955*** (-1.413, -0.497)	-0.885*** (-1.334, -0.437)
Instrument FE	Y	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
Observations	75,644	88,824	25,131	25,725	25,131	25,725
R-squared	0.782	0.790	0.890	0.892	0.890	0.892
Adjusted R-squared	0.779	0.787	0.887	0.889	0.887	0.889
Residual standard error	13.217 (df = 74607)	13.490 (df = 87565)	9.209 (df = 24577)	9.169 (df = 25078)	9.213 (df = 24577)	9.172 (df = 25078)

Notes: ***p < .01; **p < .05; *p < .1

Table A.6: Results, Two Lagged Dependent Variables

	Opening Price (1)	High Price (2)	Opening Price (3)	High Price (4)	Opening Price (5)	High Price (6)
War	-0.348*** (-0.427, -0.268)	-0.287*** (-0.373, -0.200)				
Victories			0.223*** (0.072, 0.374)	0.210*** (0.052, 0.368)		
Defeats					-0.186*** (-0.287, -0.085)	-0.171*** (-0.279, -0.064)
Lagged Opening Price	0.899*** (0.892, 0.907)		0.933*** (0.920, 0.945)		0.932*** (0.920, 0.945)	
Lagged Opening Price 2	0.090*** (0.083, 0.097)		0.041*** (0.028, 0.053)		0.041*** (0.028, 0.053)	
Lagged High Price		0.866*** (0.860, 0.873)		0.859*** (0.845, 0.872)		0.858*** (0.845, 0.872)
Lagged High Price 2		0.117*** (0.110, 0.123)		0.112*** (0.098, 0.125)		0.112*** (0.099, 0.125)
Instrument FE	Y	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
Observations	74,098	86,281	24,871	25,450	24,871	25,450
R-squared	0.995	0.993	0.995	0.994	0.995	0.994
Adjusted R-squared	0.995	0.993	0.995	0.994	0.995	0.994
Residual standard error	2.027 (df = 73070)	2.389 (df = 85045)	2.028 (df = 24319)	2.191 (df = 24808)	2.028 (df = 24319)	2.191 (df = 24808)

Notes: ***p < .01; **p < .05; *p < .1

Table A.7: Results, Three Lagged Dependent Variables

	Opening Price (1)	High Price (2)	Opening Price (3)	High Price (4)	Opening Price (5)	High Price (6)
War	-0.377*** (-0.457, -0.298)	-0.314*** (-0.399, -0.230)				
Victories			0.216*** (0.065, 0.367)	0.244*** (0.085, 0.402)		
Defeats					-0.191*** (-0.292, -0.089)	-0.189*** (-0.297, -0.082)
Lagged Opening Price	0.889*** (0.882, 0.896)		0.929*** (0.916, 0.942)		0.929*** (0.916, 0.941)	
Lagged Opening Price 2	0.050*** (0.040, 0.059)		0.014 (-0.004, 0.031)		0.013 (-0.004, 0.031)	
Lagged Opening Price 3	0.052*** (0.044, 0.059)		0.032*** (0.019, 0.044)		0.032*** (0.020, 0.045)	
Lagged High Price		0.847*** (0.840, 0.854)		0.862*** (0.849, 0.876)		0.862*** (0.849, 0.875)
Lagged High Price 2		0.095*** (0.086, 0.104)		0.049*** (0.028, 0.070)		0.049*** (0.029, 0.070)
Lagged High Price 3		0.043*** (0.036, 0.049)		0.060*** (0.045, 0.075)		0.060*** (0.045, 0.075)
Instrument FE	Y	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
Observations	73,355	85,230	24,745	25,324	24,745	25,324
R-squared	0.995	0.994	0.995	0.994	0.995	0.994
Adjusted R-squared	0.995	0.994	0.995	0.994	0.995	0.994
Residual standard error	2.018 (df = 72333)	2.316 (df = 84003)	2.027 (df = 24195)	2.188 (df = 24683)	2.027 (df = 24195)	2.188 (df = 24683)

Notes: ***p < .01; **p < .05; *p < .1

Table A.8 indicates that the results of Table 1 are also robust to including both victories and defeats in the fixed effects models, even when including lagged sovereign bond prices. All coefficients maintain the same sign as the results in Table 1 although the coefficients on battle victories are only statistically significant at the $p < .1$ level rather than that $p < .05$ level when including a lagged dependent variable

Table A.8: Results, Including Victories and Defeats

	Opening Price	High Price	Opening Price	High Price
	(1)	(2)	(3)	(4)
Victories	1.805*** (1.093, 2.516)	1.594*** (0.905, 2.283)	0.154* (-0.003, 0.311)	0.160* (-0.007, 0.327)
Defeats	-0.618** (-1.095, -0.141)	-0.549** (-1.020, -0.077)	-0.152*** (-0.257, -0.046)	-0.129** (-0.243, -0.015)
Lagged Opening Price			0.972*** (0.969, 0.975)	
Lagged High Price				0.966*** (0.963, 0.969)
Instrument FE	Y	Y	Y	Y
Country FE	Y	Y	Y	Y
Month FE	Y	Y	Y	Y
<i>Observations</i>	25,131	25,725	25,000	25,584
<i>R-squared</i>	0.890	0.892	0.995	0.994
<i>Adjusted R-squared</i>	0.887	0.889	0.995	0.994
<i>Residual standard error</i>	9.208 (df = 24576)	9.168 (df = 25077)	2.029 (df = 24446)	2.209 (df = 24938)

Notes: ***p < .01; **p < .05; *p < .1

Table A.9 demonstrates that the results of Table 1 are relatively robust to alternate coding of treatment variables, namely whether a country experiences any battle victory or defeat in a given month. Similar to the results in Table 1, experiencing any victory in a given month raises the price of sovereign bonds, and both coefficients are statistically significant. The results for experiencing any defeat are mixed. The negative coefficient in Model 4 implies that experiencing any defeat in a given month will decrease the price of sovereign bond prices, but the coefficient isn't statistically significant. The coefficient in Model 3 is positive and statistically insignificant, which contradicts the results presented in Table 1.

Table A.9: Alternate Treatment Coding

	Opening Price (1)	High Price (2)	Opening Price (3)	High Price (4)
Any Victory	0.660** (0.152, 1.169)	0.519** (0.037, 1.000)		
Any Defeat			0.019 (-0.326, 0.364)	-0.164 (-0.515, 0.187)
Lagged Opening Price	0.972*** (0.969, 0.975)		0.972*** (0.969, 0.975)	
Lagged High Price		0.966*** (0.963, 0.969)		0.966*** (0.963, 0.969)
Instrument FE	Y	Y	Y	Y
Country FE	Y	Y	Y	Y
Month FE	Y	Y	Y	Y
Observations	25,000	25,584	25,000	25,584
R-squared	0.995	0.994	0.995	0.994
Adjusted R-squared	0.995	0.994	0.995	0.994
Residual standard error	2.029 (df = 24447)	2.209 (df = 24939)	2.030 (df = 24447)	2.209 (df = 24939)

Notes: ***p < .01; **p < .05; *p < .1

Placebo Tests

Placebo tests, which demonstrate that variables that theoretically shouldn't have a causal effect on a dependent variable don't have an effect, are a final method whereby I can bolster confidence in my empirical findings. I conduct two placebo tests. First, I demonstrate that war outcomes don't have an effect on sovereign bond prices. Second, I show that the number of battles doesn't have an effect on sovereign bond prices. Both these results are in line with theoretical expectations.

Namely, and perhaps somewhat counter-intuitively, we shouldn't expect the outcome of an interstate war, either victory or defeat, to affect sovereign bond prices. This is the case for at least two reasons. First, the end of an interstate war doesn't provide a clear economic boost to either victors or losers. Not only will there be adjustment costs from shifting a wartime economy to peacetime, but any reparations payments or other forms of wartime plunder may serve to destabilize a victor's domestic economy (Eichengreen 2011). Second, whereas war initiation can help resolve information asymmetries regarding capabilities and resolve the end of a war provides only limited information above and beyond that provided by wartime events like battles (Powell 2004). Sovereign debt markets and other financial actors will find it easier to price in the effects of war termination *ex ante* than the effects of war initiation because the end of a war will be preceded by battle outcomes that may be a stronger signal and/or easier to interpret than pre-war crisis bargaining. In line with this theoretical expectation, Table A.10 demonstrates that victory or defeat in war doesn't have a consistent effect on sovereign bond prices. Although victory in war has a negative, statistically significant effect on the opening price of a victor's sovereign bonds it has no effect on the high price. Similarly, defeat in war has a positive, statistically significant effect on the monthly high price of sovereign bonds but has no effect on the opening price.

Table A.10: Placebo Test, War Outcomes

	Opening Price (1)	High Price (2)	PriceMonthOpen (3)	PriceMonthHigh (4)
War Victory	-0.845*** (-1.297, -0.393)	0.238 (-0.333, 0.809)		
War Defeat			-0.259 (-0.731, 0.214)	0.600** (0.017, 1.183)
Lagged Opening Price	0.981*** (0.979, 0.984)		0.981*** (0.979, 0.984)	
Lagged High Price		0.968*** (0.966, 0.970)		0.968*** (0.966, 0.970)
Instrument FE	Y	Y	Y	Y
Country FE	Y	Y	Y	Y
Month FE	Y	Y	Y	Y
<i>Observations</i>	24,210	30,219	24,210	30,219
<i>R-squared</i>	0.996	0.992	0.996	0.992
<i>Adjusted R-squared</i>	0.995	0.992	0.995	0.992
<i>Residual standard error</i>	2.030 (df = 23486)	2.683 (df = 29331)	2.031 (df = 23486)	2.682 (df = 29331)

Notes: ***p < .01; **p < .05; *p < .1

Based on a similar logic we shouldn't expect the number of battles to have an effect on sovereign bond prices. How many battles a country is involved in during a given month provides little information on the length or outcome of a war to financial actors as compared to the outcome of those battles. Table A.11 demonstrates, in line with this theoretical expectation that the number of battles in a given month has no effect on sovereign bond prices.

Table A.11: Placebo Test, Number of Battles

	Opening Price (1)	High Price (2)
Battles	0.030 (-0.044, 0.104)	-0.024 (-0.105, 0.057)
Lagged Opening Price	0.972*** (0.969, 0.975)	
Lagged High Price		0.966*** (0.963, 0.969)
Instrument FE	Y	Y
Country FE	Y	Y
Month FE	Y	Y
<i>Observations</i>	25,000	25,584
<i>R-squared</i>	0.995	0.994
<i>Adjusted R-squared</i>	0.995	0.994
<i>Residual standard error</i>	2.030 (df = 24447)	2.209 (df = 24939)

Notes: ***p < .01; **p < .05; *p < .1

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