EMERGING MARKETS, SOVEREIGN DEBT AND INTERNATIONAL FINANCIAL INTEGRATION: 1870–1913 AND TODAY

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- Two features in the environment faced by emerging markets today:
    - International Financial Integration (since the 1970s).
    - Large and increasing reliance on bond finance (since the mid-1990s).
- Similarities and differences with most recent previous era of financial globalization and bond finance: 1870-1913.
    - Burgeoning literature: Bordo-Eichengreen, Eichengreen-Portes, Ferguson-Schularik, Flandreau-Zumer, Obstfeld-Taylor.
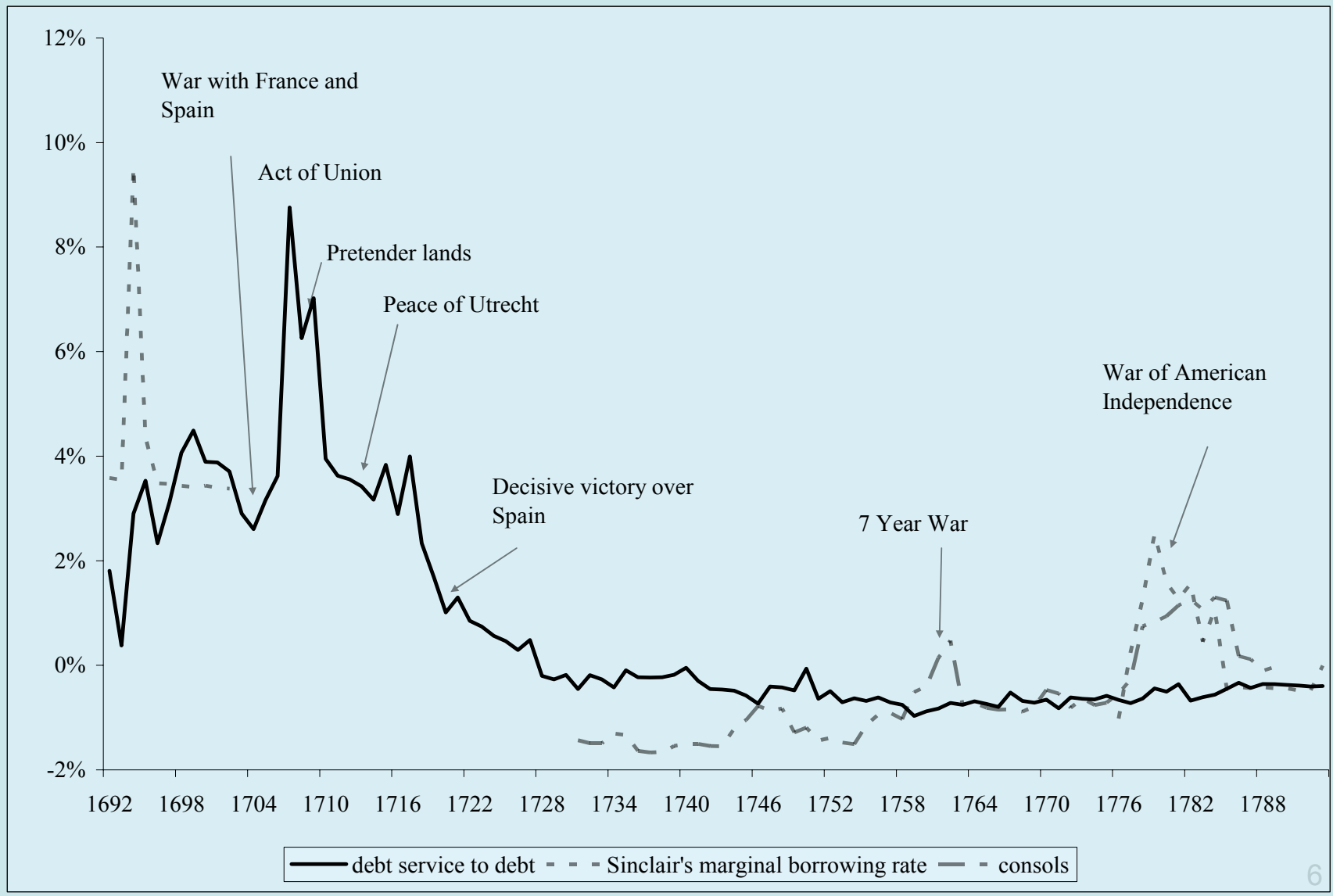
- Focus on spreads on bonds issued by emerging economies in pounds sterling on the London market.

- Sample: eighteen emerging markets in 1870–1913; eight in 1994–2004.

- Historical Data: spreads monthly, collected by hand from the Investors' Monthly Manual; macro data (annual, from IMM, country specific primary sources, and our friends); news monthly (from Palmer's index to the London Times).

- Modern Data: Spreads from EMBI, macro from standard sources, news from Financial Times.

- News by category:
  - Wars and instability
  - Bad economic news
  - Good/neutral economic news
  - Reforms and investor-friendly institutional changes
  - Domestic politics
  - Foreign relations
- What we do:
  - Two Case Studies (1688 Glorious Revolution, debunking North and Weingast; Meiji Japan vs. Russia, 1870-1913)
  - News and Sharp Changes in Bond Spreads
  - Panel regressions: the determinants of spreads; save the residuals.
  - Co-movement of Spreads controlling for fundamentals, frequency of common crises.

- Lessons for Today
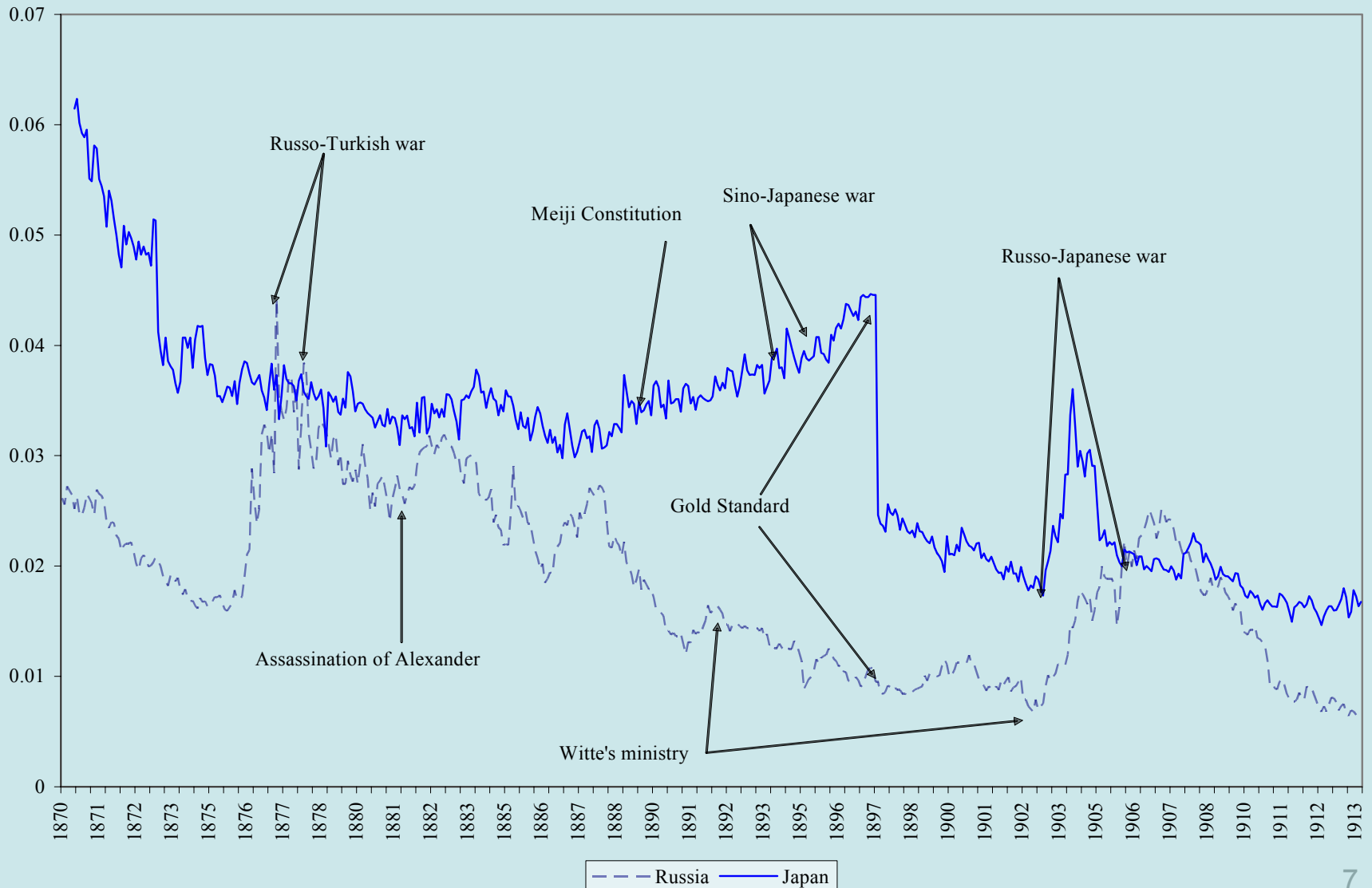 - Which fundamentals matter? Wars and episodes of politically-motivated violence have large and immediate impact. Also macro (fiscal solvency, growth of GDP or exports). Institutional reforms take a long time to reduce the cost of borrowing.
  - (Country-specific) fundamentals matter more in the past than today. Moreover, comovement of spreads, even controlling for fundamentals, is higher today than in the past.

Interest Differential, Britain vs Holland

War with France and Spain

Act of Union

Pretender lands

Peace of Utrecht

Decisive victory over Spain

7 Year War

War of American Independence

Legend: debt service to debt — Sinclair's marginal borrowing rate — consols

6

Meiji Japan and Russia, 1870-1913

	Change in spread (b.points)	Change in spread (percent)	
Months with Largest Spread Changes, by Country 1870-1913			
Date	Change in spread (b.points)	Change in spread (percent)	News
Argentina			
Mar-76	295	50.1%	
Jul-90	117	45.2%	Revolution and political unrest (11); ministerial crisis (1); financial crisis and panic in Bourse (numerous items).
Nov-76	465	38.8%	End of panic (1); forced currency (1); commercial news (1).
Jul-91	199	38.6%	Revolt (3); financial panic (1); budget (1); tariff bill (1).
Jan-12	33	27.4%	Railway workers strike, and riots (22); tensions with Paraguay (4); new railways (4); meat exports.
Brazil			
Apr-98	155	31.2%	
Oct-13	31	21.2%	Taxation: rubber export duty (1); further reduction proposed (1); railways (7); trade statistics.
Oct-96	63	20.6%	Finance problems (4); stable financial situation (official contradiction to the former article) (1); trade restrictions.
May-98	-127	-19.4%	Government revenues (1).
Apr-13	24	17.8%	Engineering contracts abroad (1); finance: expenditure (2); loans: new issue announced (2); railway (10).

	Months with Largest Spread Changes, 1994-2002		
Date	Change in spread (b.points)	Change in spread (percent)	News
Argentina			
1998/08	824	181.5	No news (Russian crisis)
2001/11	1210	56	Negative economic news items (11) about failing debt restructuring attempts (9) and dealings with IMF (2); political bad news (1 item).
2001/12	1000	29.7	Riots/strikes (7), President/Cabinet changes (5), controls (3); talk of debt default (7)
2002/05	975	19.5	More negotiations with IMF to take place (4)
2002/06	1095	18.3	Riots (3), Central Bank President resigns (1)
Brazil			
1998/08	813	133.7	(Time of Russian crisis.) Labor reform (1); relaxation of short-term capital controls (1).
2002/07	793	51.2	IMF negotiations not going well (2); US seeks to soothe Brazil after remarks by O'Neill (2).
2002/09	765	46.9	Elections (6): Serra stages comeback; Lula rides on wave of disillusion over reforms
2002/08	-711	-30.4	Back from the brink on prospects of IMF deal (4); doubt about IMF deal (1); O'Neill heals rift with Brazil (1); Bank of Brazil to aid troubled companies
2002/10	-653	-27.3	Lula Decries market fears of default (1); Lula pulls ahead, poised to win, transition team planned, victory (9)

- Do months with sharp spread changes have more news on average than do all other months?

1870-1913

Yes in 8 out of 15 countries

1994-2002

Yes in 2 out of 8 countries

Do months with big news have larger changes in spreads?

1870-1913

Yes , but...

1994-2002

Not really.

Spreads, News, and Macroeconomic Variables, FGLS Fixed Effects Panel Regression, 1870-1913

|					
Wars	0.021	0.019	0.024	0.020	0.019
	(0.006)*	(0.007)*	(0.005)*	(0.006)*	(0.007)*
Good / Neutral Economic	-0.009	-0.005	-0.003	0.005	0.001
	(0.009)	-(0.011)	(0.008)	(0.009)	(0.010)
Bad Economic	0.015	0.014	0.020	0.016	0.014
	(0.007)	(0.009)	(0.007)*	(0.008)	(0.009)
Reform	-0.002	0.003	0.002	0.001	0.000
	(0.007)	(0.008)	(0.007)	(0.008)	(0.008)
Political	-0.012	-0.012	-0.013	-0.010	-0.003
	(0.009)	(0.011)	(0.008)	(0.010)	(0.010)
Foreign	0.001	0.008	-0.003	0.006	0.007
	(0.007)	(0.009)	(0.007)	(0.008)	(0.009)
Gold Standard	-0.101		-0.085		0.010
	(0.040)*		(0.040)*		(0.047)
Exports		-0.155		-0.120	-0.088
		(0.028)*		(0.024)*	(0.027)*
Fiscal Surplus		-0.080		-0.057	-0.038
		(0.022)*		(0.021)*	(0.016)*
Debt per Capita					0.006
					(0.001)*
Portfolio Spreads			0.431	0.439	0.458
			(0.040)*	(0.045)*	(0.052)*
Number of Observations	561	436	561	436	394

FGLS with heteroskedasticity across countries and country-specific AR(1) terms.

Spreads, News, and Macro Variables, Fixed Effects Panel Regressions, 1994-2002, Quarterly Data

	FGLS AR (1)		SURE
Instability	-0.029	-0.023	-0.031
	(0.030)	(0.022)	(0.020)
Good / Neutral Economic	0.065	0.052	0.033
	(0.023)*	(0.017)*	(0.014)*
Bad Economic	0.002	0.002	-0.012
	(0.024)	(0.017)	(0.015)
Reform	0.010	-0.026	-0.032
	(0.026)	(0.019)	(0.015)
Political	0.044	0.047	0.054
	(0.022)	(0.017)*	(0.014)*
Foreign	0.000	-0.012	0.007
	(0.025)	(0.019)	(0.017)
Exports	-0.180	-0.173	-0.040
	(0.046)*	(0.034)*	(0.045)
Fiscal Surplus	-0.001	0.000	0.002
	(0.002)	(0.001)	(0.001)
Portfolio spreads		0.854	0.421
		(0.056)*	(0.062)**
Lagged dependent variable			0.745
			(0.030)**
Number of Observations	230	230	228

Feasible Generalized Least Squares with heteroskedasticity and AR(1) correction. SURE is seemingly unrelated regressions.

EMBI Spreads, 1992-2003
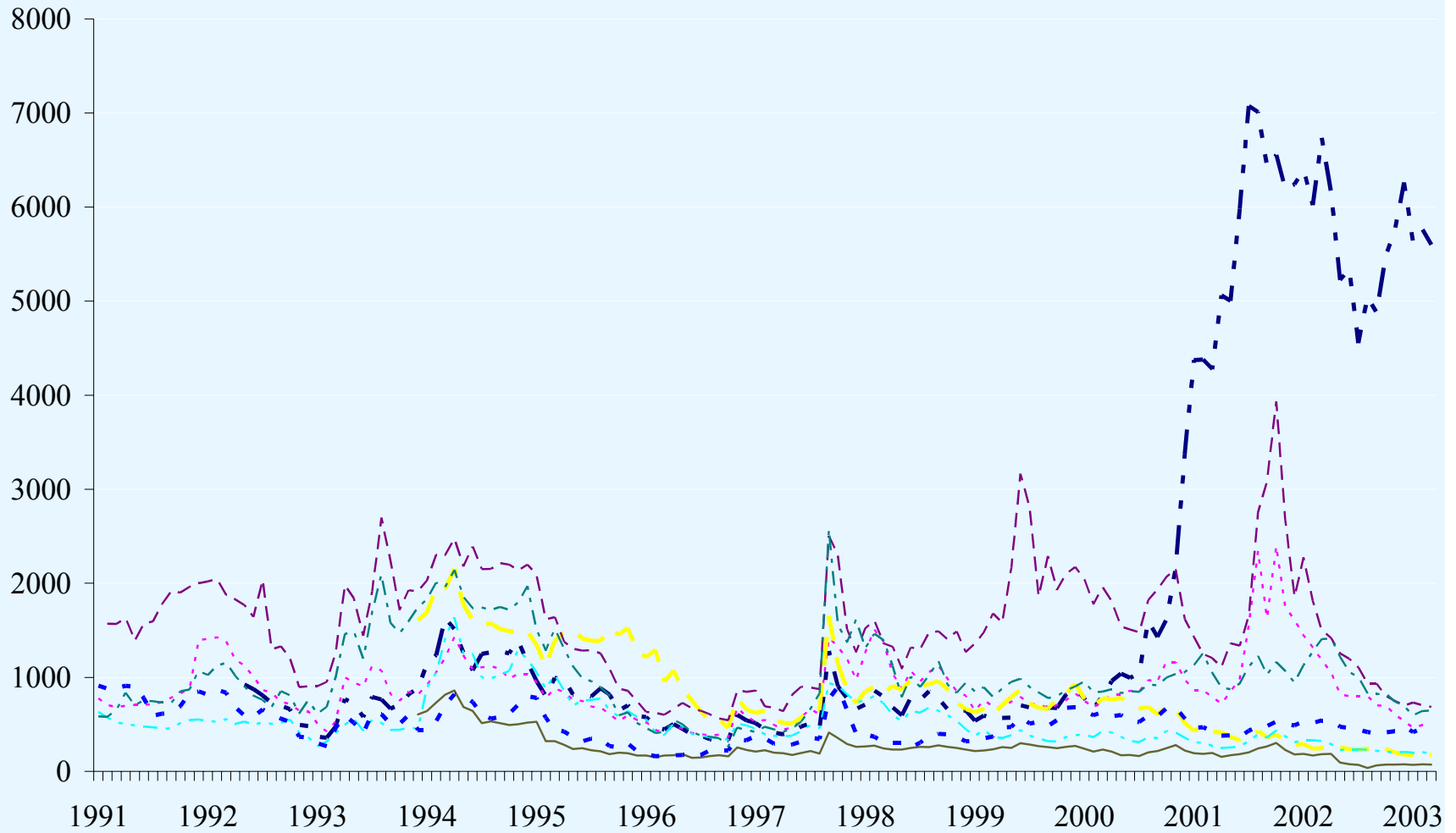
Legend: Argentina, Brazil, Bulgaria, Mexico, Nigeria, Poland, Venezuela, Philippines

	Comovement of Residuals		
1877-1913	1994-2001	1994-2004	1994-2004 (excl. ARG)
0.55 (0.02)	0.75 (0.03)	0.55 (0.04)	0.62 (0.04)

- Why did Argentina not lead to contagion?
  - widely anticipated;
  - JP Morgan changed the composition of the EMBI → orderly portfolio rebalancing out of ARG instead of all emerging markets.
- Were the 1990's an exception, and are we going back to 1870-1913?

Additional Slides

Table 4.4: IMM News by Category and Sharp Changes 1870-1913 (All Countries)

News and Spread Changes, pooling all country/months, 1870-1913

Type of Events	Number of Events	Average | Δ Spread |	Average | % Δ Spread |
All types	232	0.0038 (0.0000)*	10.1395 (0.0000)*
Good Economic	21	0.0025 (0.5369)	5.6485 (0.7136)
Bad Economic	42	0.0050 (0.0000)*	11.6508 (0.0037)*
Political	35	0.0036 (0.0276)*	8.5251 (0.3038)
Reforms	13	0.0035 (0.2067)	8.4119 (0.5537)
Instability and Wars	86	0.0037 (0.0005)*	10.2337 (0.0028)*
Foreign Relations	51	0.0037 (0.0074)*	12.1791 (0.0004)*
Debt-related	128	0.0032 (0.0027)*	7.6018 (0.3655)
No events	5326	0.0019	6.5543

Note: Non-debt related news. P-values reported in parentheses refer to the null hypothesis that the average change in spreads for country/months with events of type mentioned is the same as for country/months with no events. There are 5,326 country/months with no events. Asterisks denote significance at the 5 % level.

Front Page News and Spread Changes, pooling all country/months, 1994-2002

Type of Events	Observations	Avg. |? Spread		Avg. |? % Spread	
All Front Page and Long Article	45	199.422	17.207
Other country/months	791	111.858	12.885
		(0.0019)*	(0.1224)
All Front Page	310	135.571	13.214
No Front Page	526	105.375	13.061
		(0.0221)*	(0.9067)
Good	128	144.531	14.461
		(0.0272)*	(0.4673)
Bad	134	156.246	13.657
		(0.0042)*	(0.7373)
Neutral / Unsure	132	134.871	12.991
		(0.0834)	(0.9685)
Good / Neutral Economic	121	164.901	15.153
		(0.0010)*	(0.2783)
Bad Economic	70	200.171	15.068
		(0.0001)*	(0.4097)
Political	104	115.769	11.201
		(0.5720)	(0.3360)
Foreign Relations	76	100.395	15.220
		(0.8092)	(0.3612)
Reforms	57	149.561	12.811
		(0.0760)	(0.9258)
Instability and Wars	58	170.828	11.264
		(0.0088)*	(0.4863)

Note: P-values reported in parentheses refer to the null hypothesis that the average change in spreads for country/months with events of type mentioned is the same as for country/months with no front page events. There are 526 country/months with no front page events. Asterisks denote significance at the 5% level.

Spreads, News, and Macro Variables, Fixed Effects Panel Regressions, 1870–1913

Wars	0.045	0.053	0.042	0.054	0.058
	(0.017)*	(0.017)*	(0.013)*	(0.015)*	(0.016)*
Good / Neutral Economic	-0.124	-0.067	-0.01	-0.04	-0.037
	(0.024)*	(0.024)*	(0.019)	(0.022)	(0.024)
Bad Economic	0.031	-0.009	0.035	0.011	0.006
	(0.024)	(0.024)	(0.018)	(0.022)	(0.022)
Reform	0.0268	0.035	0.013	0.013	0.019
	(-0.021)	(0.020)	(0.016)	(0.019)	(0.019)
Political	--0.032	-0.025	-0.027	-0.018	-0.012
	(-0.027)	(0.027)	(0.021)	(0.025)	(0.025)
Foreign	0.001	-0.020	0.008	-0.002	-0.009
	(-0.024)	(0.023)	(0.018)	(0.021)	(0.021)
Gold Standard	-0.113		-0.047		0.090
	(0.056)*		(0.043)		(0.059)
Exports		-0.388		-0.012	-0.004
		(0.045)*		(0.058)	(0.062)
Fiscal Surplus		-0.136		-0.143	-0.143
		(0.043)*		(0.039)*	(0.040)*
Debt per Capita					0.007
					(0.002)*
Portfolio Spreads			0.516	0.457	0.504
			(0.027)*	(0.048)*	(0.052)*
Constant	0.942	2.271	0.318	0.404	0.118
	(0.061)*	(0.176)*	(0.057)*	(0.256)	(0.267)
Number of Observations	561	436	561	436	394

Table 5.4: Individual Country Effects and Country Characteristics, 1870–1913

Country	Individual Country Effect	Gold standard	History of Default	Links to British Empire	Europe
Costa Rica	0.74	~	+		
Colombia	0.70	~	+		
Uruguay	0.60	~	+		
Mexico	0.51	~	+		
Argentina	0.35	~	+		
China	0.34				
Japan	0.26	~			
Egypt	0.25		+		
Greece	0.23	~	+		+
Chile	0.16	~	+		
Turkey	0.13	~	+		
Brazil	0.08	~	+		
Portugal	0.02	~	+		+
Hungary	-0.09	~			+
Russia	-0.35	~			+
Queensland	-0.58	+		+	
Sweden	-0.72	+			+
Canada	-0.88	+		+	

Note: Individual country effects are the estimated dummies from the regression in the third column of Table 5.2. For the gold standard, a "plus" sign indicates adherence for essentially the entire period, and a tilde indicates adherence for only part of the period.

Spreads, News, and Macro Variables, Fixed Effects Panel Regressions, 1994–2002

	Annual Data			Quarterly Data		
Wars	-0.002	0.041	0.125	0.035	0.061	0.041
	(0.085)	(0.076)	(0.048)*	(0.057)	(0.045)	(0.049)
Good / Neutral Economic	0.288	0.229	0.121	0.133	0.124	0.076
	(0.099)*	(0.090)*	(0.061)	(0.045)*	(0.035)*	(0.045)
Bad Economic	0.077	0.053	0.016	0.080	0.041	0.057
	(0.083)	(0.074)	(0.053)	(0.049)	(0.039)	(0.045)
Reform	-0.164	-0.119	-0.223	-0.063	-0.064	-0.114
	(0.106)	(0.095)	(0.058)*	(0.058)	(0.045)	(0.053)*
Political	0.000	0.023	-0.022	0.063	0.084	0.089
	(0.081)	(0.072)	(0.044)	(0.045)	(0.035)*	(0.041)*
Foreign	0.058	-0.021	-0.116	0.004	-0.061	-0.079
	(0.108)	(0.098)	(0.054)*	(0.057)	(0.045)	(0.052)
Exports	-0.438	-0.258	-0.535	-0.280	-0.251	-0.322
	(0.218)*	(0.200)	(0.219)*	(0.114)*	(0.090)*	(0.107)*
Fiscal Surplus	-2.457	-1.334	-2.381	-0.002	0.000	0.000
	(1.921)	(1.734)	(1.133)*	(0.003)	(0.003)	(0.003)
Debt / GDP			-0.317			
			(0.348)			
Growth Real GDP			-1.034			-1.195
			(0.952)			(0.269)*
Portfolio spreads		0.759	0.720		0.838	0.839
		(0.192)*	(0.110)*		(0.073)*	(0.088)*
Constant	11.874	6.069	13.601	7.655	5.324	6.866
	(5.236)*	(4.889)	(5.475)*	(2.470)*	(1.962)*	(2.366)*
Number of Observations	72	72	56	230	230	161

Spreads, News, and Macroeconomic Variables, Fixed effects FGLS Panel Regressions, 1994-2002

	Annual Data		Quarterly Data	
Instability	0.064	0.072	-0.029	-0.023
	(0.060)	(0.056)	(0.030)	(0.022)
Good / Neutral Economic	0.409	0.318	0.065	0.052
	(0.078)*	(0.075)*	(0.023)*	(0.017)*
Bad Economic	0.187	0.165	0.002	0.002
	(0.063)*	(0.060)*	(0.024)	(0.017)
Reform	-0.263	-0.226	0.010	-0.026
	(0.095)*	(0.086)*	(0.026)	(0.019)
Political	-0.032	-0.029	0.044	0.047
	(0.068)	(0.061)	(0.022)	(0.017)*
Foreign	-0.059	-0.102	0.000	-0.012
	(0.086)	(0.081)	(0.025)	(0.019)
Exports	-0.271	-0.213	-0.180	-0.173
	(0.092)*	(0.086)*	(0.046)*	(0.034)*
Fiscal Surplus	-2.570	-2.333	-0.001	0.000
	(2.018)	(1.763)	(0.002)	(0.001)
Portfolio spreads		0.662		0.854
		(0.177)*		(0.056)*
Number of Observations	72	72	230	230

Feasible Generalized Least Squares with heteroskedasticity and AR(1) correction

Spreads, News, and Macroeconomic Variables, SUR Fixed effects Panel Regressions, 1870-1913

Wars	0.014	0.021	0.019	0.023	0.022
	(0.005)*	(0.006)*	(0.004)*	(0.005)*	(0.005)*
Good / Neutral Economic	-0.008	-0.016	0.001	-0.010	-0.014
	(0.006)	(0.008)*	(0.006)	(0.009)	(0.007)
Bad Economic	0.016	0.005	0.016	0.009	0.006
	(0.006)*	(0.008)	(0.006)*	(0.008)	(0.008)
Reform	-0.001	-0.003	-0.004	-0.007	-0.006
	(0.006)	(0.007)	(0.005)	(0.007)	(0.007)
Political	0.009	0.008	0.006	0.006	0.014
	(0.007)	(0.009)	(0.007)	(0.009)	(0.008)
Foreign	-0.001	0.004	-0.001	0.006	0.002
	(0.006)	(0.007)	(0.006)	(0.007)	(0.007)
Gold Standard	0.012		0.014		0.029
	(0.016)		(0.017)		(0.019)
Exports		0.004		0.050	0.041
		(0.014)		(0.016)*	(0.015)*
Fiscal Surplus		-0.066		-0.065	-0.064
		(0.010)*		(0.009)*	(0.009)*
Debt per Capita					0.002
					(0.001)*
Portfolio Spreads			0.100	0.101	0.131
			(0.016)*	(0.023)*	(0.024)*
Lagged Dependent	0.915	0.867	0.848	0.844	0.816
	(0.017)*	(0.021)*	(0.020)*	(0.020)*	(0.023)*
Number of Observations	535	424	535	424	387

FGLS with heteroskedasticity across countries and country-specific AR(1) terms