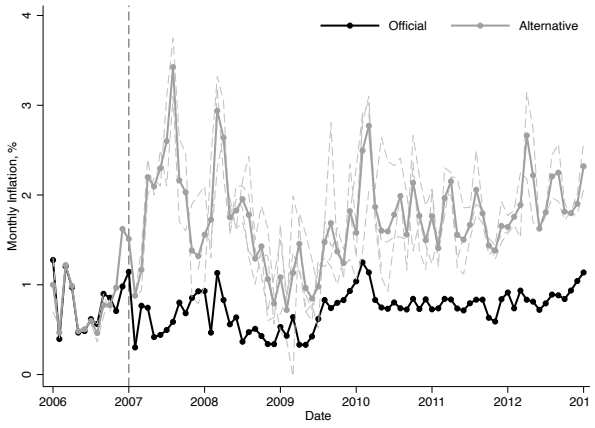
3. Empirical Analysis: The Case of Argentina

Figure 3. Argentina's Misreport of Inflation and Decoupling of Spreads

(a) Argentina's measures of inflation



(b) Latin America's bond spreads

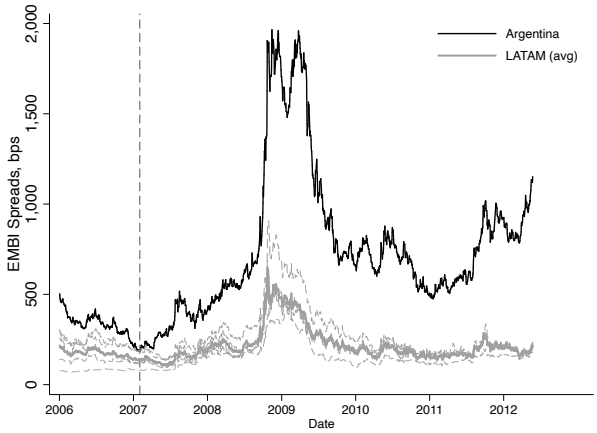


Figure 4. Break-even Inflation Rate

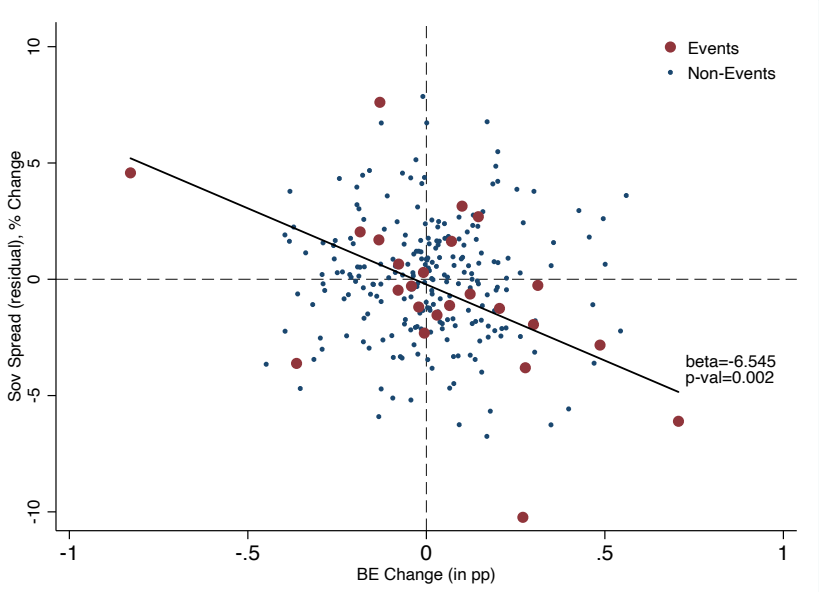


TABLE 1. Summary Statistics

Moments	Non-Event	Event
Mean $\Delta ln(SP)$	0.055	-0.554
SD $\Delta ln(SP)$	2.717	3.569
Mean ΔBE	0.007	0.029
SD ΔBE	0.189	0.294
Cov($\Delta ln(SP)$,ΔBE)	-0.017	-0.573
Observations	234	24

TABLE 2. Effects of Inflation Misreport on Sovereign Spreads

	(1)	(2)	(3)	(4)
ΔBE	-10.437***	-11.130***	-8.562***	-9.443***
95perc CI	[-15.63, -5.27]	[-17.27, -5.80]	[-13.94, -2.88]	[-14.44, -3.48]
Observations	258	255	67	79
Events	2-day window	3-day window	2-day window	3-day window
Non-events	All other days	All other days	4-day window	4-day window
Controls	Yes	Yes	Yes	Yes

FIGURE 5. OLS Estimates - Rolling Windows

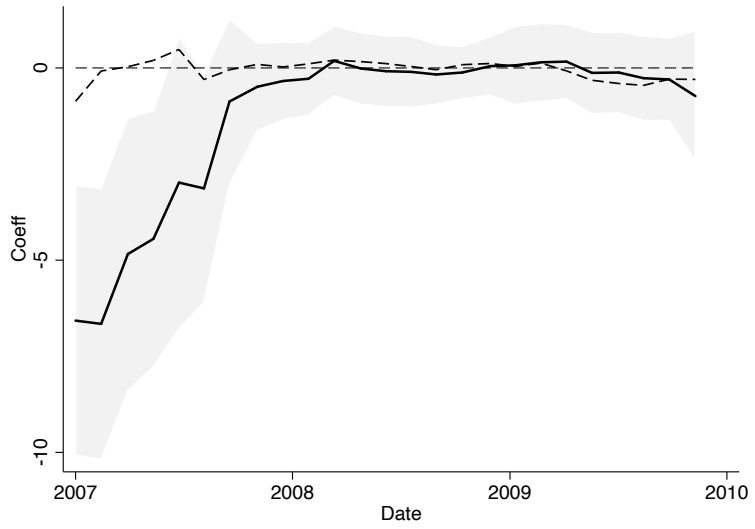


TABLE 3. Effects of Inflation Misreport on Stock Returns

	(1)	(2)	(3)	(4)
ΔBE	0.246	0.351	0.035	-0.063
95perc CI	[-1.31, 1.71]	[-1.44, 1.91]	[-2.19, 1.41]	[-1.96, 1.33]
Observations	241	238	62	74
Events	2-day window	3-day window	2-day window	3-day window
Non-events	All other days	All other days	4-day window	4-day window
Controls	Yes	Yes	Yes	Yes

Appendix B. Empirical Analysis

B.2. **List of Event Days.** List

Table B.1. Reporting Dates

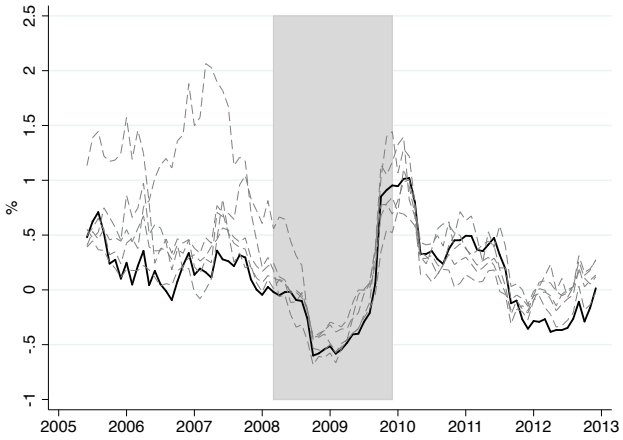
Event	Month	Reported Day	Rate (%)	Event	Month	Reported Day	Rate (%)
1	Jan-07	2/5/2007	1.14	25	Jan-09	2/11/2009	0.53
2	Feb-07	3/5/2007	0.30	26	Feb-09	3/11/2009	0.43
3	Mar-07	4/11/2007	0.77	27	Mar-09	4/14/2009	0.64
4	Apr-07	5/4/2007	0.74	28	Apr-09	5/13/2009	0.33
5	May-07	6/5/2007	0.42	29	May-09	6/11/2009	0.33
6	Jun-07	7/5/2007	0.44	30	Jun-09	7/14/2009	0.42
7	Jul-07	8/7/2007	0.50	31	Jul-09	8/12/2009	0.62
8	Aug-07	9/7/2007	0.59	32	Aug-09	9/4/2009	0.83
9	Sep-07	10/5/2007	0.80	33	Sep-09	10/14/2009	0.74
10	Oct-07	11/6/2007	0.68	34	Oct-09	11/12/2009	0.80
11	Nov-07	12/6/2007	0.85	35	Nov-09	12/11/2009	0.83
12	Dec-07	1/7/2008	0.93	36	Dec-09	1/15/2010	0.93
13	Jan-08	2/7/2008	0.93	37	Jan-10	2/12/2010	1.04
14	Feb-08	3/6/2008	0.47	38	Feb-10	3/12/2010	1.25
15	Mar-08	4/10/2008	1.13	39	Mar-10	4/14/2010	1.14
16	Apr-08	5/9/2008	0.83	40	Apr-10	5/12/2010	0.83
17	May-08	6/10/2008	0.56	41	May-10	6/14/2010	0.75
18	Jun-08	7/11/2008	0.64	42	Jun-10	7/14/2010	0.73
19	Jul-08	8/11/2008	0.37	43	Jul-10	8/13/2010	0.80
20	Aug-08	9/11/2008	0.47	44	Aug-10	9/15/2010	0.74
21	Sep-08	10/10/2008	0.51	45	Sep-10	10/15/2010	0.72
22	Oct-08	11/11/2008	0.43	46	Oct-10	11/12/2010	0.84
23	Nov-08	12/10/2008	0.34	47	Nov-10	12/16/2010	0.73
24	Dec-08	1/13/2009	0.34	48	Dec-10	1/14/2011	0.84

B.3. **Argentina's Fundamentals.** Plots

Figure B.1. Argentina versus LATAM countries

(a) GDP growth (real, year-year in %)

(b) Stocks growth (USD, year-year in %)



B.4. **Analysis of Bond Yields and Break-even Inflation Rate.** Plots and tables

TABLE B.2. Static Information for Argentina's Bonds

(A) Dollar-denominated Bonds

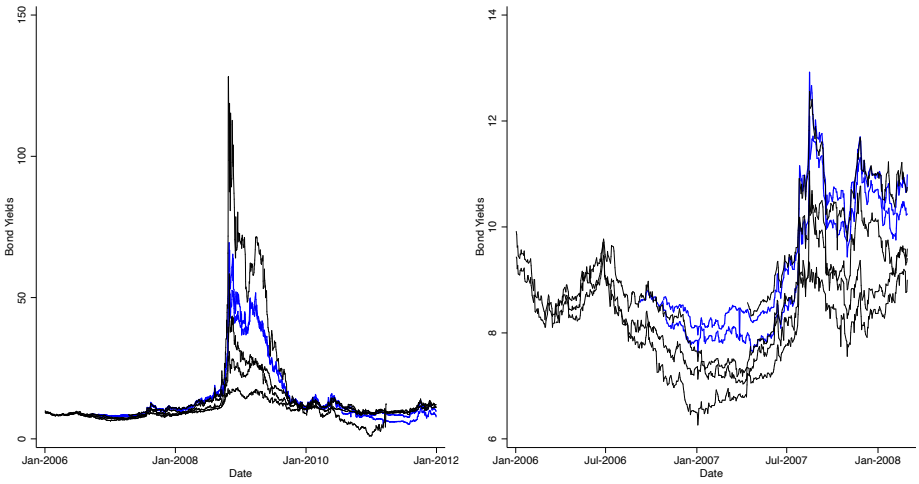
ISIN	Maturity	Currency	Coupon Frequency
ARARGE03F482	12jun2012	ARS	S/A
ARARGE03F243	28mar2011	USD	S/A
ARARGE03F342(*)	12sep2013	USD	S/A
ARARGE03F144(*)	03oct2015	USD	S/A
ARARGE03F441	17apr2017	USD	S/A
US040114GL81	31dec2033	USD	S/A
US040114GK09	31dec2038	USD	S/A

(B) Inflation-linked Bonds

ISIN	Maturity	Currency	Coupon Frequency
ARARGE03B309	15mar2014	ARS	Monthly
ARARGE03E931(*)	30sep2014	ARS	S/A
ARARGE035162	03jan2016	ARS	Monthly
ARBNAC030255	04feb2018	ARS	Monthly

FIGURE B.2. Yield of Argentina's Bonds

(A) Dollar-denominated Bonds



(B) Inflation-index Bonds

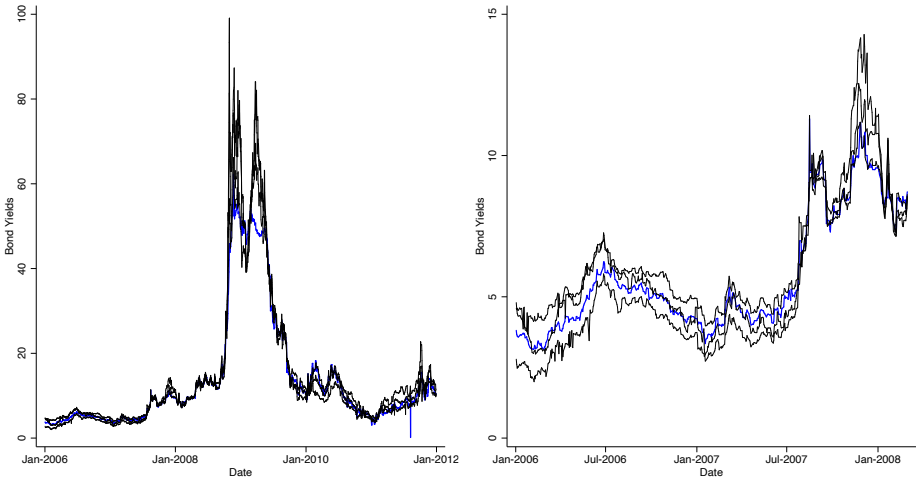
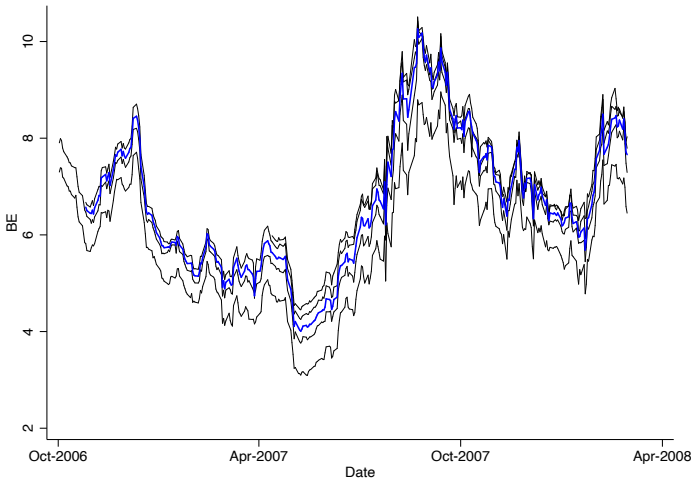


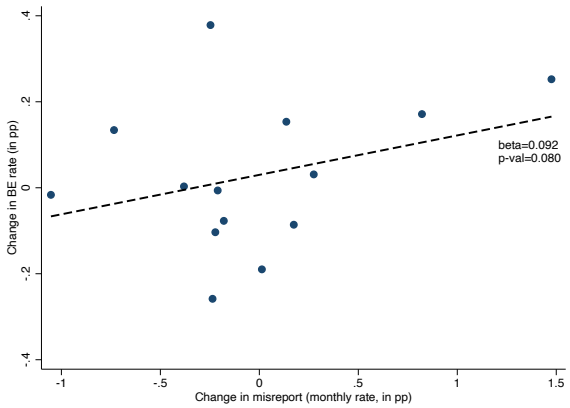
FIGURE B.3. Break-even Inflation Rate—Different Measures



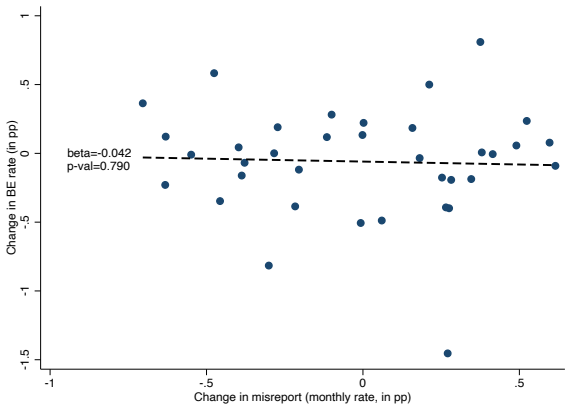
B.5. **Inflation Misreport and Changes in the BE inflation rate.** Plots

FIGURE B.4. Changes in Break-even Inflation Rate and Inflation Misreport

(A) Pre March 2008



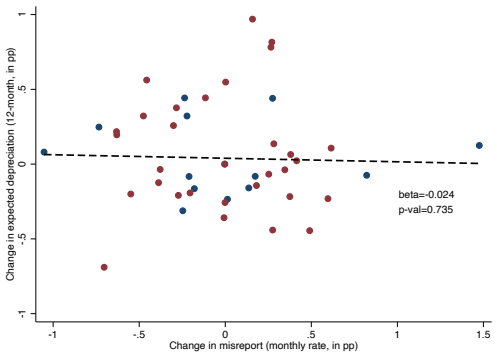
(B) Post March 2008



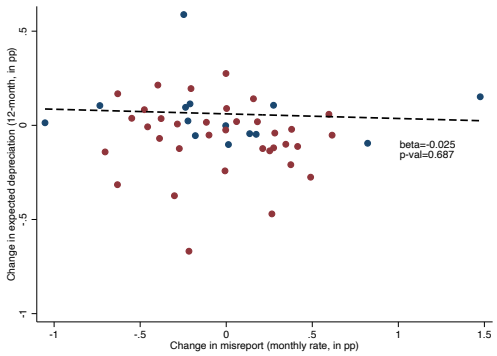
B.6. **Discussion: Exchange Rate Risk.** Plots

FIGURE B.5. Changes in Expected Depreciation Rate and Inflation Misreport

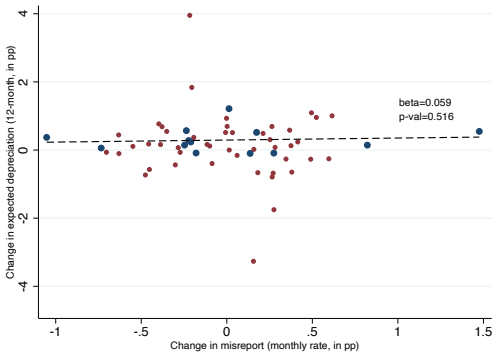
(A) Forwards



(B) Forwards (5-day Moving Average)



(C) Expectations Survey



(D) Deposit Rate Differentials

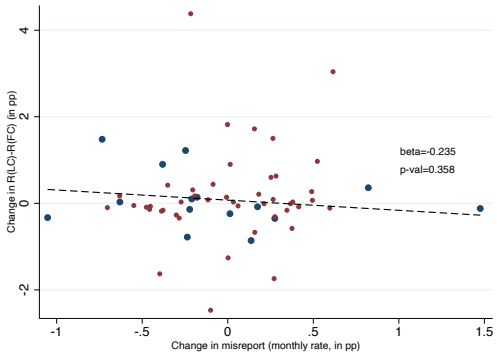
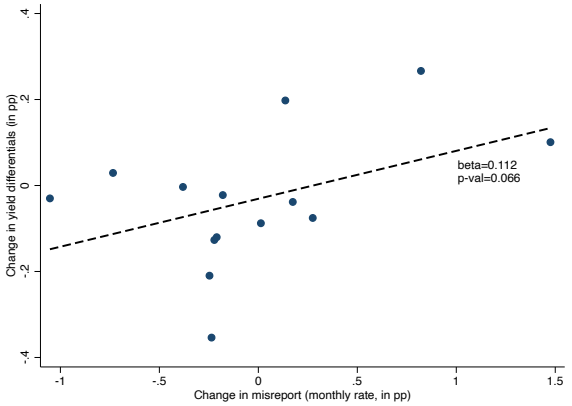
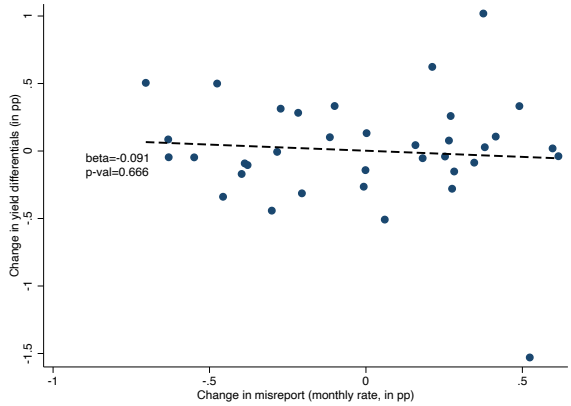


FIGURE B.6. Changes in Yields Differential and Inflation Misreport

(A) Pre March 2008



(B) Post March 2008



B.7. **Test of Identifying Assumption.** Table

TABLE B.3. Test of Identifying Assumption

	Window 1	Window 2	Window 3	Window 4
Window Type				
Event	2-day window	3-day window	2-day window	3-day window
Non-event	All other days	All other days	4-day window	4-day window
Standard Deviation				
Event	0.294	0.265	0.294	0.265
Non-event	0.189	0.178	0.165	0.165
Ratio Test: $\sigma_{\Delta BE,E} > \sigma_{\Delta BE,NE}$				
F-test				
F-value	2.432	2.214	3.197	2.602
$P(F > f)$	0.000	0.000	0.000	0.001
BC Bootstrap - One-Sided CI				
90% CI Lower Bound	1.222	1.198	1.352	1.244
95% CI Lower Bound	1.116	1.120	1.221	1.163

B.8. **Robustness Analysis.** Tables

OLS Estimates

TABLE B.4. OLS Regression

(A) January 2007-February 2008

	(1)	(2)	(3)	(4)	(5)
Event Window	Full Sample	2-day Window		3-day Window	
ΔBE	-1.726*	-6.691***	-0.473	-6.783***	-0.666
Standard Error	(0.972)	(1.998)	(0.981)	(1.787)	(1.040)
Observations	258	24	234	36	219
Days Included	All	Event Days	Non-Event Days	Event Days	Non-Event Days
Controls	Yes	Yes	Yes	Yes	Yes

(B) January 2010-February 2011

	(1)	(2)	(3)	(4)	(5)
Event Window	Full Sample	2-day Window		3-day Window	
ΔBE	-0.184	-0.485	-0.132	-0.719	-0.034
Standard Error	(0.278)	(0.894)	(0.298)	(0.632)	(0.325)
Observations	259	25	234	39	219
Days Included	All	Event Days	Non-Event Days	Event Days	Non-Event Days
Controls	Yes	Yes	Yes	Yes	Yes

Event Study Results

TABLE B.5. Event-study Approach

Event Type	# Events	Obs	$\Delta ln(\bar{SP}^A)$	J1-stat	$\Delta \bar{BE}$
		2007-2008			
Good News Event	6	12	-2.229	-2.935	0.187
Bad News Event	5	10	1.477	1.775	-0.105
		2010-2011			
Good News Event	5	10	-0.251	-0.400	0.283
Bad News Event	7	14	0.761	1.439	-0.208

B.10. **Identified Structural VAR.** Figure

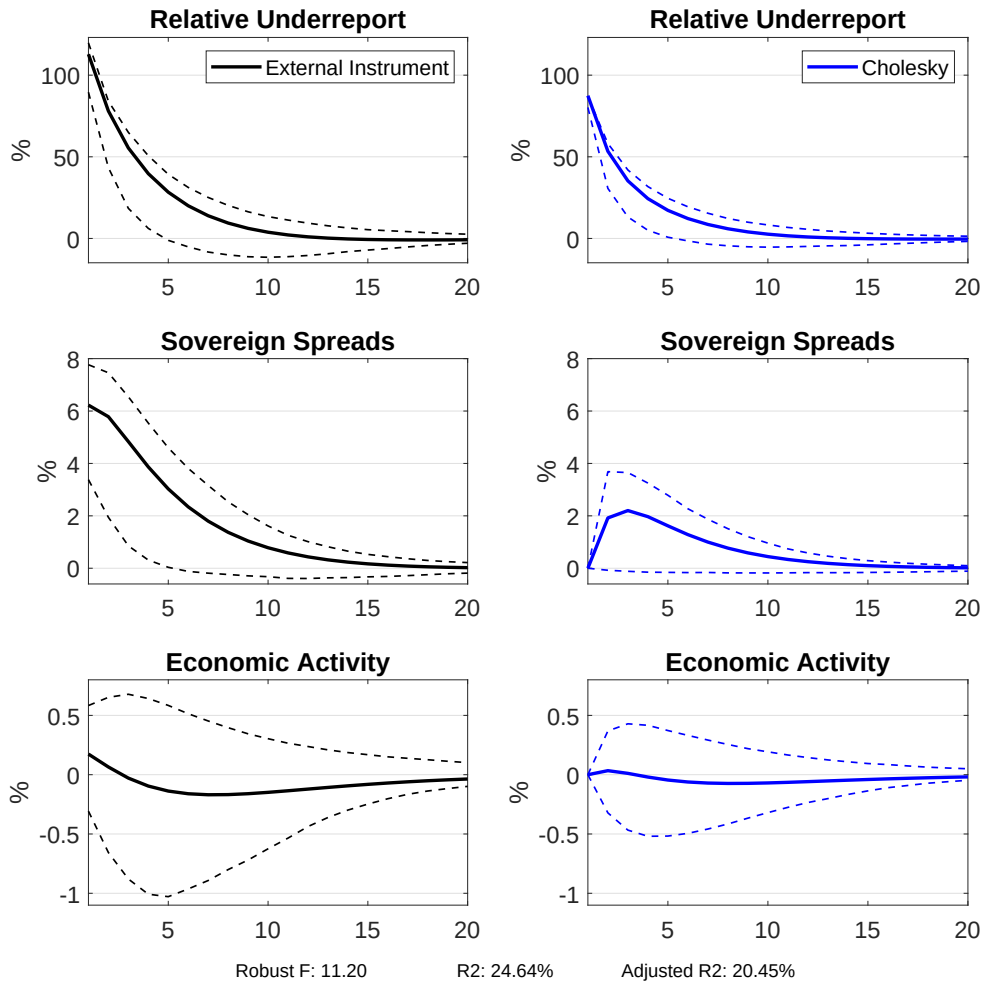



FIGURE B.7. Impulse Response to a Misreport Shock