Online Appendix:

"Are Capital Controls Countercyclical?[1]"

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[1] Available online at http://www.columbia.edu/~mu2166/fru.

This appendix presents further details on the dataset used in the paper as well additional robustness plots referred to in the paper. Here is a summary of its content:

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Table A.1. Dataset: A Summary

		(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
		Gross Domestic Product	Real Effective Exchange Rate	Current Account	Schindler Index	Included in the Exchange Regime Exercise	Included in the Indebtdness Exercise	Included in the sample of the Chinn-Ito Index	Included in the sample of the Quinn Index
ADVANCED ECONOMIES	Australia	o	o	o	O	o	o	o	o
	Austria	o	o	o	O	o	o	o	o
	Belgium	o	o	o	O	o	o	o	o
	Canada	o	o	o	O	o	o	o	o
	Denmark	o	o	o	O	o	o	o	o
	Finland	o	o	o	O	o	o	o	o
	France	o	o	o	O	o	o	o	o
	Germany	o	o	o	O	o	o	o	o
	Greece	o	o	o	O	o	o	o	o
	Iceland	o	o	o	O	o	o	o	o
	Ireland	o	o	o	O	o	o	o	o
	Italy	o	o	o	O	o	o	o	o
	Japan	o	o	o	O	o	o	o	o
	Netherlands	o	o	o	O	o	o	o	o
	New Zealand	o	o	o	O	o	o	o	o
	Norway	o	o	o	O	o	o	o	o
	Portugal	o	o	o	O	o	o	o	o
	Spain	o	o	o	O	o	o	o	o
	Sweden	o	o	o	O	o	o	o	o
	Switzerland	o	o	o	O	o	o	x	o
	United Kingdom	o	o	o	O	o	o	o	o

	United States	o	o	o	O	o	o	o	o
EMERGING MARKETS	Argentina	o	x	o	O	o	o	o	o
	Bahrain	o	x	o	X	x	x	x	x
	Brazil	o	o	o	O	o	o	o	o
	Brunei Darussalam	o	x	o	O	o	o	x	x
	Bulgaria	x	x	o	O	x	x	x	x
	Chile	o	o	o	O	o	o	o	o
	China	o	o	o	O	o	o	o	o
	Costa Rica	o	o	o	O	o	o	o	o
	Cyprus	o	o	o	O	o	o	o	o
	Czech Republic	x	x	x	O	x	x	x	x
	Dominican Republic	o	o	o	O	o	o	o	o
	Ecuador	o	o	o	O	o	o	o	o
	El Salvador	o	x	o	O	o	o	o	o
	Guatemala	o	x	o	O	o	o	o	o
	Hong Kong SAR, China	o	x	o	O	o	o	o	o
	Hungary	x	o	o	O	x	x	x	x
	India	o	x	o	O	o	o	o	o
	Israel	o	o	o	O	o	o	o	o
	Jamaica	o	x	o	O	o	o	o	o
	Kazakhstan	x	x	x	O	x	x	x	x
	Korea, Rep.	o	x	o	O	o	o	o	o
	Kuwait	o	x	o	O	o	o	o	x
	Latvia	x	x	x	O	x	x	x	x
	Lebanon	o	x	o	O	o	o	o	x
	Malaysia	o	o	o	O	o	o	o	o
	Malta	o	o	x	O	o	o	o	o
	Mauritius	o	x	o	O	o	o	o	o
	Mexico	o	o	o	O	o	o	o	o
	Oman	o	x	o	O	o	o	o	x

	Panama	o	x	o	O	o	o	o	o
	Peru	o	x	o	O	o	o	o	o
	Qatar	o	x	o	O	o	o	o	x
	Romania	x	x	o	O	x	x	x	x
	Russian Federation	x	x	x	O	x	x	x	x
	Saudi Arabia	o	o	o	O	o	o	o	o
	Singapore	o	o	o	O	o	o	o	o
	Slovenia	x	x	x	O	x	x	x	x
	South Africa	o	o	o	O	o	o	o	o
	Swaziland	o	x	o	O	o	o	o	x
	Thailand	o	x	o	O	o	o	o	o
	Tunisia	o	o	o	O	o	o	o	o
	Turkey	o	x	o	O	o	o	o	o
	United Arab Emirates	o	x	o	O	o	o	o	x
	Uruguay	o	o	o	O	o	o	o	o
	Venezuela, RB	o	o	o	O	o	o	o	o
LOW INCOME COUNTRIES	Angola	o	x	o	O	o	o	o	x
	Bangladesh	o	x	o	O	o	o	o	o
	Bolivia	o	o	o	O	o	o	o	o
	Burkina Faso	o	x	o	O	o	o	o	o
	Cote d'Ivoire	o	o	o	O	o	o	o	o
	Egypt, Arab Rep.	o	x	o	O	o	o	o	o
	Georgia	x	x	x	O	x	x	x	x
	Ghana	o	x	o	O	o	o	o	o
	Indonesia	o	x	o	O	o	o	o	o
	Kenya	o	x	o	O	o	o	o	o
	Kyrgyz Republic	x	x	x	O	x	x	x	x
	Moldova	x	x	x	O	x	x	x	x
	Morroco	o	o	o	O	o	o	o	o
	Nicaragua	o	x	o	O	o	o	o	o

	Pakistan	o	o	o	O	o	o	o	o
	Paraguay	o	o	o	O	o	o	o	o
	Philippines	o	o	o	O	o	o	o	o
	Sri Lanka	o	x	o	O	o	o	o	o
	Tanzania	o	x	o	O	o	o	o	o
	Togo	o	o	o	O	o	o	o	x
	Uganda	o	x	o	O	o	o	o	o
	Uzbekistan	o	x	x	O	x	x	x	x
	Yemen	x	x	x	O	x	x	x	x
	Zambia	o	o	o	O	o	o	o	o

Note: This table describes the sample of countries used in the dataset as well as their classification into three groups according to WEO (2013). It is comprised of the 91 original countries in Schindler (2007). In columns (i), (ii) and (iii) a 'o' means that that data on that country is available earlier than 1986 (i.e. we have at least 25 years of data since our dataset ends in 2011). An 'x' means that we don't, so this country is not included for the analysis of the particular column that the column is referring to. In column (iv) 'o' means that we have data for the Schindler Index from 1995 to 2011, while 'x' means that we do not have observations for the entire period of study and hence that country is excluded from the sample. In columns (v), (vi), (vii) and (viii) a 'o' means that the country is included in the respective robustness check, while 'x' means that the country is excluded from the respective exercise. Sources: GDP was taken from WDI; The index was taken from Schindler (2007) and updated by the authors; CA are from IMF-WEO (2013) and REER from IMF-IFS; Data on de facto exchange rate regimes identified in Ilzetzki, Reinhart and Rogoff (2010); Data on external indebtness comes from Lane and Milessi-Ferreti (2007); Chinn-Ito index is publicly available; Quinn index was provided by the author.

When selecting the countries for our data we used as main criteria the sample in the original Schindler paper. In Schindler there are 91 countries and we updated the index for all of them. When categorizing the 91 countries into different and mutually exclusive groups we followed IMF (2013)´s WEO, Chapter 4. We defined three categories: Advanced Countries (AC), Emerging Markets (EM) and Low Income Countries (LIC). Importantly the set of LIC economies has a subset of economies that are Highly Indebted Poor Countries (HIPC). Broadly speaking, the methodology used in this chapter, uses three criteria for grouping countries: adherence to OECD prior to 1990, income per capita levels, and population. Out of the 91 countries in Schindler that we updated, 8 are not in Table 4.6 of WEO Chapter 4 because they did not meet the population criteria. We decided to keep them nonetheless and replicate the categorization using the two remaining criteria (adherence to OECD prior to 1990 and income per capita levels). After doing this, the 91 countries are distributed as follows: 22 are developed, 45 are emerging and 24 are low income. When carrying out the analysis, we applied two additional and separate filters: (i) data on all six asset categories had to be available for the period 2006-2011; and that (ii) we had to have data for GDP until 2011 and at least going back to 1987. When applying the first filter we drop one country, Bahrain, an EM. When applying the second filter, with GDP data, we drop 8 EMs and 4 LIC. Hence we end up working with a total of 78 countries whose distribution is 22 are developed, 36 are emerging and 20 are low income.

Table A.2. Correlations between Output and Capital Controls: Average across countries

	j=-1	j=0	j=+1
(a) Inflows			
Total	-0.03	0.00	0.04
	(-0.71,0.64)	(-0.61,0.62)	(-0.58,0.65)
Advanced Economies	-0.11	-0.07	0.00
	(-0.67, 0.46)	(-0.49, 0.35)	(-0.24,0.23)
Emerging Markets	0.05	0.07	0.11
	(-0.58,0.69)	(-0.54,0.68)	(-0.55,0.77)
Low-Income Countries	-0.11	-0.04	-0.06
	(-0.89,0.66)	(-0.78,0.70)	(-0.8,0.68)
(b) Outflows			
Total	0.00	0.00	0.01
	(-0.64,0.63)	(-0.67, 0.67)	(-0.64,0.67)
Advanced Economies	-0.08	-0.07	-0.01
	(-0.63,0.46)	(-0.46,0.32)	(-0.25,0.22)
Emerging Markets	0.03	0.03	0.00
	(-0.56,0.62)	(-0.69,0.74)	(-0.7,0.7)
Low-Income Countries	0.03	0.04	0.05
	(-0.74,0.79)	(-0.76,0.84)	(-0.80,0.90)

Note: The table reports the unconditional correlation between the cyclical component of output in period t and that of the capital controls index in period t+j. The dataset is made of a balanced panel of 78 countries between 1995 and 2011. We used the simple averages across countries. The numbers in brackets report two standard deviations intervals. The different sub-groups of countries were based on the WEO (2013) classification. See note in Figure A.1 and Table A.1 for more details.

Table A.3.a. Country Correlations: Output and Capital Controls on Inflows

	j=-1	j=0	j=+1
China	-0.9***	-0.91***	-0.86***
Pakistan	-0.8***	-0.88***	-0.65***
Uzbekistan	-0.68***	-0.64***	-0.33
Iceland	-0.63***	-0.52**	-0.12
Kenya	-0.41	-0.51**	-0.69***
Ghana	-0.44*	-0.43*	-0.69***
Spain	-0.54**	-0.4	-0.12
Lebanon	-0.47*	-0.38	-0.36
Canada	-0.55**	-0.36	0.08
Cote dIvoire	-0.42	-0.34	-0.13
France	-0.45*	-0.34	-0.2
Cyprus	-0.5**	-0.32	0.1
Ecuador	-0.32	-0.26	-0.23
Mexico	-0.24	-0.26	0.31
Portugal	-0.58**	-0.25	-0.01
Bangladesh	-0.28	-0.22	0.18
New Zealand	-0.23	-0.22	-0.15
Jamaica	-0.15	-0.2	-0.21
Malaysia	-0.03	-0.17	-0.18
Saudi Arabia	-0.29	-0.15	-0.28
Nicaragua	-0.25	-0.13	0
Japan	-0.23	-0.09	0.25
Germany	0.04	-0.08	-0.22
Oman	0	-0.06	-0.13
Brunei Darussalam	0.09	-0.05	-0.01
Finland	-0.04	-0.04	0.09
Kuwait	-0.24	-0.04	0.28
Chile	0.09	-0.03	0.08
Guatemala	-0.01	-0.03	0.01
Morocco	-0.35	-0.01	-0.39
Austria	0	0	0
Belgium	0	0	0
Denmark	0	0	0
Hong Kong	0	0	0
Ireland	0	0	0
Italy	0	0	0
Netherlands	0	0	0
Norway	0	0	0
Panama	0	0	0
Singapore	0	0	0

Switzerland	0	0	0
United Kingdom	0	0	0
United States	0	0	0
Uruguay	0	0	0
Zambia	0	0	0
Thailand	-0.05	0.01	0.05
Sri Lanka	-0.04	0.04	-0.06
Uganda	0.27	0.05	-0.34
Philippines	0.2	0.07	-0.01
Costa Rica	-0.22	0.08	0.11
Dominican Republic	0.47*	0.09	-0.15
Burkina Faso	0.06	0.1	-0.12
Sweden	0.24	0.11	0.09
Togo	-0.22	0.12	0.17
Qatar	0.46*	0.13	-0.06
Peru	0.24	0.14	0.24
Argentina	0.42	0.15	-0.17
Egypt	0.2	0.17	0.22
Tanzania	0.2	0.17	0.03
Israel	0.21	0.2	0.15
Turkey	0.07	0.2	0.43*
South Africa	0.14	0.21	0.31
Bolivia	-0.66***	0.23	0.27
Brazil	0.09	0.24	0.39
El Salvador	0.27	0.27	0.26
Greece	0.13	0.27	0.28
India	0.33	0.31	0.23
Indonesia	0.44*	0.31	0.11
Korea, Rep.	0.29	0.32	0.01
Swaziland	0.5*	0.38	0.32
Mauritius	0.24	0.4	0.4
Angola	0.33	0.43*	0.56**
Australia	0.52**	0.43*	0.01
Venezuela	0.08	0.47*	0.77***
Malta	0.33	0.49**	0.59**
United Arab Emirates	0.35	0.51**	0.64***
Paraguay	0.59**	0.72***	0.72***
Tunisia	0.69***	0.79***	0.89***

Note: The table reports the unconditional correlation between the cyclical components of output in period t and that of the capital controls index on inflows in period t+j. It sorts countries according to their contemporaneous correlation. The period of analysis is 1995-2011. Stars next to each country name, (***)/(**)/(*), denote statistical significance at 1%/5%/10% levels.

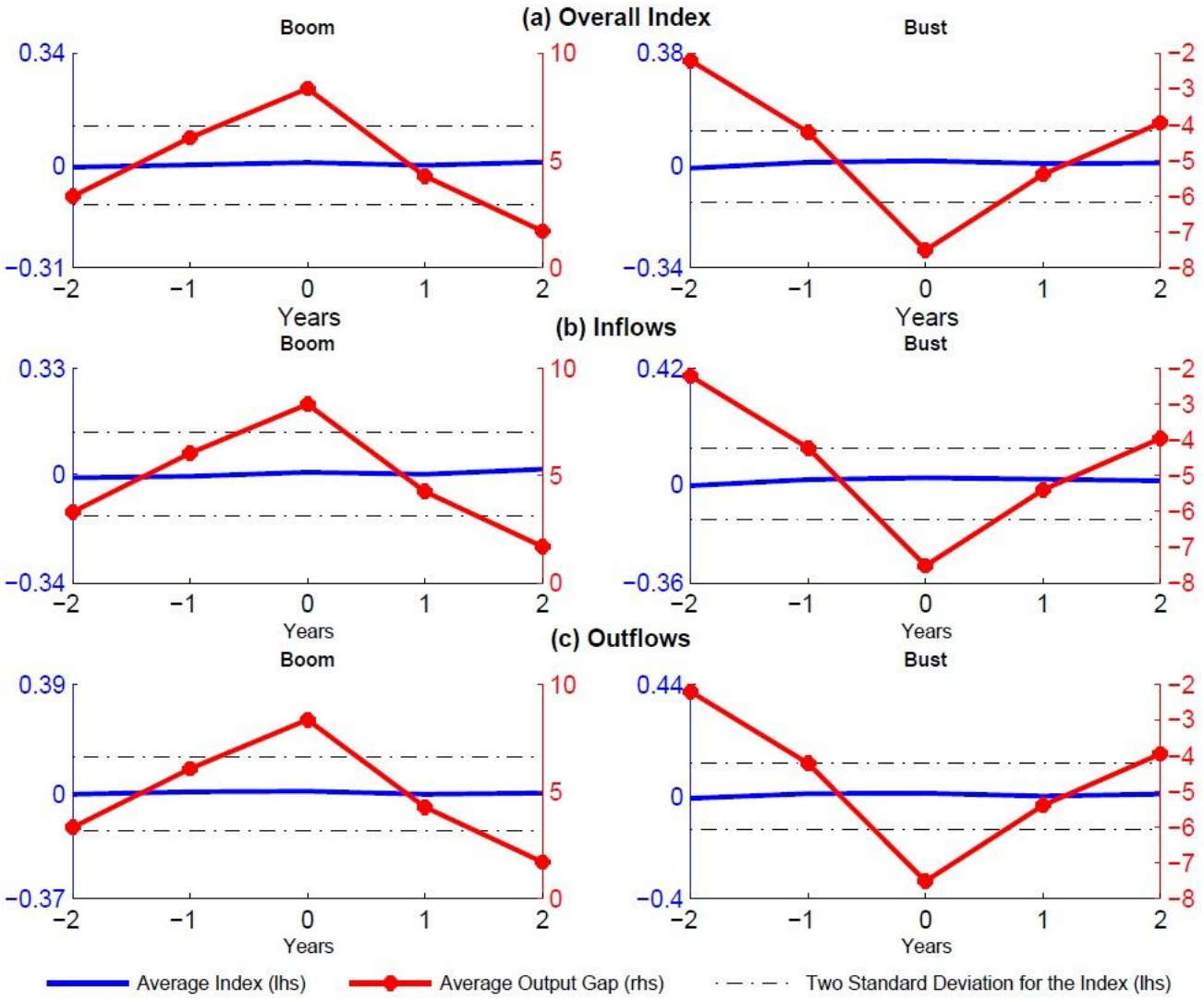
Table A.3.b. Country Correlations: Output and Capital Controls on Outflows

	j=-1	j=0	j=+1
El Salvador	-0.72***	-0.89***	-0.52**
Argentina	-0.3	-0.69***	-0.79***
Singapore	-0.71***	-0.62***	-0.45*
Pakistan	-0.57**	-0.58**	-0.44*
Iceland	-0.68***	-0.55**	-0.17
Uzbekistan	-0.54**	-0.51**	-0.3
Ghana	-0.49*	-0.45*	-0.69***
Cote dIvoire	-0.3	-0.42*	-0.17
Spain	-0.54**	-0.4	-0.12
Kenya	-0.29	-0.38	-0.46*
Greece	-0.58**	-0.34	-0.01
Cyprus	-0.35	-0.28	0.04
Dominican Republic	-0.1	-0.28	-0.35
Kuwait	-0.16	-0.26	-0.46*
Saudi Arabia	-0.18	-0.26	-0.4
Bangladesh	-0.24	-0.25	-0.08
Indonesia	-0.32	-0.25	-0.11
Switzerland	-0.02	-0.21	-0.06
Italy	-0.32	-0.2	0.1
Portugal	-0.25	-0.2	-0.32
Belgium	-0.22	-0.19	-0.01
Qatar	0.21	-0.18	-0.21
South Africa	0.03	-0.16	-0.4
France	-0.26	-0.13	-0.05
Ecuador	-0.25	-0.1	-0.01
Korea, Rep.	0.2	-0.09	-0.29
Mexico	-0.05	-0.07	0.02
Chile	0.04	-0.06	-0.04
Morocco	-0.22	-0.03	-0.34
Germany	0.19	-0.01	-0.21
Brunei Darussalam	0	0	0
Canada	0	0	0
Costa Rica	0	0	0
Denmark	0	0	0
Finland	0	0	0
Guatemala	0	0	0
Hong Kong	0	0	0
Ireland	0	0	0
Jamaica	0.01	0	-0.1
Japan	0	0	0

Mauritius	0	0	0
Netherlands	0	0	0
New Zealand	0	0	0
Nicaragua	0	0	0
Norway	0	0	0
Oman	0	0	0
Panama	0	0	0
Peru	0	0	0
Sweden	0	0	0
United Kingdom	0	0	0
Uruguay	0	0	0
Zambia	0	0	0
China	0.12	0.01	-0.27
Sri Lanka	-0.04	0.04	-0.06
Uganda	0.27	0.05	-0.34
Lebanon	0.05	0.06	0.04
Austria	0.24	0.13	0.17
Malaysia	-0.2	0.13	0.18
Tanzania	0.12	0.14	0.06
United Arab Emirates	0	0.19	0.03
Turkey	0.35	0.21	0.29
United States	0.04	0.21	0.17
Bolivia	0.45*	0.29	0.32
Brazil	0	0.29	0.36
Burkina Faso	0.23	0.3	0.56**
Angola	0.45*	0.32	0.33
India	0.52**	0.34	-0.03
Swaziland	0.4	0.34	0.33
Australia	0.56**	0.37	0.18
Venezuela	0.15	0.46*	0.61**
Egypt	0.18	0.49**	0.74***
Togo	0.46*	0.55**	0.56**
Israel	0.42	0.62***	0.56**
Thailand	0.54**	0.66***	0.45*
Paraguay	0.59**	0.72***	0.72***
Malta	0.39	0.74***	0.63***
Philippines	0.76***	0.77***	0.72***
Tunisia	0.69***	0.79***	0.89***

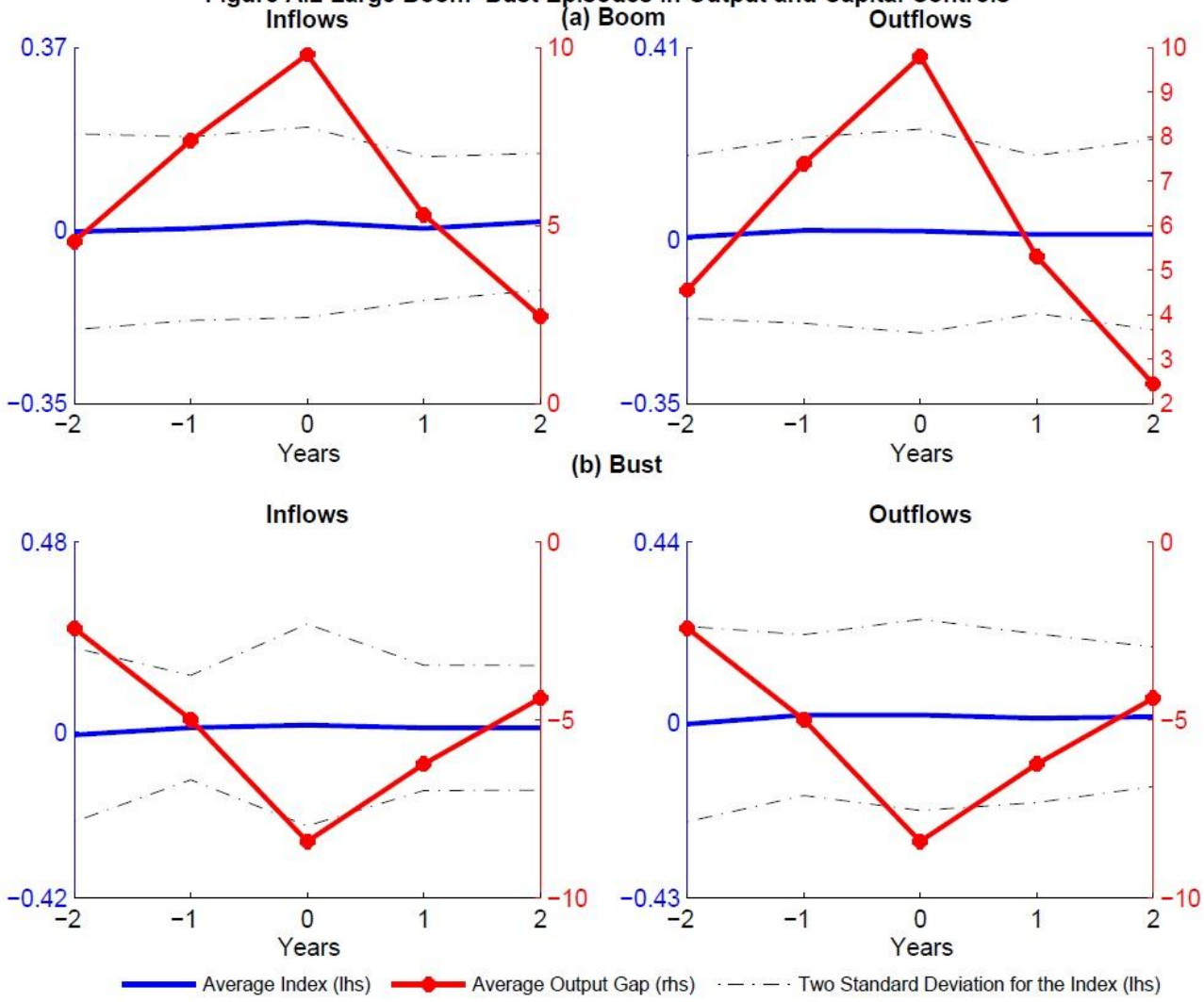
Note: The table reports the unconditional correlation between the cyclical components of output in period t and that of the capital controls index on outflows in period t+j. It sorts countries according to their contemporaneous correlation. The period of analysis is 1995-2011. Stars next to each country name, (***)/(**)/(*), denote statistical significance at 1%/5%/10% levels.

Figure 3.A.1 Boom-Bust Episodes and Capital Controls (Alternative Error Bands)



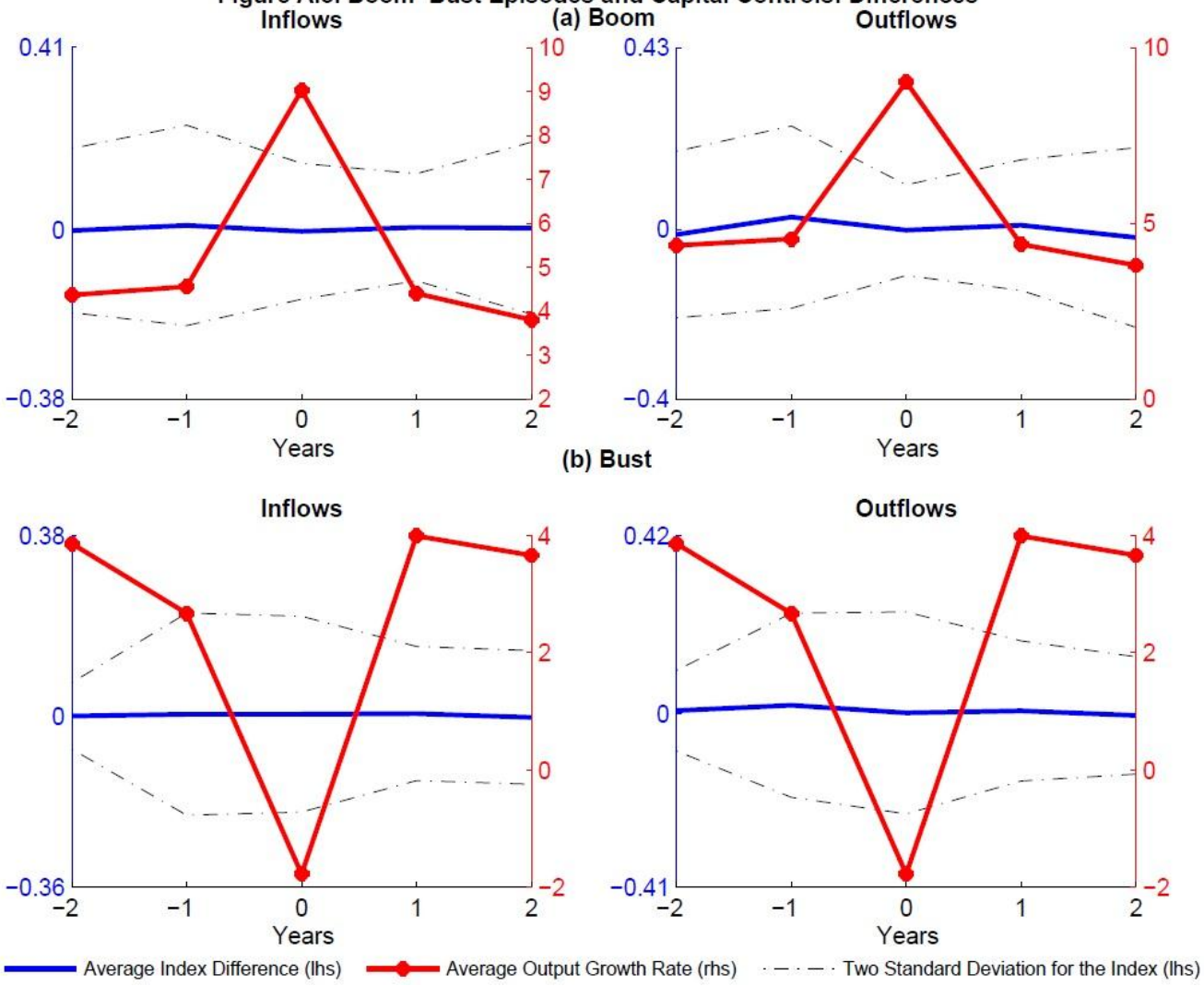
Note: This figure is identical to Figure 3 in the paper except that error bands are computed as twice the cross section standard deviation. The latter is computed as the average of the country-specific standard deviation for all countries in the sample during the entire period covered in the dataset, 1995-2011.

Figure A.2 Large Boom−Bust Episodes in Output and Capital Controls



Note: The upper/lower plots report the average dynamics of the output gap (red stars) and the cyclical component of the capital controls index (blue solid) in a 5-year window around the periods identified as large output gap booms/busts across all countries in the dataset. A large episode is characterized by being one where the absolute value of the output gap is above 1.3 standard deviations at the peak/trough. The period of analysis is 1995-2011. The black lines denote the two standard deviation confidence bands for the capital controls index on inflows or outflows.

Figure A.3. Boom−Bust Episodes and Capital Controls: Differences



Note: The upper/lower plots report the average dynamics of output growth (red stars) and the first difference of the capital controls index (blue solid) in a 5-year window around the periods identified as booms/busts episodes in output growth across all countries in the dataset. These episodes are identified as the years in which the absolute value of output growth was above 1.3 standard deviations. If two (or more) consecutive years are identified we select the maximum. The period of analysis is 1995-2011. The black lines denote the two standard deviation confidence bands for the capital controls index.

Figure 4.A.1 Acyclicality of Granular Measures of Capital-Outflow Controls in Booms

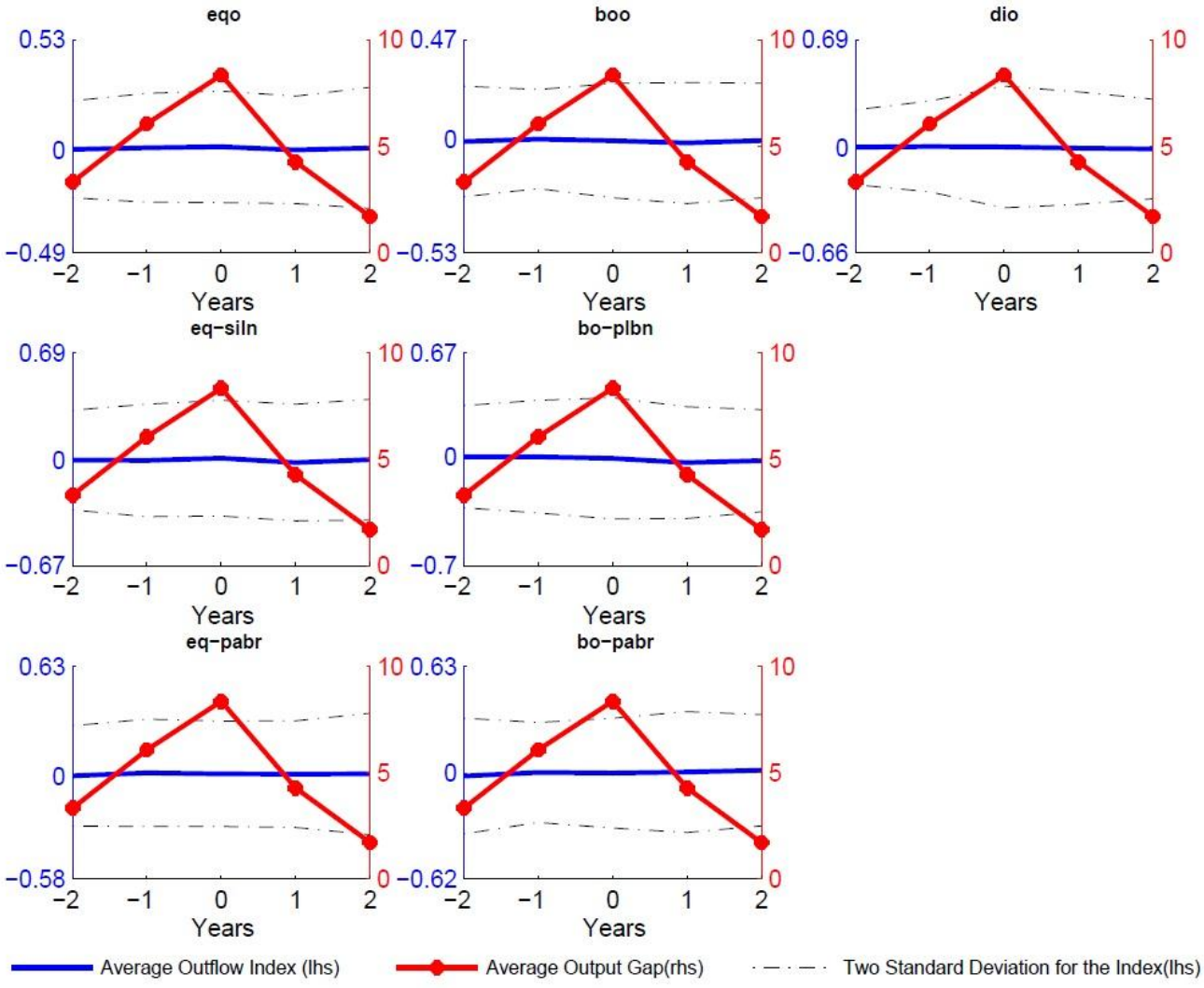


Figure 4.A.2 Acyclicality of Granular Measures of Capital-Inflow Controls in Busts

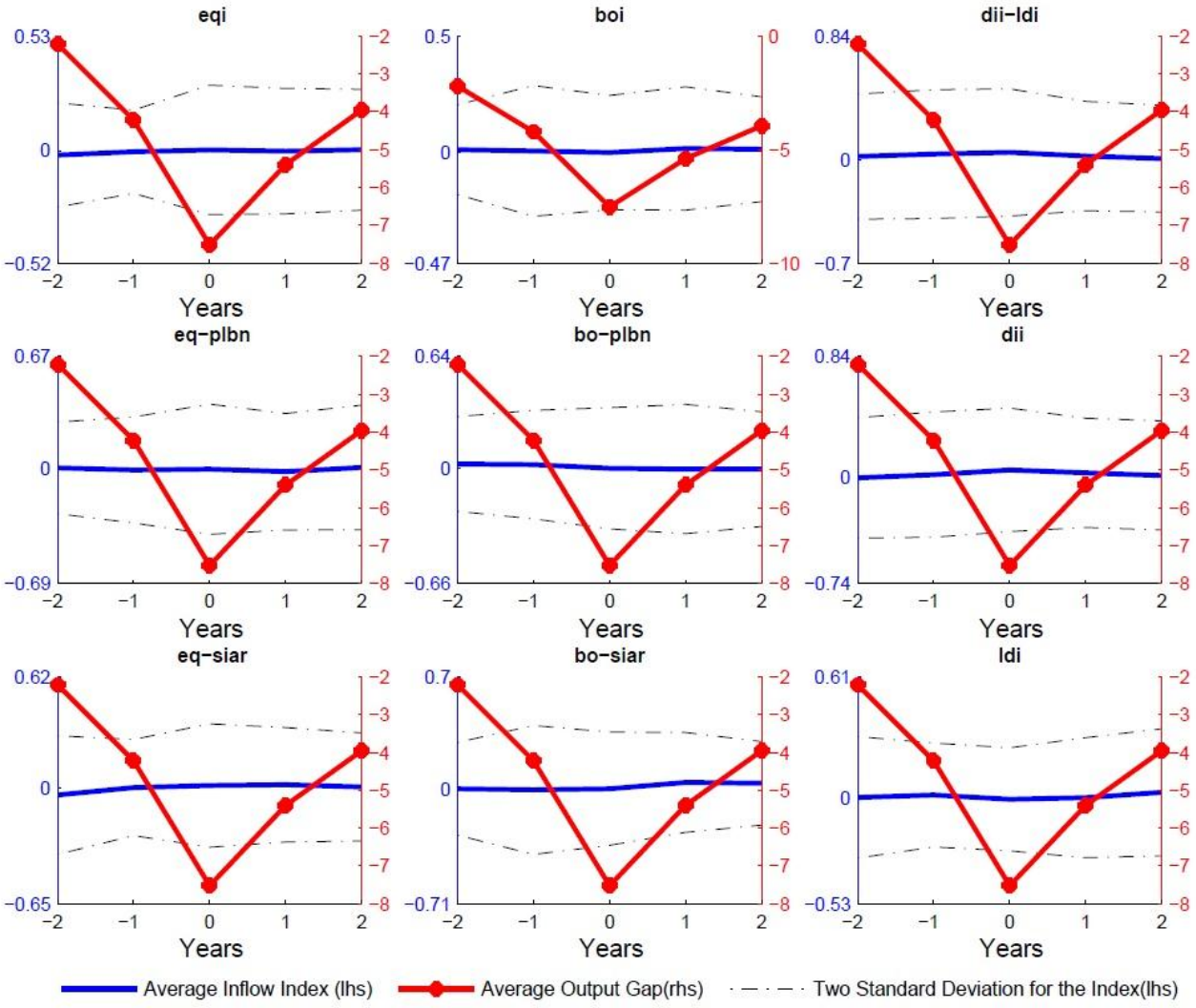


Figure 4.A.3 Acyclicality of Granular Measures of Capital-Outflow Controls in Busts

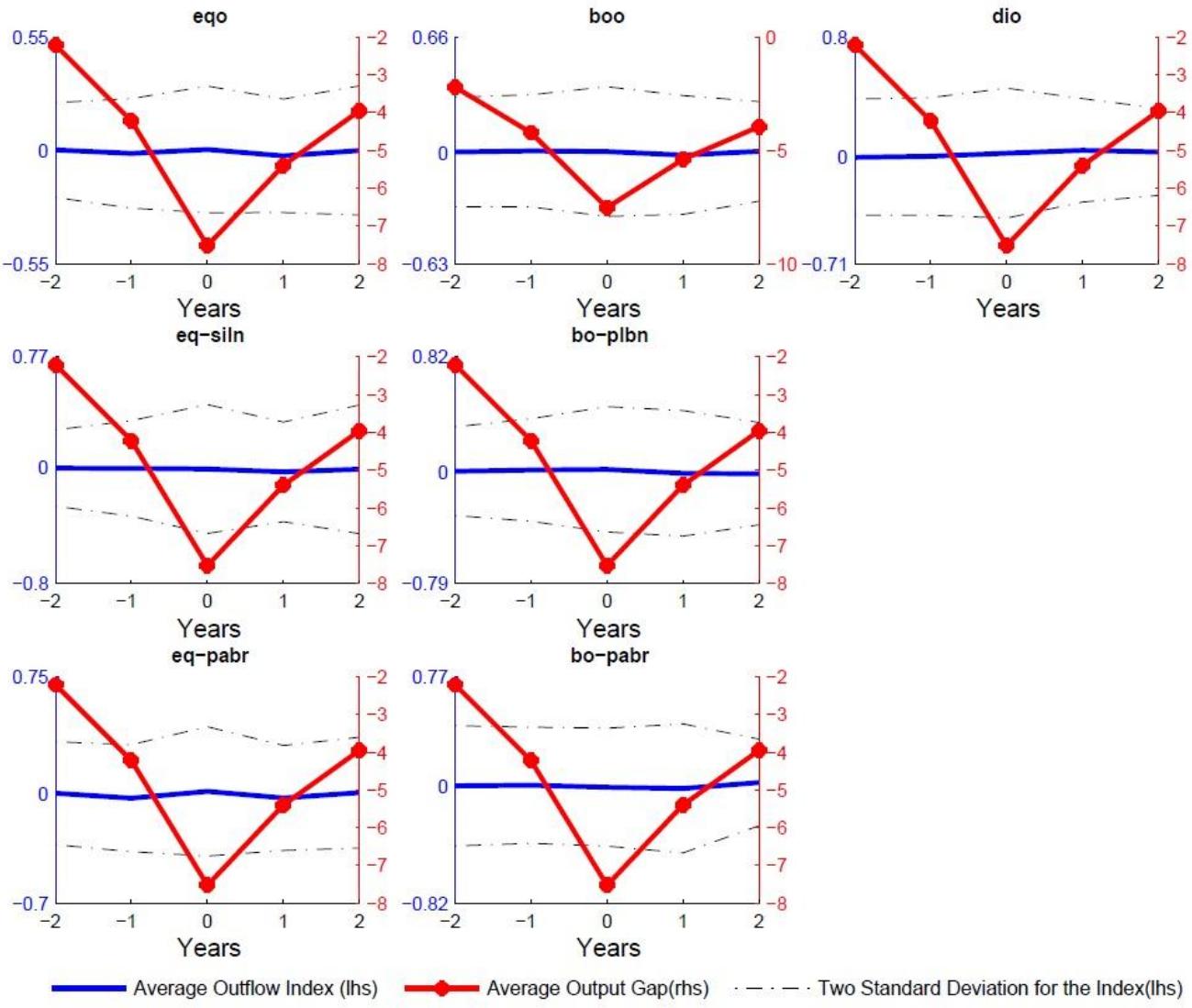


Figure A.5.1 Capital-Outflow Controls in Boom Episodes By Level of Development, Exchange-Rate Regime and Level of External Indebtedness

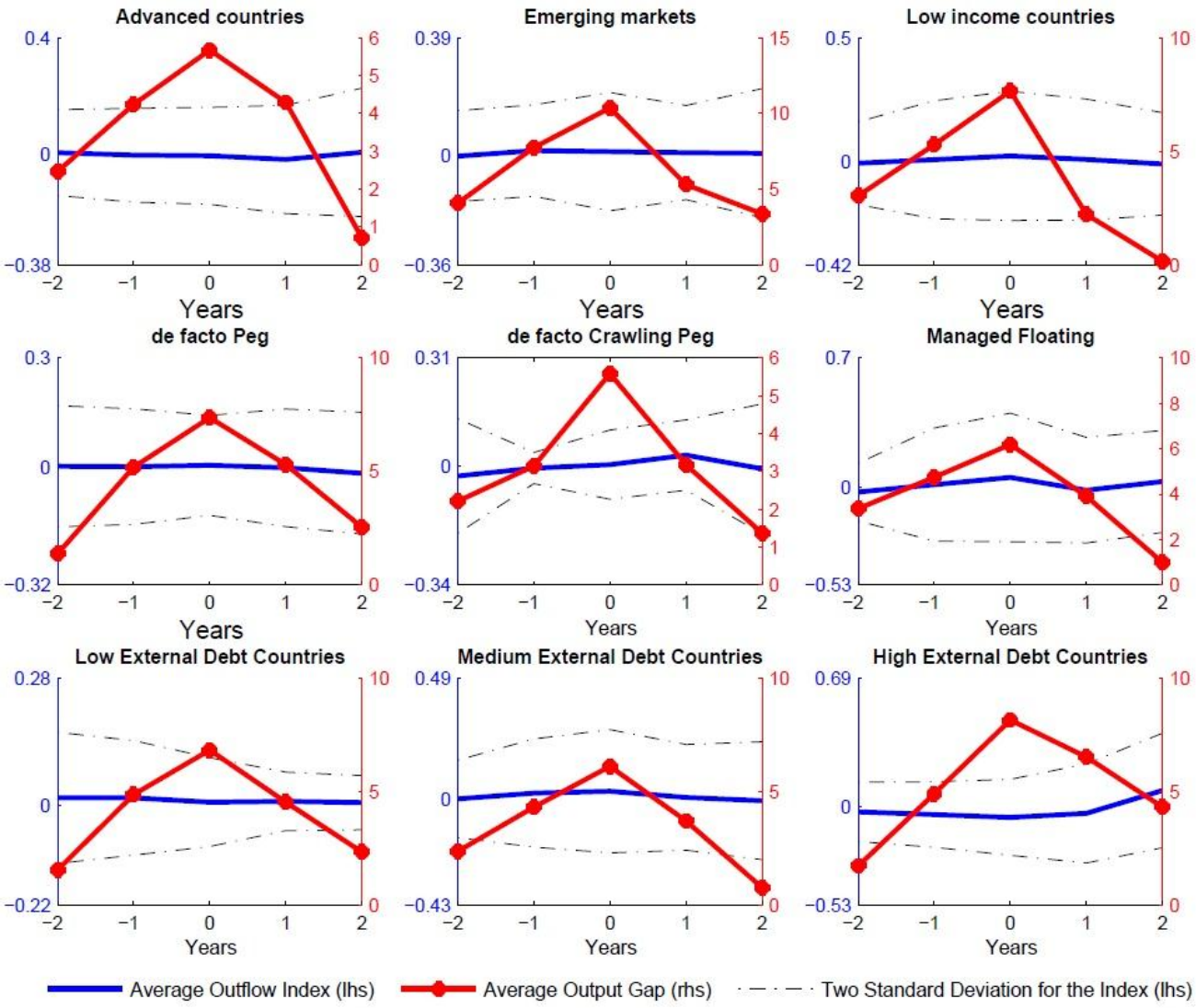


Figure A.5.2 Capital-Inflow Controls in Bust Episodes By Level of Development, Exchange-Rate Regime and Level of External Indebtedness

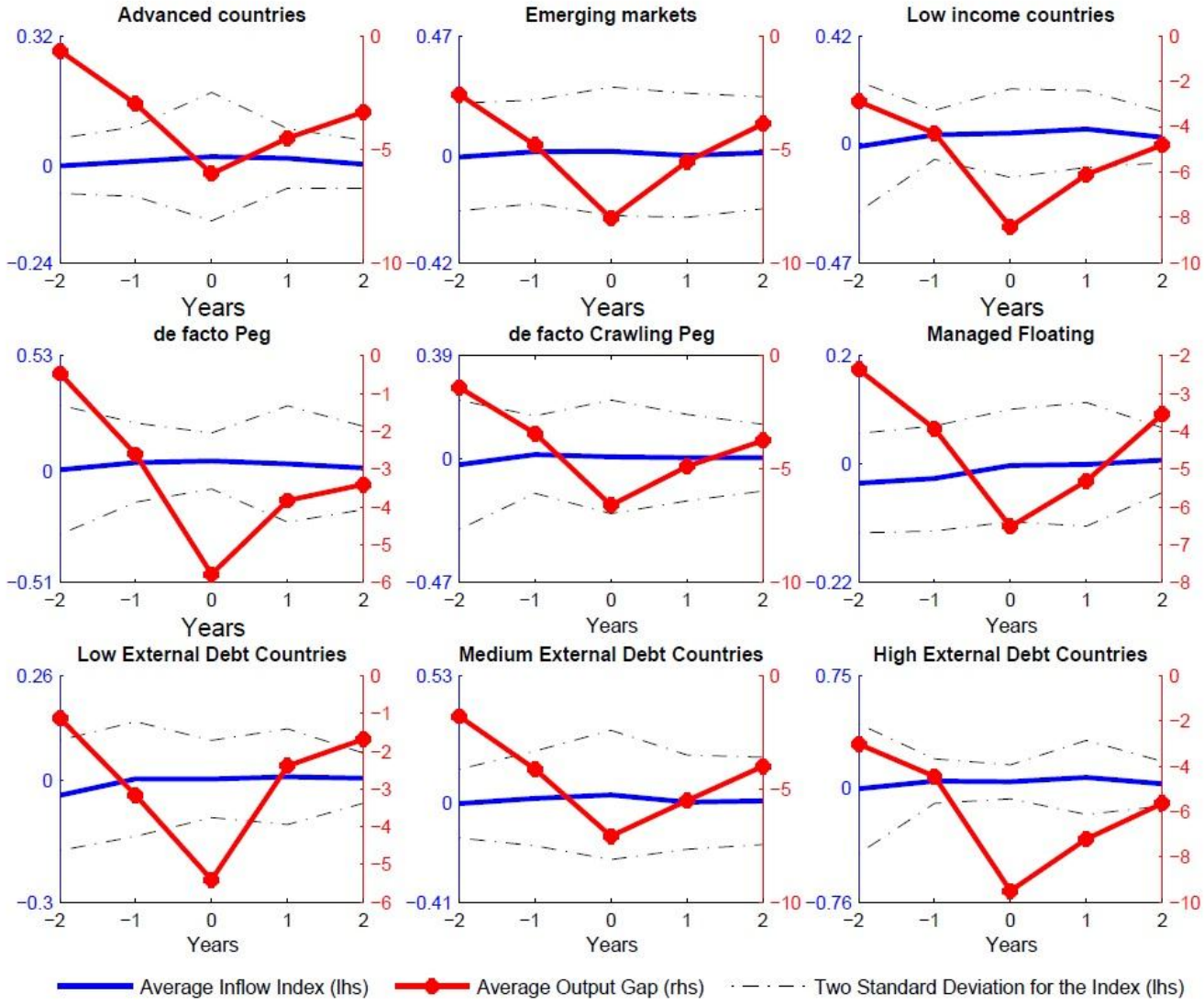


Figure A.5.3 Capital-Outflow Controls in Bust Episodes By Level of Development, Exchange-Rate Regime and Level of External Indebtedness

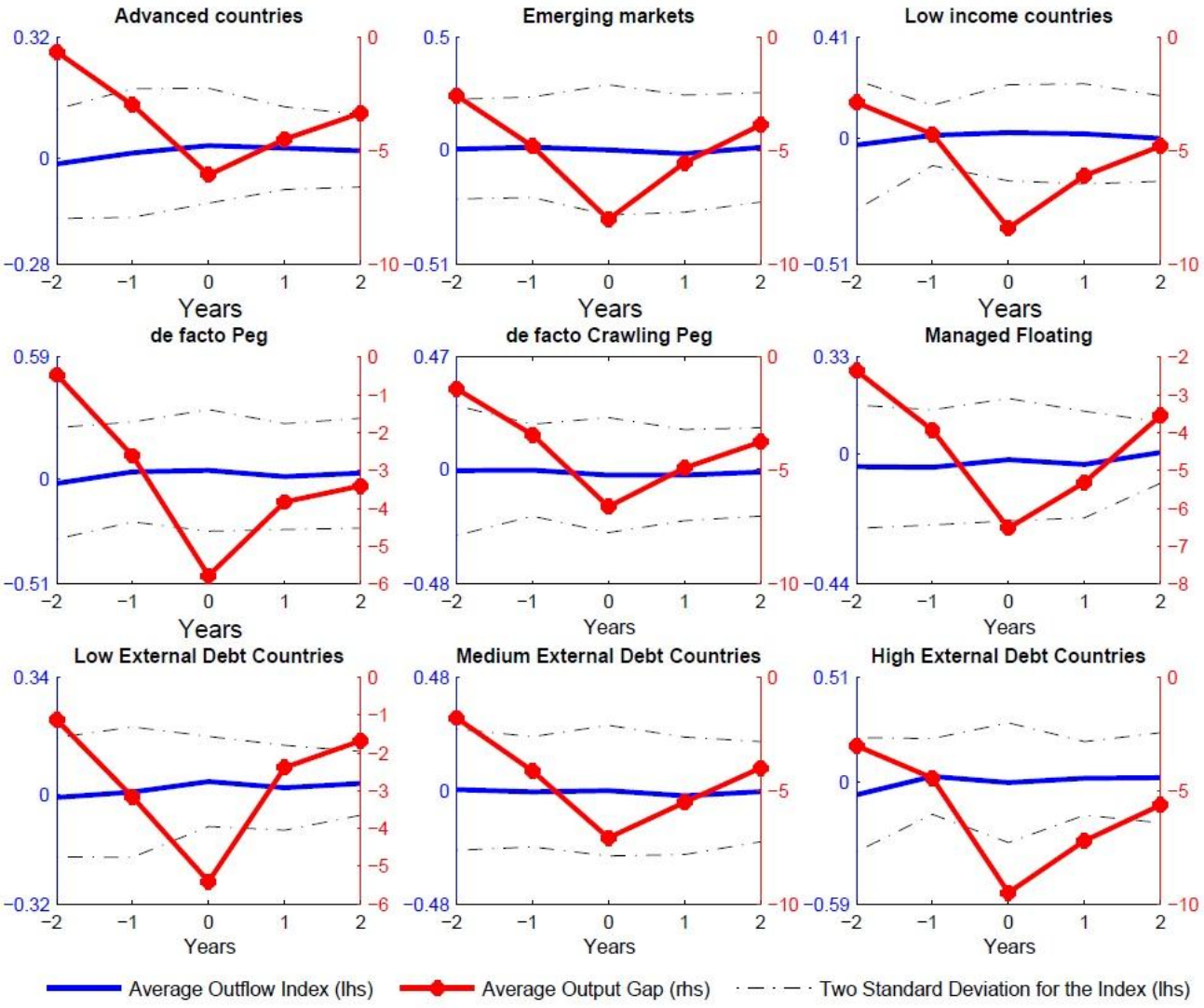
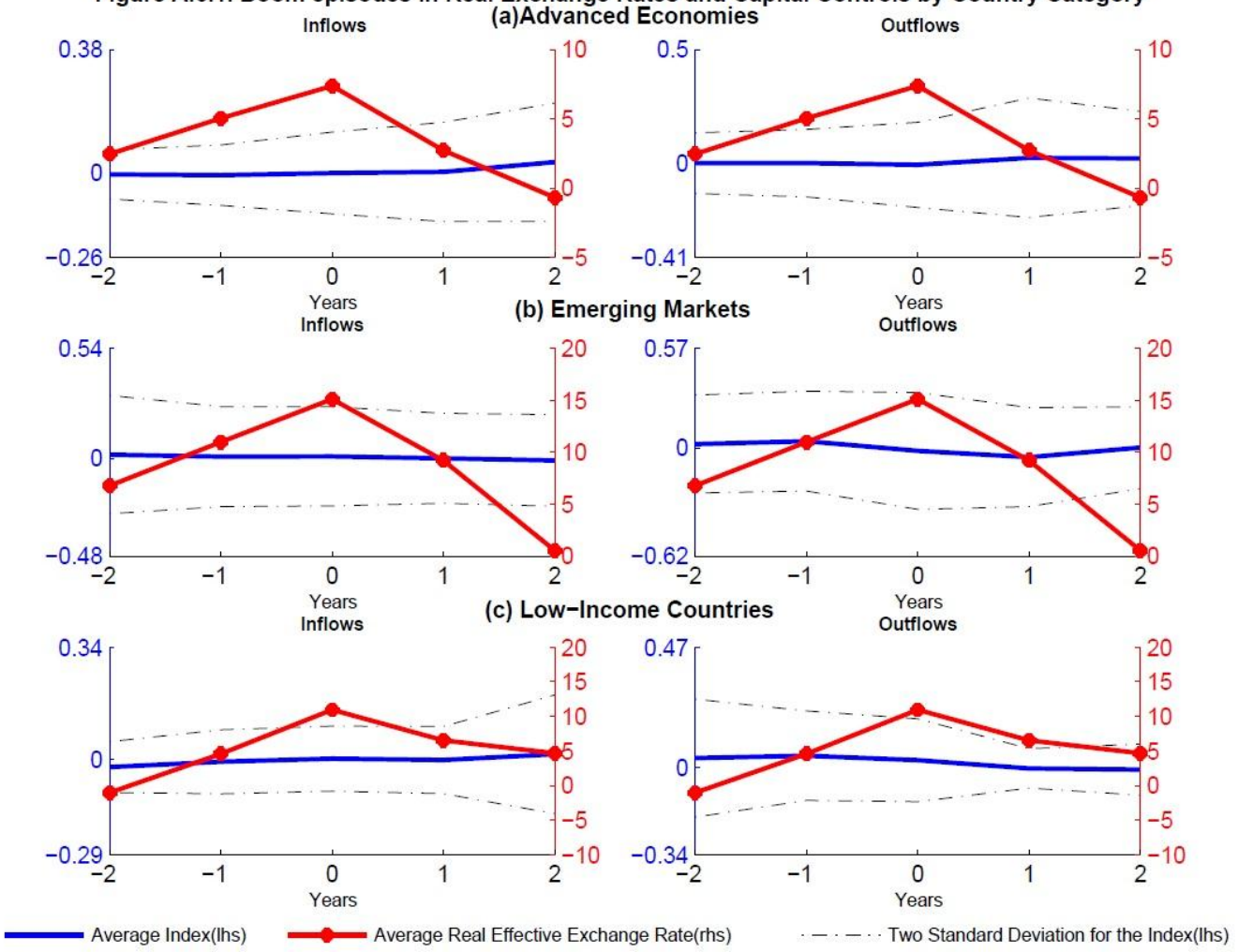
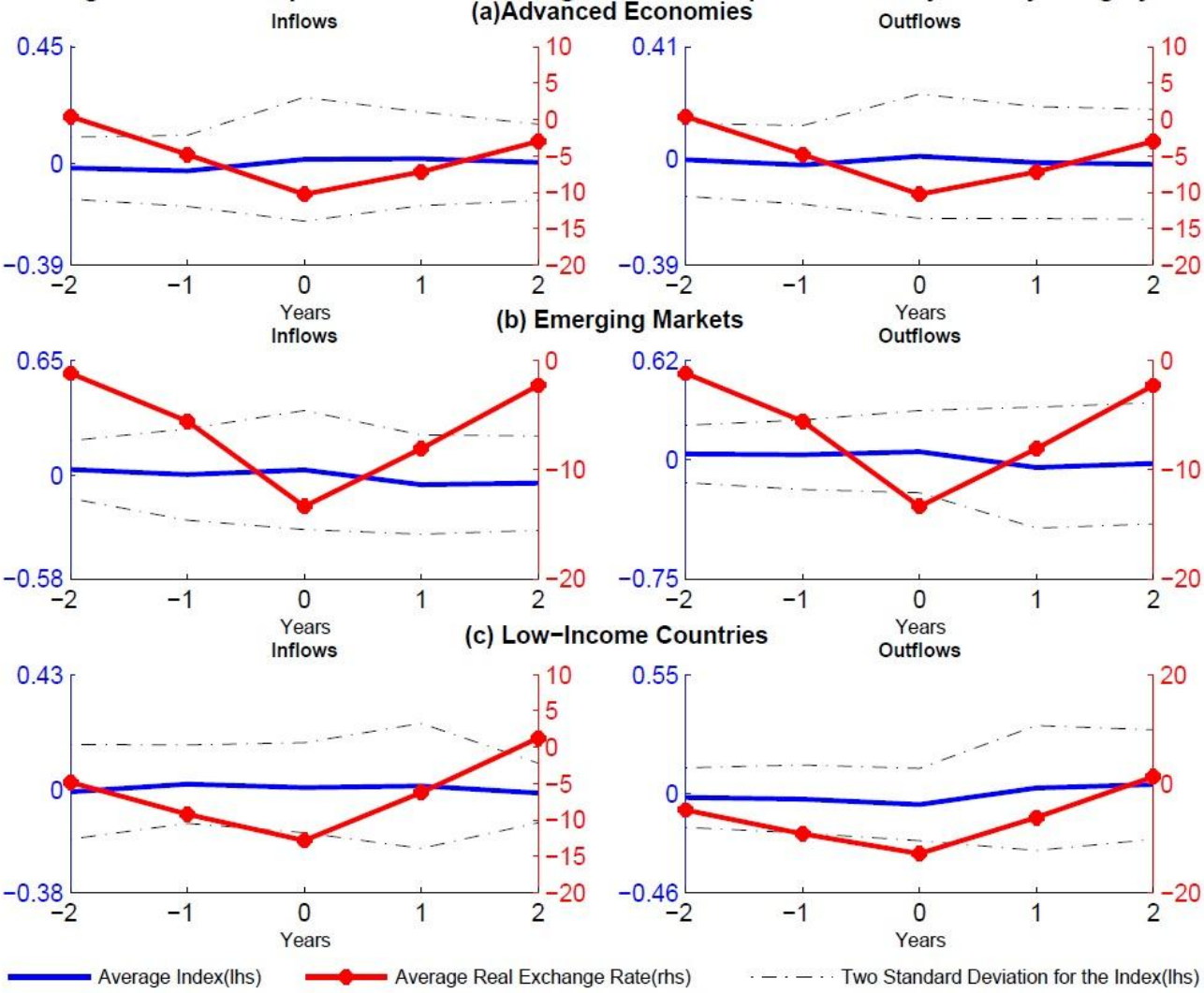


Figure A.6.1. Boom episodes in Real Exchange Rates and Capital Controls by Country Category



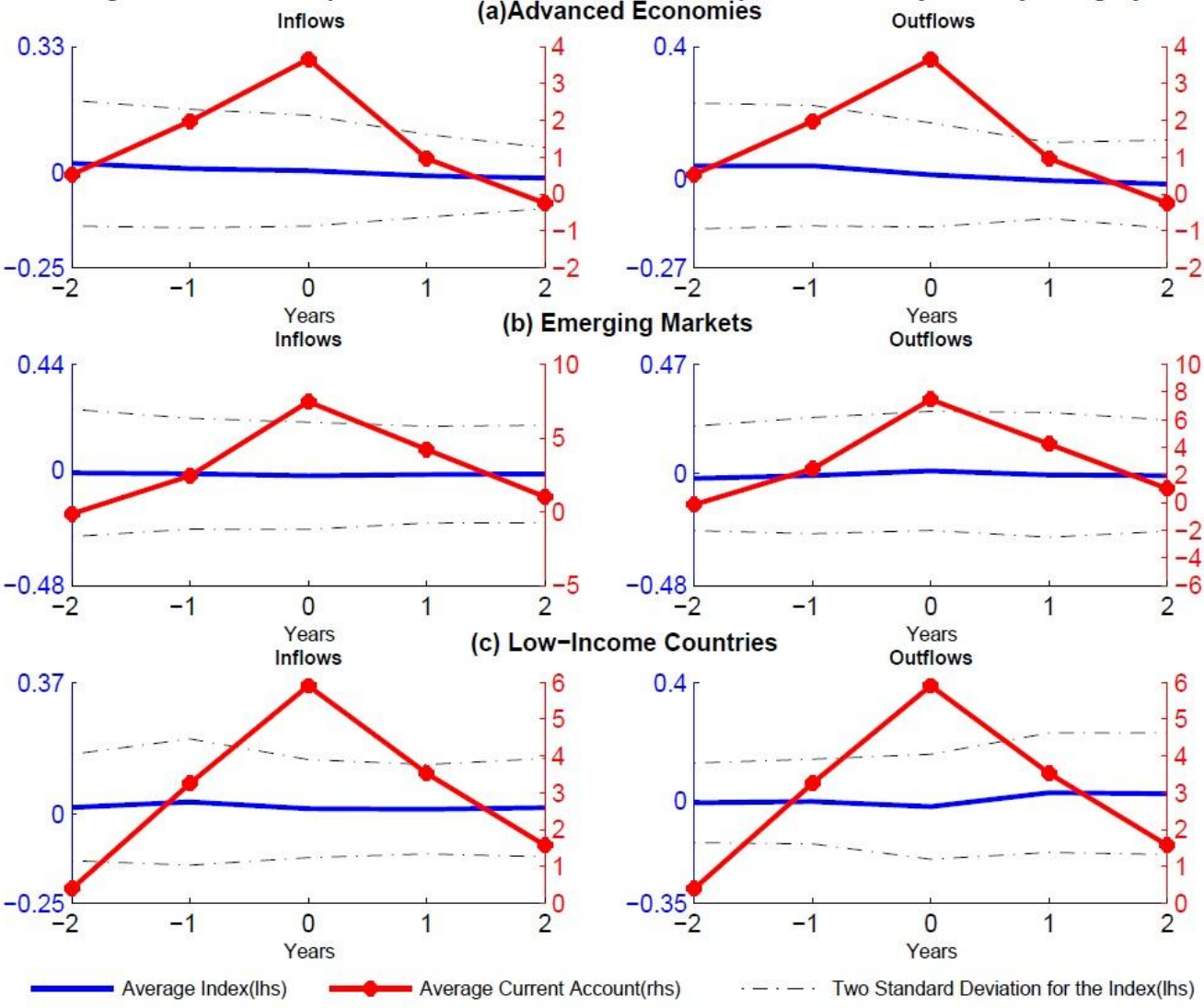
Note: The plots report the average dynamics of the cyclical components of the real effective exchange rate, REER (red stars), and the capital controls index (blue solid) in a 5-year window around the periods identified as booms in REER across all five types of countries in the dataset in accordance with the WEO (2013) classification. As with output, boom episodes in REER are identified as peaks of the periods where REER has been above its trend for more than three consecutive years. The period of analysis is 1995-2011. The black lines denote the two standard deviation confidence bands for the capital controls index. The cyclical component of the REER was found first taking the logarithm of the annual data and then using a quadratic trend. Data on REER comes from IMF.

Figure A.6.2. Bust episodes in Real Exchange Rates and Capital Controls by Country Category



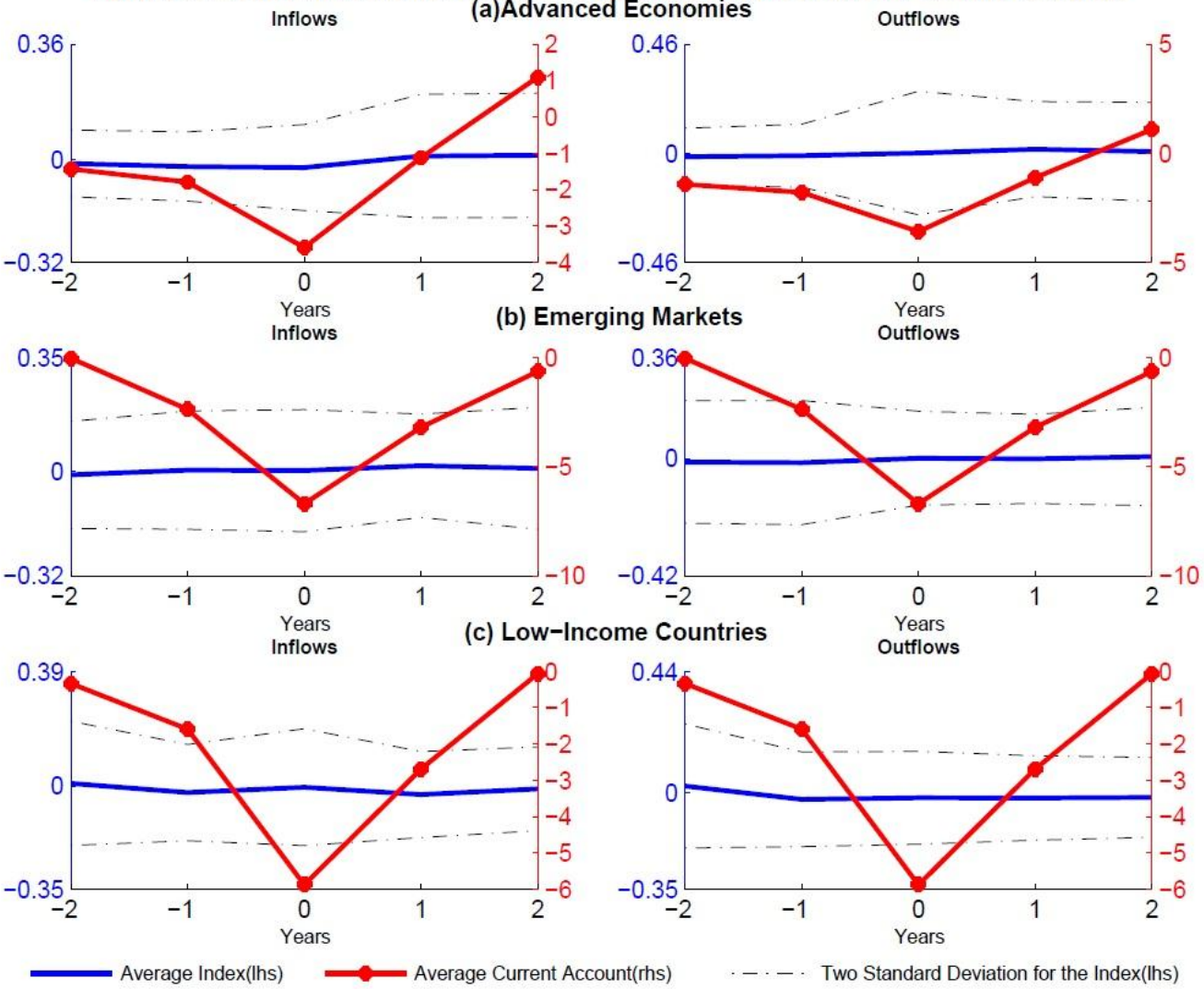
Note: The plots report the average dynamics of the cyclical components of the real effective exchange rate, REER (red stars), and the capital controls index (blue solid) in a 5-year window around the periods identified as busts in REER across all five types of countries in the dataset in accordance with the WEO (2013) classification. As with output, bust episodes in REER are identified as troughs of the periods where REER has been below its trend for more than three consecutive years. The period of analysis is 1995-2011. The black lines denote the two standard deviation confidence bands for the capital controls index. The cyclical component of the REER was found first taking the logarithm of the annual data and then using a quadratic trend. Data on REER comes from IMF.

Figure A.6.3. Boom episodes in Current Account and Capital Controls by Country Category



Note: The plots report the average dynamics of the cyclical components of the current account, CA (red stars), and the capital controls index (blue solid) in a 5-year window around the periods identified as booms in CA across all five types of countries in the dataset in accordance with the WEO (2013) classification. As with output, boom episodes in CA are identified as peaks of the periods where CA has been above its trend for more than three consecutive years. The period of analysis is 1995-2011. The black lines denote the two standard deviation confidence bands for the capital controls index. The cyclical component of the CA was found used a quadratic trend. Data on CA comes from IMF.

Figure A.6.4. Bust episodes in Current Account and Capital Controls by Country Category



Note: The plots report the average dynamics of the cyclical components of the current account, CA (red stars), and the capital controls index (blue solid) in a 5-year window around the periods identified as busts in CA across all five types of countries in the dataset in accordance with the WEO (2013) classification. As with output, bust episodes in CA are identified as troughs of the periods where CA has been below its trend for more than three consecutive years. The period of analysis is 1995-2011. The black lines denote the two standard deviation confidence bands for the capital controls index. The cyclical component of the CA was found used a quadratic trend. Data on CA comes from IMF.

Figure A.7 Countries With Active Capital-Control Policy on Outflows

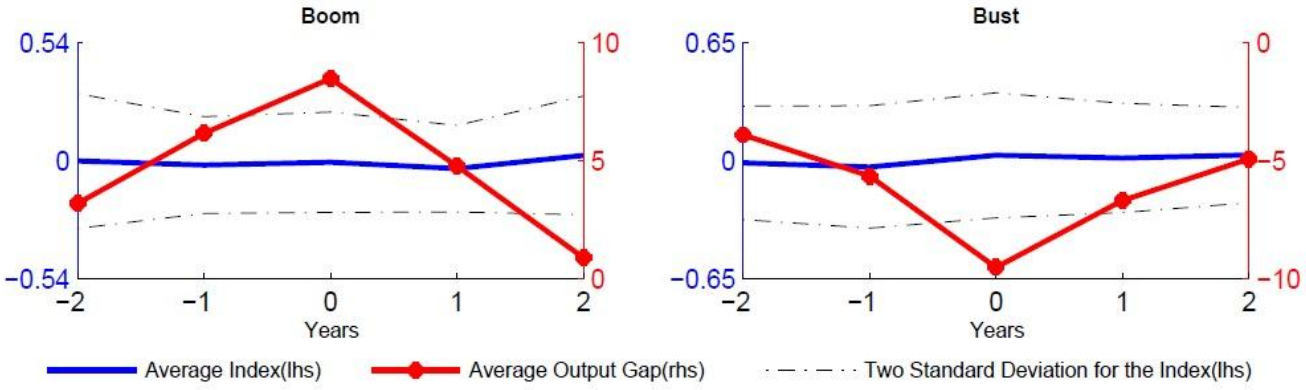


Figure 1.A.1 Country-By-Country Correlations Between Capital Controls on Bonds and Output

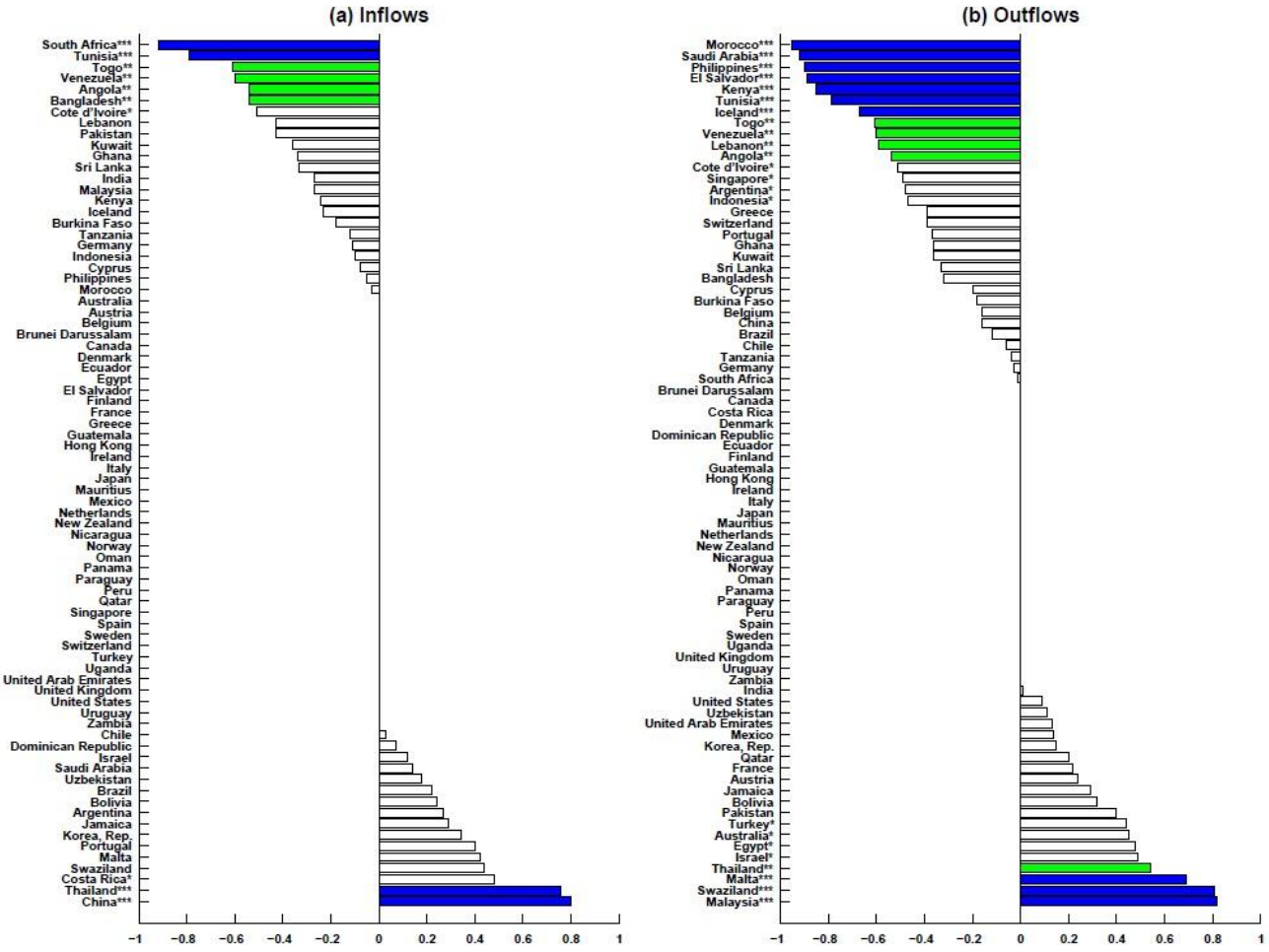


Figure 1.A.2 Country-By-Country Correlations Between Capital Controls on Equity and Output

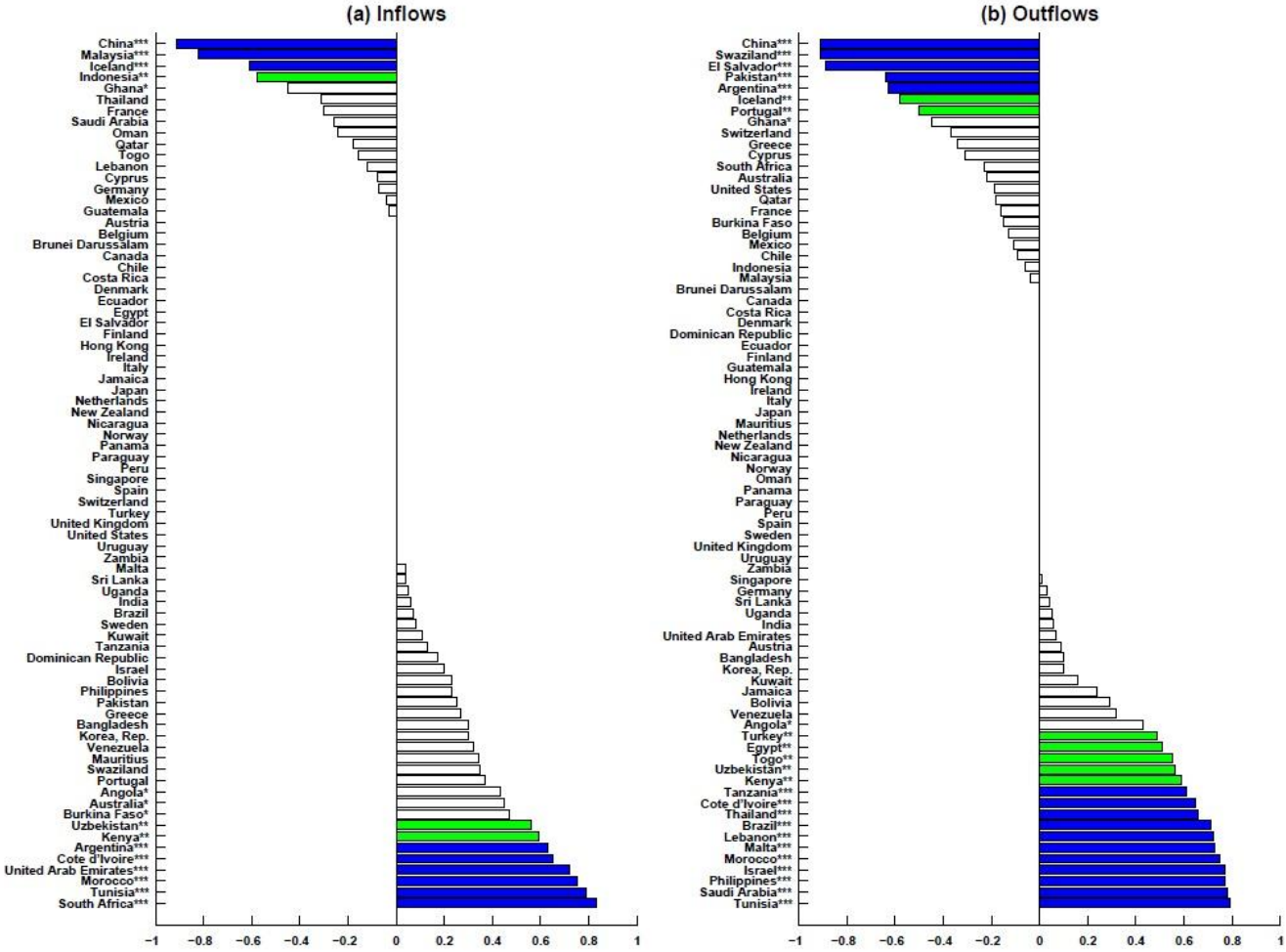


Figure 2.A.1 Country-By-Country Correlations Between Controls on Capital Inflows and Outflows in Bonds

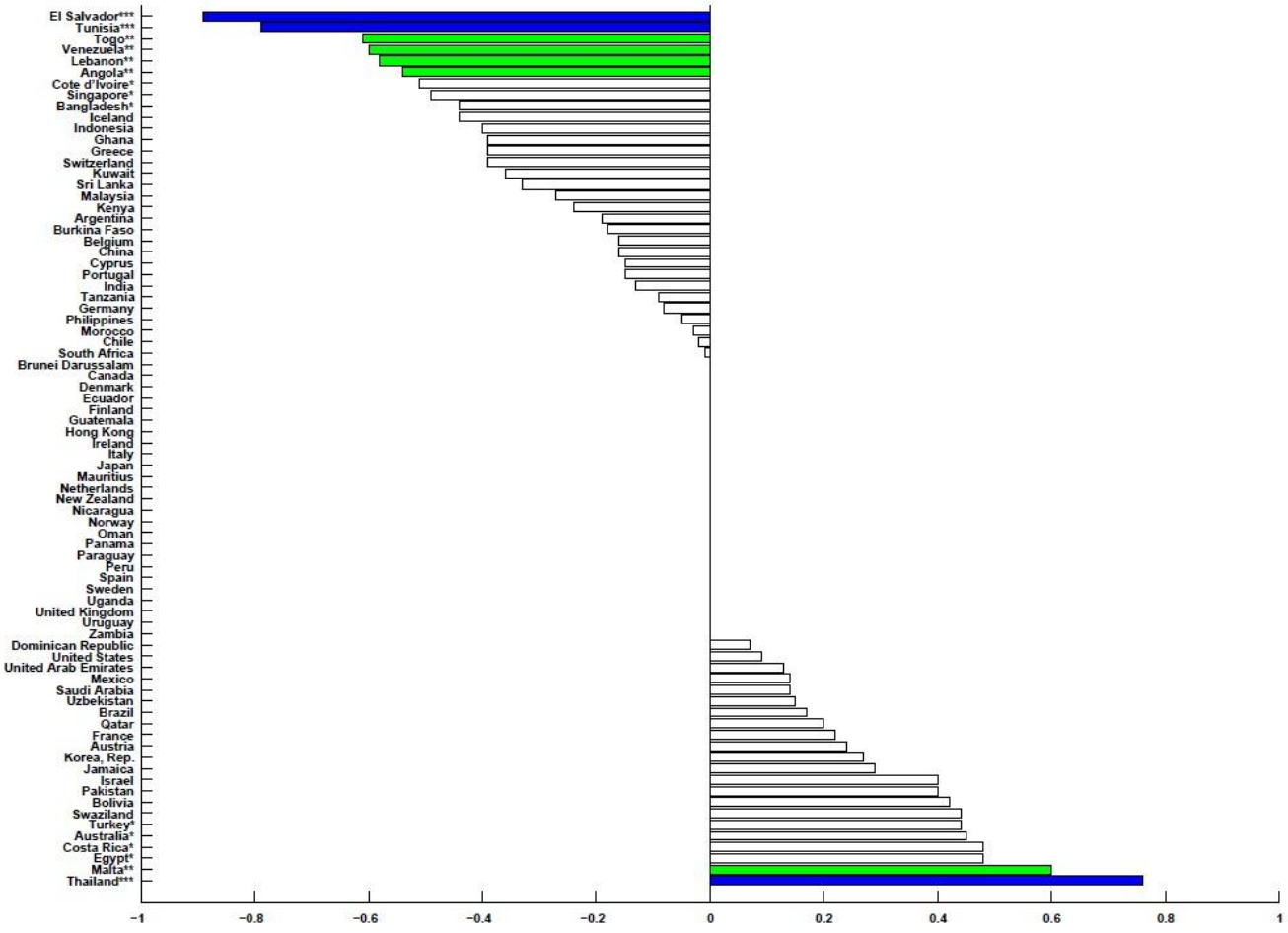


Figure 2.A.2 Country-By-Country Correlations Between Controls on Capital Inflows and Outflows in Equity

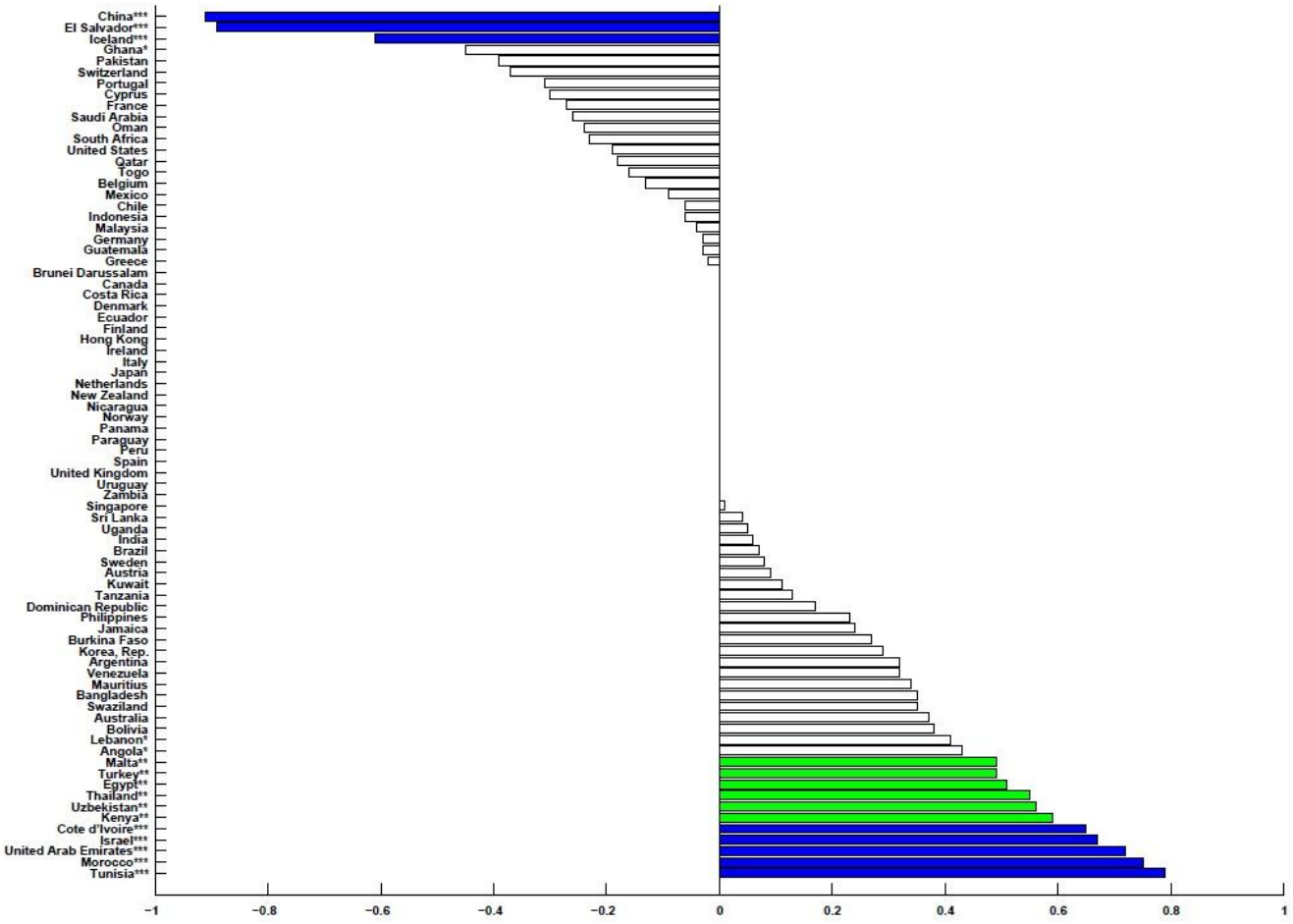


Figure 5.A.1 Capital-Inflow Controls in Bonds During Booms By Income Level, Exchange-Rate Regime, and Level of External Indebtedness

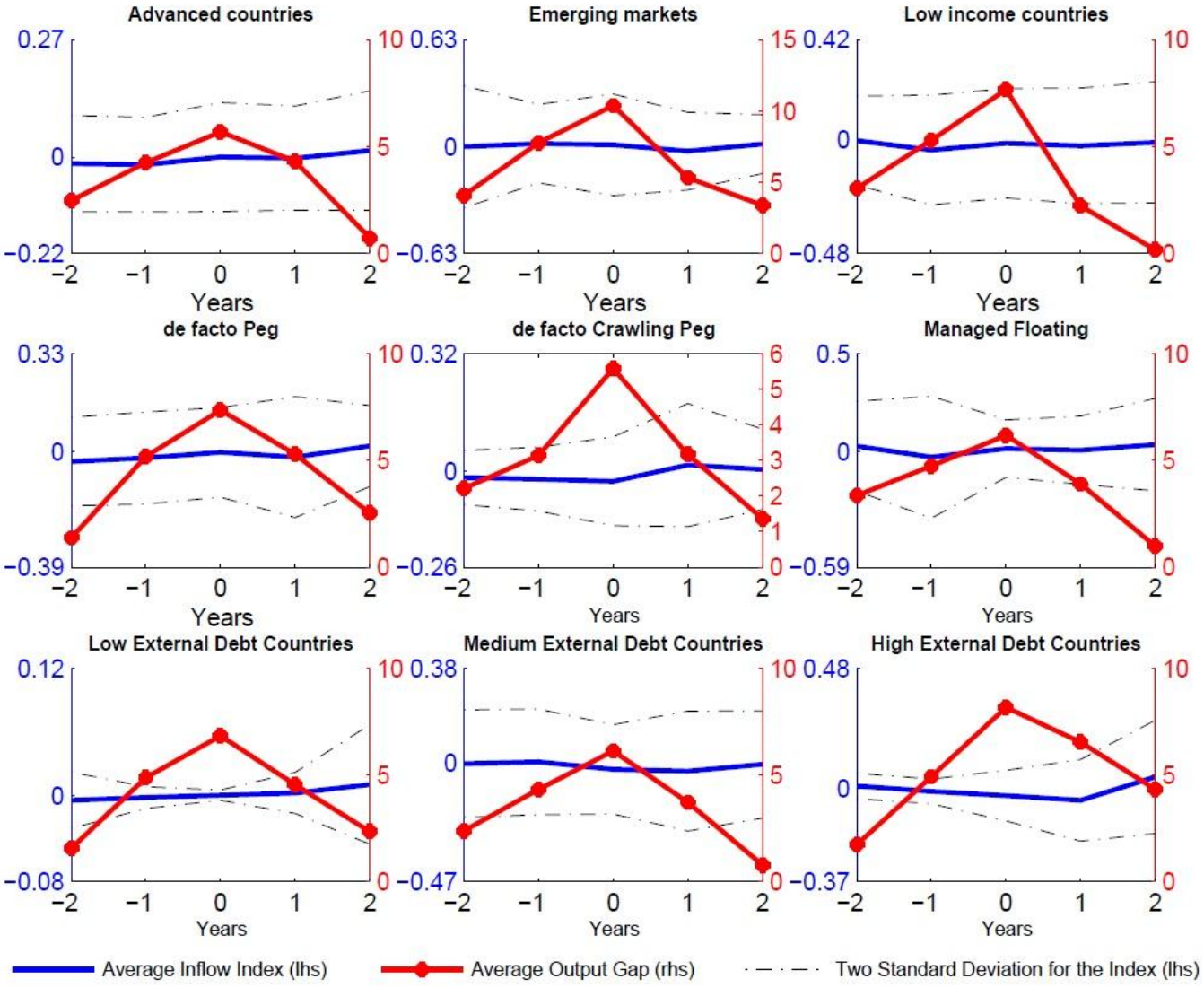


Figure 5.A.2 Capital-Inflow Controls in Bonds During Busts By Income Level, Exchange-Rate Regime, and Level of External Indebtedness

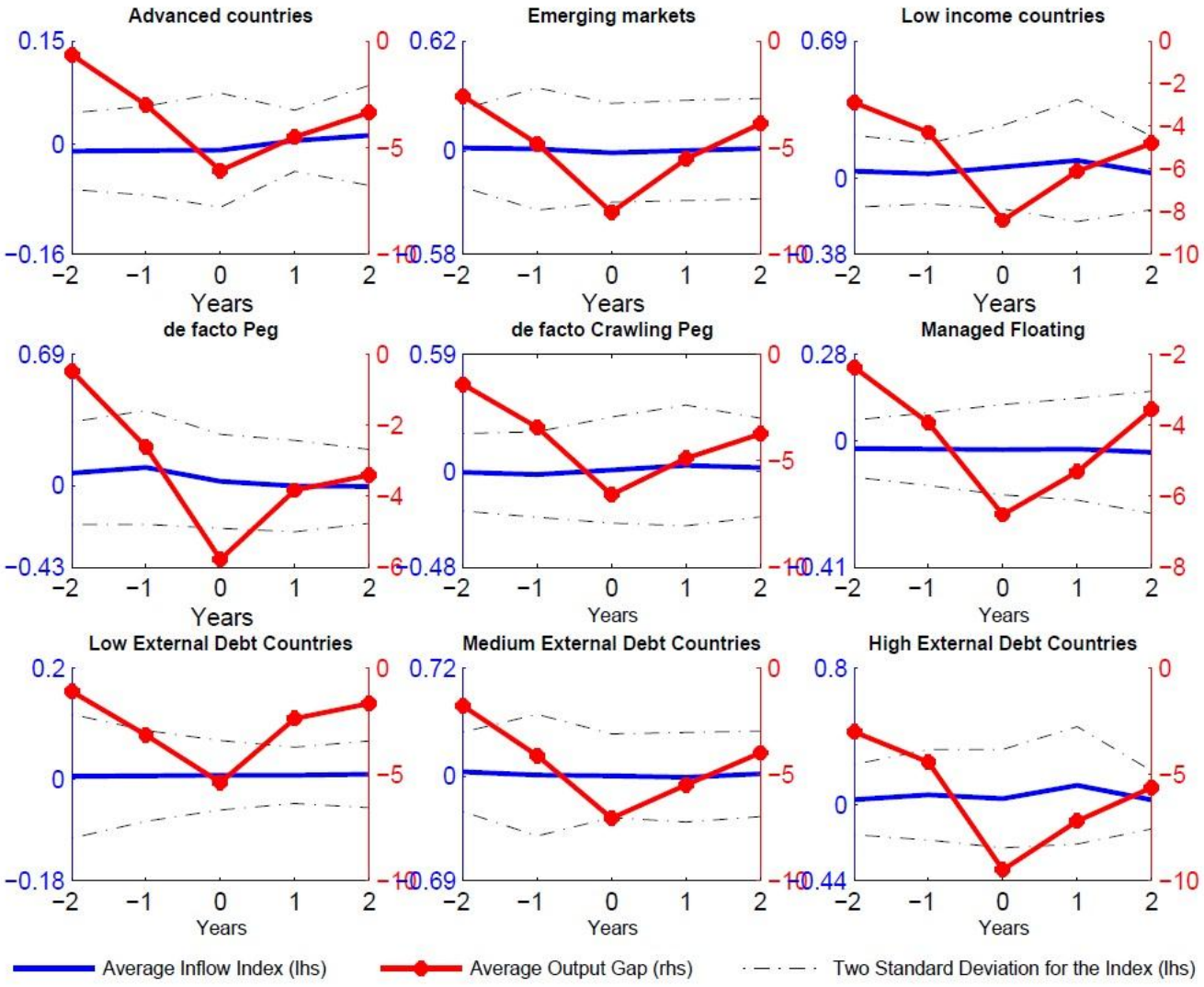


Figure 5.A.3 Capital-Outflow Controls in Bonds During Booms By Income Level, Exchange-Rate Regime, and Level of External Indebtedness

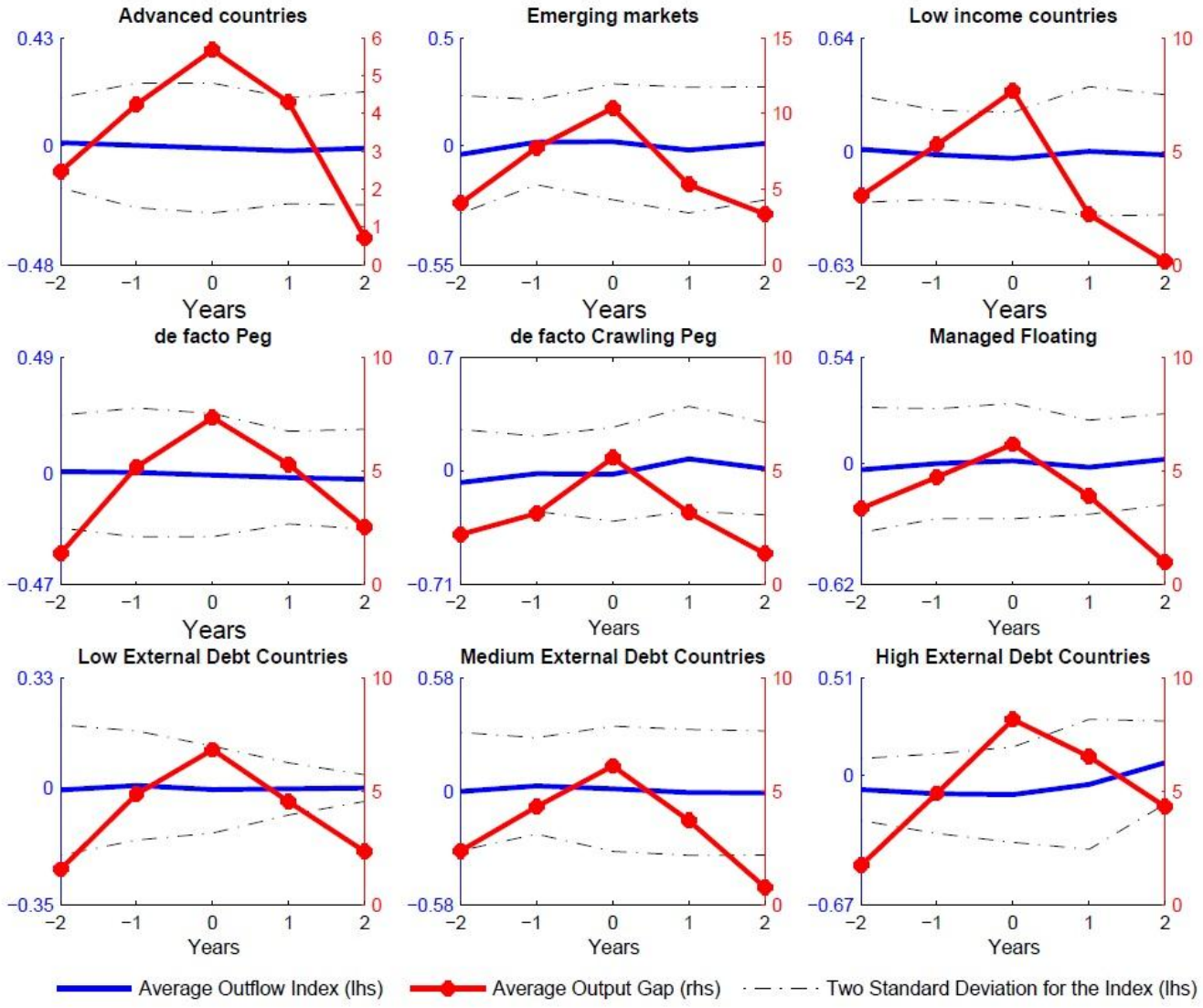


Figure 5.A.4 Capital-Outflow Controls in Bonds During Busts By Income Level, Exchange-Rate Regime, and Level of External Indebtedness

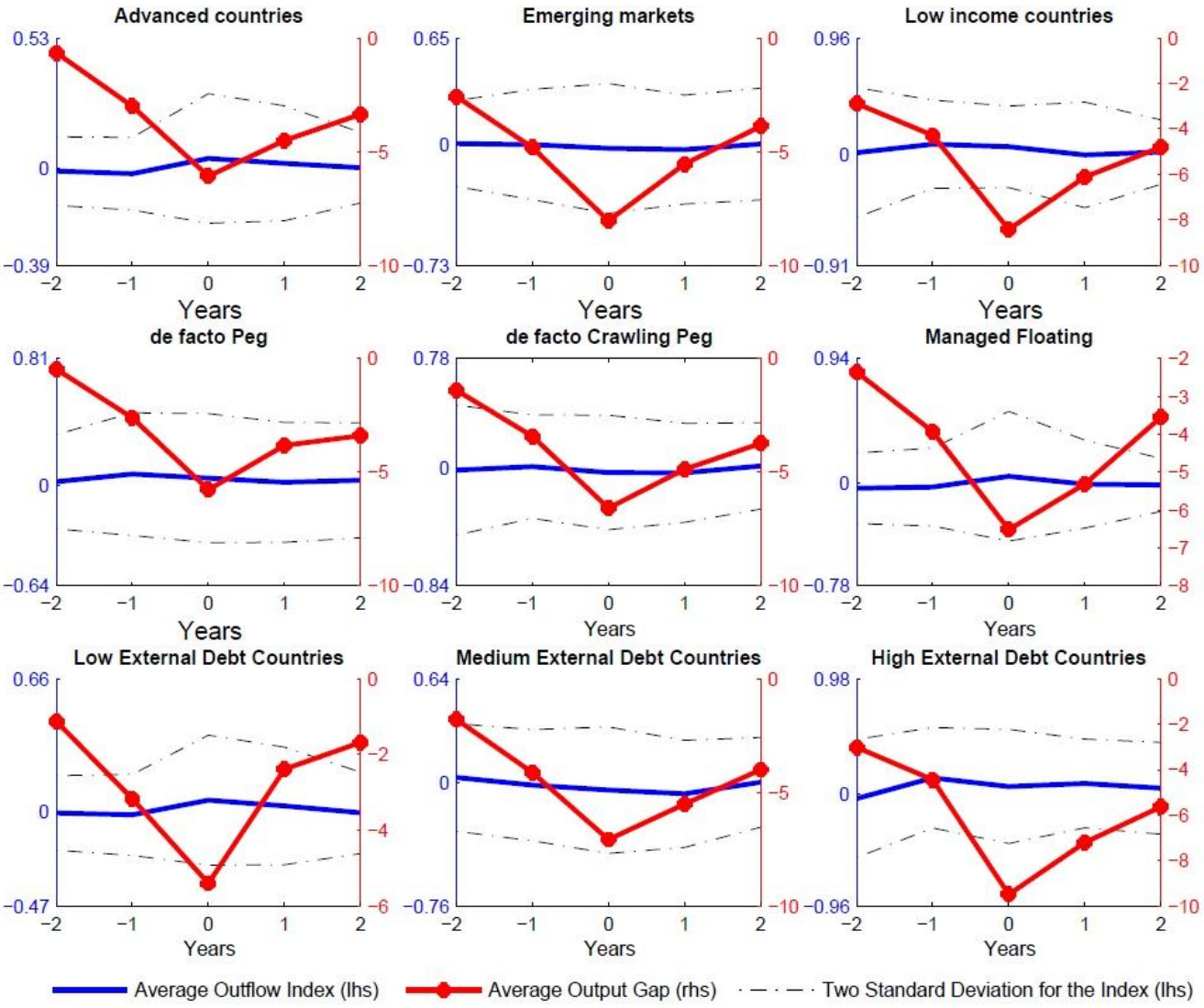


Figure 5.A.5 Capital-Inflow Controls in Equity During Booms By Income Level, Exchange-Rate Regime, and Level of External Indebtedness

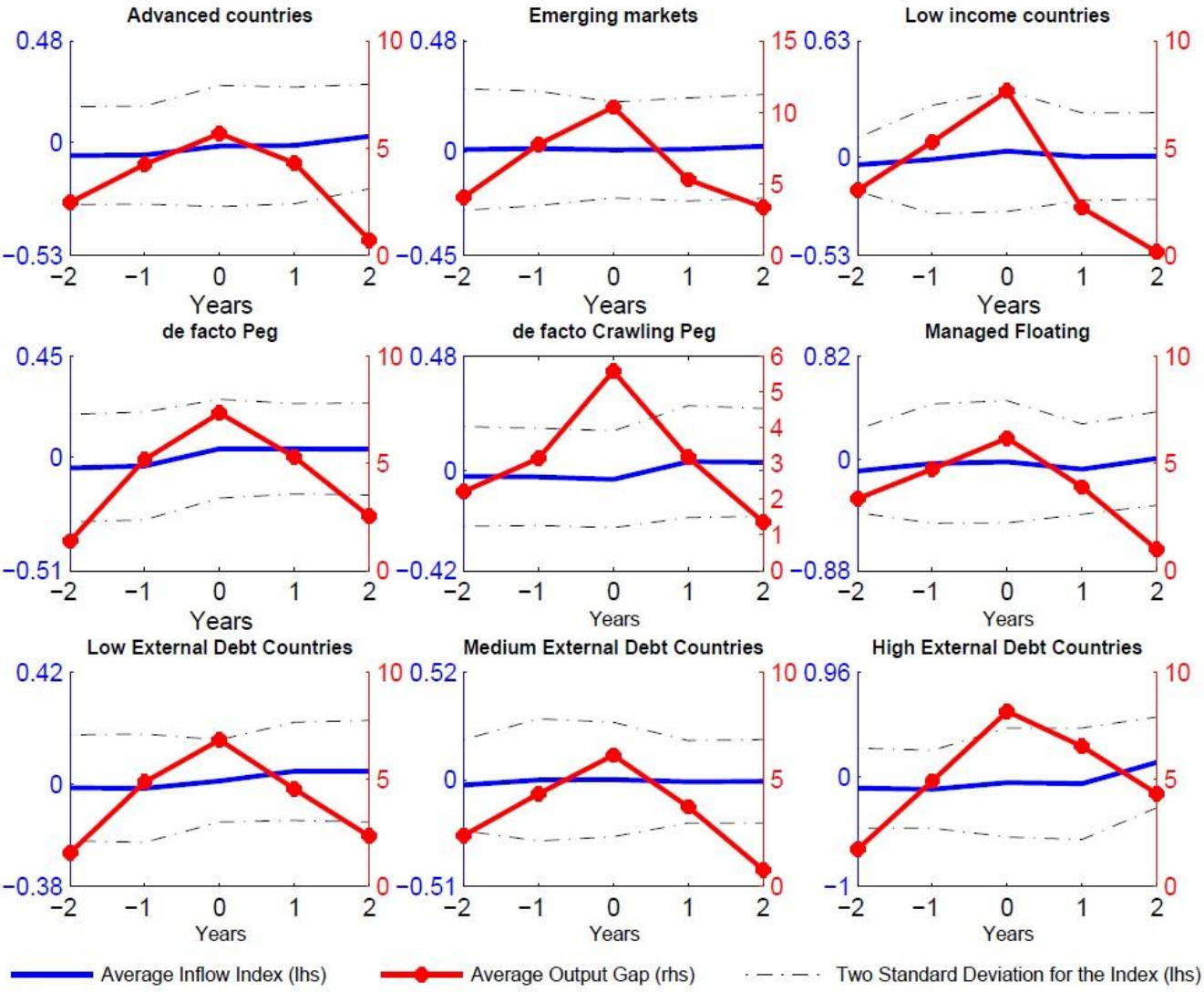


Figure 5.A.6 Capital-Inflow Controls in Equity During Busts By Income Level, Exchange-Rate Regime, and Level of External Indebtedness

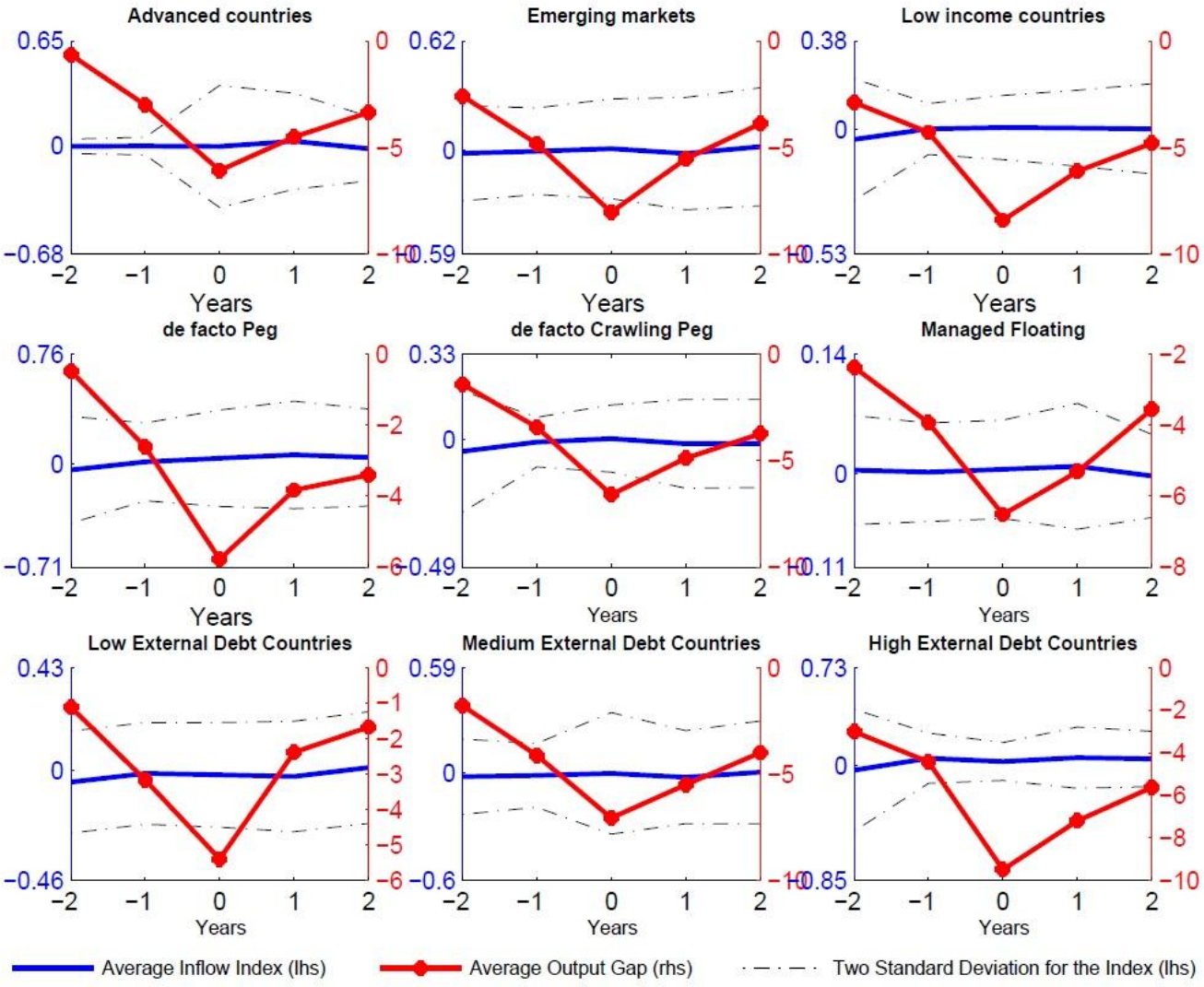


Figure 5.A.7 Capital-Outflow Controls in Equity During Booms By Income Level, Exchange-Rate Regime, and Level of External Indebtedness

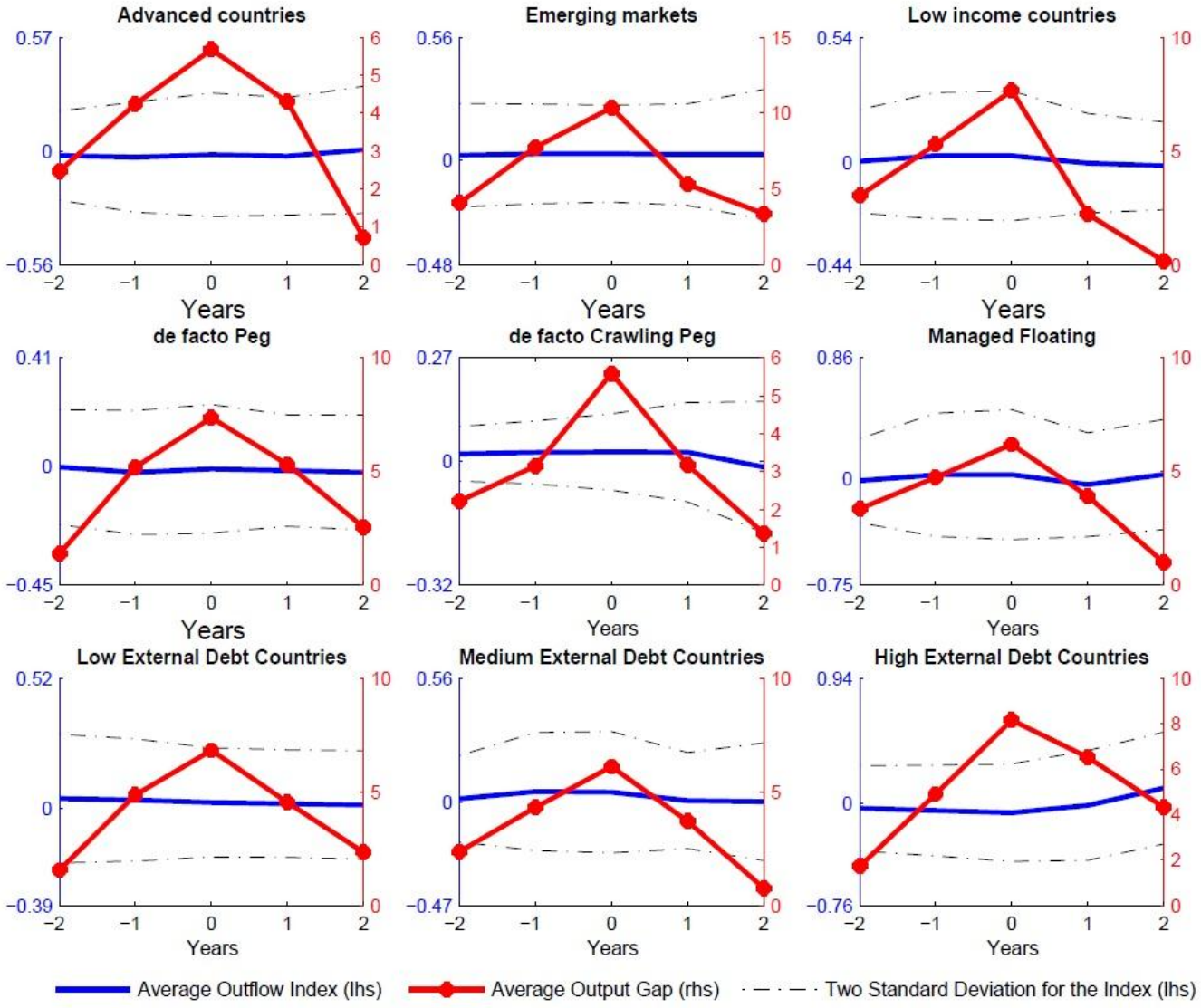


Figure 5.A.8 Capital-Outflow Controls in Equity During Busts By Income Level, Exchange-Rate Regime, and Level of External Indebtedness

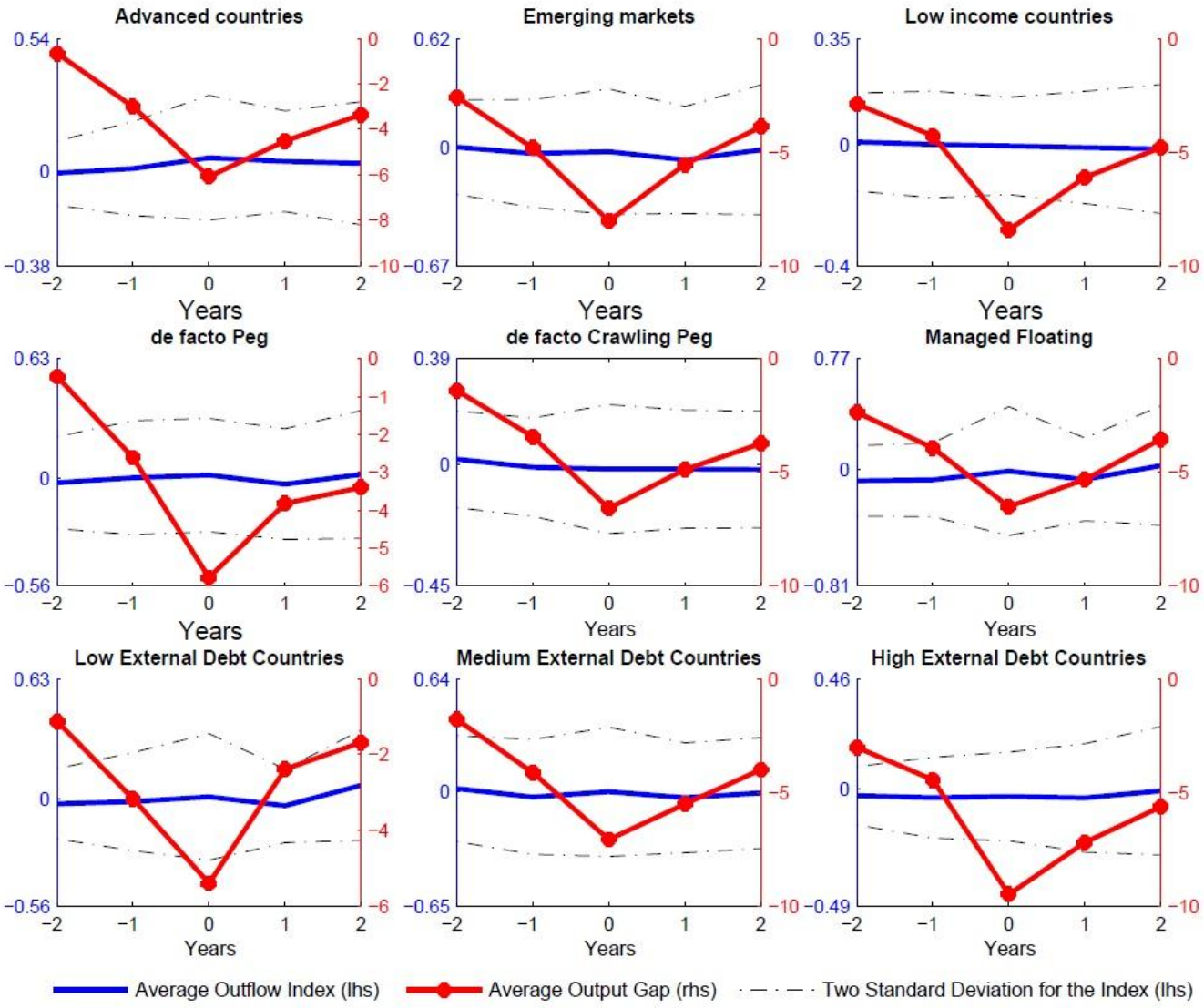


Figure 6.A.1 Capital-Inflow Controls in Bonds During Booms and Busts In The Real Exchange Rate and the Current Account

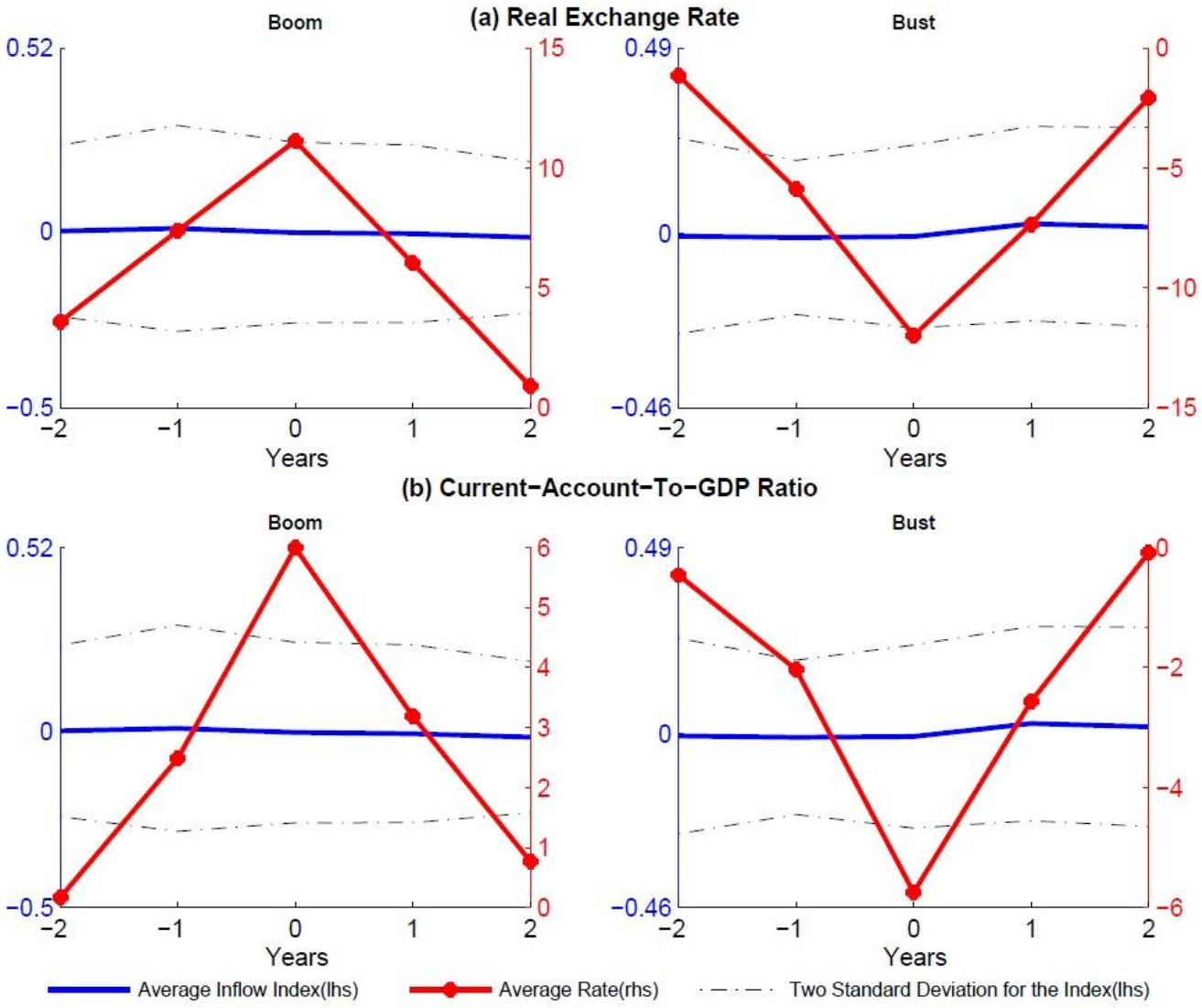


Figure 6.A.2 Capital-Outflow Controls in Bonds During Booms and Busts In The Real Exchange Rate and the Current Account

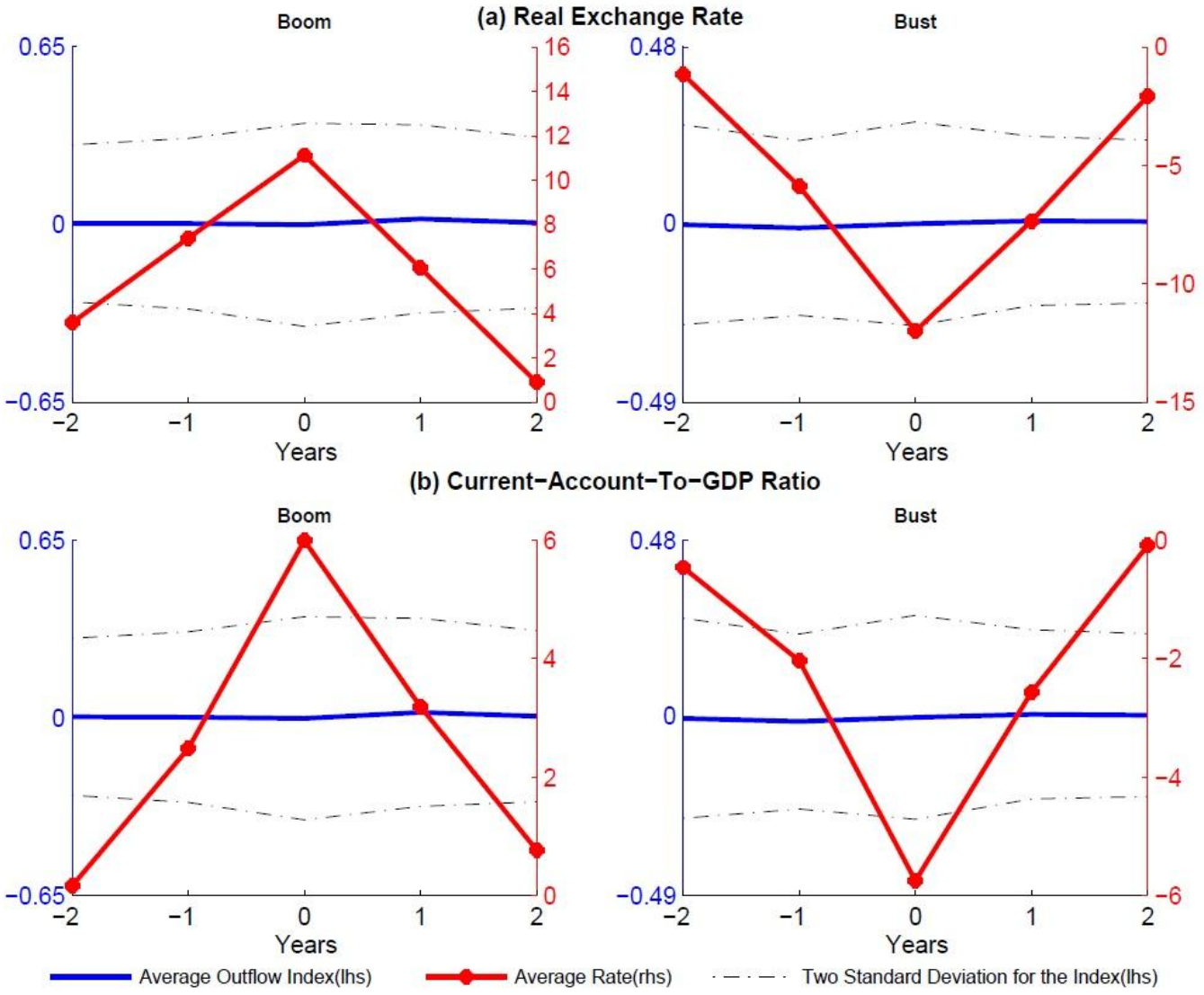


Figure 6.A.3 Capital-Inflow Controls in Equity During Booms and Busts In The Real Exchange Rate and the Current Account

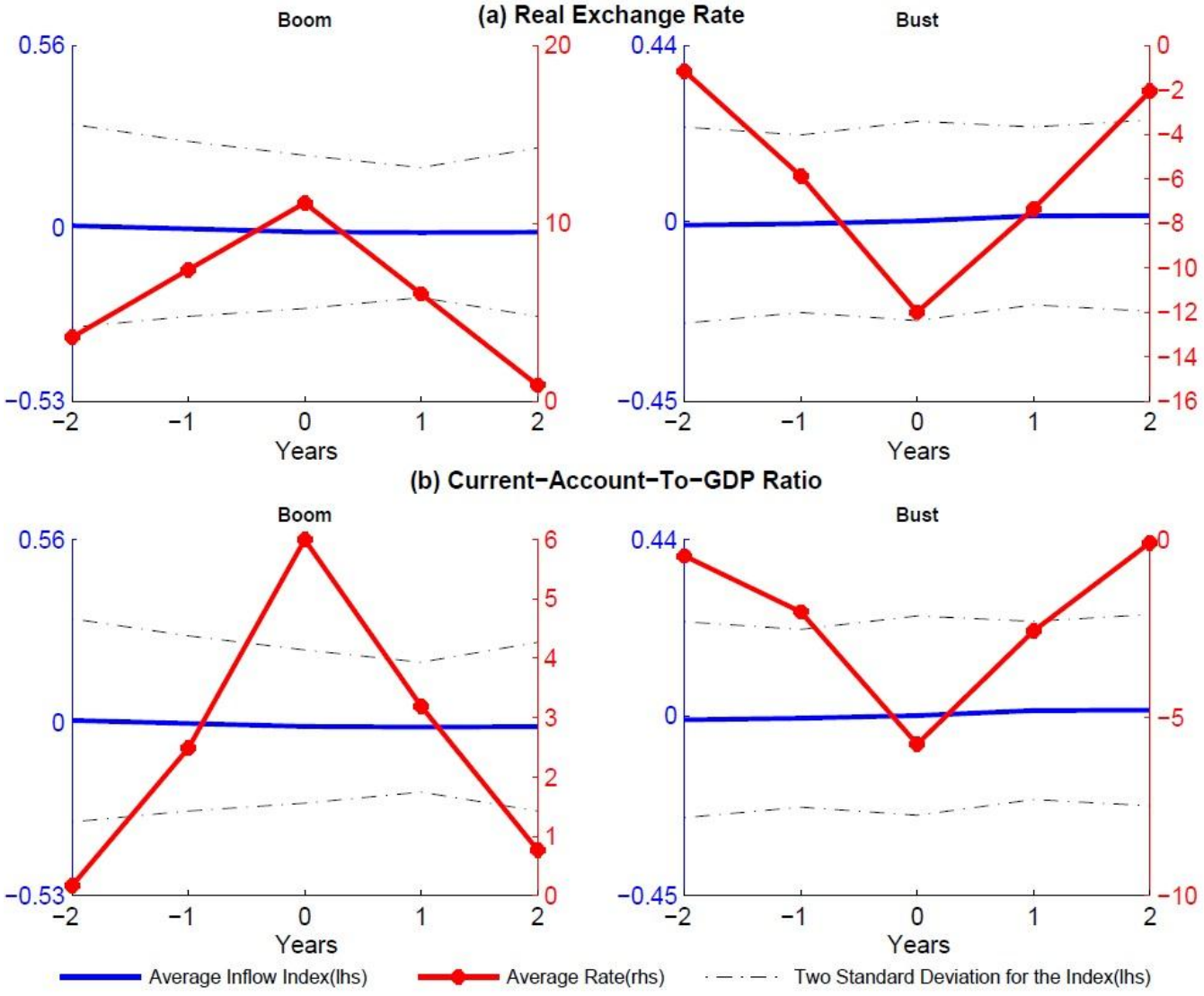


Figure 6.A.4 Capital-Outflow Controls in Equity During Booms and Busts In The Real Exchange Rate and the Current Account

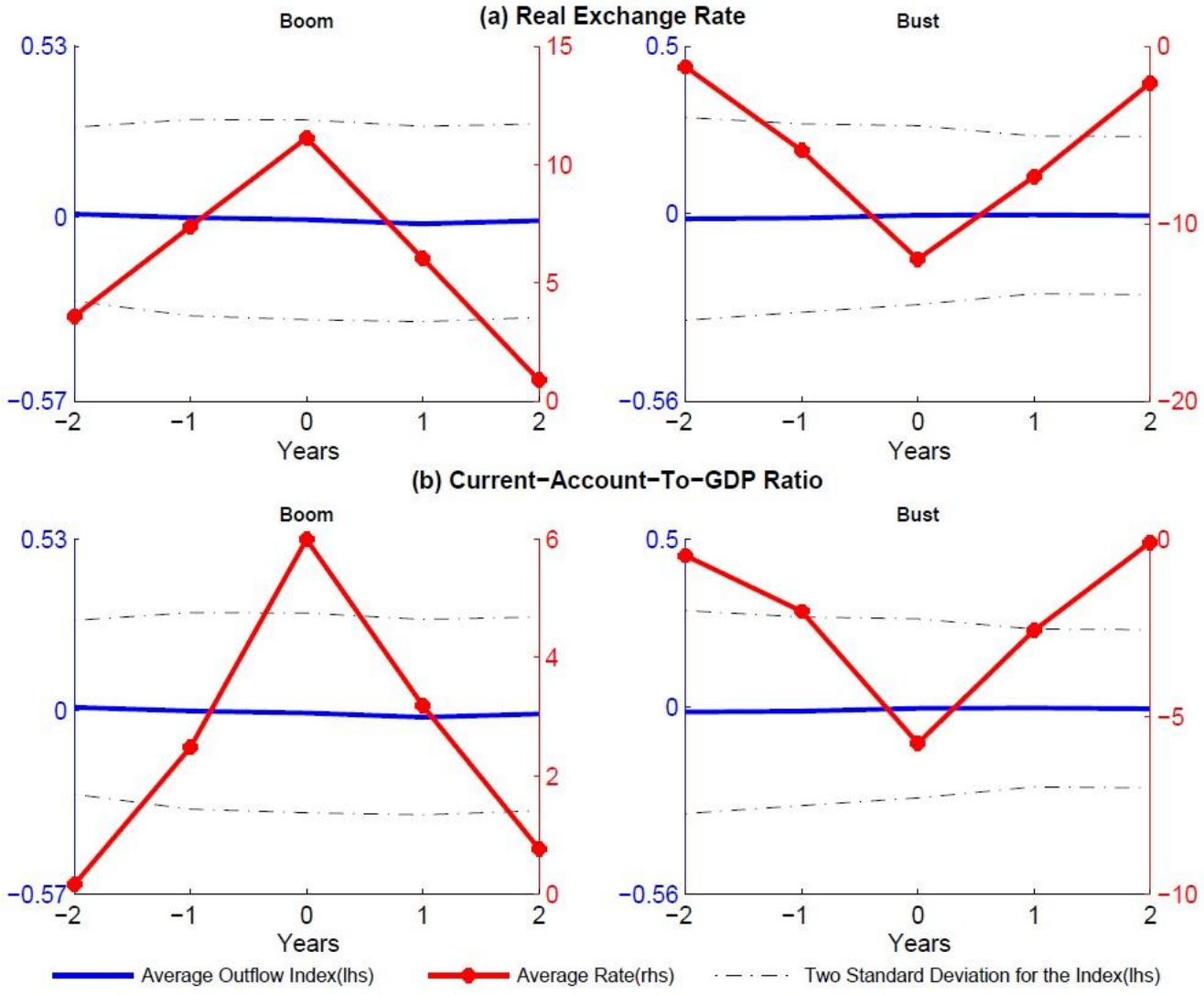


Figure 7.A.1 Capital Controls on Bonds Around the Great Contraction By Impact Level

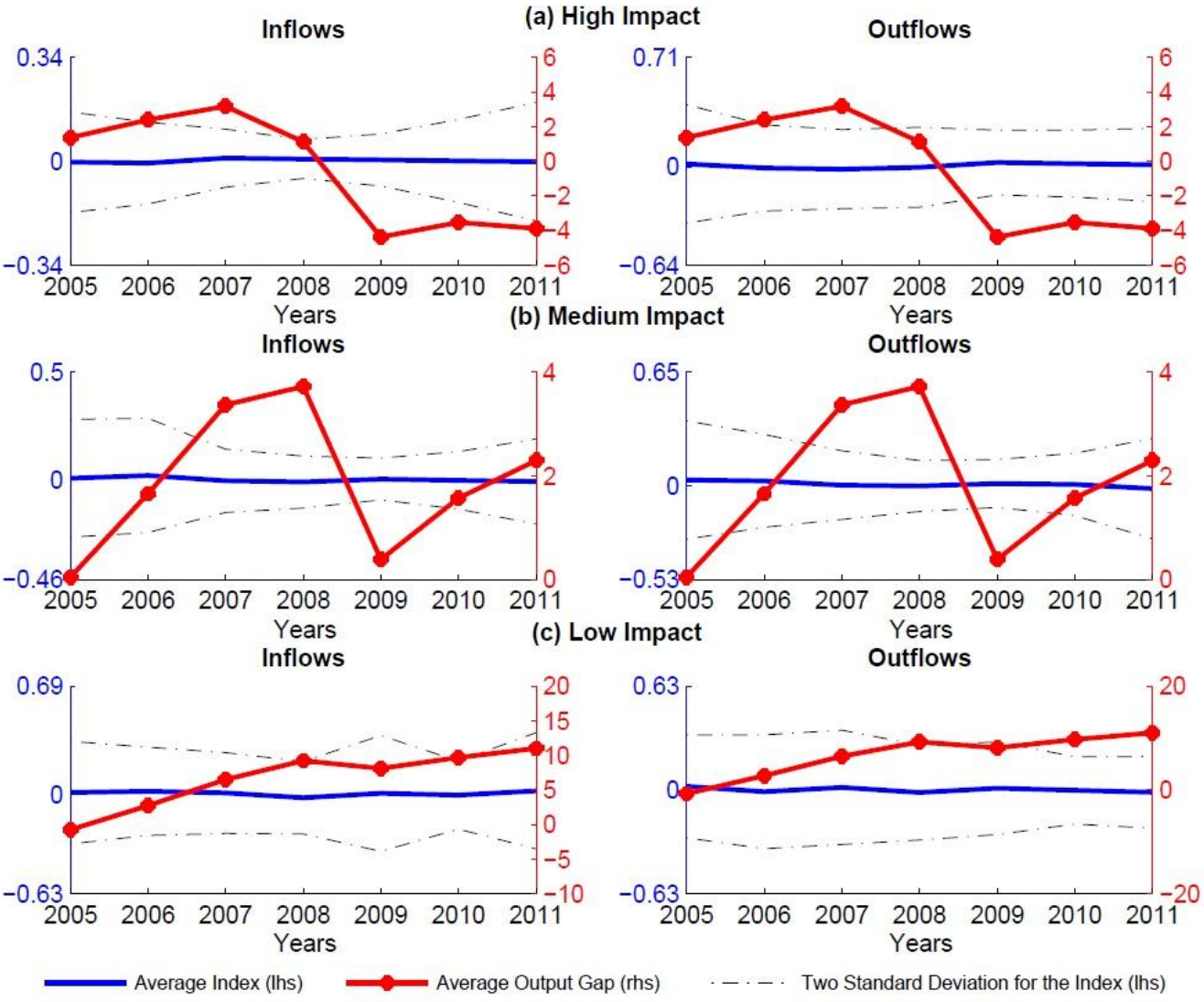


Figure 7.A.2 Capital Controls on Equity Around the Great Contraction By Impact Level

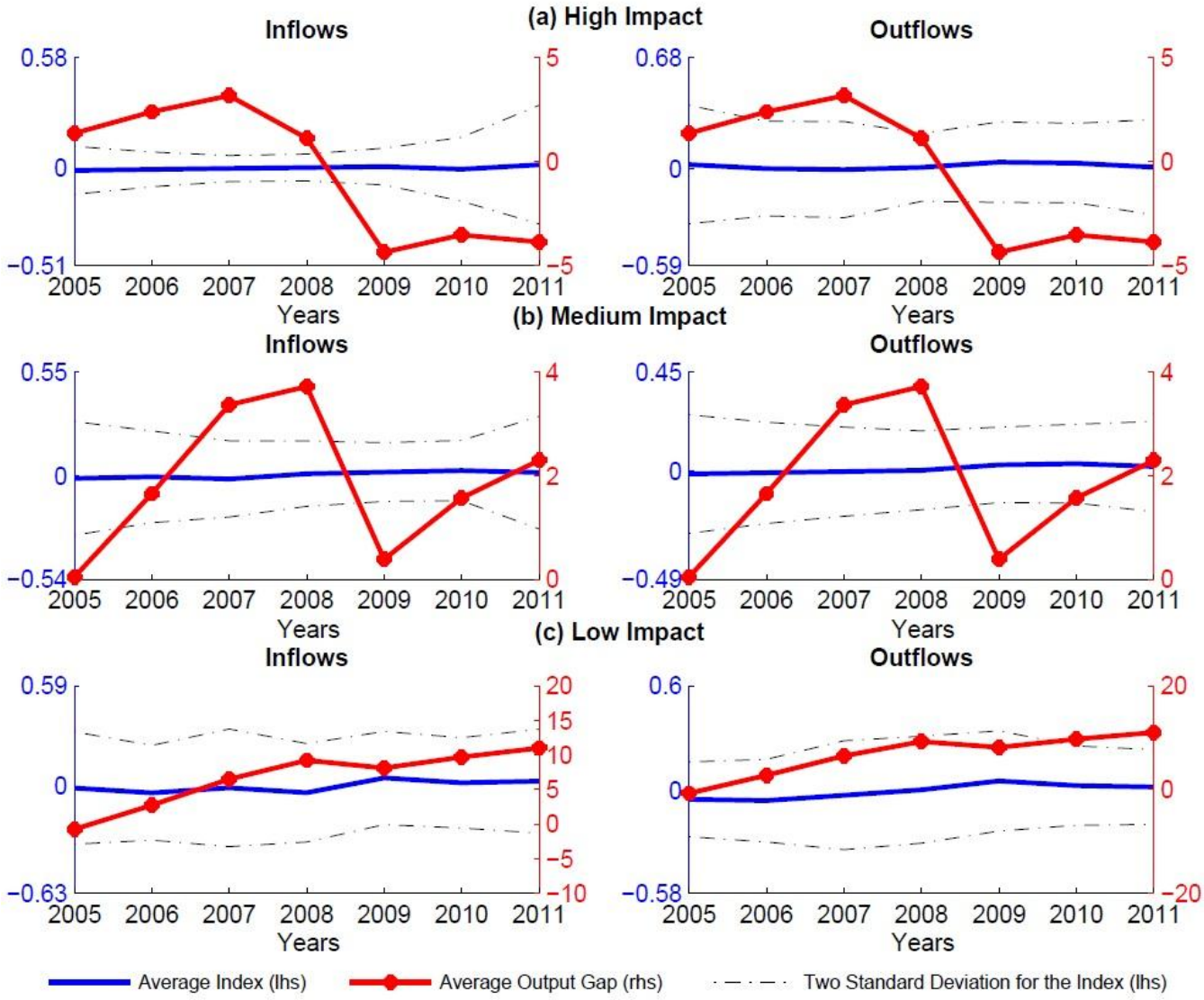


Figure 9.A.1 Countries With Active Capital-Control Policy on Bonds

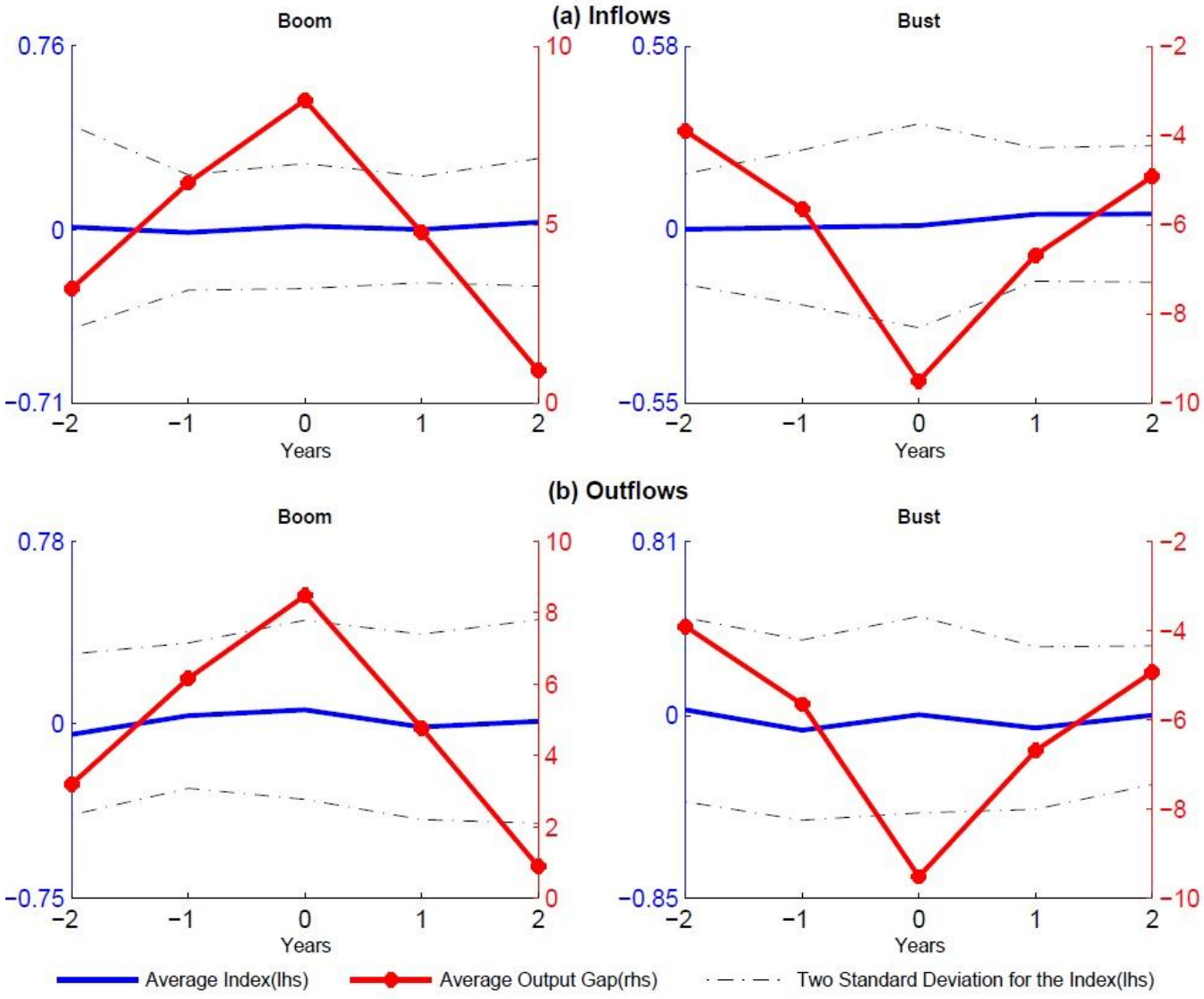


Figure 9.A.2 Countries With Active Capital-Control Policy on Equity

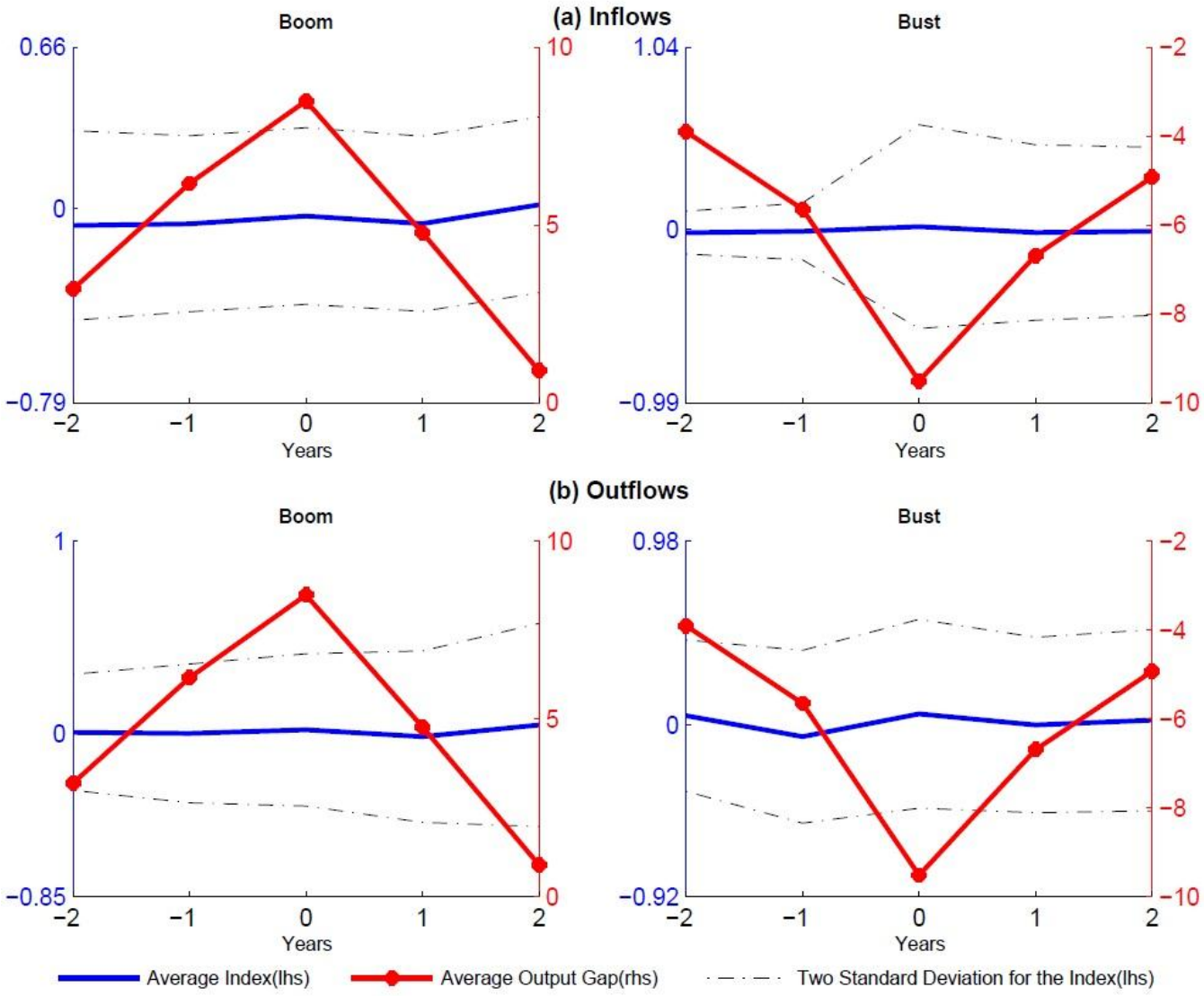


Table A.4.a Inflows Restrictions in Brazil by Asset Category: Equity

Year/ Asset category	Equity	
	Purchase Locally by Non-Residents	**Sold or issue abroad by residents**
2008	*Registration and notification requirements only	*The issue of depository receipts must be authorized and registered with the CVM
2009	*Effective October 19, 2009, a 2% tax (IOF) applies to foreign equity inflows, except FDI	*Effective November 19, 2009, a 1.5% tax (IOF) applies to certain trades involving ADRs issued by Brazilian companies. The tax is charged when foreign investors convert ADRs for Brazilian companies into receipts for shares issued locally
	*The foreign exchange transaction tax on other transactions is 0.38%, with some exceptions	
	*Registration and notification requirements apply	
	*Limitations apply to participation in certain economic activities.	
	*ADRs may be purchased abroad freely	*The issue of depository receipts must be authorized and registered with the CVM
2010	*The tax rate on (1) inflows for purchase of shares by foreign investors in a public offering; and, (2) inflows, including through simultaneous foreign exchange operations by foreign investors, was increased to 4% effective October 4, 2010 and to 6% on October 19, 2010	*Effective November 19, 2009, a 1.5% tax (IOF) applies to certain trades involving ADRs issued by Brazilian companies. The tax is charged when foreign investors convert ADRs for Brazilian companies into receipts for shares issued locally

	*The general IOF tax rate on other transactions is 0.38%, with some exceptions	
	*Nonresident investors must register with the CVM	*The issue of depository receipts must be authorized and registered with the CVM
	*Limitations apply to participation in certain economic activities	
2011	*The general IOF rate on other transactions is 0.38%, with some exceptions	*A 1.5% IOF rate applies to certain trades involving ADRs issued by Brazilian companies. The tax is charged when foreign investors convert ADRs for Brazilian companies into shares issued locally
	*Nonresident investors must register with the CVM	
	*Limitations apply to participation in certain economic activities	
	*Effective January 1, 2011, the IOF rate was increased from zero to 2% on inflows, including through simultaneous foreign exchange operations related to inflows of FDI and destined for investment in shares traded on the stock exchange. This tax was decreased to zero, effective December 1, 2011	
	*Effective January 1, 2011, the IOF rate was increased from zero to 2% on inflows derived of cancellation of DRs in order to convert them into shares traded on the stock exchange. This was decreased to zero, effective December 1, 2011	*The issuance of DRs must be authorized by the CVM

	*The IOF tax rate on (1) inflows for purchase of shares by foreign investors in a public offering; and, (2) inflows, including through simultaneous foreign exchange operations by foreign investors; (3) the cancellation of DRs for investment in shares negotiated on a stock exchange; (4) changes in the regime of a foreign investor, from direct investment to investment in shares negotiated on a stock exchange; and (5) simultaneous foreign exchange operations related to inflows of FDI and destined for investment in shares traded on a stock exchanges; was decreased to zero effective December 1, 2011	*Effective January 1, 2011, the tax rate was increased from zero to 2% on inflows, including through simultaneous foreign exchange operations contracted since January 1, 2011, derived from cancellation of DRs in order to convert them into shares traded on the stock exchange
		*Effective December 1, 2011, foreign exchange inflow transactions including through simultaneous foreign exchange operations, related to the cancellation of DRs for investment in shares negotiated on a stock exchange are subject to a zero IOF rate

Table A.4.b Inflows Restrictions in Brazil by Asset Category: Bonds

Year/Asset category	Bonds	
	Purchase Locally by Non-Residents	**Sold or issue abroad by residents**
2008	*No	*No
2009	*Effective October 19, 2009, a 2% tax (IOF) applies to nonresidents' investments in equity and fixed income securities, with no discrimination between long- and short-term flows	*Effective October 19, 2009, a 2% tax (IOF) applies to nonresidents' funds inflows
	*The foreign exchange transaction tax on other transactions is 0.38%, with some exceptions	
2010	*Effective October 19, 2010, a 6% tax (IOF) applies to nonresidents' investments in fixed-income securities, with no discrimination between long- and short-term flows	*Public companies are required to notify the CVM
	*The tax was previously raised from 2% to 4%, effective October 4, 2010	
	*The foreign exchange transaction tax on other transactions is 0.38%, with some exceptions	
2011	*Nonresident investors must register with the CVM.	*Public companies are required to notify the CVM
	*A 6% IOF rate applies to nonresidents' investments in fixed income	

	securities, with no discrimination between long- and short-term flows	
	*The foreign exchange transaction tax on other transactions is 0.38%, with some exceptions	
	*Effective December 1, 2011, the following foreign exchange transactions are subject to a zero IOF rate for inflows, including through simultaneous foreign exchange operations, related to (1) the acquisition of bonds and securities related to investment projects in the area of infrastructure or research and developmen; (2) purchases of variable income securities traded on a stock exchange or commodities and futures exchange; and (3) inflows, including through simultaneous foreign exchange operations, for purchase of fixed debentures with maturities longer than four years	

Table A.4.c Inflows Restrictions in Brazil by Asset Category: Money Market & Collective Investment

Year/Asset category	Money market instruments		Collective investments	
	Purchase Locally by Non-Residents	**Sold or issue abroad by residents**	**Purchase Locally by Non-Residents**	**Sold or issue abroad by residents**
2008	*No	*No	*Registration and reporting requirements apply	*Not regulated
2009	*Effective October 19, 2009, a 2% tax (IOF) applies to nonresidents' investments in equity and fixed income securities, with no discrimination between long- and short-term flows	*Effective October 19, 2009, a 2% tax applies to nonresidents' funds inflows	*Effective October 19, 2009, a 2% tax (IOF) applies to nonresidents' investments in equity and fixed income securities, with no discrimination between long- and short-term flows *The foreign exchange transaction tax on other transactions is 0.38%, with some exceptions	*The 2% tax applies only to nonresidents' funds inflows

	*The foreign exchange transaction tax on other transactions is 0.38%, with some exceptions		*Nonresident investors must register with the CVM, and the transactions must be reported to the CVM and registered with the RDE	
2010	*Effective October 19, 2010, a 6% tax (IOF) rate applies to nonresidents' investments in fixed-income securities, with no discrimination between long- and short-term flows *The tax was previously raised from 2% to 4%, effective October 4, 2010 *The foreign exchange transaction tax on other transactions is 0.38%, with some exceptions	*No	*The IOF tax rate on inflows, including through simultaneous foreign exchange operations by foreign investors to purchase shares of participation investment funds, emerging companies investment funds, or investment funds in shares of equity funds regulated by the CVM was increased to 4% effective October 4, 2010 and to 6% on October 19, 2010.	*No

			*Nonresident investors must register with the CVM	
2011	*Effective October 19, 2010, a 6% tax (IOF) rate applies to nonresidents' investments in fixed-income securities, with no discrimination between long- and short-term flows *The tax was previously raised from 2% to 4%, effective October 4, 2010	*No	*Effective January 1, 2011, the IOF rate was decreased from 6% to 2% and as of December 1, 2011 to zero on inflows, including through simultaneous foreign exchange operations by foreign investors to purchase shares of participation investment funds, emerging company investment funds, or investment funds in shares of equity funds regulated by the CVM	*No
	*The foreign exchange transaction tax on other transactions is 0.38%, with some exceptions			

Table A.4.d Inflows Restrictions in Brazil by Asset Category: Financial Credit

Year/Asset category	Financial credits
2008	*Effective August 15, 2008, the requirement that the CBB must be informed about prepayments for financial loans was eliminated
2009	*As of January 3, 2008, a 5.38% tax (IOF) is applied to inflows related to external loans with a maximum maturity of 90 days
	*The requirement that the CBB be informed about prepayments for financial loans has been eliminated *Foreign loans and financing raised with maturities longer than 90 days is exempt from the tax on foreign exchange transactions
2010	*A 5.38% tax (IOF) is applied to inflows related to external loans with a maximum maturity of 90 days
2011	*Effective March 28, 2011, the IOF rate for inflows related to external loans with a maximum maturity of 360 days was increased from zero to 6% *The maximum maturity of external loans subject to 6% IOF rate was increased from 360 days to 720 days, effective April 6, 2011