

Fiscal Procyclicality and External Sustainability¹

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**CONFERENCE ON CURRENT ACCOUNT
SUSTAINABILITY: RECENT METHODS AND
POLICY ISSUES**

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¹ The views expressed herein are those of the author and should not be attributed to the IMF, IDB, World Bank their Executive Boards, or their management.

Motivation

Twin Deficits Hypothesis (First moment)

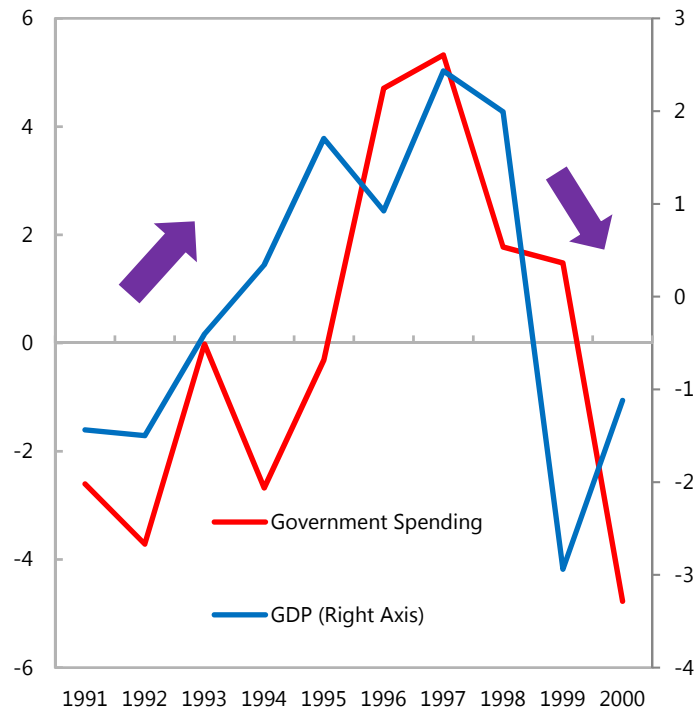
- Fiscal expansion leads to higher fiscal and external deficits (US in the 1980s).

Twin Deficits over the Business Cycle (Second moment)

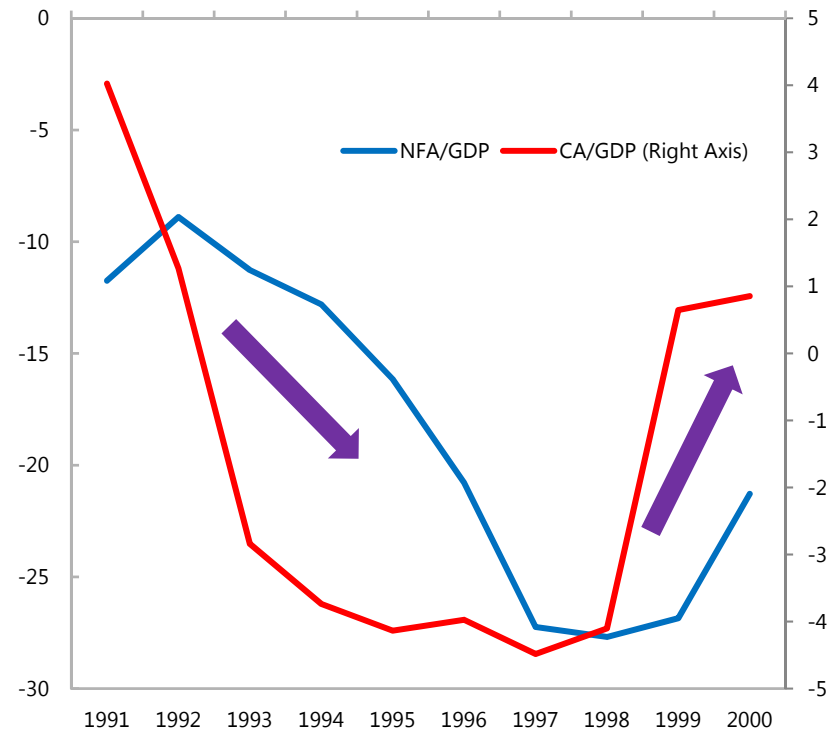
- What is the effect of fiscal procyclicality on the volatility of the external balance? What are the implications for external sustainability?
- **Colombia:** Graduation from fiscal procyclicality and its effects on the external balance.

Fiscal Procyclicality and External Position in Colombia (I)

Detrended Real Government Spending and GDP in the 1990s
(100=1991)

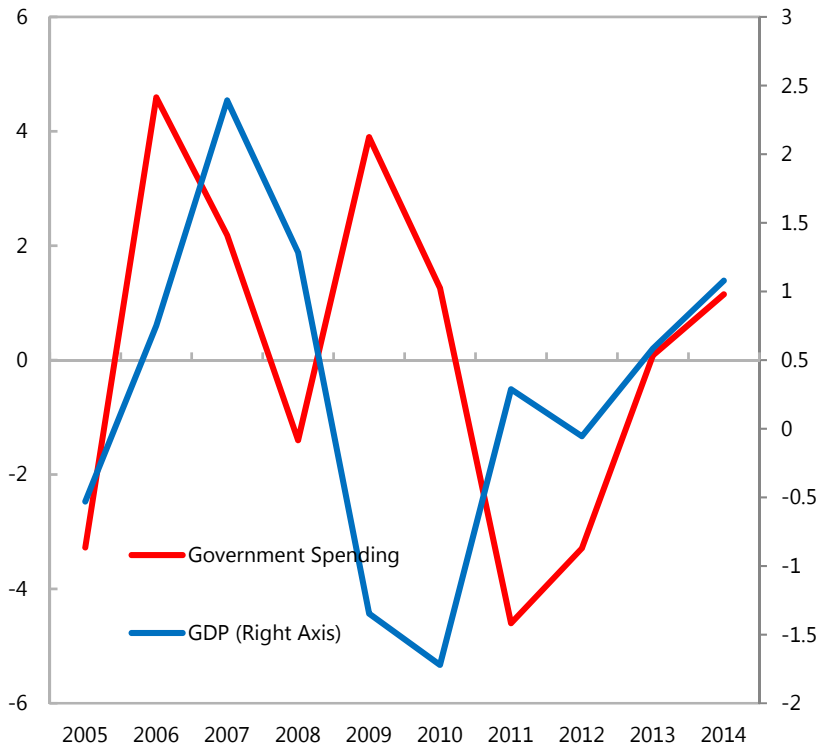


Current Account and Net Foreign Assets in the 1990s
(Percent of GDP)

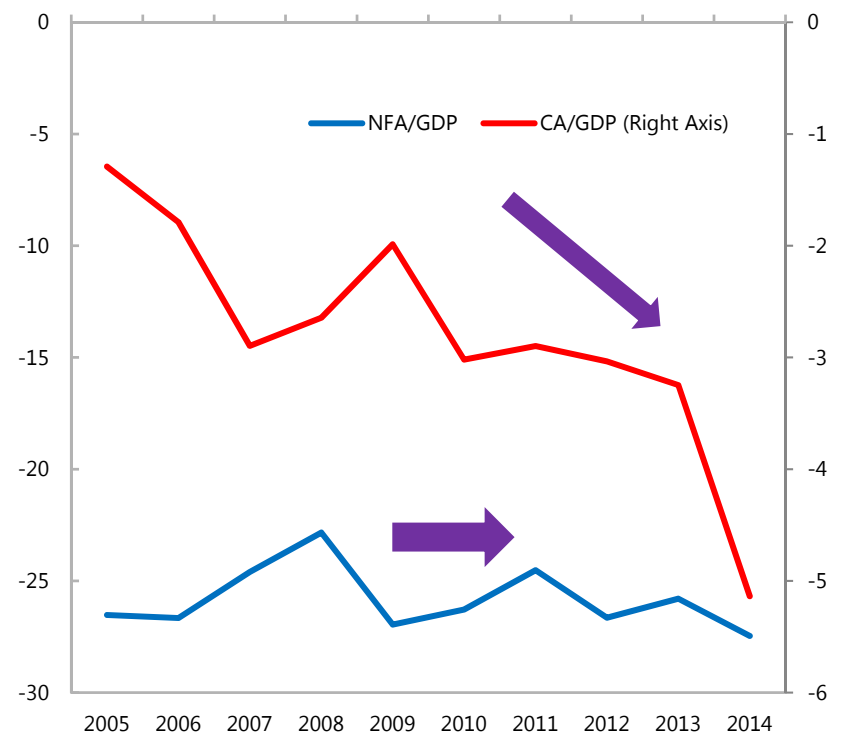


Fiscal Procyclicality and External Position in Colombia (II)

Detrended Real Government Spending and GDP in the 2000s
(Percentage Points)



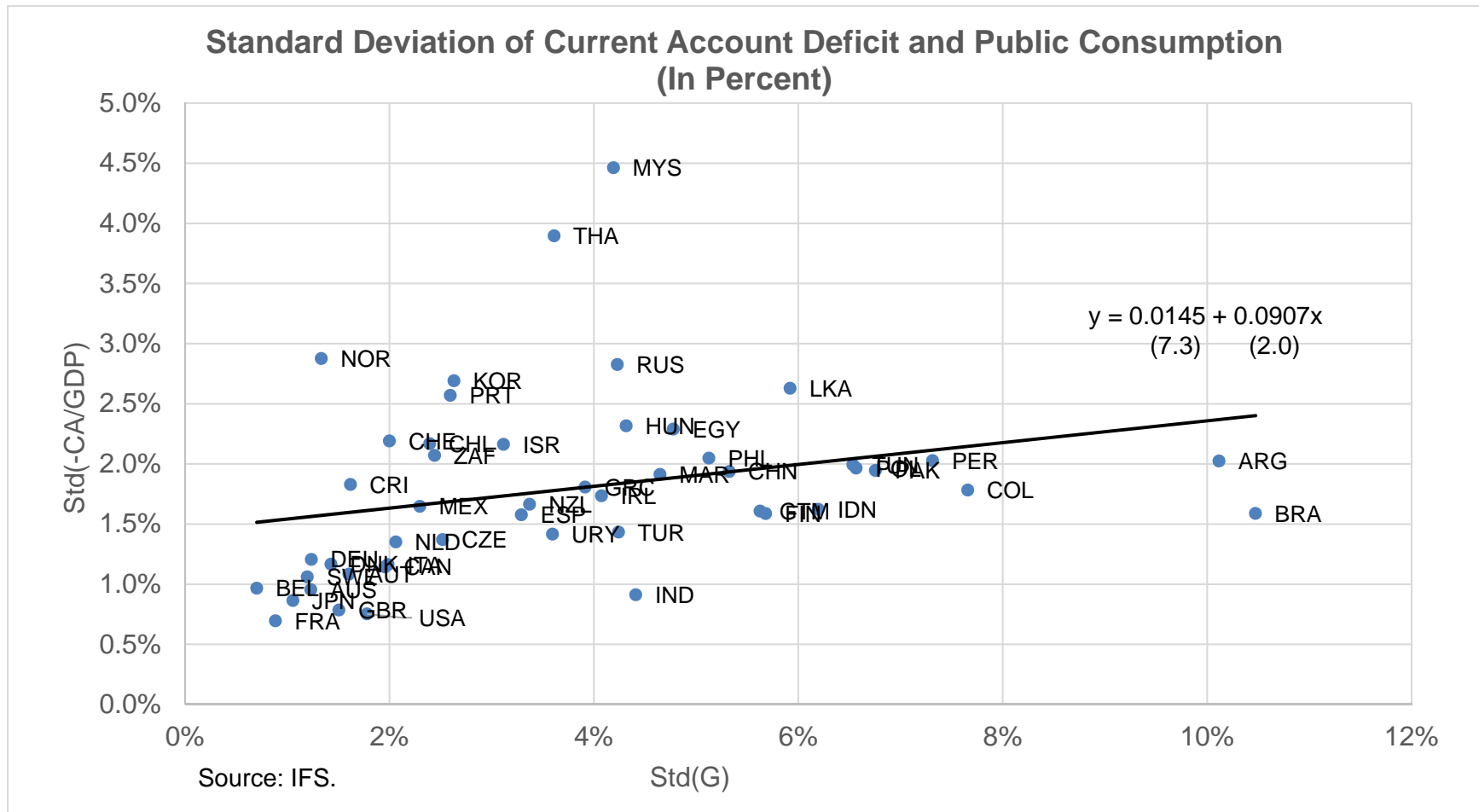
Current Account and Net Foreign Assets in the 2000s
(Percent of GDP)



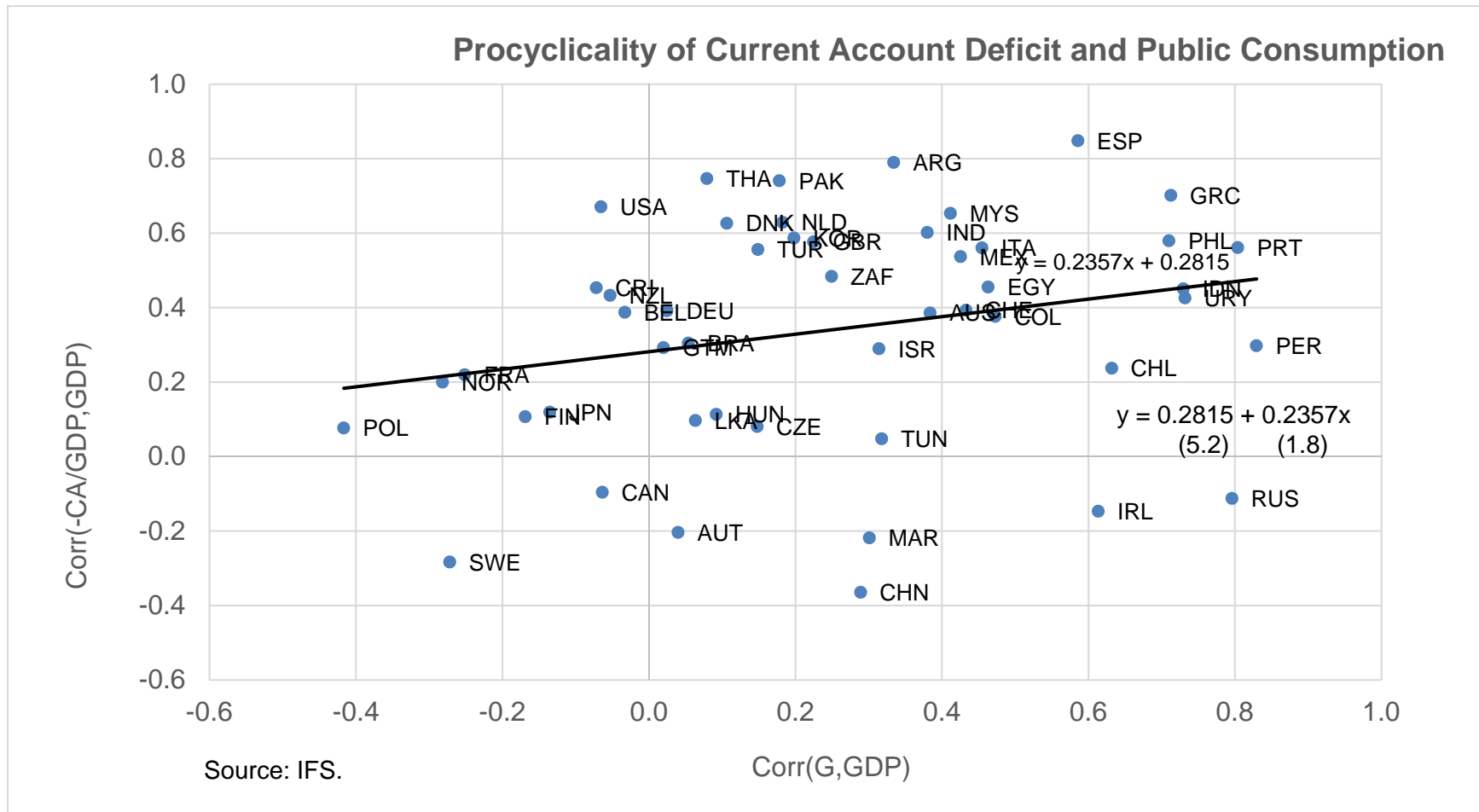
Outline

1. Stylized Facts
2. Related Literature
3. A small open economy T-NT model
4. Procyclicality and Business Cycles
5. Implications for External Sustainability
6. Concluding Remarks

1. Stylized Facts (I)



1. Stylized Facts (II)



2. Related Literature

Twin deficits literature:

Lane and Perotti (1998), Beetsma et al. (2008), and Monacelli and Perotti (2010).

Fiscal Procyclicality Literature:

Kaminsky et al. (2004), Frankel et al. (2013), and Vegh and Vuletin (2014).

3. Small Open Economy Model

Canonical Small Open Economy Model
(Rebelo and Vegh, 1995)

- Small open economy (Price-taker)
- Two sectors: Tradable and Non-tradable
- Flexible prices
- Inputs: Capital and labor
- Non-tradable sector more intensive in labor

3. Small Open Economy Model

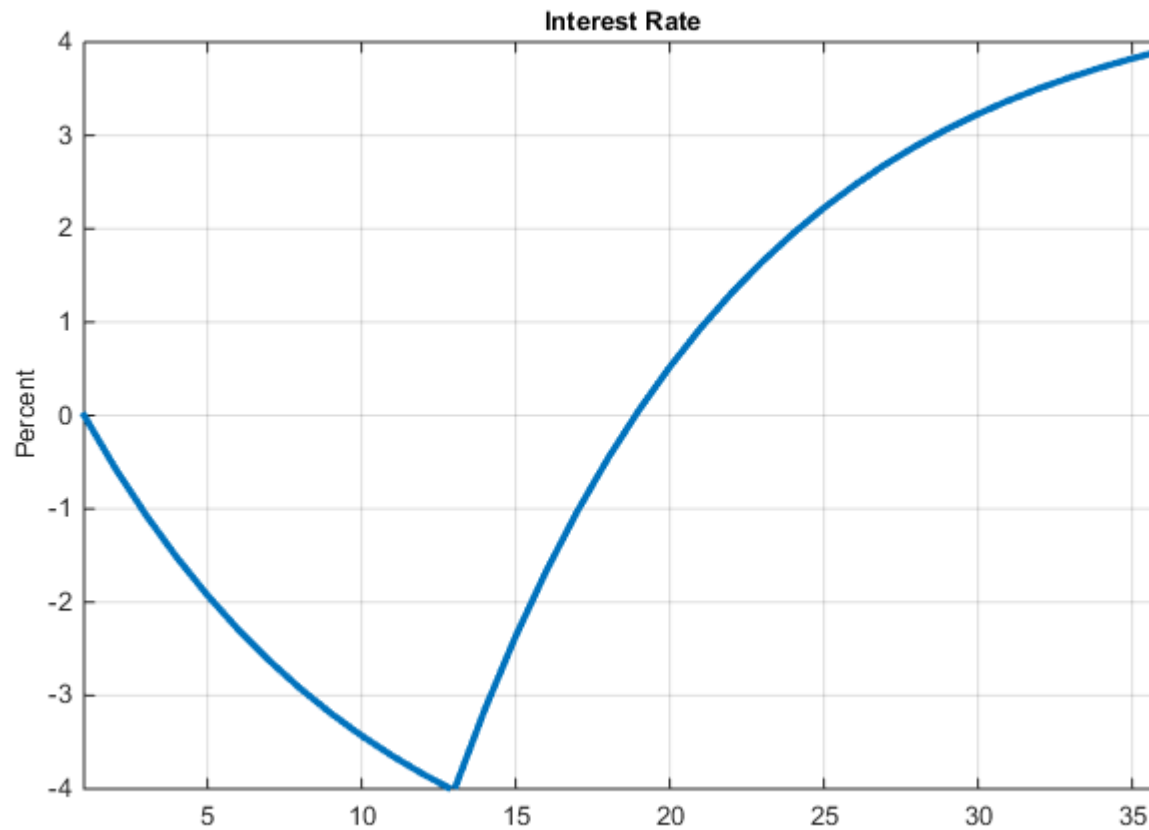
- **Calibration:** Prototypical small open economy model (Rebelo and Vegh, 1995)
- **Shocks:** Business cycle driven by foreign real interest rate shocks: $\ddot{u} = \alpha \ddot{u} + \epsilon$
- **Fiscal Regimes:** Defined by the parameter β

$$\ddot{u} = \beta \ddot{u} - \alpha \ddot{u}$$

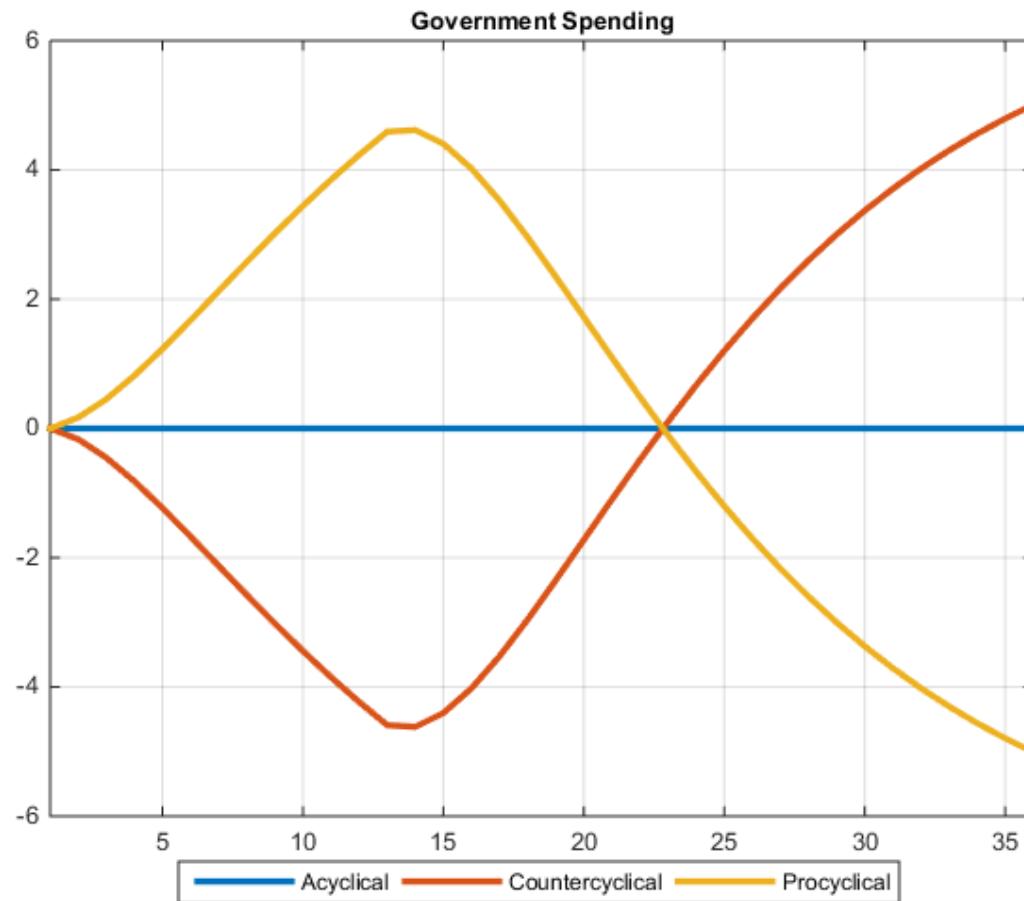
- $\beta < 0$: Countercyclical ($\downarrow \ddot{u}$ $\uparrow \ddot{u}$ $\downarrow \ddot{u}$)
- $\beta > 0$: Procyclical
- $\beta = 0$: Acyclical
- Calibration of fiscal parameter:

$$\beta = \arg \min_{\ddot{u}} (\ddot{u} - \ddot{u})$$

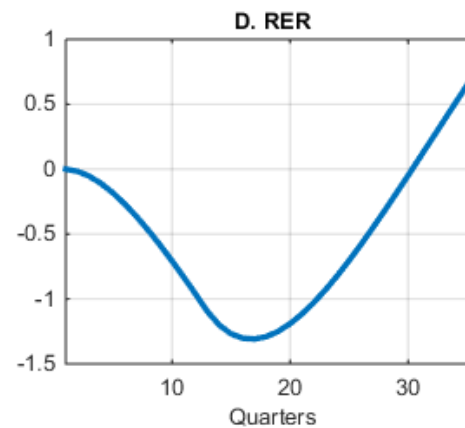
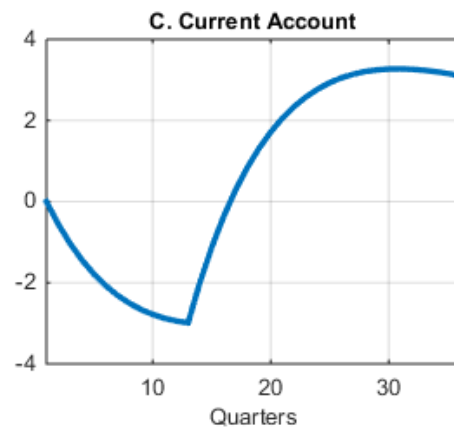
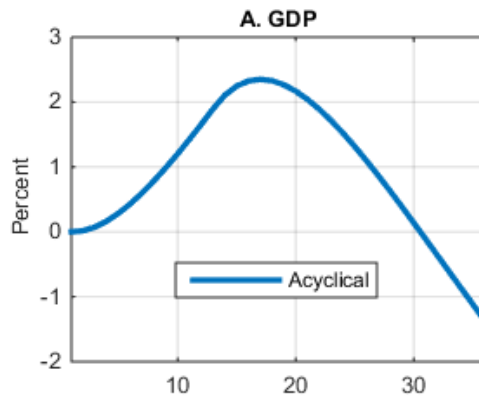
4. Procyclicality and Business Cycles



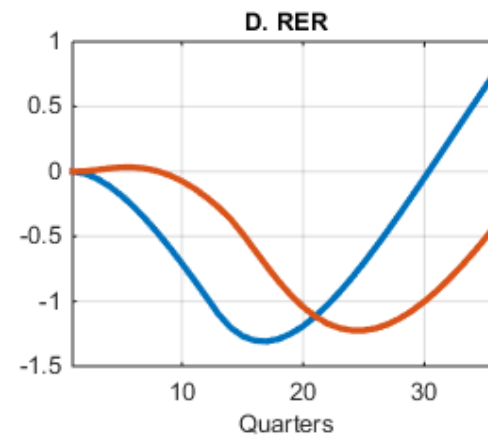
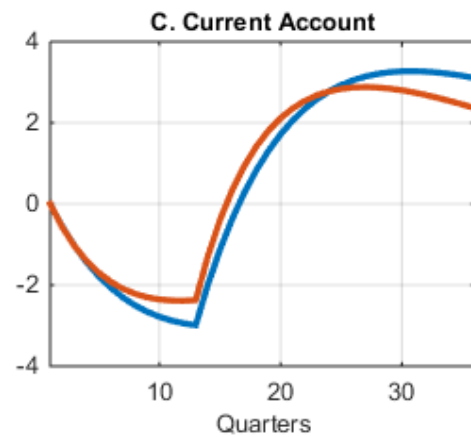
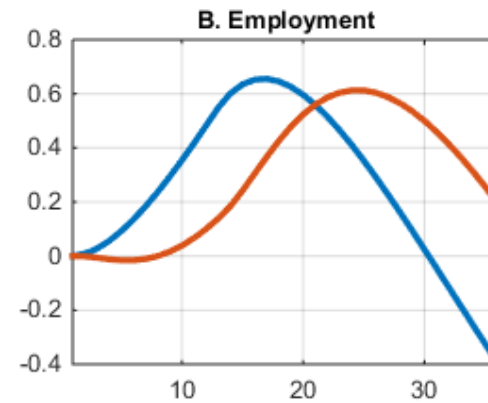
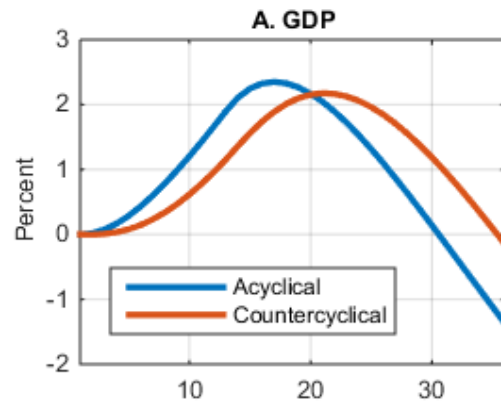
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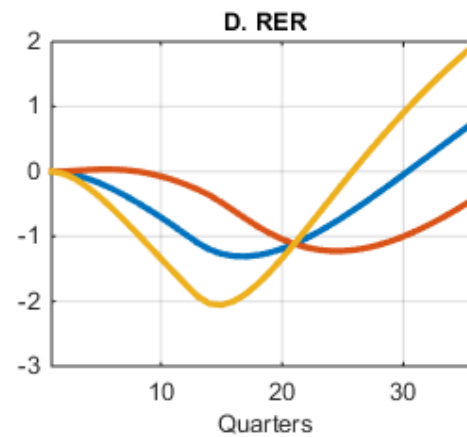
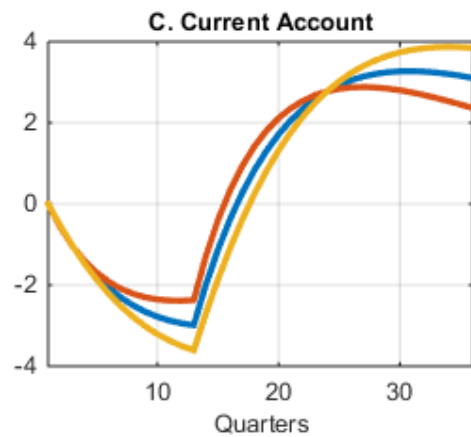
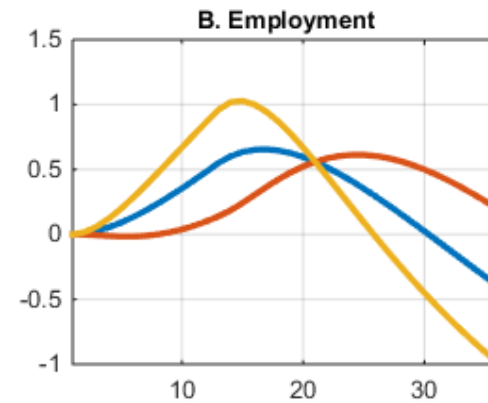
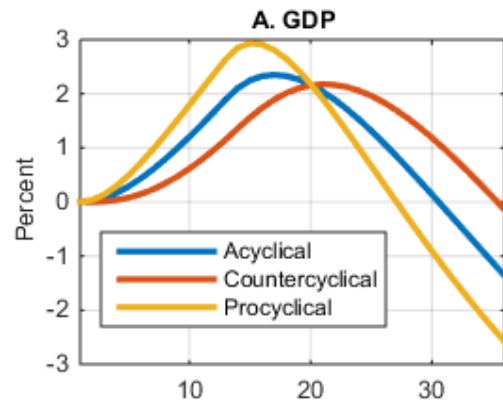


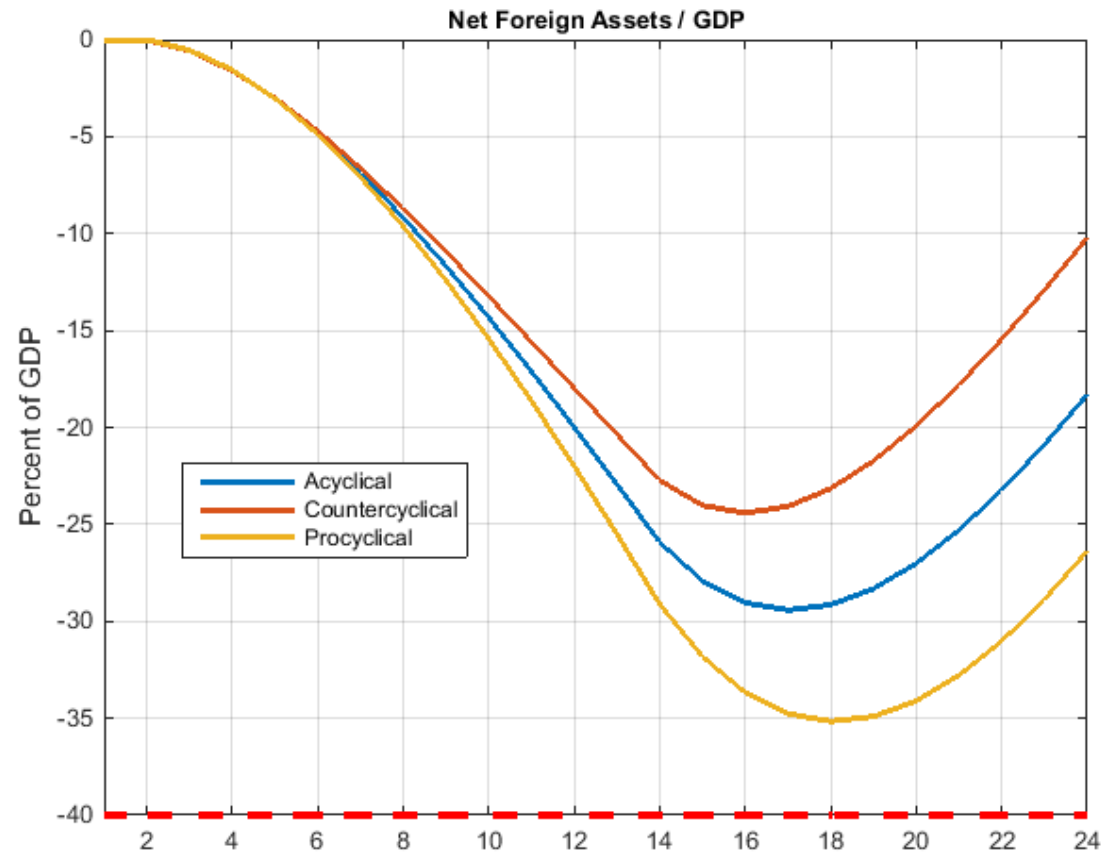
Table 1 . Business Cycle Statistics in the Boom-Bust Scenario

	Acyclical	Countercyclical	Procyclical
Std. Interest Rate	0.67	0.67	0.67
Std. Government Consumption	0.00	3.07	3.07
Std. GDP	1.07	0.81	1.61
Std. Employment	0.30	0.24	0.60
Std. Current Account/GDP	2.42	2.12	2.76
Std. REER	0.60	0.48	1.20
Std. Private Consumption	0.62	0.53	0.76
Std. Investment	17.44	18.90	16.00
Std. Tradable Output	1.74	2.36	1.19
Std. Non-tradable Output	0.08	0.84	0.97
Corr(G,GDP)	NA	-0.19	0.94
Corr(-CA/GDP,GDP)	0.30	-0.50	0.68
Corr(-CA/GDP,G)	NA	-0.74	0.89

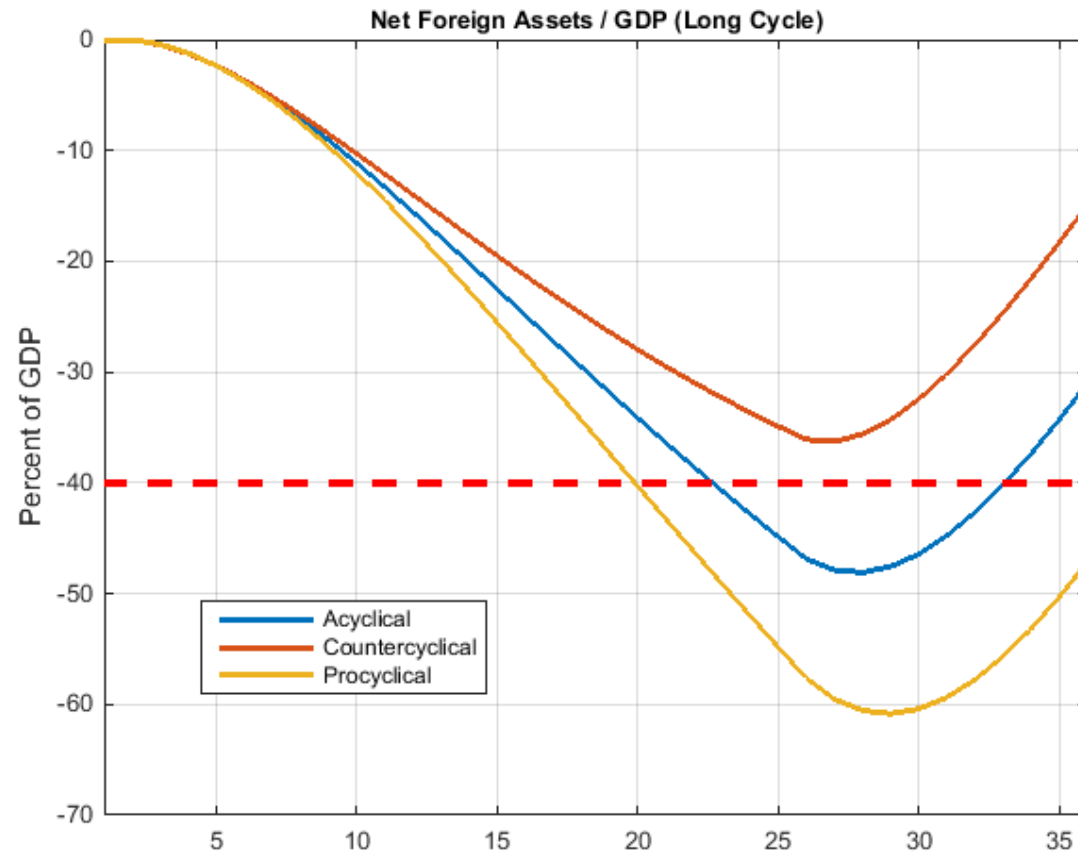
5. Implications for External Sustainability

- Three Scenarios:
 - Baseline
 - Larger amplitude of the cycle (peak at 24 periods)
 - Larger interest rate shock (6 percentage points decline)
- Do Net Foreign Assets (NFA) have a sustainable trajectory?
- What is a sustainable level?
 - Catao and Milesi-Ferretti (2014): 50 – 60 percent of GDP.
 - Reinhart et al. (2003): 40 – 60 percent of GDP.

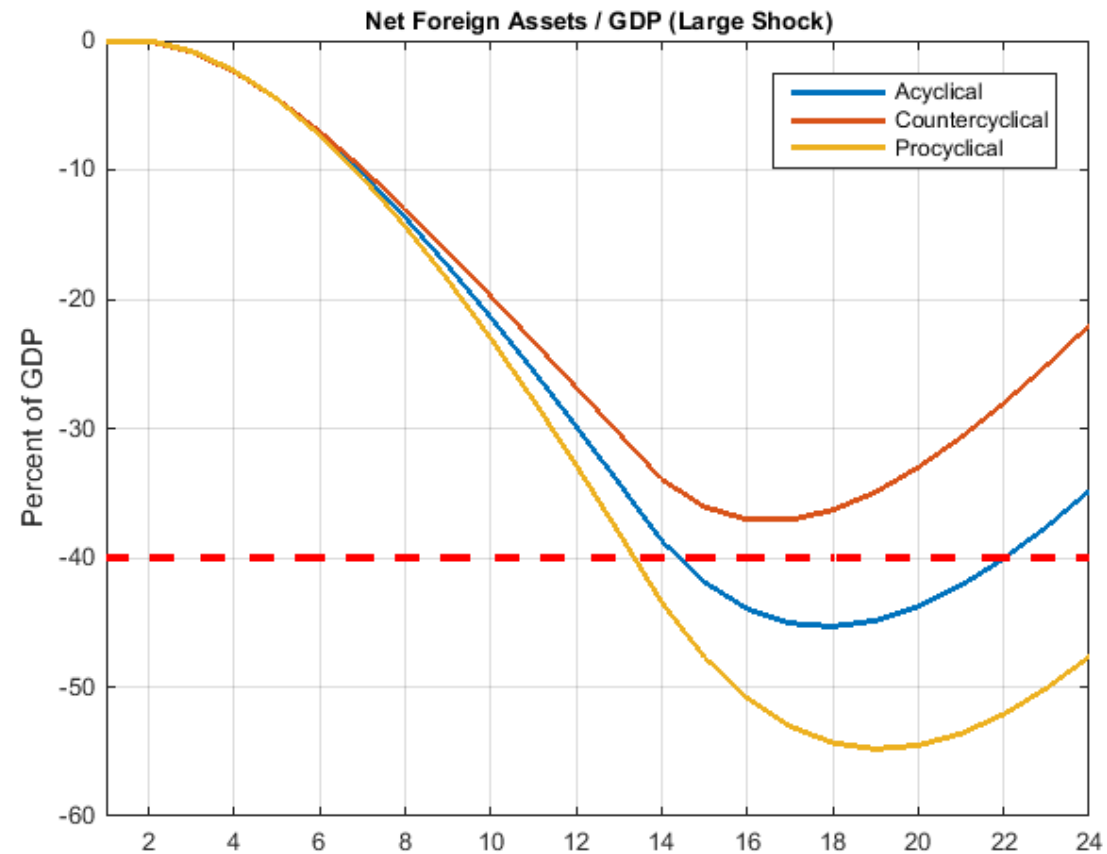
5.A. Baseline Scenario



5.B. Longer Cycle



5.C. Larger Capital Inflows



6. Concluding Remarks

- Empirical evidence suggests a connection between fiscal procyclicality and current account volatility.
- In a tradable/non-tradable small open economy model we illustrate the implications of different degrees of procyclicality on current account volatility.
- A decline in procyclicality (“graduation”) leads to a more stable current account (and NFA).
- The effectiveness of a countercyclical fiscal policy increases when business cycles are more persistent and volatile (i.e. moves the NFA away from “dangerous” thresholds).
- What are the macroeconomic implications of reaching the threshold?