Assessing the sustainability of external positions in new EU members

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Motivation and Outline

Some questions:

- Are new EU members external positions sustainable after all?
- Which role plays the exchange rate (appreciation)?
  - Cause or consequence of external positions?
  - Villain (competitiveness) or hero (adjustment-smoother in convergence)?
- Work in progress…departing from REER equilibrium estimation (RDE)

OUTLINE

- NMS features
- Sustainability of external positions in new EU members and equilibrium exchange rate
- Caveats
  1. Net debt as catalyser of productivity convergence
  2. Valuation effects and exchange rate role
  3. Cost of debt
- Conclusions
The optimistic view:

- rapid real convergence, improvement in per capita income and equilibrium real exchange rate appreciation (Balassa-Samuelson)
Intro. New EU members marked features

- **The alarming view:**
  - Large current account imbalances….leads to deterioration of external position NFA
  - …but quite less than cumulated c/a balance

![Graph showing current account balances for BULGARIA + BALTICS and 4 LARGI](image-url)
Intro.

New EU members marked features

- **Decomposition of the NFA position**
  - Key to explain the consistency of deteriorating NFA with sustainability and e-r evolutions

- **Graph of debt composition**
  - Reserves offset by portfolio and debt
  - Controlling for that FDI dominates the picture

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**NFA COMPOSITION**

**BALTICS + BULGARIA**

- FDI
- Debt
- Portfolio equity
- Reserve

**NFA COMPOSITION 4 LARGE**

- Reserves
- FDI
- Debt
- Portfolio equity
- NF

Graph of debt composition


Reserves
FDI
Debt
Portfolio equity
NF

% GDP

-100% -80% -60% -40% -20% 0% 20% 40%
Exchange rate determination. Portfolio model

- **External debt dynamics equation**

  \[ \text{cab} = \Delta nfa = \text{pcab} + (r - g)nfa \]
  - \( \text{Pcab} \) = cab net of interest payments: trade balance and others

- **Narrow view of competitiveness (rer driven)**

  \[ \text{pcab} = -\gamma q \]

  (increase in real exchange rate \( q \) (CPI defined) is appreciation)

- **Equilibrium**

  \[ \Delta nfa = 0 \]
  \[ \text{pcab} = -\frac{(r - g)nfa}{\gamma} \]
  \[ eq = \frac{(r - g)nfa}{\gamma} \]
  - Stabilization of external position
  - Generate trade surplus if \( nfa < 0 \)
  - Eq \( q \) is depreciating with \( nfa < 0 \)
Exchange rate determination. Portfolio model

- **Estimation Alberola & Navia (2007) RDE**
  - POL/CHE/HUN-'93-'04
  - Test link between external position and real exchange rate
  - The cointegration approach says just the opposite.

**POLAND: RER vs N**
- **RER-CPI**
- **NFA[-] (right scale)**

**CZECH REPUBLIC: RER vs N**
- **RER-CPI**
- **NFA[-] (right scale)**

**HUNGARY: RER vs N**
- **RER-CPI**
- **NFA[-] (right scale)**
Exchange rate determination. Portfolio model

- Miserable failure of the portfolio model

- Why?…rest of the presentation

a) How do e-r interact with external position and its sustainability
   - Debt as productivity-convergence-competitiveness enhancing
   - E-r appreciation as improving NFA position (valuation effects)

b) NFA dynamics are twisted
   - Cost of debt relative to return-growth from debt
I-Debt as productivity-competitiveness enhancing

- Portfolio model
- Net FDI-
- NFA-
- Eq e-r
- Relative productivity
- Relative labour costs
- Competitiveness

- Balassa-Samuelson

Relative labour costs → Competitiveness
I-Debt as productivity-competitiveness enhancing

- Conventional view: convergence leads to exchange rate appreciation
- …tested in unconventional way: extending model
- COINTEGRATION RELATIONS AND SIGNS

| REER | + |  
| NFA | RELATIVE PRODUCTIVITY |
| NFA | ? |
| NFDI | + | - |

**POLAND: Productivity vs FDI**

- Index 100 = UE 27 average
- Productivity
- FDI liabilities (right scale)
- % GDP

**POLAND: RER, Productivity and NFA**

- RER: index 100 = 1993
- Productivity index 100 = 1999
- RER-CPI
- Rel Productivity
- NFA (right scale)
- % GDP
II- Exchange rate valuation effects

\[
cab = \Delta nfa = \text{pcab} + (r - g)nfa
\]

\[
nfa = nfa' + nfa^*
\]

\[
cab = \Delta nfa = \text{pcab} + (r - g)nfa + \Delta e nfa^*
\]

- Decomposition of debt and currency denomination

<table>
<thead>
<tr>
<th></th>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI, portfolio</td>
<td>Nfa*</td>
<td>Nfa’</td>
</tr>
<tr>
<td></td>
<td>…small</td>
<td></td>
</tr>
<tr>
<td>Reserves</td>
<td>Nfa*</td>
<td>-</td>
</tr>
<tr>
<td>Debt</td>
<td>Nfa*</td>
<td>Nfa*</td>
</tr>
<tr>
<td></td>
<td>…small</td>
<td></td>
</tr>
</tbody>
</table>
II- Exchange rate valuation effects

- How is the picture in NMS?
  - FDI liabilities (in domestic currency) dominates
  - Net positions in foreign currency are relatively low in NET terms:
    • Reserves (assets) offset debt (liabilities)
  - Valuation effects of appreciations are not very relevant: exceptions LAT-LIT-POL

NET FOREIGN ASSETS COMPOSITION

% GDP

III- Is the net cost of debt positive?

\[ cab = \Delta nfa = xn + (r - g)nfa \]

- An intriguing possibility. Dynamics reversion
  
  Convergence play:
  - financial (low financing cost)
  - Real (high real growth)

![Graph showing implicit returns and cost of debt for various countries from 2002 to 2006.](image)

### Table: Average 2002-2006

<table>
<thead>
<tr>
<th></th>
<th>Poland</th>
<th>Lithuania</th>
<th>Hungary</th>
<th>Latvia</th>
<th>Estonia</th>
<th>Slovakia</th>
<th>Czech Republic</th>
<th>Bulgaria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td>30.1%</td>
<td>35.0%</td>
<td>48.6%</td>
<td>64.8%</td>
<td>73.2%</td>
<td>52.9%</td>
<td>65.0%</td>
<td>64.7%</td>
</tr>
<tr>
<td>Liabilities</td>
<td>74.3%</td>
<td>75.7%</td>
<td>137.0%</td>
<td>119.7%</td>
<td>158.3%</td>
<td>81.9%</td>
<td>92.2%</td>
<td>100.2%</td>
</tr>
<tr>
<td>NFA</td>
<td>-44.3%</td>
<td>-40.8%</td>
<td>-88.4%</td>
<td>-54.9%</td>
<td>-85.1%</td>
<td>-29.0%</td>
<td>-27.3%</td>
<td>-35.6%</td>
</tr>
<tr>
<td>Income b.</td>
<td>-3.0%</td>
<td>-2.4%</td>
<td>-5.8%</td>
<td>-1.1%</td>
<td>-5.0%</td>
<td>-3.1%</td>
<td>-5.2%</td>
<td>1.2%</td>
</tr>
</tbody>
</table>
Sumup and conclusions

\[ \text{cab} = \Delta nfa = \text{pcab} + (r - g)nfa + \Delta e \ nfa * \]

- Dynamics are contained

**CUMULATED CONTRIBUTIONS TO NFA EVOLUTION. LITHUANIA**

- Inflation
- Rest of valuation+E&O
- Primary CAB
- Income balance
- GDP growth
- Exchange (valuation)
- NFA

% GDP

1997 2001 2005

-18% -50%
Sumup and conclusions

- **External sustainability assessment depends on NFA position**
  - Ratio of indebtedness
  - Composition: types of net debt and currency

- **Exchange rate as key variable**
  - Appreciation identified with deterioration of external accounts
  - Adjustment variable in portfolio models

- **Challenges to this view**
  - Exchange rate appreciation compatible with external sustainability
    - *Debt favours productivity convergence, e-r appreciation*
    - *With no competitiveness loss,*
  - E-r appreciation favour NFA stabilization through valuation effects
    - *…in some countries, to some extent, less than expected*
  - Cost of debt lower than return from debt in most countries
    - *contains unsustainable dynamics through income balance*
    - *Favoured by EU/EMU convergence play*
Wrapup and conclusions

- **Overall**: Benign view of external sustainability in NMs

- **BUT**
  - Current account imbalances widening in several countries:
    - *excess domestic demand rather than competitiveness loss*
  - Burden on NFA increasing
    - *Own dynamics*
    - *Increasing returns in FDI as they mature*
  - What matters is not so much stock but flow sustainability (financing availability)
    - *Solvency v. liquidity*
    - *Ability to cover financing needs, which are large*
    - *NFA dynamics are in any case negative, ever increasing financing needs*
  - Hinges on success of convergence play
    - *Incentive to hurry into euro adoption*
    - *Sustainable convergence?*

- **Might exchange rate appreciations bring relief to pressures? (hero not villain)**
  - Contain demand + inflation