Lecture 16: Balance of Payments

Benjamin Graham
Today’s Plan

• Housekeeping
• Reading quiz
• Paper Rubric & citation wrap-up
• For today:
  • Balance of Payments
    • How to calculate a current account balance
    • What to do about a current account deficit
Housekeeping

• Out of town through 10-29
• Papers due Thursday at the BEGINNING of class
  • Upload to turnitin via blackboard
  • Log in to blackboard, assignment should show up
Reading Quiz (1)

• How would you describe the interest rates the U.S. government was paying on its debt in 2012 (and currently):
  • a. Historically low
  • b. Historically high
  • c. Historically average
  • d. Extremely volatile -- i.e. historically high some months, historically low others
Reading Quiz (2)

• If a country is running a current account surplus, then...
  • a. The deposits in the current account exceed what is necessary to cover foreign exchange liabilities.
  • b. It is exporting more than it is importing
  • c. It is importing more than it is exporting
  • d. It has more savings in the current account than the past account.
Direct vs indirect quotation

• Direct quotation
  • Only use when the exact wording is critical

• Paraphrase in all other situations
  • Its shorter
  • Still requires parenthetical citation
For this class:

- It is OK to answer part of, and not the entire, question.
  - A narrower topic can facilitate a more interesting argument

- If it is not possible that I disagree with your argument...
  - you’re doing it wrong

- Your paper is only as good as what you’ve learned outside of class
  - Lectures and readings are old news
  - Original argument, backed by evidence I don’t already know
Rubric

• Thesis: 10 pts
• Convincing argument and logical soundness
  • Is there enough meat here? Am I learning something new and interesting?
  • Is the argument solid?
• Organization and clarity
  • Skimmable!
  • Brevity is its own kind of eloquence
• Bibliography
  • These should be free points
• Points for remarkable insight
Capital as a Factor of Production?

• What is the price of capital?
  • A. The savings rate
  • B. The inflation rate
  • C. The interest rate
  • D. The exchange rate
  • E. The balance of payments

• When capital is abundant, interest rates are low and vice versa.
Among OECD countries, U.S. has one of the lowest average household savings rates as a percent of disposable income over the 2000-2010 period.

<table>
<thead>
<tr>
<th>Country</th>
<th>Savings Rate as a Percent of Disposable Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>China*</td>
<td>32%</td>
</tr>
<tr>
<td>France</td>
<td>13%</td>
</tr>
<tr>
<td>Germany</td>
<td>11%</td>
</tr>
<tr>
<td>Italy</td>
<td>10%</td>
</tr>
<tr>
<td>Japan</td>
<td>4%</td>
</tr>
<tr>
<td>Canada</td>
<td>4%</td>
</tr>
<tr>
<td>United States</td>
<td>3%</td>
</tr>
</tbody>
</table>

SOURCE: Data from the OECD, Economic Outlook Volume 2009 Issue 2 (December 2009); CEIC Flow of Funds data, for China. Compiled by PGPF.

*Data for China actually reflects average across the period of 2006-2007.
The “Gains from Trade” in international finance

- Savers (e.g. people with pension plans) in countries with high savings rates can earn higher interest.
- Borrowers (e.g. firms borrowing to buy new equipment) can get loans at good rates, even in countries with low savings rates.
- The logic of “locally scarce” and “locally abundant” factors applies:
  - Open capital markets are good for Chinese and Indian savers, bad for American savers.
  - Good for American borrowers (businesses and people in debt) and bad for borrowers in China and India.
Quick Question

• If there is no international flow of capital and a country has high savings rate and low rate of investment, what are real interest rates like in that country?

   A. High
   B. Medium
   C. Low
   D. There is no borrowing and no lending
International Accounting Identities

\[ Y = C + T + S \]  \hspace{1cm} \text{eq. 1} \]

\[ Y + M = C + G + I + X \]  \hspace{1cm} \text{eq. 2} \]

\[ X - M = Y - (C + I + G) \]  \hspace{1cm} \text{eq. 3} \]

\[ X - M = (C + T + S) - (C + I + G) = (S - I) + (T - G) \]  \hspace{1cm} \text{eq. 4} \]

\begin{align*}
X &= \text{Exports} \\
Y &= \text{National Income} \\
S &= \text{Savings} \\
T &= \text{Taxes} \\
M &= \text{Imports} \\
C &= \text{Domestic consumption} \\
I &= \text{Investment} \\
G &= \text{Government consumption}
\end{align*}
Current Account Balance

- X-M
  - Exports - Imports
- Y - (C + I + G)
  - Total income - private consumption, investment, and government spending
- A current account surplus is when exports are greater than imports
  - A current account deficit is the reverse

- Note: The government’s surplus/deficit is T - G
  - (taxes - government spending)
  - This is different that the current account balance, but it affects the current account balance
Current Account Balances

Chart a: Global imbalances have worsened dramatically in the last decade...

% of GDP, current account balances

China
Japan
Euro zone
US

2000 2001 2002 2003 2004 2005 2006 2007
What to do about a current account deficit?

- If you have a fiat currency, one tempting solution is:
  - Change the exchange rate
    - Create inflation (print money) to deflate the value of your currency.
  - Your exports become cheaper in other countries
    - They buy more
  - Imports into your country from abroad become more expensive
    - Your citizens buy less of them
What to do about a current account deficit:

- Change the exchange rate
- Create inflation (print money) to deflate the value of your currency.

Your exports become cheaper in other countries, so they buy more.

Imports into your country from abroad become more expensive, so your citizens buy less of them.

### Depreciation of the Dollar (relative to the Yuan)

<table>
<thead>
<tr>
<th>Date</th>
<th>Exchange Rate</th>
<th>Appliance in ¥</th>
<th>Appliance in $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1, 2007</td>
<td>1¥ = $0.128</td>
<td>¥7,000</td>
<td>$897</td>
</tr>
<tr>
<td></td>
<td>1 ¥ = 7.788¥</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 8, 2011</td>
<td>1¥ = $0.154</td>
<td>¥7,000</td>
<td>$1078</td>
</tr>
<tr>
<td></td>
<td>1 ¥ = 6.493¥</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What to do about a current account deficit?

• Change the exchange rate
• Create inflation (print money) to deflate the value of your currency.
• Your exports become cheaper in other countries
• They buy more
• Imports into your country from abroad become more expensive
• Your citizens buy less of them

### Appreciation of the Yuan (relative to the Dollar)

<table>
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<tr>
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<th>Exchange Rate</th>
<th>Machine tool in $</th>
<th>Machine tool in ¥</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jan. 1, 2007</strong></td>
<td>1¥ = $0.128</td>
<td>$25,000</td>
<td>¥194,700</td>
</tr>
<tr>
<td></td>
<td>$1 = 7.788¥</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>April 30, 2010</strong></td>
<td>1¥ = $0.154</td>
<td>$25,000</td>
<td>¥162,325</td>
</tr>
<tr>
<td></td>
<td>$1 = 6.493¥</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Clicker Question

• If the US allows the dollar to depreciate in value, what are the effects?
  A. Our exports become cheaper and more competitive abroad
  B. Our exports become more expensive and less competitive abroad
  C. Imported goods become more expensive
  D. Imported goods become less expensive
  E. Both A and C
Clicker Question

• If the US allows the dollar to depreciate in value, what are the effects?
  
  A. This is bad for retirees on fixed incomes, because their dollars buy less.
  B. This is good for people with a lot of debt (like a mortgage).
  C. This is bad for people with a lot of debt (like a mortgage).
  D. Both A and B
  E. Both A and C
How can we eliminate a current account deficit if our exchange rate is fixed?

- Not everyone has a floating currency, some are pegged
  - And Eurozone countries don’t control their own currency

- \[ X-M = (S-I) + (T-G) \]
  - Exports - Imports = (Savings - Investment) + (Taxes - Government Consumption)

- To fix a current account deficit, we can either:
  - Boost savings
  - Reduce investment
  - Raise taxes
  - Reduce government spending
How can we eliminate a current account deficit if our exchange rate is fixed?

• \( X - M = (S - I) + (T - G) \)
  • Exports - Imports = (Savings - Investment) + (Taxes - Government Consumption)

• To fix a current account deficit, we can either:
  • Boost savings (less spending)
  • Reduce investment (less capital per worker, lower productivity)
  • Raise taxes (disincentive for work, also less spending)
  • Reduce government spending (less spending)

• All of these things reduce growth
  • Eurozone countries will suffer to fix current account deficits
Checking understanding: The current account

Which of the following improve a country’s current account balance (i.e. reduce a current account deficit)?

A. Increasing government spending
B. Increasing investment
C. Increasing household savings
D. A and B
E. B and C
Borrowing Abroad: The Temporary Fix

• Balance of Payments = (X-M) - net foreign assets
  • Exports - Imports = (Savings - Investment) + (Taxes - Government Consumption)

• If you have a current account deficit:
  • You can borrow money from abroad to cover it
  • Sell off assets to foreigners

• If you have a current account surplus:
  • Loan money to other countries
  • Use the surplus to buy assets (e.g. real estate, companies) in other countries.

• This only works for so long. As the debt grows, will or can the borrowing country repay?
Over-borrowing and Debt Crises

• Step 1: The debt is growing, questions arise about the country’s willingness or ability to pay it all back.

• Step 2: Cautious investors pull back or demand higher interest to cover the higher risk.

• Step 3: Higher interest payments make the current account deficit worse, debt rises more.

• Step 4: More investors pull back, interest rates rise more, debt gets bigger, and so on...

• When you can’t borrow enough to cover your current account deficit, we call this a “balance of payments” crisis.
Checking Understanding

• How long can a country keep borrowing to cover a current account deficit?

A. Forever
B. Until debt reaches the size of GDP
C. Until lenders get scared that the country can’t afford to pay back its loans
Checking Understanding

- How do currency crises start?
  A. As lenders get scared, interest rates fall, causing the country to borrow more
  B. As lenders get scared, interest rates rise, making the existing debt even harder to pay back
  C. Currency crises usually start with a default by the government