THE GLOBAL MACROECONOMY

• Professor Elliott Parker, Ph.D.
• Online Syllabus
• Syllabus Review:
  ❧ Weekly group homework – book, Maple, supplements
  ❧ Three Country Studies
  ❧ Four Quizzes
  ❧ Midterm and Final Exams

Chapter Outline

1. Foreign Exchange: Of Currencies and Crises
   • How Exchange Rates Behave
   • Why Exchange Rates Matter
   • When Exchange Rates Misbehave
   • Summary

2. Globalization of Finance: Of Debts and Deficits
   • Deficits and Surpluses: The Balance of Payments
   • Debtors and Creditors: External Wealth
   • Darlings and Deadbeats: Defaults and Other Risks
   • Summary

Chapter Outline

   • Integration and Capital Controls: The Regulation of International Finance
   • Independence and Monetary Policy: The Choice of Exchange Rate Regime
   • Institutions and Economic Performance: The Quality of Governance
   • Summary
Overview

Countries have different currencies

"So much of barbarism, however, still remains in the transactions of most civilized nations, that almost all independent countries choose to assert their nationality by having, to their inconvenience and that of their neighbors, a peculiar currency of their own."
—John Stuart Mill

- Why do all these monies exist and what purposes do they serve? And what are their implications for the working of our global economy?
- What are the causes and consequences of the changing value of one currency against another?
- Aside from national pride, does a country enjoy benefits from having its own money? Or does it suffer costs?

Overview

- Countries lend and borrow

"Neither a borrower nor a lender be;
For loan oft loseth both itself and friend,
And borrowing dulls the edge of husbandry."

Polonius, in William Shakespeare’s Hamlet

- Why do all these transactions occur and what purposes do they serve?
- Who lends to whom, and why?
- Why are some debts paid, but not others?
- Is the free flow of finance a source of economic benefits; or do we need to consider potential economic costs too?

Overview

- Policy matters

"History, in general, only informs us of what bad government is."
—Thomas Jefferson

- Recessions, depression, crises, defaults..... How can devastating economic failures be understood?
- And even when economic problems are not so glaring, what can be said about the seemingly more mundane choices governments make about monetary and fiscal policies, or about exchange rates and capital mobility?
- Are the right choices being made? What are the tradeoffs? Is there a single “right” answer?
Three Key Elements

1. Currencies
   - Exchange rates
   - Theory and applications
2. Finance
   - The balance of payments
   - Theory and applications
3. Policy
   - Emphasize policy issues throughout
   - Evidence based approach using historical and contemporary case studies and examples

How Important is Global Finance?

According to the BIS, the average daily turnover in foreign exchange markets in April 2004 was approximately 1.9 trillion dollars per day, and this is growing fast.

About 90% of it is traded in U.S. Dollars (e.g., buying Euros with Dollars, or buying Dollars with Yen).

How Much is This?

To put this in context, the total U.S. GDP was approximately $11 trillion per year, the world’s GDP was approximately $36 trillion, and the world’s annual exports of merchandise and services totaled up to around $9 trillion per year.

Thus (assuming 250 trading days per year), the amount of money flowing through foreign exchange markets is about 50 times more than can be explained by the purchase of foreign goods.
Where are the Transactions Made?

20% of the flow occurs in the United States
30% in the UK
8% in Japan
5% in Singapore, and 5% in Germany
4% in Hong Kong
3% in Australia, 3% in Switzerland, and 3% in France
2% in Canada, Denmark, the Netherlands
1% in Sweden.
No other country accounts for more than 1%, and all together maybe 10% total.

Why does this money flow?

Obviously, only a small fraction is necessary for buying foreign goods.

Part of it can be explained by long-term investments between countries.

For the U.S., all this together (trade and long-term investments) adds up to less than $6 trillion in annual turnover, or about 1/75 of the total trade in Dollars.

Changes in Foreign Investments

Our citizens owned about $8.3 trillion in foreign assets at the beginning of 2004, and increased this to 9.8 trillion by the end.

At the same time, foreigners increased their ownership of U.S. assets from $10.7 to 12.5 trillion
– about 2.7 trillion is in direct private investment, 2 trillion each in privately-owned stocks, privately-owned corporate bonds, and official foreign reserve assets (e.g., the PBC and the BOJ holding U.S. Treasury Bonds), about 0.3 in U.S. currency, and the rest is mostly in bank assets.
(1) The Dollar is a vehicle currency
(2) Most investment is short-term portfolio investment between major economies (i.e., the Dollar, the Euro, and the Yen)
(3) Currency traders make extremely short-term movements of currency to speculate on predicted changes in exchange rates or small differences in overnight interest rates
(4) Currency traders buy insurance on currency fluctuations through derivatives market

**LEARNING OBJECTIVES**

1. Foreign Exchange: Of Currencies and Crises
   - Analyze exchange rate movements over time.
   - Define fixed versus floating exchange rates and identify each using data.
   - Understand why exchange rates matter in the macroeconomy.
   - Understand the consequences of exchange rate crises and the role of the government and international development authorities.

**How Exchange Rates Behave**
- The exchange rate is the price of one currency in terms of another.
- The vast majority of countries use a single, unique national currency.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 U.S. $</td>
<td>1</td>
<td>123.72</td>
<td>0.7425</td>
<td>1.0688</td>
<td>0.5004</td>
<td>1.1806</td>
<td>1.2298</td>
</tr>
<tr>
<td>1 Yen</td>
<td>0.0081</td>
<td>1</td>
<td>0.006</td>
<td>0.0086</td>
<td>0.004</td>
<td>0.0095</td>
<td>0.0099</td>
</tr>
<tr>
<td>1 Euro</td>
<td>1.3467</td>
<td>166.61</td>
<td>1</td>
<td>1.4394</td>
<td>0.6739</td>
<td>1.59</td>
<td>1.6562</td>
</tr>
<tr>
<td>1 Can $</td>
<td>0.9356</td>
<td>115.75</td>
<td>0.6947</td>
<td>1</td>
<td>0.4682</td>
<td>1.1046</td>
<td>1.1506</td>
</tr>
<tr>
<td>1 U.K. £</td>
<td>1.9985</td>
<td>247.25</td>
<td>1.484</td>
<td>2.136</td>
<td>1</td>
<td>2.396</td>
<td>2.4577</td>
</tr>
<tr>
<td>1 AU $</td>
<td>0.847</td>
<td>104.79</td>
<td>0.6289</td>
<td>0.9053</td>
<td>0.4238</td>
<td>1</td>
<td>1.0416</td>
</tr>
<tr>
<td>1 Swiss Fr.</td>
<td>0.8132</td>
<td>100.6</td>
<td>0.6038</td>
<td>0.8691</td>
<td>0.4069</td>
<td>0.9601</td>
<td>1</td>
</tr>
</tbody>
</table>

As of 6pm on June 24, 2007
How Exchange Rates Behave

- Over time, exchange rates may be stable (fixed) or may fluctuate (floating).

Here, which exchange rate is fixed? Which is floating?
- What happened to the yuan/dollar rate in 2005–06?
- What happened to the dollar/euro rate in 2002–04?

Why Exchange Rates Matter

- Two channels through which exchange rate affect the economy:
  - relative prices of goods
  - relative prices of assets

- Changes in the exchange rate affects the relative prices.
  - Example:
    - September 2002, $1.00 per €
    - February 2006, $1.25 per €
    - How does this change affect the relative price of goods?
    - How does this change affect the relative price of assets?

Why Exchange Rates Matter

- Example: Part 1
  - September 2002, $1.00 per €
  - February 2006, $1.25 per €
  - Compare $100 pair of leather boots made in U.S. with €100 pair of leather boots made in Italy.
    - Suppose these prices are fixed in local currencies.
    - In 2002 how do their prices compare in dollars?
      - $100 for both
    - In 2006?
      - The Italian boots now cost $125, or 1.25 times as much as the American boots.
      - The relative price of European goods to American goods increases when the dollar-euro exchange rate increases.
Why Exchange Rates Matter

- **Example: Part 2**
  - September 2002, $1.00 per €
  - February 2006, $1.25 per €

  How does this change affect the relative price of assets?
  - You cannot directly deposit U.S. dollars into a foreign bank, so you convert the $1000 into euros. In September 2002, you receive €1000 to deposit into your German checking account.
  - In February 2006, you still have €1000, but it will be worth $1,250 because each euro is now worth $1.25.
  - Conversely, a German who had placed €1000 in a U.S. account and waited would have seen her $1000 fall in value from €1000 to €800.
  - Thus, an increase in the dollar-euro exchange rate leads to an increase in wealth for Americans who own Eurozone assets, and a decrease in wealth for Eurozone residents who own American assets.

When Exchange Rates Misbehave

- **Exchange rate crises** occur when a currency experiences a sudden decrease in value against another currency.
  - Such crises are fairly common – 19 crises 1980-2002

- Crises can have severe economic consequences.
  - Government default
  - Financial and banking collapses
  - Severe contraction in output and decline in real wages

  - Politically embarrassing
  - Countries experiencing crises often seek help from international development agencies, such as the International Monetary Fund (IMF).

- Zimbabwe a repeat offender in 2007 and 2008

When Exchange Rates Misbehave

- Zimbabwe a repeat offender in 2007 and 2008
When Exchange Rates Misbehave

- Exchange rate crises often coincide with macroeconomic collapse and political crisis. Why?

Economic Crisis in Argentina

- Between January and July 2002, the Argentine peso decreased in value by 70% (relative to the U.S. dollar).

Economic Crisis in Argentina

- In January 2002, the Argentine government announced default on $155 billion in debt.
- Real output decreased 15% in 2002. Output did not recover to pre-crisis levels until two years later.
- As of 2006, the unemployment rate was still 10%.
- In the summer of 2002, 11,200 people fell into poverty each day (earning less than $3 per day).
- Widespread hunger and malnutrition.
- Increase in crime and homelessness, especially in cities.
- Unrest, political upheaval. Argentina had 5 presidents in the span of 2 weeks during the height of the crisis.
LEARNING OBJECTIVES
2. Globalization of Finance: Of Debts and Deficits

- Understand the relationship between expenditure, income, and the current account.
- Identify net debtors and net creditors.
- Analyze the relationship between international financial transactions, the current account, and external wealth.
- Understand the factors leading to sovereign government default.
- Define country risk and discuss how it relates to default and international financial transactions.

### U.S. Income, Expenditure, and Current Account

<table>
<thead>
<tr>
<th>Income</th>
<th>Expenditure</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross National Disposable Income</td>
<td>Gross National Expenditure</td>
<td>Current Account</td>
</tr>
<tr>
<td>1990</td>
<td>$5,811</td>
<td>$5,881</td>
</tr>
<tr>
<td>1991</td>
<td>6,037</td>
<td>6,023</td>
</tr>
<tr>
<td>1992</td>
<td>6,334</td>
<td>6,371</td>
</tr>
<tr>
<td>1993</td>
<td>6,652</td>
<td>6,723</td>
</tr>
<tr>
<td>1994</td>
<td>7,063</td>
<td>7,466</td>
</tr>
<tr>
<td>1995</td>
<td>7,398</td>
<td>7,689</td>
</tr>
<tr>
<td>1996</td>
<td>7,813</td>
<td>7,913</td>
</tr>
<tr>
<td>1997</td>
<td>8,216</td>
<td>8,406</td>
</tr>
<tr>
<td>1998</td>
<td>8,720</td>
<td>8,507</td>
</tr>
<tr>
<td>1999</td>
<td>9,250</td>
<td>9,529</td>
</tr>
<tr>
<td>2000</td>
<td>9,800</td>
<td>10,197</td>
</tr>
<tr>
<td>2001</td>
<td>10,125</td>
<td>10,495</td>
</tr>
<tr>
<td>2002</td>
<td>10,410</td>
<td>10,894</td>
</tr>
<tr>
<td>2003</td>
<td>10,919</td>
<td>11,469</td>
</tr>
<tr>
<td>2004</td>
<td>11,677</td>
<td>12,326</td>
</tr>
<tr>
<td>2005</td>
<td>12,491</td>
<td>13,173</td>
</tr>
<tr>
<td>2006</td>
<td>13,187</td>
<td>14,090</td>
</tr>
</tbody>
</table>

### Deficits and Surpluses: The Balance of Payments

- We look at the difference between national income and expenditure: the current account.
  - Expenditure > Income → Deficit
  - Expenditure < Income → Surplus
- Imbalances are associated with all the different kinds of international transactions, which are recorded in the balance of payments accounts.
  - These are related to the national income accounts for income and expenditure.
- It is not possible for all countries to run deficits at the same time.
  - Globally, deficits and surpluses balance.
  - In recent years there have been some large surplus countries, and some large deficit countries: global imbalances.
Net foreign savings has to make up the difference (Percentage of GDP)

Deficits and Surpluses: The Balance of Payments
Deficits and Surpluses: The Balance of Payments

- How does the U.S. (or any country) manage to run a current account deficit?
  - Expenditure exceeds income.
  - How to fund the difference?
  - Sell financial assets to foreigners.
  - The surplus country buys the assets with its excess income.
- This causes changes in ownership of the assets.
- This leads us naturally to consider the implications of these activities for a nation's wealth.

Debtors and Creditors: External Wealth

- Wealth = assets – liabilities
  - What others owe you, minus what you owe them.
  - A measure of a “net worth”
    - For example: When you borrow, your liabilities rise, reducing net worth.
    - When you lend, your assets rise, increasing net worth.
  - The same principle applies to countries

Countries experience changes in external wealth:
- External wealth = external assets – external liabilities
- Changes in external wealth may reflect a country borrowing (foreign liabilities increase) or lending (foreign assets increase) from/to other countries.
  - They may also reflect capital gains and losses
  - External wealth > 0 → Creditor
  - External wealth < 0 → Debtor

Debtors and Creditors: External Wealth

- External wealth changes for several reasons.
  - Countries with ...
    - Current account deficits
      - borrow from the rest of the world (foreign liabilities increase)
      - this is how they pay for expenditure > income
      - this reduces external wealth
    - Current account surpluses
      - lend to the rest of the world (foreign assets increase)
      - use with the funds saved from income > expenditure
      - this increases external wealth

Debtors and Creditors: External Wealth

- Changes in the value of foreign assets or foreign liabilities also affect external wealth
  - Example 1:
    - An increase in the price of Australian gold mining stocks leads to capital gains for the stock owners – some of whom are U.S. residents.
    - This leads to an increase in foreign assets for the U.S. and an increase in U.S. external wealth.
    - There is simultaneously a decrease in Australian external wealth.

Debtors and Creditors: External Wealth

- Changes in the value of foreign assets or foreign liabilities also affect external wealth
  - Example 2:
    - Default on foreign liabilities
    - An Argentine default on foreign liabilities effectively eliminates the nation’s foreign debt, causing an increase in the country’s external wealth.
    - All the foreign debt holders experience equal and opposite capital losses, a decrease in external wealth for their countries.

Darlings and Deadbeats: Defaults and Other Risks

- Since 1980, 14 countries have defaulted on their debt as a result of exchange rate crises;
  - Of these 14, half have defaulted twice since 1980.
  - Why do countries default?
  - Upside: default improves their external wealth position.
  - The downside?
- What are the consequences of default?
  - Country risk refers to the additional interest (relative to interest paid on a safe benchmark) the country must pay to compensate investors for the risk of default.
  - Once a country defaults, its country risk will increase substantially for some time.
  - It will face higher interest rates when it borrows.
  - It may even be unable to borrow for a while.
  - Defaults may trigger fiscal pain, crises, recessions.
Darlings and Deadbeats: Defaults and Other Risks

- Countries that default, or are in danger of default, suffer from high country risk and poor credit ratings.

Government and Institutions: Of Policies and Performance

- Macroeconomic roles for the government:
  - Policies
    - Discretionary government policy decisions designed to achieve macroeconomic objectives.
    - Example: The government cuts taxes during a recession, in order to increase expenditure.
  - Regimes, or rules
    - Limitations on government discretion. Policy makers must follow specific rules or guidelines, limiting their choices.
    - Examples: fixed exchange rate regime or inflation targeting rule.
  - Institutions
    - Recent research focuses on the importance of institutions in achieving economic goals.
    - Institutions represent the deep frameworks of customs, norms, laws, etc. within which regimes and policies are determined.

Integration and Capital Controls: The Regulation of International Finance

- Financial openness and financial transactions
  - Increased steadily since 1970
  - Most dramatic increase since the 1990s
Integration and Capital Controls: The Regulation of International Finance

- Patterns in integration and financial openness
  - **Advanced countries**
    - High income per person
    - Well-integrated into the global economy
    - Examples: U.S., European Union, Japan, OECD
  - **Emerging markets**
    - Middle-income countries with high growth rates
    - Increasingly integrated into the global economy
    - Examples: Mexico, Brazil, Argentina, Korea, Taiwan, Thailand, Turkey
  - **Developing countries**
    - Low-income countries
    - Not yet well-integrated into the global economy.
    - Includes most African countries, many parts of Asia and Latin America.

---

Independence and Monetary Policy: The Choice of Exchange Rate Regime

- Most countries have their own currency as sovereign nations. But what is their exchange rate regime choice?
  - Fixed or floating? Both are important:
Independence and Monetary Policy: The Choice of Exchange Rate Regime

• Another option?
  - Some groups of countries that eliminates their individual currencies in favor of a common currency.
  - In January 2008 the Eurozone expanded again, from 13 to 15 countries (2 of the above coins went into use).
  - Several other countries are in line to join soon.
  - The policies governing the value of the common currency are jointly decided by governments in the participating countries.

• Yet another option?
  - Other countries may decide against an individual currency and use the currency of another country, without the ability to have a say in policy. (This note is no longer in use)
  - This is known as dollarization.
  - Examples: Ecuador (US$), El Salvador (US$), Panama (US$), Liechtenstein (SFr), Montenegro (€), Pitcairn Island (NZ$)
Institutions and Economic Performance: The Quality of Governance

“The main losers in today’s very unequal world are not those who are too much exposed to globalization, but rather those who have been left out.”
—Kofi Annan, Former UN Secretary General

- Development issues
  - Is financial globalization a good thing for rich and poor countries?
  - Why isn’t capital flowing to many poor countries?
  - Do potential gains outweigh the risks of crises?

Institutions and Economic Performance: The Quality of Governance

- The Great Divergence
  - Advanced countries are about 50 times richer than poorest countries.
  - Quality of institutions and economic performance
    - Fact: Countries with higher quality institutions tend to have higher levels and lower volatility of income per person
    - Why?
      - Governance failures (corruption, poor rule of law, etc.)
      - Instability creates uncertainty in income and employment.
      - Risk of expropriations for investors
      - Both domestic and foreign
      - Bureaucratic inefficiency, red tape, bribery
      - Poor monetary and fiscal policies
      - Weak financial sector regulation
Institutions and Economic Performance: The Quality of Governance

- Sources of the divergence?
- Many theories have been proposed, for example:
  - actions of colonizing powers (failure of colonization to establish quality institutions),
  - differences in the evolution of legal codes that favored economic progress, and
  - differences in resource endowments that lead to the establishment of different institutions according to geography.

The Wealth of Nations

- What explains the "Wealth of Nations"?
  "Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism but peace, easy taxes, and a tolerable administration of justice: all the rest being brought about by the natural course of things"
  -- Adam Smith

The Wealth of Nations

- Poor governance is a serious obstacle to economic development in poor countries.
  - According to the World Bank’s 2005 World Development Report, poor governance costs businesses as much as 25% of sales.
- Even when businesses are asked to list their most important obstacles, they stem back to governance:
  - policy uncertainty,
  - macroeconomic instability,
  - taxes, and
  - corruption.
**The Wealth of Nations**

The World Bank measures the quality of governance in different countries.

---

**The Wealth of Nations**

- Suggestions from the World Bank:
  - A reduction in rent-seeking in government institutions.
  - Credibility in formation and implementation of policy.
  - Fostering of public trust and legitimacy.
  - Tailoring of policy responses to local conditions.
- A plan to start: “delivering the basics”
  - Stability and security
  - Better regulation and taxation
  - Better infrastructure for financial institutions
  - Improved labor market regulation

---

**Where from here?**

- Goal of:
  - analyzing issues surrounding exchange rates, the rise in international financial transactions, and the role of government.
  - understanding how each has changed over time and varies around the world today.
- Start by:
  - reviewing why countries trade;
  - developing theories of how exchange rates and international transactions affect the economy, and the government's role in this process; and
  - Analyzing how these elements interact in the global macroeconomy.