

Topic 11: Basics of international finance

International trade: brief recap

We've now completed our study of international trade in goods (and factors). Before moving on let's just summarize the main things we learned.

1. Trade exists because of comparative advantage, which depends on
 - a. Technology and productivity differences
 - b. Factor endowment differences
 - c. Preferences (e.g., tastes for variety)
 - d. Economies of scale
2. There are many sources of gains from trade.
3. Trade can affect income distribution, making some better off and some worse off. Mainly this reflects the fact that trade in goods substitutes for trade in factors.
4. Government policies (eg, trade subsidies) can change trade volumes but do not necessarily raise welfare.

International trade: brief recap

5. Trade barriers are usually harmful and redistribute income from consumers and input users to protected producers. Import barriers tend to be regressive in their impacts on households.
6. Trade barriers are high-cost policies to achieve objectives and targets.
7. There is a need for multilateral trade rules (e.g., WTO).
8. FTAs may or may not liberalize trade in terms of gains from trade creation versus losses from trade diversion.
9. Labor and capital mobility also generate gains in welfare, but redistribute income.
10. Multinational enterprises engage in foreign direct investment, which largely shifts technological knowledge abroad. But offshoring jobs also redistributes income.

Now we study international finance (also called international monetary economics).

We study this material to understand:

- Why countries have trade surpluses and deficits (actually, “current account” surpluses and deficits).
- Why and how countries borrow and lend in international markets: essentially to finance imbalances in the current account.
- How exchange rates are determined in the short run and long run and how they affect economic activity.
- The major differences between fixed and floating exchange rates.
- How governments make macroeconomic policy when there are many countries (“open economy” policymaking). Important but we won’t have time to get to this.

Big issue 1: national borrowing and lending

So far we've considered countries trading goods across borders within a particular time period. We assumed that trade is balanced in each period, which we know is false.

In fact, countries "trade across time" which means:

- Countries sometimes borrow by importing more goods and services (in value terms) than they export in a year. This is a "trade deficit" (more accurately a "current account deficit" that we look at later).
- These CA deficits must be financed by borrowing from abroad (by selling domestic assets to foreign investors).
- Other countries lend by exporting more goods and services than they import, generating a "trade surplus" (CA surplus).
- These CA surpluses achieve excess income that is lent abroad (by domestic investors purchasing foreign assets.)

Keep in mind that it's not actually countries that do this, but the collection of individuals, firms, and organizations (including government) engaged in buying and selling goods and services that determines whether a country borrow or lends.

Borrowing and lending

Consider some examples:

What does it mean to borrow now to fund your college education?

- You are consuming goods and services in excess of your current income.
- This means you are “importing” (in consumption goods and education) more than you are “exporting” (whatever you get working) and must finance the difference through borrowing. At some point you have to pay the funds back.

Suppose a firm wants to build a new factory to use a new technology. It believes that future sales will pay enough to cover these initial costs so the firm is willing to borrow the funds and commit to future repayment.

- If many firms are doing this the economy is likely to need more funds than generated by domestic savings and the economy will have to borrow from foreign markets.
- The firms may have no idea that they are doing so because they get funds from their banks, but that bank may be borrowing from foreign savers and financial institutions.

In contrast, imagine an economy in a recession and firms don't want to expand and individuals don't want to buy many goods.

- Then the demand for funds may be small relative to savings and this economy would be in a position to lend its surplus savings abroad. But that would mean it has a trade (CA) surplus because of its low imports compared to exports.

Borrowing and lending

The essence of this is “trade across time” in that in some years economies may have good reasons to import more goods and services than they export, running a CA deficit. But that has to be financed through current international borrowing.

Other economies in some years have good reasons to export more goods and services than they import, running a CA surplus. That results in current international lending.

Ultimately the first group of countries must repay this borrowing by converting to CA surpluses. The second group ultimately will end up being paid back, which means converting to CA deficits.

All of this means that international finance permits countries to borrow at some times and lend at other times, which is generally efficient.

Intertemporal trade makes economies better off.

Our job will be to figure out what determines these choices.

Big issue 2: countries have different currencies

An *exchange rate* is the price of one currency in terms of another. We can make the following distinctions:

Bilateral exchange rate, e.g. $1\text{£} = \$1.50$. This is the pound price, i.e., $E = \$1.50/\text{£}$ is the price of a pound in terms of dollars. And this means the price of the dollar is $1/E = 1/1.50 = \text{£}0.67/\text{\$}$.

A trade-weighted exchange rate or an *effective exchange rate* is an index of bilateral exchange rates for a particular currency, with the weights based on a country's trade shares with its trading partner. This is generally a good measure of how expensive or cheap a currency is in world trade. (See below.)

A *real exchange rate* adjusts exchange rates (or effective exchange rates) for price differences or differences in inflation rates, as we'll see later.

There are other concepts of the exchange rate that we will encounter as we go forward.

Exchange rates: the basics

Here are some market spot exchange rates as of 3:30 pm EST 11/12/18 (source: <http://www.x-rates.com/>):

Dollar price of

- Canadian dollar = 0.7555 (\$0.755 per C\$) => $1/(0.755) = \text{C}\$1.32/\$$ is C\$ price of \$.
- British pound = 1.285 (\$1.285 per £) => $1/(1.285) = \text{£}0.778/\$$ is £ price of \$.
- Euro = 1.124 (\$1.124 per €) => $1/(1.124) = \text{€}0.89/\$$ is € price of \$.
- Japanese yen = 0.0088 (\$0.0088 per ¥) => $1/0.0088 = \text{¥}113.64/\$$ is ¥ price of \$.
- Chinese yuan (RMB) = 0.1436 (\$0.1436 per C¥) => $1/0.1436 = \text{C¥}6.964/\$$ is C¥ price of \$.

If the price of a currency is rising, we call it an appreciating currency.

If the price of a currency is falling we call it a depreciating currency.

Note: on March 19 2018 the last rate was C¥6.332/\$. Did the yuan appreciate or depreciate relative to the dollar in the last 6 months?

Don't get confused by this. If the yen is appreciating it means it costs more dollars per yen. So the dollar depreciates at the same time.

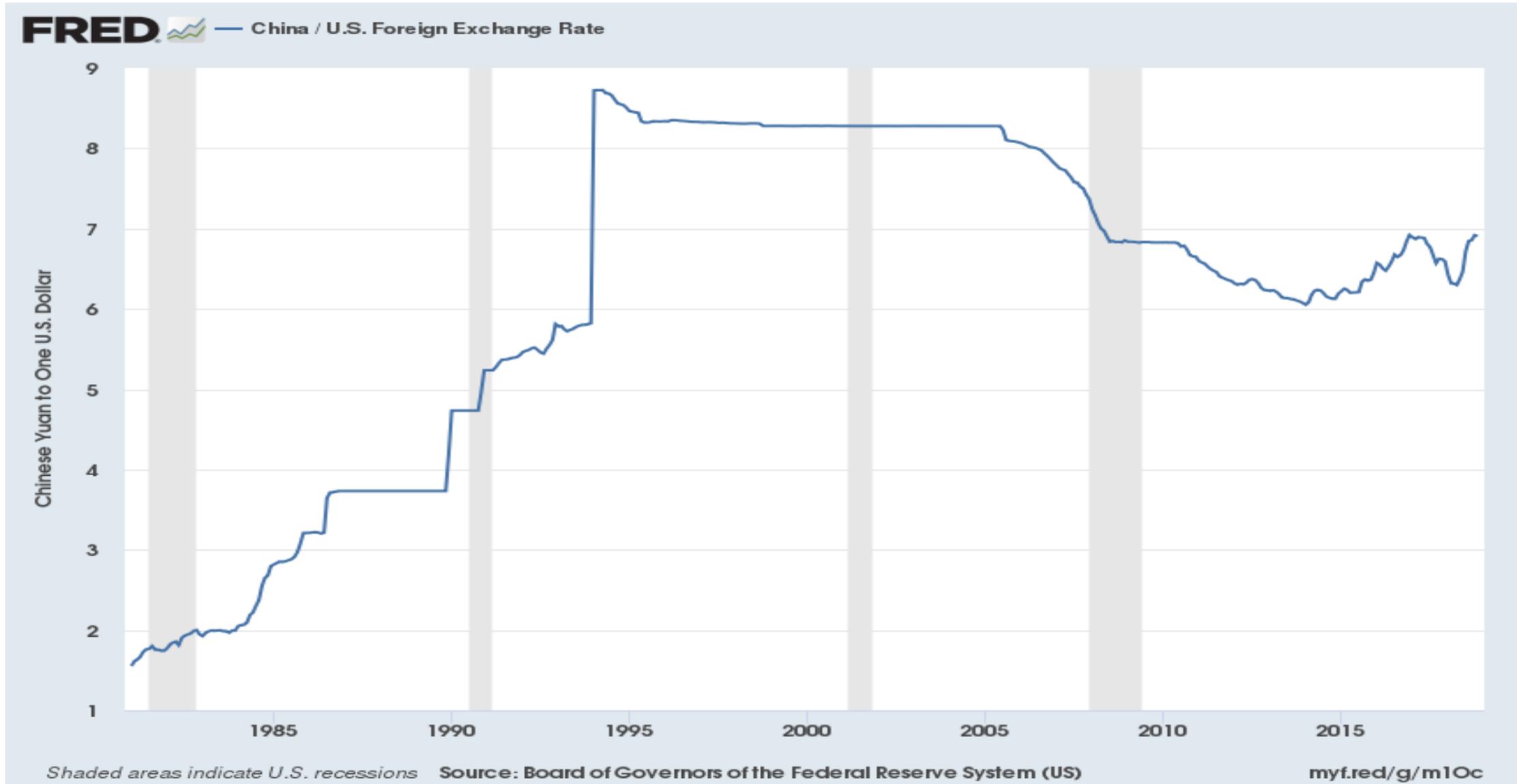
Dollars per euro, 2005 to 2018



Canadian dollars per US dollar, 2005-2018



Chines yuan (RMB) per dollar, 1980-2018

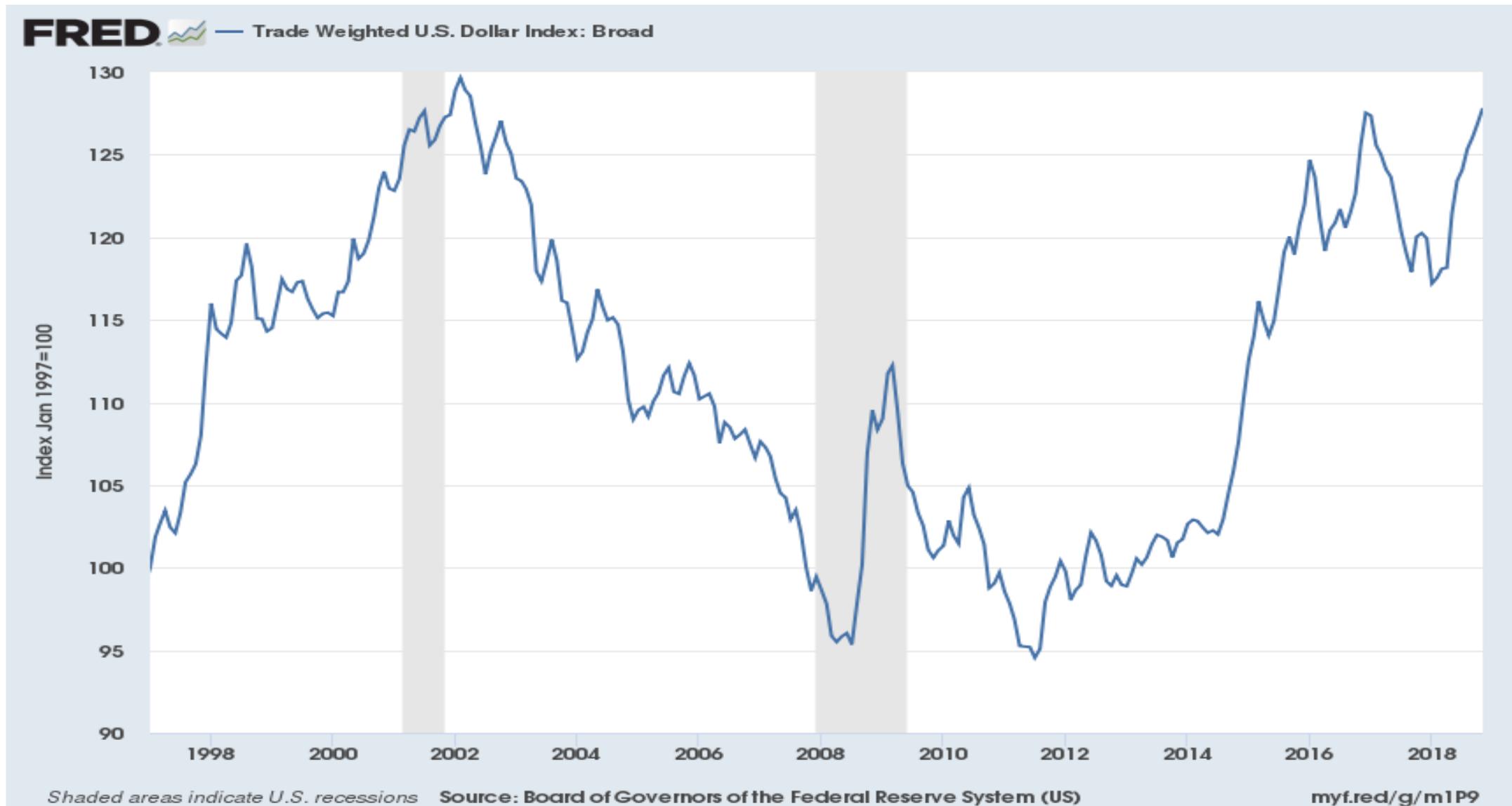


Exchange rates: the basics

We can also compute an *effective exchange rate*, which is a weighted average of bilateral exchange rates.

- Choose the countries with which the US has a lot of trade (currently 27, 1 is the euro area).
- The weights are usually the shares of each country in US overall trade (exports plus imports of goods and services).
- For each (of 27) countries, multiply the trade weight by the bilateral exchange rate, then add up these products to get the weighted average, or EER.
- By convention, for the indicated country (e.g., the US) each bilateral exchange rate is the price of that country's currency (US\$). Because exchange rates aren't comparable in magnitudes (for example, 136 yen/\$ isn't comparable to 1.25 C\$/), the computation is an index.
- The next chart shows what has been happening to the "effective" value of the US\$ over time (base year 1997). (An increase means an appreciation of the effective dollar.)

Nominal effective value of the US dollar against currencies of 27 major countries/regions, 1997-2018



Exchange rates: basics

Brief questions:

Who do you think gains from a stronger dollar?

- US importers, US tourists abroad, foreigners holding dollar-denominated assets, Americans who owe foreign-currency denominated debt.

Who loses?

- US exporters, foreign tourists (and students) in the US, US citizens owning foreign-currency assets, foreigners who owe dollar-denominated debt.

What do you think a large appreciation of the dollar implies for inflation in the US?

What do you think it implies for the ability of developing countries to pay their dollar-based debts?

Are these issues a consideration for the Fed's monetary policy?