THE U.S. DOLLAR AND THE TRADE DEFICIT

Elliott Parker, Ph.D.
Professor of Economics
University of Nevada, Reno
http://www.coba.unr.edu/faculty/parker

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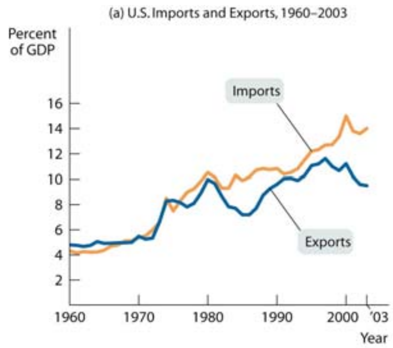
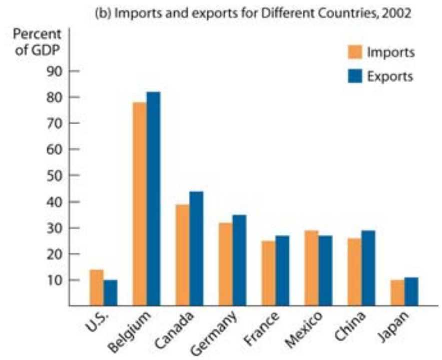
The Growing Importance of International Trade



International Trade is increasingly important for the U.S.

(but we run a trade deficit)



International Trade is much more important for smaller economies

(but most of them run trade surpluses)

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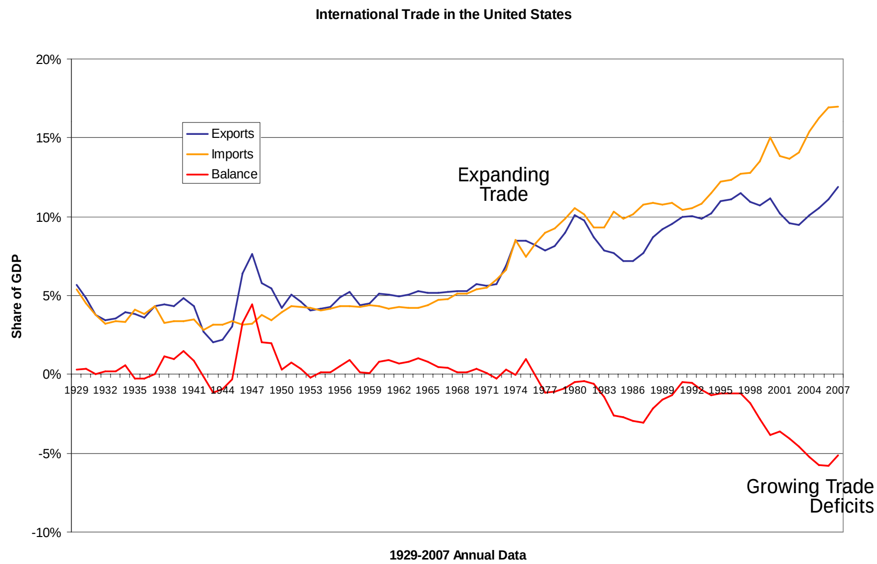
A Longer Look at U.S. Trade Data



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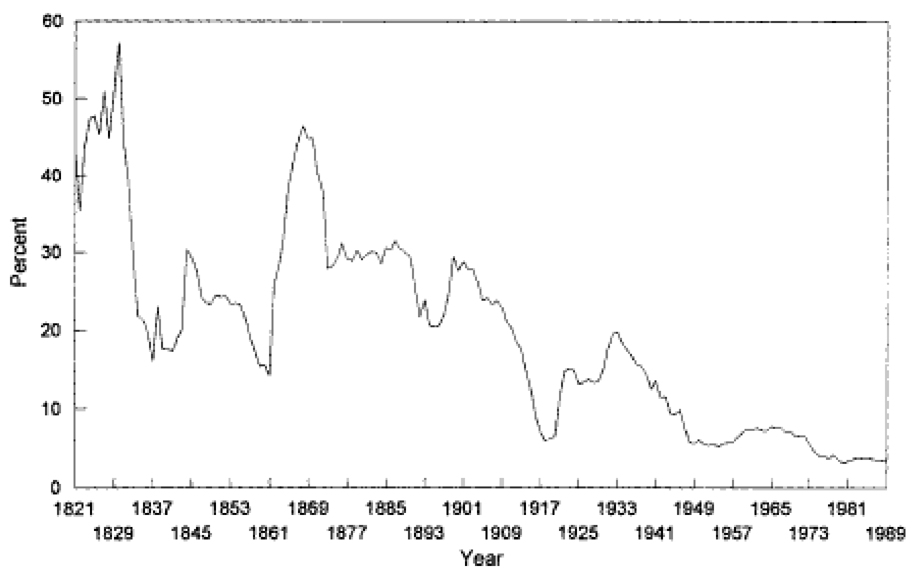

FIGURE 1. AVERAGE U.S. TARIFF RATES, 1821–1989

The World Trade Organization

- Created by the Uruguay Round as successor to GATT, 1995- (U.S. Senate ratified in 1994).
- Paid staff of 550, budget of $100 million. Most work is done by 151 (current) members.
- Ministerial Conference directs General Council, the Dispute Settlement Body and Trade Policy Review Body.
- Continued of principles of multilateralism, reciprocity, non-discrimination, and allowing safety valves.
- New principles of transparency and enforceability.
- New agreements: GATS, TRIPS, plus ten-year expiration of MFA.
- Agricultural subsidies still a problem – In 2000, U.S. spent $49 billion on subsidies (0.5% of GDP), E.U. spent $93 billion (1.2%), Japan $47 billion (1.1%). Current Doha Round COLLAPSED due to this dispute.

Facts about trade:

- About a fourth of all goods and services produced in the world are exported to another country. Merchandise accounts for almost 90 percent of trade.
- Of the merchandise traded in 2005, 9% was agricultural, 14% was fuels or mining, and 74% was manufactures.
- The six largest economies, which together account for more than 60% of world output, are also the world's leading traders, accounting for over 40% of merchandise exports and imports. Germany and U.S. trade the lead as the top exporter, the U.S. is the top importer by far.
- On average, smaller economies trade more as a share of their GDP, while larger economies trade more within their own borders.

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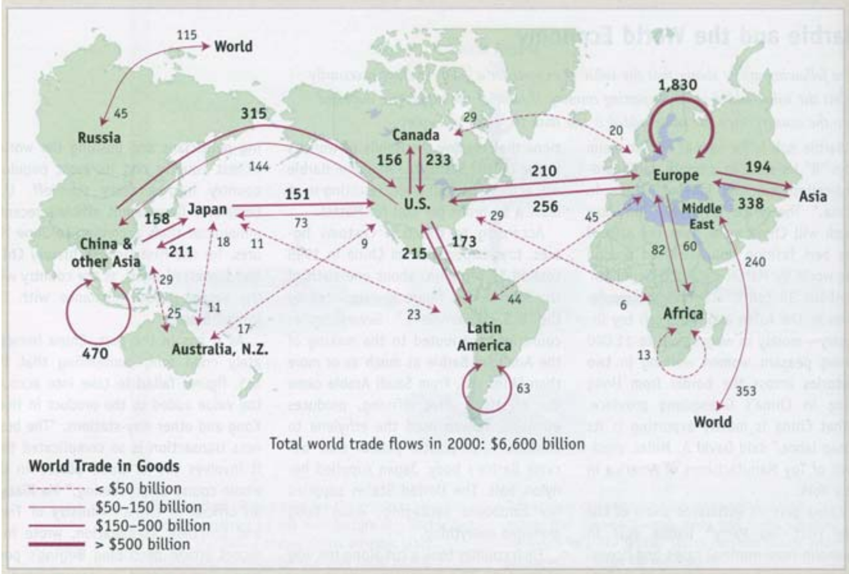
More Facts:

- The European Union currently accounts for 43% of all merchandise exports (2/3 of which is intra-EU, and 1/3 is trade with other countries).
- Asia accounts for 27% of merchandise exports, and 23% of imports.
- South America, Africa, the former USSR, and the Middle East combined account for only 13% of exports and 10% of imports.

Share of World Exports

Origin	North America	South and Central America	Europe	Russia and CIS	Africa	Middle East	Asia	World
North America	**8.1**	0.9	2.3	0.1	0.2	0.3	2.7	14.5
South and Central America	1.2	0.8	0.7	0.1	0.1	0.1	0.5	3.5
Europe	3.9	0.6	**31.5**	1.1	1.1	1.2	3.3	43.0
Commonwealth of Independent States (CIS)	0.2	0.1	1.8	0.6	0.0	0.1	0.4	3.3
Africa	0.6	0.1	1.3	0.0	0.3	0.1	0.5	2.9
Middle East	0.7	0.0	0.9	0.0	0.2	0.5	2.8	5.3
Asia	**6.0**	0.5	4.9	0.4	0.5	0.9	**14.0**	27.4
World	20.6	3.0	43.3	2.2	2.4	3.2	24.0	100.0



World Trade in Goods, 2000 ($ billions) This figure shows the trade in merchandise goods between selected countries and regions of the world for 2000 in billions of dollars. The amount of trade in goods is illustrated by the width of the lines, with the largest trade flows having the heaviest lines and the smallest having dashed lines.

Source: United Nations trade data.

Major World Exporters and Importers

SHARE of Leading exporters and importers in world merchandise trade (excluding intra-EU (25) trade), 2005

	Exporters	Share		Importers	Share
1	Extra-EU (25) exports	17.1	**1**	**United States**	21.4
2	**United States**	**11.7**	2	Extra-EU (25) imports	18.0
3	China	9.8	3	China	8.1
4	Japan	7.7	4	Japan	6.3
5	Canada	4.6	5	Canada	3.9
6	Hong Kong, China	3.8	6	Hong Kong, China	3.7
7	South Korea	3.7	7	South Korea	3.2
8	Russian Federation	3.1	8	Mexico	2.9
9	Singapore	3.0	9	Singapore	2.5
10	Mexico	2.8	10	Taiwan	2.3
11	Taiwan	2.5	11	India	1.7
12	Saudi Arabia	2.3	12	Switzerland	1.6

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Facts about U.S. Trade:

- The U.S.A.'s largest export markets are, in order, Canada, the EU, Mexico, Japan, South Korea, Taipei, Singapore, and Hong Kong.
- We import most from, in order, the EU, Canada, China, Mexico, Japan, Korea, Taipei, Malaysia, and Saudi Arabia.
- In commercial services, the U.S.A. is by far the largest exporter and runs a substantial surplus.

U.S. Merchandise Trade, 2006 (percentage of U.S. trade, by region)

Region	U.S. Export Share	U.S Import Share
Canada & Mexico	37	31
Asia:	28	34
Japan	7	9
China	4	11
Other Asia	17	14
Europe	23	22
Latin America	7	6
Middle East	3	4
Africa	2	3
CIS (former USSR)	1	2

Effects of Reduced Tariffs?

For the United States:

- Average GDP per-capita growth rate *rose* in postwar era:
  - 1.2% from 1820-1850, 1.6% from 1850-1900, 1.7% from 1900-1950, and 2.2% from 1950-2000.
  - However, average growth was the same in 1950-1975 as it was 1975-2000, even though tariffs were lower in second half.
- U.S. trade grew substantially:
  - 1929-1970, exports & imports averaged 4.6% & 4.0% of GDP (surpluses).
  - 1971-2000, these averaged 8.9% & 10.2% (deficits).
  - 2001-2006, these averaged 10.2% & 15.0% (unsustainable deficits).
- There is good theoretical reason to believe that trade may have widened the income distribution between rich and poor, but most economists give much more weight to the effects of technology and even government tax policy.

The Global Effect of International Trade

- From 1950-2003, world exports rose 117 times, after adjusting for inflation, an average annual growth rate of 9.4%.
- After 1950, economic growth rates doubled. From 1750-1950, world per-capita GDP grew at about 1% per year, and population also grew by 1%. From 1950-2003, world GDP rose by a factor of 7, an average annual rate of almost 4% (half was population growth).
- However, the world's GDP per-capita growth grew faster (2.9%) from 1950-1973 than from 1973-2000 (1.3%).
- Real per-capita income was 10 times higher in 2000 than in 1870. For Japan, 20 times higher; 5 times for the rest of Asia; only 3 for Africa.
- Exports fell from 1913-50, then doubled by 1973, doubled again by 2000.
- Many once-poor countries that adopted policies promoting international trade subsequently grew at much faster rates, especially in Asia: Japan, South Korea, Taipei (Taiwan), Singapore were first, then Malaysia and Thailand, and now China, Brazil, India, Poland, Ireland, et cetera.

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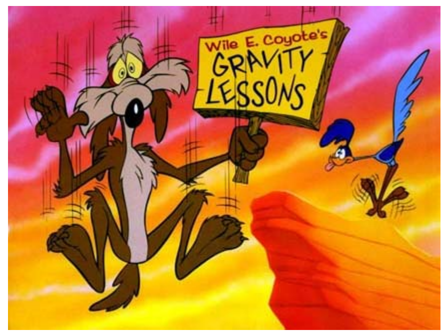
What does the Literature say?

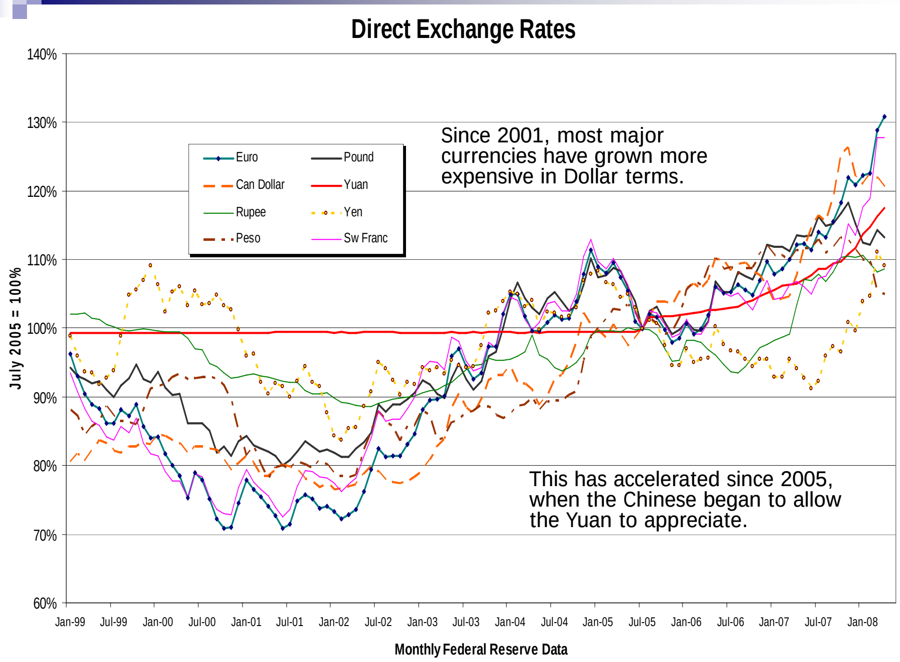
Lewer & Van den Berg (2003) examined hundreds of estimations from many dozens of other studies, and they focus on the dynamic effects of how trade growth affects economic growth. The theory is that trade improves the incentive to increase productivity, to invest, and to improve your skills, all of which take time but have long-term effects.

- Many different studies have predominantly positive and statistically significant results. The average estimated effect is that 1% higher growth in trade leads to a 0.25% increase in economic growth.
- Thus, a typical East Asian country with trade growing at 12% per year will grow 2.5% more per year than a typical country in Sub-Saharan Africa where trade grows by 2% per year.

Enough about the effects of trade. What is going on now?

- The U.S. has been running a large trade deficit, and financing it with foreign borrowing.
- The Dollar seems lately to have reached a "Wile E. Coyote" moment, when foreign currency traders think the Dollar's value is unsustainable.



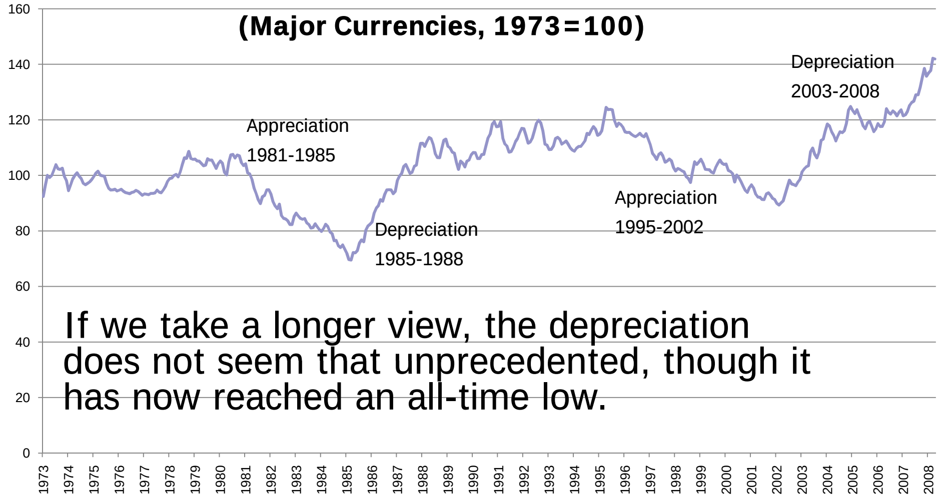


How much has the Dollar depreciated?

- Since 2001:
  - the Euro has risen by 85%,
  - the Canadian Dollar by 50%,
  - the Swiss Franc by 75%,
  - and the Mexican Peso by 15%.
- Since 2005:
  - the Euro has risen by 22%,
  - the CD by 22%,
  - and the SwF by 18%.
  - Also, the Yuan has risen by 18%, the Yen by 6%, the Won by 6%, the Pound by 5%, and the Indian Rupee by 9%.

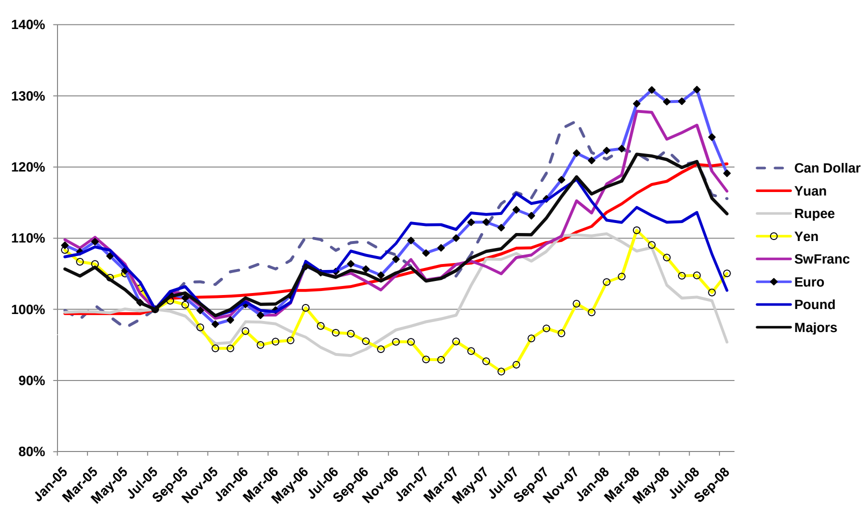
As with the stock market, there seems to be a bit of a madness to it…

Average Price of Foreign Currency

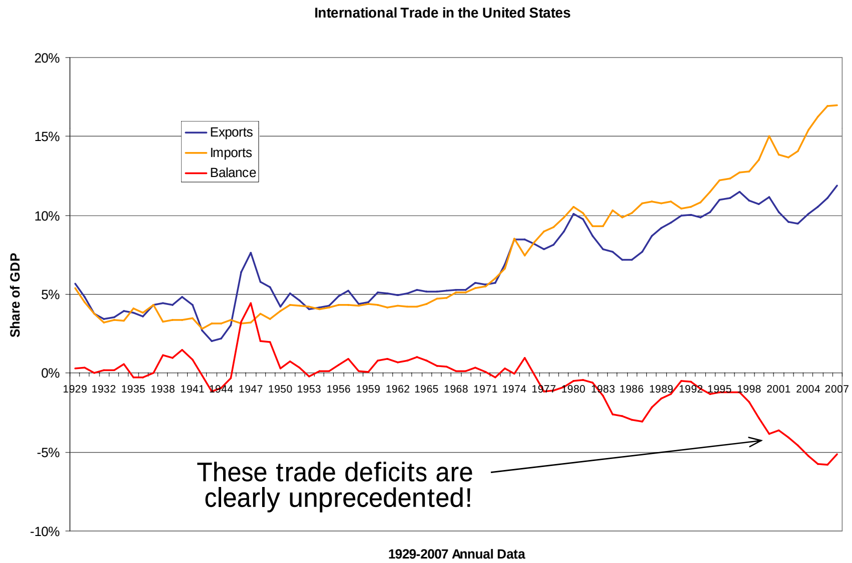


If we take a longer view, the depreciation does not seem that unprecedented, though it has now reached an all-time low.

Currency Movements since 2005



What about our trade deficits?



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What causes Trade Deficits?

- Bilateral trade deficits can be caused by triangular trade, and are not important indicators. Only multilateral trade deficits matter.
- Merchandise imports are usually overstated because they include insurance and freight, and exports are understated because they exclude profits from directly-invested enterprises. So the current account balance matters more.
- Protectionism reduces imports, but it also reduces exports – so it does not really change the trade balance.
- The essential cause is simply net foreign savings inflows or outflows. This results when domestic savings is not equal to domestic investment.
- Higher interest and profit rates, plus more stable financial markets, will attract foreign savings. More saving inflows will make foreign currency cheaper, causing exports to fall.
- Countries that save more than they invest have trade surpluses. Countries that save less have trade deficits.
- In essence, every Dollar that a country saves in our country (i.e., lending it to us) is a Dollar they do not spend on our exports.

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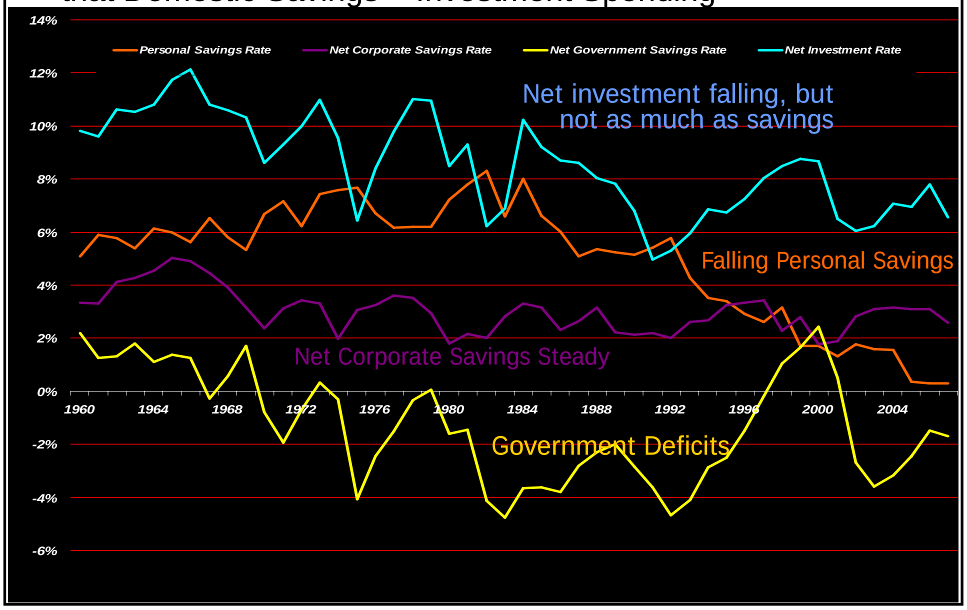
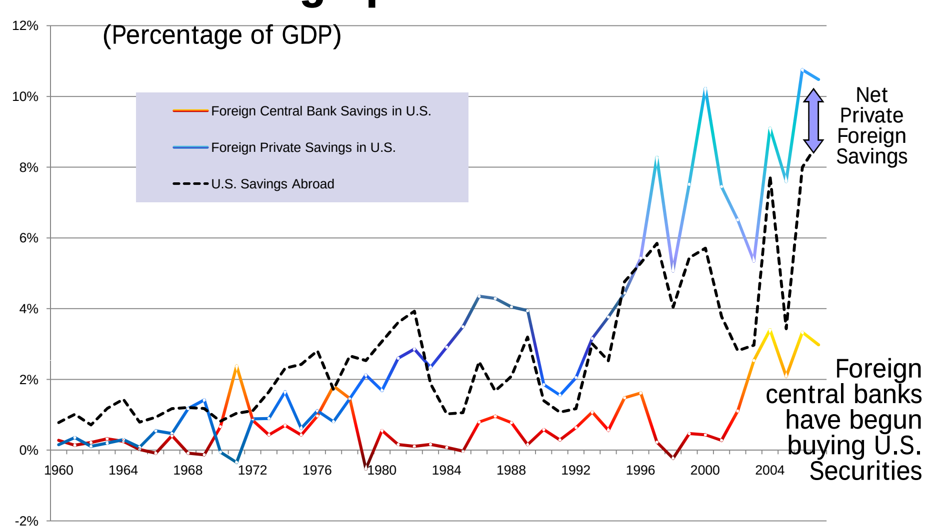
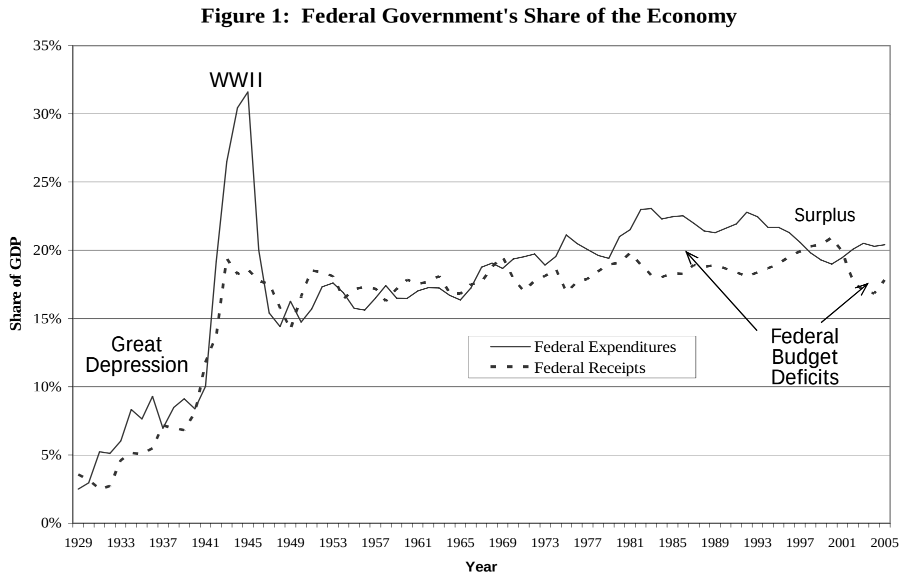
Spending more on new goods than we produced implies that Domestic Savings < Investment Spending

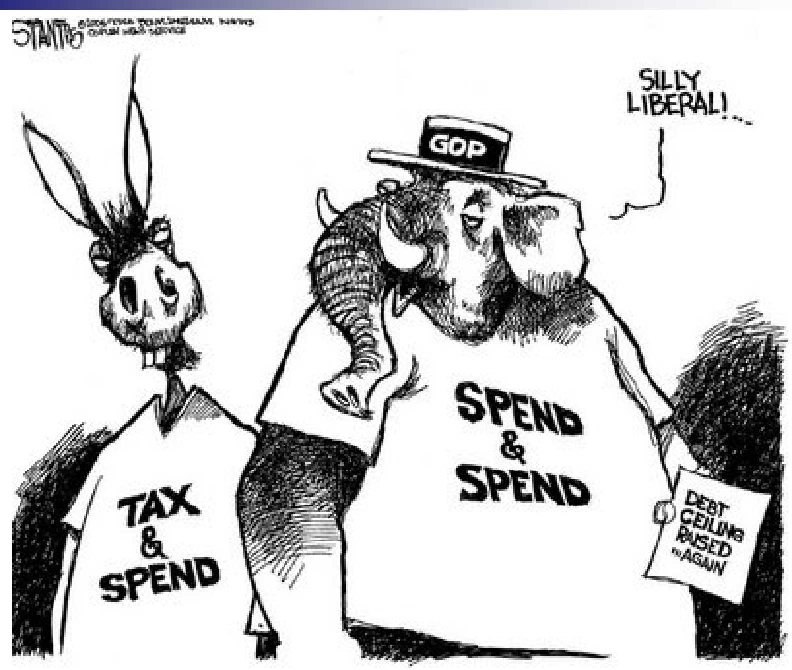


Net foreign savings must therefore be making up the difference



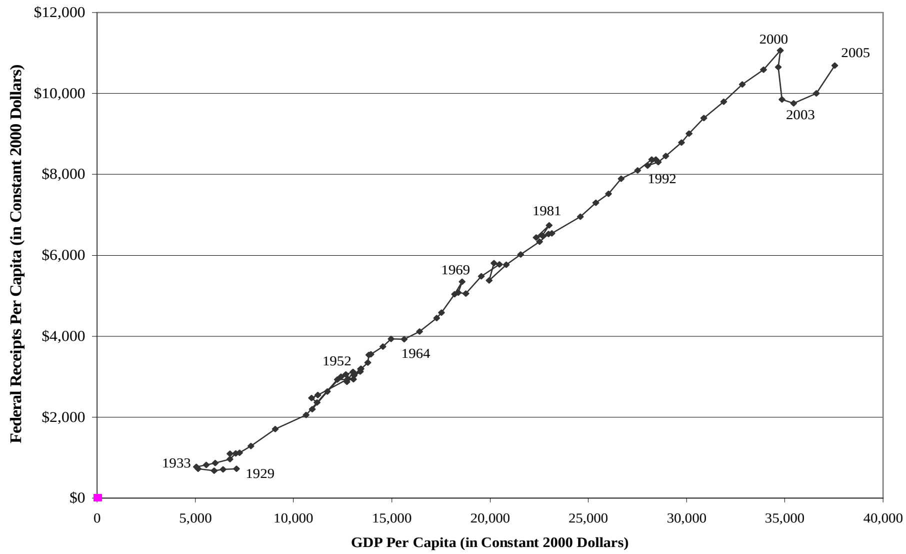
Growth of the federal government





Taxes have risen with income (until just recently)

Figure 2: The Relationship between Income and Taxes



Why has the Dollar been Falling?

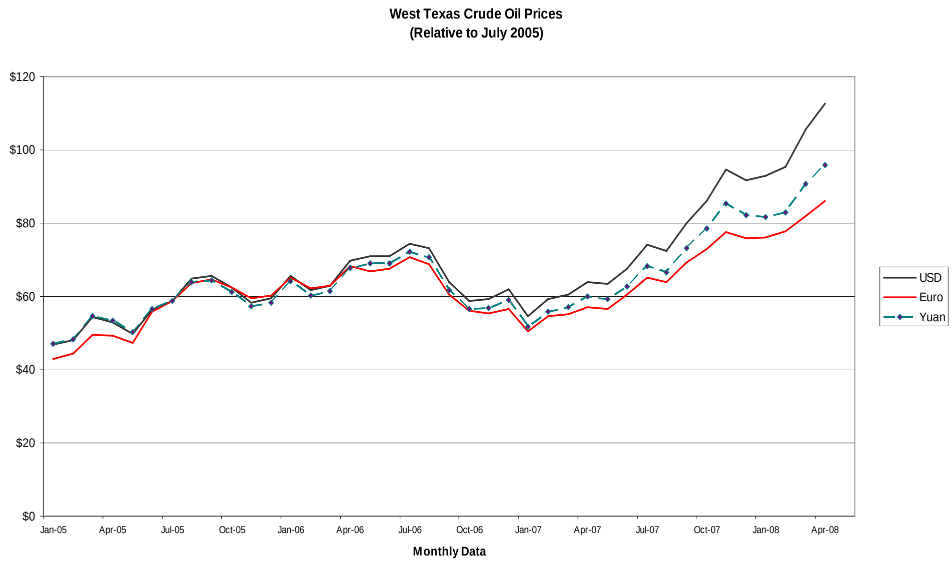
- In the past, the exchange rate was low (i.e., the Dollar was high) because foreign savings were flowing into the U.S., because our financial markets were seen as safer, with higher returns.
- Our government gave tax cuts, increased spending, and borrowed the difference. Consumers also spent more than they earned, borrowing from their equity. This is not sustainable forever.
- In the future, we will have to repay what we borrowed, and the exchange rate will have to rise.
- Foreign exchange is a forward-looking market. If we all expect the Dollar to fall, it will fall.
- We appear to be in the transition between the past and the future, between borrowing and repaying.

Why is this a Problem?

- Foreigners now own over half of U.S. Federal Debt. China's central bank alone hold $1.2 trillion.
- Americans consumption is high, so imports are high.
- Foreign savings keeps Dollar high → fewer exports.
- Looming retirement problem:
  - "Baby boom" retires, federal government treats current FICA surplus as government revenue, so "true" federal budget deficit is much higher.
- Speculative bubbles in stock market, then real estate. Bubbles often burst.
- Markets currently still expect future depreciation of Dollar (oil futures rising in part due to expected cheaper Dollar).

The Retirement Problem is only part of a bigger Federal Debt problem…

One effect is that oil is becoming more expensive for us, relative to the rest of the world.



Scary Scenario

For the last several years, I have been telling my students about the following possibility:

- Trade deficits, other concerns → depreciation of Dollar → slowing foreign savings inflows → rising interest rates → rising government interest expenditures, decline in private asset values → popping bubble, declining private wealth and consumption, rising government deficits, loss of faith in ability of federal government to repay, further depreciation of Dollar, inability to meet Social Security and Medicare commitments, et cetera.

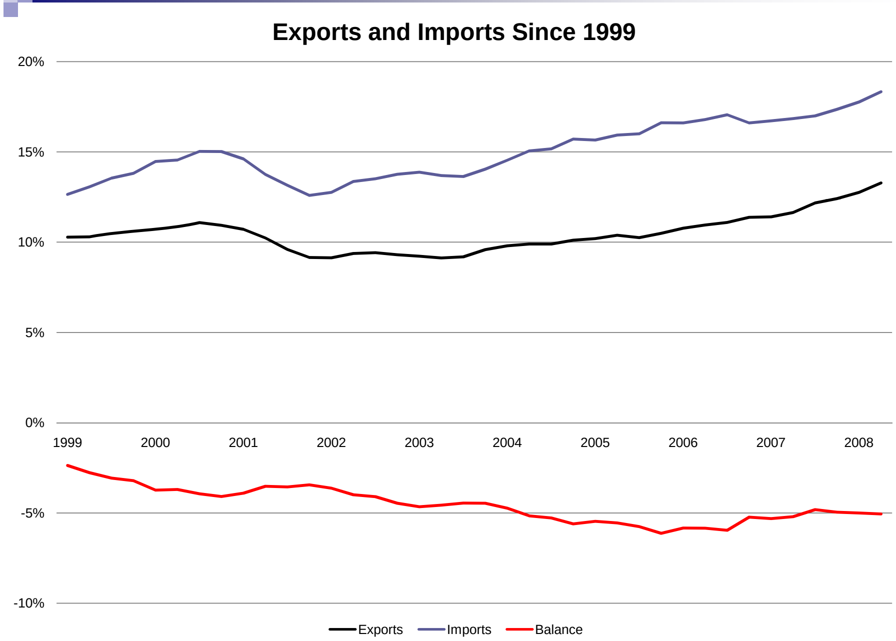
I told my students the probability was less than 50%, but some of these seem to be happening now.

One additional possibility is that the U.S. Dollar could lose its position as the world's vehicle currency. If people start holding Euros instead of Dollars then one of my graduate students estimates that this could conservatively cost us between $14 and $40 billion annually in interest on government bonds.

Positive consequences?

The falling Dollar makes imports dearer and exports cheaper. How would this affect the trade deficit?

- Since 2005 alone, the Dollar has depreciated by 20%.
- In the short-run, we spend more on imports. Deficit may rise. Assuming a short-run price elasticity of 0.4 for both exports and imports, the deficit could rise back from 5% to 6% of GDP.
- In the long-run, we export more and buy fewer imports. The trade deficit should fall. Assuming a long-run price elasticity of 1.0 for both exports and imports, the same 20% appreciation would cause the 5% deficit to fall to 2.5%.
- With a 1.5 elasticity, this become a trade surplus of 1% of GDP. This would enable us to start repaying our foreign debt.
- A recession is also likely to reduce our imports. Estimates of the income elasticity of imports are generally greater than one, so the effect could be relatively large.
- If these things happen, however, it will require households to substantially increase their savings rates, unless investment falls dramatically and/or the government stops running budget deficits.



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How far can the Dollar fall?

- In purchasing power terms, the U.S. Dollar is still expensive relative to the Yuan and the Hong Kong Dollar, but cheap compared to the Euro, the Swiss Franc, and even the British Pound and the Canadian Dollar.
- The interest rate differential predicts only a few percent depreciation per year.
- Enough foreigners hold enough Dollars that there is significant economic interest abroad in preventing too much more depreciation. The 20% appreciation of the Yuan, for example, has already cost China about $200 billion in equivalent asset value.

Big Mac Index – July 2007

Country	Local Price	in USD	1 USD =	Over(+) / Under(-) Valuation
United States	$3.41	$ 3.41	1.00	
Canada	C$ 3.88	$ 3.89	1.00	+13%
China	RMB 11	$ 1.57	6.99	-51%
Euro area	€ 3.06	$ 4.76	0.64	+41%
Hong Kong	HK$ 12	$ 1.54	7.80	-52%
Japan	¥ 280	$ 2.69	104.2	-16%
Mexico	Peso 29	$ 2.79	10.40	-13%
Saudi Arabia	Riyal 9	$ 2.40	3.76	-25%
South Korea	Won 2900	$ 2.78	1043	-14%
Switzerland	SFr 6.3	$ 6.01	1.05	+87%
United Kingdom	£ 1.99	$ 3.89	0.51	+21%