Trade Policy and Exchange Rates

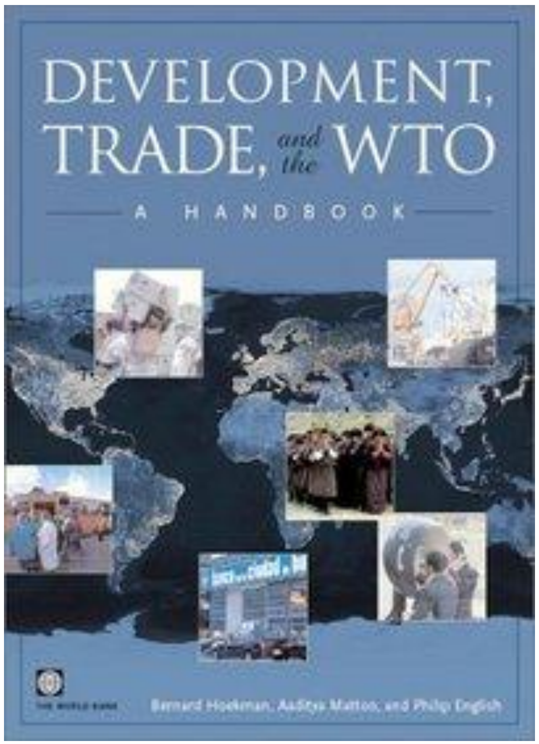
Douglas Irwin
Dartmouth College

Trade policy

- International monetary system in background
- Exchange rates affect resource allocation
- Keynes's theorem:
  - 10% devaluation = 10% import tariff + 10% export subsidy

Misaligned exchange rates

- Overvalued currency
  - Common developing country problem
  - Leads to domestic protectionism
  - Remedy: devaluation and trade liberalization
- Undervalued currency



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HOWARD J. SHATZ
DAVID G. TARR

EXCHANGE RATE OVERVALUATION AND TRADE PROTECTION

Although both fixed and flexible exchange rate systems (and their variants) have their advantages and disadvantages, more than half the countries in the world maintain fixed or managed exchange rates.[1] While we do not discuss the relative merits of these exchange rate systems in this chapter, we note that as a practical matter, exchange rate management in many countries in the world has resulted in overvaluation of the real exchange rate, in some cases leading to gross distortions.[2] (For further discussion of the links between trade and macroeconomic management, see the CD-ROM, "Applied Trade Policy," that accompanies this Handbook.)

Since governments are frequently confronted with the problems of external shocks and external trade deficits in the context of a fixed exchange rate regime, a concise survey of worldwide experience with the effects of overvalued exchange rates in terms understandable to policymakers should be useful. This chapter presents theory, cross-country econometric evidence, and important case studies of the effects of overvalued exchange rates.

Although as a group, developing countries progressively liberalized their trade regimes during the 1980s and 1990s, some governments continue to take actions to defend their exchange rates that are counter to their long-run trade liberalization efforts. One classic pattern is to attempt to defend an overvalued exchange rate through protectionist trade policies.[3] Experience shows that protection in defense of an overvalued exchange rate will significantly retard the country's medium-to-long-run growth prospects. In fact, an overvalued exchange rate is often the root cause of protection, and the country will be unable to return to the more liberal trade policies that allow growth without exchange rate adjustment.

Moreover, a devaluation of the nominal exchange rate appears to be a necessary condition for achieving a large depreciation of the real exchange rate, as virtually all real devaluations (above 25–35 percent) have been accompanied by nominal devaluations (Ghei and Hinkle 1999). Sustained efforts to use downward adjustment of wages and prices as a means of restoring a competitive real exchange rate have frequently led to severe recessions or depressions.

Worldwide experience has shown that defending the exchange rate has no medium-run benefits, since falling reserves will eventually force devaluation. It is better that the devaluation be accomplished without further debilitating losses in reserves and lost productivity due to import controls. Experience with devaluations shows that after

Overvaluation

- Schatz and Tarr (2002):
  - “one classic pattern is to attempt to defend an overvalued exchange rate by protectionist trade policies . . . . In fact, an overvalued exchange rate is often the root cause of protection”
- Drabek and Brada (JCE, 1998), “Exchange Rate Regimes and the Stability of Trade Policy in Transition Economies”

Welfare cost of overvalued exchange rates

- Hause (JPE, 1966), "Welfare Cost of Disequilibrium Exchange Rates"
- Bhagwati & Krueger, 1970s NBER project
- Krueger (1999), "Nominal Anchor Exchange Rate Policies as Domestic Distortions"

Currency Misalignments and Optimal Monetary Policy: A Reexamination[†]

By Charles Engel*

Exchange rates among large economies have fluctuated dramatically over the past 30 years. The dollar/euro exchange rate has experienced swings of greater than 60 percent. Even the Canadian dollar/US dollar exchange rate has risen and fallen by more than 35 percent in the past decade, but inflation rates in these countries have differed by only a percentage point or two per year. Should these exchange rate movements be a concern for policymakers? Or would it not be better for policymakers to focus on output and inflation and let a freely floating exchange rate settle at a market determined level?

Empirical evidence points to the possibility of "local-currency pricing" (LCP) or "pricing to market."[1] Exporting firms may price discriminate among markets, and/or set prices in the buyers' currencies. A currency could be overvalued if consumer prices are generally higher at home than abroad when compared in a common currency, or undervalued if these prices are lower at home.[2] Currency misalignments can be very large even in advanced economies.

In a simple, familiar framework, this paper draws out the implications for monetary policy when currency misalignments are possible. Currency misalignments lead to inefficient allocations for reasons that are analogous to the problems with inflation in a world of staggered price setting. When there are currency misalignments, households in the Home and Foreign countries may pay different prices for the identical good. A basic tenet of economics is that violations of the law of one price are inefficient—if the good's marginal cost is the same irrespective of where the good is sold, it is not efficient for the good to sell at different prices. We find that these violations lead to a reduction in world welfare and that optimal monetary policy trades off targeting these misalignments with inflation and output goals. In our model, because there are no transportation costs or distribution costs, any deviation from the law of one price would be inefficient. More generally, if those costs were to be included, then pricing would be inefficient if consumer prices in different locations do not reflect the underlying resource costs of producing and distributing the goods.

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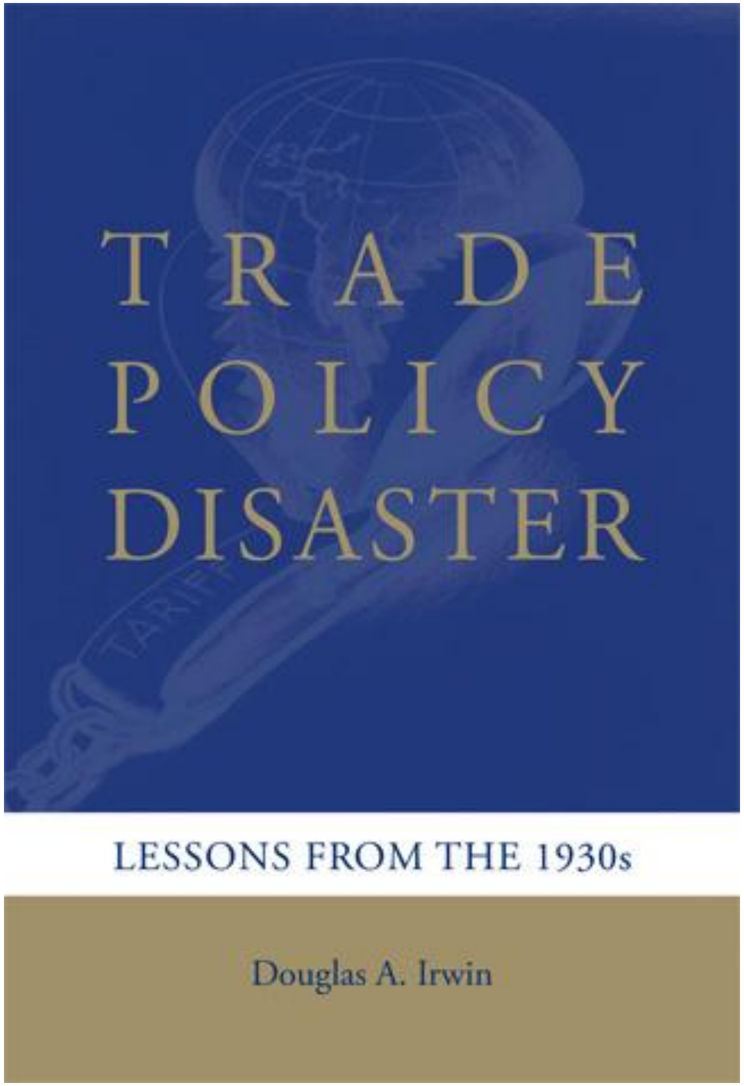
† To view additional materials, visit the article page at http://www.aeaweb.org/articles.php?doi=10.1257/aer.101.6.2796

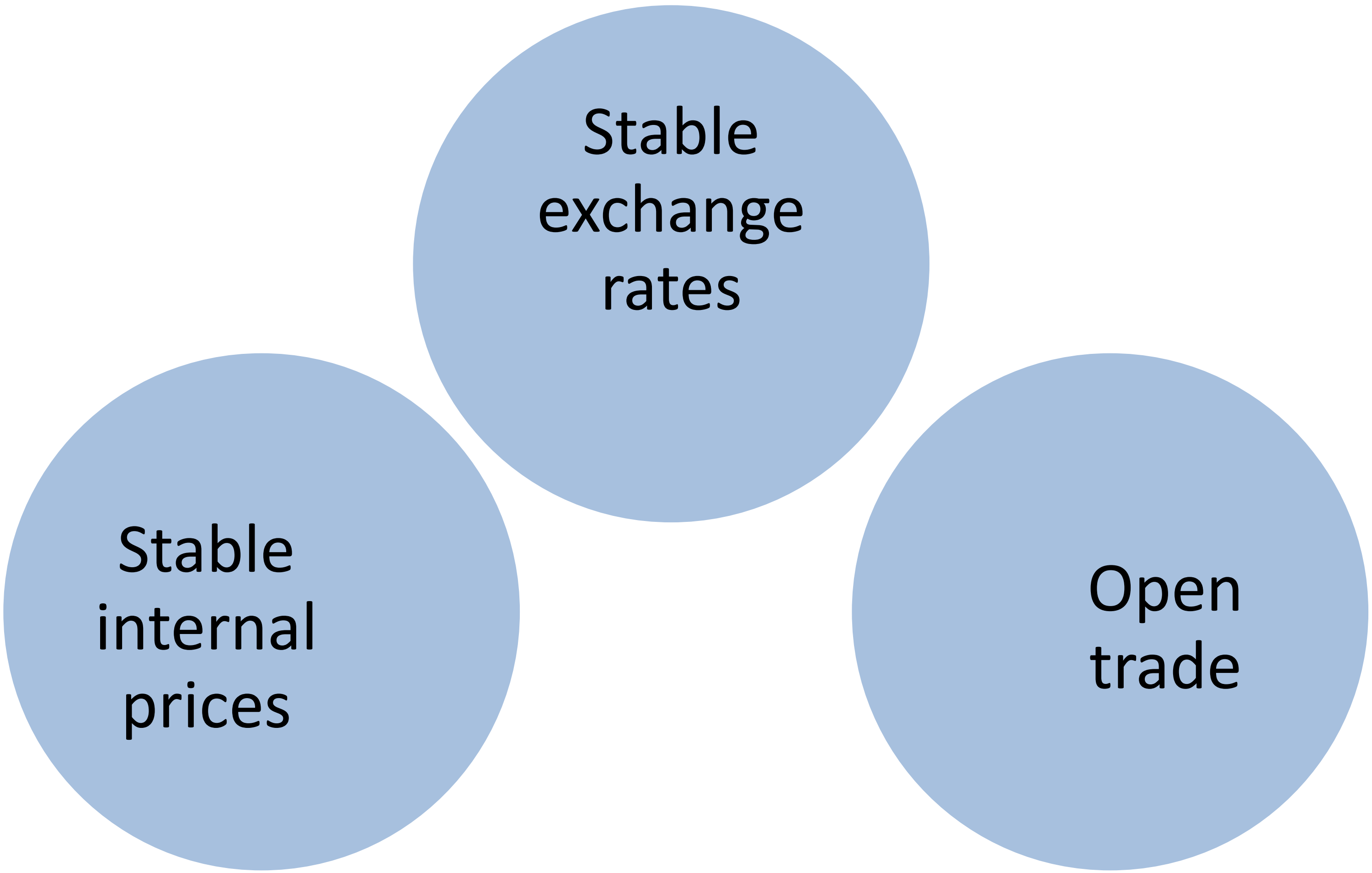
1 Many studies have found evidence of violations of the law of one price for consumer prices. Two prominent studies are Engel (1999) and Andrew Atkeson and Ariel Burstein (2008). The literature is voluminous—these two papers contain many relevant citations.

2 A precise definition of our use of the term "currency misalignment" appears in Section III below.

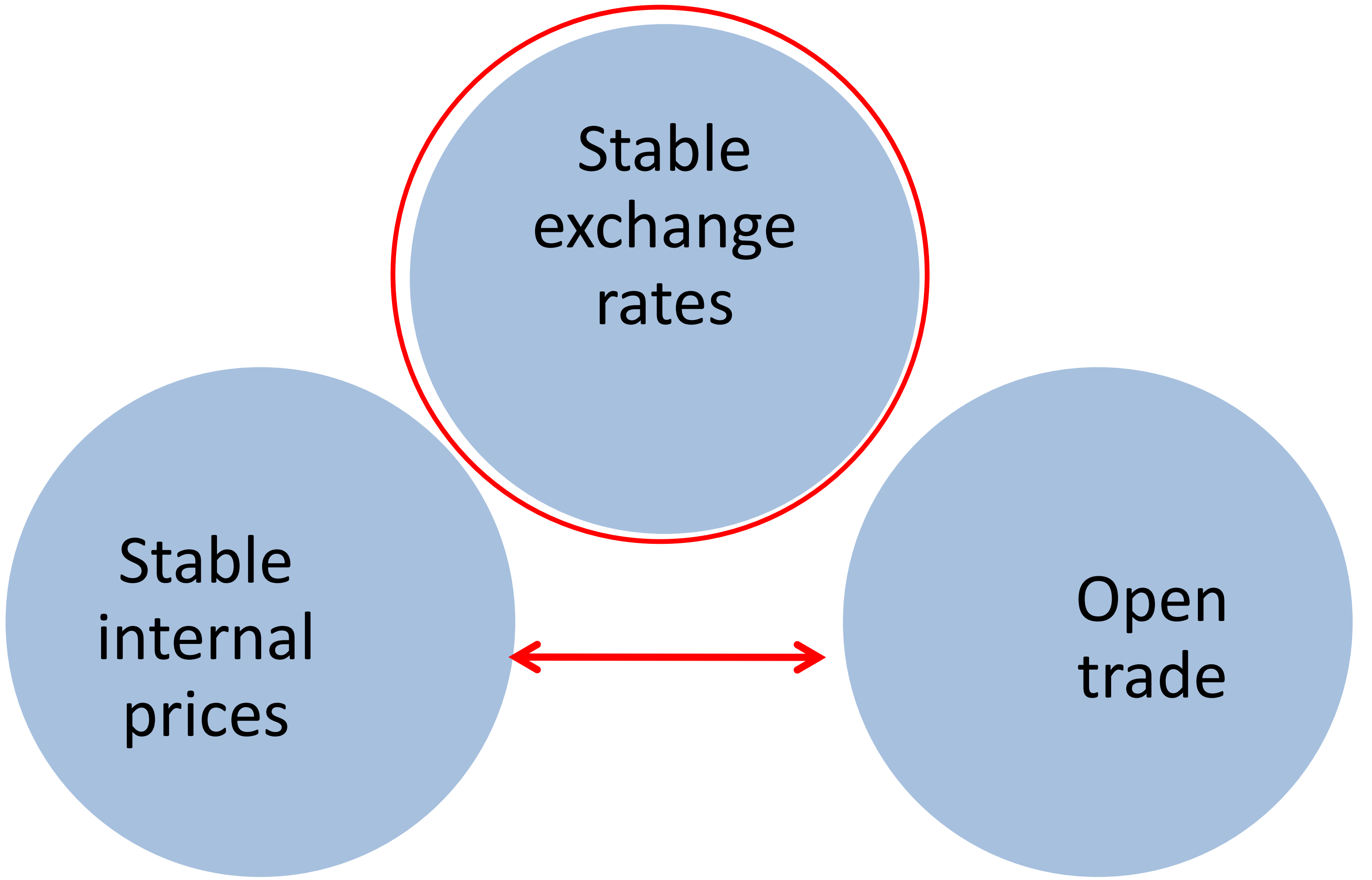
Historical evidence



The Trilemma



The Trilemma



Max Corden

- “the inability to use the exchange rate as a policy instrument provides an incentive to impose or increase restrictive trade policies at times of crisis, and thus leads to protectionist measures which often fail to be reduced when the short-term crisis is at an end”

2008-09 Crisis

Number of Countries that Implemented Discriminatory Trade Policy Measures since 2008

Source: authors' calculation based on Global Trade Alert.

James Meade (1955)

- “free trade and fixed exchange rates are incompatible in the modern world, and all modern free traders should be in favour of variable exchange rates.”

Other evidence

- Great Depression
  - Eichengreen & Irwin (2010), Irwin (2012)

- Strong dollar in early 1980s

- Real exchange rate and antidumping
  - Knetter & Prusa (2003), Bown & Crowley (2011)

- Real exchange rate and protectionist legislation
  - Broz (2010), Oakley (2011)

Figure 4: Protectionist Steel Legislation in the House of Representatives and the REER of the U.S. Dollar

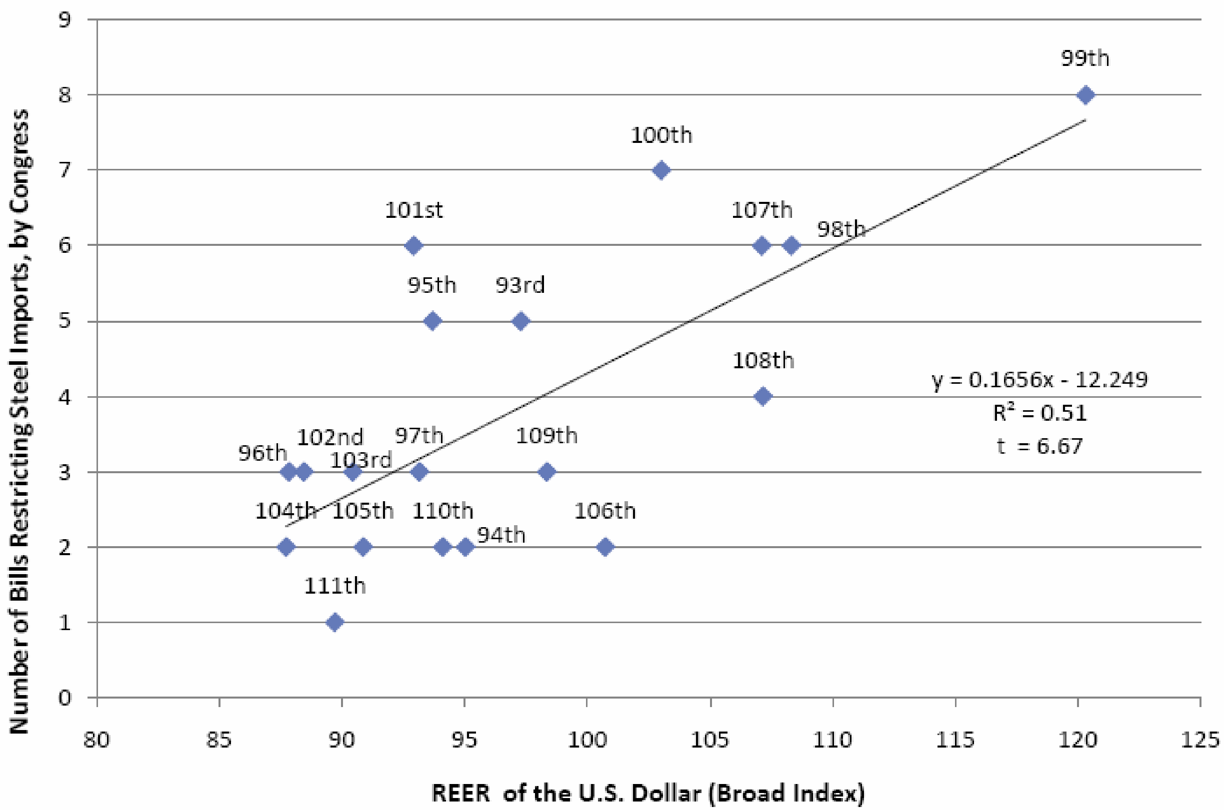
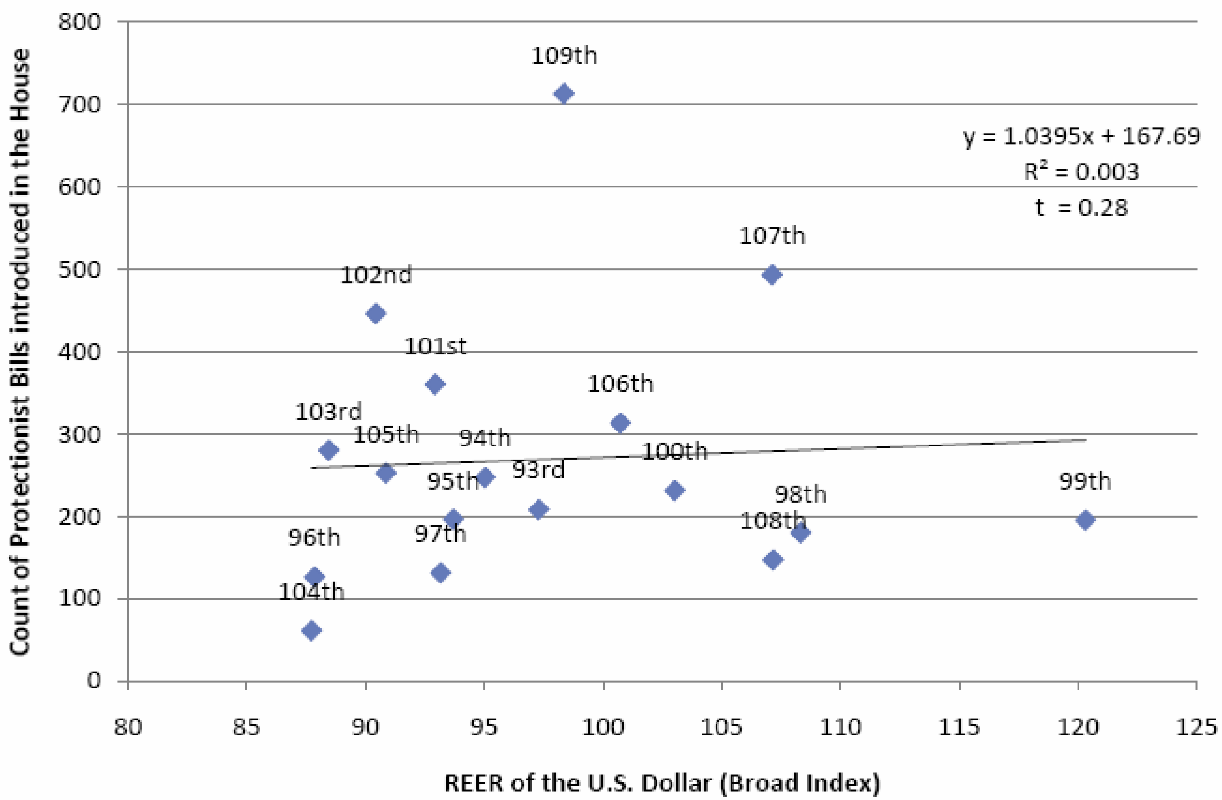


Figure 5: All Protectionist Trade Legislation in the House of Representatives and the REER



- Overvalued currency
  - Export tax and import subsidy
  - contract domestic production of tradables

  → protectionism at home

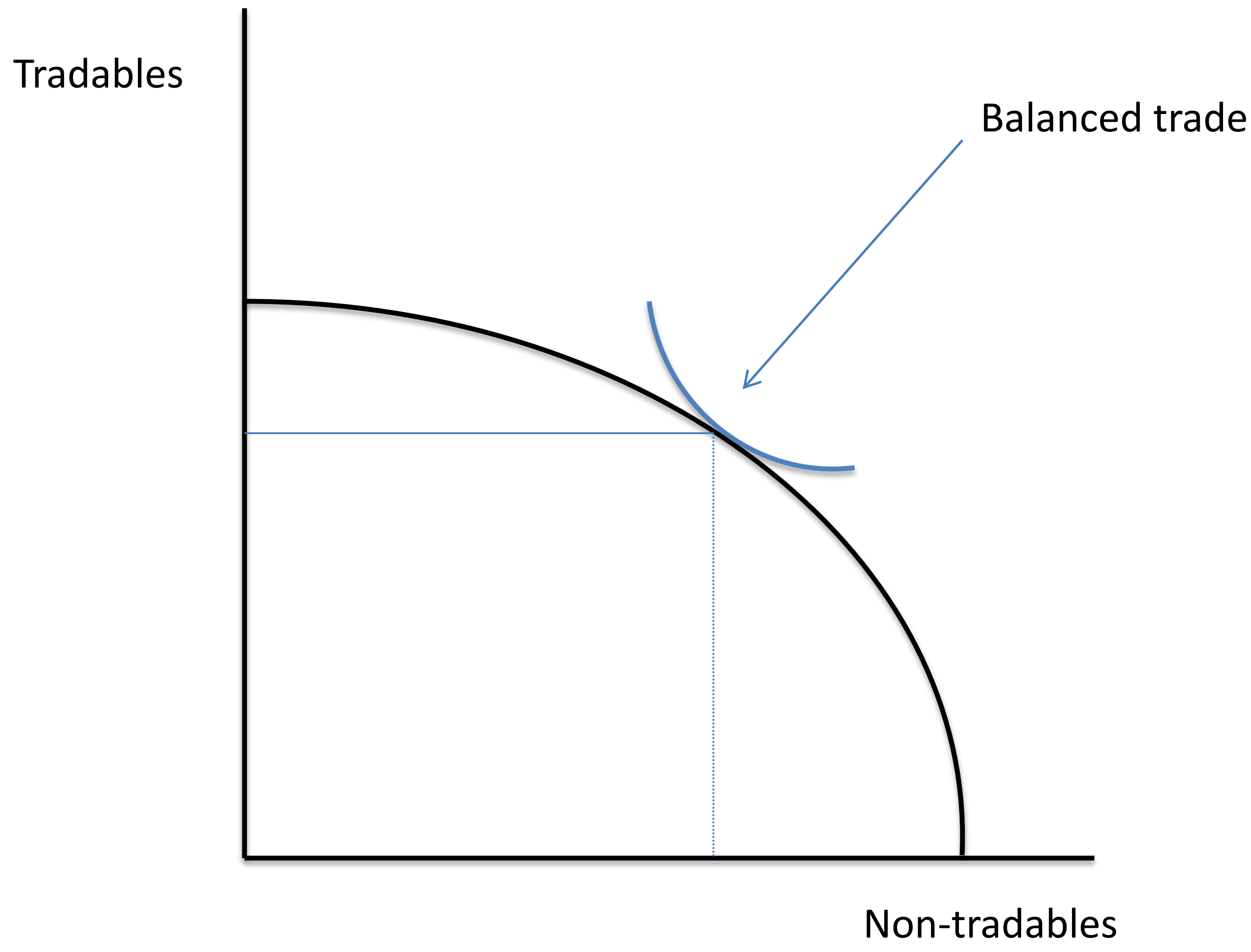
- Undervalued currency
  - Expand production of tradables

  → Protectionism abroad?

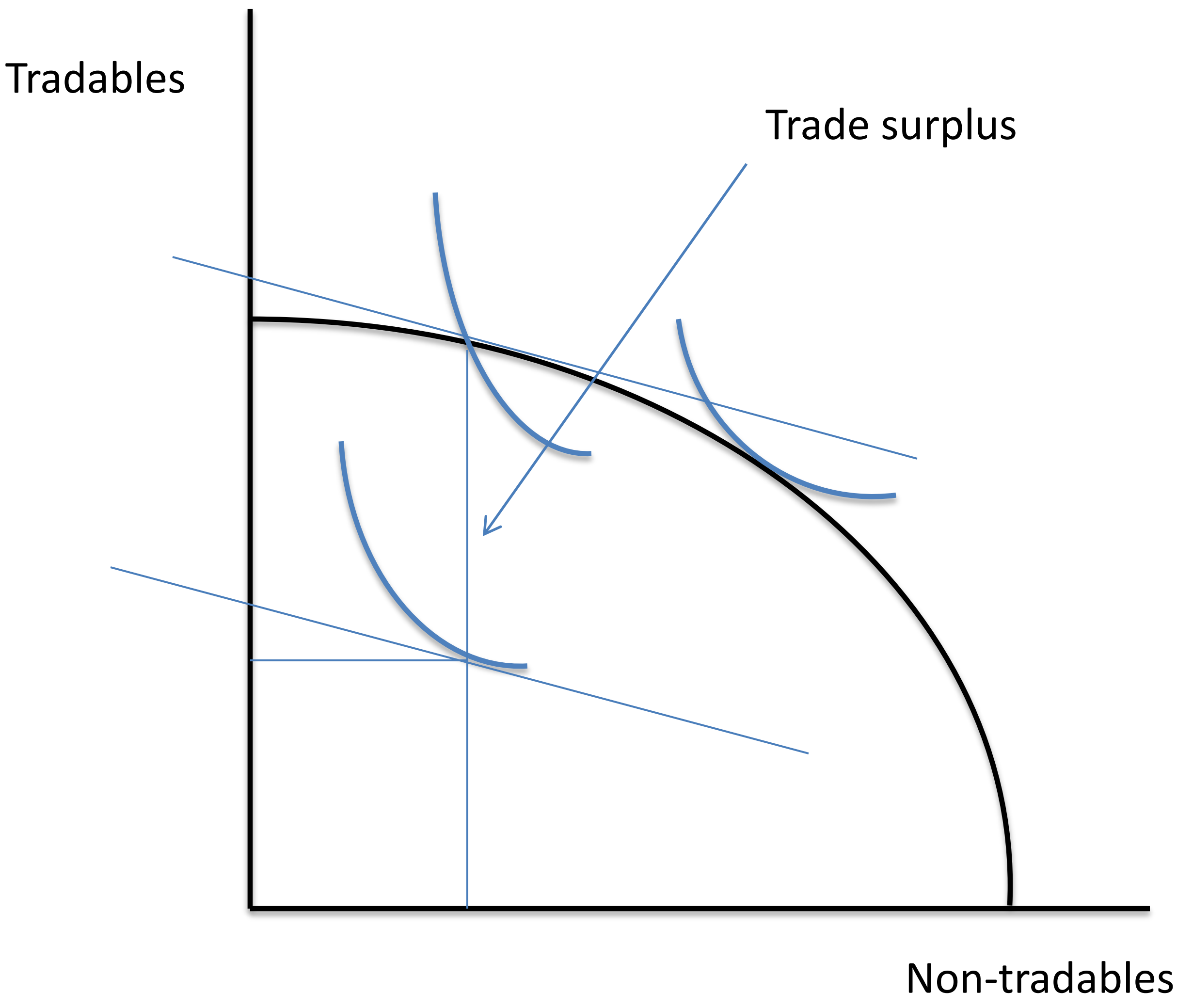
Exchange rate protectionism

- Max Corden (1982)
  - Undervalued exchange rate
  - Protect tradables relative to non-tradables
  - Also distorts resource allocation

Salter diagram



Salter diagram



Why undervalue?

- Rodrik (2008)
  - Undervalued currencies → faster growth
  - Overvalued currencies → slower growth
  - Externality in tradables sector?
  - Undervalued defined as deviation of real exchange rate from PPP

INTERNATIONAL MONETARY FUND

WORLD TRADE ORGANIZATION

IMF provisions

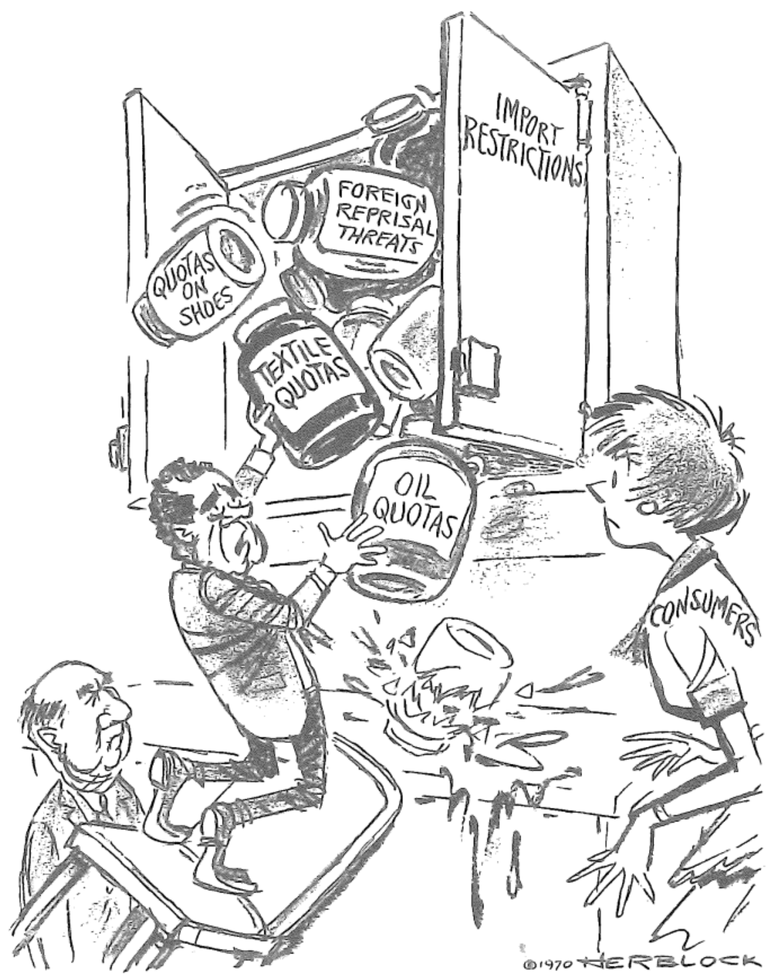
- Articles of Agreement:
  - "avoid manipulating exchange rates or the international monetary system to prevent effective balance of payments adjustment or to gain an unfair competitive advantage over other members."

- 1977 decision
  - "protracted large-scale intervention in one direction in exchange markets" evidence of currency manipulation

WTO provisions

- Article 15:
  - Countries “shall not, by exchange action, frustrate the intent of the provisions” of the agreement
  - Meaning exchange controls, not exchange rates?
- Article 23
  - Nullification and impairment
- Subsidies and Countervailing Measures

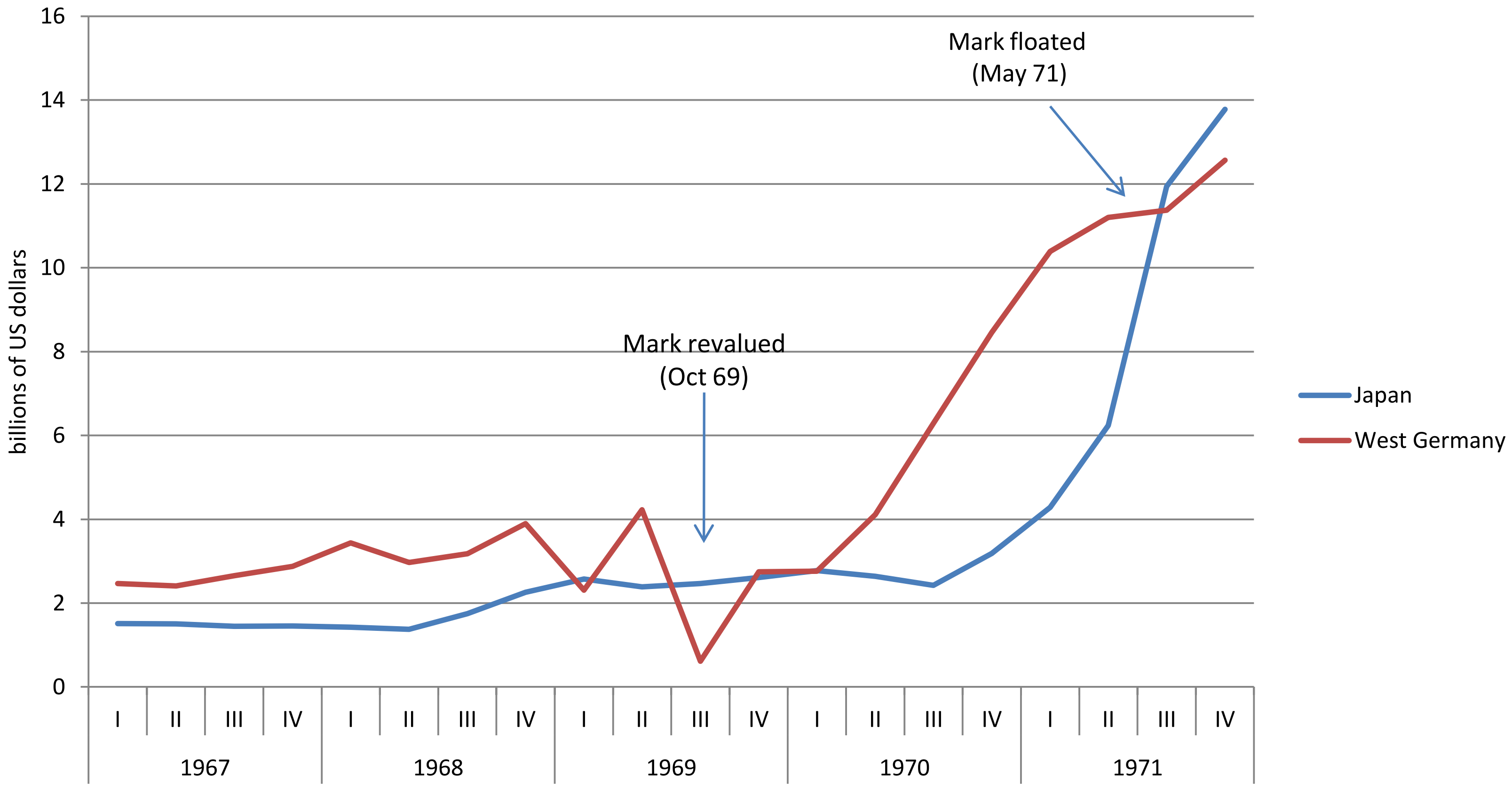
Another history lesson



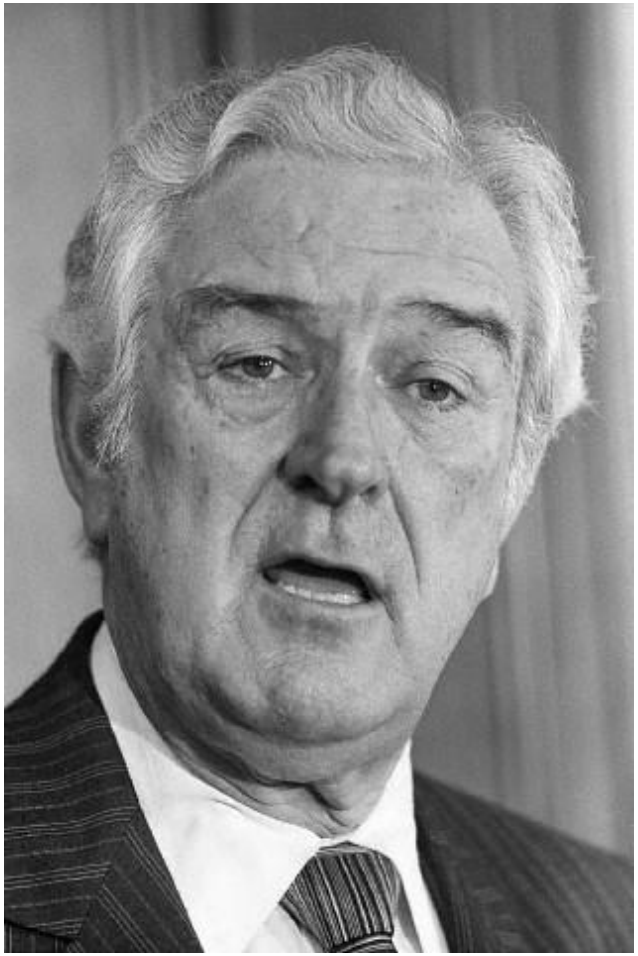
"I JUST OPENED IT TO GET SOME JAM FOR MY FRIEND STROM."

7/29/70

Resisting revaluation: foreign exchange reserves



Treasury Secretary John Connally



- “Foreigners are out to screw us. Our jobs is to screw them first.”
- “The dollar may be our currency, but it is your problem.”

Nixon shock of August 1971
10% import surcharge


"All the News That's Fit to Print"

The New York Times

LATE CITY EDITION

VOL. CXX .. No. 41,477

NEW YORK, MONDAY, AUGUST 16, 1971

15 CENTS

NIXON ORDERS 90-DAY WAGE-PRICE FREEZE, ASKS TAX CUTS, NEW JOBS IN BROAD PLAN; SEVERS LINK BETWEEN DOLLAR AND GOLD

A WORLD EFFECT
Unilateral U.S. Move Means Others Face Parity Decisions

REACTION MIXED
Mansfield Pleased by Wage-Price Action—McGovern Critical

SPEAKS TO NATION
Urges Business Aid to Bolster Economy—Budget Slashed

Hate Pursues British Troops in Ulster

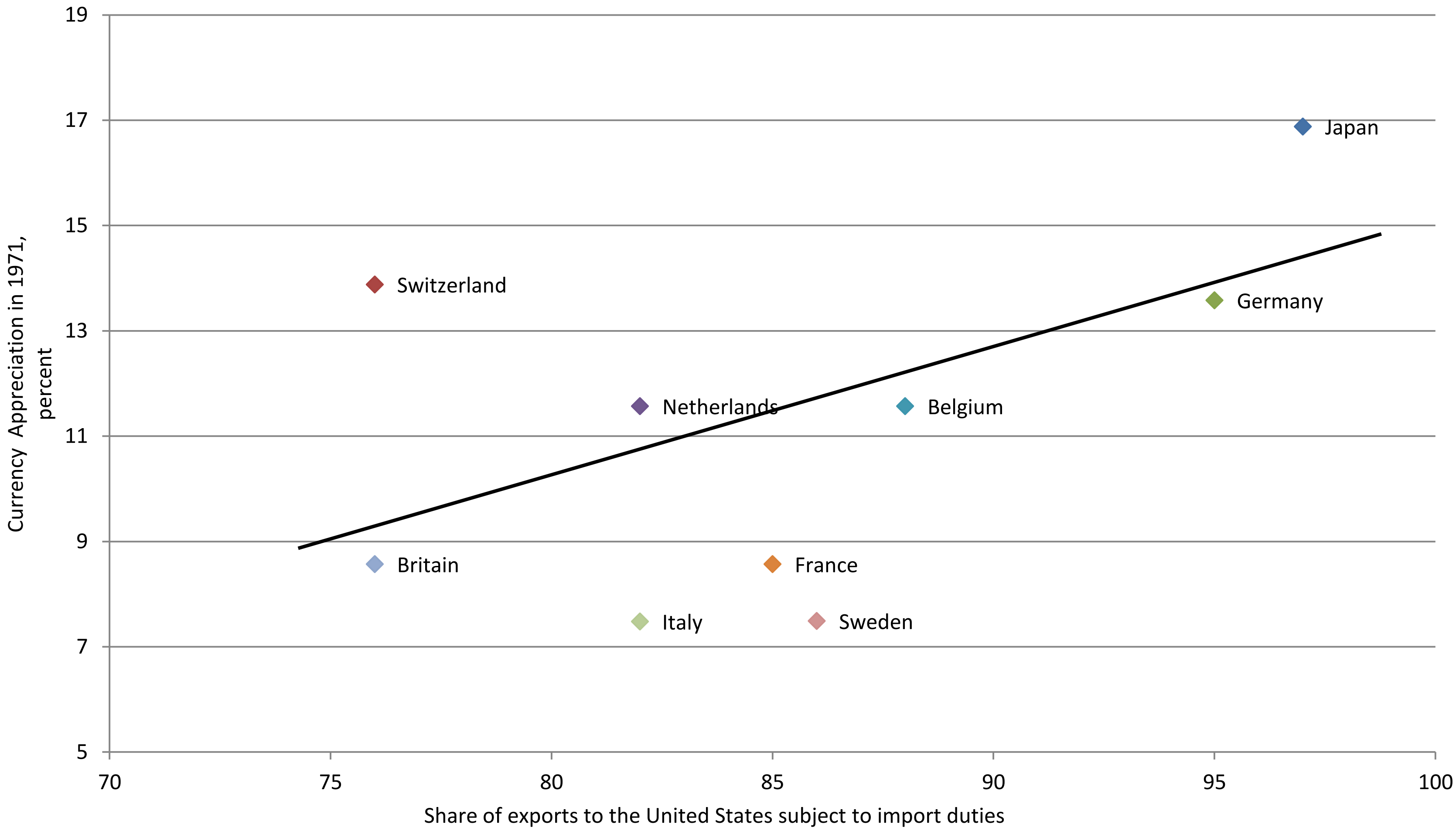
Highlights of Nixon Plan

U.S. WARNS HANOI OVER DMZ ACTION

Suburbs Abandoning Dependence on City

Autos Called Major Test; Lower Car Prices Likely

Coincidence?



- Article XV
  - Establishes GATT deference to IMF on all exchange rate matters
- IMF
  - “justified as a means of improving the U.S. balance of payments only until it is possible to supplant it by effective action in the exchange rate field”
- GATT
  - “inappropriate given the nature of the United States balance-of-payments situation and the undue burden of adjustment placed upon . . . the trade of other contracting parties.”

Smithsonian agreement

A CHRISTMAS APPEAL: NEW YORK'S NEEDIEST CASES: SECTION 2

"All the News That's Fit to Print"

The New York Times

LATE CITY EDITION

VOL. CXXI . No. 41,602 — NEW YORK, SUNDAY, DECEMBER 19, 1971 — 50 CENTS

SECTION ONE

10-NATION MONETARY AGREEMENT REACHED; DOLLAR IS DEVALUED 8.57%; SURCHARGE OFF

Pakistan Calls Bhutto to Form Regime With New Charter

YAHYA DENOUNCED

Approval by President of Cease-Fire Spurs Demonstrations

By MALCOLM W. BROWNE

REDISTRICTING BILL HELPFUL TO G.O.P. PASSED IN ALBANY

Democratic Senators Score Measure as Gerrymander—Assembly Debate Heated

By WILLIAM E. FARRELL

NIXON HAILS PACT

He Makes a Surprise Appearance—Gold Goes to $38

By EDWIN L. DALE Jr.

REPORTS ON TALKS WITH NIXON: Zulfikar Ali Bhutto, Pakistani Foreign Minister, in Washington yesterday.

ANNOUNCING MONETARY MOVE: President Nixon speaking at the Smithsonian Institution in Washington. At right is Karl Schiller, Finance Minister of West Germany.

President Tells Pakistani Of Concern for Stability

By BERNARD GWERTZMAN

H.U.D. TO GIVE POOR FUNDS FOR HOMES

System of 'Allowances' to Buy or Rent Housing Will Be Tested in 6 Cities

By JACK ROSENTHAL

Sato Welcomes Accord But Sees Serious Impact

By RICHARD HALLORAN

PACT ENCOURAGES BUSINESS EXPERTS

Improved Economic Climate and Restored Confidence Are Expected for U.S.

By DOUGLAS W. CRAY

States Curtailing Polluters On Pollution Control Units

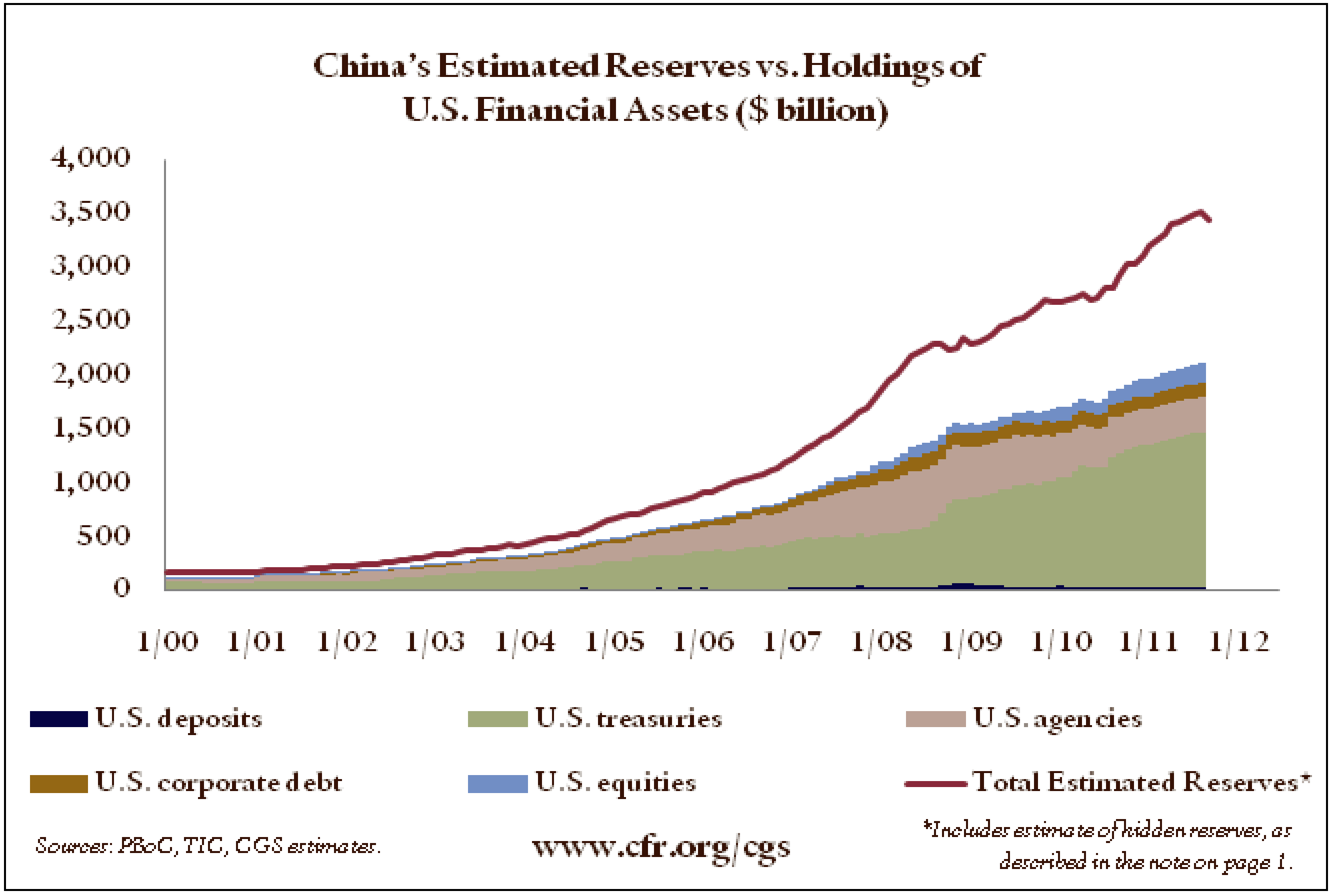
- "the most important monetary agreement in the history of the world"

–Richard Nixon

Volcker on the Nixon shock

- “The conclusion reached by some that the United States shrugged off responsibilities for the dollar and for leadership in preserving an open world order does seem to me a misinterpretation of the facts. . . . The devaluation itself was the strongest argument we had to repel protectionism. The operating premise throughout was that a necessary realignment of exchange rates and other measures consistent with more open trade and open capital markets could accomplish the necessary balance-of-payments adjustment.”

China



China's Estimated Reserves vs. Holdings of
U.S. Financial Assets ($ billion)
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1/00
1/01
1/02
1/03
1/04
1/05
1/06
1/07
1/08
1/09
1/10
1/11
1/12
U.S. deposits
U.S. treasuries
U.S. agencies
U.S. corporate debt
U.S. equities
Total Estimated Reserves*
Sources: PBoC, TIC, CGS estimates.
www.cfr.org/cgs
*Includes estimate of hidden reserves, as described in the note on page 1.

Tariffs can persuade Beijing to free the renminbi

By Robert Aliber
Published: December 7 2009 20:43 | Last updated: December 7 2009 20:43

International payments arrangements are at an impasse much as they were in the summer of 1971, when there was widespread recognition that trade imbalances were far too large.

Then, the values of the Japanese yen, the French franc and the British pound were frozen to the US dollar; no country wanted to take the initiative to realign currencies. Today the problem is the unsustainable US-China trade imbalance. China's exports of manufactured goods have increased at a rapid rate, but the adjustments that would have led to comparable increases in imports have not occurred because China **refuses to budge** in allowing the value of the renminbi to increase.

Beijing's unprecedented accumulation of $2,000bn (€1,350bn, £1,225bn) of **US dollar securities** is the product of its "beggar-thy-neighbour" policy in importing jobs. The undervaluation of the renminbi has the same impact as an import tariff of 50 or 60 per cent.

A principal motive for the cheap renminbi policy is Beijing's concern that domestic unemployment will increase if the currency strengthens. Moreover, the low value for the currency facilitates China's move up the technological ladder, since imports of high-technology products from the US, Japan, Germany and other industrial countries are stalled while domestic production of similar goods is increased.

China's large holdings of US securities have enhanced its political clout and given it the standing to comment on US interest rates and the US fiscal deficit. And as long as China's trading partners are focused on the huge **trade surplus**, their other demands on Beijing are modest.

Americans have been patient – too patient – in accepting the loss of several million US manufacturing jobs because of China's determined pursuit of mindless mercantilist policies. The absurdity of the current situation is that China's currency protectionism has more of an impact on American manufacturing employment than US fiscal policy.

The US can help China make the necessary adjustments toward a reduction in imbalances by adopting a uniform tariff of 10 per cent on all Chinese imports, based on their values when they enter the US. Six months after the establishment of this tariff, the rate would increase by one percentage point a month until the Chinese trade surplus with the US declines to $5bn a month.

The New York Times

September 29, 2010

Eye on China, House Votes for Greater Tariff Powers

By DAVID E. SANGER and SEWELL CHAN

WASHINGTON — The House of Representatives sent an unusually confrontational signal to the Chinese leadership on Wednesday, voting overwhelmingly to give the Obama administration expanded authority to impose tariffs on virtually all Chinese imports to the United States.

The move, which could affect more than $300 billion in goods this year, was made in retaliation for the country's refusal to revalue its currency.

The bill passed 348 to 79 and included the support of 99 Republicans, a highly unusual bipartisan vote at a time when large numbers of House Republicans have rarely joined Democrats on an economic issue. House Speaker Nancy Pelosi, who has long pressed China trade issues, personally gaveled the vote closed. Nonetheless, prospects for Senate approval are unclear.

The action was intended to hand President Obama new leverage in what has become a major flashpoint between the world's two largest economies. While tariffs have been placed on specific products, like steel and tires, because of evidence of unfair export subsidies, the threat of putting sizable tariffs on a country's entire line of exports to the United States is highly unusual — and, some argue, of dubious legality under international trade law.

It reflects both election-year politics over a loss of American jobs and great frustration over unfulfilled promises by China to allow its currency to rise in value, which would make Chinese goods less competitive in the United States.

The Obama administration never took an emphatic position on the legislation and some officials say that, if passed, signed into law and challenged at the World Trade Organization, it might well be struck down. But this is a case where the symbolism may be more important than the legal niceties, and for that reason, the White House has been of two minds about the bill.

Mr. Obama has tried to use the rising public anger over China's trade advantage to argue to Chinese leaders that the United States would no longer tolerate deliberate currency manipulation, a point Mr. Obama made repeatedly in a meeting last week with Wen Jiabao, China's prime minister. He did so again on Wednesday in Des Moines, where one businessman asked the president about the issue.

"The reason that I'm pushing China about their currency is because their currency is undervalued," he said, adding: "People generally think that they are managing their currency in ways that make

October 11, 2011

Senate Jabs China Over Its Currency

By JENNIFER STEINHAUER

WASHINGTON — A bipartisan cross-section of Congress seems to agree that China manipulates its currency in ways that make it harder for many American manufacturers to compete. Where they cannot find alignment is on how best to address that problem, while maintaining America's relationship with its biggest lender and a major trading partner.

On Tuesday, the Senate passed a bill that would require the Treasury Department to order the Commerce Department to impose tough tariffs on certain Chinese goods in the event of a finding by the Treasury that China was improperly valuing its currency to gain an economic advantage.

The measure passed 63 to 35, with 16 Republican votes, an unusual dynamic in the Democrat-controlled Senate. It enjoyed rare support from members of both parties despite the strong disapproval of Senator Mitch McConnell of Kentucky, the Republican leader, who pressed his party colleagues to vote against it.

At the same time, House Republicans have made it clear they have no intention of bringing the currency measure to the floor, and the White House has given it a chilly reception, fearing it too blunt an instrument against China, which has slowly moved to increase its currency value.

This is a reverse of last year when a similar, though less stringent, measure passed the House and the Senate neglected to take it up, preferring its own bill. Democrats are now trying, against political headwinds, to force a vote on that same measure against the desires of Republican leaders.

THE WALL STREET JOURNAL.
WSJ.com

MARKETS | NOVEMBER 16, 2011

Debate on Yuan Manipulation Moves to WTO

By MATTHEW DALTON And DIANA KINCH

The World Trade Organization in the coming months will examine whether international trade rules can be used to punish governments that manipulate the value of their currencies, a debate driven by Brazilian anger over China's policy of keeping the yuan pegged to the U.S. dollar.

The review opens a new front in the debate over China's dollar peg, making the Geneva-based arbiter of trade disputes the latest international institution to tackle global angst over the issue. It comes as Western companies have started to make the argument that the peg amounts to an unfair export subsidy that should be fought with tariffs on Chinese-made goods.

More

- **Data Help China's Case on Yuan**

Brazil's government said Monday that the WTO had agreed to discuss the matter. The WTO on Tuesday confirmed that its 153 government members have agreed to hold a meeting on the topic, probably in the first half of next year, according to WTO spokesman Keith Rockwell.

Governments are also likely to discuss the issue at a meeting next month of trade ministers in Geneva, Mr. Rockwell said.

Brazil, which first raised the issue with the WTO in September, alleges the yuan's undervaluation is gravely damaging Brazil's industrial base. Though Brazil's economy is growing relatively quickly overall, the country's industrial production is now falling, partly due to a tide of cheaper Chinese goods.

"Exchange-rate factors are devastating the productive structure of Latin American countries," Brazilian trade and industry minister Fernando Pimentel told reporters this week.

November 2011

Peterson Institute for International Economics

The Current Currency Situation

William R. Cline and John Williamson

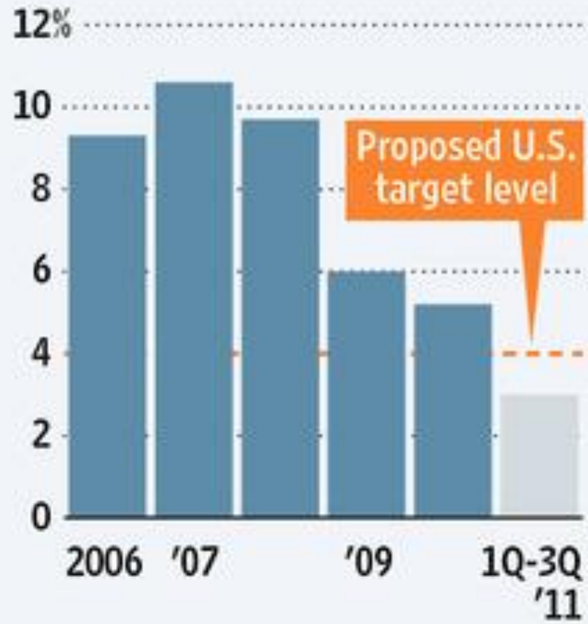
The dollar remains overvalued by about the same amount as in April, about 9 percent. In contrast, the Chinese RMB is substantially closer to equilibrium, with its undervaluation falling from 16 percent to 10.6 percent.

FEER

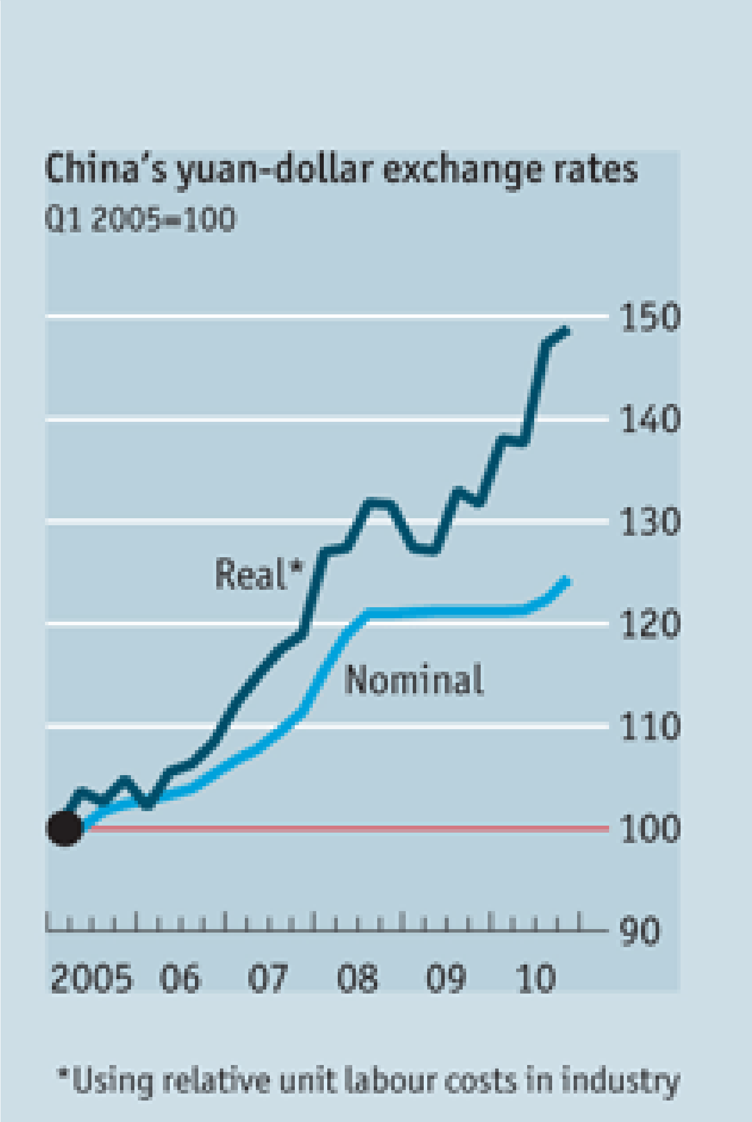
- “Fundamental equilibrium exchange rate”
  - Rate at which external imbalances and capital flows can be indefinitely sustained
  - Current account deficit +/- 3% of GDP

On Target

China's current-account surplus as a percentage of GDP



Sources: State Administration of Foreign Exchange; National Bureau of Statistics; Wall Street Journal calculations


China's yuan-dollar exchange rates
Q1 2005=100
150
140
130
120
110
100
90
Real*
Nominal
2005
06
07
08
09
10
*Using relative unit labour costs in industry

Problems

- How do we know if a currency is “undervalued”?
  - Limits on accumulation of foreign exchange reserves?

- Can governments control the real exchange rate?

- What about capital account liberalization as a substitute?

Conclusion

- Trade economists should pay attention to exchange rate policies
- Exchange rate misalignments & disputes can lead to trade policy interventions
- If the IMF & WTO don’t provide guidance, countries will act unilaterally