Obstfeld and Taylor

- Capital mobility
- Fixed exchange rate
- Domestic monetary policy
  - cannot have all three at the same time (theoretical result)
- Countries tried to have all three and failed (empirical result.)
  - had to abandon something
    - Germany abandons capital mobility
    - UK abandons fixed exchange rate
    - US abdicates domestic monetary policy
- There was a big recession in 1921 but not a depression. Why no depression?
  - They had floating exchange rates.
    - did not return to gold standard right away
  - Things did not work well during these times
    - Hyperinflations - perhaps floating exchange rates give too much freedom?
- Why no depression earlier? We were on the gold standard then.

- In pre-war period, not having domestic monetary policy was not a big deal.
- perhaps there were not any huge shocks
- maybe wages were flexible prior to the war - recent work has debunked this hypothesis.

abandoned:	1931	1933
Capital mobility	Germany	Germany
fixed exchange rate	UK	US, sterling area
domestic monetary policy	US	gold bloc

- The Germans did not devalue the mark in the 1930's - why? (Even though they didn't believe in markets) Had currency controls
  - Effectively, they were devaluing their currency.

Evidence for well-functioning markets

capital accounts $\frac{CA}{NI} = \frac{CA}{Y}$ national income

- Capital markets - more foreign investment if mkts work - returns would be higher in developing countries
  - Large capital flows prior to 1914 in Canada, Australia, Argentina
  - resource-rich, developing countries
    - small populations ⇒ small national income - perhaps we shouldn't deflate using national income.

- Hypothesis 1: prior to 1914, there were well-functioning capital markets
- Hypothesis 2: the capital went primarily to British colonies
- Interest rate parity was small.
  - $i = i^* + E[\varepsilon'/\varepsilon]$
  - How do they get around this? Forward exchange markets.
    - $\frac{\varepsilon}{f} i = i^*$ where f - forward rate
    - covered interest parity
    - why can't they use this as their measure?
      - forward markets didn't exist.
      - They used bills of exchange as a proxy for the forward exchange rates: $\frac{\varepsilon}{b} = (1 + i^*)$
        b: bill - includes domestic interest rate.
  - They find that the means did not fluctuate much
- Real interest rates - why would you expect real interest rates to be equalized

- There has to be enough capital flow to equalize real interest rates.
- Table 3: They find that the std. dev. rises in the 1920's, but this is being driven primarily by Belgium, a member of the gold bloc.
- How general are these results? They seem to be driven quite a bit by outliers.

Temin:
- High wages due to unions led to high incomes and high unemployment.
- 1937- things collapse again. Why doesn't this lead to another depression? The US had flexible interest rates.

Does Gordon see problems with capital?
- Gordon sees "one big wave"- high growth in total factor productivity.
- Why is he doing all his data work?
  - controlling for other things causes the "one big wave" to be smaller than it appeared at first glance.

- equipment versus structures
  - equipment levels relative to structures rose. (capital is becoming more "equipment oriented.")
    - smaller machines, less structure needed. How does this change affect productivity?
      - equipment depreciates much more rapidly - can upgrade
        - get more services per dollar invested in equipment
- In the end, Gordon still has "one big wave," but it is shifted a little bit.
- What is the source of this one big wave? Four big inventions. (reminiscent of the industrial revolution.)
  - Why does this wave go away?
    - perhaps it went away because of a shock to the oil prices.