War and Peace

M&B 25, 26

Wartime seigniorage, inflation

- Civil War
- WWI
- WWII
- Vietnam

Mechanisms differed, influenced banking policy

Multiple post war options

- Deflate to prewar P
- Stop Inflating
- Continue, accelerate inflation
Postwar Options after wartime \( \pi \).

- **Deflate**, restore prewar std, P level.

  \[ \Rightarrow \text{Postwar depression} \]
  \[ \pi^a > 0, \text{ but } \pi < 0 \]
  \[ \Rightarrow \text{Negative seigniorage} \]
  
  **Civil War, WWI**

- **Stop inflation**, stabilize \( P \) at new level

  \[ \Rightarrow \text{devaluation, recession} \]
  \[ \pi^* > 0, \text{ but } \pi = 0 \]
  \[ \Rightarrow \text{Seizure terminated} \]
  
  **WW II**

- **Continue inflation** \( \Rightarrow \) delays recession

  \[ \Rightarrow \text{Continuous seigniorage} \]

  \[ \Rightarrow \text{Permanent } \pi \text{ or postponed recession,} \]

  \[ \Rightarrow \text{permanent fiat } M. \]

**Vietnam**

**Until Volcker Credit Crunch**

\( \circ 1979-82 \)

**Dramatically slowed } \pi \).
Options restricted by gold (or silver) standard

- M+8 ch. 3.

1834-1933, US mostly on gold

$20.67/oz, de facto or legally.

except Greenback Std.

1862-1879.

Going into Civil War (1861-65)

Much of Currency was Private Bank Notes

- Demand obligations payable in
  specie (gold or silver coin)

- Kept only Fractional reserves

- All State chartered,
  restricted to home state.

- Notes circulated at a discount
  in other states, cities.
Civil War Era, 1861-1879

US Price Level, 1784-1992 (1982-4 = 100, Ratio Scale)
Civil War 1861-65

- US Treasury pays expenses
  with US Notes (Greenbacks)

- 1861 - Redeemable for Gold at Treasury
  like Bank Notes

- 1862 - Redemption suspended,
  made Legal Tender for debts.
  Suspension continued to Resumption of 1879

  ➞ Greenback Stol, 1862-1879.

- Direct Inflationary Finance by Treasury
  ➞ P↑ 14.2 2/4%, 1861-65.

- But - Much of C was still State Bank Notes.
  ➞ Backed by State, not Federal bonds
  ➞ Reduced D for Greenbacks

  Federal govt wanted private bank notes to
  be backed by US bonds instead.
Created National Banks (NB)

- Federal charters
- Free Banking
- Unit Banking
  - No interstate (or intrastate) branching despite Fed. charter.
  - (Intrastate later allowed per state rules)
- Could issue National Bank Notes
  - Liability of individual bankers
  - Uniform design, except for bank name
  - Obtained from Comptroller of Currency in US Treasury Dept. Regulated NBs.
  - Par redemption required at any NB, if solvent.
  - Uniform National Currency
Nat'l Bank Notes could

- NBs req'd to hold $100 in US Treasury bonds per $90 of NB Notes issued.
  ⇒ lower i for Treasury.

- Bonds kept by "Comptroller of Currency" for NB until notes redeemed,
  - to prevent sale, secure notes.

- Interest on bonds ⇒ NB ⇒ Shareholders
  less 0.5% tax ⇒ Treasury

- Provided supplemental seigniorage
  - low i. for US Trans.
  - 0.5% tax
  - But less efficient than Greenbacks or VR Notes
    = interest-free loan.
  - Had to compete w/ state notes initially

- Prohibitive 10% tax on State Bank Notes
  - Passed 1865, implemented 1866.
  - Stamped out state bank notes
  - (Repealed 1976)
Postwar Deflation Required to Restore
Prewar Std.

Contraction Act of 1866 -

- Retired Greenbacks @ up to
  $4 M /mo

  ⇒ rapid deflation, negative seigniorage

- Repealed 1868

  ⇒ slow deflation as economy
  grows, NA deflation,
  \(-3.3\% \text{ /yr, 1865-1879.}\)
  Greenbacks frozen @ $347 M
  after peak of over $400 M,
  CIRculated into 1950s.

- Resumption 1879

  Gold Stays $20.67/oz

  Prewar standard restored,
  even strengthened
  (by elimination of silver)
NB Notes 1863–1935

Large portion of C

"Uniform National Currency"

- Par Redemption at any NB.
- Notes very safe

- But tried to declining National Debt

- "Inelastic Currency"

- Pyramided reserves.

- Suspensions of deposits
  1873, 1884, 1890, 1893, 1907
Federal Reserve System (1913 -)

- To provide "Elastic Currency"
- Mostly through Discount Window (C), originally.
- Rediscounting Commercial & Ag Loans. Treasuries ineligible at first.
- NB Notes replaced by F-R Notes, 1935.
- 40% gold reserve requirement originally.
  Rest in gold obligations.
  - 0 of commerce, Ag, via banks.
  - 0 later US govt.
20th Century

US Price Level, 1784-1992 (1982-4 = 100, Ratio Scale)
Gold Inflation

1896-1915, PE 2.67%/yr under Gold Stol.

- New gold discoveries
  - S. Africa
  - Alaska
  - etc

- New cyanide process for extracting gold from low-grade ores.

P above trend, 1915-1932

Back on trend, 1933-39.
World War I era, 1914-1933

- War in Europe 1914-1918
  - Printed M, suspended as US had in Civil War.
  - Gold → US, Pos ↑
  - IT ↑ → B ↑ → M ↑ → P ↑

- US in War 1917-1918
  - War Bonds made eligible at favorable Discount Rate
  - L ↑ → B ↑ → M ↑, P ↑
  - More efficient Int. Finance than NB Notes —
    - Fed gets interest on L, but bankers keep spread.
    - Less efficient than Greenbacks, OMO's.

- 1915-1920
  - 13.5% π /yr.
After WWI -

• Staying on Gold @ $20.67/oz with Europe back on Gold required deflating to pr war level

  ○ as after Civil War

  ○ (adj for ~2.6%/yr gold inflation)

• 2 Postwar Deflations

  ○ 1920-22

  ○ 1929-33
1920-22 Postwar Deflation -9% /yr

- 1919 Discount Rate on War Bonds↑

→ LB, B & M↑, PV↓

Sharp but brief recession
1920-22

- Price Plateau 1922-29

Europe mostly still off gold

Gold @ 20.67 /oz in US,
Yet P<sub>us</sub> >> P<sub>1914</sub>

Intl "Gold Exchange Std."
- Ch. 3

- Europe tries to get back on gold, 1924-30

Built up gold reserves.

⇒ ↓ pressure on prices in terms of gold,

$ Prices.
1929-33 Second Postwar Deflation

- $P_{1929}$ towards $P_{1934}$ - 8.5% / yr

- Related Post WWI Deflation as $R$ tries to return to gold,

  $\rightarrow$ Great Depression of 1930s.
  - UPI to 2.5% in 1932
    - SRPC

- 1933
  - $R_{1933} > R_{1934}$, but on pre-War trend.

  $\rightarrow$ Further Def or devaluation
  
  prob unnecessary

- NY Fed closes one of FDR inauguration, because gold reserves < 40% of FR Notes!

- Fed Qebs OMO powers 1932, starts discouraging L..
"Hoover-New Deal" 1929-32


- Hoover urged major employers to keep nominal wages up, in exchange for resisting unionization.

  \[ \text{Real wages} \, \bar{P} \text{ as } \bar{P} \, V \]

  \[ \Rightarrow \text{Niger U.} \]

- Also encouraged Trade Associations to cut production, keep prices up, act as cartel, relaxed anti-trust enforcement.

  \[ \Rightarrow \text{Output, employment } V, \quad \bar{P} \text{-adjustment delayed} \]

  \[ \Rightarrow S_{\text{goods}} > D_{\text{goods}}, \quad \text{Suppressed Deflation} \]
FOR New Deal 1933-WWII

- Mandatory Price Floors
  - Nat'l Indus. Recovery Act (NIRA)
    - mandatory industrial cartels
    - Output B, PA
  - Ag. Adjustment Act
    - Output B, PA
  - Interstate Commerce Commission
    - Set minimum rates, fares for
      buses, trains, buses, planes
    - Until Carter Admin deregulation.
  - Min. Wage
    - blocked wage cuts
  - Wagner Act
    - mandated unionization
    - on majority vote of existing workers.
  - etc

⇒ Suppressed Deflation through 30's.
  0.29% to WW II.
  - Draft removed 12 million men from
    labor force, U.S.
Domestic Gold Std. Abolished 1933

- Illegal to own gold coin, bullion until 1975 (Fed)

- Gold $35/oz in 1935
  - from $20.67 since Jackson
  - for Intl. transactions, mining, jewelry, dentistry etc.
  - until 1968-71

- Gold = US
  - But bought by Treasury
    - with tax proceeds,
      - not by Fed
  - So $B = 0, no "reflation"
    - to 1920's level
    - But tax burden
      - Gold parked in Ft. Knox, Ky

- FR Notes replace gold coin, certificates 1933
  - Nat'l Bank Notes 1935
WW II Era 1939-51

- War in Europe 1939-45
  1939-41: Gold → US as
  in WWII. Ius ↑, Pus ↑

- US in War 12/41-45
  OMO Primary Tool of Int Fin.
  \[ S↑ → B↑, MT↑, P↑ \]
  More efficient than WWII
  Rates on T-Bills pressed at
  low rates to 1951
  → Fed held almost all T-Bills,
  Treasury controlled $B by
  maturity choice.

- Price Controls Office of Price Admin OPA
  \[ \bar{P} < \bar{M}/\bar{m} \] → Shortages, rationing,
  black markets. "Suppressed Int."

- 1940-48:
  \[ \Pi = 6.7\% /yr. \]
Post WW II

- No Big Deflation

- Yet No Devaluation
  - $ already devalued in 1933-35, to $35/oz
  - World off gold, US off initially
    → Only moderate gold drain until 1960s.

- Korea (1950-53)
  - No Int. Finance

- Accord of 1951

  ends WWII interest peg policy.

  → Fed determines a B.

- 1952-65
  \[ \pi = 1.3\% \text{ /yr} \]
Vietnam Era 1965-1992

- US in war, 1965-73

- Treasury borrows → rt
  - Fed tries to prevent ↓
    ⇒ $\uparrow$, BT, MA, PP
  - Only weak π → feedback.

- Nixon Price Controls 1971-74
  - ⇒ Shortages, Suppressed π
    - No ration coupons
    - Gas shortage severe, Fall 73-
      Spring 74.

- US off gold, even Internationally,
  1968-71
  ⇒ Permanent FIAT M.
Postwar

- IT continued, accelerated to 1982

(1967-82)

\[ \text{IT} = 7.1\% /\text{yr} \]

More cumulative IT than WWII

Late 70's - r < 0!

- 1979 - Volker restricts $B, r, M$
  
  Let's ? ??
  
  \[ \Rightarrow \text{Credit Crunch of 1979-82} \]
  
  \[ \text{r ↑ over 6% - early 80's} \]

\[ \text{U ↑ over 10%} \]

\[ \text{IT ↑ after 1982} \]

- 1982 - Fed switches to i instrument,
  but with strong IT feedback.

- IT gradually down to 2.5% (1/98-9/03)
  
  But IT target not explicit.
Why was Great Depression so Great?

* 1929-33 deflation inevitable given
  * WWI II in Europe,
  * Europe's return to gold,
  * US @ $20.67/oz.

* But didn't have to be so abrupt:
  * Europe could have frozen M as US did after Civil War
  * Gradual global US deflation.
  * But US had no control over this.

* Debt Deflation (Bernanke), bank failures;
  * M contraction (Friedman) aggravated
    but didn't cause Depression.
  * Hoover, FDR suppressed deflation
    aggravated, prolonged Depression.

* Devaluation to $35/oz
  * Unnecessary by 1933
  * Created uncertainty over future P level.
  * Treasury gold purchased added tax burden.

No reason to recur.