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Any lessons for today? Exchange-rate stabilisation in Greece and South-East Europe between European aspirations and fiscal reality, 1841 - 1939

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Locating the current Greek debt crisis in time and place

- Focus on Greek financial crisis misses strong regional pattern…

  (reliance on outside financial help in some form since 2005: Albania, Bosnia Herzegovina, Bulgaria, FYROM, Kosovo, Serbia, Romania, Turkey)

- … and needs to be complemented by a historical dimension

  Key features of experience of Bulgaria, Greece, Romania, Serbia/Yugoslavia

  Short-lived adherence to Classical gold standard and interwar gold standard

  Monetary standard remains weak while in operation

  Financial supervision plays important role in joining and adhering to gold

  (only Romania 1890-1912 follows gold standard on its own)

Key question and main argument

Why were periods of stable exchange-rates so short?

- not a lack of conviction ("European aspirations" + economic rationale)…
- … but a result of weak fiscal institutions
- improvement of fiscal institutions mainly by foreign pressure

Clarification: stable exchange-rates before 1971 were the norm

"European aspirations": political, institutional factors vs. financial, economic factors

- Additional dimension to xr stabilisation in SEE: commitment mechanism in the presence of weak domestic institutions

  (←→ Kydland&Prescott 1977, North&Weingast 1989: domestic commitm.)

  Stathis Kalyvas 8th July 2015: "This is no longer about euro versus drachme but democracy versus drachme."
- explains why financial supervision has been grudgingly accepted in SEE - and even actively welcomed by some (Tuncer 2015)

Structure of today's presentation

- Documenting short duration & weakness of stable xr
- How to close budget deficits? Seigniorage vs. capital imports
- Testing for fiscal dominance in South-East Europe
- Some lessons for today

European aspirations vs. fiscal reality pre-1914

SEE countries all legislation gold standard legislation with the aim of stabilising their exchange-rates with England, France, Germany…

(Romania: 1867; Greece: 1868; Serbia: 1873; Bulgaria: 1881)

… but they do not implement their legislation

(Bulgaria: first gold coinage in 1894; gold: 6% of total coinage by 1913)

Why? Persistent budget deficits → need for seigniorage →

- coinage of cheaper coin (silver, copper alloys)
- Loans from bank of note issue

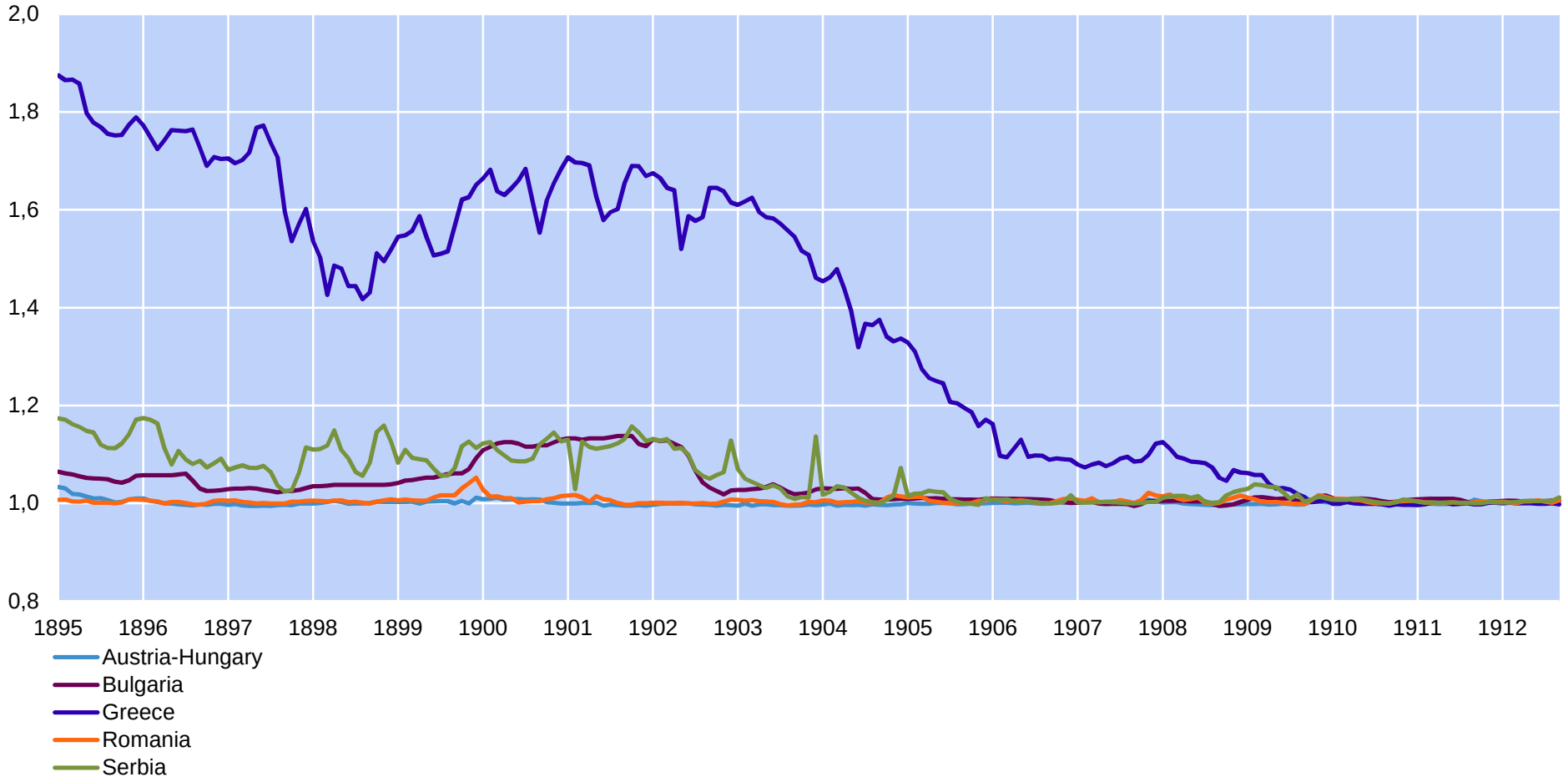
Monetary chaos in all four countries by mid-1880s

(Ottomar Haupt, Histoire monétaire de notre temps, Paris 1886)

Exchange-rate stabilisation in South-East Europe, 1895-1912

FIGURE I Deviation from Mint Parity for Five South-East European Countries, January 1895–September 1912

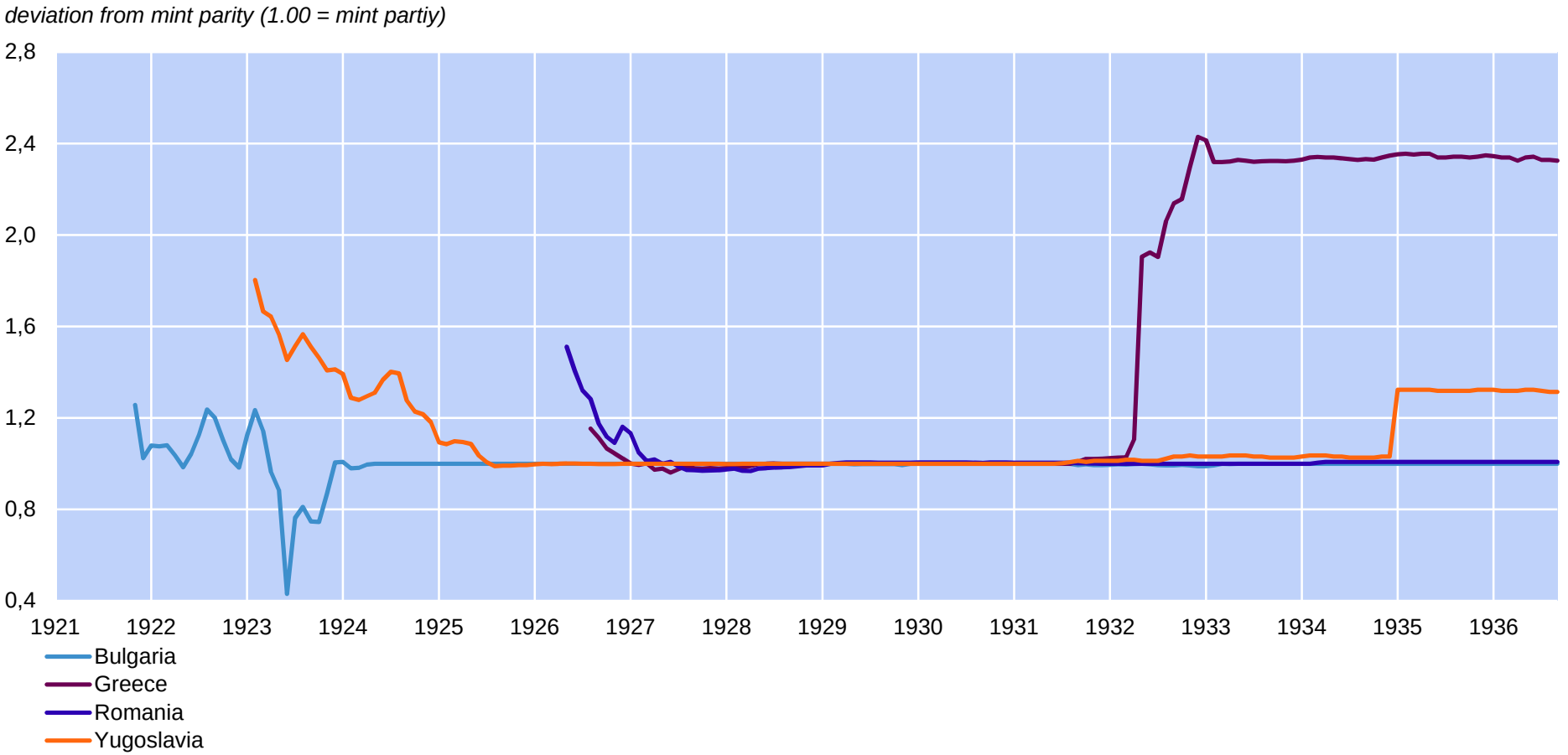
deviation from mint parity (1.00 = mint partiy)



Source: Morys (2014).

Exchange-rate stabilisation in South-East Europe, 1921-1936

FIGURE II Deviation from Gold Exchange Standard Parity for Four South-East European Countries, 11/1921–9/1936



Source: Morys (2014).

de facto / de jure adherence (Ø: 6y4m, 2y8m) short compared to S-Europe, CEE, Scandinavia

Duration of exchange-rate stabilisation (= gold standard adherence)

	Classical Gold Standard (1873-1914)	Interwar Gold Standard (1925-1931)
Western Europe (7) Austria(-Hungary), Belgium, France, Germany, Netherlands, Switzerland, United Kingdom	38 years	8 years 7 months
Nordic countries (4) (Denmark, Finland, Norway, Sweden)	41 years	5 years 5 months
Southern Europe (2) (Italy, Portugal)	22 years	3 years 6 months
South-Eastern Europe (4) (Bulgaria, Greece, Romania, Serbia/Yugoslavia)	9 years	2 years 8 months
Central and Eastern Europe (6) (Czechoslovakia, Estonia, Hungary, Latvia, Lithuania, Poland)	n.a.	6 years 4 months

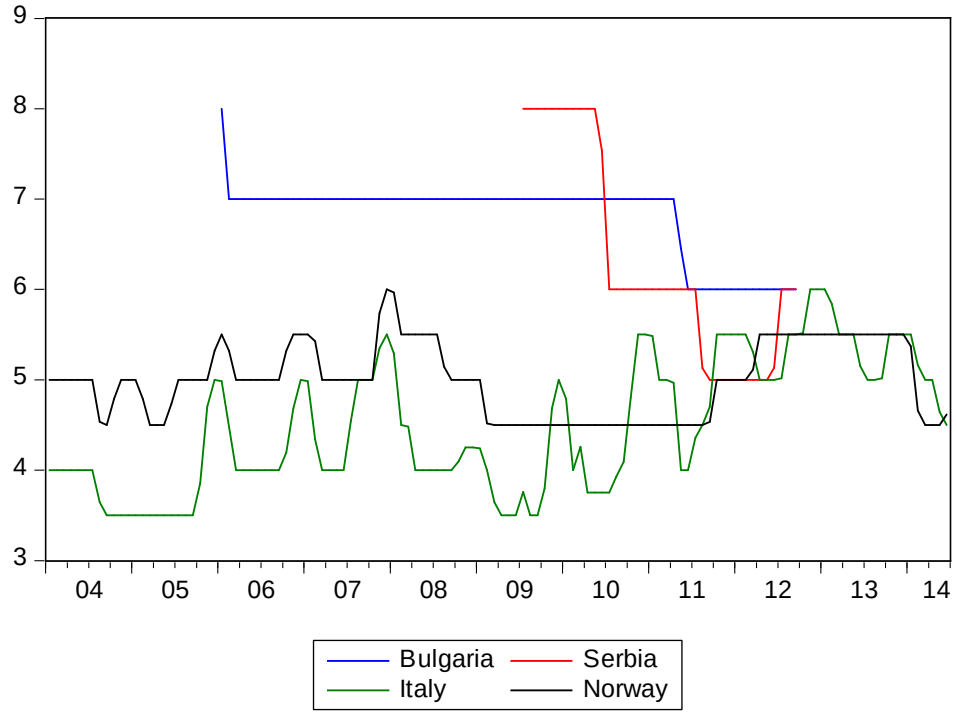
Weak gold standard adherence in SEE

- high discount rate, xr volatility
- Classical gold standard
  - only de facto adherence
    - (exception: Romania)
  - coin circulation of silver, copper
    - (less than 10% gold coin vs.
    - > 50% for core countries)
- High levels of depreciation between the two periods

Bulgaria	factor 26.7
Greece	factor 14.9
Romania	factor 32.3
Yugoslavia	factor 11.0

- Interwar gold standard
  - largely foreign reserves, little gold
  - (under League of Nations influence, creates problems after Sept. 1931)
  - early capital controls in Bulgaria

Bank rate on European periphery, 1904-1914



2. How to close budget deficits? Seigniorage vs. capital imports

- Fiscal policies pursued contradict monetary policy required to maintain exchange-rate link
- "fiscal dominance" of SEE countries, similar to Italy 1861-1998 (Fratianni&Spinelli 1997, 2001)
- "Fiscal dominance"

  government deficits condition money supply growth

  excessive money growth makes adherence to fixed xr-system short-lived

- government budget constraint

$$\underbrace{\Delta S_t}_{\text{increase in consolidated government debt}} = \underbrace{(G_t - T_t)}_{\text{budget deficit}} + \underbrace{TR_t}_{\text{seigniorage (revenue through issue of coins and notes)}}$$

"foreign debt" **"domestic debt"**

2. How to close budget deficits? Seigniorage vs. capital imports (con't)

3 ways to finance the budget deficit but limits to each of them

- capital markets: government debt crisis
- seigniorage: devaluation of the currency, inflation tax
- capital markets & seigniorage: potentially contradictory (currency crisis, debt crisis)

Costs and benefits of the 3 different options can change over time

Capital markets

- not open to newly independent countries
- closed during wartime (1912-1918: Balkan Wars & World War I)
- increasingly difficult access after onset of the Great Depression

Seigniorage

- Domestic resistance to devaluation/inflation tax
- Bond holder resistance: seigniorage & currency mismatch could lead to debt default

7 distinct phases, high regional synchronicity

1. **Autonomy / political independence – first bond issue: *seigniorage***

- Romania, Serbia and Bulgaria issue first bond in 1875, 1881 and 1887, respectively
- Greece re-enters international bond market after 1879 debt compromise

2. **Access to capital markets – financial supervision: *capital markets & seigniorage***

- Only international capital markets can satisfy financing needs
- Countries try to stabilise currencies yet seigniorage remains important
- Greece and Serbia default in 1893 and 1895, respectively, and enter financial supervision
- Bulgaria avoids default only by entering "voluntarily" into financial supervision (1902)
- Romania enacts gold standard legislation (1890)

3. **Financial supervision – War Period (1912-1918): *capital markets***

- Foreign lenders stabilise currencies in order to secure debt repayment
- Foreign lenders allow further use of capital markets (exception: Greece) but disallow seigniorage
- Bulgaria, Serbia and Greece join the gold standard in 1906, 1909 and 1912, respectively
- Romania relies on domestic commitment mechanism: gold standard

7 distinct phases, high regional synchronicity (con't)

4. War period: 1912-1918: *seigniorage*

- Capital markets closed
- large financial needs due to long war period (Balkan Wars 1912-1913) and heavy fighting

5. Post-war stabilisation: *seigniorage*

- Each country has its own reason for large financial needs yet capital markets remain effectively closed (Bulgaria: Neuilly Treaty 1919, exposure to 1923 German hyperinflation; Greece: Asia Minor catastrophe 1922; Romania: massive territorial expansion)
- Results in the highest devaluation rates compared to pre-1914 parities
  (Bulgaria: 26.7; Greece: 14.9; Romania: 32.3; Yugoslavia: 11.0)

6. Interwar gold standard: *capital markets*

- Gold standard adherence requires in all cases foreign loans
- League of Nations imposes conditionality, among other no seigniorage

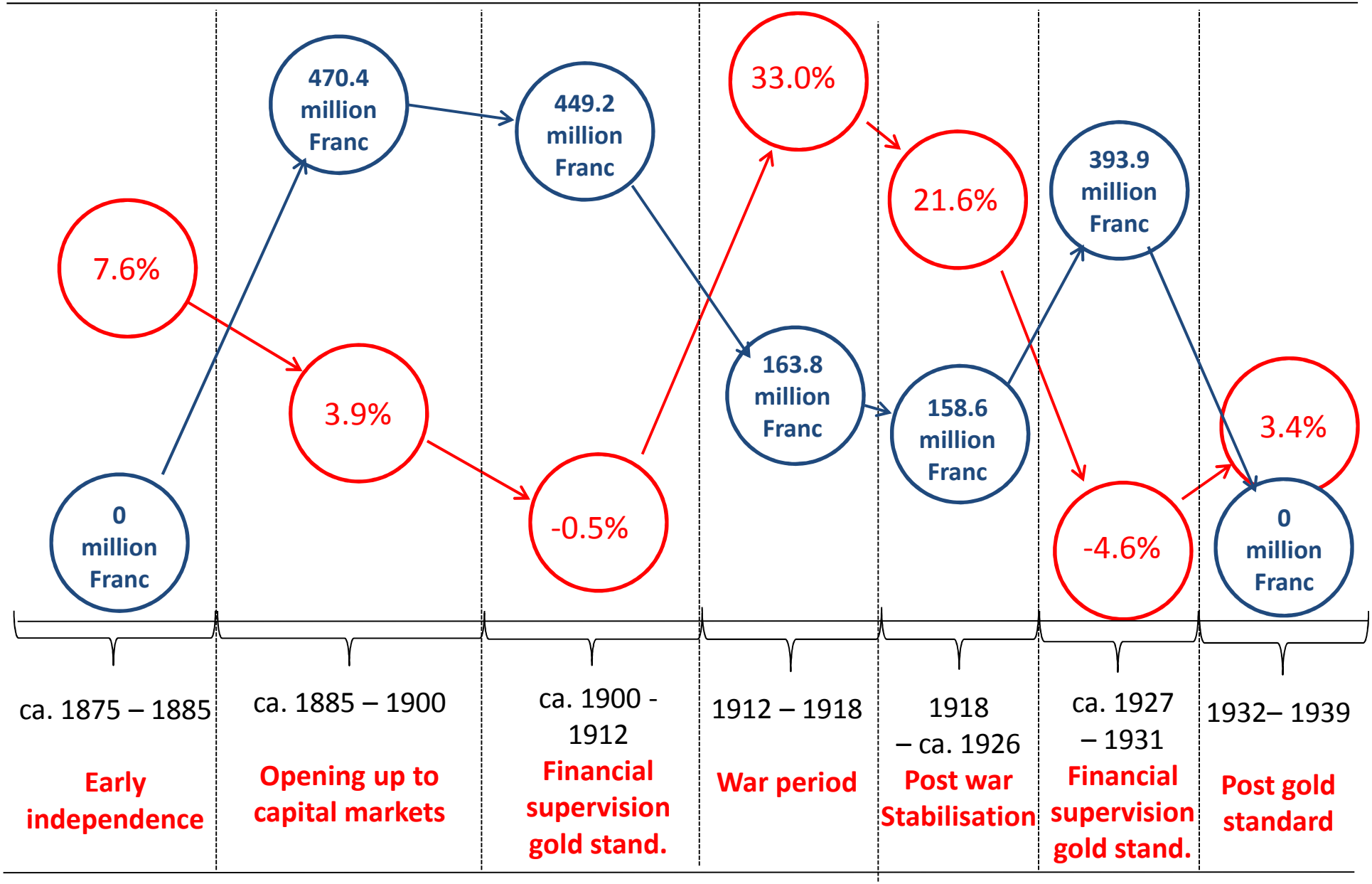
7. Post gold standard: *seigniorage*

- Access to capital market becomes increasingly difficult and is impossible after defaults

Government finance through seigniorage or capital markets?
seigniorage as % of total gov. revenue in 7 distinct periods

	seigniorage vs. capital markets	Bulgaria	Greece	Romania	Serbia / Yugoslavia	average
early independence	seigniorage	9.7% (1881-1887)	8.0% (1860-1878)	4.3% (1867-1874)	8.2% (1873-1880)	7.6%
opening up to capital markets	both	3.0% (1888-1903)	8.2% (1879-1897)	3.0% (1875-1889)	1.3% (1884-1895)	3.9%
financial supervision	capital markets	-0.8% (1904-1911)	-1.1% (1898-1911)	-0.2% (1890-1911)	0.0% (1896-1911)	-0.5%
war period	seigniorage	24.0% (1912-1918)	17.8% (1912-1922)	57.3% (1912-1918)	n.a.	33.0%
post-war stabilisation	seigniorage	40.9% (1919-1923)	7.6% (1923-1926)	16.3% (1919-1926)	n.a.	21.6%
interwar gold standard	capital markets	-7.0% (1924-1930)	-1.4% (1927-1931)	-6.4% (1927-1930)	-3.4% (1925-1931)	-4.6%
post gold standard	seigniorage	7.9% (1931-1939)	0.9% (1932-1939)	3.0% (1931-1939)	1.9% (1932-1939)	3.4%

closing the deficit: seigniorage vs. capital imports in 7 distinct periods (seigniorage: regional average; capital imports: regional total)



3. Testing for fiscal dominance in Greece and SEE

Fiscal dominance: monetary system is determined by fiscal needs

- Italy (Fratianni&Spinelli 1997, 2001) and Spain (Sabaté et al. 2006, 2015)

2 step-procedure for testing for fiscal dominance:

(1) money growth accounting

(2) Granger causality: does “budget deficit” Granger cause “seigniorage”?

Money growth accounting

- Similar to “growth accounting”: overall growth is explained by its components
- Friedman&Schwartz 1963, Brunner&Meltzer 1964, Fratianni&Spinelli (2001)

$$M = m * MB$$

$$MB = MB\_TC + MB\_REST$$

where

M	M3
m	money multiplier
MB	monetary base (pre-WW II: mostly coins and bank notes in circulation)
MB_TC	Treasury Component of MB (coins, bank notes in return for government debt)

Money growth accounting: Greece 1860-1939

			total growth	mb_tc	mb_rest	money mult.
Full period	1860	1939	9.8%	4.7%	2.5%	1.2%
contribution in %				47.9%	25.4%	12.6%
Early independence	1860	1878	9.5%	6.8%	2.6%	-0.9%
Opening up to capital markets	1879	1897	5.3%	2.9%	-1.9%	1.5%
Financial supervision / g. st.	1898	1911	5.0%	-0.7%	0.7%	5.0%
War period	1912	1922	24.6%	17.8%	8.2%	-3.9%
Post-war stabilisation	1923	1926	12.5%	2.1%	6.2%	1.6%
Financial supervision / g. st.	1927	1931	13.2%	-3.2%	-0.6%	16.9%
Post gold-standard	1932	1939	5.6%	1.7%	7.7%	-3.8%

Granger causality Greece 1860-1939 budget deficit versus seigniorage

		p-value of H_0:	
		"deficit" does not cause "seigniorage"	"seigniorage" does not cause "deficit"
All observations (79)	1860-1939	0.0%	69.1%
Domestic regime (60)	1860-1897 1912-1926 1932-1939	0.0%	28.7%
Financial supervision (19)	1898-1911 1927-1931	67.0%	74.6%

Note: VAR estimation based on 1 lag (identical acc. to LR / FPE / AIC / SIC / HQC criteria); both time series are I(0).

Fiscal dominance prevails in Greece and SEE…

… but financial supervision breaks cycle between deficit & debt monetisation.

4. Lessons for today?

- SEE fiscal institutions have remained weak
- conflict between capital imports and seigniorage persists (Bulgaria vs. Serbia)
- SEE countries benefitted from international capital flow cycle 2001-2008

- Greece benefitted more strongly from capital inflows due to euro
- 2001-2008 cycle was preceded by other cycles since 1981 (EU membership)
- Post-2008: private capital flows replaced by public capital flows but increasing political resistance

- Greece today: what to do when neither capital flows (private or public) nor seigniorage available?
  - make seigniorage possible again (Grexit)
  - create conditions for return of capital flows?
  - improve fiscal institutions but how?