Comments on "What Drives Long-Term Interest Rates? Evidence from the Swiss Franc History 1852-2022"

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Contents

- Newly compiled financial market data since 1852, in particular long term Swiss franc bonds
- Theoretical modelling of the interaction of home and foreign interest rate, exchange rate and monetary policy
- Empirical analysis using a TVP-SV-VAR pointing to (trend) inflation uncertainty as the main driver of deviations from UIP and the term spread.

Theoretical modelling

- Interpretation of theoretical model: real UIP

$$r_{t+1} - r^*_{t+1} - E_t(q_{t+1} - q_t) =$$
$$- 0.5(Var_t(\gamma c_{t+1} + p_{t+1}) - Var_t(\gamma c^*_{t+1} + p_{t+1}))$$

γ : CRRA-coefficient

Monetary or inflation uncertainty on the RHS?

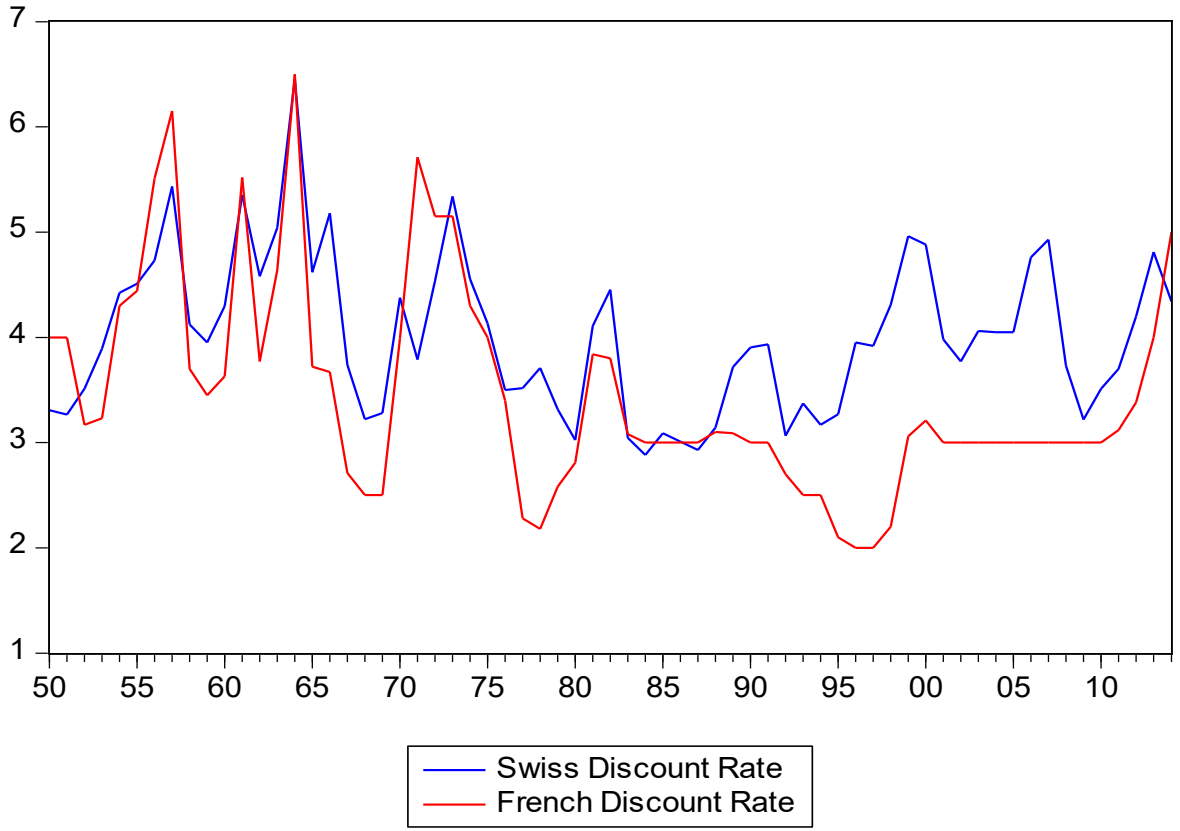
A kind of nominal consumption variance with a weight of real consumption depending on γ (nominal consumption for log utility)

Data

- Definition rest of the world
  - 1852 – 1914: UK
  - 1914 – 1963: France, UK and US
  - 1963 - 2022: According to effective exchange rate
- Only UK for the first period is a bad choice as exchange rate. Movements within the Latin currency union are very different and much more interesting and important than the pound, exchange rate (Figures from Baltensperger/Kugler 2017)
- Stamp tax on bills in Basel until 1899 may distort Basel exchange rate data
- Real factors missing: Income inequality and size of “saving intensive” age group from 40-64

Deviations from metallic parity, Swiss franc (1852-1914)

Swiss and French interest rate, 1850 - 1914



- Monetary regimes should be more differentiated:

  1850 – 1959: silver standard

  1850 – 1914: bimetallic standard

  1914 – 1928: paper

  1929 – 1936: gold standard

  1937 – 1949/52: paper with commercial and financial dollar and restrictions on international gold transactions

  1953- 1972: Bretton Woods

  1975-1998: Monetary Targeting

  1999-2022: “Inflation Targeting”

Econometric modelling

- First difference VAR not appropriate for exchange rate modelling, level information has to be included
- Metallic Standard: TAR or TEC models

$$\Delta s_t = \lambda(s_{t-1} - sp) + \varepsilon_t, \text{ if } abs(s_{t-1} - sp) \geq \tau$$

$$\Delta s_t = \varepsilon_t, \text{ if } abs(s_{t-1} - sp) < \tau; \quad \lambda < 0$$

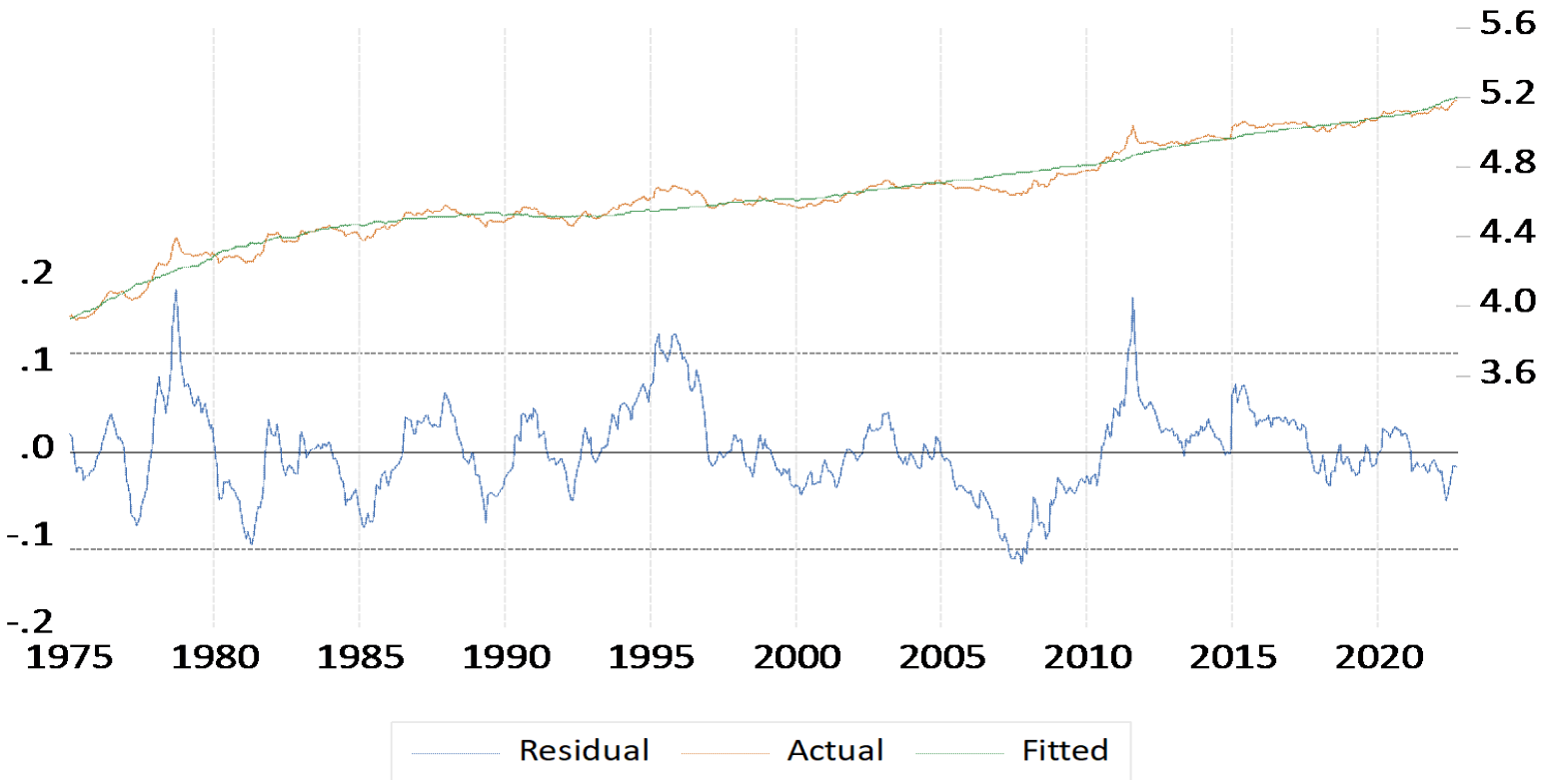
- PPP and cointegration with relative price level (for dollar and pound franc exchange rate since WWI Baltensperger/Kugler 2017), holds for effective Swiss franc exchange rate since 1973, too.

Effective exchange rate Franc franc (log) and PPP

monthly data, $\log(S_t) = a + b\log(P^*_t/P_t) + ct$

FMOLS estimates: b = 1.11 (se=0.081), c= 0.000271 (se=0.000103)

Phillips-Ouliaris τ= -4.01 (p 0.028)



- Interpretation of inflation variability as trend phenomenon is questionable: Swiss inflation since 1852 seems to be stationary and strongly heteroskedastic: PP = -8.09 [-3.685], KPSS =0.145 [0.097], 1914 -2022 sample in brackets