Liquidity Management and Central Bank Strength: Bank of England Operations Reloaded, 1889-1910

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Motivation

- Pre-crisis consensus on pure ***interest rate policy***:
  - ✓ CB only sets signal (policy rate) and opportunity cost of reserves (deposit facility rate)
  - ✓ Interbank rate adjust to signal
  - ✓ If CB credible, no need for intervention
  - ✓ CB balance sheet size and composition only determined by autonomous factors

Motivation

- But this works under the hypothesis of no access to standing facilities (Borio and Disyatat 2010; Bindseil and Jablecki 2011):
  - ✓ If standing facilities are accessed, interest rate policy must be coupled with ***balance sheet policy***
  - ✓ CB balance sheet size and composition not only determined by autonomous factors
  - ✓ Credibility depends not only on CB's commitment, but also on the *sustainability* of monetary policy

Motivation

- Credibility and CB strength:
  - ✓ ***CB strength*** defined as capability to meet financial engagements. It depends on financial resources and contingent assets and liabilities (Stella 1997; Archer and Moser-Boehm 2013)
  - ✓ Empirical studies find a correlation between CB financial strength and monetary policy effectiveness (Klüh and Stella 2008; Adler, Castro, and Tovar 2012; Perera, Ralston, and Wickramanayake 2013)
  - ✓ **Is this result peculiar to today?**

This Paper

- Case study of pre-WW1 Britain:
  - ✓Out-of-sample evidence
  - ✓Core country
  - ✓CB with very strong commitment to conservative monetary policy
  - ✓Weak CB (limited ability to meet all engagements)
  - ✓Poor policy effectiveness, macroeconomic instability

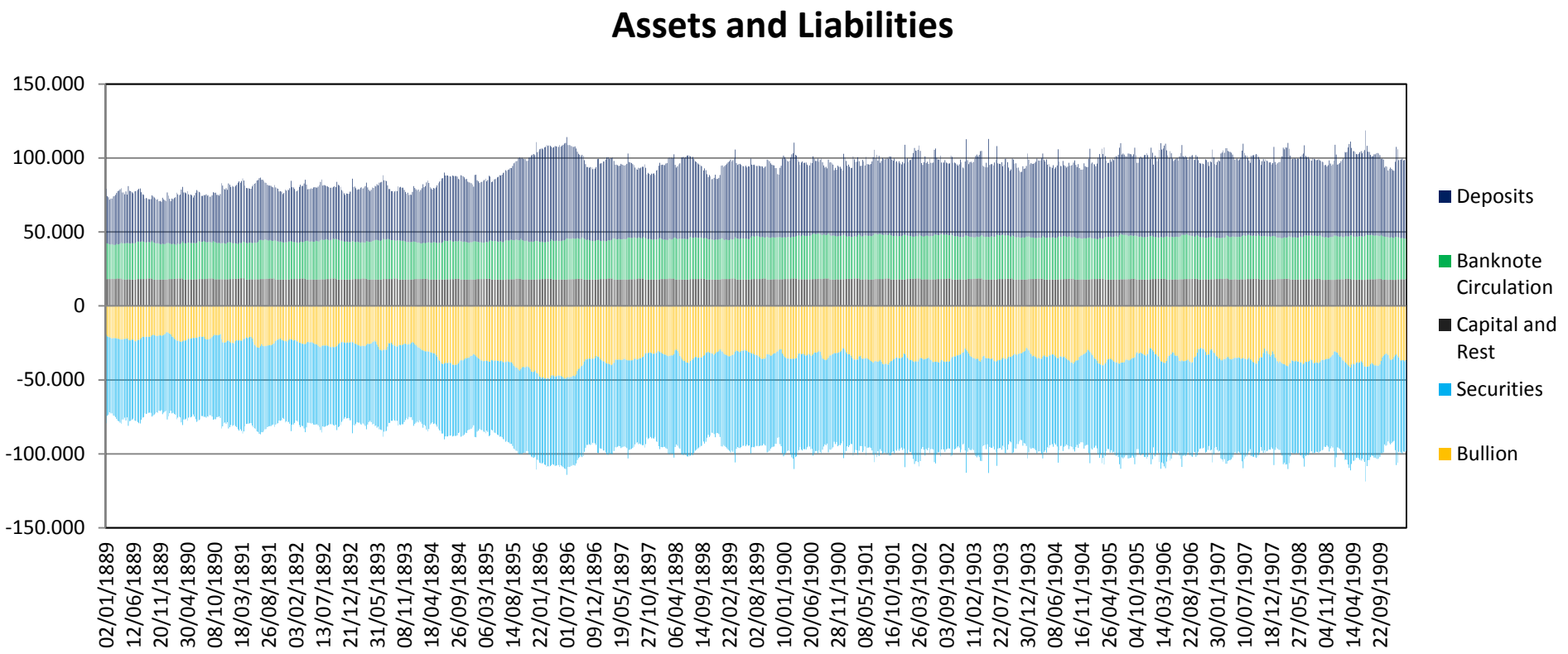
This Paper

1) Assessment of CB strength
2) Assessment of policy effectiveness
3) Epilogue and conclusions

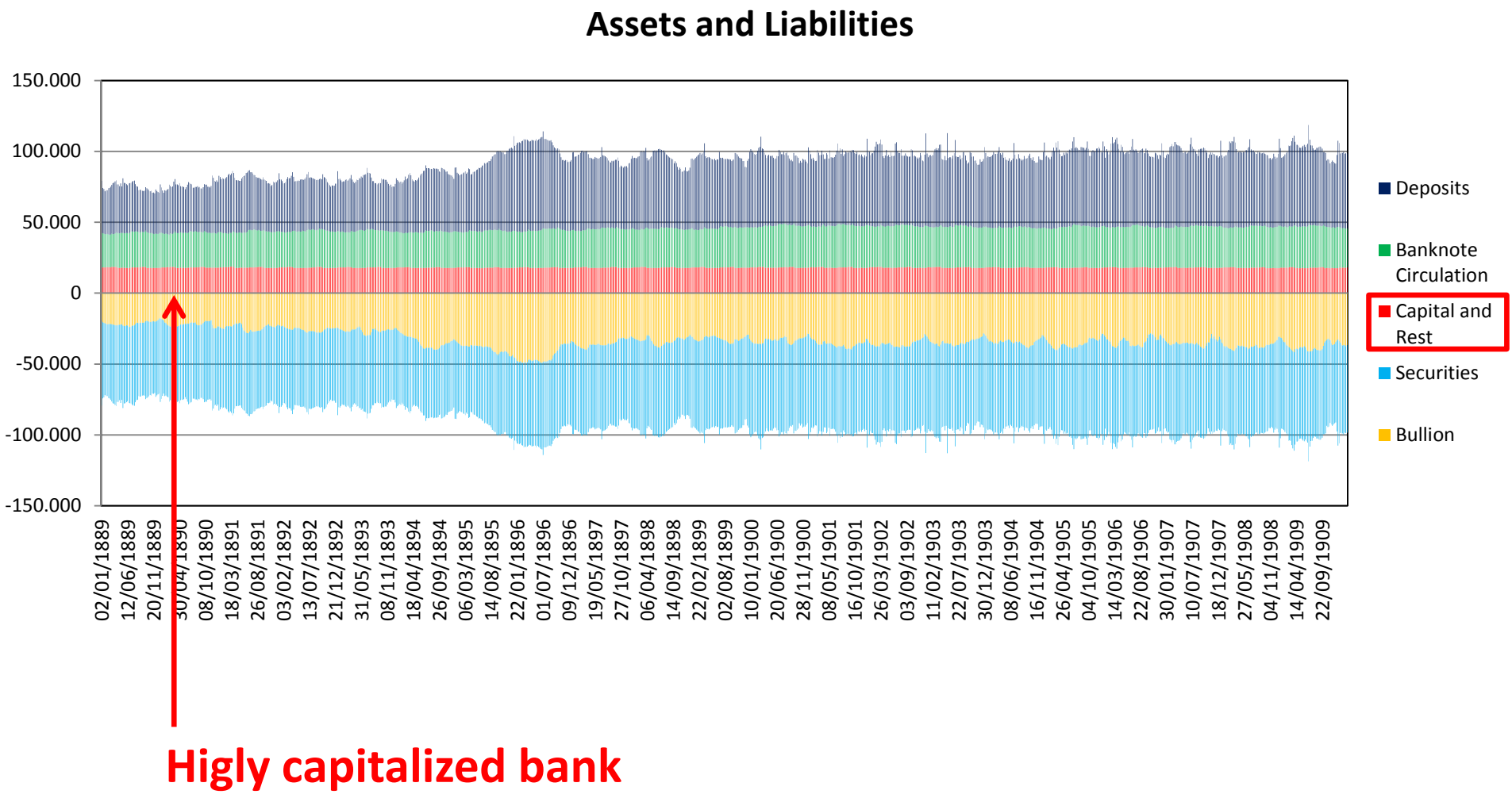
Literature Review

- Literature mostly concerned with the "rules of the game": did BoE magnify gold flows?
  - ✓*Yes* (Cunliffe Report 1918; Hawtrey 1934; Pippenger 1984; Dutton 1984; Davutyan and Parke 1995; Jeanne 1995…)
  - ✓*No* (Bloomfield 1959; Goodhart 1972; De Cecco 1974; Giovannini 1986…)
- But literature takes changes in CB balance sheet as deliberately implemented through OMOs
- This is dubious (Sayers 1936; Moggridge 1984)

Assessing CB Strength



Assessing CB Strength



Higly capitalized bank

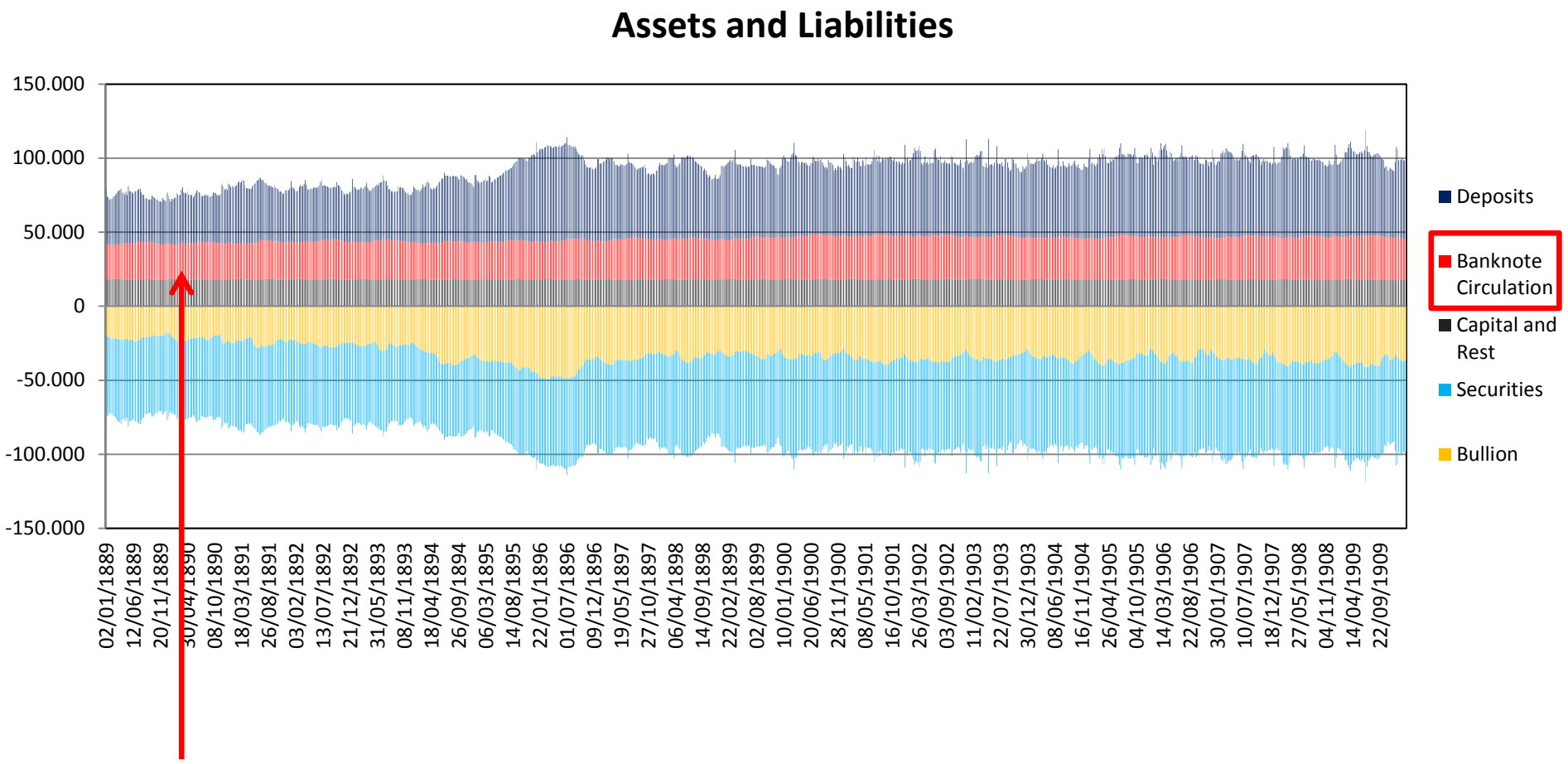
Assessing CB Strength

Select CB Balance Sheet Items as % of GDP (1909)

	Stock Capital	Banknote Circulation	Bullion Reserve	Total Balance Sheet
Britain (end-of-year)	0.72%	1.44%	1.91%	5.33%
France	0.46%	12.88%	10.95%	15.59%
Germany	0.41%	4.71%	2.06%	6.89%
Austria-Hungary	0.83%	8.66%	6.42%	11.96%
Italy	0.31%	7.66%	4.60%	10.93%
Belgium	0.68%	11.56%	4.21%	14.75%
Netherlands	1.06%	14.92%	7.38%	16.89%
Switzerland	1.41%	7.40%	3.91%	9.94%
Norway	1.44%	5.89%	3.82%	9.09%
Britain (mid-December)	0.72%	1.41%	1.72%	4.54%

Higly capitalized bank

Assessing CB Strength



Stable banknote circulation

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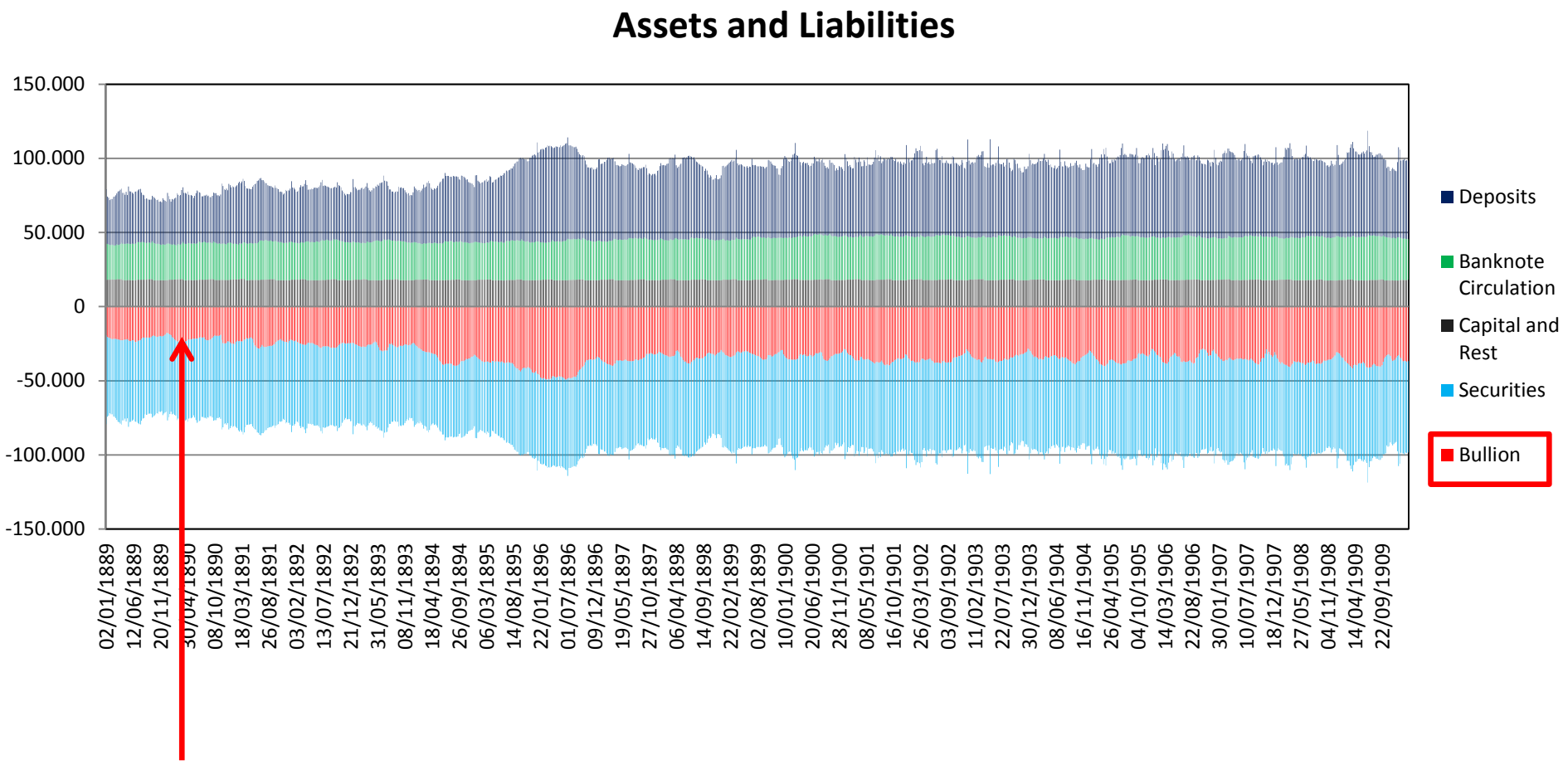
Small banknote circulation

Assessing CB Strength



In relative terms, a large bullion reserve…

Assessing CB Strength

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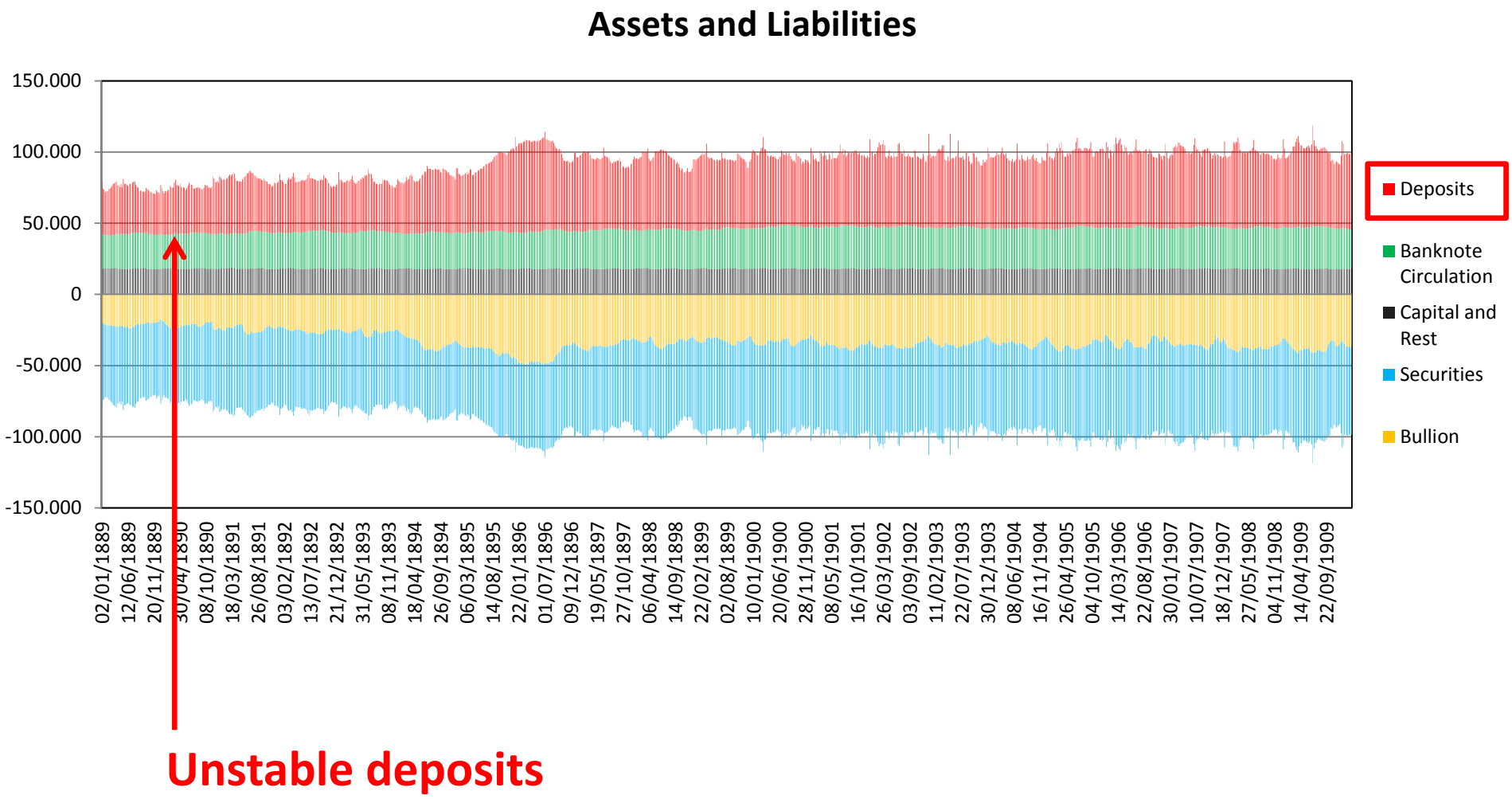
… in absolute terms, a small bullion reserve

Assessing CB Strength



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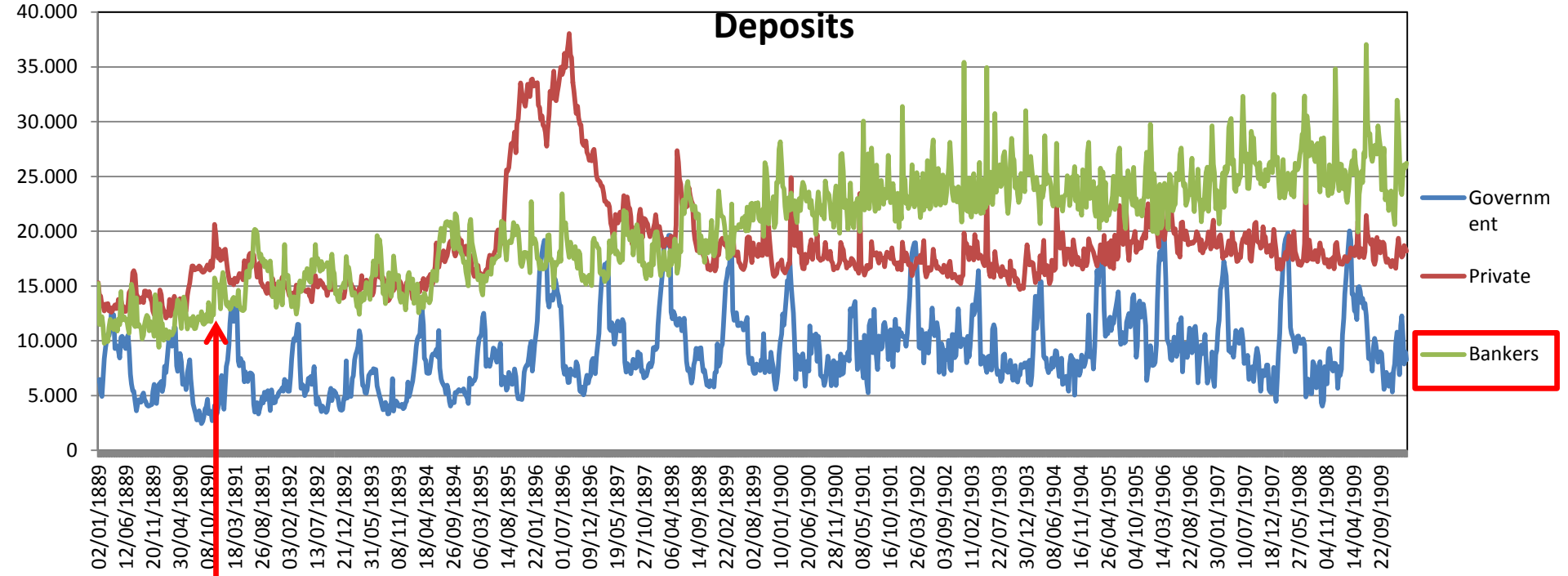
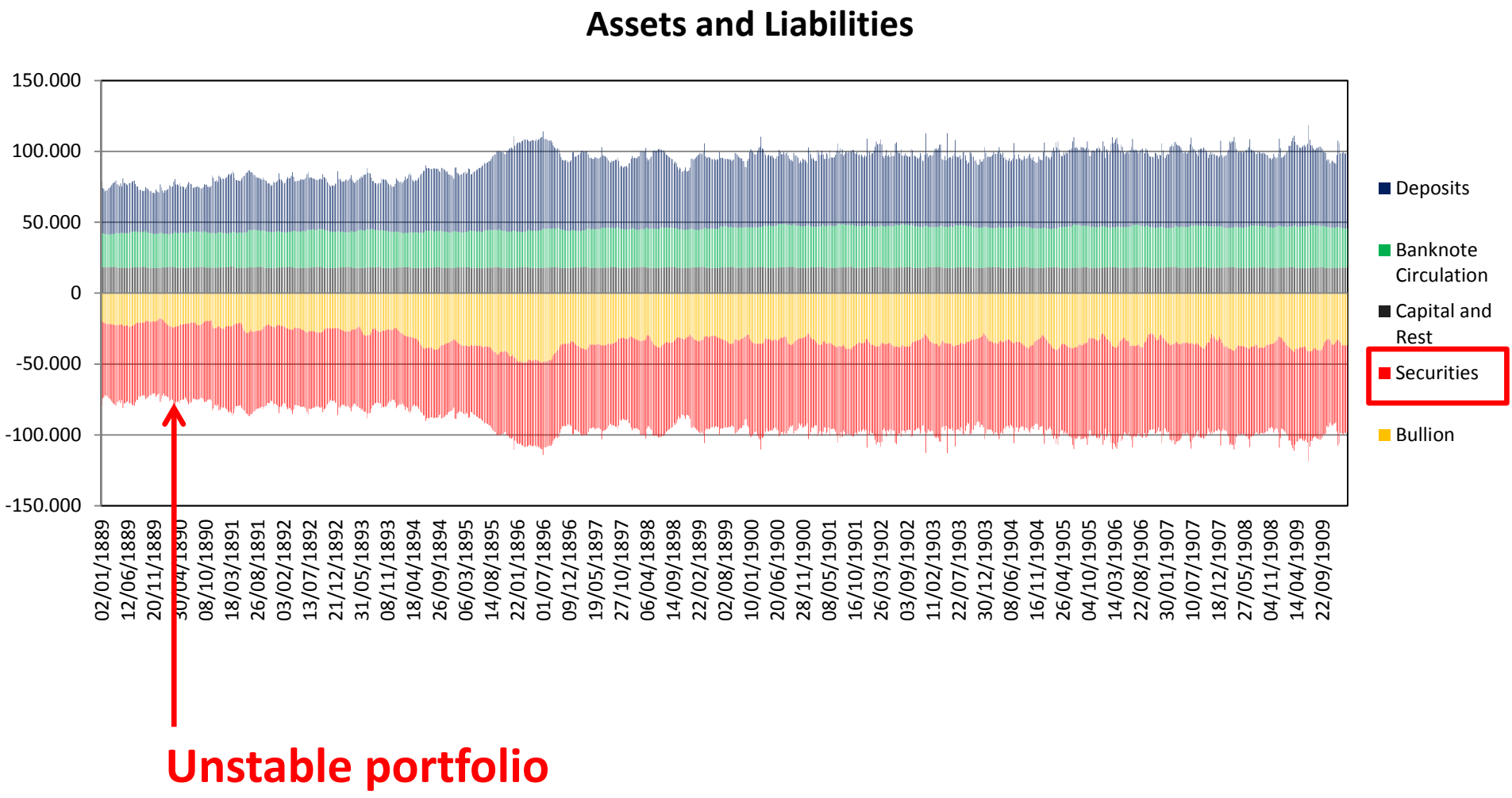


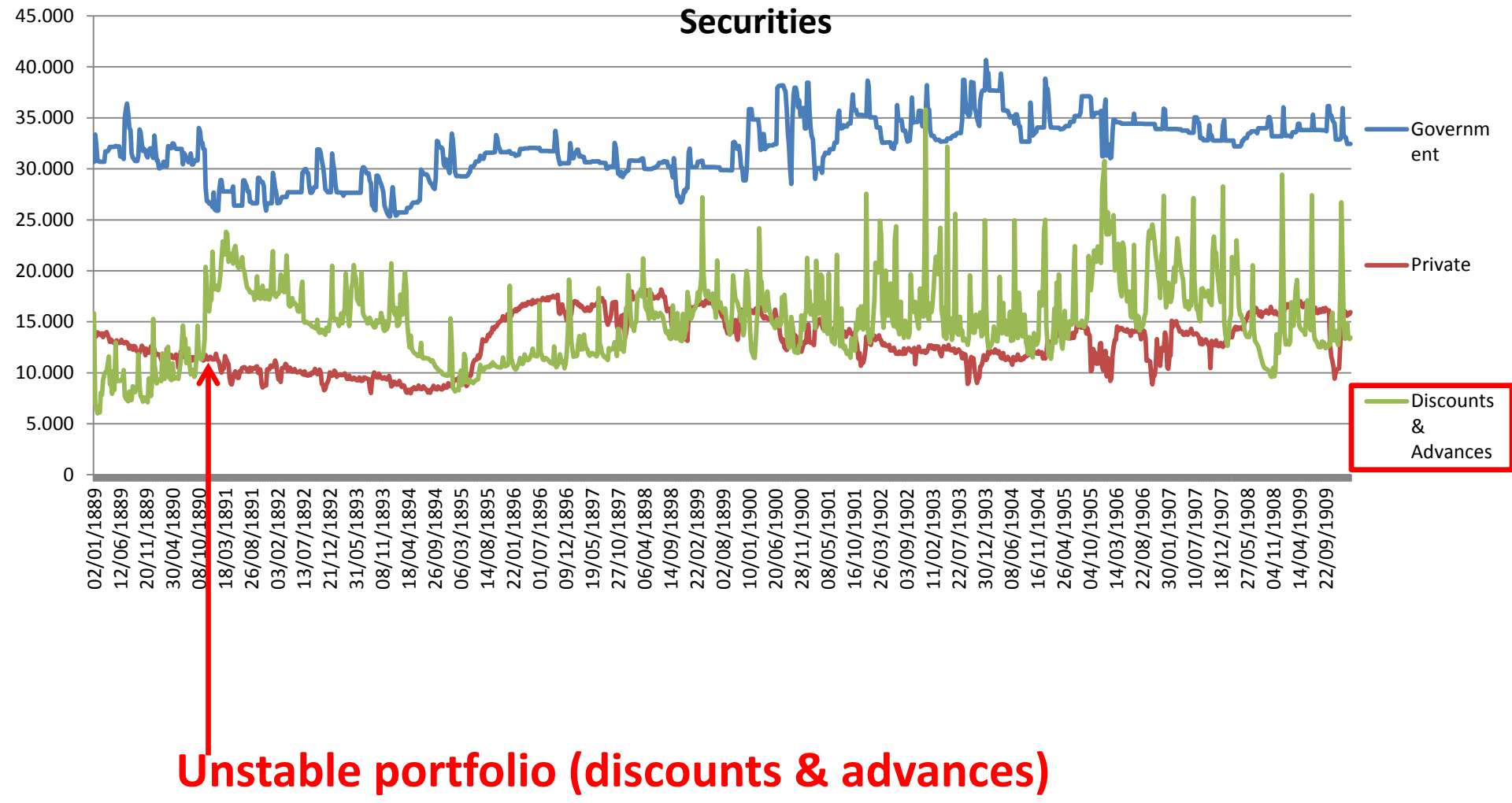
Bank's reserves determined exogenously (Goodhart 1972); unlike in previous periods (e.g. 1866), they do not increase during crises

Assessing CB Strength



Unstable portfolio

Assessing CB Strength



Unstable portfolio (discounts & advances)

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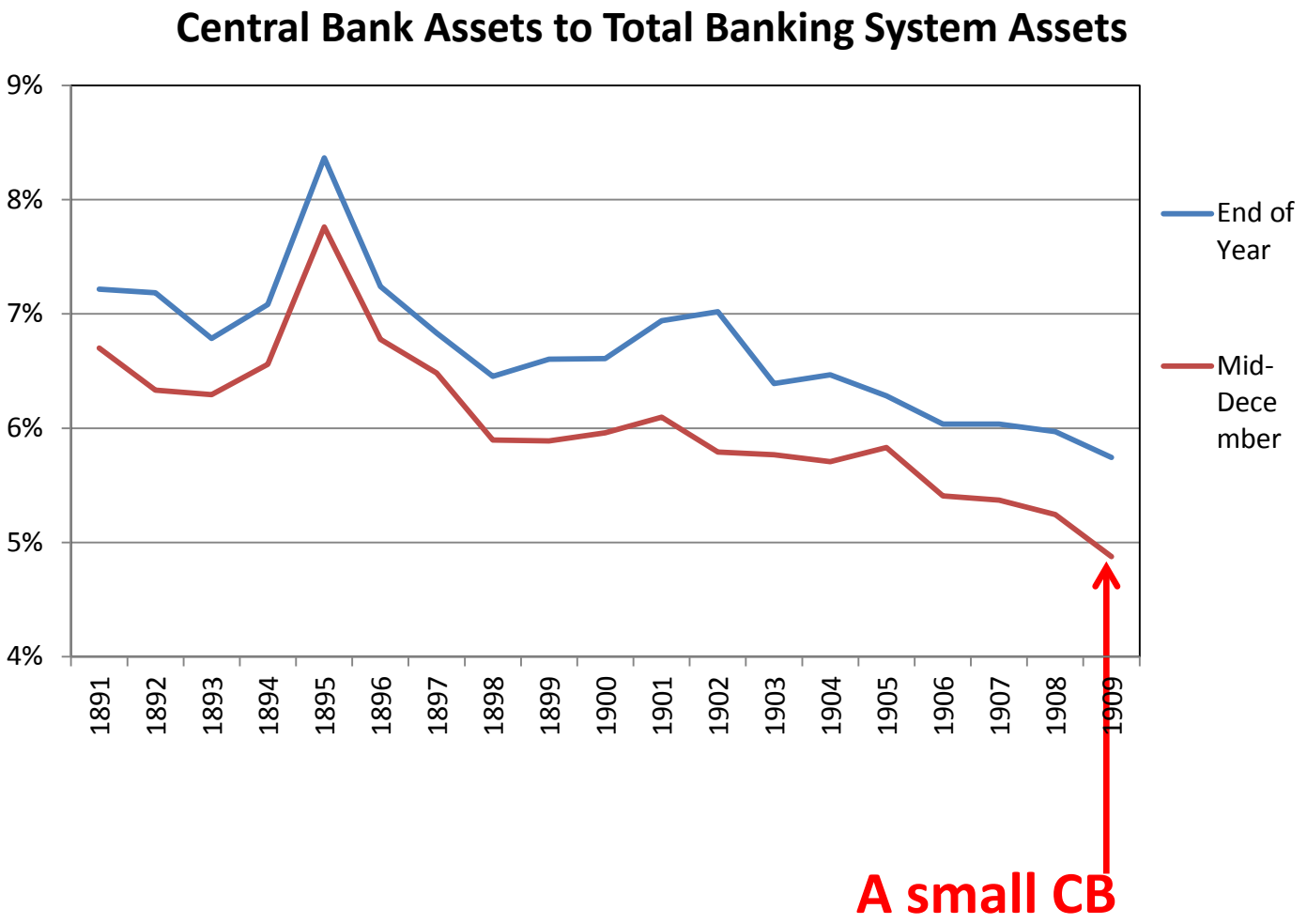

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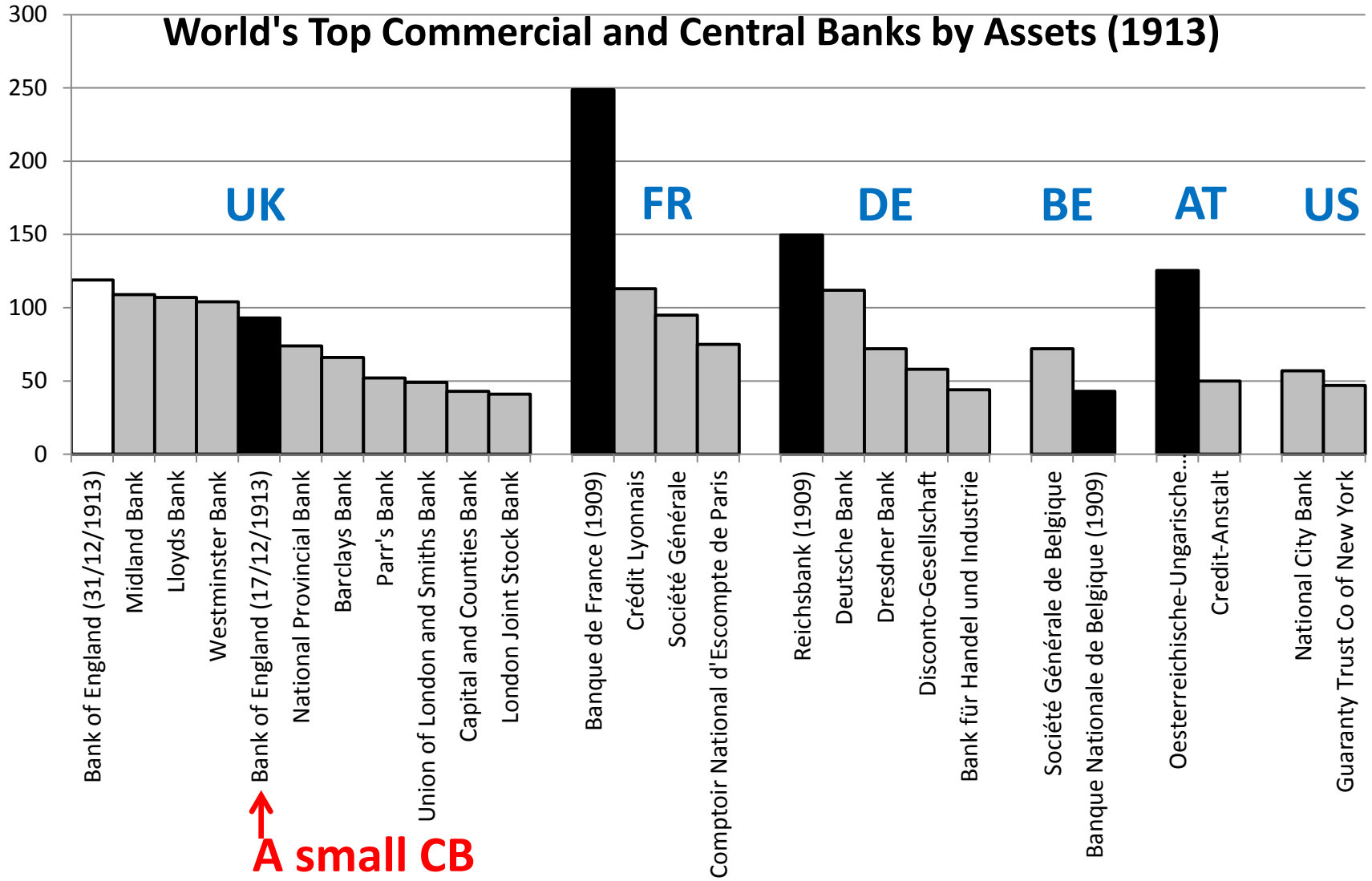
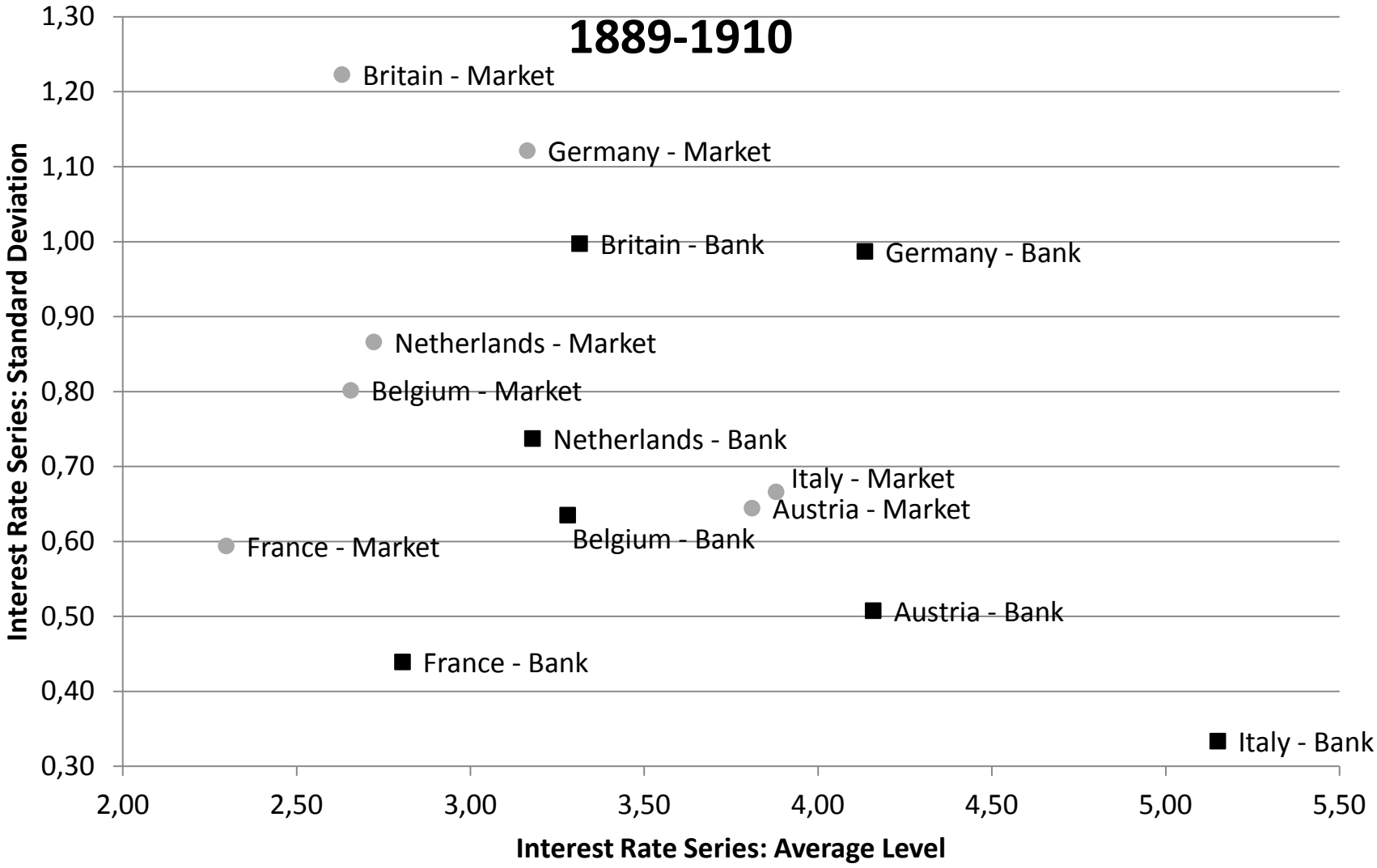


Assessing CB Strength

- BoE's weakness
  - ✓Huge contingent assets from standing facility
  - ✓Limited room for expansion of liabilities
- Attempts to reform after 1890 (Pressnell 1968)
  - ✓BoE asks for permission to remunerate deposits (**DENIED**)
  - ✓BoE asks for introduction of reserve requirements (**DENIED**)

Assessing CB Policy Effectiveness



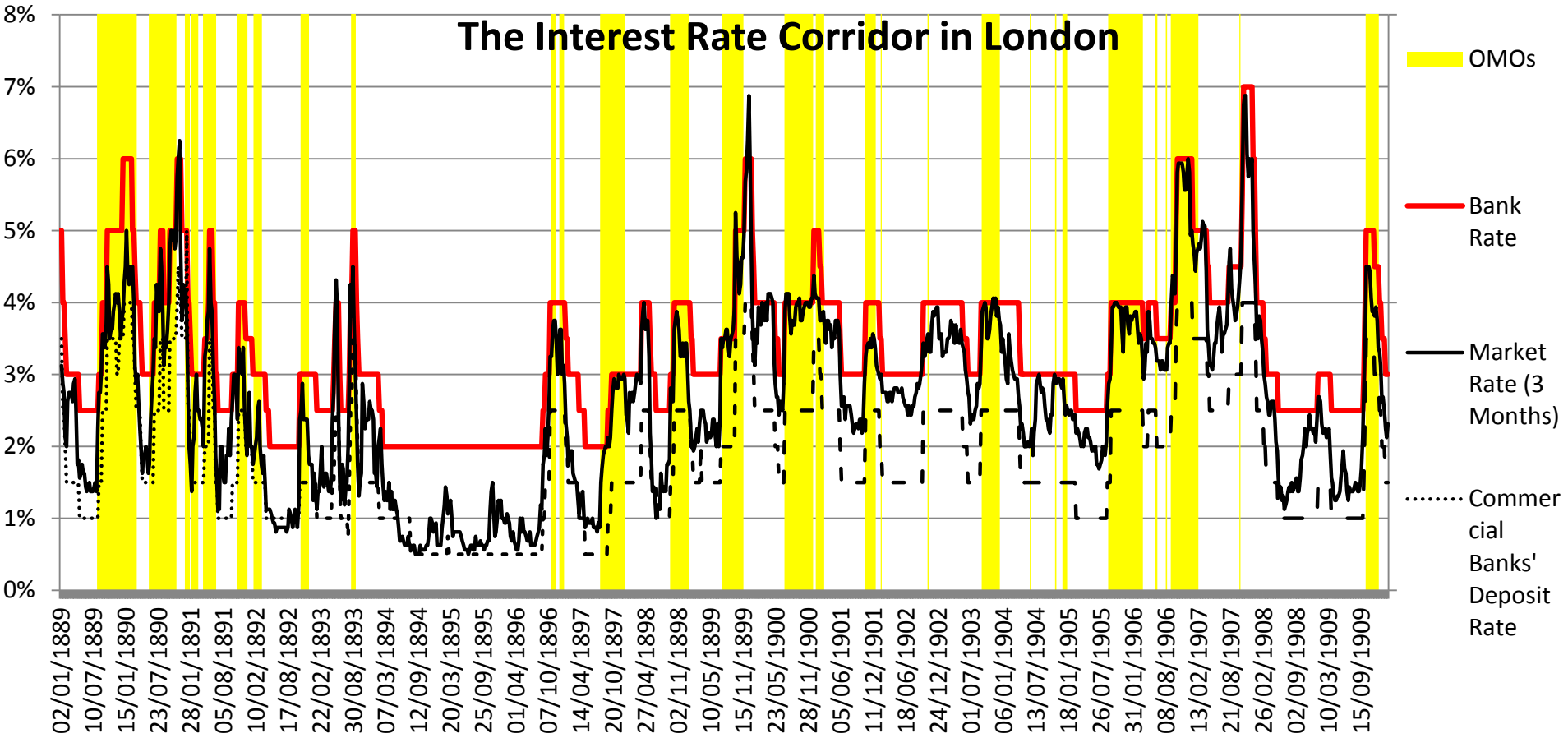
Assessing CB Policy Effectiveness

- Discontent at interest rate volatility, triggering macroeconomic instability (Palgrave 1903)
- BoE unhappy with it
- BoE tries to cap market rate volatility through "unconventional" liquidity management strategies:
  - ✓ *"Gold devices"*: changing bid/ask prices of gold (Sayers 1936, Ugolini 2013)
  - ✓ *"Borrowing on Consols"*: liquidity-absorbing OMOs (Hawtrey 1934, Sayers 1936, this paper)

Assessing CB Policy Effectiveness

- BoE lacks control over domestic interbank rates (Bank rate "ineffective")
- To avoid excessive access to standing facility (market "in Bank") triggering Bank rate spikes, BoE acts preventively to prick credit expansion:
  - ✓Secretly implements reverse repos (mostly on corporate, not gov't securities) at very short term
  - ✓Triggers an *inversion of the yield curve*
  - ✓Impacts expectations on future rates
  - ✓Raises Bank rate to avoid access to standing facility

Assessing CB Policy Effectiveness



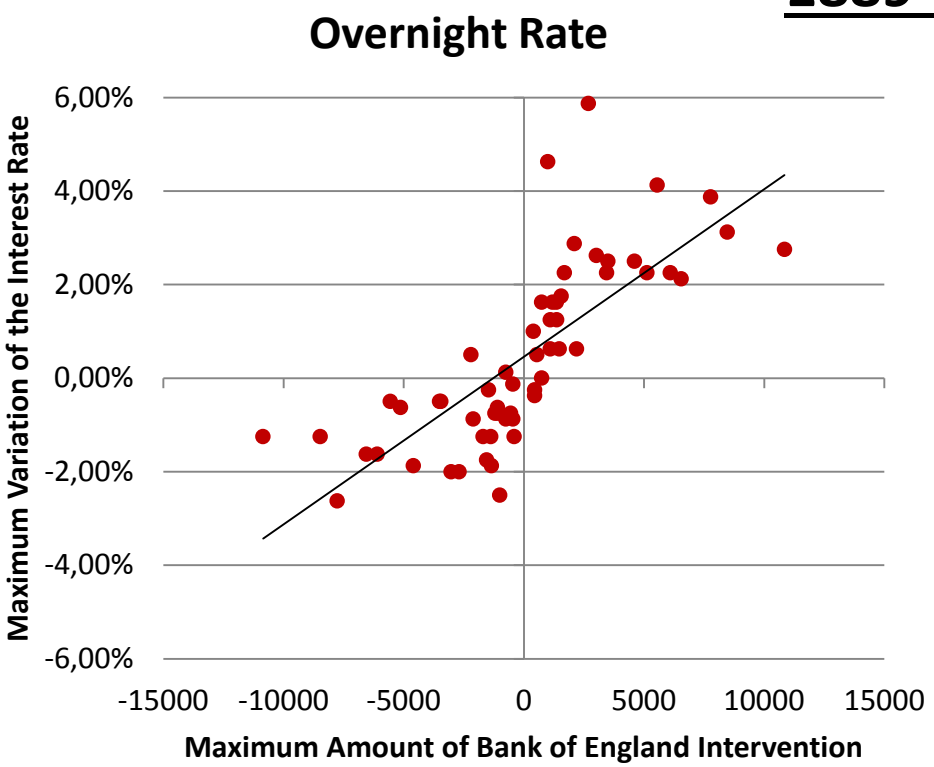
BoE lacks control over interbank rates, implements OMOs while raising official rates

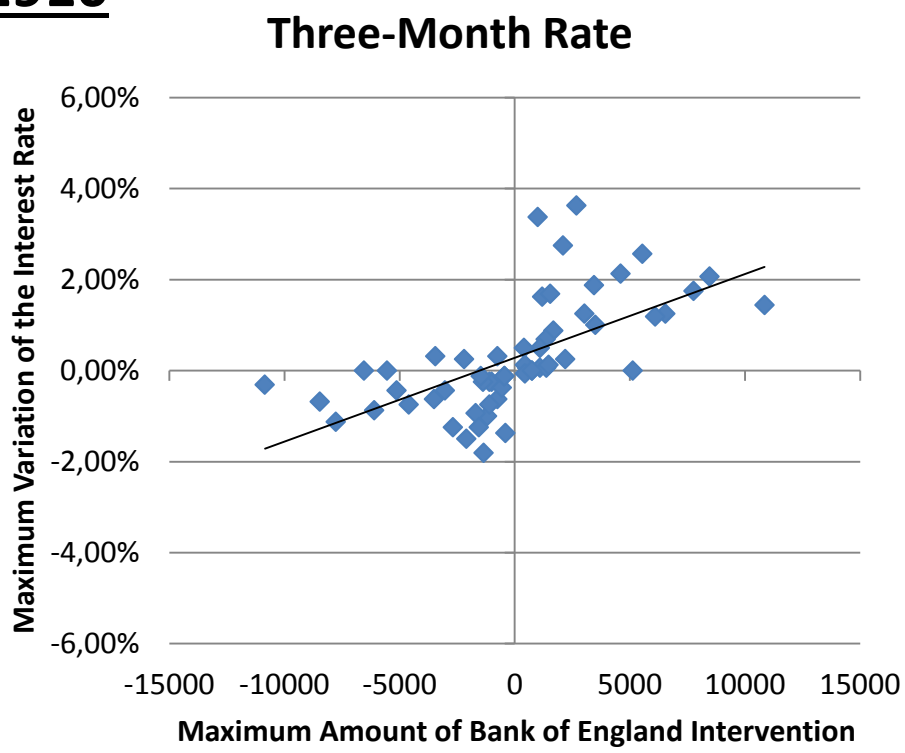
Assessing CB Policy Effectiveness

- **32** episodes of inversion of the yield curve in 1889-1910
- Of these, **14** (on average, more intense) are associated with Bank interventions
- BoE aims at impacting market expectations:
  - ✓Market perceives that inversions are generally associated with future rate increases (Peake 1923)
  - ✓Yet market does not unanimously acknowledge the Bank's role in triggering inversions (Peake 1923)

Assessing CB Policy Effectiveness

1889-1910

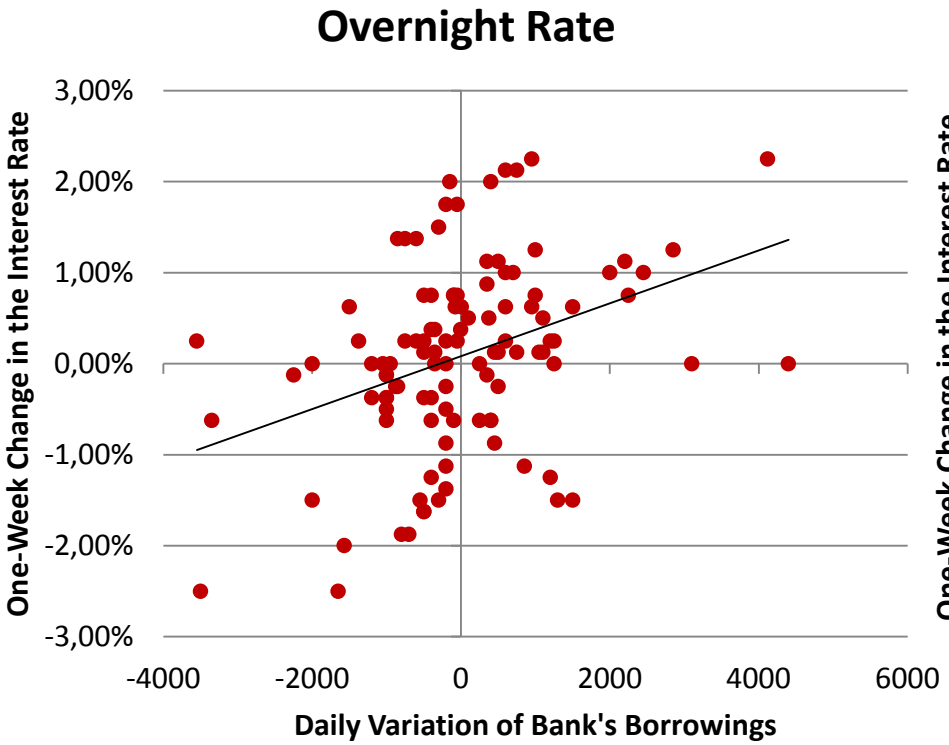


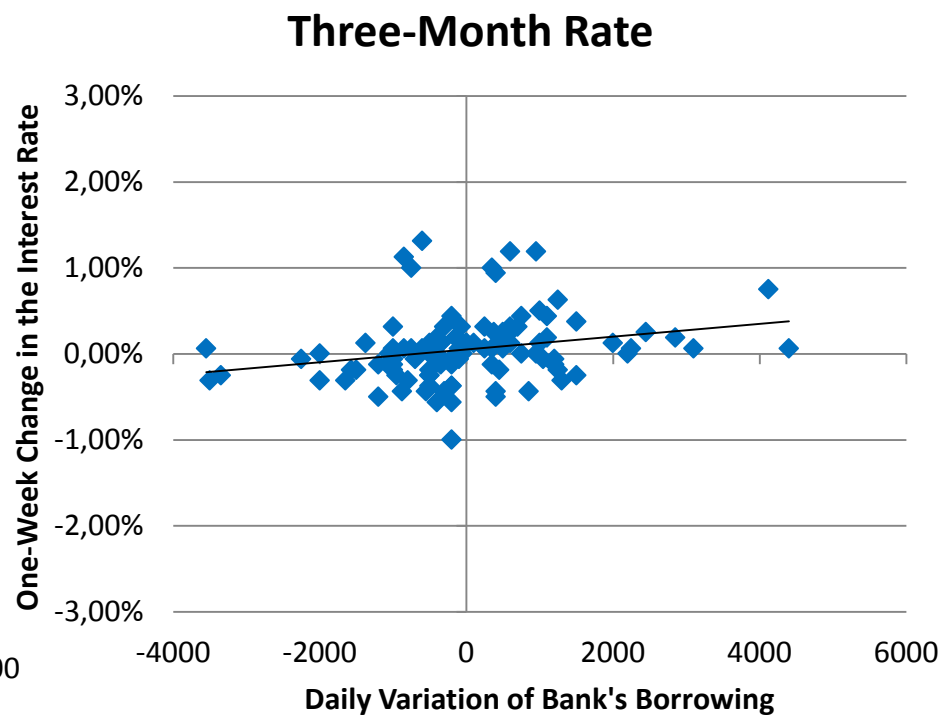


Intervention generally (but not systematically) effective

Assessing CB Policy Effectiveness

1905-1910





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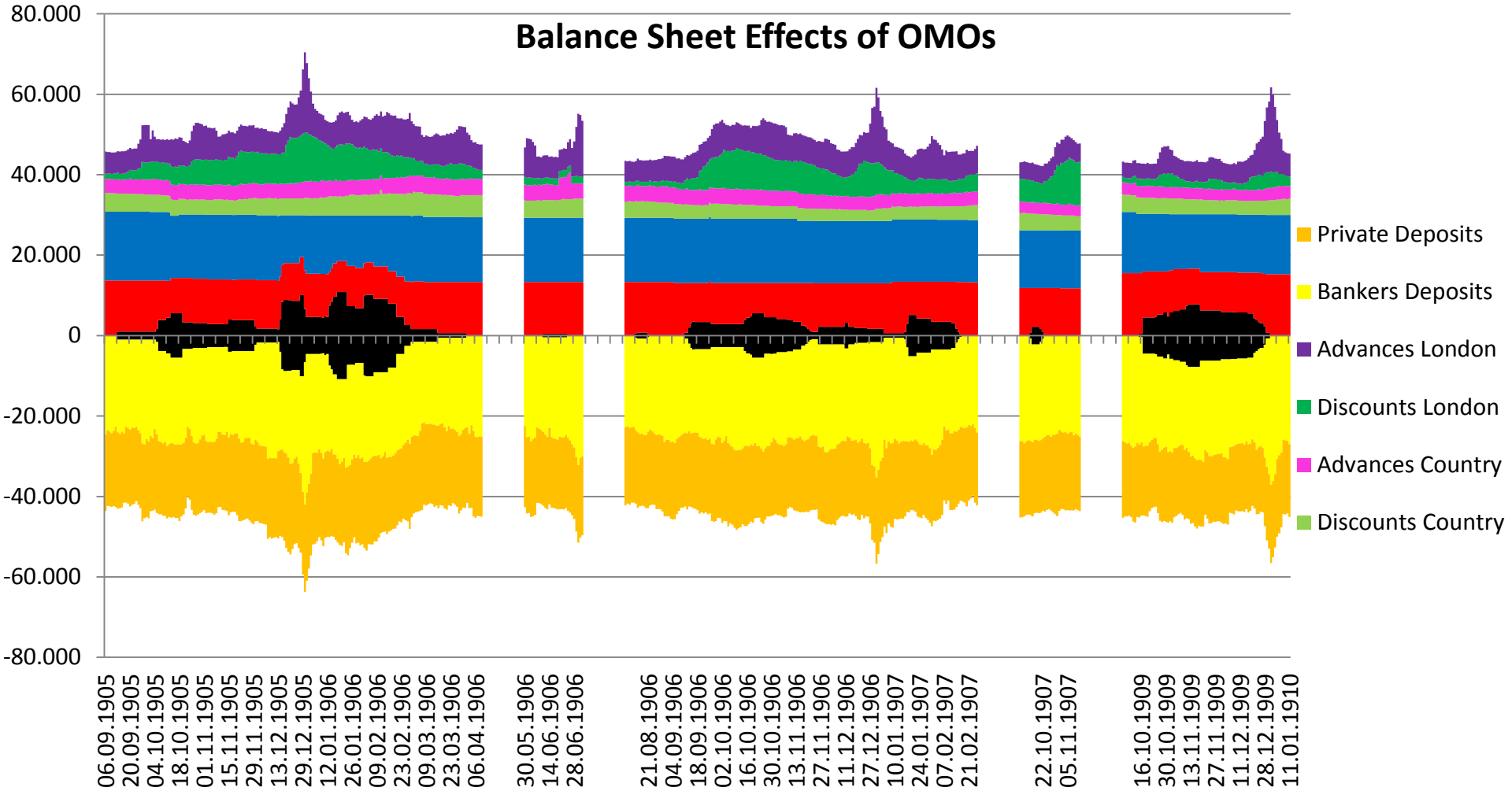

The limits to intervention

Epilogue

- BoE's capability of meeting all obligations increasingly questioned
- Debate on adequacy of gold reserves
- Commercial banks expect BoE to default on convertibility, accumulate gold directly
- Banks trigger a run on the BoE in July 1914 (Keynes 1914; De Cecco 1974; Roberts 2013)

Conclusions

- BoE a core CB with strong commitment to “sound” monetary policy
- But BoE a weak CB with limited means to pursue its targets
- Poor quality of CB’s signals, lack of control over interbank rates
- Inconsistencies lead to eventual implosion
- Core and conservative CBs not immune from policy sustainability issues

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