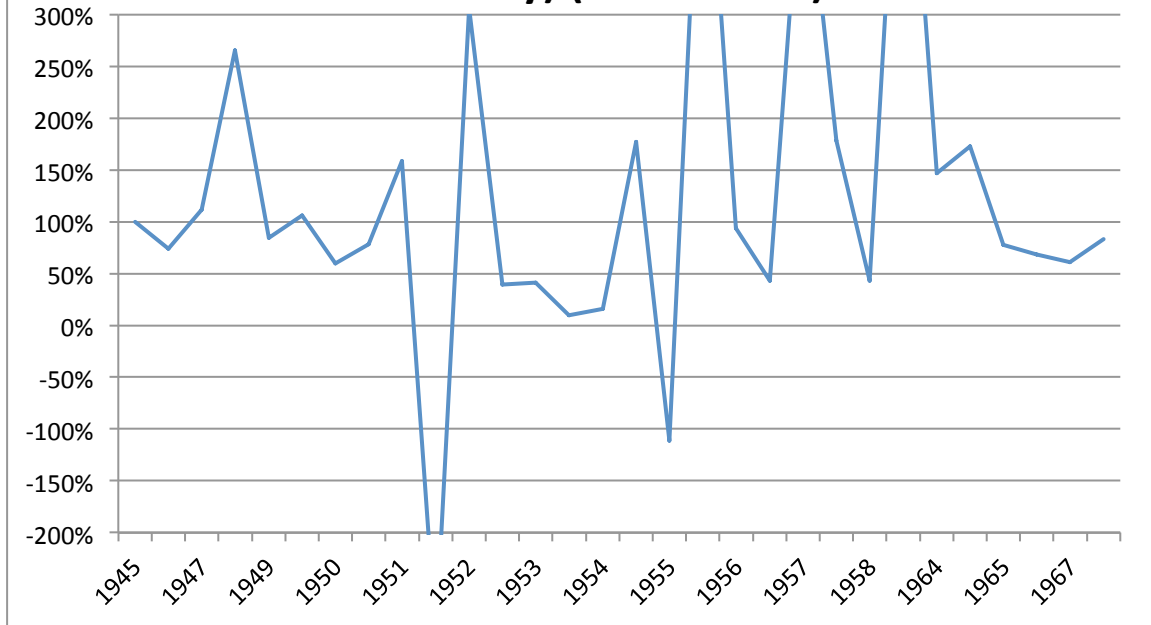
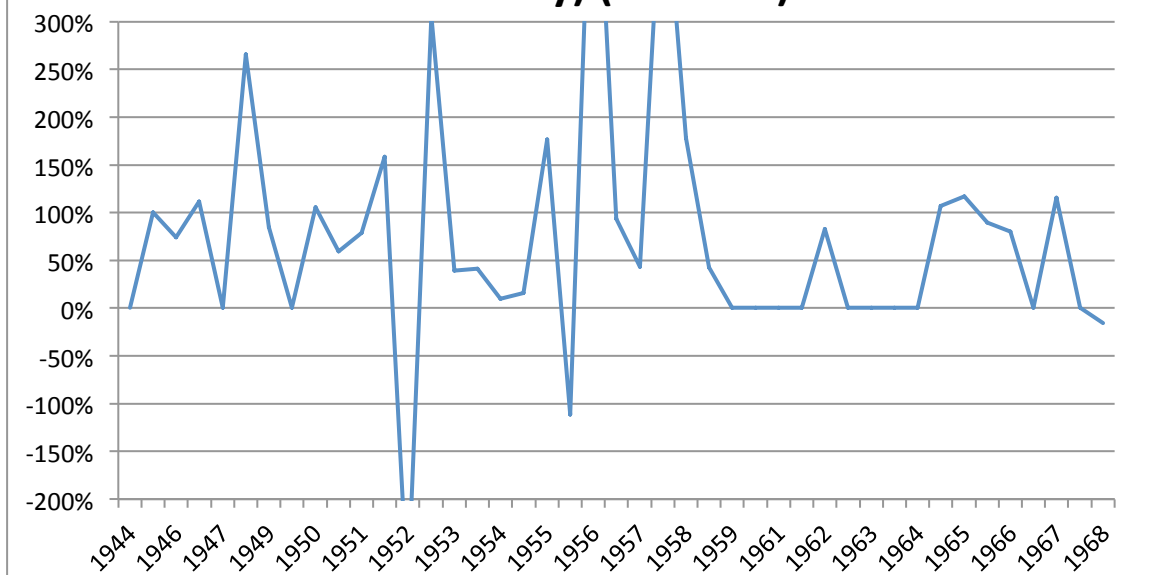


Figure 6. Year-over-Year Reserve Pass-Through (%) (100% = currency board orthodoxy) (Continuous)

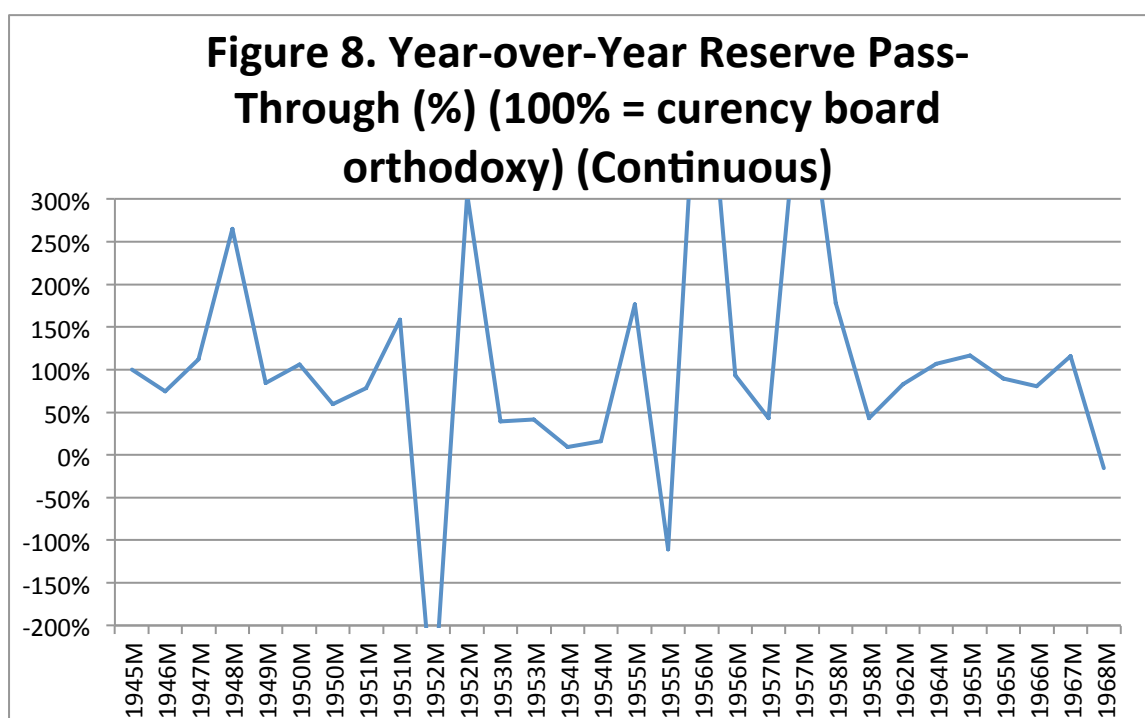


Main sources: Malta Government Gazette; calculations.

Figure 7. Year-over-Year Reserve Pass-Through (%) (100% = currency board orthodoxy) (Discrete)



Main sources: Malta Government Gazette; calculations.



Main sources: Malta Government Gazette; calculations.

Conclusion

Results seem to be mixed. First, the legal framework and some of the data tests make it seem orthodox. The Paper Currency Ordinance, 1939 provided that notes issued under this Ordinance should be convertible at the Treasury at sterling rates on days to be fixed by the Governor and notified in the Government Gazette. However the law did not provide explicitly for any particular reserve backing. By Currency Notes Ordinance, 1949, the maximum ratio of external reserves to Maltese currency notes was fixed at 110%. The 1949 ordinance also provided for the mechanism for wholesale conversion of Maltese currency notes into sterling or vice versa on demand. These legislations are consistent with the currency board orthodoxy.

Second, by statistical analysis, some indices suggest orthodoxy. Net foreign assets ranged from approximately 90 to nearly 107 percent of currency in circulation, and total assets ranged from approximately 90 to nearly 112 percent of currency in circulation between 1944 and 1968, remaining at or very near to the legal maximum, suggesting that during the period the Treasury (later Commissioners of currency) acted in a highly rule-like manner. Moreover, the flat dynamic monetary composition index also suggests orthodoxy.

However, the volatile reserve-pass through seem to indicate unorthodoxy, even after adjusted by using cost instead of market value of the Maltese government securities. Hence this is a question that remains to be fully resolved by further study of the data and the development of other ways to try to measure currency board orthodoxy statistically. On the one hand, it is possible that the Treasury/Commissioners of Currency were somewhat unorthodox. On the other hand, there might be circumstances in which reserve pass-through is not as good an indicator, though often it

works well.

Although this study gathered and digitized mass data from 1939 to 1968, there are several years when data are incomplete.² This might barely affect the significance of the statistical test, but possible future studies might be to gather the missing data and hence confirm the reliability of the current study.

Postscript: Companion Spreadsheet Workbook and Source Documents

The companion spreadsheet workbook to this paper contains the underlying data, calculations, and the original versions of the graphs. The workbook also contains some data not used in the paper, notably annual data of the income and expenditures of the Treasury (later Commissioners of Currency) and balance sheet data for the financial year ending 1968.

² For the year 1945, the interest earned on Note Security Fund is missing. Other missing years include 1959, 1960, 1962 and 1963. The International Monetary Fund's International Financial Statistics database has balance sheet data for part of Malta's currency board period, which we did not use because it is rounded to the nearest million pounds rather than giving exact amounts; it has no income-expenditure data.

Appendix A. Summary Legislative History of Maltese Note Issue, 1939-1968

(acts relating to the Treasury/Commissioners of Currency and selected other measures)

- Here is a brief discussion of Malta's World War I note issue. Malta had been using British currency. The war both interrupted shipments of currency and increased demand for currency. Malta, Ordinance No. 8, 12 August 1914, permitted the Maltese government to issued notes as an emergency measure. Sammut (2001: 161) offers a quotation suggestion that the notes were backed 100% by external assets. The government issued notes in denominations from 5 shillings to £10, equal to their sterling counterparts. Notes up to 10 shillings were redeemable in silver, while notes of higher denominations were redeemable in gold (Malta, Government Notice No. 149, 15 August 1914; No. 162, 25 August 1914; No. 183, 8 September 1914; No. 194, 17 September 1914; No. 209, 29 September 1914; No. 229, 19 October 1914). British notes continued to circulate. Malta, Ordinance No. 5, 10 June 1915, allowed notes of 10 shillings and £1 issued by the British Treasury to be legal tender; previously, only Bank of England notes, whose smallest denominations was £5, had been legal tender. The notes were made legal tender by a governor's proclamation of 16 June 1914. Ordinance No. 5 also permitted the governor to call in Maltese government notes for cancellation and redemption. Malta, Government Notice No. 110, 6 May 1915, stripped Maltese £1 notes of legal tender effective the following day. Malta, Government Notice No. 204, 23 September 1915, stripped other Maltese notes of legal tender effective 30 September 1915. Notes could continue to be redeemed at the government treasury (Malta, Government Notice No. 270, 25 November 1915). The total amount of Maltese notes in circulation never rose as high as £100,000, and by 22 June 1915 it had fallen to £1,533, according to the government treasurer (Malta, "Report of the Treasurer for 1915-15," *Malta Government Gazette*, Supplement No. 19, 17 September 1915: 121).
- Malta, Paper Currency Ordinance, No. 48, 13 September 1939: The government issued notes up to £1 as an emergency measure during the Second World War. The British government did not want to expand the circulation of British notes in Malta lest the island be captured by Axis forces. British notes already in Malta remained in circulation, though. It's provided that notes issued under this Ordinance should be convertible at the Treasury at sterling rates on days to be fixed by the Governor and notified in the Government Gazette. However the law did not provide explicitly for any particular reserve backing.
- Malta by a multitude of government notices authorized further issues of notes. Insofar as we have them, the notices and their dates are: No. 13, 12 January 1940; No. 215, 18 May 1940; No. 318, 24 June 1940; No. 353, 13 July 1940; No. 401, 2 August 1940; No. 137, 1 April 1941; No. 236, 16 May 1941; No. 250, 30 May 1941; No. 324, 4 July 1941; No. 399, 22 August 1941; No. 468, 17 October 1941; No. 563, 10 December 1941; No. 91, 20 February 1942; No. 146, 26 March 1942; No. 246, 27 May 1942; No. 319, 30 June 1942; No. 365, 16 July 1942; No. 412, 11 August 1942; No. 477, 12 September 1942; No. 526, 12 October 1942; No. 587, 9 November 1942; No. 615, 17 November 1942; No. 698, 24 December 1942; No. 69, 2 February 1943; No. 184, 13 April 1943; No. 272, 1 June 1943; No. 307, 18 June 1943; No. 352, 20 July 1943; No. 452, 2 October 1943; No. 496, 2 November 1943; No. 212, 30 May 1944; No. 308, 26 July 1944; No. 419, 3 October 1944; No. 451, 31 October 1944; No.

173, 13 April 1945; No. 283, 19 June 1945; No. 435, 11 September 1945; No. 461, 27 September 1945; No. 608, 11 December 1945; No. 630, 21 December 1945. The notices, in the *Malta Government Gazette*, authorize the additional issue or the exchange of notes of various denominations.

- Malta, Paper Currency (Amendment) Ordinance, No. 15, passed 22 September 1942, assented 25 September 1942: Reduced the lowest denomination of note from 2 shillings to 1 shilling.
- Malta, Currency Notes Ordinance, No. 1, 21 January 1949, brought into force by Governor's Proclamation No. 2, 8 March 1949: Established a currency board.
- Malta, Currency Notes Regulations, Government Notice No. 226, 12 April 1949: Regulations governing aspects of the currency board's operation.
- Malta, Currency Notes (Amendment) Regulations, Government Notice No. 780, 9 December 1949: Made a change regarding note serial numbers.
- Malta, Currency Notes (Amendment) Ordinance, No. 15, passed 7 August 1960, enacted 8 August 1960: Substituted the Financial Secretary and the Accountant General for the Legal Secretary and the Treasurer as the members of the board.
- Malta, Central Bank of Malta Act, No. 31, 11 November 1967; Notice No. 32, 17 April 1968; Notice No. 47, 7 June 1968: Established the Central Bank of Malta on 17 April 1968 to replace the currency board. The transfer of the Note Security Fund, making the central bank a monetary policy institution, became effective on 7 June 1968.

References

Caine, Sydney. 1948-1949. "Monetary Systems of the Colonies," *The Banker*, July 1948: 21 - 24; "II. West Africa," August 1948: 93 - 99; "III. East Africa," September 1948: 169 - 175; "IV. Hong Kong," October 1948: 33 - 39; "V. Malaya," November 1948: 101 - 106; "VI. The West Indies," December 1948: 161 - 167; "VII. The Indian Ocean, Pacific, and Mediterranean Colonies," January 1949: 42 - 33; "VII. Trends and Future Possibilities," February 1949: 92 - 98. (Part VII includes Malta. Caine was a British colonial official whose career specialized in finance.)

Caine, Sydney. 1950. *Monetary Systems of the Colonies*. London: The Banker. (Reprints the articles above with some changes.)

Hanke, Steve H. 2002. "On Dollarization and Currency Boards: Error and Deception," *The Journal of Policy Reform*, 5(4), pp. 203-222 (<http://www.hacer.org/pdf/Hanke01.pdf>)

Hanke, Steve H. 2008. "Why Argentina Did Not Have a Currency Board," *Central Banking*, v. 18, no. 3, February, pp. 56-58 (http://object.cato.org/sites/cato.org/files/articles/hanke_feb2008_argentina_currencyboard.pdf)

Malta. 1936–1967. *The Malta Government Gazette*. Valetta. (In English and Maltese.)

"History of Central Bank of Malta." No date. Central Bank of Malta official website, retrieved on 13th December 13, 2014. See <http://www.centralbankmalta.org/our-history>.

Sammut, J. C. 2001. *Currency in Malta*. Valetta: Central Bank of Malta.

Shannon, H. A. 1951. "Evolution of the Colonial Sterling Exchange Standard." *IMF Staff Papers*, v. 1, no. 3, April: 334-354.

Shannon, H. A. 1952. "The Modern Colonial Sterling Exchange Standard." *IMF Staff Papers*, v. 2, no. 2, April: 318-362.