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**Working Paper**

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Claremont Colleges Working Papers in Economics, No. 1999-14

**Provided in Cooperation with:**

Department of Economics, Claremont McKenna College

*Suggested Citation:* Burdekin, Richard C.K.; Weidenmier, Marc D. (1999) : Interest-Bearing Currency and Legal Restrictions Theory: Lessons from the Southern Confederacy, Claremont Colleges Working Papers in Economics, No. 1999-14, Claremont McKenna College, Department of Economics, Claremont, CA

This Version is available at:

<https://hdl.handle.net/10419/94603>

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## **Interest-Bearing Currency and Legal Restrictions Theory: Lessons from the Southern Confederacy**

*Richard C. K. Burdekin and Marc D. Weidenmier\**  
(Cato Journal, forthcoming)

Instances of interest-bearing currency are relatively rare. The Southern Confederacy issued both interest and non-interest-bearing notes during the Civil War. The two types of notes apparently circulated alongside one another with the interest-bearing currency generally commanding the premium implied by legal restrictions theory. Government-imposed restrictions on banks prevented the non-interest-bearing notes from being driven out of circulation. The Southern experience appears to be consistent with the legal restrictions theory of money and suggests a potential role for interest-bearing currency as a circulating medium.

### **The Role of Interest-Bearing Currency**

I would ... suggest the expediency of issuing notes ... of two kinds; one of a small denomination, without interest, say tens and fives, and denominations of twenties and upwards, at eight per cent. per annum. It is believed that those bearing this interest will, as soon as the crop begins to come in, be relieved from circulation as a sort of savings fund ... If the Secretary of the Treasury be authorized to try the market with these issues experience will determine to what extent they may be used.

(Confederate Secretary of Treasury Memminger, May 10, 1861)<sup>1</sup>

US government bonds have no more default risk than Federal Reserve notes and yet bondholders receive interest payments while holders of Federal Reserve notes do not. Why then do so many choose the non-interest-bearing notes? According to Wallace (1983) non-interest-bearing currency would be dominated by interest-bearing assets save for legal restrictions that interfere with the free circulation of interest-bearing alternatives. Government bonds, for example, are issued only in relatively large denominations and are not legal tender. Absent legal restrictions, Wallace (1983) argues that non-

interest-bearing currency could exist side-by-side with other government obligations that pay interest only when the rate of return on the interest-bearing obligations is driven down to zero (or near zero). There are very few examples of interest-bearing currency with which to test the implications of legal restrictions theory, however. Indeed, the very absence of non-interest-bearing currency has itself been taken as evidence against legal restrictions theory.

For example, White (1987) emphasizes that, even though there were apparently no legal restrictions prohibiting bank-note-issuing Scottish banks from offering interest on their notes over the 1716-1844 period, no interest-bearing notes were actually issued. According to legal restrictions theory, non-interest-bearing notes would be dominated by alternative interest-bearing assets like the high-quality commercial bills and government bonds that were available at the time. Friedman (1969: 39) argues that, in the absence of legal restrictions, competition among banks would force them to pay interest on currency--albeit at a rate below that paid on deposits because of the additional costs of paying the interest on the circulating currency. Thus, a Scottish note-issuing bank of the free banking era should have been “forced by competition to pay out to note-holders the anticipated net earnings on its asset portfolio” (White 1987: 450n).<sup>2</sup> The free banking experience in Scotland hardly disproves the idea that interest-bearing currency could afford a private note issuer a competitive advantage in other settings, however. Indeed, Schuler (2001) suggests that one way private banks could effectively compete with government-created money today would be through paying interest on them through a lottery feature.

McCulloch (1986) argues, though, that complete bank deregulation may be required to make interest-bearing currency feasible and cost effective. A major cost of private note issuance by US banks--before their notes were forcibly phased out under the terms of the 1913 Federal Reserve Act (see Schuler 2001)--had been the government bonds that banks were required to purchase to “back” their notes according to the 1863 National Currency Act. Even under the pre-1863 “free banking” era, banks still

had to back their note issues with holdings of approved bonds. In this case, however, banks that were perceived to be riskier had their notes initially discounted by the market. Redemption at par not only allowed banks to prove their ability to honor their notes but also provided an implicit interest return based on the initial discounted price (Gorton 1996).<sup>3</sup>

Schuler (2001), while reviewing the federal government issuance of non-interest-bearing notes (the familiar “greenbacks”) during the Civil War, and the attendant restrictions on note issuance by private banks, surprisingly does not consider that this same historical episode is also one of the very few experiences with actual issuance of *interest-bearing* currency. So, rather than speculate on why interest-bearing currency has failed to appear, there is an opportunity to see how actual issues of interest-bearing currency were received by the public. Such evidence could not only potentially offer some more direct evidence on the propositions of legal restrictions theory but also yield insights into whether private banks could have anything to gain from issuing interest-bearing currency.

It is true that existing work on the experience of the North during the Civil War suggests that interest-bearing currency was not well received and that it did not have any apparent competitive advantage over its conventional non-interest-bearing counterpart. Interest-bearing currency issued by the Northern government apparently circulated alongside non-interest-bearing notes but commanded no more than face value until the interest payment date approached--at which time the interest-bearing currency was seemingly held back from circulation as an investment. Gherity (1993: 129) emphasizes that this contradicts the legal restrictions theory’s prediction that

such notes would be preferred to non-interest-bearing currency to such a degree that either the rate of return on the interest-bearing notes would fall to zero (meaning, in this case, that their value would be equal to their face value plus interest to maturity) or that non-interest-bearing currency ... must disappear from circulation.

If this experience were considered to have general applicability, this would of course help explain why there have been so few issues of interest-bearing currency. Basically, if interest-bearing currency cannot command a premium over non-interest-bearing currency, it is hard to see how there could be any meaningful competitive advantage for the issuer. There would essentially be no gain to compensate for the extra interest expense.

The Confederate government also issued interest-bearing currency during the Civil War. But this experience is, in our view, much more favorable to legal restrictions theory and suggests that issues of interest-bearing notes could be a viable competitor to non-interest-bearing notes. Although others have claimed that Confederate interest-bearing notes did not circulate and were “simply investments” (Makinen and Woodward 1999: 128), there is, in fact, strong circumstantial evidence that Confederate interest-bearing currency not only circulated but also typically commanded a premium that reflected accrued interest. While the interest-bearing currency admittedly did not chase non-interest-bearing notes from circulation, this is readily explicable given that there were *de facto* legal restrictions that caused large quantities of these notes to be kept within the banking system. That is, large volumes of the Confederate interest-bearing notes were effectively kept out of the public’s reach, thereby artificially restricting their usage and preventing them from dominating non-interest-bearing notes as legal restrictions theory would otherwise imply. We conclude that the Confederate experience is actually quite supportive of legal restrictions theory and of the viability of interest-bearing currency.

### **Circulation of the Confederacy’s Interest-Bearing Currency**

The Southern Confederacy issued \$2 million in 3.65 percent interest-bearing notes in 1861 followed by \$120 million in 7.30 percent notes in 1862. (These interest rates equated to 0.01 percent per day and 0.02 percent per day, respectively, in non-leap years.) On December 31, 1862, interest-bearing

notes represented approximately 28 percent of total Treasury notes outstanding (see Godfrey 1978: 40-47). Thus, while most notes remained the traditional non-interest-bearing variety, the volume of non-interest-bearing notes was far from trivial. All of the larger 1862 issues were of \$100 denomination while the 1861 issue also included interest-bearing \$50, \$500 and \$1000 notes. The higher denominations likely reflected the Confederate government's original intent that the notes not be used as hand-to-hand currency as well as the costs of collecting and calculating interest on small denomination currency (White 1987). The purchasing power of the individual interest-bearing notes declined rapidly during the war, however, and by October 1862 the purchasing power of a \$100 bill was less than that enjoyed by a \$20 bill in early 1861. By October 1864 its purchasing power had actually fallen to less than \$3 in 1861 terms.

The Confederacy's interest-bearing notes could be presented annually for payment of accrued interest and the stamps on the back of surviving 7.30 notes reveal the location at which the payment was made. In many cases, the stamps are from *different cities*. For example, one note in the authors' possession has three stamps from three different cities in Georgia: Atlanta, Macon and Columbus. And Dr. Ball, who has examined thousands of these notes, assures us that the vast majority of them do indeed bear the stamps of more than one city.<sup>4</sup> Moreover, most of these notes apparently show wear consistent with at least limited circulation. Although this does not establish how actively the 7.30 notes circulated, it is hard to see how these notes moved from city to city unless they circulated to at least some extent.

The 7.30 notes certainly do not seem to have become the savings vehicle that Secretary of Treasury Memminger had foreseen. The Confederate government twice attempted to force their conversion into bonds--first under the February 17, 1864 Currency Reform Act and then again in November 1864. The February 17 Act stated that all notes over \$5 not exchanged for 4 percent bonds by April 1, 1864 (or July 1, 1864 west of the Mississippi river) would be subject to a one-third "tax."<sup>5</sup> The

old issue notes would be exchangeable for new notes only on a two-for-three basis. It was not entirely clear whether the February legislation applied to the 7.30 notes, however, and Godfrey (1978: 45) records only a \$2 million dollar reduction in the stock of outstanding 7.30 notes between January 1, 1864 and October 1, 1864. Indeed, the share of interest-bearing notes in total Treasury notes outstanding, that had fallen to 11 percent prior to the implementation of the February 1864 reform, rose back to 15 percent as of October 1, 1864--reflecting a sharp reduction in non-interest-bearing notes outstanding but barely any change in the 7.30s.

Schwab (1901: 23) states that additional November 1864 legislation specifically targeted the 7.30 notes and sought

to drive them out of circulation by making them exchangeable for 30-year 6% bonds, which could not have succeeded, for it was generally more profitable to circulate the notes than to hold them.

Schwab (1901: 23), in fact, stresses the role of the 7.30 notes in “adding greatly to the redundancy of the currency” and being “a source of annoyance to the government.” Todd (1954: 108) and Ball (1991: 164) endorse Schwab’s interpretation that the interest-bearing notes were actively circulated. Without doubt, noteholders proved to be extremely reluctant to exchange the interest-bearing notes for bonds following the February 1864 funding act. Ball (1991: 164) notes that, “between April 30, 1864 and November 10, 1864, fewer than \$27,000 of the notes out of the \$99 million outstanding were retired from circulation.”

In the face of uncertainty as to whether any 7.30 notes not exchanged for bonds were actually repudiated under the terms of the funding act, however, the notes henceforth traded at a discount rather than at the premium that had previously prevailed. Table 1 provides a series of quotes from Wilmington, North Carolina, implying that quite frequent trading continued between May 3, 1864 and November 29, 1864. The discounts shown there are consistent with available quotes from other Southern markets. For example, the *Mobile Tribune* (April 30, 1864) reports that the 7.30 notes were trading at a 20-25 percent

discount to the new replacement currency issued in 1864. A later set of quotes from the Richmond market shows trades at a 20-21.5 percent discount with block sizes ranging from \$1,500 to \$15,000 (*Richmond Whig*, September 1, 1864).

These exchanges at a discount were bemoaned by the *Charleston Daily Courier* (June 15, 1864), which questions why anyone would “go to the brokers and take 80 cents on the dollar for those beautiful \$100 bills, and get currency, no better, not near so good, bearing no interest, and which may be taxed next December at the rate of 33½ per cent.” Although the November 1864 Act subsequently sought to clarify the conversion of the 7.30 notes into bonds, some trading still continued. Indeed, the *Houston Tri-Weekly Telegraph* gives regular quotes for the 7.30 notes until late January 1865--albeit with a discount consistently in excess of 35 percent.

But given that the 7.30 notes could have been exchanged for bonds at par, why did so many hold onto these notes and thereby endure the decline in value after the funding act took effect on April 1, 1864? Seemingly, the only sensible reason for this choice would be if the interest-bearing notes possessed at least some added liquidity and were not simply bond-like investments. Interest-bearing currency certainly appears to move quite independently of bond prices. Available quotes for the interest-bearing notes between March 31, 1863 and January 20, 1864 (Table 2) all show the notes trading at or about par plus interest prior to the implementation of the 1864 currency reform. By contrast, 8 percent Confederate bonds (as issued under the \$100 million loan of 1861) over this same period rise from trading at or around par with (non-interest-bearing) currency in March 1863 to a premium of 15-20 percent in January 1864 (see Burdekin and Weidenmier 2002). And these bonds rise to still greater premiums after the implementation of the February 1864 Act while the interest-bearing notes sink to a discount.

Prior to the February 1864 Act, however, the data in Table 2 suggests that owners of the interest-bearing notes were indeed able to secure the premium implied by legal restrictions theory. Furthermore,

the trading volumes appear to have been quite substantial. The *Richmond Dispatch* (February 12, 1864), for example, reports that quite large lots of \$19,100 and \$24,000 of the 7.30 notes changed hands at a 3.5-4 percent premium. Even larger volumes were noted after the passage of the February 17, 1864 funding act. The *Richmond Whig* (March 7, 1864) reports that a \$82,000 block changed hands and the total reported volume in 7.30 notes that day was near \$200,000. The steady premium and the volume being traded as late as 1864 suggests that there was a liquid market for the 7.30 notes but does also beg the question of why these notes did not chase the non-interest-bearing notes out of circulation.

### **Explaining the Parallel Circulation of Non-Interest-Bearing Notes**

Although the Confederacy did not have official legal tender laws the availability of the interest-bearing notes to the general public was limited by an important *de facto* legal restriction imposed on Confederate banks. With the exception of the New Orleans and Mobile money centers, most banks in the south had suspended specie payments in November 1860 after the election of Abraham Lincoln (Godfrey 1978: 69). The banks in New Orleans and Mobile followed in September 1861 when, under pressure from the Confederate government, the Governor of Louisiana issued a proclamation recommending suspension “avowedly in order to be able to offer accommodation to the planting interests, but actually to enable them to accept treasury notes...” (Schwab 1901: 141). Meanwhile, other states sought to ensure a captive demand for state and Confederate bond and note issues by imposing conditions for the continued suspension of specie payments. For instance, the Alabama State Legislature declared on December 9, 1861 that the suspension would be maintained until after the end of the war *provided* “that the banks accepted Confederate treasury notes at par and limited their rate of discount to 8%” (Schwab 1901: 129).<sup>6</sup>

Banks not surprisingly showed a preference for interest-bearing currency over non-interest-bearing notes. Amongst North Carolina banks, for example, 40 percent of all Confederate notes held at

war's end were the 7.30 notes of 1862 (Ball 1991: 163). While soaring inflation made the real returns on the 7.30 notes profoundly negative from the outset, the banks--essentially having no choice but to continue accepting Confederate notes--rationally absorbed the interest-bearing notes in preference to their non-interest-bearing counterparts. In short, such notes were more valuable to the banks than to the general population owing to the pressures and restrictions placed on the banks by the Confederate and state governments.<sup>7</sup> Furthermore, outflows of interest-bearing currency from the banks were discouraged because banks reportedly adopted a discriminatory policy whereby they would insist that customers credit the bank for accrued interest upon withdrawal but would give no credit for accrued interest when the notes were deposited.<sup>8</sup>

## **Conclusions**

The Confederate experience supports the idea that interest-bearing currency can compete with conventional non-interest-bearing notes as a circulating medium. Unlike the Northern experience documented by Gherity (1993), Confederate interest-bearing notes--at least prior to the 1864 currency reform--also appear to have commanded a premium in line with their accrued interest.<sup>9</sup> The only apparent contradiction with the predictions of the legal restrictions theory lies in the failure of the interest-bearing currency to dominate the non-interest-bearing notes and actually drive them out of circulation. But the Confederacy's *de facto* legal restrictions ensured that, as a practical matter, large volumes of interest-bearing notes were artificially kept out of the public's hands. It is thus hardly surprising that non-interest-bearing notes continued to circulate side-by-side with the 7.30 notes and the Southern experience is, at the very least, much more consistent with legal restrictions theory than casual observation would suggest. At the same time, the viability of interest-bearing currency should perhaps not be so readily discarded on the basis of the limited historical evidence available elsewhere.

## Footnotes

- \* Richard C. K. Burdekin is Professor of Economics at Claremont McKenna College; Marc D. Weidenmier is Assistant Professor of Economics at Claremont McKenna College and NBER Faculty Research Fellow. The authors thank Douglas Ball, Hugh Rockoff, Manfred Keil, Tom Willett and an anonymous referee for their advice and comments.
1. Reprinted in Capers (1893: 420).
  2. There was, in fact, an “option clause” typically offered on larger notes whereby a note not immediately redeemed in specie would then exchange for a pre-specified premium payable at a pre-specified future date. For example, the option clause printed on Bank of Scotland notes from 1730 to 1765-- after which such option clauses were prohibited in Scotland--yielded a 5 percent implicit annual interest rate in the event of delay (White 1992: 160). Cowen and Kroszner (1989: 223) argue that option-clause notes, “even if not paying explicit interest, may also be considered an interest-bearing medium ... The holder of an option clause note ... held a lottery ticket that paid its face value in gold in one state of the world and interest with delayed gold redeemability in the other.”
  3. Otherwise, however, banking regulation may have combined with other transaction and computation costs--as identified by White (1987)--to account for the apparent lack of true interest-bearing notes. While it remains to be seen whether a bank could profitably issue interest-bearing currency today, technical advances (such as the “smart cards” pioneered by Mondex in the United Kingdom) suggests that this is more likely now than in the past.
  4. The stamps on the back of the notes are dated January 1, 1863, January 1, 1864 and--less often-- January 1, 1865. This final interest payment occurs after the Confederate Congress’ December

1864 vote to defer the forced conversion of old currency for bonds until July 1, 1865 (Todd 1954: 114).

5. Burdekin and Weidenmier (2001) document the potency of the February 1864 reform in achieving a sharp, albeit temporary, reduction in the rate of Confederate currency depreciation after the different dates at which it took effect east and west of the Mississippi river.
6. Godfrey (1978: 86-87) points out that the banks were susceptible to such pressures in that, “[s]ince bank directors and stockholders were generally liable for a bank’s debts, they faced considerable personal loss if the banks were forced to close and redeem their liabilities in specie.”
7. Another factor is identified by Secretary of Treasury Trenholm, who succeeded Memminger in July 1864. Trenholm (1864: 17) points to a problem with the interest payments on the 7.30 notes in that the “payment of interest is attended with the risk of frauds, and the regulations adopted for the security of the treasury are found inconvenient to the public.” Indeed, Trenholm cites this problem as the main justification for converting the 7.30 notes into bonds--rather than the motive of simply getting them out of circulation emphasized by Schwab (1901) and others.
8. We are indebted to Douglas Ball for providing us with this information.
9. While it is unclear exactly why the acceptance of interest-bearing notes appears to have been so different in the North, Gherity (1993) does report that there were four types of interest-bearing notes each with differing minimum denominations and with some afforded legal tender status and some not. This may have led to more confusion on the part of the public than was true of the more uniform Confederate interest-bearing notes.

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**Table 1**

**Discounted Values for Confederate 7.30 Notes in Wilmington, North Carolina in 1864**

<b>Date</b>	<b>Price</b>
May 3, 1864	80 cents on the dollar
May 25, 1864	80
June 8, 1864	80
June 22, 1864	80
July 20, 1864	80
July 27, 1864	80
August 3, 1864	80
August 10, 1864	70
August 17, 1864	70
August 24, 1864	70
August 31, 1864	70
September 7, 1864	70
September 14, 1864	65
September 28, 1864	65
October 5, 1864	65
October 12, 1864	65
October 18, 1864	70
October 26, 1864	65
November 2, 1864	65
November 29, 1864	75

Source: *The Wilmington Daily Journal*.

**Table 2**

**Market Quotes for Confederate 7.30 Notes in Richmond Prior to the 1864 Currency Reform**

<b>Date</b>	<b>Price</b>
March 31, 1863	104
April 18, 1863	99½ - 99¾ and interest
May 2, 1863	100 and interest
August, 1, 1863	99¾ and interest
September 19, 1863	100 and interest
January 20, 1864	99 and interest

Notes: The March 31, 1863 quote includes accrued interest. For the remaining quotes the accrued interest would be added to the posted price when the transaction was completed.

Sources: The *Richmond Examiner* and the *Richmond Whig*.