



# Reconsidering Colonial Maryland's Bills of Credit 1767–1775

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In several recent papers Farley Grubb (2015; 2016a; b; c) has proposed that the value of bills of credit, the paper monies issued by American colonies, can most properly be explained by considering them not as fiat monies but as zero-coupon discount bonds maturing at some future date. Grubb's recent paper with James Celia in the *Economic History Review* considers Maryland's final issues of colonial currency, 1767–1775, from this perspective. Celia and Grubb conclude that “this paper money traded below face value due to time-discounting,” and that the “vast majority of its market value” must be attributed to “its real-asset present value” (2016, 1132, 1152). This paper argues that the Maryland bills of credit in question actually passed interchangeably, at par, with hard money, and that Celia and Grubb's analysis is based on a mistaken computation of the par of exchange.

Maryland's 1767–1775 paper money was unique in many respects. Maryland built on its previous paper money experience and designed its currency to sidestep imperial regulations and mollify imperial critics. By denominating its currency in dollars rather than local pounds Maryland circumvented the act of Parliament enforcing Queen Anne's proclamation, an act that prohibited Spanish dollars from being paid and received for more than 6 shillings in local currency. These Maryland issues were the only dollar-denominated currency issued in America before 1776 (Newman 1986; Brock 1975, 130–167). To secure the currency's reputation Maryland levied a tax, deposited the proceeds in London, and earmarked those proceeds to redeem its bills at face value, silver dollar for paper dollar, at fixed future dates.<sup>2</sup>

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2. Strictly speaking, Maryland promised to redeem its currency with bills of exchange on London at the rate of 4 s. 6 d. sterling per paper dollar. The silver in a Spanish silver dollar, when valued at the mint price of

The provision of an explicit redemption fund invested in London securities bestowed a unique cachet on the currency and emboldened Maryland to issue it without making it legal tender. Hence it did not violate the Currency Act of 1764. Historical precedent buttressed public faith in the new currency. Maryland's previous issues of paper money also relied on a redemption fund in London. When Maryland successfully redeemed all its earlier emissions in 1764, as promised, it set to rest any apprehensions the public might have harbored about paper currency issued on such a scheme. Initially, no one seems to have foreseen what the future held: a Revolution, runaway inflation, and the confiscation of the London redemption fund after the political upheaval. Maryland issued three batches of the new dollar currency, one in 1767 designed to be redeemed beginning in 1777, another in 1770 designed to be redeemed beginning in 1782, and a final batch in 1774 designed to be redeemed beginning in 1785 (Celia and Grubb 2016; Gould 1915; Behrens 1923).

Celia and Grubb's hypothesis that the public valued Maryland's bills of credit as discount securities is altogether plausible *a priori*. Nevertheless, for whatever reason, the public treated the bills as money, not as discount bonds. That the public did so should be obvious from the fact, which Celia and Grubb acknowledge, that the 1767 bills, the 1770 bills, and the 1774 bills all possessed an equal value. Because each cohort of bills possessed a different 'maturity' date, the equality of their values is inconsistent with the discount bond hypothesis. At an interest rate of 6 percent, the 1774 issues should have been worth about 62 percent of the 1767 issues.

Celia and Grubb's foundational assumption—that "this paper money traded below face value" (2016, 1132)—is untrue. Maryland's dollar-denominated paper money passed in transactions at the same rate as Spanish silver dollars, namely, at 7 s. 6 d. in Maryland's money of account. Previous historians knew this to be the case: Kathryn Behrens (1923, 55–56) concluded that "In spite of the absence of legal tender clauses in the acts of 1769 and 1773, and although there must have been a great deal of paper money in circulation at this time, it did not depreciate...but remained at par with specie during the continuance of the proprietary government." Joseph Ernst (1973, 166) concurred. Behrens's and Ernst's conclusion is amply supported by a wide variety of evidence.

In 1753 Maryland's tobacco inspection act rated Spanish silver dollars at 7 s. 6 d. each, creating a Maryland unit of account known as "hard money" or "common money" (Gould 1915, 32–34; McCusker 1978, 192; Brock 1975, 415–417; Mossman 1993, 40). "This valuation," according to historian Clarence Gould, "was soon adopted by many business men and became widely used" (1915, 33).

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silver in Britain, was worth 4 s. 6 d. sterling; hence, the scheme mimicked a literal paper dollar-for-silver dollar exchange.

That Maryland continued to value Spanish silver according to this rule during the late colonial period is verified by a coin rating table published in *The Philadelphia Newest Almanack, for the Year of Our Lord 1775* (Telescope 1774). Moreover, a day book kept by John Glassford and Company, tobacco factors operating in Maryland, demonstrates that this valuation was honored in transactions. An entry for 13 February 1773 is crystal clear: “To Cash one Silver Dollar – 7/6” (John Glassford and Company, 1772–1773). When Maryland first created its dollar-denominated bills of credit, the intention was that they would pass on the same basis, as attested to by the following announcement published 12 March 1767 in the *Maryland Gazette*.

As many People are puzzled about our  
New Emission of Bills of Credit, the  
following Table, by Way of Explana-  
tion, may not be unnecessary to some  
of our Readers :

Denomination of the B I L L S.	V A L U E.	
	Sterling.	Currency.
Eight Dollars. - -	1 : 16 : 0	3 : 0 : 0
Six Dollars. - - -	1 : 7 : 0	2 : 5 : 0
Four Dollars. - -	0 : 18 : 0	1 : 10 : 0
Two Dollars. - -	0 : 9 : 0	0 : 15 : 0
One Dollar. - - -	0 : 4 : 6	0 : 7 : 6
Two 3 <sup>rd</sup> of a Dollar.	0 : 3 : 0	0 : 5 : 0
Half a Dollar. - -	0 : 2 : 3	0 : 3 : 9
One 3 <sup>rd</sup> of a Dollar.	0 : 1 : 6	0 : 2 : 6
Two 9 <sup>th</sup> s of a Dollar.	0 : 1 : 0	0 : 1 : 8
One 6 <sup>th</sup> of a Dollar.	0 : 0 : 9	0 : 1 : 3
One 9 <sup>th</sup> of a Dollar.	0 : 0 : 6	0 : 0 : 10

**Figure 1.** The value of Maryland’s bills in pounds, shillings, and pence, as explained in the *Maryland Gazette* (Jonas Green, ed.), 12 March 1767, p. 2 ([link](#))

Evidence that Maryland’s dollar-denominated currency was actually paid and received on this basis may be found in the John Glassford and Company daybook in entries such as the following: on 24 July 1772, “To Cash 9 .. 6 Dollar Bills £20..5” and on the same date “To Cash 1 .. 8 Dollar & 1 . 60/ Bill £6.” Using the fact that 1 £ = 20 s. and 1 s. = 12 d., one can easily verify that each paper dollar is being credited at 7 s. 6 d. The daybook also records transactions mixing paper money and specie, such as one on 3 October 1772: “To Cash 2..4 Dollar 1..2 Dollar & 1.. 1 Doll<sup>r</sup> Bill & 1 Silver Dollar 4..10..0.” All the dollars in this transaction, both paper and silver, are being credited at 7 s. 6 d.<sup>3</sup> Likewise New Jersey account books

3. This is not an exhaustive list of such transactions. See entries for 7 July 1772, 8 August 1772, 21 August 1772, 22 September 1772, and 1 October 1772 in John Glassford and Company and Successors (1772–1773; see also 1767, 178, 184, 193, 206–207). Also see Samuel Galloway’s account with Ben Brooks in Galloway-Maxy-Markoe families papers (1654–1888, Correspondence, Box 1), and p. 265 of the

contain accounts from 1768 and 1774 that record Maryland dollars being accepted there for 7 s. 6 d. New Jersey proclamation money, the same rate at which Spanish silver dollars were accepted in West Jersey (Studley et al. 1968, reel 5 img. 303, reel 6 img. 685). A Pennsylvania almanac, *The Gentleman and Citizen's Pocket-Almanack for the Year 1772* (Evitt 1771), contains a table showing the value of Maryland bills of credit in Pennsylvania, a table which is identical to the table of their value in Maryland in Figure 1. Because Spanish silver dollars also circulated in Pennsylvania at 7 s. 6 d., we know Pennsylvanians valued Maryland's dollar-denominated bills of credit at par with silver dollars just as the residents of Maryland and New Jersey did (Michener and Wright 2006, 8, 35).

Because Maryland's dollar-denominated paper money worked seamlessly in tandem with specie before the Revolution, it generated scarcely any controversy in colonial newspapers or the colonial assembly. In the Confederation period, however, we find public discussion shedding light on how it functioned. In 1786, Maryland debated the wisdom of once again issuing paper money to relieve fiscal and economic pressures on the state government and its citizens. The Maryland House of Delegates supported the move and in a 1786 report cited the favorable prewar experience as a hopeful precedent. "We know," the delegates stated, "that in 1776 above £238,000, in bills of credit, emitted by the old government, and above £200,000 issued by the conventions, were in circulation, and passed, until August, 1776, at par with specie" (Maryland House of Delegates General Assembly 1787, p. 87). Paper money advocates echoed this in the newspapers. Denouncing "the bug-bear of depreciation, which is held out as a terror to the weak-minded," one went on to observe that "under our former government when our legislature thought it necessary to emit paper money... they proposed it — they funded it well — they emitted it — no such objections were made — it passed at par — kept its credit" (*Maryland Journal and Baltimore Advertiser*, 26 December 1786, p. 3).

An opponent of Confederation era bills of credit, Alexander Contee Hanson, answered this argument with his own reflections on Maryland's monetary history. He acknowledged that before the war "there was a time, when, in all respects, [bills of credit] were equal to cash." That the pre-war bills had a "value equal to so many sums of ready money" he attributed to a "popular illusion, an opinion universally, or very generally, prevailing, that they will answer all the purposes of specie, [which] will give them this value as effectually as if there were a sum of money deposited in places convenient to every person for exchanging on demand. Under such an opinion, no man would hesitate to take them from another." Nevertheless, he argued, the illusion no longer prevailed. "This opinion, having existed before the war, was unfortunately lost by the continental bills." Hence, "the season for bills of

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Bushtown MD. Iron Works Journal in the John Lee Webster account books (1747–1793).

credit is past” (Hanson 1787, 17).

That Maryland’s dollar currency circulated at par alongside paper money issued by the Revolutionary government as late as August 1776 strongly points to its value being based on its utility as a medium of exchange and not, as Celia and Grubb argue, on its “real-asset present value.” Maryland’s dollar currency was the creature of its proprietary government and could scarcely carry the same “real-asset present value” as the paper money issued by the Revolutionary government. By August 1776 the Revolution was well underway. Someone was obviously going to win, and someone lose, and the “real-asset present value” of the loser’s currency would almost certainly be nil. In the interim, however, both currencies simultaneously offered the same services as a medium of exchange.

Maryland’s bills could not have been valued as a discount security, as claimed by Celia and Grubb, unless they passed at a discount; that is, unless the public actually paid and received them for less than their face value. Celia and Grubb maintain they *were* valued at less than their face value. They don’t arrive at this conclusion by comparing how Maryland’s paper dollars were valued relative to silver dollars within the colony—a subject their paper doesn’t explore. Rather, Celia and Grubb compare Maryland’s commercial exchange rate on London to par, from which they conclude Maryland’s bills were worth only about 70 percent of their face value (Celia and Grubb 2016, 1152, Figure 1). It would be moot to debate whether the issue is best determined by comparing exchange rates or by comparing how the bills were accepted vis-à-vis silver in transactions, because Celia and Grubb computed the par of exchange incorrectly.

To understand the mistake underlying the erroneous par, we must understand the monies of account used in colonial Maryland. The colony concluded its first experiment with paper money in 1764 by retiring it at the rate of 6 s. a dollar, equivalent to  $133\frac{1}{3}$  pounds of this Maryland currency for each 100 pounds sterling, a rate established when the bills were first created in 1733 (Brock 1975, 421–422; Gould 1915, 31). After Maryland retired its first batch of paper money, prices denominated in its “one dollar = 6 s.” units lingered on, appearing occasionally in Maryland contracts and accounts (McCusker 1978, 194). The accounting units embodied in this now defunct currency became a form of ghost money, and this accounting system coexisted with the “common money” or “hard money” system introduced in 1753, by which “one dollar = 7 s. 6 d.” Maryland’s ghost money has a modern analogue, British guineas, which existed as an actual medium of exchange in Great Britain only until the Great Recoinage of 1816. Nevertheless, prices in some auctions and professional contracts are quoted in guineas to this day. Historical tradition holds that a guinea is worth 21 shillings and 20 shillings comprise a pound; hence, agreements stated in guineas are executed using pounds according to the formula that 105 pounds is equal to 100 guineas. Similarly,

agreements made in Maryland's ghost money were executed using Maryland's hard money according to the rule that 100 pounds of this ghost money was equivalent to 125 pounds of Maryland's hard money, a ratio based on the rating each standard placed on the Spanish dollar, namely  $7.5/6 = 1\frac{1}{4}$  (McCusker 1978, 194).

When Maryland undertook a second trial of paper money, the one studied by Celia and Grubb, the old paper money units remained a ghost because Maryland denominated its new paper money in hard money—dollars—not the pounds the colony had used to denominate the previous currency (Newman 1986). Nevertheless, Celia and Grubb proceed by treating 125, the value in pounds of £100 in Maryland's ghost money when converted to Maryland's hard money, *as the Maryland-London par of exchange*, a truly breathtaking non sequitur (Celia and Grubb 2016, 1149). The relationship between Maryland's ghost money and its hard money has no relation to the 1767–1775 par of exchange between Maryland and London, any more than the ratio of Guineas to pounds today establishes a par for the modern dollar-pound exchange rate. The recognized par of exchange between Maryland and London in 1767–1775 was actually  $166\frac{2}{3}$ , because Maryland's "hard money" standard rated dollars at 7 s. 6 d., dollars valued at the mint price of silver in London were worth 4 s. 6 d. sterling, and  $7.5/4.5 = 1\frac{2}{3}$  (McCusker 1978, 7–8, 192; Gould 1915, 32–33; Mossman 1993, 40, 75).

Once par is correctly computed, one discovers Maryland's commercial exchange rate on London oscillated in the general neighborhood of par. Even if one believed any discount on the bills should most properly be computed from exchange rates, one would still be led to conclude Maryland's paper money circulated essentially at par. Whether depreciation is best measured by comparing exchange rates or by comparing how the bills were accepted vis-à-vis silver in transactions was actually debated in colonial times. Maryland's dollar-denominated bills of credit were in precisely the same situation as New York's and Pennsylvania's bills of credit, which also circulated within their respective colonies at a constant value for decades. In 1767 Ben Franklin took note of this and made the following observation.

It has indeed been usual with the Adversaries of a Paper Currency, to call every Rise of Exchange with London, a Depreciation of the Paper: But this Notion appears to be by no means just. . . . And as a Proof of this, it is a certain Fact, that whenever in those Colonies Bills of Exchange have been dearer, the Purchaser has constantly been obliged to give more in Silver as well as in Paper, for them, the Silver having gone hand in hand with the Paper at the Rate above-mentioned: And therefore it might as well have been said that the Silver was depreciated. (Franklin 1970, 84–85)

One last observation regarding the par of exchange is in order, although it

is tangential to the critique of Celia and Grubb offered here. Modern historians as well as most eighteenth-century merchants calculated the dollar par of exchange by computing the ratio of the rated value of dollars in a colony to dollars valued at the mint price of silver in Great Britain (4 s. 6 d. sterling). This calculation of par is no more than a convenient simplification, analogous to the practice of computing interest on intrayear loans as if each month has 30 days. It isn't quite correct because eighteenth-century Great Britain had overrated gold relative to silver at the mint, and Spanish dollars were bought and sold as a commodity in London at a small fluctuating premium over the mint price of the silver they contained. To compute par more precisely one must take the ratio of the rated value of Spanish dollars in Maryland to their *market value* in London. Because dollars circulated by tale in Maryland but were sold by weight in London, one must also know the average weight of dollars circulating in the colonies.

One consequence is that fluctuations in the price of Spanish silver in London had an effect on colonial exchange rates: During the French and Indian War a representative of the British Army in America reported that “the price they give for [bills of exchange] is a good deal Regulated by the price of Silver in London of which they have Advice by every Ship” (cited in Brock 1992, p. 92). Sophisticated colonials understood these things: *The New-York Pocket Almanack, for the Year 1766* (Moore 1765) printed a table converting New York and Pennsylvania money to sterling using a par of exchange based on dollars valued at 4 s. 8 d. sterling, their average value in London bullion markets, rather than at 4 s. 6 d. sterling, their value at the London mint price of silver.

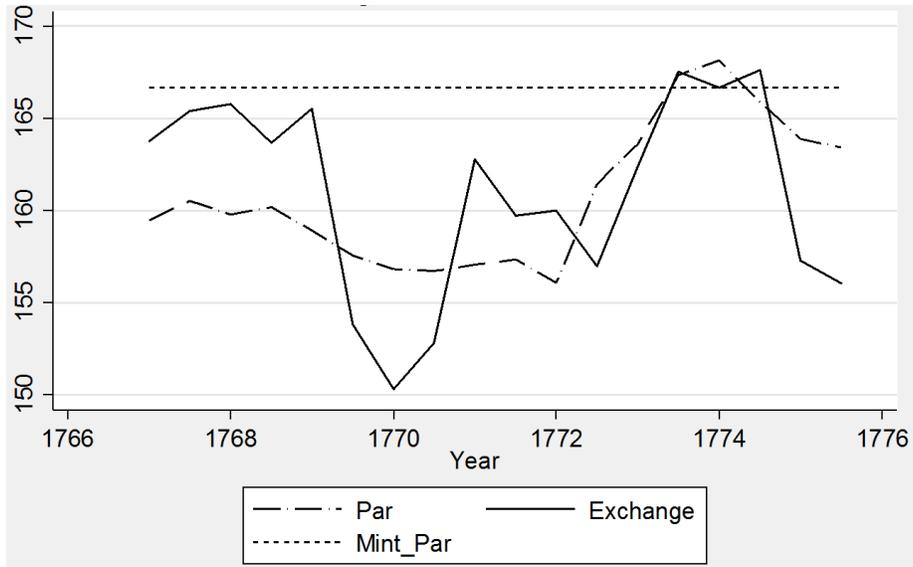
These details matter because they address an objection likely to occur to a keen-eyed reader. If one compares the Maryland exchange rates in McCusker (1978, 199) to the conventional par of exchange, one discovers that bills of exchange in Maryland seldom sold for as much as 166.67 and occasionally sold for considerably less. If bills of exchange were consistently under par, how can that fact be reconciled with well-documented episodes of specie flows from the colony to England? And how can an exchange rate as low as 151.03, the average in 1770, which is more than 9 percent below the traditional measure of par, be reconciled with specie points universally thought to be narrower than that in peacetime? The correct calculation of par addresses both these issues, as is illustrated in Figure 2, which shows biennial averages for exchange, par based on the London price of Spanish silver, and par based on the mint price of Spanish dollars.<sup>4</sup> As one can see

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4. Exchange rates are January–June and July–December averages from McCusker (1978, 199); silver prices are January–June and July–December averages from Brock (1992, 105). Conversion of silver prices to a par of exchange is based on colonial dollars weighing an average of 0.866 ounces each, which is based on *The New-York Pocket Almanack for the Year 1773* (Moore 1772, 35).

the Maryland exchange rate was correlated with the par of exchange (the sample correlation coefficient is 0.51), the exchange rate was frequently above par, and deviations from par did not exceed 4.5 percent.

**Figure 2.** Exchange and measures of par



Grubb and Celia (2016, 1154) believe their paper “[takes] the analysis of colonial paper money far beyond its cumulative state in the economics literature.” Grubb (2015; 2016a; b; c) has made similar claims for his previously published work applying the same theoretical framework to colonial New Jersey. A full discussion of Grubb’s earlier work is far beyond the scope of this brief note, but readers should be warned that New Jersey’s colonial currency, like Maryland’s, passed at par with specie in New Jersey’s everyday transactions. Grubb argues otherwise, but his argument for New Jersey, like his argument for Maryland, is grounded in a misunderstanding of New Jersey’s par of exchange (Michener 2018).

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