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## Financial stability and secure currency in a modern context

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## Working Paper No. 877

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### Financial Stability and Secure Currency in a Modern Context\*

by

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Levy Economics Institute of Bard College

**November 2016**

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\* Keynote address to the conference commemorating the bicentenary of David Ricardo's *Proposals for an Economical and Secure Currency; with Observations on the Profits of the Bank of England, as they Regard the Public and the Proprietors of Bank Stock* (1816), sponsored by the Royal Economic Society, the Ricardo Society of Japan, the Open Political Economy Group at The Open University, and the SOAS Money and Development Seminar Series, University of London, June 2, 2016.

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## **ABSTRACT**

Against the background of modern-day monetary proposals, ranging from a return to the gold standard to the wholesale abolition of currency, this paper seeks to draw implications from David Ricardo's *Proposals for an Economical and Secure Currency* for plans to reform the operation of central banks and extraordinary monetary policy. Although 200 years old, the "Ingot plan," proposed during a period in which gold convertibility was suspended, appears to be applicable to modern monetary conditions and suggests possible avenues of reform.

**Keywords:** David Ricardo; Monetary Systems; Ingot Plan; Gold Standard

**JEL Classifications:** B12, E42, N10

## INTRODUCTION

It is hard to assess the role of money in the economy these days. On the one hand, Donald Trump is following the perennial Republican election tactic of proposing a return to past greatness via a restoration of the gold standard.<sup>1</sup> Not to be outdone, Larry Summers and Willem Buiter (among others) have recommended the abolition of currency, while in counter current, Lord Turner<sup>2</sup> has proposed a helicopter drop of the very bank notes that Summer and Buiter want to eliminate. And this against the background of a proliferation of alternative digital currencies, mobile payment systems, and financial institutions investigating blockchain private transfer systems.

Granted, some of the confusion is due to the inability of central banks to transfer from a ZIRP to a NIRP policy (Buiter and Rahbari 2015) à la Silvio Gesell, and attempts to quash criminals hiding behind untraceable currency notes (Summers 2016) in the presence of the Libertarian belief that only Bitcoin can be considered democratic. Clearly we have need of a straightforward, logical proposal, such as David Ricardo presented in his so-called “Ingot Plan” for the return to gold convertibility in his *Proposals for an Economical and Secure Currency* (hereafter *Proposals* or *PESC*).<sup>3</sup>

Revisiting Ricardo’s monetary *Proposals* is also timely because it is based on his concerns for the impact of the monetary system on the distribution of income. While Ricardo’s unsuccessful search for an invariable measure of value (and Sraffa’s solution) are now well known, it is perhaps less-widely recognized that his monetary proposals were driven by his concerns, as an active participant in financial markets,<sup>4</sup> that variations in the value of the currency in which time contracts are denominated would produce changes in the distribution of income between

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<sup>1</sup> “In some ways I like the gold standard and there is something very nice about the gold standard [...]. We used to have a very solid country because it was based on a gold standard and we do not have that anymore [...] It would be very very hard to do at this point and one of the problems is we do not have the gold—other places have the gold.” (From an interview with Josh McElveen, March 31, 2015. Available at [www.wtae.com](http://www.wtae.com)).

<sup>2</sup> Helicopter money as a policy option; available at: <https://ineteconomics.org/ideas-papers/blog/helicopter-money-as-a-policy-option>

<sup>3</sup> This text uses the version in Sraffa’s (1951–55), *Works and Correspondence of David Ricardo*, vol. VII.

<sup>4</sup> And as an analyst, and trader in the gold market, see his 1813 letters to Malthus containing detailed calculations of arbitrage prices for various gold coinage and mint prices in foreign markets, e.g., #37 and #45. The authoritative description of Ricardo’s activity in this area is to be found in Marcuzzo and Rosselli (1991).

creditors and debtors. However, it is now generally accepted that the invariable standard proposed by Sraffa could not provide the measure of value sought to preserve the sanctity of financial contracts.<sup>5</sup>

This modern assessment of Ricardo's monetary proposal will reflect on two different frameworks. The first relates to the specific economic and institutional conditions that served as its background. Monetary measures can never be considered outside the particular historical and institutional context in which they take place, and Ricardo's proposal cannot be understood outside that context. The second will place the proposal in the framework of the historical evolution of the theory of monetary systems, using the work of James Steuart and Luigi Einaudi, which highlights the distinction between what we will call "dual" and "mono" monetary systems. Finally, a closing section will attempt an analysis of the relevance of the modern proposals elicited above against the background to Ricardo's analysis.

## **RICARDO AS REVOLUTIONARY**

Indeed, in his time Ricardo's proposal was considered as unorthodox and revolutionary<sup>6</sup> as any of the modern-day proposals mentioned above, for he went against the historical and traditional view, arguing that the Bank of England could restore the gold standard by eliminating payment in specie, indeed suggesting that Bank of England notes should fully displace minted gold coin. The paradox, indeed heresy, of a gold standard without gold money!

Ricardo's heretical proposal had appeared in embryonic form several of his earlier writings,<sup>7</sup> but took pride of place in his pamphlet *Proposals for an Economical and Secure Currency* (1816). Originally incited to write an essay criticizing of the Bank for making excessive profits on the management of the Crown debt and failing to report and distribute the earnings to the

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<sup>5</sup> See Marcuzzo and Rosselli (1994) and Deleplace (1994a and b).

<sup>6</sup> Trower, in letter #159 (Sraffa 1951–55: Volume VII) to Ricardo notes that the proposal "carries on the face of it so great an innovation as no doubt to startle those who have not well weighed its effects" (22), while Broadley (letter #168) objected that "the Bank should be ruined, or subjected to ruin [...] is a proposition so fully fraught with injustice to that Company and the impolicy and danger to the nation itself" (39).

<sup>7</sup> As an appendix to the fourth printing of *High Price of Bullion* and in private communication to other officials (see Sraffa's *Introduction* to volume V: 46).

shareholders as stipulated in the Bank's charter, these issues were ancillary to the *Proposals* (revolutionary then, and now a possible plan for Donald Trump, who is worried that the US does not have enough gold to go back to a gold currency). It may also make possible an assessment of the more radical proposals for the elimination or expansion of currency, noted above.

It is also appropriate to note the similarity between the context of these various modern proposals in the agonizingly slow recovery from the recent Great Financial Recession, and financial conditions of Ricardo's proposal in the aftermath of the financial crisis of 1793–94 that led to the 1797 Bank Restriction Act, which suspended specie payment of Bank of England notes. The proximate cause of the British government's instruction to the Bank of England to suspend payment is generally believed to have been the widespread failure of country banks to redeem their notes in 1794, aggravated by increasing government demands for finance of the war with France, the collapse of the French Assignat, and then the general panic caused by an apparently staged French invasion of Wales.<sup>8</sup> Thus the main issue to be faced was that of the resumption of specie payments against a background of frequent suspension in periods of crisis. While Ricardo supported resumption, he recognized the inherent risks in backing the note issue with specie and thus sought a system that might avoid the frequent suspensions and crises. The historical background thus suggests concerns about the stability of the currency and measures to meet the recognized fragility of the pre-restriction system of specie payments.

To the modern reader (or modern currency abolitionist), the *Proposals* is hard to understand, so some linguistic interpretation may be useful. It is certainly not current to define a currency regime as "economical." Although in the present era of NIRP, holding currency rather than bank

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<sup>8</sup> See Feavearyear (1931: chapter VII) for a summary of the events leading up to the Bank Restriction Act. This also accords with Ricardo's own explanation:

I have very little doubt but there has been a considerable rise in the value of money which I think has been effected by the many failures of the country Banks, which has increased the use of Bank of England notes in the country, both as a circulating medium, and as a deposit against the alarm which always attends extensive failures in the country. I believe too that bullion has had a real fall, which has also contributed to bring it nearer to the value of paper. The bullionists, and I among the number, considered gold and silver as less variable commodities than they really are, and the effect of war on the prices of these metals were certainly very much underrated by them. The fall in the price of bullion on the peace in 1814, and its rise again on the renewal of war on Bonapartes entry into Paris are remarkable facts, and should never be neglected in any future discussion on this subject. (Letter to Trower, #147; Sraffa 1951–55: 343–44)

deposits may be considered economical since it avoids the negative interest charges on the holding of wealth in other types of financial assets. However, it is important to recognize that economical<sup>9</sup> in Ricardo's terms refers to minimizing the use of specie, which is gold minted into coin.

In Section V of the *PESC*, proposing a plan to reduce the negative impact of the payment of interest on the government debt, he refers to “[t]he very great perfection to which our system of economizing the use of money has arrived, by the various operations of banking” (*PESC*: 75). He indicates that “those who are well acquainted with the economical system, now adopted in London, throughout the whole banking concern, will readily understand that the plan here proposed is merely the extension of this economical system to a species of payments to which it has not yet been applied” (*PESC*: 76). For Ricardo this economical system is effectuated by means of “payments [...] made by checks on bankers; by means of which money is merely written off one account and added to another, and that to the amount of millions daily, with few or no bank notes or coin passing” (*PESC*: 58). It is through the use of what Keynes would call “bank money” via bank clearing houses that payments are made without the need of currency, thus making payments in a more “economical” way than through either the use of specie or paper notes.

Note that Ricardo here appears to conflate two means of effectuating “economy” in the currency. One is the process of the offsetting of debts and credits via the clearing house, which requires “few or no bank notes or coin passing,” and the other a substitution of bank notes rather than coin in effectuating payments:

Whenever merchants, then, have a want of confidence in each other, which disinclines them to deal on credit, or to accept in payment each other's check, notes, or bills; more money, whether it be paper or metallic money, is in demand, and *the advantage of a paper circulation, when established on correct principles, is, that this additional quantity can be presently supplied without occasioning any variation in the value of the whole currency.* (*PESC*: 58, emphasis added)

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<sup>9</sup> Broadly, in the letter noted above, refers to Ricardo's proposal for a “cheap currency.”

Indeed, as we shall see below, he was more interested in the savings in the use of gold to make payments than in the use of notes, but the distinction is not made at this stage of his analysis since it was implicitly assumed that notes would simply substitute for minted coin.

In the first definition of economical, Ricardo would seem to be in concert with the modern currency abolitionists, suggesting that most payments could be made without the presence of currency. It is interesting that had he followed this approach, he might have been led back to the analysis of money as a unit of account and institutions such as the Bank of Amsterdam, but this is an approach that he rejects. More on this below.

Ricardo only pursues the second definition, and the problem then becomes how to maximize the role of bank notes in substituting for gold coin, but on the condition that the issue of paper does not have an impact on the value of the currency, however composed as notes or coin. Here we see an announcement of the currency versus banking school debates. Thus Ricardo's economy problem is to discover a monetary regime in which notes can provide a substitute for specie without this producing any change in the "value of the whole currency."

As historical context, it is important to note that Ricardo believed that the suspension of redemption had caused a change (depreciation) in the value of the "whole currency." While we might today be tempted to refer to this as an inflation of prices, this was not the way Ricardo or any other economist of the time would have viewed the matter, as it was sometime later that a change in the value of money would have been presented as the purchasing power of money over goods or the inverse of some appropriate price index. Today we are not accustomed to reason in terms of monetary standards, but it is impossible to understand these debates without them.

Thus for Ricardo, the value of money was measured against a standard of value. In this case the standard was gold (which meant gold bullion, a commodity, not minted gold coin), so that the measure of the depreciation of the currency was represented by the appreciation of gold bullion in terms of the paper notes. If the price of bullion had risen, then the currency had depreciated, independently of the behavior of the prices of other commodities. It is also to be noted that the causes of this condition were the subject of heated debate. In Ricardo's view it was clear it is the



excessive issue of notes by the Bank of England as it pursued its own interests in maximizing its profit, rather than pursuing monetary stability.

Thus to return to the problem of instituting an economical currency whose value is stable: “A currency, to be perfect, should be absolutely invariable in value” (*PESC*: 58). After noting that it is not possible to stabilize the value of the currency absolutely, because fixing to any standard will always be subject to variations caused by possible variations in the standard itself, the instability (Ricardo calls it the “variation”) in the currency since the Restriction Act was to be found in the absence of a specific standard for the currency in the form of convertibility into gold coin, which has removed any limitation on the issue of currency to insure stability in its value. The problem is thus to formulate appropriate policy in order, “[t]o secure the public against any other variations in the value of the currency than those to which the standard itself is subject, and, at the same time, to carry on the circulation with a medium the least expensive, is to attain the most perfect state to which a currency can be brought” (*PESC*: 66).

How to attain the perfection of maximizing the use of paper currency and minimizing the use of gold coin while at the same time ensuring the currency retains the stable value that would result if gold were the standard as well as the means of circulation? Ricardo’s proposal is that gold bullion, rather than gold coin, should be used as the standard for convertibility, reducing the demand to redeem notes for coin at the Bank of England and thus reducing the need for the Bank to hold reserves of coin, therefore reducing the possibility of a run. This also creates an arbitrage differential to advantage redemption in bullion rather than coin by creating a price differential that produced a stabilizing arbitrage by private-sector traders.<sup>10</sup>

Ricardo thus enunciates:

the object which I have in view would be in a great measure attained, if the Bank were obliged to deliver uncoined bullion in exchange for their notes at the mint price and standard [...] by which means paper would never fall below the value of bullion without being followed by a reduction in its quantity. To prevent the rise of paper above the value of

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<sup>10</sup> Here Ricardo follows the tradition of the external stability of the gold standard and the gold import and export points in generating profit opportunities that generate stabilizing financial flows. See Keynes’s *Tract on Monetary Reform*, and the more extensive discussion in Marcuzzo and Rosselli (1994).

bullion, the Bank should also be obliged to give their paper in exchange for standard gold [...]. (*PESC*: 67–66)

Whenever there is a discrepancy between the value of bullion and currency there would be an incentive to sell the overvalued item against the undervalued and convert at the mint, taking a profit. This would reduce the quantity of the overvalued item and increase the demand for the undervalued, leading to a convergence in their values.

While Ricardo's proposal—sometimes presented as being based on the quantity theory and the control of the supply of money to insure the absence of inflation—is instead based on the use of private interest through profit-seeking arbitrage to produce his desired results: “The issuers of paper money should regulate their issues solely by the price of bullion, and never by the quantity of their paper in circulation” (*PESC*: 64).

This market arbitrage is also the system that produces the second characteristic of the “secure” currency:

Under such a system, and with a currency so regulated, the Bank would never be liable to any embarrassments whatever, excepting on those extraordinary occasions, when a general panic seizes the country, and when everyone is desirous of possessing the precious metals as the most convenient mode of realizing or concealing his property. Against such panics, Banks have no security *on any system*; from their very nature they are subject to them, as at no time can there be in a Bank, or in a country, so much specie or bullion as the money individuals of such a country have the right to demand. A panic of this kind was the cause of the crisis in 1797. (*PESC*: 68)

Thus the plan for the “perfect,” “economical,” and “secure” system results in a currency that is not quite so perfect, it is a sort of second best—since it will have variable value given that the standard cannot be guaranteed to be invariable over time and on occasion it may be subject to panic, since there will never be enough specie or bullion available to cover the entire note issue if the public chooses to “run” from the currency. While Ricardo concedes that there is nothing that can be done about the first imperfection, he does offer a rather novel approach to the second.

In the current context of imposing increasing capital requirements to ensure bank solvency, Ricardo rejects this remedy, at least in the case of Bank of England notes. In Ricardo's view bank profits result primarily from the note issue, rather than from employing bank capital: "There is this material difference between a Bank and all other trades: A Bank would never be established, if it obtained no other profits but those from the employment of its own capital: its real advantage commences only when it employs the capital of others." Thus, for Ricardo an addition to bank capital will have only marginal impact on bank profits and he argues that if the Bank was forced to meet its contractual commitment to pay dividends to its shareholders (which it was not doing) the reduction in bank capital would not have a negative impact on the stability of its notes or the overall profitability of the Bank.

Symmetrically, it thus follows that:

[n]either would such an addition [to bank capital by refraining from paying dividends] contribute towards the *security* of the Bank; for the Bank can never be called upon for more than the payment of their notes, and the public and private deposits; these constituting at all times, the whole of their debts. After paying away their cash and bullion, their remaining securities, consisting of merchants acceptances and Exchequer bills, must be at least equal to the value of their debts; and in no case can these securities be deficient, even without any surplus capital, excepting the Bank could lose all that which constitutes their growing dividend; and even then they could not be distressed, unless we suppose that at the same time payment were demanded for every note in circulation, and for the whole of their deposits, both public and private. (*PESC*: 108)

And this is the case of a systemic run from the currency<sup>11</sup> rather than a classic run on the liabilities of an individual institution, and, as Ricardo has noted, cannot be prevented by any amount of capital.

Ricardo points out, regulating the capital of banks would have no impact on the size of the note issue since "[t]he amount of notes in circulation depends in no degree on the amount of capital possessed by the issuers of notes, but on the amount required for the circulation of the country, which is regulated, as I have before attempted to shew, by the value of the standard, the amount

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<sup>11</sup> See Tobin's (1987) distinction between a "run" on the liabilities of a single institution and a systemic "run" from the currency.

of payments and the economy practiced in effecting them” (*PESC*: 109). Thus, the current emphasis on capital requirements must rest on a rejection of the proposition that “their remaining securities, consisting of merchants acceptances and Exchequer bills, must be at least equal to the value of their debts; and in no case can these securities be deficient” (*PESC*: 108). No securitized subprime mortgages for the asset portfolio of the Bank!

As pointed out, the *raison d’être* of the pamphlet, as well as his argument concerning the stability of the Bank, was motivated by the failure of the Bank of England to provide transparent figures on its accumulated profits and the failure to meet the legal requirements of paying dividends to its proprietors. However, when it came to the note issue of the country banks, Ricardo took a different approach to stability; indeed it was the instability of the country banks that he considered to have been the cause of the crisis that led to the restriction in the first place. Here he again makes a distinction between the incentives that generate bank profits and those of commercial enterprise; while defending the principle of free trade for the latter, he makes an exception for government interference in the provision of paper currency, noting that while the quality of gold minted in coin:

is obtained by means of a government stamp [...] how much more necessary is such protection when paper money forms the whole, or almost the whole, of the circulating medium of the country? [...] In the case of Bank of England notes, a guarantee is taken by the government for the notes which the Bank issues; and the whole capital of the Bank, amounting to more than eleven million and a half, must be lost before the holders of their notes can be sufferers from any imprudence they may commit. Why is not the same principle followed with respect to the country banks? [...] the public should be protected by requiring of every country bank to deposit with the government, or with commissioners appointed for that purpose, funded property or other government security, in some proportion to the amount of their issues. (*PESC*: 73)

In an often-overlooked aspect of the *Proposals*, Ricardo recommended a system in which stamps would be given in exchange for reserves against the note issue, with the faculty of recovering reserves on the return of the stamps, i.e., when the notes had been paid. Because of their doubtful fraudulent practices, he also notes that the country bankers should support such a system since it “would prevent the competition of those, who are at present so little entitled to appear in the market against them” (*PESC*: 73). Ricardo thus clearly comes out in favor of

reserves, rather than higher capital requirements, to ensure the stability of the value of the perfect currency system.

## **RICARDO AND THE MONETARY STANDARD: DUAL VS. MONO FRAMEWORKS**

In his famous essay on “Imaginary Money,” Einaudi (1953 [1936]) points out that for modern readers it is virtually impossible to correctly interpret “monetary treatises written prior to the eighteenth century” without being aware of the distinction between:

a monetary unit used only as a standard of value and of deferred payments and another monetary unit used only as a medium of exchange. There was, then, a monetary unit used only a standard of deferred payments (promises to pay) or for the purpose of keeping accounts. This was the function of a money of account, and imaginary or ideal money. [...] Although it was possible to make contracts or to keep account in imaginary money—that is, in pounds, shillings and pence—it was impossible to make actual payments in these monetary units, since they had not been coined [for several centuries]. Payment was made in real currency, that is, gold coins [...]. (Einaudi 1953 [1936]: 235–66)

Since there was no coin equivalent to the money of account, but there was a plethora of circulating metal coins of varying weight and quality, the role of the unit of account was to allow payments to be made in any currency by converting it into standard money or money of account. This was done by specifying the metallic content of the standard unit and producing tables providing conversion factors for all the various coins in common circulation. Einaudi (1953 [1936]) notes “no less than 22 different gold coins and 29 silver coins, most of which were foreign” circulating in Milan in 1762. The existence of the unit of account allowed any of these coins to be used as a medium of exchange.

However, this “dual” system had a basic drawback, which Einaudi illustrates by reference to the relative rates of exchange of gold for silver. If the tables were based on a gold:silver ratio of 1:12 and the market value of silver fell to 1:12.5 or 1:11.5, then all the conversion factors for silver coins would have to be rewritten. And in practice this was what was done, but usually with some delay. The effect of this adjustment was that the money of account remained stable over time, but its equivalent in amounts of real money (circulating minted metal coin) changed

according to the market price of the metal (NB, not the quantity) in the coins. This process was called an “enhancement of the currency.” As Einaudi notes this could be very confusing, for the price of bread could remain stable in unit of account, but require either more or fewer real coins to be purchased. It was thus possible to have price stability and inflation or deflation at the same time! And since contracts were denominated in unit of account, it would represent a *de facto* change in the real value of debts and credits, depending on the change in the metal market.

Einaudi notes two implications of this method of adjustment. First it would be impossible for banks to issue notes stipulating payment in money of account, since they might be redeemed under a different conversion table, producing either a gain or loss to the holder. Nonetheless, this system remained in place, Einaudi argues, because of the overwhelming desire for monetary stability. This is in contrast to the modern system in which the response to a change in prices in the metal market is to adjust the amount of circulating coin or notes—reducing to counter inflation, increasing to counter deflation, or changing the metal content of coins through a recoinage. He believes that the use of imaginary money was a more efficient way of providing stability of the price level than these alternatives.

One implication of this approach, which Einaudi emphasizes, is that suspension of convertibility is of little importance in such a system. It is not the metallic content of the coins that may be converted into notes that is fixed, but the metallic content of the unit of account, which since it is notional (imaginary) is independent of whether notes are convertible into a specific quantity of metal. The problem is the weight of the metal contained in the coins that are the equivalent of the weight of metal established for the unit of account:

[B]ecause of the existence of money of account, men every day set the price” on the various circulating coins, “which they received and paid out. Every day, in every single transaction it was made clear to their minds that the money with which they paid even bank money or paper money, was a commodity like any other, that its price was governed by the market and, like any other price, was the result of an infinite number of economic and noneconomic forces which determine the general equilibrium of all prices. (Einaudi 1953 [1936]: 273)

Sir James Steuart, in Book III, Part I, Chapter 1 of *An Inquiry into the Principles of Political Oeconomy* (1767) starts by defining<sup>12</sup> money of account as “quite a different thing from money-coin” and that it “preserves itself invariable amidst the fluctuations, not only of the value of things themselves, but of the metals which are commonly considered measures of their value” (Skinner 1966: 408). With respect to measures of value, he noted “the moment any measure begins to be measured by another, the proportion of which it is not physically, perpetually, and invariably the same, all the usefulness of such a measure is lost” (416), finally noting the “circumstance which incapacitates the metals from performing the office of money; the substance of which the coin is made, is a commodity, which rises and sinks in its value with respect to other commodities, according to the wants, competition, and caprices of mankind. [...] What regards the paper is foreign to our purpose, and belongs to the doctrine of credit” (420), which he analyzes by distinguishing banks of circulation and banks of deposit in Book IV, “Of Credit and Debts.”

Einaudi notes that this system was eventually replaced when the monetary unit (coin or paper) became the money of account with a specified content. And thus the problem of whether the paper notes could be converted into the specified metallic content. Ricardo’s financial experience would have taken place at period in which European monetary systems were in transition from dual to mono currency systems so that he was faced with the problem of the intertemporal stability of the imaginary unit of account in specie producing variation in its value and in the income redistributions that were the result. Whether this was from his business experience or not, he does note and criticize Steuart’s description of the unit of account system (citing Book III, Chapter I, “Of Money of Account”), in particular the importance of the dual system and the stability of the money of account.

In his discussion of Steuart, Ricardo defines it as “a system without a specific standard,” noting that after suspension, “a pound note did not and ought not to vary with a given quantity of gold, more than with a given quantity of any other commodity.” He then goes on to criticize the

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<sup>12</sup> I am working here from the Skinner abridged edition of 1966. Skinner notes in the Preface to volume I that “The text of books 3 and 4 of the *Principles* has been collated with Steuart’s *Principles of Banks and Banking and Money*, which was published separately in 1820 and again in 1812.” And must have been known to Ricardo, who only cites the former.

absence of a standard as “no one has yet been able to offer any test by which we could ascertain the uniformity in the value of money so constituted. Those who supported this opinion did not see, that such a currency, instead of being invariable, was subject to the greatest variation” and goes on to criticize this view because “the only use of a standard is to regulate the quantity, and by the quantity the value of the currency” (*PESC*: 59).

Thus, Ricardo seems to represent, at least partially, those Einaudi believed unable to understand the system based on the unit of account. Ricardo does identify correctly the fact that the unit will not be invariable in terms of any commodity standard, yet fails to accept that this will be true of any money linked directly to a commodity standard. Yet, one might interpret Ricardo’s proposal as seeking to avoid the problem of the variation in the official tables converting multiple currencies into the single unit of account by substituting bullion and replacing minted coin by Bank of England notes. Thus Ricardo sought a replacement for the unit of account that avoids its variation in terms of means of payment and thus the impact on the distribution of income.

Thus if we try to situate Ricardo’s *Proposals*, it is necessary to place them at the transition from the Stuart/Einaudi dual monetary system to the single (mono) monetary system, and the recent experience of the suspension of convertibility and financial crisis. Ricardo’s rupture with this prior dual currency approach is evident from the first line of Section 1 of the *Proposals*: “All writers on the subject of money have agreed that uniformity in the value of the circulating medium is an object greatly to be desired,” rejecting the non-circulating unit of account as being the target of uniformity. The “approximation to that object” is to find a means of “diminishing the causes of variation,” even though Ricardo admits that “no plan can possibly be devised which will maintain money at an absolutely uniform value [...]” (*PESC*: 54). Here it is important to note that Ricardo is not in search of an invariable standard of value, but of a plan, what Ghislain Deleplace has called a “monetary regime,” which minimizes variation in the value of the currency.

Ricardo takes as given the British monetary system in which gold and silver have been “the standard of our currency” and the “standard by which to measure the value of other things” (*PESC*: 55). Again, note the identity of standard and minted metal coin. He opines that this



tradition is based on the “comparative steadiness in the value of the precious metals,” that is of the market price of bullion, recognizing that this may not be a permanent state of affairs.<sup>13</sup>

This reflects Einaudi’s definition of monetary systems after the turn of the century; he refers to the legislators of the French Revolution unifying the weight and standard with the means of payment: “What they wanted to make clear to the public was that the monetary unit was a disc of silver weighing 4.5 grams, or a disc of gold of 0.29 grams. Thereby they erroneously assumed people would never again fall into the error of looking at the monetary unit as perpetually endowed with a fixed value of its own” (Einaudi 1953 [1936]: 256).

Ricardo’s plan is designed to perpetuate this error through a plan to achieve a “perfect currency” that he defines as one whose (metallic) standard is invariable, that always conforms to the standard, and “the utmost economy is practiced” in its use. He goes on to note that there are advantages of paper over coin minted in the standard, given by<sup>14</sup> “the facility with which it may be altered in quantity, as the wants of commerce and temporary circumstances may require” (*PESC*: 55).

As already noted, Ricardo’s interest was in finding a way to prevent the inequitable impact on the relation between creditors and debtors. Recognizing that nothing could be done to influence changes in prices resulting from real forces (what would eventually become the neoclassical distinction between relative prices and nominal prices), it was necessary to find a way to

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<sup>13</sup> In a letter (volume VI, #149) to Mill he states that “invariability of the value of the precious metals, but from particular causes relating to themselves only, such as supply and demand, is the sheet anchor on which all my propositions are built” (348), written just after a letter (#141) to Trower in which he admits that “I among the number (of bullionists) considered gold and silver as less variable commodities than they really are,” and refers in particular to the impact of war (344).

<sup>14</sup> This did not go unobserved by his critics. Broadley, in the letter cited above, adopts the position of Stuart and argues: “The Misfortune is, that you argue from an erroneous proposition or foundation, you have chosen for your standard measure of value a thing that deserves not the Name, you say Bullion at the Mint price is the Standard Measure of value, but, as the price of Bullion does and ever will vary it cannot deserve the denomination of Standard. And this, Sir, is the unfortunate condition of every Man I’ve yet seen write on the subject of Currency—nay it is in fact our Country’s misfortune that our ‘Standard Measure of Value’ has not yet been discovered, or has been intirely overlook’d by every Writer on Political Economy &c [...]” (Sraffa 1951–55, vol. VII: 40–41). He goes on to offer to supply Ricardo “with the only certain Standard measure of value that Great Britain possesses [...]” This is provided in a subsequent letter in response to Ricardo’s response to his criticism (but which is not reprinted in full in the Sraffa edition, but summarized: “need I add that what I mean is ‘the Ledger pound and its parts’” (Sraffa 1951–55, vol. VII: 44), by which one must presume he meant a system of money of account.

identify independent changes in the value of money. Writing to James Mill during the drafting of the *Proposals* he noted:

I know I shall be soon stopped by the word price, and then I must apply to you for advice and assistance. Before my readers can understand the proof I mean to offer, they must understand the theory of currency and price. They must know that the prices of commodities are affected by two ways one by the alteration in the relative value of money, which affects all commodities nearly at the same time,—the other by an alteration in the value of the particular commodity, and which affects the value of no other thing, excepting it ent[er] into its composition. (Sraffa 1951–55, vol. VI: 348)

Thus his search is not for an invariable standard, but rather for a plan. He proceeds in stages, and starts with specifying the “utmost economy”—with the quantity of metal or of notes backed by metal—required for perfection. This is determined by three factors: (1) its value; (2) the amount or value of the payments to be made; and (3) the “degree of economy practised in effecting those payments.”

The argument under (1) starts by noting gold is clearly preferable to silver or other metals, for “if the denomination of a pound were given to any specific weight of these metals, fifteen times more of such pounds would be required” to meet the needs of trade at a relative value of silver to gold of 15:1.

In discussion of (2), the value of the currency relative to the value of payments to be made, Ricardo channels Einaudi’s explanation of the behavior of a unitary monetary system in which “the possibility of reaching stability in the general level of prices” requires:

decreasing or increasing the volume of money in circulation, as prices go up or down, especially if those variations are undesirable. [...] If nothing varies, except that the quantity of money is doubled, the person which has £10 instead of £5 will spend £10 instead of £5, because, if he is not willing to do so, his desire to build up monetary reserves will have changed which is contrary to our assumption. [...] Consequently, one unit of an economic good priced at £5 must necessarily go up to £10. (Einaudi 1953 [1936]: 253)

Ricardo thus proposes that “the quantity of money required would be in inverse proportion to the value of the metal” by analyzing the impact of “an increase in the number of transaction from an increasing opulence and industry, bullion remaining the same.” This would lead to an increase in the purchasing power of money over goods (a lower level of goods prices) and above the value of gold bullion. Restoring stability in the value of the currency would require varying (increasing) the quantity of money inversely from the direction of the change (fall) in prices. However, Ricardo does not produce a plan based on a quantity rule for the supply of money: he instead invokes the process of market arbitrage, which eventually becomes the basis for the *Proposals*, as noted above.

When “money is more valuable than bullion or the standard, it can therefore be purchased, coined, and issued as money, with a profit equal to the difference between the market and mint prices” (*PESC*: 57). This would automatically provide the required adjustment in the quantity of money. This “profit, however, could not long continue; for the quantity of money which, by these means, would be added to the circulation, would sink its value, while the diminishing quantity of bullion in the market would also tend to raise the value of bullion to that of coin: from one or both these causes a perfect equality in their value could not fail to be soon restored” (*PESC*: 57). And at the same time restore the equilibrium general price level.

But this is not Ricardo’s proposed plan—it is the argument that supports his proposal to use paper notes instead of specie. He points out that the arbitrage adjustment of the quantity of money will have a peculiar characteristic:

if the increase in the circulation were supplied by means of coin, the value both of bullion and money would, for a time at least, even after they had found their level, be higher than before; a circumstance which though often unavoidable, is inconvenient, as it affects all former contracts. This inconvenience is wholly got rid of, by the issue of money; for, in that case, there will be no additional demand for bullion; consequently its value will continue unaltered; and the new paper money, as well as the old, will conform to that value. (*PESC*: 57)

The attentive reader will note that here Ricardo has added an additional condition to the stability property of the arbitrage process that imposes the quantity adjustment of coin and bullion, for the use of paper also requires the “judicious management of the quantity” of paper. This is

where the plan emerges, as well as the discussion of the necessity of a return to convertibility. Ricardo notes that “[t]here is this material difference between a Bank and all other trades: A Bank would never be established, if it obtained no other profits but those from the employment of its own capital: its real advantage commences only when it employs the capital of others” (*PESC*: 108).

Ricardo notes that if there is thus a profit incentive for a bank to borrow by issuing its own liabilities to a maximum, the maximization of bank profits may conflict with the “judicious management” of the banks’ note liabilities, and recognizes the importance of convertibility in imposing limits. But again, instead of imposing some quantitative limit on the issue of notes, he reverts to the idea of the perfect currency: The need for the value of notes to be expressed in the standard, to conform to the standard, and be uniform to the standard. To this end, Ricardo reverts to his prior argument of market-based arbitrage as controlling the issue of coin. In presenting that argument he had already pointed out that it would hold irrespective of whether the perfect money is minted coin or fully backed paper. This leads to the conclusion that this arbitrage process will operate equally well with paper and preclude the need for a “judicious management” of the issue of paper. It also then follows that the uniformity of the perfect paper standard does not depend on the convertibility of paper into coin, but only the convertibility of paper into bullion.

Thus, Ricardo’s “proof” that since paper has the same stability properties resulting from price arbitrage as minted coin, and it can be varied more rapidly than using specie (which incurs the delays of dealing with the mint). Paper money is preferable to gold if there is “judicious management of the quantity, a degree of uniformity, which is by no other means attainable, is secured to the value of the circulating medium in which all payments are made” (*PESC*: 57–58).

And thus the Ingot Plan: As long as the Bank of England will convert its notes into bullion—and vice versa—and as long as bullion can be taken to the mint in unlimited quantities to be transformed into coin, there is no need for the Bank to convert notes into coin and no need to hold coin in reserves. Notes can provide as uniform a standard as gold coin, it is more economical, as it saves on the use of gold in circulation and in bank reserves and its quantity is adjusted in the arbitrage process more rapidly than coining bullion at the mint or melting coin

into bullion. The convertibility of notes into bullion is the basis of the economical and secure currency, QED.

Now since it was widely accepted that during the suspension of convertibility the market price of bullion had risen, Ricardo could argue that the reason was a failure in the operation of the automatic adjustment mechanism to limit the expansion of Bank of England notes. And the failure in the mechanism was due to the absence of convertibility. Thus, he could argue that the inflation occurred because the value of the standard had fallen below the price of bullion. The proper response was then to make it attractive to convert notes into bullion. He does this by first noting that incentives will be influenced by the bid-ask spread. This “price ought to be so fixed as to make it the interest of the seller of gold rather to sell it to the Bank than to carry it to the mint to be coined” (*PESC*: 66, note \*).

A restoration of convertibility would then have had the effect of increasing the value of the currency and decreasing the value of bullion, as described in the arbitrage example above. The impact of restoration would then clearly be deflationary, and to offset this result an addendum to the plan called for a gradual adjustment of the spread that the Bank would charge for conversion of notes into bullion. However, when Ricardo’s plan was introduced, the reality turned out to be rather different, with the existing inflation being reversed and replaced by a deflation of a magnitude much larger than Ricardo had anticipated. This was taken as evidence of the failure of the plan to stabilize the currency. Ricardo, however, countered by noting that the plan had not been faithfully observed by the Bank in that it had tried to build up gold reserves in order to prepare for eventual convertibility of notes to coin. Thus there was a much larger-than-anticipated contraction in the gold market that prevented the fall in the value of gold and impeded the operation of the arbitrage process, causing an overshooting. Ricardo thus faulted the Bank management for this failure.<sup>15</sup>

Recall that the main impetus for writing the pamphlet in the first place was to question the excessive profits produced by the excessive fees the Bank of England charged the government for managing the public debt. Ricardo finds them to be excessive, and suggests that they should

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<sup>15</sup> See the discussion in Sayers (1953).

be renegotiated, in the interest of the “economical currency,” noting further that the government could itself undertake these services much more cheaply. Indeed, he goes so far as to suggest that the Bank itself could be replaced: “It cannot, I think, be doubted, that all the services, which the Bank performs for the public, could be performed, by public servants and in public offices established for that purpose, at a reduction or saving of expense of nearly half a million per annum” (*PESC*: 53). As for the basis of the economical system: “Paper money may be considered as affording a seigniorage equal to its whole exchangeable value,—but seigniorage in all countries belongs to the state, and with the security of convertibility as proposed in the former part of this work, and the appointment of commissioners responsible to parliament only, the state, by becoming the sole issuer of paper money, in town as well as in the country, might secure a net revenue to the public of no less than two millions sterling” (*PESC*: 114). He then closes by noting that this is not a real threat since the Bank Charter was renewed until 1833. However, as a result of the unsatisfactory implementation of the plan, Ricardo eventually built on his suggestion and produced the pamphlet calling for the creation of a national bank to replace the Bank of England.

## **MODERN MONETARY PROPOSALS**

As noted above, the modern equivalent of Ricardo’s proposal to replace gold coin with bank notes is to eliminate bank notes themselves. If we deal first with Summers and Co., this is a proposal to eliminate high-value notes. Ironically, suspension required the Bank of England to issue small-denomination notes to replace gold coin that was preferred by the public. The real issue to be raised is the possible disappearance of the physical dollar proposed by Buitier, because it provides protection from the tax on stores of value represented by NIRP.

Here one can make use of an ingenious adaptation of Ricardo’s proposal to the case of a non-standard currency (fiat currency) proposed by Deleplace (1994c: 322):

A fiat money regime may be defined as one in which inconvertible money issued by a central bank is legal tender. The creation of this base money results from the monetization by a central bank of the various sorts of debt owned by banks. If money creation is endogenous, this monetization occurs on demand, in unlimited amounts and at a fixed price through discount lending, which provides borrowed reserves for the banks. Central bank money might then qualify for the role of standard money, and the type of debt eligible to the “discount window” of the central bank might apply for the role of monetary standard; in the same way as a given quantity (“standard”) of gold is assumed in a metallic regime, a given type of such debt may be called standard debt.

Here central bank liabilities can be held by the general public as legal tender notes or by private banks as central bank reserve deposits. Private bank liabilities take the place of gold bullion in that they can be converted into central bank liabilities at the discount window. Instead of positing the standard for the currency as a given weight and fineness of gold, the standard for central bank liabilities would be given by the specification of the maturity (short-term?) and credit rating (AAA) that make private liabilities eligible for discount, called “standard debt.” Thus just as gold currency is defined in terms of a standard weight and fineness of gold, the central bank reserve deposit or bank note is defined by the standard debt, say discountable high-grade commercial paper.

First note that in Deleplace’s replication of Ricardo’s plan, there is no difference between a system with legal tender notes and without, since the two are equivalent liabilities of the central bank. Abolishing bank notes would make no difference as long as the public could be allowed access to central bank reserve deposits (something which has been normal in the history of European central banking). This might also be accomplished by providing the public with one-day central bank bills or Treasury bills. There is no need for notes (NB: these were central bank notes, not private bank notes). The standard in this case is similar to the US National Banking system in which government debt was required as the backing for the issue of national bank notes before the creation of the Federal Reserve. It is also instructive that that system came to grief on the variability of the value of the bonds backing the notes due to variations in interest rates.<sup>16</sup>

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<sup>16</sup> Compare Buiter: “The first option would be to retire currency. There are countless alternative stores of value, means of payment and media of exchange, private and public. The numeraire/unit of account role that currency—as one form of ‘money’—can be absorbed by the other forms of base money which will remain in existence, notably central bank reserves” (Buiter and Rahbari 2015: 6).

Now the role of the bullion standard in Ricardo's proposal is to allow a price differential that profitable arbitrage would eliminate and in the process impose equality between the value of the standard and the value of money. In this case the price differential would be between central bank reserves, which have a value of unity, and private liabilities, with the mint price being the price on discountable liabilities. While this analysis could be carried out in terms of the price of debts, Deleplace chooses to use the inverse of prices, allowing him to specify the discount rate as the cost of seigniorage. While this point was hardly relevant in Ricardo's discussion, since these charges were negligible or zero, this is not the case in the example of fiat central bank money. But it does allow the specification of the differential between central bank money and private liabilities in terms of the discount rate and the market interest rate.

Deleplace (1994c) notes that stability of the standard requires  $r \geq i^* \geq 0$ , where  $r$  is the official discount rate (which represents the equivalent of the mint costs of converting bullion into coin) and  $i^*$  the rate of interest in the money market. Current money market conditions however, appear to be reversed, with  $r \leq i^* \leq 0$ , which, if I have interpreted Deleplace correctly, means that the cost of seigniorage is negative, leading not to a depreciation of currency, or better an expansion of bank reserves and an increased demand for them, via conversion of debt into reserves. This appears to be exactly what is happening in current conditions, with falling prices leading to a speculative holding of appreciating bank reserves.

Now, if this is correct, it means that the equivalent of helicopter money would be a grant of central bank reserves to the general public, which in current conditions would not lead to an increase in private debt or lending and thus have little impact on overall demand. Indeed, this provides the limitation to this analysis, which is the absence of demand on the balance sheets of private individuals and financial institutions.



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