

## INTRODUCTION

### 1. WHY A BOOK ON RICARDO ON MONEY?

Money is what made Ricardo become an economist. The publication in 1810 of *The High Price of Bullion, a Proof of the Depreciation of Bank Notes* established him as a leading figure in the economic debates of the time, and, more than on public finance or free trade, his monetary ideas gained him celebrity during the whole of his lifetime, for the better or worse. In his own eyes, the adoption of the Ingot Plan by Parliament in 1819 was “the triumph of science and truth in the great councils of the Nation,” but it was also about money that one of his opponents dubbed him ironically “*the Oracle by excellence*.”

#### Revaluation

For the past two centuries, money also played a singular part in the evaluation of Ricardo as an economist. This singularity lies in a paradox: Ricardo’s monetary theory is usually exposed on the basis of his contributions to the debates around the *Bullion Report* of 1810, as if his subsequent theory of value and distribution contained in *On the Principles of Political Economy, and Taxation* (1817-1821) had not affected in any way his monetary views. A mere chronological gap makes the starting point become *ipso facto* the ending point of the story: Ricardo’s theory of money pre-exists his theory of value and distribution, *hence* the former is independent of the latter. To use a modern phrase: the “dichotomy” between his “real” theory of value and his “monetary” analysis is complete. A variant of this approach to Ricardo on money is to acknowledge that *Principles* might have affected Ricardo’s theory of money, but just to lock it into inconsistency or contradiction: advocating a paper money anchored to a metallic standard, Ricardo would be trapped in the impossible task of reconciling a commodity-theory of money – in which the value of money determines its quantity – and a quantity theory of money – in which the causality runs the other way round.

The present book aims at challenging this view by arguing that Ricardo’s theory of money is neither independent from nor contradictory with his theory of value and distribution. But this requires looking *also* at his monetary writings *after* he started inquiring into the determination of the rate of profit – that is, after *An Essay on the Influence of a low Price of Corn on the Profits of Stock* (1815) –, not only *before*. I will contend that the most elaborate expression of Ricardo’s theory of money – again using a modern phrase, one that integrates his monetary analysis in his theory of value and distribution – is to be found in his late monetary writings (of 1819-1823), *not* in his early ones. The publication of *Proposals for an Economical and Secure Currency* in 1816 and of the three successive editions of *Principles* in 1817-1821 gave a theoretical foundation to Ricardo’s views on money in the 1819-1823 papers, by putting the notion of monetary standard centre-stage. The bicentenary of these two books thus offers the opportunity of revaluing Ricardo on money by shifting the cursor from the early to the mature monetary writings.

## Rehabilitation

Such revaluation leads to a rehabilitation. In modern times, the dominant evaluation of Ricardo on money has been negative. It will not be asked in the book since when and why it is so. Surely Keynes's statement in *General Theory* that "Ricardo conquered England as completely as the Holy Inquisition conquered Spain" (Keynes 1936: 32) played a role, although it was strictly addressed to "Ricardo's doctrine that it was impossible for effective demand to be deficient" (ibid). It seems that in academic circles Schumpeter's judgment in *History of Economic Analysis* was decisive, both for its negative tone and the affirmation that it was useless to dig into Ricardo's numerous writings on money and banking. Listing the published ones, he wrote: "Other items might be added. Ricardo's theory of money, credit, and banking gains on acquaintance, and in perusing his letters as well as his evidence before the Committees on the Usury Laws and on Resumption, one discovers more and more fragments that might be combined into a spacious structure. No attempt will be made, however, to do so." (Schumpeter 1954: 689n)

Their author having died in 1950, these words had been written before the publication by Piero Sraffa of the *Works and Correspondence of David Ricardo*, which started in 1951. Although this publication added many more "other items" related to this field, it did not, however, give rise to any attempt at building the "spacious structure" suggested by Schumpeter. Several books that will be mentioned here have aimed at providing a comprehensive view of Ricardo's works, but money has always been treated as only a piece of them. Leaving collections of essays aside – such as *Ricardo on Money and Finance*, edited by Yuji Sato and Susumu Takenaga in 2013 – the only book devoted entirely to money in Ricardo was published twenty-five years ago (in 1991) by Maria Cristina Marcuzzo and Annalisa Rosselli and it was an important source of inspiration for the present research. However, as indicated by its title – *Ricardo and the Gold standard. The Foundations of the International Monetary Order* – it mainly aimed at integrating theoretical analysis and historical reconstruction in order to account for a particular question: international adjustment. Thus, although a rough calculation indicates that more than one half of what Ricardo wrote in economics was devoted to money and banking, no book is covering this topic as a consistent whole.

It may thus be worthwhile to take up the challenge suggested by Schumpeter, all the more so since the reason why he did not do it himself – and possibly why it was not done since – is to be found in his negative evaluation of Ricardo's theory of money. The above quotation continues as follows: "We shall have to be content with a few features of Ricardo's analysis that are of major importance to doctrinal history. The reader is warned that this may involve some injustice to his performance as a whole. But the impression the reader is bound to get, that Ricardo did not contribute much that was both true and original, agrees with Viner's judgment, and so does, I believe, my opinion that as an analyst of money and credit Ricardo was inferior to Thornton." (ibid) The distinction between "doctrinal history" and what should be expected from "an analyst of money and credit" speaks for itself. A few pages further, Schumpeter is even clearer: "In matters of monetary as of general theory, Ricardian teaching is a detour and it slowed up the advance of analysis, which could have been much quicker and smoother had Thornton's lead been followed – had Ricardo's force not prevailed

over Thornton's insight." (ibid: 704n) This opinion, it seems, only gained in force during the last sixty years and this may explain the lack of comprehensive study on Ricardo on money: why should "a spacious structure" be built to accommodate the whole of Ricardo's writings in this field if it is to tell the story of "a detour [having] slowed up the advance of analysis"? In contrast with Sraffa's "Introduction" to *Works* that launched a heated and on-going debate on the logical structure of Ricardo's theory of value, distribution, and accumulation, nothing of the kind exists for Ricardo's theory of money, and it might be that nothing could exist, if Schumpeter was right in his evaluation. On the contrary, I will try to show that, on money too, there is an original and coherent theory of money to be found in Ricardo, provided the whole of his monetary writings is taken into account. This is why the second object of the present book is to rehabilitate Ricardo as a first-rank monetary theorist.

### Completeness

The dominant negative evaluation of Ricardo on money is also to be related to the paradox mentioned at the beginning. On the one hand, it usually overemphasises his doctrinal extremism. For Schumpeter, "here as elsewhere Ricardo was a prisoner to once-for all conceived ideas. In this case he had pinned his colors to the mast of a rigid quantity theory." (ibid: 724) He was "espousing a hard-line version of it [the quantity theory]" (Blaug 1995: 31) and held an "extreme bullionist" position (Viner 1937: 106; Laidler 1987: 290) On the other hand, as noted above, commentators usually draw exclusively on what Sraffa called "the Bullion Essays" of 1809-1811 to ascertain Ricardo's theory of money, in spite of the fact that these writings were mostly concerned with a monetary regime in which, due to the then inconvertibility of the Bank of England note, the quantity of money was *not* regulated by a standard (to use Ricardo's words). In contrast, his theory of money in *Proposals for an Economical and Secure Currency* (1816) and beyond dealt with a monetary regime endowed with such regulation:

The only use of a standard is to regulate the quantity, and by the quantity the value of the currency. (*Proposals*; IV: 59)<sup>1</sup>

The centrality of the standard in Ricardo's mature theory of money was not only a matter of historical context – the perspective of the resumption of convertibility. Parallel was Ricardo's elaboration of a theory of value and distribution that would apply to all commodities produced in competitive conditions – including the standard of money: gold bullion – and end up in the search for an invariable standard of value. As we will see, this "real" line of inquiry had important consequences for the theory of money. Before attributing a quantity theory of money to Ricardo – and *a fortiori* an extreme version of it – it seems thus prudent to account for the writings dealing explicitly with a currency regulated by a standard: not only *Proposals* and *Principles* but also the 1819-1823 papers, whether published, in

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<sup>1</sup> All quotations refer to the Sraffa edition of *The Works and Correspondence of David Ricardo* (Ricardo 1951-1973). When the extract is from a book, a pamphlet, or a manuscript written for publication, its title is indicated in abbreviation, with the volume (in Roman numeral) and pagination (in Arabic numeral) in *Works*. When it is from a speech, evidence, or correspondence, only the volume and pagination are indicated. Quotations from Ricardo and his contemporaries are separated from the main text and printed in smaller type, while quotations from later commentators are inserted in the text with commas.

manuscript form, or reported. This prudence should also apply to other negative evaluations of Ricardo's theory of money, which less emphasise its extremism than its contradiction with the theory of value and distribution contained in *Principles*. A third object of the present volume is to demonstrate, on the basis of *all* Ricardo's monetary writings, that there is neither extremism nor contradiction, but an idiosyncratic theory, which is neither the quantity theory of money nor a commodity-theory of money, and which integrates money into Ricardo's theory of value and distribution.

## **Relevance**

Assessing a theory of money that focuses on the standard could as well be for Ricardo the kiss of death. Against the old accusation of abstract reasoning, modern commentators have mostly relied on Ricardo's knowledge of facts and practices to reevaluate him: for Davis (2005: 100) he was "an empirical economist", and for King (2013: 81) "he reveals himself to be above all a practical economist." This judgment is particularly applied to monetary matters: the only qualifications to an overall negative evaluation that may be found in modern literature are Ricardo's defence of an exclusive paper circulation and of an independent central bank regulating the issue by open-market operations. In contrast, emphasising Ricardo's *theory* of money and shifting it towards the understanding of a currency anchored to a standard seems to be a sure recipe to bury it in the gone-away times of the gold standard.

However, theorising on money did not mean for Ricardo neglecting adjustment processes and feasible plans. And there are two levels at which his theory of money may appeal to modern readers. First it has been acknowledged for long that the Ingot Plan was the forerunner of the gold-exchange standard, hence of any monetary system where the domestic currency is anchored to a foreign currency – a still-debated issue today. Second, one lesson to be drawn from Ricardo is that the standard may "regulate the quantity, and by the quantity the value of the currency" thanks to private arbitrage between its market price and its legal price. This adjustment process does not require necessarily a metallic standard but solely any marketable asset that is legally convertible into money and into which money is legally convertible at a fixed price. Such asset might as well be a public bond purchased and sold for money by a central bank at a fixed price – a situation not far from that of our modern economies.

The reasons why the present book was got started are thus four: it aims at providing a comprehensive study of Ricardo on money, rehabilitating him as a theorist, accounting for all his monetary writings, and suggesting his relevance for modern analysis.

## **2. AN EVOLUTION IN RICARDO'S THEORY OF MONEY**

### **The relation with the theory of value and distribution**

Money in Ricardo is usually approached in modern literature from two angles. One, oriented towards monetary policy and banking, is the "Bullion Controversy" of 1809-1811 on the depreciation of the pound sterling, where Ricardo affirmed a central proposition that he would maintain until the end of his life, namely that the depreciation of paper money may

only be caused by an excess in its quantity. The other angle, oriented towards macroeconomic theory, is Say's Law, endorsed by Ricardo in *Principles* and implying that the level of aggregate output is only determined on the side of production – in which money is supposed to have no part – with aggregate demand being passive. These two angles are usually simply juxtaposed, the emphasis being put either on one or the other aspect, with the supposition that they complement each other under the loose acceptance that the quantity theory of money – the alleged rational foundation of Ricardo's central monetary proposition – implies Say's Law and vice-versa.

The first angle leads to observe that, antedating Ricardo's theory of value and distribution established in *Principles*, his theory of money – if it is to be found in the Bullion Essays of 1809-1811 – was in no way affected by this other theory. There is only one step to infer that this was the reason why Ricardo's views on money did not change from 1809 to 1823. Reciprocally, the second angle leads to emphasise the neutrality of money – except temporarily – in respect to the real level of aggregate output. This neutrality results from the two assumptions that aggregate output is only constrained by the availability of capital, and that money has no permanent effect on the determinants of this availability (in particular the rate of interest). There is only one step to infer that there is no relation whatsoever between real magnitudes and money, which belong to completely separated spheres of Ricardo's political economy.

One of the objects of the present book is to show that these two steps are unwarranted. In other words, it aims at challenging the conventional approach to Ricardo on money and at establishing how Ricardo integrates money in his theory of value and distribution. I will contend that this theory gave to Ricardo's views on money a theoretical foundation that was lacking in the Bullion Essays. There was consequently an evolution in Ricardo's theory of money from the Bullion Essays of 1809-1811 to *Proposals* (1816) and *Principles* (1817-1821), an evolution that explains why, in his various interventions from 1819 to 1823, he consistently emphasised the distinction between a depreciation of money and a fall in its value – a distinction which did not exist in the Bullion Essays.

It is generally acknowledged that, leaving aside the first round (1797-1803) of the Bullionist Controversy in which Ricardo took no part, his main influence in the monetary debates of his time manifested itself during the third round (1816-1821) – where the issue was the conditions under which the convertibility of the Bank of England note should be resumed – rather than in its second round (1809-1811) – where the issue was the effect of the inconvertibility of the Bank of England note. As Laidler put it, "Ricardo dominated the later stages of the bullionist controversy, as Thornton had dominated its earlier stages." (Laidler 1987: 293) However, it is also generally assumed that Ricardo's views on money did not change significantly from the Bullion Essays of the second round (*Price of Gold, High Price, Reply to Bosanquet*) to his publications during the third (*Proposals, Principles, Plan for a National Bank*): there were indeed improvements in the applied plans of monetary reform advocated by Ricardo (the Ingot Plan; the plan for a public bank of issue), but they are supposed to be based on unchanged theoretical foundations – namely the quantity theory of money in its most simplistic form, leading to the extreme bullionist proposition that the depreciation of paper money may only be caused by an excess in its quantity.

This conventional appraisal of Ricardo on money raises two doubts. First, the distinction between the second and third rounds of the Bullionist Controversy justly emphasises the differences between the issues at stake: the working of a monetary system with inconvertible (second round) or convertible (third round) paper money. Indeed the debate on the inconvertibility of the Bank of England note – around the question of whether it was the main (if not the sole) cause of the depreciation of the pound sterling, by allowing the Bank of England to issue notes in excess – implied the understanding of how convertibility worked before its suspension in 1797. But the originality of Ricardo's position during the third round of the Bullionist Controversy was precisely that England should not simply revert to the pre-1797 monetary system but base the resumption of convertibility of the note on a radical change: convertibility into bullion instead of coin (in the Ingot Plan defended by Ricardo in Parliament in 1819), or transfer of note issuing from the Bank of England to a public bank (in the *Plan for a National Bank* drafted in 1823 and published posthumously in 1824). This originality makes it legitimate to inquire whether there was not something new in Ricardo's mature views on money as compared with the Bullion Essays, something not only to be found in the major writings but also in Ricardo's expression in Parliament and in correspondence.

The second doubt raised by the common belief that there was no substantial evolution of Ricardo on money after the Bullion Essays concerns the theoretical foundations of his views. In the Bullion Essays, the main charge made by Ricardo against inconvertibility was that it deprived the note from being regulated by a standard. This was reaffirmed in *Proposals*:

Without a standard it [the currency] would be exposed to all the fluctuations to which the ignorance or the interests of the issuers might subject it. (*Proposals*; IV: 59).

For Ricardo, this standard of money was bullion, that is, a commodity chosen as standard because its value was assumed to be less variable than that of all other commodities, although it could not be absolutely invariable. This is why Ricardo could not have in 1809-1811 a solid theoretical foundation for an analysis of a monetary system endowed with a standard – to be opposed to the then ruling system deprived of such standard: he did not have yet a theory of the value of commodities of his own and he consequently was not equipped to discuss the question of the invariability of the standard. As is well-known, this question preoccupied Ricardo in the successive editions of *Principles* (1817, 1819, 1821), and until his last manuscript on “Absolute value and exchange value” in 1823.

In contrast with the conventional statement according to which Ricardo's views on money did not change substantially from 1809 to 1823, the present book aims at establishing that: a) there has been a substantial evolution from the Bullion Essays of 1809-1811 to the papers of 1819-1823; b) this evolution is of a theoretical nature and concerns the relation between money and the standard; c) Ricardo's mature theory of money is rooted in his theory of value and distribution; d) it provides a foundation to his applied plans of monetary reform.

### **Ricardo's mature theory of money in brief**

Starting with *Proposals* (1816) and culminating with the 1819-1823 papers, Ricardo's mature monetary writings contain an original theory of a monetary system endowed with

convertibility both ways between money and the standard – a theory of money consistent with the theory of value and distribution developed in *Principles* (1817-1821).

In this theory, a discretionary change in the quantity of money does not affect its value directly (as in the quantity theory of money) but indirectly, through a change in the market price of the standard. The value of money consequently varies under two influences: a change in the *value* of the standard (with a positive sign), and (with a negative sign) a change in its market *price* which departs from the legal price when the quantity of money is inadequate for the needs of circulation. Since the value of the standard is regulated by its cost of production with the portion of capital paying no rent, every permanent change in its difficulty of production affects permanently the value of money in the same direction. Since the market price of the standard adjusts itself to the level of the legal price by arbitrage, an inadequate quantity of money – whether in excess or deficient – relatively to “the wants of commerce” only affects the value of money temporarily and is endogenously adjusted. In contrast with inconvertibility where an excess quantity of banknotes is eliminated by the export of bullion, the regulation of the convertible-note issue operates thanks to domestic arbitrage on bullion, which constrains the behaviour of the issuing bank. Ricardo’s analysis then provides the theoretical foundation of his plan of reform of the currency (the Ingot Plan), based on two pillars: convertibility of notes into bullion – which rules out the use of the standard in circulation and thus eliminates the monetary instability generated by this use – and the management of the note issue by watching the market price of the standard – which reinforces the domestic adjustment of the quantity of money by substituting central banking for private arbitrage.

### **3. THE CONTENT OF THE BOOK: HISTORY, THEORY, POLICY**

#### **Part I. History**

The first part of the book is devoted to the history of Ricardo’s monetary writings, which resulted from his participation in the Bullionist Controversy from 1809 to 1823.

Chapter 1 studies the historical context in which Ricardo contributed to the monetary debates with his writings and interventions. The chapter describes the English monetary system (currency and banking) at the time of Ricardo, and the international monetary relations in Europe, characterised by three interconnected monetary zones, centred respectively on London, Paris, and Hamburg, with two standards (gold and silver) operating side by side, and one superior bank in each zone: the Bank of England, the Bank of France, and the Bank of Hamburg. Then it evokes the main questions raised by the Bullionist Controversy (1797-1821) and focuses on the pivotal one: the responsibility of note-issuing in monetary disorder. Finally it analyses the first round of the Bullionist Controversy (1797-1803), marked by the search for analytical foundations and the influence of Henry Thornton’s *Paper Credit of Great Britain*.

Chapter 2 studies Ricardo’s battles on currency and banks during the second and third rounds of the Bullionist Controversy in which he took part: the debates around the *Bullion Report* (1809-1811) and the debates around the resumption of the convertibility of the Bank

of England note (1816-1821, continued until Ricardo's death in 1823). For each one, I consider the historical context and the questions raised in the debates, before analysing Ricardo's positions. In 1809-1811, he rejected the explanation of the high price of gold bullion and of the low exchange of the pound by an adverse foreign balance and contended that they resulted from the depreciation of the inconvertible paper money. In 1816-1823, in the perspective of the resumption of the convertibility of the Bank of England note, he designed successively two plans for reforming the monetary system with a gold standard. The Ingot Plan (1816) substituted convertibility of the note into bullion for convertibility into coin and introduced a management of the issue by watching the market price of gold bullion. The Plan for a national bank (1823) granted an independent public bank the monopoly of the note issue and introduced open-market operations on government securities.

## Part II. Theory

The second and central part of the book is devoted to theory, around the main issue of the value of money. First some ambiguity in modern literature obliges to clarify how Ricardo defined the value of money: as its purchasing power over all commodities or only over the standard of money (gold bullion)? In Chapter 3 textual evidence and analytical reasoning show that for Ricardo the value of money was its purchasing power over all commodities *except* the standard of money. This means that for Ricardo a change in the value of money in a certain direction was the only cause of – in fact was identical with – a homothetic change in all money prices (except that of the standard of money) in the opposite direction. The singularity of the standard was that “in a sound state of the currency” a change in its market *price* was constrained between narrow limits and temporary – it was self-adjusting – although its *value* could vary significantly and permanently. Since a change in the value of the standard caused the same change in the value of money, the question of the invariable standard became an integral part not only of Ricardo's theory of value and distribution but also of his theory of money. This led Ricardo to face a dilemma between stabilising the value of the standard of money and stabilising its price, that is, between two conditions for “a perfect currency”: the invariability of the standard in value and the conformity of the currency to this standard.

Chapter 4 studies the determinants of a change in the value of money in a system endowed with a standard. It first considers the direction of the causality between the quantity and the value of money, about which Ricardo has been often accused of inconsistency or contradiction. It then emphasises an important distinction made by Ricardo in his papers from 1819 to 1823, between a fall in the value of money and a depreciation of money. This distinction leads to what I call the Money-Standard Equation, which combines two causes of change in the value of money. According to this equation, the value of money varies positively with the value of the standard and negatively with its price, as testified by a factual illustration given by Ricardo in a speech in Parliament in 1823. This conclusion calls for the analysis of the respective determinants of a change in the *value* and in the *price* of the standard: this is the subject of the three subsequent chapters.

Chapter 5 studies the first cause of change in the value of money: a change in the *value* of the standard. I first discuss the famous “analogy” made by Ricardo in the Bullion Essays between an increase in the quantity of money caused by the discovery of a new gold



mine and one caused by an additional discretionary issue of inconvertible notes. Next I consider how Ricardo extended his theory of rent from land to mines, while acknowledging a specificity of gold bullion in respect to corn, which affected the adjustment process of the natural price of bullion after the discovery of a new gold mine. This adjustment is analysed in two steps: in the gold-producing country which exported bullion and in the gold-importing country where bullion was coined. A symmetrical case was the adjustment to an increased demand for gold bullion, which caused an increase in its value and thereby in the value of money. This occurred between 1819 and 1821 when the Bank of England purchased gold to prepare for the resumption of the convertibility of its note into coin – a behaviour much criticised by Ricardo.

Chapter 6 considers the case of a rise in the *price* of the standard – hence of a depreciation of money – caused by the debasement of a metallic currency. I first show how convertibility both ways between bullion and coin determined the boundaries that constrained the variations in the market price of gold bullion. Next it is necessary to clarify how a change in the market price of the standard affected the prices of all other commodities via the depreciation of the currency. It is then possible to analyse how the debasement of the coins, by triggering a rise in the market price of gold bullion, resulted in a price increase for all other commodities. This was for Ricardo an illustration of “the principle of limitation of quantity” of money – the same principle which applied to banknotes. Another cause of the variability in the value of a metallic currency existed when it was on a double standard (gold and silver). When he considered a mixed system of coins and notes, the critique of the double standard of money was for Ricardo the occasion of warning against the power of the Bank of England to change the value of the currency at will – a recurrent complaint by him.

Chapter 7 studies the regulation of the quantity of convertible notes by the standard, in a mixed monetary system of undebased coins and Bank of England notes convertible into coin – like that ruling in England before 1797 and from 1821 onwards. I analyse how, according to Ricardo, the value of money adjusted to a change in the quantity of notes issued, first by departing from the value of the standard (depreciation or appreciation), then by being brought back to it. This requires introducing the quantity of money into the Money-Standard Equation formulated in Chapter 4. Two cases of self-adjusting process are studied, in response to an increase in the “wants of commerce” or in the discretionary note issue. An important consequence ensues: contrary to what is generally said in the literature, Ricardo’s monetary theory was *not* a quantity theory of money. Next I ask whether this theory applies to a money without a standard (in the case of inconvertibility), before concluding on the specificity of the market for gold bullion.

### **Part III. Policy**

The last part of the book considers the consequences of Ricardo’s theory of money for monetary policy. It may be surprising to find Chapter 8 in Part III of the book, since it deals with the international adjustment to a monetary shock. This adjustment is indeed an element of any monetary theory applying to an open economy and it could have been analysed in Part II of the book. However, the conclusion of this chapter is that for Ricardo an active management of the domestic quantity of money should substitute for international flows of

bullion and of commodities to produce this adjustment, which became thus the outcome of monetary policy. I first show that Ricardo used notions widely accepted at the time – such as the real par of exchange and the bullion export and import points. He used them to explain how international adjustment operated in two successive steps, implying gold bullion and other commodities. The much-criticised proposition according to which a fall in the exchange rate could only be explained by a redundancy of currency appears then, with appropriate qualification, as a necessary outcome of his monetary theory. In Ricardo's view, international adjustment was not produced by the effect of hydraulics of money on the balance of trade – the so-called price-specie flow mechanism – but by the corrective properties of international bullion flows. The same correction could be obtained quicker and safer from an active management of the quantity of money. This analysis fits Ricardo's general approach to money, as it is illustrated by the Ingot Plan, and includes the foreign balance in the policy rule to be applied to the monetary system – what will later be called the gold-exchange standard.

Chapter 9 studies the question of central banking and how its treatment by Ricardo led to what Bonar (1923) called “the euthanasia of metal currency.” Rather than relying on the quantity theory of money and the price-specie flow mechanism, Ricardo's positions on central banking stemmed from the theory of money exposed in Chapters 3 to 7 and of its consequences for international adjustment as analysed in Chapter 8. The starting point was Ricardo's conception of the public nature of paper money, which was embodied in the two plans he designed for the monetary system, the Ingot Plan (1816) and the Plan for a national bank (1823). There was continuity between these plans on the two underlying principles of “a perfect currency” managed by a central bank: the ingot principle – convertibility of the note into bullion for foreign payments – and the management principle – varying the note issue inversely with the spread between the market price and the legal price of the standard. The plans not only aimed at stabilising the market price of the standard – hence eliminating the monetary cause of variation in the value of money – but also at increasing the security of the monetary system, by preventing an internal or external drain of the metallic reserve of the central bank. They were an application of Ricardo's theory of money.

The afterword sums up the main results obtained in the book, before evoking the legacy of Ricardo's theory of money for today.

As much as I felt necessary, I have quoted Ricardo extensively to substantiate my arguments and invite the reader to follow his way of thinking. I also tried, when it appeared possible and in the limited range of my capacity, to formalise in equations Ricardo's analysis of the determination of the value of money. The purpose was only to help formulating his views with rigour, a task emphasised by Ricardo in a letter to James Mill on 1 January 1821:

Political Economy he [Malthus] says is not a strict science like the mathematics, and therefore he thinks he may use words in a vague way, sometimes attaching one meaning to them, sometimes another and quite different. No proposition can surely be more absurd. (VIII: 331)

Each chapter is accompanied with an appendix, which provides additional material on its subject or deals with a particular question in relation with it. Appendix 10, following the afterword, gathers the main equations constituting Ricardo's model.

#### 4. TWO HUNDRED YEARS AFTER

This book is the result of a 25-year companionship with Ricardo on money. On the basis of a former interest for his theory of value and distribution in the line of Piero Sraffa, I started dealing with this subject in the early 1990s, through the conjunction of a research on international monetary relations in the 16<sup>th</sup> century (Boyer-Xambeu, Deleplace, Gillard 1986, 1994a) and of the discovery of the book *Ricardo and the Gold Standard* (Marcuzzo and Rosselli 1991). Following the publication of a collection of essays by various authors on money and the standard in Ricardo (Deleplace ed. 1994), this subject has accompanied my studies on the nature of a monetary economy (Deleplace and Nell eds. 1996), the logic of the history of economic thought (Deleplace 1999), the history and theory of international bimetallism in the 19<sup>th</sup> century (Boyer-Xambeu, Deleplace, Gillard 1994b, 1997, 2010a, 2013). Ricardo even became a member of my family thanks to the co-authorship with my wife of an article (which took 15 years to be written and published) confronting him with Bentham on money (Deleplace and Sigot 2012). He also became a target in letter-hunting (Deleplace, Depoortère, Rieucan 2013).

Greater familiarity with Ricardo's works and life aroused my growing admiration for "the little plain man with the acute features and the keen eye,"<sup>2</sup> as he appears in the miniature by Thomas Heaphy (reproduced in Vol. VIII of *Works*). At the end of the day, two hundred years after the publication of *Proposals for an Economical and Secure Currency* (1816) and with the approaching bicentenary of the first edition (1817) of *On the Principles of Political Economy, and Taxation*, my aim has been at showing that Ricardo was not only a giant on value, distribution, and accumulation, but on money too.

Paris, 1 October 2016

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<sup>2</sup> Obituary by Daniel Whittle Harvey in 1823, quoted in Weatherall (1976: 189).