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Alvaro Cencini & Sergio Rossi, *Economic and Financial Crises: A New Macroeconomic Analysis*, Palgrave Macmillan, 2015, 281 pp, £75, Hardcover

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Abstract. The reviewed book develops a new paradigm regarding economic and financial crises at both the national and international level. That paradigm rests on the purely numerical and vehicular nature of money, from which Cencini and Rossi infer the fundamental laws governing a monetary economy of production. The pathologies of the economic system are then characterized in light of these laws. In order to avoid the recurrence of crises, the authors eventually put forward a reform of the domestic and the international payment systems, which rests on a distinction between money, income and fixed capital developed throughout the book. After a short introduction, this review offers a description of the book and ends up drawing some implications, especially as pertains to the nature of money and the characterization of crises.

Keywords. Crisis, Money, Income, Monetary Reform.

JEL. E31, E32, E42, E44, E50.

1. Introduction

Although the subprime crisis that burst in 2007 has not yet given rise to a paradigm change in economic thinking, it calls into question the legitimacy of the current monetary system and opens a window of opportunities for alternative approaches to economic analysis beyond the neoliberal view. Analogously to the proposals – such as *Positive Money* in England – calling for a full-reserve backing of bank deposits by central bank money, these approaches contrast with the current framework for banking regulation (in force since the 1980s) that rests on microeconomic incentives for market participants. However, these alternatives do not break with the dichotomous conception of the economic system, whereby the association of money and real goods is dependent on the behaviour of economic agents.

Inspired by the work that Schmitt (1966; 1972; 1984) initiated more than fifty years ago, the reviewed book goes on to develop an integrated approach to financial and economic crises at both the national and international level.ⁱ Within the framework of the “theory of money emissions” – also labelled the “quantum theory” of money and production – developed by the French author and other scholars based in Dijon, Fribourg and Lugano,ⁱⁱ the work of Cencini and Rossi starts from an investigation of the bookkeeping nature of money. From such a conceptual analysis, the authors derive the fundamental laws governing a monetary

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economy of production in order to characterize the pathologies to which the latter is subject, and to avoid the recurrence of economic and financial crises. After a summary of each chapter of the book, this review discusses the paradigm developed by Cencini and Rossi as regards the neoclassical and post-Keynesian (monetary) theories notably.

2. Content of the book

Chapter 1 is a conceptual investigation of the nature of money and income. Owing to its bookkeeping origin, money is a numerical form issued by banks as a means of final payment. Its emission draws a circular and instantaneous (a payment has no duration in time) movement implying both the creation and the destruction of money for the payer and the payee. As regards income, it defines the association between money and output through the payment of wages: workers obtain on the factor market their *own* product in the form of an income, which is immediately deposited in the banking system. Such an *absolute* exchange gives money a purchasing power and ensures the numerical homogeneity of the newly-produced goods.ⁱⁱⁱ In this respect, income takes the form of bank deposits and represents the *object* of payments, which are conveyed by money.^{iv}

Chapter 2 infers from the purely numerical nature of money the three fundamental laws governing modern monetary economies of production. Cencini and Rossi revisit in this respect Say's law and Keynes's logical identity between global supply (output) and demand (income) in light of the bookkeeping nature of money. The third law is the identity between each agent's sales and purchases, according to which every purchase is financed out of a pre-existent income and conveyed by money (the payer and the payee are respectively debited-credited and credited-debited within the circular flow of money). As logical identities, these laws cannot be altered by the behaviour and decisions of individuals.

In light of these laws, Chapter 3 offers a critical review of the main theories of economic crises. First, Cencini and Rossi dismiss the Marxian theory of the falling rate of profit because of the problem of the monetary realization of surplus-value goods. Secondly, the authors address micro-founded neoclassical business cycle models, whereby economic crises are the result of exogenous shocks. Whether these shocks are monetary or real, this does not alter the underlying logic: "microfoundations" confine these models to a dichotomous approach, in which the money-output relationship is dependent upon the behaviour of economic agents.^v

In the same vein, Chapter 4 makes clear that, by using the analytical framework of real business cycle models, the New Neoclassical Synthesis fails to provide a coherent explanation of the malfunctioning of the whole economic system. According to Cencini and Rossi, this failure pervades all the monetarism-inspired models, in which money bears (at odds with its bookkeeping origin) the characteristics of a physical object (like mass or motion in space). In this respect, the money-output relationship would rest on equilibrium conditions (relying on behavioural factors), which, in turn, require assuming the purchasing power of money whereas the latter in fact has to be explained before exchanges take place.

Chapter 5 stresses that Keynesian models are not a real alternative to neoclassical models. While Keynesians (using the IS-LM model) and New Keynesians (using partial equilibrium models) focus on monetary disturbances and markets imperfections respectively, their models rest on microfoundations that imply a dichotomous view of the economic system. Then, Cencini and Rossi specify why the post-Keynesian theories of money do not really break with this framework: whether these theories deal with fundamental uncertainty,^{vi}

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conventions,^{vii} state's sovereignty or banks,^{viii} they rest on circular reasoning and mix up money with income.

Chapter 6 demonstrates that economic crises are perfectly compatible with Keynes's identity between global demand and global supply. According to Cencini and Rossi, any discrepancy between these two magnitudes is purely arithmetical and does not alter Keynes's identity, which relies on the payment of wages. Global demand being defined in national income terms, production creates always and everywhere the necessary and sufficient quantity of purchasing power for the final purchase of current output. Considering the money-output relationship, Keynes's identity is the fixed point from which crises can be characterized. For instance, inflation results from an empty emission of money, implying a purely nominal increase of global demand that dilutes current income into an excessive number of money units.^{ix} Against this background, Cencini and Rossi go beyond the dual conception of global demand and global supply defended by supporters of demand-side or supply-side economics, which is derived from a dichotomous conception of the economic system.

Chapter 7 specifies how the process of fixed capital formation leads to a structural pathology increasing the risk of occurrence of crises within the national economy. To this end, Cencini and Rossi draw an integrated approach of capital from the history of economic thought and specify the role of (the production of) amortization goods in leading to crises. The chapter first emphasizes the significance that leading authors (Smith, Ricardo, Marx, Böhm-Bawerk) attach to savings in their positive analysis of capital and, then, clarifies the financial intermediation role played by banks in a non-dichotomous theory (of capital). Against this background, capital is derived from the automatic and immediate expenditure of workers' income in the financing (*via* banks) of the stock of goods stored in firms.^x

Whereas capital is reversible, fixed capital immobilizes income in an irreversible way. In this respect, fixed capital is formed when firms spend their profits in the payment of wages and, thereby, acquire the corresponding output definitively. With a two-period analysis, Cencini and Rossi show that the investment of profits on the factor market deprives the income earned by households in the production of capital goods of the corresponding output. This leads to a pathological state whereby global demand is nominally inflated relative to global supply. Exacerbated by the production of amortization goods, such a state will be prolonged up to the point where firms will take advantage in spending their profits to purchase financial assets or to produce wage-goods. This will increase financial instability and creates a deflationary gap respectively.

Chapter 8 elaborates on the preceding chapter with respect to interest. Following Schmitt, Cencini and Rossi develop a theory of interest according to Keynes's identity. In this respect, the authors offer a critical analysis of the work of some leading authors (such as Böhm-Bawerk, Fisher, and Keynes) in order to show that capital is not a factor of production but is nevertheless at the origin of interest as a macroeconomic income. Interest is the compensation earned by the holders of the savings that are irremediably immobilized in fixed capital as a result of the investment of profits on the factor market. Once the origin of interest has been explained, Cencini and Rossi reinterpret Wicksell's theory of cumulative process and show that the reduction of the gap between the (monetary) rate of profit and the rate of interest on loans rests on the pathological process of accumulation explained in Chapter 7. A joint increase in unemployment (following the reduction in investment opportunities) and speculation (supported by empty money emissions) follows from such a reduction.

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Chapter 9 is concerned with the international dimension of financial crises, especially the lack of a true system of international payments and its consequences on financial stability. In marked opposition with the vehicular nature of money, an importing country currently pays its commercial partners with its own acknowledgment of debt.^{xi} The latter being a claim on the national income deposited in the banks of the relevant country, the payment of imports is inflationary for exporting countries, which merely receive a promise of payment. This entails a duplication of bank deposits that feeds speculation and, hence, global financial instability.

This structural pathology of the international monetary order induces the duplication of the external debt – and its servicing – of indebted countries as well. Following Schmitt (2014), Cencini and Rossi demonstrate that net importing countries currently run into debt up to twice the deficit in their trade balance.^{xii} Indeed, these countries are forced to borrow foreign currency (supposed to be purely vehicular) to convey the income spent by their residents. In other words, the debt of the nation substitutes for the debt of the residents at the very instant imports are paid. Then, the authors emphasize the structural feature of the European sovereign debt crisis, which cannot justify the implementation of austerity policies consequently.

Chapter 10 presents a structural monetary reform in order to conform the domestic payment systems with the fundamental distinction between money, income and fixed capital. On the basis of a functional separation of banks' books in three departments, the goal of Cencini and Rossi is to avoid the confusion between monetary and financial intermediation and to prevent the lending of bank deposits corresponding to the investment of profits on the factor market. In this respect, the "issue department" will record any money emissions that banks carry out in the domestic payments system, especially for the payment of wages. The "financial department" will record those credits that banks grant up to the *income* deposited on the liability side of their ledger. Finally, the "fixed-capital department" will allow draining the financial department of the profit invested in the production of fixed-capital goods. Such a threefold departmentalization of banks' book will avoid empty money emissions.

In order to promote global financial stability, Chapter 11 presents a reform of the international monetary system in conformity with the balance-of-payments identity and the vehicular nature of money. Such a reform takes three alternative forms depending on whether it involves a single country, a group of countries, or the entire world. As regards the national level, the reform will avoid the duplication of the country's external debt, which results from the lending of a means of payment. In this respect, Cencini and Rossi refer to Schmitt's 2014 paper and advocate the implementation of a "sovereign Bureau" whose intervention will allow grasping the imports and the exports of the relevant country as an exchange of real goods. Preventing the pathological addition of a monetary payment to a real payment also justifies the creation of a supranational settlement institution at the global or multinational level. In light of the principle of double-entry bookkeeping, Cencini and Rossi suggest to create a supranational bank issuing a means of final payment in every transaction between countries. In a homogeneous international monetary space, to be set up following the authors' proposals, all payments carried out by residents of each participating country will be conveyed by money proper.

3. Overall perspective

As regards the various implications of the purely numerical nature of money, the reading of Cencini and Rossi's book will surely disconcert scholars used to the

canons of the neoclassical research programme. In this respect, the aim of the authors is not to refine a given utility maximization model in order to explain the – ever moving – resurgence of crises phenomena, but to develop an integrated approach capable of improving our understanding of the fundamental causes of these crises. By treating money through utility theory, or social choice theory, neoclassical scholars never succeed in developing a non-dichotomous framework in their models, in which money is an adventitious phenomenon devoid of explanatory power *per se*. In response to the resurgence of economic and financial crises, neoclassical authors are, then, forced to put forward *ad hoc* and reactive explanations regarding the causes of each episode of instability considered separately.

The successive failures of neoclassical theory to transcribe the reality of our monetary economies of production are then justified by the vast number of social interactions existing in the real world. It is from these interactions that neoclassical scholars (try to) derive economic laws in order to give to their models some explanatory, or predictive, power. In this respect, economics would be defined as a science, whose object is regularities, which are contingent to the behaviour of economic agents in their quest for equilibrium.

Being used in an instantaneous circular flow, money is not subject to an exchange taking place on an *ad hoc* market. Indeed, it cannot be one of the two terms of a (relative) exchange since a procedure of homogenization with real goods would have to be established, which is impossible without pure numbers, that is, money. Against this background, money is not a financial asset, as this would be characterized by its specific position on the liquidity spectrum (as argued by Keynesian liquidity preference theory).

In this respect, neoclassical and Keynesian theories confuse money and financial assets. In neoclassical theory, money is negotiated on an *ad hoc* market, which is, thanks to Walras's law, withdrawn at equilibrium.^{xiii} Now, such a law is not valid out of equilibrium (during the Walrasian groping process), so that money and real goods are confined to a reciprocal (and circular) determination. Assuming the value of money, post-Keynesian theories are open to a similar critique: the purchasing power created by banks when they grant "initial finance" to firms (when banks *finance* production) is really determined by the exchange between money and real goods, which relates two assets measuring each other reciprocally.^{xiv}

The merit of Cencini and Rossi's book is to bring out the non-contingent laws governing our monetary economies of production. Indeed, these laws do not rest on the behaviour of economic agents, but are logical identities derived from the purely numerical and vehicular nature of money. By demonstrating that the value of money is given by the payment of wages, the authors show that money and output are jointly determined in the form of income.

Such an achievement reminds that the homogeneity of physically heterogeneous goods has to be demonstrated. By evading this crucial stage, neoclassical and post-Keynesian theories are confined to a dichotomous approach, whereby the origin of money and the origin of real goods are independent one from the other. According to these theories, the value of money and the numerical homogeneity of goods are given by the relative exchange of money and goods on the commodity market. Against this background, when referring to the price level or the conventional character of money, neoclassical and post-Keynesian theories draw circular reasoning since they suppose that exchanges determine the direction of causality between the relevant magnitudes. By determining the value of money and the numerical homogeneity of goods before exchanges take place on the commodity

market, Cencini and Rossi avoids the pitfalls of any equilibrium analysis whereby economic laws are behaviourally contingent.

In this respect, the fundamental laws governing our monetary economies of production that Cencini and Rossi derive from the bookkeeping origin of money give to the concept of crisis its full significance. Indeed, the pathological state of a system can only be characterized once a normal state has been determined rigorously. The major shortcoming of neoclassical and post-Keynesian theories is precisely that of grasping the pathologies of the economic system from a dichotomous and superficial point of view (to wit, a rough empiricism, which puts the behaviour of economic agents forward). Against this background, crises will remain evanescent phenomena as long as scholars claim to understand them through a prism that is unable to explain the value of money and the determination of absolute prices cogently.

One of the achievements of Cencini and Rossi is to grasp crises from an integrated framework precisely. At the national level, crises are the outcome of the over-accumulation of capital induced by the amortization of the fixed capital initially formed through the investment of profits on the factor market. As regards inflation, it rests on the formation of fixed capital so that it is both a real and a monetary phenomenon: in the theory of money emissions, inflation is not derived from an unrealistic thought experiment, such as Friedman's (1969) "helicopter money". At the international level, crises are expressed by the violation of the balance-of-payments identity allowed by the current architecture of the international monetary regime whereby deficit countries pay their commercial partners with their own acknowledgment of debt.

Once the concept of crisis is defined, Cencini and Rossi suggest a reform of the national and international monetary systems in order to ensure global financial stability. These proposals bear some comments as regards the methodology of the authors. First, by deriving the necessity of the reforms from the essence of phenomena, Cencini and Rossi free themselves from the duality between positive and normative analysis imposed by the sole observation of economic agents' behaviour – and the contingent laws this implies. For instance, the reform aiming at separating banks' books in three departments is a positive one since it rests on the nature of money, income and fixed capital, which are shed in light by an integrated approach on this subject matter. Secondly, in opposition to neoclassical theory, Cencini and Rossi do not infer macroeconomic laws from the analysis of individual behaviour. According to the authors, macroeconomic analysis is not a mere question of aggregating microeconomic magnitudes. The distinction between these two levels of analysis rests on whether a given transaction leads to the creation or the destruction of income (macroeconomic analysis), or to the transfer (microeconomic analysis) of income on financial markets.

Since Cencini and Rossi develop a new economic paradigm, their work is exposed to many criticisms. For instance, post-Keynesian authors will likely assert that the theory of money emissions attaches little importance to the role of effective demand in the determination of the level of employment. The aforementioned theory rests on Say's law, which would mean that the economic system always operates at its full-employment level. Now, the interpretation of Say's law (and Keynes's identity) put forward by Cencini and Rossi is concerned with the money-output relationship and not with the level of employment as such; in the theory of money emissions, effective demand is akin to a "supply-demand", whereby income formation and final expenditure are two identical magnitudes. Moreover, Cencini and Rossi demonstrate that Say's law is compatible with involuntary unemployment once the pathological process of capital accumulation is taken into account.

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The aforementioned example points out that the new paradigm expounded by Cencini and Rossi is better appreciated with respect to other theories. Whereas these references are numerous throughout the book, the reader will regret the lack of a general conclusion. In addition to a summary of the distinctive features of the aforementioned paradigm, such a conclusion would have allowed to anticipate various critiques and, especially, to specify the developments on which the theory of money emissions can be subject. It is not the task of a single work to answer all the possible questions but, as regards economic and financial crises, the reader will wonder about the role (in the paradigm of Cencini and Rossi) of fiscal policy, or about the way to implement the reform of the domestic payment system. These questions represent opportunities to improve the macroeconomic analysis developed in this book, which is valuable in many respects, regarding notably the nature of money and the fundamental causes of economic and financial crises.

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Notes

ⁱ See also the work of Cencini (1995; 2001; 2005), Rossi (2003; 2007) and Gnos & Rossi (2012).

ⁱⁱ See Rossi (2006) for an overview of the theory of money emissions.

ⁱⁱⁱ Created on the factor market, income is definitively destroyed by the final purchase of output. In the meantime, income is spent on financial markets.

^{iv} In this respect, credit is always granted through the expenditure of income on the financial market.

^v According to Cencini and Rossi, these behavioural considerations also pervade Minsky's "financial fragility hypothesis", which operates a confusion between money and income that gives banks an unreal power of creating value out of nothing.

^{vi} See Davidson (1972).

^{vii} See Aglietta & Orléan (2002).

^{viii} See Wray (1998) and Graziani (2003) respectively.

^{ix} In this respect, income at constant prices is distinguished from income at current prices.

^x "[I]ncome is immediately transformed into a capital, which is both financial (workers' claims on bank deposits) and real (the stock at firms' disposal)" (p. 168).

^{xi} This is particularly true for countries issuing a reserve-currency chosen as international standard.

^{xii} For the sake of brevity, foreign direct or portfolio investments are not considered here.

^{xiii} See Patinkin (1965) as pertains to general equilibrium theory.

^{xiv} See Graziani (2003) as regards the theory of the monetary circuit.

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