Introduction
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This volume gathers a series of contributions to monetary macroeconomics within the so-called Dijon–Fribourg School, also known as the theory of money emissions (for a survey, see the relevant chapters in Rochon and Rossi, 2003, as well as Rossi, 2006). Bernard Schmitt, the founder of this School, has developed over about fifty years this new approach to economic analysis and policy making (see for instance Schmitt, 1960, 1966, 1972, 1973, 1975, 1982, 1984, 1988, 1996, 2003). Both in Dijon, where he has founded the Centre for Monetary and Financial Studies at the University of Burgundy, and in Fribourg (Switzerland), Schmitt has taught to various generations of students at different levels of their curricula how contemporary economic systems are essentially monetary economies of production and exchange, within and across country borders.

The Schmitt School provides a new conceptual framework for understanding and solving the variety of macroeconomic problems that affect contemporary economic systems at both the domestic and the international level. Starting from an essential definition of money, that is, referring to banks’ double-entry book-keeping, this School explains that the loans-to-deposits causality (as captured by various heterodox approaches to money and banking) derives from the nature of money, but that its working can give rise to a macroeconomic disorder when the structure of banks’ book-keeping does not respect the distinction that exists between money and credit essentially. Banks are, indeed, both money and credit providers, but ‘[t]he supply of credit is the supply of a positive amount of income and requires the existence of a bank deposit (a stock), whereas the supply of money refers to the capacity of banks to convey payments (flows) on behalf of their clients’ (Cencini, 2001, p. 7). Since the emission of money by a bank gives rise to a bank deposit within the banking system, there is no endogenous limit to the issuance of money, as the book-keeping requirement to balance every asset with a corresponding liability is always and everywhere respected by the mechanism of money emission. In Schmitt’s (1975, p.13) own words, money is an ‘asset–liability’, since it measures the entries recorded on both the assets and the liabilities
side of a bank’s ledger, when the latter carries out the relevant payment. This payment, however, can create, transfer, or destroy a bank deposit at the macroeconomic level, depending on the market concerned and the monetary–structural framework within which the payment is carried out by banks. Clearly, as the so-called monetary circuit theory explains (see for instance Graziani, 1990, 2003), the opening of a bank’s credit line to a firm allows the latter to pay out wages to its collaborators, as a result of which the firm becomes a debtor to the bank and wage earners are creditors of the same bank in so far as they have a claim on the bank deposits that have been created in the payment of wages. Contrary to monetary circuit theorists, who claim that deposits with banks have a purchasing power per se (to wit, because of banks’ creditworthiness), however, the Schmitt School argues that the purchasing power of bank deposits stems from their association with production on the factor market, notably when wages are paid out for a given, and finite, period of time (say, a month). There is, indeed, an integration between money and output on the labour market: money measures production numerically, and output defines the purchasing power of money. The resulting bank deposits are a sort of memory item recorded in banks’ book-keeping to testify the firm’s debt and depositors’ credit with the banking system – which is therefore an intermediary, in the sense that it neither sells nor buys anything when it issues money in payment of a transaction. When this purely instrumental role blurs the distinction between money and credit, however, it becomes possible for the bank involved to exploit its credit-purveying capacity in order for it to give rise to a bank deposit that is new for the banking system, although no new output has been produced in the economy as a whole. This emission of ‘empty money’, as Schmitt (1996, p. 120) labels it, is the mark of a monetary–structural disorder, even if it remains unnoticed, as the price index targeted by the central bank is unaffected by this discrepancy introduced in the money-to-output relationship by banks’ book-keeping. In fact, banks have been exploiting their capacity to issue money via credit on the interbank market, in order for them to increase their business (and the ensuing profits) in a variety of purely speculative financial transactions that have inflated an asset bubble (see Rossi, 2010, for elaboration on this point).

The contributions gathered in this volume offer therefore a structural–monetary analysis of the macroeconomic causes that led to the global systemic crisis, which is still affecting various countries at the time of writing. These causes are essentially macroeconomic, since they stem from the workings of the whole economic system – which is a monetary economy of production within country borders – and cannot be grasped, not to say eradicated, by a ‘micro-founded’ investigation of different agents’
forms of behaviour (as both mainstream and heterodox authors have been pretending to do over the last forty years or so). In fact, the pretence to understand and to explain the working of an economic system by referring to its agents’ behaviour can be traced back to the work of Walras (1954), the founder of the neoclassical school and the mentor of so-called economics — by opposition to political economy, which originates in the Classics (Smith, Ricardo, Marx, to name just the most famous authors) and has been elaborated upon by Keynes as well as some of the first-round scholars gathered around him in Cambridge, UK. The Walrasian framework has been refined and elaborated upon mathematically in the last thirty years or so, owing also to the still ongoing progress in information technology, but its conceptual and anthropological contents have remained the same essentially, for they revolve around relative exchange and the so-called *homo oeconomicus*, both being instrumental in attaining general economic equilibrium in a variety of models that have been used also to inform policy makers’ decisions around the world. The now so-called dynamic stochastic general equilibrium approach, which features prominently in various central banks’ models, in fact, shares with the simple atemporal general equilibrium theory of 1950s vintage a fundamental preconception, namely, that the economy can be truly represented as a *stable* self-regulating system in which effective ‘market forces’ will always tend to bring it into a state of general equilibrium except in so far as ‘frictions’ of one sort or another put the break on the equilibrating process. (Leijonhufvud, 2009, p. 2)

In the first chapter of this book, Bernard Schmitt argues that general equilibrium theory, in both its old and its contemporary forms, is wrong, because it is based on a misunderstanding of the nature of the market economy, so that ‘further technical innovation in mathematical modelling or econometrics will not bring real progress as long as this remains the ruling paradigm’ (Leijonhufvud, 2009, p. 2). The argument that Schmitt develops in this chapter shows that relative exchanges cannot be captured by general equilibrium theory, because the determination of equilibrium prices is affected by a fundamental (mathematical) error. As a matter of fact, the problem of the determination of relative prices within general equilibrium theory amounts to explaining how numerical equilibrium prices can be established through direct exchange. Schmitt considers the case of two commodities, pens and razor-blades, and their exchange on the commodity market. As he explains, if supplies and demands are said to adjust through a variation in numerical prices, the determination of the equilibrium between pens and razor-blades requires the simultaneous solution of no less than three equations.
Mainstream economists would maintain in this connection that adding pens to razor-blades makes no difference at all as regards the purely mathematical determination of the ‘equilibrium’ price and that only one equation is therefore required in this respect. The rationale for their explanation is simple: even in a two-commodity economy, all exchanges are relative, defined as they are between ‘terms’, one commodity at each end. The matter, however, is still far from being settled. As elementary logic reveals, equalizing supply of and demand for pens, on the one hand, and supply of and demand for razor-blades, on the other hand, is a twofold task, consisting in two equations – not just one – independent from one another. Further, once these two equations yield their results (or solutions), the relative price of pens in razor-blades is still indeterminate, as there is no guarantee at all that an agreement could ever be reached for an exchange, at any price level, between pens and razor-blades. The search for a precise number that would be the agreed price of pens and razor-blades to be exchanged between the agents involved is an equation in its own right, to wit, an additional determination, leading to a total of three distinct and totally independent equations, as Schmitt explains.

What happens, then, when one commodity is arbitrarily chosen to be associated with a pure number, and defined indeed as the price of the other commodity? Is the introduction of Walras’s numéraire sufficient to dispose of the indeterminacy of relative prices? In Chapter 1, Schmitt shows that the answer is no, and provides two rigorous proofs of this dismal state of affairs. The unavoidable rejection of relative prices paves thereby the way to a new conception of money, so much so that relative exchanges are replaced by absolute exchanges in order to understand economic reality. Considering the Walras numéraire as the scientific form of the money unit allows one to understand that money (that is, the numéraire) is a unit of account which measures (in purely numerical terms) the product it contains. In order to reach this conclusion, however, it must be explained, rather than assumed, that, as already advocated in Walras’s Elements, the numéraire has its place in economics, and leads to a truly scientific definition of money. Schmitt’s fundamental criticism of relative prices determination, and the ensuing rejection of any general equilibrium analysis are a necessary step towards the correct understanding of economic reality, as it proceeds with the replacement of Walras’s numéraire by what one may denominate the ‘money-numéraire’, and culminates in the passage from relative to absolute exchanges, which characterize any monetary economies of production and exchange.

Elaborating on this analysis, Alvaro Cencini shows in Chapter 2 the conceptual avenue that must be followed in order for both economists and
policy makers to benefit from a truly macroeconomic approach to macroeconomics. As a matter of fact, in the majority of economics textbooks, economists have no misgivings concerning the microeconomic foundations of macroeconomics. Thus, for example, Malinvaud (1998, p. xix) argues that

\[\text{[i]n order to well define the nature and significance of their behavioural laws, in order to endow these laws with a few definite properties, macroeconomists have to proceed to preliminary microeconomic analyses and to study aggregation of individual actions and behaviour. . . . In other words, macroeconomic theory has microeconomic foundations.}\]

The Malinvaud view is absolutely in line with what the great majority of economists commonly believe today. According to them, the reference to microeconomics is a necessity, any behavioural macroeconomic laws being inferred from the microeconomic analysis of individual behaviour. True to their conception, these economists are bound to consider the field of macroeconomic theory as a very complex domain, characterized by contrasting interests and forms of behaviour influenced by time and uncertainty, and inserted in a changing legal and institutional framework. It is therefore not surprising to find that macroeconomic theory has failed in providing a consistent unified system of thought, and that its results are so often unsatisfactory as regards economic policy. This is a very unrewarding conclusion, which, considering the crucial importance of the point at issue, seems hardly in keeping with mainstream economists’ endeavour to provide a satisfactory explanation of the real world of macroeconomics. Yet, despite the well-known problems related to aggregating data and to the modelling of economic agents’ behaviour, and although in 2012 it is still true that ‘[t]here is not now any model which successfully integrates micro and macro theory’ (Weintraub, 1979, pp. 159–60), all major economic theories agree as to the need to build macroeconomics on solid micro-foundations.

In Chapter 2, Cencini challenges what has almost become an axiom of modern economics by showing that it rests on an erroneous perception of economic events, and by proposing an alternative solution, in which macroeconomics is absolutely built on macro-foundations. His contribution starts by showing that today’s wide agreement as to the relevance of micro-foundations to macroeconomics is the unavoidable outcome of the influence exerted by general equilibrium analysis in any of its varieties. While microeconomic considerations have been present since the outset of our science, it is only since Walras’s introduction of general equilibrium analysis that the macroeconomic approach to macroeconomics has been superseded by a microeconomic approach. As Cencini points out, Keynes’s contribution has failed to reverse this tendency, mainly because
his followers have interpreted his theory in terms of equilibrium, losing thereby the originality of the message conveyed by Keynes’s logical identities. In light of this argument, Cencini provides the main elements for a macroeconomic analysis based on macroeconomic principles. Referring to Schmitt’s quantum theoretical approach, he explains notably that economic laws are macroeconomic in their nature, and that it is utterly misleading for professional economists as well as policy makers to claim both that ‘macroeconomics deals with aggregates [and that] these aggregates are composed of the behaviors of individuals’ (Hoover, 2001, p. 129).

Equipped with the new analytical approach presented in the first two chapters of this book (Part I), Part II addresses a number of macroeconomic issues at the domestic level. In Chapter 3, Bernard Schmitt puts the record straight, providing some clarifications on money, effective demand, and profits, in order for readers to better understand quantum macroeconomic analysis as it has been developed since the publication of *La formation du pouvoir d’achat* (Schmitt, 1960), and as presented in the second part of this volume.

The role played by money in our economic systems as well as in quantum analysis is such that it will not be amiss to insist on the crucial distinction between money and credit, as well as on the difference between nominal money and real money. According to economics textbooks, money ‘circulates’ from purchasers, who spend, to sellers, who earn. This is precisely what is advocated by the well-known ‘quantity theory of money’, which states that money circulates at a given, finite velocity. These claims are not simply wrong; they are also counterfactual. The message conveyed to the world by economics changes entirely when, instead of tediously repeating that money circulates, it is indeed explained that in a capitalistic system any newly produced output is integrated into a sum of money, from which it is withdrawn by income holders when they get hold of it in the form of purely physical goods.

Another argument considered by the contributions to Part II of this volume refers to Keynes’s analysis of unemployment and particularly to the concept of effective demand. This is also a subject matter in need of clarification, too many economists being still convinced that unemployment can be brought about by a lack in effective demand. Introduced by Keynes (1936/1973) in his *General Theory*, the concept of effective demand acquires a precise meaning once it is interpreted according to the principles of quantum analysis. It establishes that total demand is the reflux of the incomes formed by total supply, and expresses the fact that total demand and total supply are the terms of an identity, as Schmitt shows in Chapter 3 of this book.

The last topic that Schmitt addresses in Chapter 3 is among the most
difficult in economics, that is, the formation of profit. Economists have repeatedly attempted to reconcile the existence of profit as a positive income included in national income with the undisputed fact that profit is costless. At the same time, economists have unsuccessfully attempted to explain how positive profits may form without surrendering the necessary equivalence – accepted by the Classics as well as by Walras and Keynes – between value and prices. As Schmitt argues in Chapter 3, profit remains a stumbling block for most economists, including those who develop their analysis within the quantum macroeconomic framework. Schmitt singles out the main obstacles towards a correct understanding of how profit can be explained in accordance with facts at the macroeconomic level and with the tenets of quantum macroeconomic analysis.

Chapter 4, contributed by Jean-Luc Bailly, focuses on labour, wages, and non-wage income, explaining them in the light of Schmitt’s analysis. Contemporary economic thought within the mainstream (both neoclassical and new-Keynesian) elaborates a variety of theories of income distribution upon the well-known Cobb–Douglas production function. These theories suppose therefore that real incomes are equal to the marginal factor productivity for both labour and capital. In other words, they suppose that production factors receive, in the form of new goods and services, the equivalent of what they bring in the form of productive services. Thus both incomes and their functional distribution within the economic system would be given in real terms, before production and exchange on the product markets occur actually. These schools of thought represent the functioning of our economies according to the articulation of two separated sectors, that is to say, a sector in which real magnitudes would be formed and another sector in which monetary magnitudes would be formed. It follows that a variety of mainstream authors address income distribution ‘as if’ there were two measurements of output, the real measurement of output not coinciding always and necessarily with its nominal measurement. If so, then any difference between the two measurements of the same object would impede general equilibrium. New-Keynesians, for instance, attribute to money-wage rigidities the responsibility of observed unemployment.

The radical criticisms of the neoclassical model proposed by both post-Keynesians and the quantum theory of production developed by Schmitt enable the understanding that the production process does not consist in a relative exchange between what production factors bring and the new goods and services that they receive. In fact, production is a process of creation of forms during which workers give rise to a net product, which exists in a real form as well as in a monetary form. Indeed, the logic of the association of money and output entails that wage earners initially
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receive in the form of money the whole new product. As a result, real wages and nominal wages form an identity. Nonetheless, labour not being the sole factor of wealth, wage earners do not obtain the whole output when they transform their wages on the market into produced goods and services. The difference between the prices on the product market and production costs makes it possible for firms to earn an income both for their shareholders (dividends) and for their creditors (interests). Thus, the distribution between labour income (that is, wages) and capital income concerns, at the same time, production and the flow of output on the product market. Bailly concludes thereby that non-wages incomes do not add to wage units distributed in production to make up national income, and that the rate of profit does not depend on variations in money wages. Consequently, the function of prices is not to reduce nominal magnitudes to real magnitudes: their role is to distribute output between wage and non-wage earners.

The circuit of income is a powerful analytical instrument that enables one to take into account the creation as well as the destruction of monetary incomes, thereby integrating money and production. However, the real test of robustness of such a concept concerns its ability to be extended from an elementary circuit wherein monetary incomes are first earned by wage earners and then spent on buying consumption goods to a complex dysfunctional economy characterized by inflation. This is the subject matter that Xavier Bradley and Pierre Piégay address in Chapter 5. In this respect, as the authors show, the circuit of income, if closed on to itself, might appear too perfect to allow for any sort of inflation; or, on the contrary, it might seem too lax if it is left open to variations in the amount of money during the interval between the creation and destruction of income.

In his Treatise on Money, Keynes (1930/1971) attempted to build an original and comprehensive analysis of inflation through the working of such a circuit. Unfortunately, this analysis epitomizes the problems raised by the traditional approach of the circuit of incomes from which Keynes failed to distance himself. According to Keynes, profit inflation in the consumption sector is based on the circulation of incomes from one sector to the other, and profit inflation in the investment sector comes from the autonomy of money creation compared to that of incomes. These are in fact the two key weaknesses of the traditional conception of the circuit: if monetary incomes circulate in the economy and if money can be created in between the ‘extremes’ of the circuit, then money is given back its autonomy compared to goods, and this restores the neoclassical dichotomy between real magnitudes and monetary magnitudes. Does this mean then that the circuit-of-incomes perspective should be discarded altogether or viewed as an instrument of secondary importance?
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As Bradley and Piégay show in their contribution, the circuit of incomes can provide the foundation of the analysis of a monetary economy of production and in particular for the study of dysfunctions like inflation, but this requires a profound change in the way one considers payments. This is precisely what Bernard Schmitt has undertaken: in his view, one must distinguish the realm of flows or payments that take place in complete instantaneous circuits and the realm of stocks or financial relations that characterize the situation in the continuity of time in between payments. Far from excluding the possibility of inflation, as a superficial impression would have it, this kind of instantaneous circuit provides, on the contrary, a much deeper explanation of inflation than the usual idea of too much money chasing too few goods. In this perspective, the Schmitt analysis gives a sound basis for the intuitions of Keynes: it is the investment of profits that causes an inflationist malformation of incomes. Bradley and Piégay argue notably that it is the way profits are spent, in the current banking system, that explains the current malformations of incomes, that is, incomes emptied of their content – their purchasing power – right at the moment of their creation on the factor market. This is a monetary–structural factor of (involuntary) unemployment, independently of any forms of behaviour, an issue that Claude Gnos elaborates upon in Chapter 6.

In his chapter, Gnos asks indeed the following question: why does full employment not prevail in the economy? While standard Keynesians consider that the important thing is whether or not price and wage flexibility allows supply and demand to counterbalance each other, Keynes on the contrary focused on demand deficiency. In Chapter 6, Gnos investigates first the logic and relevance of Keynes’s focus on demand deficiency. He thus asserts the relevance of Keynes’s view of the ‘entrepreneur economy’ as opposed to Walras’s ‘real exchange economy’. He then argues that Schmitt’s analysis of the circuit allows him to revamp Keynes’s approach to unemployment, in exhibiting a fundamental source of demand deficiency, which is not grounded in consumers’ and entrepreneurs’ forms of behaviour but in the way banks carry out monetary and financial operations involved in the process of firms’ accumulation of capital.

The Gnos analysis considers different stages. With reference to the novelty of Keynes’s analysis of money, particularly how he saw the financing of production when defining the ‘finance motive’, Gnos critically considers current monetary policy strategies and then introduces the novelty of Schmitt’s approach to money regulation. This allows him to present Schmitt’s analysis of banks’ involvement in unemployment, in order to show how to improve banks’ modus operandi to avert the occurrence of another systemic crisis.
On this ground, Chapter 7, contributed by Alvaro Cencini, investigates the link between economic and financial crises. Indeed, the crisis related to speculative investments in the US market for subprime mortgage loans that broke out in 2007 is just the last in a long series of crises to have hit global financial markets. Strong fluctuations in the price of oil and basic farm products have caused serious concern about the future of the global economy, which has allegedly entered a much more difficult and uncertain period than ever. Worldwide economic turmoil and fundamental uncertainty are now threatening the development of several economies, and experts increasingly evoke the ghost of a severe recession. How can we explain this situation? What are the reasons for economic crises, and what can be done to address them? The aim of Chapter 7 is to propose a new, truly macroeconomic analysis of crises capable of giving a correct answer to these questions.

Cencini intends to go beyond business cycle theories, to show that economic crises in general are the consequence of a pathology affecting the capitalist system, and that their understanding requires the elaboration of a macroeconomic analysis capable of explaining how crises can arise in the first place. What is at stake is not only the possibility that business cycles exist as a mechanism of interconnected events, but also the possibility of moving from a disorderly to a stable economic system. Cencini provides a framework of analysis allowing the separation of the structural causes of economic crises from accidental disturbances due to economic agents’ behaviour. His search for a new theory of crises passes through a critical assessment of business cycle theories, revisits the theories of crises of the past, and switches from a micro- to a macroeconomic analysis of economic pathologies. Leaving behind the traditional conception of crises as events disrupting economic equilibrium, Cencini shows that disturbances are due to a lack of conformity between the logical laws of our economic system and its present monetary structure.

The analysis proposed in Chapter 7 is conceptual rather than mathematical, as Cencini aims to explain the nature of economic crises rather than trying to reproduce reality using a model. The absence of mathematical tools should not be interpreted as a sign that his analysis lacks rigour or difficulty. Quite the opposite: the search for the logic of economic events requires a strong intellectual effort, and does not allow for any easy shortcut.

To be sure, the transition from the microeconomic approach pervading contemporary economic analyses to the macroeconomic approach advocated by Schmitt implies a radical change in perspective. Emphasis shifts indeed from behaviour to logical laws, from the massive use of mathematics to conceptual reasoning. Crises are a symptom of a pathology affecting the economic system as a whole. They happen because the present system...
of payments is inconsistent with the laws governing capitalist economies. Even more than physical laws, logical laws prevail under whatever conditions. If the payment system does not comply with them, they apply anyway, and the discrepancy between them and the way payments are actually carried out is sanctioned by the emergence of a pathology, which affects the whole economic system.

This discrepancy, and the ensuing pathology (or monetary disorder), has been clearly at work within the European Monetary Union (EMU). As Sergio Rossi explains in Chapter 8, opening the last part of the book, which focuses on international economic issues and economic policies, the euro-area crisis that broke out near the end of 2009 is the result of a monetary–structural disorder affecting Euroland as a whole. In fact, Euroland countries still have heterogeneous currencies although the latter have all the same denomination since they were encapsulated in the EMU. To be true, EMU is actually a misnomer, since to date there is no currency union across that area, which lacks in particular a final-payment mechanism for the European System of Central Banks (ESCB). It is notably the lack of payment finality between any two EMU member countries that has been originating (observed and non-observed) soaring imbalances within the EMU, particularly after the bursting in 2009 of the systemic crisis that is devastating the euro area at the time of writing.

As Goodhart (1989, p. 26) explains, the finality of a payment requires that the ‘seller of a good or service, or another asset, receives something of equal value from the purchaser, which leaves the seller with no further claim on the buyer’. Within the euro area, this occurs for residents but not for their countries, because exporting countries still have a claim on the ESCB – also called the Eurosystem, which includes the European Central Bank (ECB) and the national central banks (NCBs) of all euro-area member countries – once these countries are ‘paid’ for those goods, services and/or assets that their residents export in excess of what they import during the relevant period of time. As Rossi explains in his chapter, it is therefore a payment deficit that originates intra-euro-area imbalances eventually. This echoes the well-known ‘exorbitant privilege’ that so-called ‘key-currency’ countries have been enjoying for about forty years within the ‘non-system’ for international payments that has been created by the demonetization of gold and the ensuing abandonment of gold convertibility of the ‘core’ currency (to wit, the US dollar).

Rossi addresses thereby the monetary–structural origin of TARGET2 imbalances, that is to say, all those unsettled positions within the euro-area-wide payment system that has been operated since the introduction of the euro in January 1999. After presenting the infrastructure and mechanics of the TARGET2 system, Rossi explains with a stylized example how
payments carried out via that system are final for the residents involved but not yet for their own countries. He then proposes a monetary–structural reform that will allow any euro-area countries to be paid finally and to recover their own monetary sovereignty, without disposing of the major advantage provided by a common currency used as a means of final payment in foreign trade.

International monetary issues are then further explored in the last two chapters of Part III. In Chapter 9, Bernard Schmitt points out and explains that indebted countries pay interest twice on sovereign debts. Contrary to traditional wisdom, it is not correct to identify a country’s sovereign debt with the debt incurred by the State, that is, with what is commonly called the public debt: the external debt incurred by the public sector is only part of the external indebtedness of the country considered as a whole. Indeed, the debt that the private sector contracts towards external lenders is also a constituent part of a country’s sovereign debt. Correctly defined, the sovereign debt is the external debt incurred by both the public and the private sectors. In Chapter 9, Schmitt shows that, because of the present non-system of international payments, sovereign debts are twice as high as they should be. Instead of lying only on the public and private sectors that incur it, the external debt lies also on the country as such. The sovereign debt resting on the country itself and adding up to the public and private external debt is pathological, and a reform is urgently called for allowing for its cancellation.

According to the bogus logic of the quantity theory of money, as Schmitt recalls in the chapter, countries incur financial debts among themselves, but are never affected by an excess of financial debt incurred to (the benefit of) a stateless financial bubble. In fact, it is the opposite that is true, as Schmitt argues. This becomes clear once the definition of bank money is taken into consideration, notably once it is recognized that money is not a stock, that it does not circulate within a country or across countries, and that its ‘velocity’ is infinite, since in each payment it is instantaneously recovered by the bank issuing it. On these conditions, which are not derived from the theorist’s imagination but from the mere observation of facts, it is certain that a country’s external debt exists both at the international level, between countries, and on a pathological plane, formed between the set of all countries and a stateless financial bubble.

To illustrate his analysis, Schmitt recalls that in 2010 the UK external debt amounted to more than 6 trillion pounds. If we assume an interest rate of 3 per cent, the payment of interest amounted to 180 billion pounds per annum, a sum taken from the UK national output. Schmitt shows that, on top of this payment, the United Kingdom has suffered from a straightforward loss, that is, the reduction by 180 billion pounds of its annual budget.
The mechanism causing a country’s external debt to be multiplied by two explains why interest on a country’s external debt is paid twice. Yet the analysis can also run from interest to debt. As shown by Schmitt, it is possible to induce that a country’s external debt is twice as high as it should be from the proof that the country pays twice the interest due to the rest of the world. More specifically, Schmitt shows that countries’ payment of interest on their debt currently is multiplied by two. This is another confirmation of the result reached in this path-breaking investigation.

Elaborating on it, the last chapter of this volume, contributed by Alvaro Cencini and Mauro Citraro, highlights and explains the mystery of the ‘missing surplus’ and of the ‘missing capital outflow’ in countries’ current and capital accounts respectively. To be sure, surplus and deficit countries being inter-related, the current account of all world countries should be perfectly balanced, as should be the world capital and financial account. However, this is not what happens in the real world, where both the global current account and the global capital and financial account are far from being perfectly balanced. Known as the world current account discrepancy, and the world capital and financial account discrepancy, these imbalances are a clear symptom of the disorder characterizing the current international monetary system.

The aim of Cencini and Citraro is to show how the mystery of the ‘missing surplus’ and of the ‘missing capital outflow’ can be unravelled by a new macroeconomic approach while assessing the intuition of experts at the International Monetary Fund about the role played by capital flight and by the so-called ‘interest income position’. In order to do so, Cencini and Citraro first examine the concept of the balance of payments, in an attempt to show that, contrary to what the word ‘balance’ suggests, it does not define a state of equilibrium. They then clarify the meaning and implications of the balance of payments being a fundamentally logical identity. In this context, particular attention is paid to the official reserves account, and to its supposed function as an accommodating item, that is, as an entry whose distinguishing feature is that it exists ‘only because the other items in the balance of payments are such as to leave a gap of this size to be filled’ (Meade, 1951, p.11). Challenging the tendency for uncritical acceptance of traditional thinking in economics, Cencini and Citraro show that an innovative as well as operational definition of international reserves can be reached by referring to the concept of the ‘international investment position’. Quintessentially macroeconomic, this conception of official reserves allows for a proper understanding of the stock and flow distinction, and opens the way to a macroeconomic policy for rectifying world balance-of-payments discrepancies.

In their chapter, Cencini and Citraro also introduce a novel analysis of
capital flight, which supports the idea that the cause of global balance-of-payments discrepancies is to be found in ‘the systematic misreporting of international interest income flows’ (Krugman and Obstfeld, 2003, p. 314). Crucially, what these authors call ‘systematic misreporting’ must not be conceived as inaccurate or false reporting. It is indeed not due to errors and omissions in data collection, but to a pathology of the present system of international payments affecting the payment of net interest on debt. Schmitt’s analysis of the double payment of net interest presented in Chapter 9 thus provides the key to the resolution in Chapter 10 of the mystery of the ‘missing surplus’ and of the ‘missing capital outflow’. Buttressed by logical reasoning and by statistical evidence, Schmitt’s theorem establishes the (pathological) double payment of net interest that Cencini and Citraro confirm in their analysis: though fully accounted for by the indebted countries’ current account, the payment of net interest entails also the parallel (and pathological) decrease in their official reserves. Bearing in mind that the second payment is entirely macroeconomic in nature – so that, while benefiting the macroeconomy of the creditor countries, it goes unrecorded in their balance of payments – Cencini and Citraro finally show that net interest payments are indeed the cause of both the world current account deficit and the world’s net capital inflow.

On the whole, the contributions gathered in this volume offer a pathbreaking analysis of contemporary economic theory as well as policy at both the national and the international level. Moving from a logically and conceptually rigorous analysis of various macroeconomic issues that to date remain to be solved, the authors of these contributions show collectively that the time has come to rethink economics anew to address and to solve relevant macroeconomic problems in the real world rather than reproducing acritically ‘established truths’ with a prescientific approach that is blurred by ideological argument and mathematical beauty.

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