Monetary policy before and after the crisis: what should we be teaching undergraduates?

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Abstract: The economic crisis has seen central banks turn to some rather innovative practices in order to deal with the great recession. In particular, the Federal Reserve in the USA has made considerable use of what has been called ‘quantitative easing’. This practice marked a great departure from standard or textbook treatments of monetary policy, whether neoclassical or in its new consensus form. Yet, for post-Keynesian economists, quantitative easing is a practice fully consistent with the general conduct of monetary policy. The paper argues that the economics profession at large has been teaching the wrong theory of money.

Keywords: endogenous money; monetary macroeconomics; monetary policy.


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1 Introduction

Entering its sixth year at the time of writing, the economic and financial crisis shows no signs of slowing down, in particular in Europe. Indeed, Greece may be on the verge of exiting the euro area, and countries like Spain, Portugal, and Italy are still on the precipice of economic disaster with interest rates in many Southern countries close to dangerous levels on a regular basis. Possible bank runs have now emerged as another threat to the stability of the euro area as a whole.

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Although Germany seems to be fairing better, it stands alone as periphery euro-area countries are deteriorating at a rapid pace, whilst Europe sinks again into recession, threatening a global recession. The rate of unemployment in some parts of Europe is now well over 25% and youth unemployment in particular over 50%. With the imposition of austerity measures, which many believe is the road to economic salvation, heterodox economists are unanimous in the conclusion that the worse has yet to come.

Yet, the crisis in Europe and elsewhere is not the only crisis. In addition to the ongoing economic crisis, there is also a crisis within the profession at large – the crisis in economics (Palley et al., 2012). Indeed, one of the most striking features of this crisis is the reluctance of many mainstream economists to recognise the deep impact it has had on economic theory, more specifically on neoclassical economics, the assumptions of which have been severely tested by the crisis. This raises important questions regarding how we should be teaching economics to our undergraduate students in light of recent events. Increasingly, this is a question that is being considered by some, more enlightened, mainstream economists as well. For instance, in a recent article, Friedman (2011, p.391) reaches the same conclusion, and asks: “How should the recent financial crisis, which […] contradicted so many central ‘truths’ of modern economics, change how we teach our subject?” This is reminiscent of the famous observation attributed to Keynes: “When the facts change, I change my mind. What do you do, Sir?”

This topic is gaining some traction. For instance, in its April 1, 2012 edition, the *New York Times* dedicated its comments page to precisely this subject matter (it was not an April Fool’s Day joke). Alan Blinder and Robert Skidelsky, among others, offered their opinion on the issue. The series of very short opinions offered very little in terms of practical solutions, but it did indicate that there seems to be, at least among enlightened economists, a degree of reflection that is certainly welcome.

There are also other encouraging signs. For instance, while having made an outlandish claim at the beginning of the crisis by stating that “the state of macroeconomics is good” [Blanchard, (2009), p.210], Olivier Blanchard (2011) made an about-face a mere three years later, on March 13, 2011, noting that “our most cherished beliefs” had been seriously undermined by the crisis.

Despite these signs of encouragement, along with a symposium in the *Journal of Economic Education* (2010), we should be fairly sceptical on the possibility of change in the economics profession, let alone a revolution. The most probable result will be nothing, or very little.

First, as a profession, economists are fairly conservative, not only in their beliefs, but also in accepting changes. This second trait is a characteristic to all scientific communities. This suggests that any changes, if any, will typically take several years before filtering down. While there might be some papers or books here and there, it would take years before these comments are digested and incorporated within the economics profession at large, if at all. Further, if the experience of the Great Depression is any indication, there might be a temporary openness toward alternative ideas, as there was with those of Keynes, but over the long run neoclassical theory will remain fairly intact, although it may absorb some Keynesian ideas and create a new synthesis.

Secondly, as anecdotal evidence only, in March 2012, at the Eastern Economics Conference in Boston, a great many (or a majority?) of papers presented by mainstream economists were ‘business as usual’, with dynamic stochastic general equilibrium models and the like, as if the crisis had never happened. Moreover, a quick perusal of recent publications in some of the ‘top-ranking’ journals reveals the same fate: while the
profession may have acknowledged the crisis a few years ago, it seems unaware that things need to change in economics.

Colander (2010, p.383), however, is of the opposite view, and believes in fact that textbooks are already reflecting changes and that these changes will be passed on to undergraduate students soon. As he explains, “[m]acroeconomic textbooks of the future will likely have a full chapter devoted to crises and also will likely reorganize the macroeconomics presentation to better explain the crisis”.

Yet, to what kind of change does Colander (2010) refer precisely? After all, this is a question of perception: how damaged are the system and the theory underlying it? Are they broken and beyond repair, or are there simply in need of some updating?

Two possibilities arise. On the one hand, heterodox economists would argue that a total rejection of neoclassical theory and modelling, with their underlying assumptions, needs to take place, in order to replace them with heterodox-grounded macroeconomic theories that focus on different assumptions and variables [a macroeconomic foundation, see Rossi (2012)]. In other words, we need to adopt a new frame of reference, ask different questions, and adopt radically new policies. On the other hand, mainstream economists would aim to keep essentially the same neoclassical frame of reference, but incorporate other frictions and imperfections that would generate crises and depressions. After the great depression and the publication of Keynes’s *General Theory*, the latter scenario occurred, as we all know, and a repeat of this scenario is certainly a real (most probable) possibility. Therefore, while some, albeit not all, textbooks will undoubtedly introduce a chapter devoted to the ongoing crisis, would crises be incorporated within the overall model, or would they be simply introduced as a possibility, that is, the result of some imperfection? After all, economic slumps and unemployment situations are explained by imperfections, so why not crises?

It is highly doubtful that both Colander (2010) and Friedman (2011) have the first option in mind. The economics profession has invested too much in the neoclassical apparatus and its institutions to throw them away. In other words, while many economists could be aware that their ‘cherished beliefs’ have been undermined by the crisis, it is reasonable to assume that the profession at large will not begin an extensive rethinking of economics: they simply do not believe that the system is broken.

In this sense, the most probable scenario is the following: neoclassical theory will be amended, and may incorporate a few heterodox ideas, but will remain essentially the same. This will be the new synthesis that incorporates elements of this crisis in order to appear relevant. Yet, the overall framework will remain the same.

Two recent examples of this resistance are telling. First, consider Blanchard’s blog referred to above, where he suggests that macroeconomists need to move forward with ‘the right microfoundations’, as if the problem all along was that macroeconomics was simply build upon the wrong microfoundations.

Secondly, in a 2009 blog by Gregory Mankiw, the author advocates that excess bank reserves, a result of the Federal Reserve’s Quantitative Easing policy, are no longer inflationary. This stands in contrast to the quantity theory of money, to which mainstream economists adhere. According to Mankiw (2009):

“It is true that the monetary base is exploding. […] Normally, such surge in the monetary base would be inflationary. The textbook story is that an increase in the monetary base will increase bank lending, which will increase the broad monetary aggregates such as M2, which in the long run leads to inflation. That
is not happening right now, however. The broader monetary aggregates are not surging. Much of the base is instead being held as excess reserves.”

The reason, according to him, is because the Fed pays some interest on bank deposits. Regardless of the reason, the main point is that excess reserves were always considered inflationary. Mankiw (2009) does not abandon neoclassical theory, but merely morphs it sufficiently to explain the non-inflationary nature of QE, even if it stands in contradiction to established doctrine. The problem remains, however, on how to reconcile this with the rest of neoclassical theory.

So, while during the great recession Keynes was temporarily drummed up, the so-called ‘return of the master’ (Skidelsky, 2010), over time, he will fade again, and economists will return to what they know and understand, despite it having little relevance to the real world.

If this interpretation is correct, then this raises dramatic questions as to the possibility of another crisis, or crises, happening again in the not-too-distant future. Already, despite demands for change, economic policies in Europe, based on austerity and the push for a minimalist state, all point to history repeating itself sometime down the road.

The aim of our contribution to this special issue is to attempt to answer precisely Friedman’s (2011) question, and to shed light in particular on how we should teach monetary macroeconomics and monetary policy to undergraduates. This paper takes the first of the possibilities discussed above as its core reflection: we need not only to change, but actually to replace the existing neoclassical view with a heterodox model of monetary macroeconomics.

The next section summarises what are generally considered to be the main tenets of the neoclassical approach to monetary macroeconomics. That section will be short, as it only serves to contrast the current teaching of macroeconomics and monetary theory with an alternative approach, which will be developed in the third section, in which we offer a more detailed account of what should be taught in undergraduate programmes in economics within colleges as well as universities. In a way, readers will notice that many post-Keynesians and heterodox economists have advocated much of what we will argue in section three. This is not a coincidence. The assumption here is clear: the crisis has served two purposes. On the one hand, it has severely weakened the “central truths of modern economics”—read neoclassical models—by exposing the irrelevance of many of their assumptions. On the other hand, however, it has also served to validate many central arguments of post-Keynesianism and endogenous money theorists. So, in a way, what we should be teaching students today is what we should have been teaching them all along: post-Keynesian (heterodox) macroeconomic theory and policy.

A final note before proceeding, It is impossible in a single paper to elaborate on the many issues addressed herein. This paper is meant to give only ‘un aperçu’ into an alternative approach to monetary macroeconomics.

2 The mainstream model

In a blog read around the world, Willem Buiter, a former London School of Economics professor and chief economist at Citigroup, wrote in March 2009 that “the typical graduate macroeconomics and monetary economics training received at Anglo-American universities during the past 30 years or so, may have set back by decades serious
investigations of aggregate economic behavior and economic policy-relevant understanding. It was a privately and socially costly waste of time and resources” (Buitier, 2009). This is analogous to Krugman’s own assessment, which he made during his Lionel Robbins lectures at the London School of Economics a few months later, in June 2009. According to Krugman, the development of macroeconomics in the last three decades has been “useless at best and harmful at worst” (quoted by The Economist, 2009).

This is quite an indictment of the way economics, and monetary macroeconomics in particular, is taught in many universities around the world. Indeed, Buitier (2009) and Krugman (The Economist, 2009) pass judgment on an entire generation of economists whose work, closely tied to monetarism and real business cycles theory, is rejected.

Yet, of course, it is not only the monetary macroeconomics of the last 30 years that has been a ‘waste of time’, but rather the entire neoclassical edifice, starting with the synthesis interpretation of Keynes’s General Theory. Strictly speaking, the last 30 years have seen the development of neoclassical theory along microeconomic lines, the so-called search for microfoundations to macroeconomics, and the quest to answer the so-called Lucas critique. Yet, this development cannot be dissociated from the neoclassical theory on which it stands, or from contemporary Keynesianism as well, both of which have readily accepted the need for microfoundations. While Buitier (2009) and Friedman (2011) are correct, and as the microeconomic development of neoclassical theory has been a waste of time, one needs to reject not only the assumptions of, say, the real business cycle approach, but also the simple truths of neoclassical theory, which, as many now argue, have been laid bare during the crisis. Nowhere is this in fact truer than in monetary theory and policy. While textbooks are notoriously very slow in updating their contents, the crisis has particularly shed light on the limits of conventional thinking when it comes to money, central bank policy, and its transmission mechanism to the whole economic system.

The following four items summarise the textbook neoclassical model. We will criticise them more fully in the next section. Our discussion is limited to the textbook approach, that is, what we ordinarily see in most textbooks, which may or may not differ from more recent research on the topic, because this special issue is about the teaching of economics. In this respect, our discussion may be a simplification of the current state of monetary macroeconomics, but it is a sufficiently close approximation.

We have structured our discussion into theoretical components and issues related to monetary policy derived from the neoclassical model.

2.1 The classical dichotomy

Following Schumpeter (1954, p.278), economics has traditionally been divided between real and monetary analysis, with neoclassical theory and much of the Keynesian revival operating within ‘real analysis’, that is, where “money enters the picture only in the modest role of a technical device”. Broadly speaking, this suggests that monetary issues are unimportant and cannot affect real variables. This has been used as a justification for excluding monetary matters from the analysis. Pedagogically, this led to the creation of a number of diagrams that do not include any money. Hence, we can tell a macroeconomic story without money. Indeed, except for the IS-LM model, most models, be it the AD-AS diagram, saving-investment model and others, do not have money or a money-issuing authority. Money is considered neutral. Hence, in explaining output, employment, investment or economic growth to students, neoclassical theory can abstract from
monetary matters altogether. And while Hicks’s IS-LM model contains money, it is considered exogenous, under the control of the monetary authorities. Money may have short-run effects, owing to some sort of imperfection (stick prices or money illusion), but in the long run money does not affect the real economy. It only leads to higher prices.

Friedman (2011, p.391) criticises this approach and argues that the economics profession needs

“to recognize, much more explicitly than we now do, that we live in a monetary economy and it matters. […] [E]ducation in our profession is aimed at persuading our students that what happens within the monetary and financial aspects of our economy has little or nothing to do with output, or employment, or ordinary people’s incomes. This idea is both wrong and subversive of our ability to understand phenomena like what we have just experienced.”

This is a criticism long made by heterodox economists (Davidson, 1972; Rogers, 1989; Lavoie, 1992, among many others), who have consistently argued that it is impossible to separate real analysis from monetary analysis. Indeed, one cannot tell a macroeconomic story without introducing money at the beginning of it. This was Schumpeter’s view as well, when he defined monetary analysis as one where money is introduced at the very beginning, that is to say, “on the very ground floor of our analytic structure” [Schumpeter, (1954), p.278].

The concept of the neutrality of money stems, of course, from the idea that money plays no role except to facilitate exchange. This is why there is no need for money in telling the macroeconomic story along neoclassical lines. This goes back to the early days of trade and barter and the emergence of money. In that view, money is created in order to solve the double-coincidence-of-wants problem. Over time, an object emerged that was recognised as universally accepted, and used as a medium of exchange. In this sense, the functions of money are emphasised, or in other words, “money is what money does” [Hicks, (1967), p.1]. Yet, as we will discuss below, heterodox economists reject the myth of barter, as well as the neutrality of money [for a full discussion of the myth of barter, see Servet (2001)].

2.2 The central bank

The neutrality of money in no way implies the neutrality of the central bank. Indeed, central banks play an important part in the neoclassical theory. In fact, the policies of the central bank are not neutral: incessant increases in policy rates of interest have inflicted considerable damage on real-world economies.

In the neoclassical framework, central banks usually are depicted as having (total) control over the money supply through their control over reserves or reserve requirements: that is the introduction of the concept of scarcity in the money market. This is the fairly traditional depiction of central banks, although it has been somewhat modified in the last few years (see below). Yet, this exogeneity of the money supply, or rather the supply of “high-powered money” (Friedman, 1987), is still very much a central component of the mainstream or neoclassical approach to money as depicted in most textbooks today. Any changes in either reserves or reserve requirements will result in changes in money supply in one direction or the other. While in more advanced textbooks this story is somewhat more complicated because of the recognition of financial innovations, the story is largely the same in the sense that causality between the monetary base and total money supply is preserved.
Graphically, the exogeneity of the money supply is depicted by a vertical money supply curve in interest rate-money space, with any increases in money supply giving rise to a rightward shift of the money supply curve. Hence, the scarcity principle is preserved, since whatever is supplied must be carefully rationed among the available demand.

Finally, any increases or decreases of the money supply are seen as a deliberate action on behalf of the central bank, which, according to its policy objectives – usually an inflation target –, will either adopt expansionary or contractionary policies. In doing so, central banks will generally use open-market operations, that is, the purchase or sale of treasury bonds to inject or drain reserves from the whole banking system. A purchase of treasury bonds will inject reserves into the banking system, by which banks can provide additional loans, depending on reserve requirements (see below for a discussion of the role of banks).

2.3 The rate of interest

If central banks control the supply of high-powered money, the rate of interest is seen as the result of market forces, between the supply and demand for money. Any increases in the money supply, via the purchase of treasury bonds, will typically increase the price of these bonds and reduce the rate of interest. The market rate of interest is therefore seen as an endogenous variable, and operates largely, although not exclusively, on investment.

The market rate of interest, however, is but one interest rate discussed in that approach. There is also the natural rate of interest (a real rate of interest set by the forces of productivity and thrift), which is an unobservable variable although it remains a key magnitude in the setting of monetary policy. Moreover, the interaction between these two rates of interest will set in motion some inflationary dynamics.

The natural rate of interest, however, is problematic, because in reality it cannot be observed or calculated. However, this has never prevented central bankers in assuming its existence, which has led them to develop monetary policies based on an acknowledged assumption. When the measured rate of inflation is above the targeted inflation rate, the assumption is that the policy rate of interest is below the natural rate of interest, and that the former rate must therefore be increased to the level of the latter.

2.4 Commercial banks

The role of commercial banks is consistent with the overall real analysis of neoclassical theory. Banks are seen as mere financial intermediaries, bringing borrowers and investors together with lenders, by channelling deposits to potential borrowers. In this sense, banks are strongly controlled in their lending activities. In essence, they can only lend what they have. In this analysis, the loans supplied by banks are determined by the deposits and reserves accessible to them. For instance, when a central bank increases banks’ reserves, by crediting the banks’ accounts at the central bank, banks are now able to increase their lending activities. A decrease in reserves implies a decrease in bank loans.

This causality between reserves and loans was squarely at the heart of the Federal Reserve’s ‘unorthodox’ policies such as quantitative easing. The idea here was simple: it was believed that banks were unable to lend, so the Fed showered them with reserves in the hope that they would then lend, and kick-start the US economy. Yet, it did not work, for reasons that we will explain in the next section.
Finally, in terms of policy, neoclassical theory is generally focused on inflation, and
the central bank is presented as the guardian of price stability. This is because of the
assumed causal relationship between money and inflation: inflation is considered “always
and everywhere [as] a monetary phenomenon”, to use the famous expression of Friedman
(1987, p.17). In other words, inflation is caused by an excess of the money supply: “too
much money chasing too few goods”.

In this framework, inflation can be explained by referring either to the quantity theory
of money or to a Wicksellian analysis. Either way, an expansionary monetary policy will
lead to an increase in the price level. In this sense, a contraction in the money supply
should resolve the inflation problem.

In recent years, however, the new neoclassical synthesis, or new consensus
macroeconomics, has abandoned the exogeneity of the money supply in favour of an
exogenous rate of interest. As Romer (2000, p.154) argues, “[t]he main change is that it
replaces the assumption that the central bank targets the money supply with an
assumption that it follows a simple interest rate rule”.

At first, many post-Keynesians (see Fontana, 2006) rejoiced over this, but such
enthusiasm was misplaced, for the exogeneity of the money supply or interest rates on
their own is not important. In other words, neoclassical theory does not fall with the
recognition that the money supply is endogenous. Rather, what is important is the
relationship between money (or interest rates) and inflation. In this sense, neoclassical
economists are perfectly willing to abandon money supply exogeneity, as long as they
can still maintain that central bank policy affects inflation, through some sort of
mechanism. This is the heart of New Consensus and Taylor-rule type models, which
emphasise, through an IS curve and Phillips curve relationship, how the monetary policy
transmission mechanism operates. In essence, changes in the rate of interest impact on
aggregate demand, which then alter the output gap, which affects inflation rates. All the
core elements of neoclassical theory are preserved, despite the abandonment of money
supply exogeneity.

On a final note, although slightly outside the discussion over monetary matters, it is,
however, important to note the role attributed to fiscal policy. Within the neoclassical
framework, clearly, there is none. In other words, fiscal policy is not given any role to
play in influencing produced output. Several reasons are given, but chief among these are
the following: first, fiscal policy and deficit spending are inflationary, and they clearly go
against the importance of keeping inflation rates on target. Secondly, neoclassical authors
argue that only monetary policy is credible or reliable enough to hit the inflation target, or
to regulate the economy in such a way as to influence the output gap. Thus, interest rates
are adjusted and the economy is fine-tuned. The following quote by Farrell and Quiggin
(2012, p.21) summarises the overall neoclassical approach to monetary macroeconomics.

“The dominant approach to macroeconomic policy was based on the
assumption that an independent central bank, adjusting short-term interest rates
in line with a ‘Taylor rule,’ could manage the economy in such a way as to
achieve both stable inflation and reasonably steady economic growth. Active
fiscal policy could not improve on this outcome, and would effectively be
neutralised by offsetting adjustments to monetary policy. The ‘Great
Moderation’ (a general reduction in the volatility of output, prices and
employment beginning in the 1980s) was seen as the happy outcome of this
policy framework.”
3 The Keynesian alternative

Having developed, though briefly, the principle elements of the mainstream teaching of monetary macroeconomics in the previous section, let us provide in this section a brief criticism of this approach, as well as a frame of analysis for a credible alternative, which should be at the heart of the economics curriculum in monetary theory and policy.

The underlying assumption in this framework is that, from a post-Keynesian or heterodox perspective, the economic and financial crisis has only served to reveal the key arguments underlying the heterodox approach. In this sense, post-Keynesian economic theory and policy come into their own and the crisis may be an opportunity to get key post-Keynesian elements accepted by the mainstream, in particular in light of Friedman’s (2011) assessment.

Indeed, the following five elements are at the core of what we should be teaching students, both in terms of theory and policy.

1. we live in a monetary economy of production
2. central banks control the nominal rate of interest, and not the money supply, which is endogenous
3. interest rates are an income distributive variable
4. commercial banks are never reserve-constrained
5. a policy of low interest rates is always preferable to one where interest rates are kept high; moreover, we must downplay ‘monetary policy dominance’ (Rochon and Setterfield, 2007, 2008, 2012) in favour of fiscal policy.

Let us expand on these points.

3.1 A monetary economy of production

The notion that we live in a monetary economy of production cannot be overemphasised and puts the theory of endogenous money at the heart of such an analysis (Moore, 1988; Lavoie, 1992; Rochon, 1999). In short, it implies that there cannot be a discussion of real variables without a simultaneous discussion over money, and how the latter is introduced into the productive sphere. In other words, without money there is no macroeconomic story to tell. We cannot discuss labour, wages, interest rates, prices, employment, and investment without money: money is the sine qua non of our economic system.

This raises a number of important arguments, which link together the real side of the analysis to its monetary side. More important, it puts commercial banks, that is, the purveyors of loans, at the heart of economic analysis, and in doing so, it brings forth an institutional dimension lacking in neoclassical theory. In particular, the emphasis on a monetary economy of production implies a number of non-neoclassical conclusions relative to the behaviour of banks on the one hand, and of private firms on the other. It is the inevitable conclusion of a monetary rather than real analysis. Finally, it raises crucial arguments pertaining to the role and behaviour of central banks.
3.2 The exogeneity of the rate of interest

Post-Keynesians have been arguing for several decades now that the central bank controls the rate of interest, and not the money supply. One could argue indeed that this argument goes back to Keynes, who argued that the central bank could have the rate of interest ‘of its choice’. Kaldor (1970), followed by Moore (1979) and others, have made the same argument.

The recognition that interest rates were exogenous, that is, a policy decision, was the inevitable result of the endogenous nature of money, that is to say, money is naturally endogenous (Rochon and Rossi, 2007). While it was argued above that some versions of mainstream theory recognised that exogeneity of the rate of interest, this is not to say that orthodox economists have followed through on the implications of money’s endogeneity, as argued by Monvoisin and Rochon (2006).

Money is tied to debt when private firms wish to finance their productive activities and borrow from banks in order to pay wages and purchase investment goods (Rochon, 2009). When firms borrow, banks create money by issuing a liability, which firms must repay at some point in time. Hence, money is the physical embodiment of debt. Money is therefore the result of a tripartite relationship: “‘money’ is the by-product of a balance sheet operation of a third agent who, in modern parlance, can be dubbed a ‘bank’. In particular, money always emerges as a debt (or liability) issued by this third agent on itself, which has as counterpart a credit simultaneously granted to buyers of goods and services within an economy” [Parguez and Seccareccia, (2000), p.101].

Central banks are able to control interest rates by using so-called open-market operations defensively, in order to keep these rates on target. In this sense, even the monetary base is endogenous. Central banks are therefore able to neutralise any unwanted movements in the interbank market by adding or draining reserves. We can therefore claim that the supply of money is endogenous, as is the supply of central bank money. This approach goes back as far as Eichner (1987), and even in some aspects to Robinson (1956).

With respect to the natural rate of interest, heterodox economists see no value on its discussion, or relevance in policy prescriptions. In fact, Smithin (1994) has even gone so far as to claim that a proper theory of endogenous money must be based on the rejection of the existence of a natural rate of interest.

In addition to setting interest rates, central banks also ensure the smooth functioning of the interbank settlement system (Rochon and Rossi, 2007). Because any modern payment systems involve a great number of banks dealing with the payment orders of non-bank agents, a transaction involves more often than not two agents and two banks. Because of this, the notion of payment finality has been a crucial issue for central banks in the last two decades. Since banks do not settle their debts using their own currency but rather central bank money, central banks must ensure that these transactions clear. As such, as bank practitioners and actual bank practices reveal, “banks do not accept bank money in interbank transactions, but ultimately require their claims to be settled in central bank money” [Deutsche Bundesbank, (1994), p.46].

Given an environment of multiple banks, one bank may end up indebted towards another bank within the system at the end of any particular day. This is the inevitable result of the great number of incoming and outgoing payments initiated by and addressed to the non-bank sector. As Rochon and Rossi (2007, p.546) have argued, “the inflows and outflows implied by monetary transactions therefore require that the banking system be
complemented by a so-called settlement institution that provides lender-of-last-resort facilities in order for the bilateral debt-credit relationships born in the interbank market to be finally settled”.

3.3 The rate of interest is an income distributive variable

The rate of interest, clearly, is not determined in the money market by the forces of supply and demand. For heterodox economists, the rate of interest is an administered price, set by the central bank. But more than that, it is also an income distributive variable (Rogers, 1989; Lavoie, 1992; Rochon and Setterfield, 2007). When a central bank increases the policy rate of interest, it is in fact changing income distribution in favour of rentiers. This suggests that the transmission mechanism of monetary policy operates via income distribution, not through its effects on investment or consumption demand. In the end, increases in the policy rate of interest may well affect aggregate demand, output and unemployment, but this is done through income distribution.

3.4 Commercial banks are never reserve constrained

With respect to banks, the first argument that needs to be carefully reassessed is the notion that banks are not merely financial intermediaries between savers and investors, or between depositors and borrowers, as in neoclassical theory. Their role is far more vital to the pace of economic activity. Indeed, banks are creators of money through their lending activities. By validating the debt needs of private agents, they allow wages to be paid and production to begin.

Banks do not need prior deposits to lend, nor do they need central bank reserves. They lend because they have been endowed with the legal ability to do this by the State. They are never constrained by deposits, savings or reserves, but are only constrained by their willingness to lend to creditworthy borrowers.

This was the core argument of Keynes’s finance motive articles, published following the General Theory (see Rochon, 1997). Here, as Keynes reminds us, banks are ‘special’ in the sense that they supply the much-needed credit to the private sector in order to fund economic activity, wages, and investment. This implies a complete break with Say’s law. Loans or more generally speaking the asset side of the banks’ balance sheet is independent of its liability side. In other words, loans create deposits. This is a central argument of the theory of endogenous money: by providing credit, banks nourish the pace of economic activity. Keynes was adamant about this point as well. According to him, “[c]redit is the pavement along which production travels, and the bankers if they knew their duty, would provide the transport facilities to just the extent that is required in order that the productive powers of the community can be employed at their full capacity” [Keynes, (1971), p.197]. Recently, Friedman (2011, p.392) reached a similar conclusion: “While we live in what we conventionally call a ‘monetary’ economy, what actually matters for most of the purposes at issue here is actually not money, but credit. Indeed, with the benefit of hindsight the economics profession’s half-century-long fixation with money – how to measure it, how to control it, why people hold it, and so on – stands as a tragic distraction”.

Banks, however, do not provide credit to all those agents who demand it. This was an early misunderstanding of the theory of endogenous money. Indeed, banks will often refuse to finance economic activity. This is because banks will finance only those
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borrowers they believe will be in a position, in the near future and over the life of the loan, to reimburse banks and extinguish their debt. So, banks have a great deal of latitude in supplying credit. Their willingness to lend, in an uncertain world, will be based on their perception of the level of aggregate demand in the future – a proxy for the ability of firms to reimburse banks: when banks perceive the future in a positive light, they will have a tendency of loosening up the purse, so to speak, and increase their lending. This is achieved by lowering credit standards such that more firms now qualify for loans. This suggests that banks have no pre-existing limit imposed on their supply of credit. This has been the traditional post-Keynesian horizontalist position: banks are only limited by the availability of creditworthy borrowers (Rochon, 2006).

Keynes reminds us, of course, of the sudden bursts of optimism and of pessimism under which economic agents operate. Banks are no exception. When they are optimistic about the ability of firms to reimburse their debts, they will tend to increase their lending by lowering standards. But when banks become more pessimistic, their lending will tend to diminish, thereby slowing down economic activity. Through various surveys done, such as the Senior Loan Officer Opinion Survey on Bank Lending Practices in the USA, it is clear that the mechanism that determines loan supply is the credit standards, which banks either tighten or relax.

An important question then becomes: what determines these bursts of optimism or pessimism about the future? What triggers a bank to changing its opinion about its lending and to tighten its lending standards? This is certainly not an easy question to answer, as there may be many factors. But certainly changes in the rate of interest play a key role. Ceteris paribus, a rise in the rate of interest, or rather its successive increases, will eventually lead to a collapse of economic activity, or certainly will jeopardise the growth prospects of the economy in the future. This is reflected in the Senior Loan Officer Opinion Survey on Bank Lending Practices, according to which the key reason for tightening credit is “Less favorable or more uncertain economic outlook”. The opposite holds strongly in explaining why banks relax credit. And while the “Worsening of industry-specific problems” plays an important role in tightening credit, it plays a minimal role in relaxing credit standards. In a phase of optimism, competition from other banks becomes important in explaining why banks extend credit.

The above discussion seems to indicate that banks place an important emphasis on overall macroeconomic conditions in deciding to change credit standards. And when they decide to tighten credit, they will do so by raising credit standards. As this happens, less firms are judged creditworthy, the supply of credit will fall, thereby slowing the economy in the process.

Surprisingly, the Senior Loan Officer Opinion Survey on Bank Lending Practices shows that factors such as the “Deterioration in your bank’s current or expected capital position” play a small role, as does “Decreased liquidity in the secondary market for these loans”, although for small banks they may be important. There are no questions regarding reserves in the Senior Loan Officer Opinion Survey on Bank Lending Practices. Hence, these arguments do not seem to play a role in determining overall credit activity.

3.5 Central bank policy, inflation and interest rates

As discussed above, mainstream economists advocate a monetary policy strategy based on inflation targeting under the misguided knowledge that somehow changes in the rate of interest will have a direct and predictable impact on inflation rates.
In reality, however, nothing is quite so simple. The fact is it takes central banks several increases in their policy rates of interest to finally have an impact on output, unemployment and eventually on inflation. For inflation targeting to be successful, two important causalities must be observed: first, the causality between changes in the rate of interest and output; secondly, the causality between output and inflation rates.

Heterodox economists reject both assumptions, casting doubt on the interest sensitivity of investment, and on the demand-pull explanation of inflation. Indeed, for some post-Keynesians, interest rates have but a limited effect on output as a whole. They question therefore the use of monetary policy as an effective tool to regulate total output. Moreover, post-Keynesians reject also the importance of demand factors in explaining inflation, preferring rather to consider inflation as a result of supply factors, more notably a conflict over income distribution. If this is the case, then monetary policy is the wrong policy tool to use in order to fight inflation.

In recent years, a new approach to monetary policy has emerged among post-Keynesians and heterodox economists, arguing against relying on monetary policy to regulate business cycles and encourage economic growth. Indeed, in a series of articles, Rochon and Setterfield (2007, 2008, 2012) have noted that a number of post-Keynesians (Lavoie and Seccareccia, 1999; Smithin, 2007) have been arguing in favour of ‘parking’ interest rates at a given level, thereby leaving income distribution relatively unchanged. In this sense, post-Keynesians have proposed interest rate rules, such as the Smithin rule, the Pasinetti rule, and the Kansas City rule. All three rules agree on the need to avoid monetary policy dominance.

Once monetary policy is comfortably set aside, then policy makers should rely on the use of fiscal policy, in a very Keynesian sense, to regulate the economy, with policies for economic growth at the forefront.

4 Conclusions

The recent economic and financial crisis has done a great deal of harm to neoclassical theory, with the result that it is difficult to keep teaching the neoclassical approach in macroeconomics courses without betraying the students who are there to learn about the real world. In short, nothing but a complete revamping of monetary macroeconomics is required, that is, a complete rejection of neoclassical teachings with respect to central banks and the banking system.

This paper aimed at presenting an alternative to the dominant approach in economics, by showing the existing disarray in which neoclassical theory now finds itself. Mainstream economists are attempting to understand the current crisis, and arrive at conclusions that are fundamentally at odds with the overall neoclassical doctrine.

An alternative does exist, and has existed all along, one that is consistent with the way Keynes described the workings of a monetary economy of production. This alternative emphasises the importance of the banking system in the determination of output, money’s endogeneity, and the ability of the central bank to set the rate of interest at a level consistent with its overall economic objectives.

It is becoming clear that the crisis imposes on the economics profession a new curriculum. One can doubt, however, that the profession will change sufficiently in light of the events of the real world. This change would require a complete rejection of neoclassical theory, which mainstream economists are not prepared to do. Rather, they
will incorporate elements of heterodox economics, and forge a new neoclassical synthesis, without really following through on the implications of their reflection.

The last part of the paper provided, though too briefly, a summary of some grand themes in monetary macroeconomics in the post-Keynesian tradition that hopefully more enlightened faculty will pick up and teach.

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References


Notes

1 Despite this, Friedman (2011, p.393) is quick to argue that “banks’ ability to lend depends not only on their holding of reserves but also on their capital, and often the constraint that is binding is the one on capital.” This is a common conclusion of the mainstream, which admits the exogeneity of the rate of interest and the importance of credit, but still considers reserves as determining bank loans. This is criticised by Monvoisin and Rochon (2006), who argue that New Consensus models are not grounded on a theory of endogenous money.

2 For a full discussion of these rules, see Rochon and Setterfield (2008). The Smithin rule suggests keeping the real rate of interest at (or near) zero. The Pasinetti rule would allow the real rate of interest to be equal to the growth rate of labour productivity, while the Kansas City rule, by far the more radical of these rules, would set the nominal rate of interest at zero.