The Real Bills Doctrine in the History of Economic Thought and Economic History - a reconsideration*

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September 19, 2016

Abstract

This paper firstly discusses the Real Bills Doctrine (RBD) from a post-Keynesian perspective in order to provide a critical evaluation of mainstream accounts of its theoretical merits and historical role in central bank policy. It does so by clearly distinguishing the RBD from the Law of Reflux, and by using the latter to address the most common theoretical criticisms which have been advanced against the RBD. On this basis, the paper also briefly discusses three historical episodes which have been held up as evidence of the RBD's shortcomings, arguing that endogenous money theory and the Law of Reflux can provide alternative interpretations of these periods which in turn merit a reconsideration of the RBD. The paper thus secondly argues that the RBD should be seen as part of a broader tradition of an alternative, macro-prudential or 'qualitative' approach to monetary policy and credit control. As part of this tradition, the RBD can serve as a guiding principle in a reform of banking and finance and in reorienting monetary policy toward the goal of financial stability, and the paper broadly outlines how this could be achieved.

PRELIMINARY DRAFT - PLEASE DO NOT CITE

Keywords: Real Bills Doctrine, Endogenous Money, Law of Reflux, Monetary Policy
JEL-Classification: E42, E58, N10, N20

*I thank Duncan Ross and Devrim Yilmaz for their helpful comments on earlier drafts of this paper. I also thank the participants at the 1st Grenoble Post-Keynesian Conference (December 2016), as well as Nathan Tankus and Jan Kregel for useful hints and discussions. All remaining errors are of course my own.

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1 Introduction

The purpose of this paper is to give a theoretical and historical discussion of the Real Bills Doctrine (RBD) from a post-Keynesian perspective in order to evaluate the most common criticisms which have been advanced against it. Furthermore, the paper seeks to investigate whether the real-bills principle can be useful in informing contemporary monetary policy. The RBD has been discussed extensively by mainstream and especially monetarist economists (and, in the process, often been conflated with endogenous money theory), but has received comparatively little attention from a post-Keynesian endogenous money perspective.[1] The paper begins by clearly distinguishing the RBD from the Law of Reflux advocated by the Banking School, and by emphasising the well-established link of the reflux mechanism to the post-Keynesian tradition of endogenous money theory. While the RBD is distinct from the Law of Reflux, it is shown that the latter can nevertheless be invoked to counter various theoretical criticisms which have been raised against the RBD from a monetarist perspective. In light of this, the paper moves on to reconsider the dominant historical narrative according to which various central banks allegedly following the RBD have been responsible for unfavourable macroeconomic outcomes such as hyperinflation, currency devaluations or deep recessions. It is shown that a post-Keynesian perspective can provide a consistent alternative explanation in all cases, leading to the conclusion that contrary to widespread belief, the RBD deserves reconsideration in discussions of contemporary monetary policy. The paper thus discusses the merits of the RBD by placing it in a line of thought on macro-prudential monetary policy including writers on such as Hyman Minsky, William Dunkman and H. Parker Willis which can be summarised under the heading of 'qualitative credit control'. It is argued that this tradition, including the RBD, can form the basis for a reform of monetary policy and financial regulation toward the objective of financial stability and the paper broadly outlines some possible measures which could achieve this goal.

The paper is structured as follows: Section 2 describes the RBD's place in the history of economic thought and addresses major criticisms which have been raised against it. Section 3 contains brief analyses of three historical examples frequently invoked in critiques of the RBD. Section 4 provides a reconsideration of the RBD and places it within a broader tradition advocating an alternative approach to monetary policy.

2 The Real Bills Doctrine and its critics

Before we begin a discussion of the historical role of the RBD in central bank policy and its potential modern relevance, we must first gain a clear theoretical perspective of its origins, its place in the history of monetary thought, and the objections which have been raised against it. This is what this section sets out to do.

[1] Goodhart, a prominent participant in debates surrounding endogenous money theory, appears to dismiss the RBD on similar grounds as more orthodox analysts (see Goodhart and Jensen, 2015), a conclusion with which we disagree.

2.1 The Real Bills Doctrine and the Law of Reflux

Prescriptions for the business of commercial banks or the conduct of monetary policy which have subsequently been summarily labelled as following a 'real bills doctrine' can be traced back as far as the works of John Law (Glasner, 1992), but the most prominent early statement is usually, including in the treatment by Mints (1945) who coined the term 'real bills doctrine' itself,[2] held to be a passage by Adam Smith (1776/1981, p. 304) in which the latter writes:

> "When a bank discounts to a merchant a real bill of exchange drawn by a real creditor upon a real debtor, and which, as soon as it becomes due, is really paid by that debtor, it only advances to him a part of the value which he would otherwise be obliged to keep by him unemployed and in ready money for answering occasional demands. The payment of the bill, when it becomes due, replaces to the bank the value of what it had advanced, together with the interest. [...] Little or no expence can ever be necessary for replenishing the coffers of such a bank."

Additionally, the RBD is held to have been advocated by anti-bullionists and Bank of England officials during the suspension period of 1797 to 1821, a prominent example being Robert Torrens (Poitras, 1998). According to Laidler (1975, p. 152), "Smith suggests that bank lending be confined to a certain class of customers, namely, merchants, who should be thought of as borrowing to finance goods in the process of production and distribution". In this form, the RBD is seen as a principle to guide the behaviour of single commercial banks. Alternatively, the RBD has also been interpreted as a prescription for the operation of the entire banking system and central bank policy, stating that monetary authorities should enforce the real-bills principle to restrict the lending of banks for other purposes (Smithin, 2003a, pp. 88-91). According to Poitras (1998), the RB-criterion was regarded by anti-bullionists as an alternative way to prevent over-issue and devaluation of the currency during the suspension period, i.e. under a paper currency not convertible to gold. It is also in this latter form, as a recommendation for the regulation of the overall supply of credit, that the RBD has attracted the most substantial criticism, which we turn to below.

Various critics (Humphrey, 1982; Meltzer, 2003, e.g.) have also included Banking School writers, especially Tooke and Fullarton, among advocates of the RBD. However, while the works of both Tooke and Fullarton do contain passages which can be construed as endorsements of a form of the RBD, the major theoretical concept which the Banking School advanced against the Currency School is the Law of Reflux (Laidler, 1975; Glasner, 1992). As has variously been pointed out (Skaggs, 1991; Glasner, 1992; Glasner and Skaggs, 1997), the Law of Reflux is a distinct proposition from the RBD, even though these two concepts have frequently been treated as interchangeable (Blaug, 1996; Humphrey, 1997; Meltzer, 2003). Briefly put, the Law of Reflux as proposed by the Banking School asserts that under a convertible currency, "banks cannot overissue money, because any overissue would immediately flow back to them in debt repay-

[2]The term 'Real Bills Doctrine' was thus coined by one of the principle's sharpest critics, rather than by its early or modern advocates, and subsequently adopted by others. While we do not particularly like this label due to its somewhat negative connotations, we shall nevertheless adopt it since it has become so widely known.

ments or as a demand for redemption" (Glasner, 1992).[3] Banking School writers advocated a credit theory of money and were early exponents of the proposition that the supply of money is endogenously determined by the demand for credit of the private sector.

A further tradition of economic thought on money and banking which can be linked to the RBD is highlighted by Kregel (2015; 2016). This is composed of American writers such as Colwell (1859), Willis (e.g. Willis et al., 1933) and Dunkman (1933) but bears similarity to and is influenced by the works of British writers on the subject such as Hawtrey (1919) and MacLeod (1889). Kregel explores at length the links between this approach, the central feature of which is an adherence to the banking principle (as defined by Keynes, 1980, pp. 44-45) holding that the essential function of banks is to provide a system through which debits and credits can be offset and cleared, and the RBD. It is also this tradition which appears to have informed the Federal Reserve Act which, as elaborated below, contained a provision intended to commit the Fed to the real-bills principle. This line of thought has hardly been discussed by modern critics of the RBD, but it will be a central component of our argument for reconsidering the RBD in section 4. For the moment, we return to the relationship between the RBD and the Law of Reflux, which is crucial in addressing theoretical criticisms of the RBD.

A helpful way to distinguish between the RBD and the Law of Reflux is to note that "the law of reflux is an assertion about how the liability side of a bank's balance sheet responds to the public's demand for its liabilities, while the real-bills doctrine is a prescription for the composition of the asset side of its balance sheet" (Glasner, 1992, p. 888). The Law of Reflux bears no necessary relation to the RBD in that the former can be valid regardless of whether or not bank lending is limited by an RB-criterion. Indeed, the Law of Reflux (or reflux mechanism) has, independently of anything resembling the RBD, been proposed by modern writers in the post-Keynesian tradition using endogenous money theory to question the possibility of an excessive issue of money (e.g. Kaldor and Trevithick, 1981; Le Bourva, 1992; Lavoie, 2014, Ch. 4) by noting that any money balances in excess of what is desired by the private sector would be used to repay outstanding debts to the banking system (or, in the case of the banking system itself, to repay debts to or purchase assets from the central bank) and thereby extinguished.[4] Glasner's distinction also underlines the fact that any attempt to treat endogenous money theory and the RBD as interchangeable (which, as we shall argue below, is a feature of various monetarist critiques of the RBD) is deeply flawed.

In an economy in which the vast majority of money balances enter the system as a result of *lending*, giving rise to a corresponding liability, the Law of Reflux is a powerful proposition as is discussed at length by Lavoie (2014, Ch. 4). It represents a potent tool to counter the

[3]The meaning of a 'convertible' currency in this context is very broad and includes fiat money which derives its value from being acceptable as payment of tax liabilities (Fullarton, 1845, pp. 21 & 64). An inconvertible or 'forced' currency would under this definition be one which does not possess this characteristic and is also not convertible into gold or other precious metals (Glasner, 1992).

[4]'Excessive' should be read here as 'exceeding the demand for money'. Importantly, it does not preclude the possibility of imprudent and speculative lending due to high demand for loans which eventually leads to financial instability, i.e. it does not contain any assertion about the asset side of lenders' balance sheets, linking back to the fundamental distinction noted by Glasner (1992).

assertions of quantitative approaches to monetary analysis both regarding monetary policy in general and the RBD in particular since it is, due to the distinction emphasised above, just as applicable to systems in which commercial banks and/or the central bank follow a form of the RBD in managing the asset sides of their balance sheets as it is in contemporary systems in which the RBD currently plays no role. This recognition is central in discussing critiques which have been brought forward against the RBD chiefly from monetarist perspectives.

2.2 The Real Bills Doctrine from a post-Keynesian perspective

Apart from being held responsible for various perceived failures of central bank policy in history, which will be discussed below, the RBD has also attracted significant theoretical criticism. Chief among these is the 'dynamic instability' argument, originating with Henry Thornton (1802/1939) and formally presented by Humphrey (1982; see also Smithin, 2003a, Ch. 5). The argument begins by stating that the current supply of money, under the RB-criterion, is determined by the nominal value of past production, specifically the past price level (since real production is assumed to be constant at the full employment level). At the same time, however, the current price level is determined contemporaneously by the current money supply via the quantity theory of money, which leads to the conclusion that, exceptional circumstances aside, following the RB-criterion will lead prices to either collapse to zero (if the current price level as determined by the current money supply is lower than the previous price level) or rise to infinity (if the current price level is higher than previously).

The crux of the matter is that the RB-criterion does not provide a definite limit on or anchor for the quantity of money and that it is "treating prices as exogenous when in fact they are determined by the money stock itself" (Humphrey, 1982, p. 4). To the extent that the RBD was indeed conceived of as a measure to limit inflation by controlling the supply of money (as could, for instance, be said of Torrens' propositions (Poitras, 1998)), this does indeed represent a devastating critique. However, the argument obviously relies on a quantity theoretic determination of the price level, a point which can be countered by invoking the early insights of Banking School writers and especially the Law of Reflux as well as more modern views on endogenous money theory.

While Banking School writers did not greatly stress the real-bills principle in their arguments against the currency view, we established above that if one concurs, as the present writer does, that the Law of Reflux is a valid proposition in general, then it is also valid in a banking system adhering to the RBD. Additionally, just as with later post-Keynesian theorists, the Banking School's view of the money supply as being endogenously determined also led to an alternative (although not always completely clear and consistent) theory of the price level, the central assertion of which for the purpose of this dicussion is that "the prices of commodities do not depend upon the quantity of money indicated by the amount of bank notes, nor upon the amount of the whole of the circulating medium; but [...] on the contrary, the amount of the circulating medium is the consequence of prices" (Tooke, 1844, p. 123). Banking school writers rejected the causal mechanism running from money to prices (Daugherty, 1942; Vernengo, 2006; Arnon,

2011, Ch. 12), as do post-Keynesian theorists who instead propose views of the price level and inflation based on cost-push factors and distributional conflict (Rowthorn, 1981; Stockhammer, 2008; Lavoie, 2014, Ch. 8). Hence, the Banking School's ideas, including the Law of Reflux and the rejection of the quantity-theoretic determination of the price level, while they themselves do not rely on the RBD, can be invoked to counter the most common criticisms emanating from quantitative monetary analyses since these critiques themselves, as the reader will have noted, tend end up arguing against money endogeneity rather than dealing specifically with the RBD. If the price level is independent of the supply of money, the 'dynamic instability' argument does not apply since the level of prices is indeed "exogenous" with respect to the money supply in the post-Keynesian view. While the RBD would under this view not be an appropriate tool to control inflation, since there is no obvious channel through which the real-bills principle would influence the factors determining inflation in the post-Keynesian view, it would not *in itself* be inflationary (or deflationary) as is claimed by its monetarist critics.[5]

A broad post-Keynesian perspective can also be used both to shed more light on the intuition behind the RBD. In particular, the RBD can be linked to the post-Keynesian concept of monetary production economies (Keynes, 1973; Dillard, 1980) and to monetary circuit theory (Graziani, 2003; Zezza, 2004), both of which recognise as a central proposition that initial financing is necessary to begin production and hence the generation of income (and that in this sense, money cannot be neutral). This type of financing can be said to reflect the 'needs of trade' which banks should fulfill according to the RBD. As one conceives of additional 'layers' of production and distribution through which a good passes before it reaches the final consumer, the need for credit to finance income generation increases. The RBD can then be interpreted to hold that commercial banks should exclusively be concerned with the provision of credit for the financing of production and distribution of goods and services and that the central bank should stand ready to provide sufficient liquidity to allow them to accommodate any amount of creditworthy demand for such loans. However, the analogy drawn between the RBD and the circuitist concept of initial finance also highlights a problem with the RBD which was first raised by Thornton (see also Pilkington, 2015), namely that banks may not be able to effectively distinguish between a real and a 'fictitious' bill in practice. After all, just as initial and final finance in the circuitist literature are analytical more so than empirical categories so that it will be difficult to classify actually existing credit relationships at any point in time as either 'initial' or 'final' finance, a purportedly 'real' bill could be discounted in order to finance investment in some other financial

[5]There is an alternative version of the 'dynamic instability' argument originating with Thornton (1802/1939) which anticipates Wicksell (1936). According to this version, the RBD is inflationary if the interest rate at which qualifying credit demand is accommodated is pegged below the natural rate (Humphrey, 1997). Two observations should be made about this. Firstly, the argument can only consistently be made if a unique non-path-dependent 'natural' rate of interest does indeed exist, a proposition which appears unconvincing to the present author. Secondly, the argument could just as well be made against interest rate targeting monetary policy as practised today which, in the same theoretical system, is also inflationary if it pegs the interest rate at too low a level. A similar point can be made against the argument presented by Daugherty (1942, p. 151), according to which "the fact that each member of a business community might borrow from a bank only that amount which would suffice to cover his intended purchases at current prices [would] not prevent a general rise of prices resulting from the expenditure of borrowings in the aggregate". If there is no spare capacity, then an accommodative monetary policy could be a contributing factor to demand-pull inflation. However, even if banks and central banks do not follow the RBD but rather simply keep interest rates low and allocated credit freely toward all kinds of purposes, demand-pull inflation would be just as likely (or unlikely) to arise.

instrument or in capital goods. We shall return to this challenge in section 4, showing that they can be addressed by a proposal which attempts to resolve the conflict between the two central functions of the financial system highlighted by Minsky, namely the provision of a payments and clearing function on the one hand, and the financing of risky investment on the other.

For the moment, however, it is sufficient to conclude that the most prominent theoretical objections which have been raised against the RBD can effectively be countered from an post-Keynesian endogenous money perspective drawing on the reflux mechanism. It hence appears worthwhile to briefly reconsider from this perspective those historical accounts which ascribe various unfavourable economic outcomes to central banks allegedly following versions of the RBD. As will become clear, the practical objection raised in the previous paragraph does not have as much bearing on these discussions as it does on the content of section 4.

3 The Real Bills Doctrine and Central Bank Policy

Having discussed theoretical aspects of the RBD, we now move on to consider its historical role in central bank policy. We shall examine three cases in which central bank policy is held to have been informed by the RBD: the Great Depression in the United States, the hyperinflation during the Weimar Republic, and Bank of England's suspension of convertibility around the time of the Napoleonic Wars. We shall proceed in reverse chronological order, the reason being that the Great Depression is the most well-researched of our examples and our discussion thereof can inform the analysis of our two other examples.

3.1 The Great Depression

The Federal Reserve Act of 1913 contained a provision intended to enshrine an RBD-type principle in the Fed's policy. It limited the range of paper eligible for rediscount to "notes, drafts, and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes" (Federal Reserve Act, 1913, Section 13) which in turn was hoped to induce commercial banks themselves to limit their business to real-bills lending.

Friedman and Schwartz (1963), present an well-known and, within the mainstream of economics, widely accepted explanation of the Great Depression to the effect that the Fed, by allowing the supply of money to decline following an initial shock, turned an ordinary recession into a deep depression. Various writers such as Timberlake (2005 & 2008), Calomiris (2010) and Meltzer (2003) who fundamentally agree with this explanation add that it was the Fed's commitment to the RBD which prevented it from keeping stable or expanding the supply of money. Several others have questioned this story, arguing for instance that the true constraining factor on Fed policy was the gold standard (Wheelock, 1992a), and that the Fed did not make use of its full manoeuvring space even within the provisions of the Federal Reserve Act (Wheelock, 1992b). More broadly, Dunkman (1970, pp. 291-292) suggests that by the time of the Depression, the Fed had long abandoned the RBD in practice, and Kregel (2015) notes that it was criticised by Willis and his followers on these grounds. However, these points do not cut through to the heart of the matter in that they do not counter the broader argument of the Fed's critics, namely that

the Great Depression was caused by monetary policy which, for whatever reason, 'allowed' the money supply to decline. Ultimately, the entire issue, regardless of whether or not the Fed's critics mention the RBD, reduces to a debate about the capabilities of monetary policy in causing and curing recessions and, eventually, to an argument about endogenous versus exogenous money which is why the monetarist position can be countered from a post-Keynesian perspective.

While the Fed could doubtlessly have alleviated the banking crises during the Great Depression through more aggressive Lender of Last Resort (LoLR) action, this conclusion must be distinguished from the one that monetary policy can also prevent or reverse declines in the broad money supply or in economic activity, or that it caused these in the first place. The alternative post-Keynesian view is aptly summarised by Perry and Vernengo (2011, p. 6):

> "[...] a collapse of spending (e.g. consumption), caused in part by the collapse of a bubble (i.e. asset price deflation) would reduce the level of economic activity, and the demand for money. A central bank that followed the Real Bills Doctrine [...] would reduce the money supply, but would not be responsible for the collapse in output or the deflation, even if it were responsible for preventing the bubble in the first place. In other words, money supply increase is neither sufficient nor necessary for economic recovery."

In a system with endogenous money in which the reflux mechanism is operative, and regardless of whether or not the RBD is being followed, the central bank cannot by itself increase the supply of broad money by increasing liquidity provision to commercial banks since the supply of money ultimately depends on the demand for credit. According to Kaldor (1970), the monetary base in the US *increased* by 10% overall between 1929 and 1932 while the broad money stock nevertheless declined. An asset purchase programme begun in 1932 failed to result in growth of the broad money supply despite supplying commercial banks with a large volume of excess reserves (Wheelock, 1992a), an interesting parallel to the Fed's response to the Global Financial Crisis 2007-08. According to the post-Keynesian view, the Great Depression was not caused by a decline in the money supply (whether due to adherence to the RBD or other factors), but rather by a collapse in credit demand which could not have been reversed through an expansion of the monetary base but only through expansionary fiscal policy (Perry and Vernengo, 2011; Perez Caldentey and Vernengo, 2014).

Nevertheless, accounts of the Great Depression discussing the RBD can point to potential weaknesses of the real-bills principle. Firstly, any attempt to enshrine the RBD in national monetary policy must ensure that there are sufficient measures in place to induce commercial banks to act in line with the principle. It can be argued 'moral suasion' and restrictions on acceptable paper such as those in the Federal Reserve Act are not sufficient to induce banks to curb speculative lending. In such a situation, commercial banks may at some stage possess insufficient paper they can present for rediscount at the central bank, which in turn may lead to a collapse of the payments system (cf. Goodhart and Jensen, 2015). This means that a proposal aimed at financial stability building on the real-bills principle must be enforced by more potent

measures and that it must include provisions which protect the functioning of the payments system. Section 4 contains an attempt to answer this challenge.

3.2 The Weimar Hyperinflation

Common explanations of the hyperinflation during the Weimar Republic can be divided into two groups. The 'German' or 'balance of payments' view, asserts that the primary cause of the hyperinflation was the depreciation of the Reichsmark exchange rate brought about by the burden of reparation payments following the end of World War I (Williams, 1922). The 'quantity theoretic' view sees the initial causal factor as an exogenous increase in the money supply driven by a monetisation of government budget deficits (Bresciani-Turroni, 1937; Cagan, 1956). The Reichsbank's statutes contained a provision regarding eligibility requirements for rediscount which was similar to that in the Federal Reserve Act (see Reichsbank, 1910, e.g. p. 130) and the Reichsbank has therefore been said to have followed a form of the RBD (Burdekin and Burkett, 1992; Humphrey, 2003). Building on the 'dynamic instability' argument described in section 2.2, the quantity theoretic interpretation of the Reichsbank's RBD policy is that a burst of inflation caused by monetisation of public debt led to an increase in the nominal value of credit demand which, since the Reichsbank accommodated it and did not raise the rate of interest, further increased the supply of money, thus setting off an inflationary spiral.

Robinson's (1938) assessment of the balance of payments view can be used as a starting point for an alternative explanation beside the two mentioned above. Robinson argues that the evidence supports the view of exchange rate depreciation was the initial cause of the hyperinflation, but notes that one needs to add an additional link to the causal chain to establish why inflation continued to accelerate. She argues that this link is to be found in a wage-price spiral, set off by an initial increase in the price level due to a declining exchange rate. As price increases accelerated, this called forth accelerating increases in the supply of money. This view is supported by the empirical evidence presented by Burdekin and Burkett (1992) who show that a large share of the increase in the money supply during the hyperinflation can be explained by increases in money wages. This explanation of the hyperinflation stands in contrast to the quantity theoretic view in that increases in the money supply are an accommodative rather than a causal factor, that is, monetary accommodation merely 'validates' past price increases and hence is not sufficient to cause further accelerations in inflation (see also Lavoie, 2014, p. 541).

Two implications can be drawn from this discussion. Firstly, an analysis based on endogenous money theory leads to the conclusion that monetary expansion was not the *causa causans* of the Weimer hyperinflation. Secondly, however, the example of the Reichsbank can be taken as confirmation that the RBD is unsuitable as a policy principle for controlling inflation or, for that matter, limiting the supply of money. One might of course argue that the Reichsbank could have curbed inflation by raising its rediscount rate, thus slowing economic activity and indeed, there does not appear to be a principle inherent in the RBD which would prevent such a move

since the RBD does not prescribe any specific rule for the setting of interest rates.[6] On the other hand, however, section 4 will argue that RBD-type analyses should in general be dissociated from the quantitative line monetary thought which sees inflation control as a natural goal of monetary policy and instead be placed in an intellectual tradition emphasising *qualitative* credit control and the role of monetary policy in promoting financial stability.

3.3 The Napoleonic Wars

The Bank Restriction Act of 1797 suspended convertibility of Bank of England notes into specie. Convertibility was not reinstated until 1821, so that Britain was operating on an inconvertible fiat currency throughout the Napoleonic wars (Laidler, 2002). Humphrey (1988 & 2003) and Glasner (1992) suggest that a real-bills principle was invoked by the anti-bullionists as well as Bank officials to protect the Bank of England from the charge, led by bullionists, that suspension, in allowing the Bank to issue large amounts of inconvertible paper currency, was the cause of inflation and devaluation of the currency which ensued during wartime. Similarly to the case of the Weimar hyperinflation, the contention is that the RBD does not provide a definite limit on the supply of money and hence opens the door to inflation and devaluation. A survey of the bullionist controversies is provided by Laidler (2000).

Naturally, data on general price inflation did not exist during the time of these debates. Rather, declines in the value of the inconvertible pound in terms of either gold or other currencies were taken as a measure not only of devaluation, but also, together with price indices composed of some key goods, as proximate measures of price inflation (Viner, 1937, Ch. 3). More modern sources do present estimates of key data during this period, and although the reliability of such estimates may of course always be questioned, the picture they paint is far more ambiguous than the quantity-theoretic story would suggest. For instance, the Bank of England (MacFarlane and Mortimer-Lee, 1994) presents data showing that there was a substantial burst of inflation at the beginning of the Napoleonic wars and that another followed around 1810. However, inflation fluctuated widely in-between and toward the end of the suspension period there was in fact substantial deflation (see also the data provided by Arnon, 2011, Ch. 5 who presents various contemporary and modern price indices for the period). Bordo (2006) presents evidence to the effect that inflation averaged 5% during the suspension and peaked at 10%. Regarding the exchange rate and the price of gold, Newby (2007, p. 17), who surveys some historical data, concludes that "fluctuations in the exchange rate and price of gold were hardly different from those under convertibility". While the Schilling per Pound exchange rate declined strongly around 1809, it subsequently recovered to pre-suspension levels well before convertibility was reinstated.

Overall it would thus seem that the bullionist argument according to which the Bank of England used the suspension as an opportunity to flood market with inconvertible paper cur-

[6]The RBD has variously been treated as equivalent to a policy of interest rate pegging (Humphrey, 1982; Sargent, 1979, p. 92) which, as the above discussions should have made clear, is definitely misleading. The RBD is a principle concerning the composition of the asset sides of commercial and/or central banks rather than a prescription about which interest rate should be set.

rency and thereby generated persistent inflation can be questioned. As noted by Glasner (1992, p. 888), "[...] the Bank of England, as a commercial enterprise, had no incentive to create liabilities without limit, and neither the depreciation of sterling that followed the suspension nor subsequent fluctuations in its value are necessarily attributable to fluctuations in the quantity of Bank of England notes". Suspension was enacted during a period of war, and fluctuations in the value of sterling in terms of gold or other currencies could easily be due to shifts in the terms of trade, changes in the demand for gold, speculation on the outcome of the conflict or expectations of a devaluation when convertibility would be reinstated. In addition, price inflation is a phenomenon often associated with periods of war irrespective of the monetary regime in place.

As such we conclude that while it cannot be disputed that the RBD is not an effective tool for containing inflation, the evidence to the effect that it is inflationary in and of itself appears weak. Overall, our brief historical discussions have shown that it is possible to provide consistent and convincing alternative accounts of the historical role of the RBD in central bank policy from a post-Keynesian perspective incorporating the reflux principle. This is chiefly because, both in theoretical and historical discussion, monetarist critiques of the RBD tend to focus on the issue of money endogeneity and the merits (or lack thereof) of a passive stance of monetary policy, rather than on the qualitative limitation of bank assets which is the true rationale of the RBD.This conclusion makes it seem worthwhile to reconsider the RBD and its potential relevance to contemporary monetary policy. This is done in the next section.

4 The Real Bills Doctrine, the Banking Principle and Qualitative Credit Control

The reader will have noted that the role of commercial banks as endogenously creating means of payment in the form of bank deposits has taken a prominent place in our discussion thus far, since we argued that money endogeneity and related propositions can be used to defend the RBD from some of the most common criticisms which often attack a straw-man in the form of endogenous money theory rather than engaging with the RBD itself. We have indicated that the idea of money endogeneity is more closely associated with the Banking School's Law of Reflux than with the real-bills principle which is a prescription related to the composition of the asset sides of commercial (or central) banks' balance sheets rather than with the nature of their liabilities. In view of this, the RBD can be placed in a long line of thought on money and banking which may be called the 'qualitative' (as opposed to quantitative) school of credit control, as is done by Kregel (2015; 2016). Drawing on the insights of writers such as Colwell, Willis, Keynes, Dunkman and not least Minsky, Kregel argues that the real-bills principle should be seen as an attempt to stabilise the financial system through ensuring the smooth functioning of the payments-system or clearing function of commercial banks.

This is based on the recognition, articulated by Minsky (1994, p. 10) that the financial system, and banks in particular, serve the seemingly irreconcilable goals of two distinct 'masters':

"one master requires assurance that the financing needed for the capital development of the economy will be forthcoming the other master requires assurance that a safe and secure payments mechanism will be provided". Since the financing of capital investment under fundamental uncertainty is inherently risky, the 'capital development' function of banking represents a constant threat to the payments system function, which is summarised by Minsky's Financial Instability Hypothesis. Similar problems, as noted by Kregel (2015), were pointed out by authors long preceding Minsky. Drawing on the works of Collwell (1859) and Hawtrey (1919), he argues that banks have been conceived of both as agents/brokers, with bankers offering a payment service to offset the debits and credits of customers against each other and thus largely eliminating the need for 'money proper' or government-issued money through clearing of debts, and as principals/dealers issuing their own liabilities which can be used indiscriminately as means of payment to discharge any obligation. There are historical examples of banks which only served the former function (giro banks) whereas modern banks are primarily seen as producing a substitute for state-issued money. "This approach identifies the increasing risk in the financial system in the shift to the issue of sight liabilities as substitutes for "money proper", in the transition from agent/broker to principal/dealer. This transition raises the regulatory issue of how this "blunder" can be maintained without major disruptions to the payments system" (Kregel, 2016, p. 7).

The solution suggested by the qualitative school of credit control is that it should be the task of the monetary authority to monitor the behaviour of individual banks in order to ensure a distribution of assets and liabilities within the banking system which would approximate as closely as possible the ideal case of 'perfect clearing' discussed by Dunkman (1933), which would in turn create a situation in which "bank liabilities are never in practice redeemed and only offset in the clearing house, or the interbank market" (Kregel, 2016, p. 7). The real-bills principle, by limiting banks to exclusively lending against short-term commercial paper was seen as a way to avoid maturity mismatches and ensure that banks would only lend to parties which with near certainty possessed sufficient credits to offset their debts. Minsky (1986/2008) briefly discusses the RBD and expresses a similar view, arguing that commercial banks should concentrate on financing inventories or goods in the process of production, "as the funds to meet the debt will be obtained when the inventories are sold, i.e., are almost in sight when the financing takes place" (ibid, p. 351). According to Minsky, "[...] the idea is not so much to assure that a noninflationary quantity of money exists, as to assure the stability of the financial system" (ibid.). This is done through ensuring that "the short-term debts of business will lead to payment commitments that are consistent with business cash receipts. The bank debts of firms would be part of a hedge-financing relation" (ibid.).

Such a situation would resolve the conflict between the 'two masters' highlighted by Minsky in favour of the payments system function, precluding commercial banks from creating money directly for the purpose of capital investment. Possible measures to encourage banks to act in this way could include, in addition to close supervision of bank assets, a return to discount-window central banking (cf. Argitis, 2015) and the use of asset-based reserve requirements (Palley, 2004, 2014) which would penalise the holding of certain classes of assets and encourage the holding of

others. More broadly however, as explained by Dunkman (1933, Ch. 12) such an approach to credit control would require a shift in the culture of banking as well as the relationship between commercial banks and the central banks, whereby the implications for clearance become a central criterion on which to evaluate the positions taken by commercial banks. If this arrangement functioned as intended, the financing of capital investment and innovation, the second central function of financial systems in capitalist economies, would be limited to bond markets and other sources of non-bank credit. The price to pay for increased stability of the banking and especially the payments system could thus be a reduction of credit available for investment.

For Minsky, who briefly explored the idea of resolving the conflict between the 'two masters' through the introduction of a narrow banking proposal akin to the Chicago Plan, the curtailing of investment finance to which the Chicago Plan or the proposal outlined above would lead represented a serious drawback which led him to abandon such ideas (Kregel, 2014, 2015). These objections are similar to those raised by other post-Keynesians in discussions of full-reserve banking (see Fontana and Sawyer, 2016). However, the view of the functioning of the credit system embodied in the RBD as well as the works of Willis and Dunkman can provide the basis for a more far-reaching solution to the problem posed by Minsky than the one sketched out above as is shown by Kregel (2015). This proposal embodies a possible way of incorporating a version of the real-bills principle into the functioning of the financial system: "[l]imiting the banking system to commercial and transaction credits via a clearing system provides the counter proposal to the narrow bank proposal [...] As Minsky noted, new communications technology offers the possibility of creating an electronic clearing house [...] that would eliminate the need for sight conversion whether the clearing is operated by the private sector or by the government through a national giro system of payments" (ibid., p. 14). "Instead of making credit conform to money, debts should not be payable on demand as money" (ibid., p. 7). The liabilities of commercial banks would only be available for the settlement of commercial transactions within the clearing system, thus ensuring that credits and debts within the system would always be equal, whilst divergences arising at the level of individual banks would be eliminated through the use of clearing house credits and the supervision of individual bank balance sheets. The aim of Kregel's proposal is to limit commercial banks to the agent/broker function and provide a financial service through matching the credits and debits of their customers for the purpose of enabling the financing of production and income generation. The rationale, as noted by Kregel (2016), is similar to that behind Keynes' (1980) proposal for an international clearing union which was intended to function on similar principles.

To finance production, commercial banks would in effect purchase bills drawn by producers in return for credits on their books. These credits would in turn be used to settle the transactions necessary to enable the production of output and generation of income, but would also "become a general instrument of purchase, not because they are money, or representatives of money, but because they are the chief medium of paying debts" (Colwell, 1859, pp. 194-195). The primary task of regulatory authorities would be to supervise the qualitative composition of commercial bank assets with a view to ensuring that short-term bills purchased by banks are

secured by inventories or goods in production which, as recommended by Minsky, are likely to produce sufficient cash-flow to meet debtors' payment commitments as they fall due, as well as avoiding maturity mismatches and persistent divergences from perfect clearing between individual banks. This arrangement would increase the stability of the payments system, both because the range of assets which banks could purchase would be strictly limited and since the liabilities of commercial banks could no longer be redeemed into a credit outside the clearing system on demand. Further, the proposal could also eliminate the most challenging difficulty in implementing a real-bills principle in bank lending highlighted above. If the qualitative control of bank assets is strictly controlled, commercial banks will no longer be able to create liquidity specifically for the purpose of purchasing speculative assets, thus limiting the extent to which 'real bills' can be used to finance speculation.

Meanwhile, the long-term financing of capital investments could be undertaken by a government agency backed by the monetary authority, with the private sector retaining the choice of which investments in particular to undertake (Kregel, 2015). The goal of this is to insulate the two functions of the financial system from each other as losses on risky capital investment would be borne by government rather than financial institutions or private investors, thus protecting the functioning of the payments system when investment projects fail. A similar model is conceivable for the financing of housing construction and home ownership. Under such an arrangement, 'money' would still be endogenous in the sense that, one the one hand, the payments system would expand and contract according to the needs of business in conducting commercial transactions and the financing of production, whilst on the other hand, government finance for capital investment would expand and contract according to the desire of the private sector to undertake such investment. To the extent that such private investment does not produce a satisfactory level of employment or, conversely, leads to an overheating economy, and as the levels of commercial activity fluctuate, further, *active* government intervention in the form of a countercyclical fiscal policy would be necessary. In addition to the use of fiscal policy, fluctuations in the rate of inflation could be tackled through the implementation of various post-Keynesian proposals which have been advanced as an alternative to central bank inflation targeting, such as incomes and buffer stock policies (Kaldor, 1976; Smithin, 2003b). Since price stability would no longer be an explicit objective of monetary policy, this macro-prudential reorientation of monetary policy would also pre-empt the problem raised by some commentators following the global financial crisis, namely that a financial stability mandate may at times conflict with other objectives of monetary policy (Claessens et al., 2013; Kim and Mehrota, 2015).

The above establishes that, as also noted by Perez Caldentey and Vernengo (2014), advocacy of the RBD does not necessarily entail a belief in the fundamental stability of the macroeconomy as has at times been claimed (e.g. Goodhart, 2010). Rather, it should be seen as a proposal aiming at stabilising the financial system through a macro-prudentially oriented monetary policy and as such can be placed in a broad tradition of thinking on this subject which focuses on the qualitative rather than quantitative control of credit. Despite indications that some of its advocates believed the opposite, our theoretical and historical discussions also established that

the RBD is not a suitable monetary policy measure for controlling the level of prices or the rate of inflation. However, we concur with Dunkman (1933) who argues at length that the focus of monetary policy on price stability over other objectives is itself a symptom of the quantitative view of credit control. The proposals outlined above, in reducing macroeconomic fluctuations, would contribute to price stability, yet inflation targeting as an explicit function of monetary policy would be replaced by a focus on financial stability and maintenance of the payments system. "Thus instead of an attempt to adjust the total quantity of credit to the volume of production or to an average of prices by alterations in the reserve base, the problem of credit control becomes an attempt to build up a superstructure of credit which will not place too great a strain on the reserve base, because the debts upon which the credit structure is built will be liquidated by goods rather than settled by payments out of the reserve base" (Dunkman, 1933, p. 21). The goal of the proposal outlined above would be precisely this, since if it functioned as intended, there would be no strain whatsoever on the 'reserve base'.

5 Conclusion

The goal of this paper has been twofold. Firstly, it analysed the Real Bills Doctrine (RBD) from a post-Keynesian perspective in order to highlight the shortcomings of both theoretical criticisms of the RBD which have chiefly emanated from a monetarist perspective and of the historical accounts which have, based on these theoretical perspectives, blamed various perceived shortcomings of central bank policy on adherence to versions of the real-bills principle. It was shown that a post-Keynesian perspective focusing in particular on the reflux principle highlighted by the Banking School and modern writers such as Kaldor can effectively counter these criticisms and provide for a consistent alternative historical reading. In light of this, the paper secondly offered a reconsideration of the RBD by placing it in a long line of thought highlighting the qualitative aspects of credit control over the quantitative ones stressed by mainstream analyses of monetary policy. It was argued that based on this tradition, one could interpret the RBD as a principle aimed at shifting the focus of monetary policy toward the goal of financial stability. The paper subsequently provided a broad outline of how such a shift could be achieved in practice. We do not claim, however, to have formulated a fully-fledged policy proposal at this point. Rather, we sought to show that the RBD has been too easily dismissed by its critics and that it deserves reconsideration from an alternative perspective on the analysis of credit, money and banking. If reconsidered in this light, we believe that the RBD can be valuable as a guiding principle in reforming the financial system and promoting a focus of central banks upon macro-prudential policy measures.

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