Working Paper Series
Department of Business & Management

Macroeconomic Methodology, Theory and Economic Policy
(MaMTEP)

No. 2, 2017

Money at first principles:
A social value theory of money

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March 2017

Abstract: Money as a concept has been explored ad nauseum and yet there exists little consensus on the origins and fundamental nature of money. It is proposed here that the concept can be separated into core components. The monetary unit, monetary token, social value and the monetary space. This new perspective is developed taking into account a variety of perspectives, including traditional evolutionary views, chartalism, bullionism, the credit theory of money, social structural, the modern money theory and historical analyses. Some key macroeconomic positions that are upheld include that: economic activity in monetised economies relies directly on debt creation; credit institutions should not only be accountable for stability of lending portfolios, but to society in general; and that states have a key role to play in developing and stabilising social infrastructure and institutions.

Keywords: Post Keynesianism, macroeconomics, money creation, methodology

JEL Codes: A20, B22 & E12

Acknowledgements:

This article benefited from comments from several colleagues and I would like to express my gratitude especially to Finn Olesen, Mogens Ove Madsen and Mikael Randrup Byrialsen. All errors remain entirely my own.

1 Introduction

The observable economic system is recorded through the practice of accounting, and all transactions are conducted according to money-based prices. Money and the monetary system are thus inseparable from the analysis of the economy. As noted by Christensen, Hansen and Lilkær (1997), money is central to the functioning of a modern economy, as wages are paid in the form of money, sale of goods is in the form of money and profits are realized in the form of money. Value, and relative value, in the past, the present and the future, is almost always denominated in a money of some kind, as noted by Chick (1978) relative monetary prices (even in modern barter transactions) depend on the money prices of other resources. The money, or the value of money, provides a reference point for decision making to all economic agents[1]. Economic agents are thus bound to both money and monetary pricing as an integral aspect of thinking and planning.

As central as money is to the life of almost every human being, it remains conceptually something of an enigma. It certainly does not seem that there is any one definition that serves all purposes, partly because , as noted by Chick (1978), depending on the application, or question, to which we are seeking an answer, the functional definitions of money vary dramatically. Not only that, but identifying the core nature, or origin of money has proven equally tricky.

The origins and nature of money are relevant for more than just academic interest. Our beliefs regarding the nature of money directly affect the mechanisms chosen to manage the monetary system in a country, which can be also linked to different political ideologies or ulterior motives – leaving the direction of causality out of the discussion for now. The quantity, monetarist and neutrality theories of money can be linked to minimalist government and privatisation ideologies (possibly liberalism or neoliberalism), while the production and credit theories of money can be linked to big government and collectivistic ideologies such as the welfare state, socialism or social democracy.

Different explanations of money are also supportive of distinctly different economic paradigms. For example, neo-classical theory is compatible the former, while Keynesian and post-Keynesian theory is compatible with the latter. Depending on the current state of affairs, one might favour one or the other

[1] As she (Chick, 1978, p. 46) explained, "In the determination of reserve price, the seller's imputation of the value of his goods in *other* potential exchange situations than the one he is presently facing is an important factor, along with the articles' use-value to himself."

theory. In the pursuit of equality under a dictatorial monarchy, one might be fully supportive of neoliberalism, whereas in a country dominated by a powerful elite private class one might prefer a Keynesian-like approach. The purpose of this article is not to explore the theoretical associations of different theories of money, but to present money conceptually.

The most broadly accepted and distributed history of money is arguably that of Adam Smith, and later Samuelson, as the evolution of commodity based money from truck and barter, on the basis of improved efficiency (reduction of transactions costs) and appropriateness for trade. There have been recent developments by authors such as Ingham, Wray, Goodhart, and Bell, which provide new insights and historical context to the subject. They have explained that the simplicity of such an evolutionary view lacks credibility from a historical perspective. Alternatively, they present origins encompassing sociological preconditions, social relations and tangible manifestations of different forms of money and monetary systems. Their findings suggest that institutions and social dynamics have been both necessary and instrumental in the development of the money based economic systems to be found in most countries today and consequently, that money could not have evolved independently as a simple lubricant for markets.

Questions regarding the nature of money are also fundamental to the study of economics, where the vast majority of data is denominated in one or another money (unit of currency, or price based on a unit of currency). Somewhat paradoxically, it is a topic that is both core to the science of economics, and at the same time one of the most contested among academics and practitioners. Theories of money have been discussed by economists for time and memorial[2] in the absence of consensus. It is proposed here that the fundamental nature of money was identified and well described by Innes (1913) as the credit theory of money in 1913, although within a fundamentally different social context, and that a satisfactory theory of the origins of money has only been developed more recently.

Both positions are presented here, together with an additional argument for a Social Value theory of money, where money is deconstructed into its fundamental components – the most important of which is the concept of social value. Using the terminology to be described shortly, the monetary unit must logically have preceded the monetary token (or credit), and both require a monetary space within which

[2] Including Aristotle, Steuert, Mun, Menger, Boisguillebert, Macleod, Ricardo, Ellis, Schumpeter, Knapp, Innes, Keynes, Le Bourva, Johnson, Friedman, Hicks, Kaldor, Chick, Moore, Goodhart, Wray, Ingham, Smithin, Bell, Rochon, Rossi and Faure to name just a few.

they are valid. The token represents a credit between participants within the monetary space, typically created against a debt to a third part banking institution. Social value is then validated through the use of monetary tokens in transactions. All of modern economic activity, as recorded through the practice of accounting, is thus dependent on the ongoing creation debts and credits.

The focus here is on the fundamental nature of money rather than a detailed description of modern banking and financial systems. There are some basic policy considerations towards the end of the paper in order to place the current theory in perspective, but the primary aim here is to clarify the institutional nature of the monetary unit and the credit-based nature of the monetary token, and to emphasise the importance of acknowledging that the future is non-deterministic. The credit based monetary system permits those with access to credit creation facilities to direct the generation of and maintenance of social value in society, and in so doing to determine what aspects of society will be validated through exchange for monetary tokens.

In order to fully explain these assertions, the concept of money must be explicitly separated into distinct concepts. That is, socially contextual value (or *social value*), the *monetary unit* and the *monetary token or credit*, and the *monetary space*.

1.1 The structure of the remainder of this paper

The remainder of the paper includes a more detailed description of society, the monetary unit, monetary token, the monetary space and social value in section 2. This is followed by a brief explanation of the credit theory of money with some reference to the origins of money in Section 3. Section 4 explains the creation of monetary tokens within modern banking systems. Section 5 provides additional historical and logical context and touches on some social-structural limitations in the development of monetary systems. Section 6 is a discussion some implications of this alternative interpretation of money and Section 7 concludes.

2 Definitions of society, the monetary unit, monetary token, the monetary space and social value

While it is enough for casual conversation to simply refer to money, it is insufficient for a detailed assessment to use a single term. The term money will be abandoned, and will be replaced by two separate but mutually dependent concepts. The separation is according to roles that each perform, not

in the traditional sense, but at a conceptual level. These two concepts are given names for convenience of discussion, but it is the underlying roles that are important to identify.

The *monetary unit*[3], this is an intangible, abstract divisor (or *numeraire*). Similar to the principle presented by Orrell (Orrell, 2016), it allows us to understand abstract, intangible, subjective, socially contextual and immeasurable underlying 'value' in terms of specific numbers. Similar also, as noted by Innes (1914), to any unit of measurement such as metres for length or kilograms for weight, the *monetary unit* is simply a numerical denominator for value. It is what Orrell refers to as a quantum, and reflects an attempt to quantify and relativize value. As such, it is the source of relative pricing. Like any unit of measurement, it is most useful when perfectly stable. Importantly, there is no finite number of units of measurement. There is no fixed quantity of meters or grams; there may be a limited quantity of the medium ('value') that is to be measured, but the unit of measurement itself is essentially infinite. Also, as in the quantity theory of money, a certain quantity of value can also be divided into any number of individual parts, the choice of which depends largely on simplicity of calculation and usage[4]. Monetary units are also perfectly homogenous, in that each unit is exactly equal to any other unit and represents one *monetary unit* of value. The monetary unit is the equivalent of what other authors have described as money of account. Ingham (Ingham, 1996) noted Keynes (1930) in emphasising, "Money of Account, namely that which Debts and Prices and General Purchasing Power are expressed is the primary concept of Theory of Money."

The *monetary token or credit*[5], this is a countable item, which could be tangible (such as a coin or a note) or intangible (such as a deposit record, or an accounting record). These are items that are created in *finite quantities*, and can be held physically or on record. A *monetary token* may or may not be generally accepted, but for the purposes of a discussion of the modern capitalist banking system, it is important to note that each token, like each monetary unit, is *perfectly homogenous*. Each token is also a *non-specific*

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[3] A concept that Ingham (2004, p. 176), and he noted, several other authors, including Keynes (1930), Enaudi (1936) and Bloch (1954), referred to as the "money of account". The shift in nomenclature here is in order to avoid the use of the term money. Wray (Wray, 2001, pp. 7–9) argued, along similar lines to Keynes, that this is a concept to which a name is given, or a "title" in Keynes' words. This title can then be represented at par or at a variety of exchange rates by any token that is seen fit to serve the purpose.

[4] It is pragmatic to choose a size that makes daily usage simple for transacting. The metric system has been adopted by most modern systems, with single digits applicable to the purchase of commonly purchased low value items. $1 divided into 100c with the cost of a loaf of bread in America currently just under $1. A notable exception was the British Pound, which previously divided into 20 shillings and 240 pence; it has subsequently been decimalised and since 1971 divides into 100 pence.

[5] In Chick (1978, p. 46) this is called a "money asset", Ingham (2004) used the term "means of payment", and Wray (2001, p. 8) referred to "money things".

transferable record of credit against the resources of society. They may be created by any private or public agent, provided that they are recognised and accepted as valid records of credit. In the creation of these credits there is a simultaneous creation of an equivalent debt. As noted by Rochon and Rossi (2006, p. 7) they are essentially elements of a system of social memory for credits, against which, at some point, a debt was incurred.

While the *monetary unit* and *monetary token* are separable at a conceptual level, they are now in practice exceedingly integrated. In modern systems, one monetary token is typically equivalent to one monetary unit of value, although, as demonstrated by Innes (1913, p. 393), this has not always been the case[6].

The unit of measurement must be associated with a medium, and the token is created in order to represent a portion of that medium. To this end, a combination of Innes (1913, 1914), Ingham (1996, 2004), Wray (2001) and Rochon and Rossi (2006), may provide a transparent and historically accurate answer. The medium to which the *monetary unit* applies is an abstract quantum of value, which we will call *social value*. *Social value* is dependent on, to use Ingham's terminology (Ingham, 1996), social structural conditions. This is because the value of a good or service depends on the needs of the agent assessing the benefits of having the good or receiving the service, and is thus entirely subjective, and dependent on the environmental context in which it exists.

The *monetary space* we define here as the collection of economic agents that recognise the *monetary unit* as a means of assessing value (i.e. relative pricing) and are willing to accept a *monetary token* in exchange for goods or services. This space may be defined by physical borders, social class, direct institutional or interpersonal relations, or any other social construction. In most countries today, the monetary space is defined by the state border – as noted by Ingham (2004, p. 200) this was not the case 15th and 16th century Europe. What is most important is that within the monetary space, the credits that are created in favour of a borrower are accepted and trusted. *Society* then comprises all those agents that live or participate in the ongoing activities of the monetary space. We include in the definition of society here, all social constructs, institutions and infrastructure.

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[6] Commerce and trade continued unabated, both at a retail and in large scale for centuries in the absence of any money or monetary unit. In successive centuries, Innes (1913, p. 394) provided a number of examples to demonstrate the maintenance of commerce with a various combinations of credit recording systems and credit trading systems, as well as examples for most of the major European financial centres of the use of monetary tokens where prices in terms of the monetary unit and monetary token were not aligned.

A *monetary token* is created to record a non-specific credit for a particular level of value that is acquired initially by the acknowledgement of a debt. Later (due to homogeneity), those tokens can be acquired by any member of society in exchange for the supply of an asset, a good or service of value. Over time these tokens have acquired a range of attributes, including transferability, homogeneity, general acceptance, divisibility, geographic boundaries and importantly, denomination in a particular *monetary unit*. This means that the *monetary token* is indirectly subject to the same contextual dependency as the *monetary unit* and the concept of *social value*. If tokens are created for the purpose of purchase, the buyer does not provide alternative goods in exchange, as this would be barter and there would be no need for tokens, and thus no record of any outstanding debt. The point made here is that credits represented by *monetary tokens* are utilised to acquire something of value from society, and that their creation logically requires the creation of a debt.

Those with *monetary tokens* are in a position of *surplus credits*. Those who would like to sell goods or services in exchange for *monetary tokens* are in a position of resource surplus, but would first have to find a willing buyer in order to gain monetary credits (tokens) against society – one might say that they are implicitly dependent on those with surplus credits as a result of their willingness to accept credits in payment for their goods and services. In terms of GDP, the value of such a good or service is only validated for recording purposes upon sale in exchange for monetary tokens.

The *monetary token* is also a credit that will only be exchanged for valuable resources at some point in the immediate or extended future. The quantum of *social value* represented by a monetary token is therefore highly dependent on the capacity of the agents within a given *monetary space* to be able to provide value in the future. As Rochon and Rossi (2006, p. 8) explained, the true value of the credit is thus dependent not only on existing resources, but also the future product of society.

3 The credit theory of money

This section takes a step back, and elucidates why the monetary token should be referred to as a credit. Innes (1913, 1914) presented credit, or rather the credit relations of society, as the foundation of money, stating that "credit and credit alone is money" (Innes, 1913, p. 392). Innes (1913, p. 391) debunked several examples where the relative values of goods were thought to have been determined in relation to the value of some divisible commodity. In every case, while there may have been legal precedent for the enforcement of contracts on the basis of a particular commodity, he explained that a

monetary unit for the assessment of value existed external to the commodity itself. In his description, the commodity used was merely a means of settlement rather than pricing.

He (Innes, 1913, p. 391) also presented a historical account of the progressive development of *monetary tokens*, in a partial attempt to redress what he saw as the inaccuracies of popularised commodity theories of money, particularly those that linked the fineness of metals in coins to the quantum of *social value* purchasing power that they embodied. The antithesis of Smith was largely based on archaeological findings that Smith would not have had access to, but Innes' principle argument was related more to the nature of money as a concept, and to monetary origins in principle. He assessed that,

> "Adam Smith's position depends on the truth of the proposition that, if the baker or the brewer wants meat from the butcher, but has (the latter being sufficiently supplied with bread and beer) nothing to offer in exchange, no exchange can be made between them." … "Assuming the baker and the brewer to be honest men, and honesty is no modern virtue, the butcher could take from them an acknowledgement that they had bought from him so much meat, and all we have to assume is that the community would recognise the obligation of the baker and the brewer to redeem these acknowledgements in bread or beer at the relative values current in the village market, whenever presented to them, and we at once have a good and sufficient currency. A sale, according to this theory, is not the exchange of a commodity for intermediate commodity called the "medium if exchange," but the exchange of a commodity for a credit."

He (Innes, 1913, p. 378) argued that, "In both instances in which Adam Smith believes that he has discovered a tangible currency, he has, in fact, merely found – credit." In contrast to the commodity theory of money, he presented the foundations of trade in terms of the acknowledgement of indebtedness, which, as noted by Ingham (1996), requires a social context[7].

> "The value of a credit depends not on the existence of any gold or silver or other property behind it, but solely on the "solvency" of the debtor, and that depends solely on whether, when the debt comes due, he in his turn has sufficient credits on others to set off against his debts. If the debtor neither possesses nor can acquire such credits which can be offset against his debts, then the possession of those debts is of no value to the creditors who own them." - (Innes, 1913, p. 378)

The importance of Innes' statement is that, as noted in the introduction, in any transaction for a good, where goods are not directly exchanged, it is an acknowledgement of debt and credit that balances the trade. That credit is then represented in some way or form, either as a tangible token or in a record keeping system. Rather than considering "money" as the object of desire, Innes (1913, p. 392) presented the underlying source of the perceived value; credit.

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[7] Although Ingham agreed with the principles of Innes discussion, he emphasised that in the absence of certain social constructs, the "honesty" referred to by Innes, or the recognition of the obligation by a community could not exist – we will explore this in greater detail later.

> "A first class credit is the most valuable kind of property. Having no corporeal existence, it has no weight and takes no room. It can easily be transferred, often without any formality whatever. It is movable at will from place to place by simple order with nothing but the cost of letter of a telegram. It can be immediately used to supply any material want, and it can be guarded against destruction and theft at little expense. It is the most easily handled of all forms of property and is one of the most permanent. It lives with the debtor and shares his fortunes and when he dies, it passes to the heirs of his estate. As long as the estate exists, the obligation continues, and under favourable circumstances and in a healthy state of commerce there seems no reason why it should ever suffer deterioration. Credit is the purchasing power so often mentioned in economic works as being one of the principal attributes of money, and, as I shall try to show, credit and credit alone is money. Credit and not gold or silver is the one property which all men seek, the acquisition of which is the aim and object of all commerce."

The parallels with the functional definitions commonly presented for the money asset are immediately obvious (As noted by Chick (1978, p. 41), "durability, recognisability, portability, divisibility" and so on), as are the reasons why a generally accepted *monetary token*, that met the requirements for above description of credit (no corporeal existence, no weight, takes up no room, etc., such as an electronic record in a bank account), might possess the much lauded property of liquidity while carrying relatively low levels of risk of loss.

This analogy can be extended to the aggregate case if one considers the *creditor or lender* to be society as a whole. Since credits created in the present are intended for settlement at some point in the future, the "estate" of the debtor can then be extended to the current and future assets and the current and future product created by or supported by all indebted participants of society. Since all economic activity in modern society is validated by monetary payment, it follows that all measurable economic activity is implicitly validated through the repercussions of the act of borrowing at some point in the immediate or distant past. If a credit for social value could be conceived as a perfectly homogenous credit of purchasing power, of all items for value for sale within a given monetary space, then any token created to represent that credit would inherit some of those characteristics. As Innes asserted, it is also irrelevant what the token is, as long as the intrinsic value thereof does not exceed the value of the purchasing power that the credit represents (in which case the tangible token would be of greater value that the credit).

As noted by Chick (1978, p. 41), money, or rather *monetary tokens,* rely on confidence, but in contrast to many assertions, it is not the quality of issuer of the tokens that determines the value that those tokens possess, but the capacity of those who are indebted (and the beneficiaries of their spending) to provide value when those tokens of credit are presented for settlement – in this case, all those willing to provide

goods and services within the monetary space, or "*society*", both in the present and in the future. The trade of *monetary tokens* for goods or services is therefore a transfer of goods or services in exchange for *a credit position against the current and future product of society*.

It also follows that those institutions or agents empowered with the capacity to create such tokens are able to create perfectly homogenous credits against society (a significant capability, and thus responsibility). In exchange a debtor provides a promise to create sufficient value within society to be able to sell their products or services in the future, and in doing so accumulate sufficient credits to settle their original debt. This will be explored in greater detail below.

4 The creation of monetary units and tokens

As noted in the introduction, economic agents are bound to both *monetary units* and *monetary tokens* as an integral aspect of thinking and planning. How then are the monetary unit and monetary token maintained and created in modern economies? From the outset it is important to re-emphasise that tokens are only ever created in exchange for the creation of a debt. For all intents and purposes, since the establishment of the nation state, the homogenisation of monetary tokens and denomination thereof in a state nominated monetary unit, monetary tokens have been created by banking institutions. To categorise broadly, tokens have been created on behalf of one of two groups, state (governmental) or private borrowers.

4.1 Private creation of monetary tokens

Innes (Innes, 1914, p. 152) quite brilliantly described the creation and usage of monetary credits in the private banking process as follows,

> "…in practice it is not necessary for a debtor to acquire credits on the same persons to whom he is debtor. We are all both buyers and sellers, so that we are all at the same time both debtors and creditors of each other, and by the wonderfully efficient machinery of the banks to which we sell our credits, and which thus become the clearing houses of commerce, the debts and credits of the whole community are centralized and set off against each other. In practice, therefore, any good credit will pay any debt. Again in theory we create a debt every time we buy and acquire a credit every time we sell, but in practice this theory is also modified, at least in advanced commercial communities. When we are successful in business, we accumulate credits on a banker and we can then buy without creating new debts, by merely transferring to our sellers a part of our accumulated credits."

In order to settle a debt, one could therefore simply instruct a transfer of credits from your own account of record to that of another. Thus effecting payment. From a trade perspective, it thus became

custom that a purchase or sale transaction could be completed by the intermediated transfer of credits held at a third party bank[8]. It is therefore important to understand how these credits are created. While many examples exist of credit-based banking systems in Europe prior to the 1700s, the progression of the English monetary system prior to the establishment of the Bank of England in 1694 was particularly important, as it pre-empted the harmonisation of state and private debt and credit.

As noted by Ingham (2004, p. 193), in reference to Usher (1953 [1934]: 292) the practice of private bank lending for the creation of *monetary tokens*, and the acceptance of these counterparts of private bank records of debt as a means of payment occurred earlier, and was a critical step.

> "This creation of credit money by lending in the form of issued notes and bills, which exist independently of any particular level of incoming deposits, is the critical development that Schumpeter and others identified as the *differentia specifica* of capitalism. The issue of credit money in the form of notes and bills requires the depersonalisation of debt which enables the transferability of paper promises to pay that can then circulate as credit money outside of the network of any particular banks and its customers."

The establishment of public banks and central banks, the centralisation of clearing and settlement, and the homogenisation of all private bank created credits (notes, or "promises to pay"), and state endorsement thereof, then facilitated the acceptability of privately created and government created notes and deposit records as means of payment. The critical development, as noted by Faure (2013b, p. 50), and Ingham (2004, p. 195) was the transformation of the role of banking institutions from physical deposit takers to creators of an accounting debt record in exchange for the creation of *monetary tokens*. As explained by Faure (2013b, pp. 50–59), the result of this was the creation of (transferable) bank records of deposit in exchange for private domestic loan extension, or loans to the non-bank private sector (NBPS). The banker owned the rights to the underlying items of value[9] through the debt contract, and the borrower or government were able to utilise the deposit records (*monetary tokens*) to transact. Ingham (2004, p. 214) thus noted that,

> "the capitalist monetary system's distinctiveness is that it contains a social mechanism by which privately contracted credit relations are routinely 'monetised' by the linkages between the state and

[8] When a debt to a bank is created, the borrower provides the bank with a contract of indebtedness, and in return the bank creates credits (deposits) which initially are provided to the borrower in a simultaneous debt and credit transaction. In effect, the bank has created tokens of credit against society. The initial borrower is formally indebted to the bank, but once the credits have been spent it is the duty of the borrower to try to re-acquire those same (or similar) credits from society through the sale of either goods or services. It is only in the process of spending that the borrower effectively becomes a debtor to society in general. The bank has simply served as a medium (and gatekeeper) in the process.

[9] More specifically, a quantum of value, expressed in terms of *monetary tokens*, representative of the value of the underlying contracts, goods or items.

> its creditors, the central bank, and the banking system. Capitalist 'credit money' was the result of the hybridisation of the private mercantile credit instruments ('near money' in today's lexicon) with the sovereign's coinage, or public credits. The essential element is the construction of myriad private credit relations into a hierarchy of payments headed by the central or public bank which enables lending to create new deposits of 'money' - that is the socially valid abstract value that constitutes the means of final payment."

An essential aspect of the capitalist system described above, is that the "monetisation" process requires homogenisation of credits into a single medium. As a result, an established and generally accepted *monetary unit* is also required. Essentially, the debt to banks of larger institutions (and later of individuals) were counterbalanced by depersonalised, homogenous, divisible, and fully transferable credits against all items or services of value available for purchase *within the specific sovereign monetary space*. The importance of this cannot be overstated - it meant that all credits were equalised and that credit created by a private borrower, became equivalent to credit created by a business or government. The quality of each counterpart debt, however, continues to differ significantly. Monetary tokens created when an individual overspends on an overdraft facility have ever since carried the identical purchasing power capacity as monetary tokens created when a government deficit spends.

Post Keynesian literature provides a substantial pool of literature to explain the dynamics of private debt driven creation of monetary tokens. It is explained that in modern monetary systems, bank lending (commercial, retail, and central bank[10]) creates bank deposit records[11], and that these are by far the most prolific form of modern *monetary tokens*[12]. Members of the non-banking private sector then have the opportunity to convert those deposits (credits) into physical notes and coin provided by central banks.

In contrast to the money multiplier story of deposits creating loans, the so-called 'reverse causality', which runs from debt creation to money creation in modern economies has, amongst others, been demonstrated through: qualitative descriptive explorations of bank and central bank processes[13],

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[10] With notable exceptions in specific countries for certain types of lending. For example in Denmark, where mortgage lenders are required to fully absorb money from the non-banking private sector through the sale of debt securities in advance of the extension of the mortgage loan (Frankel *et al.*, 2004, p. 100). In principle, however, even though the aggregate level of money in circulation remains constant in such circumstances, money is still created in the lending leg of the process.
[11] It should be noted here, that *monetary tokens* in circulation in the domestic economy are affected by international trade and capital movements, particularly through the purchase and sale of foreign exchange. This affects the composition of ownership of domestic *monetary tokens*, and possibly the extent to which those *monetary tokens* are likely to circulate back to the original borrower.
[12] There are also institutions that classify as third party asset transformation institutions that accumulate funds in order to re-lend them, for example building societies in South Africa. These institutions are excluded from the definition of banks, especially as they do not typically have access to central bank accommodation services in modern monetary systems.
[13] Le Bourva (1992, p. 451), De Kock (1954), and Faure (2013a, 2013b, 2013c, 2014)

philosophies[14], institutional mechanisms[15] and the temporal ordering of lagged fractional reserve accounting[16]; formal causality tests[17]; historical records of the development of money and the creation of money[18]; microtheoretic models of banking[19]; critical analysis of the methodological and philosophical foundations of New Neoclassical Synthesis and Keynesian and Post Keynesian schools of thought[20]; detailed pedagogical demonstrations of the balance sheet impacts of bank lending[21]; and comprehensive stock flow accounting models of entire economies[22]. Simple pedagogical explanations were also provided as early as 1983 by Moore, and in 1962 by Jacques Le Bourva, and more recently by Mcleay, Radla and Thomas (2014) of the Bank of England.

In summary, the records of credit that appear in a borrower's bank account when a loan is extended do not come from another depositor's account. Those credits are new credits, homogenous credits that are able to access the resources of all of society. They are created by a bank simultaneously with a loan agreement (of identical size) against a specific borrower. The borrower then typically transfers the ownership of those newly created credits to another person or organisation in exchange for something valuable. The borrower thus absorbs value from society (spending credits in exchange for valuable goods or services). The borrower is then in a predicament: they have a debt to a bank and an agreement as to how quickly that debt must be repaid. The debt agreement requires that they must return to the bank the same homogenous credits as were created on their behalf. Since all *bank-created monetary token credits* are homogenous, it does not matter who the initial borrower was. Only that they can be acquired.

If the borrower's initial spending generates additional value in the form of a product or service, then the borrower might be able to sell that product or service in order to acquire tokens of credit. Alternatively, if the borrower has a skill-set that is particularly valuable to society, they are likely to be able to acquire credits by providing (selling) their own labour. As Innes (1913, p. 393) noted "it is through selling, I repeat, and by selling alone - … - that we acquire the credits by which we liberate ourselves from debt, and it is by his selling power that a prudent banker estimates his client's value as a debtor." The goal of course is to sell for more credits than were initially borrowed.

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[14] Dow (1985, 1999, 2001, 2007, 2010), and Chick and Dow (2001, 2002, 2005).
[15] Arestis and Eichner (1988), Dow (2006), Lavoie (1996, 2006).
[16] Godley and Cripps (1983), Godley and Lavoie (2007).
[17] Moore (1983, p. 540).
[18] Faure (2013b).
[19] Moore (1983, p. 541).
[20] Chick (2003).
[21] Faure (2013c).
[22] Godley and Lavoie (2001; 2003, 2006, 2007).

A numerical example is presented below to crystalize this chain of thought. In Figure 1 below, Jo borrows 100 credits from the bank. Instantaneously Jo has both a credit of 100, and a debt of 100 perfectly identical units (represented by the green and red solid bars respectively). In the second week Jo spends all of the credits on setting up a shop and buying stock (absorbing value from society). Each week Jo earns 20 credits in income, spends an additional 2 units in stock and wages, and pays back 15 units of debt (except in the last week when only 10 units of debt remained), and keeps the remaining 3 credits (of profit).

As can be seen it takes Jo 9 weeks to fully repay the loan. Jo has also accumulated 26 extra credits of profit. Jo was obviously able to provide greater value than was initially borrowed, as is demonstrated by society's willingness to transfer their credits to Jo in exchange for the good / service. There is, however, a problem. Only 100 credits were created, 100 units were repaid, and Jo still has 26 units! All of the units created for Jo have since been destroyed upon repayment of the debt, thus the units must have come from creation of credits on behalf of another party. More importantly, that party incurred a debt upon creation. This principle applies equally at an aggregate level. The credits earned represent value created by Jo that was validated through monetary transaction. Since monetary tokens can easily be re-spent, it is possible for one token to validate several units of value (linked to the velocity of money, and the Keynesian multiplier principle).

What remains true, however, is that monetary tokens are initially created in a finite quantity and, as noted by Bossone (2001), that quantity excludes interest[23]. It also means that at any credit held by a party that is not a debtor to a bank represents a friction in the flow of credits back to the original borrower. "Savings" of money, therefore, do not finance lending, but quite the opposite. This is not a statement of macroeconomic causality, but of micro-causal necessity. This explanation emphasises the problematic nature of the demand for and retention of money for the monetary circuit[24].

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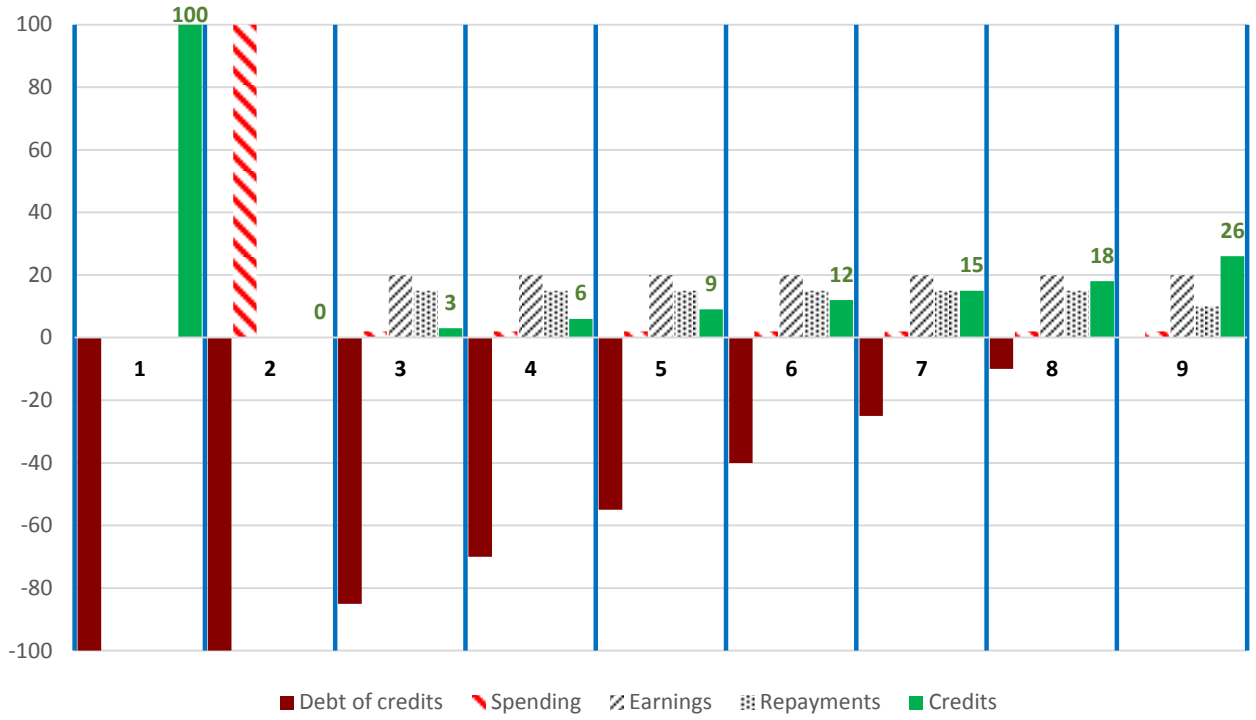
[23] Which means that all interest payments constitute an initial transfer of resources from society to the banking sector, and the payment of wages by the banking sector to households constitutes a counterbalancing flow to interest payments and fees. Whether or not the banking sector extracts excessive rents is beyond the scope of discussion here. The focus is on the initial point of creation, as a finite quantity that excludes future costs of borrowing as per the interest defined in the loan contract.

[24] According to Bossone (2001), and in the opinion of the author, this was an important aspect of Keynes' general theory, but has subsequently been misinterpreted as an optimisation problem within the demand and supply framework of AS/LM. In addition, while Keynes represented the demand for money in terms of positive, intelligent intertemporal behaviour, it seems far more likely to the present author that money is retained by the vast majority of people for far less flattering reasons. In addition to transactions, precautionary and speculative demand one could add laziness, a lack of knowledge about alternatives and a general lack of interest in exploring alternative investment opportunities (ignorance and

4.1.1 Figure 1: The 9 week loan



4.2 Governmental creation of monetary tokens

Of all parties on behalf of which credits are created, government is by far the largest. The Post-Keynesian literature has focussed largely on the creation of monetary tokens by commercial banks on behalf of private individuals and firms, where the demand for a loan precedes the creation of monetary tokens, which then results in an increase in reserves held by banks in their settlement accounts. Government driven money creation, on the other hand, is somewhat neglected.

Wray (2001, 2010, 2015), Fullwiler (Fullwiler, Bell and Wray, 2012) and Bell (/Kelton) (2001) have filled this gap, and over the past two decades presented Modern Money Theory (MMT) as an collection of thoughts of similar authors (including Knapp, Keynes, Lerner, Minsky and Godley) that emphasises the role of the state – incorporating both the credit understanding of money and the social structural

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incompetence), fear of change and distrust of those offering alternatives, and a misguided understanding of the aggregate benefits of saving monetary tokens of credit. If deposits are not accumulated in the accounts of savers, the likelihood of them returning to the original borrowers is higher, and the full term of a debt contract potentially shorter; which extends the term for which interest rent can be extracted. This may or may not be understood by the banking sector, but the possibility certain makes one question the motives for selling long term deposit securities to deposit holders – at significant interest spread below the cost of borrowing.

conditions within which monetary systems exist. As explained by Wray (2001), government debt and credit creation is essentially the same process as described above in the private case.

As he noted, governments spend by debiting their own bank account and crediting the account of the service or product provider. In the absence of any specific legal limitation, it is irrelevant whether the government account balance is positive or negative (that is, whether the government has previously accumulated credits through tax or borrowing or not). If the account balance is negative, each unit of credit that is transferred to a service or product provider is simultaneously created against an identical debt record on behalf of government. The service provider receives a credit, and the government records a debit in their accounts. The credit is transferred to the product / service provider just as it would be from a private person's overdraft facility on a checking account.

The one major distinction is in the capacity of the "state" to impose liabilities on the population. Where a private person must be able to *sell* in order to accumulate credits against their peers, a government can impose a tax liability[25].

Governments provide value less directly. In addition to the services that citizens might benefit from directly, governments have the capacity to develop the supporting conditions that might be required for the expansion of social value. This is typically through the employment of labour and resources for the development of physical and social infrastructure and institutions (such as education, roads, legal institutions, healthcare, electrical infrastructure etc.) from which positive externalities can emerge – such as reduced crime rates, self-governance, collectivism, artistic expression, etc. The benefits of a stable and well-functioning governmental system that was able to provide high quality multi-generational education, healthcare and financial security, would be difficult if not impossible to measure[26].

This also raises the important question of what aspects of society are of value in the long run, and what the goal of our enquiry into economics and macroeconomics is. Is something only of value if private

[25] The irony of income tax is that it is only those that are able / capable / willing to provide or generate additional social value that are made liable. Consumption tax through VAT as the exception. Alternatively, one could perceive tax of the high-income earner to be "giving back" part of the long term benefits accrued from society.

[26] The benefits of government spending programs cannot be received equally by all social participants. Some will be in a better position to receive those benefits than others, and thus will move forward. Others will be less able, and thus fall behind. The ability of the state to tax within a social welfare system is thus perhaps far less perverse than a purely capitalist system, where those who benefit from accumulated social capital over multiple generations are most likely to move further ahead, and those who fall behind are likely to fall further behind.

individuals are willing to purchase it with their privately acquired monetary tokens? Is the study of ethics or morality, or history valueless if there are no buyers? It is difficult to believe that the necessary components of a sustainable society can be identified by the general population in the absence of knowledge accumulation and dissemination (learning and education). It is also difficult to believe that those that find themselves in positions of power will automatically behave in the interests of equality or fairness. If we are interested in the sustainable wellbeing or welfare of all persons (or possibly other species), it is difficult to escape a degree of social engineering – which would require significant central decision-making and socially manipulative practices.

4.3 Limitations of a finite means of value validation

This presents a conundrum, as society is implicitly dependent on debt creation. Why is this? Social value is only validated upon a purchase or sale. In a society where all purchases and sales take place in exchange for monetary tokens, one party must have monetary tokens before any transaction can take place. To explain this, the analogy of the 9 week loan above, can easily be extended to the economy as a whole. Value validation requires the transfer of monetary tokens (credits), for a given quantum of monetary tokens and a given rate of transfer, any additional validation this requires additional tokens. These tokens are not distributed. In the private sector they are created on demand for any party that meets creditworthiness requirements. In the public sector they are created as growth in deficit spending. The monetary accounting system in a sovereign monetary space is a closed system, in that at an aggregate level, the total quantum of debts created should balance with the total quantum of credits in existence. Growth in economic activity, as validated by aggregate purchases or sales (expenditure or income), in the absence of declining prices, consequently necessitates the expansion of either private or public sector debt. The composition of that debt, the quality of the borrowers, and the use of the credits are also important. For example, if a government maintains a balanced budget, an expansion of the quantum of monetary tokens requires expansion of private sector debt.

5 Social context and the source of the monetary space

In this section, we explore the link between social context, the monetary space and the monetary unit, and the mechanisms that permitted such a unit to become universally adopted within a particular monetary space. Ingham (1996, 2004), Wray (2006) and Rochon and Rossi (2006), have since moved further upon the work of Innes, Knapp, Keynes and Lerner in the establishment of a sociologically, and historically consistent theory of the origins of both the *monetary unit* (money of account / measure of value) and *monetary token* (medium of exchange / means of payment). This sociological theory

contrasts the theory that has been adopted by the vast majority of economists – that money emerged through the adoption of a variety of commodities, and evolved due to the functional characteristics and relative scarcity of various commodities. It also holds several caveats for the credit theory of money proposed by Innes, and presented in the sections above.

Ingham (2004, pp. 200–206) believed that, in his eagerness to dispel the commodity theory of money, Innes had replaced one universal law for another, and it was far from sufficient to explain the emergence of credit-based *monetary tokens* and a capitalist economy. He also identified that Schumpeter had written in the early 20th century, that the two dominant theories at the time of Innes' writing were the commodity theory and the claim theory (the equivalent of the credit theory described by Innes), and that they were in relatively similar standing. Keynes (1914) made similar comments, noting that Innes had neglected to review authorities in the field, but that his historical findings were none-the-less very compelling.

In more recent literature, the explanations of the origin of money have broadened somewhat, including not only the fundamental nature of money, but also the historical circumstances that contributed to its development. Ingham (1996, p. 521) referenced Grierson (1977, p. 28) in his assessment of the logical origins of the idea of the abstract assessment of value. Agreeing that establishment of the *measure-of-value* purpose, that the *monetary unit* serves, must logically have preceded the creation of any *token* to represent it. According to both, the historical record of the concept of *wergeld ("worthpayment")* appears to be the oldest record of a "codification of the values and norms" of pre-market society. It was also a centralised value assessment system, but certainly not monetary to begin with. Tithes, fines and honours would be charged or bestowed from available resources. Wray (2001, pp. 6–8) also argued that it was unlikely that a *monetary unit* would ever exist in the absence of some sort of leadership system, which he refers to as a "state", or rudimentary state. The theoretical origin would therefore be in a social penal system, rather than in a pre-monetary market system.

Ingham (1996, p. 520) also reiterated Durkheim and Parsons, in a rejection of the notion that, "there exists "natural" substratum of economic order that is in "the nature of all things" [, and noted that] "economic institutions … could not be founded entirely on "contracts" which supposedly expressed these natural interests." … "not merely suggesting that contracts would be unworkable without norms of custom and practice and a degree of trust, but also literally unthinkable without the social construction of the idea of contract and procedure that, furthermore, could not have been generated by

the immediate parties themselves." Individual actions and motivations with regards money could then not be understood without a social context – which, in turn, changes over time. Innes had provided the vital connection between the extension of credit, the quality of the debtor, the produce that results therefrom and the resultant underlying purchasing power. Grierson, Ingham and Wray have since explored the sociological pre-conditions for such connections to develop.

Unfortunately, this can never be verified with cold, hard, historical facts, but it is difficult to reject. As Wray (2004), reflected, the earliest records of writing appear on Babylonian artefacts that by all accounts are a form of *monetary token* (or record of debt). What can be identified are the limits within which a credit based monetary system must function. As Ingham (2004, p. 202) explained, there were many examples of highly progressive monetary systems between 1100AD and 1500AD that failed due to the absence of certain institutional and political supporting structures.

> "… there were definite social and political limits to the 'market'-driven expansion of credit money. The essential monetary space for a genuinely impersonal sphere of exchange was eventually provided by states. As the largest makers and receivers of payments and in declaring what was acceptable as of payment of taxes, states were the ultimate arbiters of currency. They created monetary spaces that integrated social groups whose interaction was not embedded in particular social ties or specific economic interests. Until credit money was incorporated into the fiscal system of states which commanded a secure jurisdiction involving extensive legitimacy, it remained, in evolutionary terms, a 'dead-end'.

The principles of credit creation through the extension of bills of exchange and the subsequent circulation of such credit was well understood as early as the late 1500s, as Ingham (2004, p. 195) noted. This was particularly clear in the experiences of the Italian city-states, where city-state borrowing was monetised through both cash and deposit entry transferability, and was practiced with some degree of success but with significant instabilities. As noted above, Ingham (2004, p. 205) identified the establishment of the *nation state* as a pivotal requirement for the existence of a *monetary space*. The acceptability of a monetary unit, and of depersonalised tokens of credit, he explained, depended on a stable and universal trust in the legitimacy of the means of payment, and this could not have developed without the unifying force of a dominant state power.

As he explained, the first example of such a state was provided by England in the late 17th century, where a peculiar set of social dynamics permitted monetary advances. These included a long

established, stable, state-imposed *monetary unit* and coinage system[27]; a marginally weakened (but geographically dominant) monarchy; a strengthened commercial aristocracy; linguistic uniformity and an established class and legal structure – culminating in the establishment of the privately-owned Bank of England (BoE)[28]. A move, which Faure (2013b, pp. 57–59) explained, occurred at the same time as a massive consolidation of the banking sector, the centralisation of clearing and settlement at the BoE and the homogenisation of note issue.

For the first time also, the state issued interest bearing debt instruments to the BoE as collateral for additional spending power, which for the first time could be purchased by and enforced by the strengthened aristocracy through the BoE. In essence, the credits created by state deficit spending were monetised and distributed (spent) as monetary tokens, and the debt was converted from a simple deficit into interest bearing debt instruments. Simultaneously, the credits (notes) created in exchange for debt instruments on behalf of private citizens (borrowers) by the private banking sector were homogenised with those issued by the state.

The homogenisation of private and public credits was a crucial step. Prior to the consolidation, Faure (2013b, p. 33) noted, private banks issued deposit notes against debt[29], leveraging substantially smaller portions of specie (gold or coin reserves). Those notes were only redeemable for goods from individuals who knew of and trusted the quality of the notes – the monetary space for notes from each institution was limited by direct institutional and often regional knowledge. In principle, the notes represented precious metal reserves, but in practice, the note issues were largely not backed by anything of intrinsic value. The metallist or bullionist perspective that a monetary token should be backed by intrinsic value suffered two separate critiques here. Firstly, development of productive activity did not require any intrinsic backing for a credit to remain valid. Secondly, the credits were represented by notes that had been issued against debt, and it was the availability of goods and services of value that could be exchanged for the credits that determined their true value.

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[27] On the back of a lengthy discussion of the relative quantities and accessibility of coinage, Wray (2004, p. 237) makes the assertion that "coinage was not a transactions-cost-minimizing invention but rather emerged from a spatially and temporally specific contest between an elite that wished to preserve the embedded hierarchy of gift exchange and a democratic polis moving to assert its sovereignty." A point which he noted was clearly at odds with the bullionist/metallist belief (or application of) Darwinian evolution of a commodity money.

[28] Henry (2004, p. 80) also contradicted Innes' assertion that credit relations have always been stable, and stated that monetary development in the third millennium was directly tied to "the transition from egalitarian to stratified society", was "intertwined with the religious character of early Egypt", and represented "fundamental change in the substance of social obligations between tribal and class societies." As opposed to Innes who presented the law of debt as a universal phenomenon.

[29] Initially as goldsmith bankers using deposit receipts – the predecessor of the bank note.

The debtors of the bank were required to generate value and sell their produce, and in so doing, retrieve notes of similar quality or precious metals or coinage for settlement of the debt – but the credits (notes) of one bank were not necessarily equal to those of another. It was only after the homogenisation that all credits of all institutions became equal. As noted by Faure (2013b, p. 59), notes were standardised and all banks eventually issued credits in the form of BoE notes. Two of the most important impacts of this were, firstly, the credits were far more widely accepted, and therefore could be more easily trusted. The actual medium had developed to far greater levels of complexity in the Italian city states over a century prior; general acceptability thus appears to have had little to do with the evolution of the medium. Rather it may be far more reasonable to suggest that it was the by-product of institutional development and organisational decisions at a state level.

Secondly, the line of accountability between lender and the future value of credits (as measured by the future product of society) was blurred. The solvency of each individual bank was previously dependent on the ability of the banker to select borrowers that would succeed in acquiring credits from society – thereby being able to repay their debt to the bank, and generate a positive flow of funds in the interbank settlement process (although in a cruder fashion than post-centralisation of reserves). The loan portfolio of the banker was thus of critical importance to the banker. One might say that this aligned the interests of society and the banker – where the banker would theoretically only lend to a borrower with good prospects of adding value to society. Homogenisation allowed the monetary space to expand from the regional or reputational limits of the single bank to the nation state, but the principles of accountability for lending remained the same[30].

Monetary units, tokens, spaces and the applicable societies have evolved drastically over time, and all components of the monetary system have been critically related to and dependent on social context – geopolitical, linguistic, legal, institutional and infrastructural developments cannot be separated from the capacity to develop a trusted system of interpersonal credits. As noted by Ingham (1996, p. 514), a general critique of the market based reductionist theory of the origin of money is the neglect of social and institutional pre-conditions for and contributions towards the realisation of monetary systems. In particular, the role of governments and states.

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[30] This is not a problem, provided that the loan book remained on the balance sheet of the lender. If, however, the lender was able to move the loan book off balance sheet, the accountability for credit creation against the resources of society could be almost entirely avoided. A process that has recently been referred to as the "originate and disseminate" banking model.

6 Discussion

The purpose of this section is to discuss some of the implications of a social value theory of money. The topics presented here are chosen to highlight the importance of the monetary system in the non-deterministic future of our societies. First we discuss economic possibilities and the achievement of optimal resource utilisation. Second, we consider private sector access to credit creation facilities, and some implications for wealth distribution. Thirdly we touch on necessary wastage of resources. Forth, we will discuss some implications for fiscal policy. Fifth and finally we will consider the current role of central banks as implementers of monetary policy.

6.1 Economic possibilities and the validation of a future society

The capacity to immediately validate value within the economy through the creation of monetary tokens (either publicly or through the private sector) and subsequent purchase of goods or services presents an enormous opportunity. In the presence of idle or untapped resources, the creation of monetary tokens can stimulate the employment of labour or production of goods. As explained by the *Post Keynesian* and *circuit theory of money* schools of thought, the creation of monetary tokens can be seen as the initial trigger for the production process. Keynes first presented this theory as the monetary theory of production (MTP). A simple explanation of the theory is that the extension of *monetary token* debt permits the borrower (in the MTP a firm) to access the resources of society in order to produce something of greater value than the inputs. In contrast, if all resources, both human and otherwise, are already employed and functioning at their optimal maximum level of productivity (full employment), it is hard to imagine that additional stimulation would result in excess value creation for the future.

The sustainability of the creation of monetary tokens is a question of balance. In terms of social value, the borrowing of *monetary tokens* involves the promise of the borrower to provide at least as much value to society as is consumed through the use of the *monetary tokens* that are initially created. A general rule, however, is that if the credits are used purely to consume resources, and not used to generate additional value (at least equivalent value), society will experience a net loss, and the borrower will most likely be unable to recover the credits originated on their behalf. Innes (1913, 1914) assessed money to have always been a credit relationship but, in contrast to Innes(1913) and Rochon and Rossi (2006), credit (monetary tokens) and debt cannot be regarded as synonymous in modern economies. The major distinction is that commercial bank debt has specific debtors, whereas credits are non-specific.

A powerful advantage for society is that a unified form of credits allows for intertemporal adjustment and connectivity, and facilitates natural selection of products and companies. Homogeneity of monetary credits across time, means that it is irrelevant for what purpose or when a credit was created when one is trying to acquire them. A credit from a baker, builder or government borrower are entirely indistinguishable. Therefore, the original debtor is also irrelevant when it comes to accumulation. Credits created in a current period, to produce an undesired good, are likely to be transferred to a producer of a good or service that is desired – and in theory, only the most desired products and services will prevail.

Balance can also be found in the preservation of certain social institutions that provide less direct benefits, or those that might prevent social deterioration. Philosophers may be needed to assess the ethical and moral implications of social actions, or sociologists, anthropologists and historians to help prevent the repetition of social ills – if there is no active private market for such cultural capital, there must be a central system that validates and sustains those aspects of society that would otherwise disappear. If individuals are relied upon to make prioritisation decisions (purchases) with their own resources, other more predictable needs might also be neglected, such as antenatal guidance, healthcare, parental guidance, access to public knowledge institutions, education systems, or poverty alleviation.

Just as the long-term benefits of a stable society are almost impossible to measure, the damage caused by cumulative degradation of portions of society over multiple generations is equally difficult to assess. The harmonisation of public and private sector credits allows cognisant governments to validate a wide array of such indirect forms of social value that can help to prevent such social decay.

6.2 Private sector access to credit creation facilities and wealth distribution effects

Private individual borrowers typically promise to achieve the balance between value consumption and value provision through the provision of labour (through employment) through the course of their lives. Firms and entrepreneurs promise to achieve this through the production of goods and services, through the acquisition of (employment of) labour and resources. In both cases the private sector is obliged to generate and sell value.

As Innes (1913, p. 393) so clearly identified: "it is by his selling power that a prudent banker estimates his client's value as a debtor". Selling, however, is not only a question of product quality, but also of the ability to manipulate human impulses, stimuli, desires and fears. There is absolutely no guarantee that

the economic agent best at selling will provide the best outcomes for society, nor that the purchasing decisions of society will validate the most socially beneficial goods and services[31]. Regardless of whether the intention is good or not, the ability to sell, and thereby acquire homogenous credits against society, is the primary determinant of economic successes in the private sector of a liberal capitalist economy. The corollary of which is access to resources to produce the goods or services that will be for sale. Such access is granted to borrowers that can demonstrate the above-mentioned success in selling – either in the form of a proven track-record, or in the form of ownership of assets of value (i.e. a strong balance sheet).

Unfortunately, solvency of a private individual is therefore also linked to prices of assets, which are subject to demand – demand that can be satisfied by purchase with monetary tokens. Credits that are created for the purchase of such assets, based on expected capital value returns – which are in turn dependent on price appreciation – can quickly fuel a circular, self-fulfilling process of price escalation that is completely disconnected from underlying social value (a bubble) [32]. In addition, the rapid expansion of monetary tokens can result in a shift in the proportional distribution of credits for social value – in much the same way as a corporate rights issue can dilute proportional shareholding, inflationary monetary expansion can redistribute a greater proportion of underlying social value to the beneficiaries of credit expansion.

In the presence of idle resources, access to credit can also permit the borrower to gain ownership and control of assets that generate substantial value in the future. Access to borrowing opportunities thus

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[31] Examples of successful selling that has detracted from social value include the worldwide sale of asset backed securities prior to the 2007, the abundance of Ponzi schemes, the exorbitant wealth of leaders of commercialised religious groups (such as Kenneth Copeland, Edir Macedo, Creflo Dollar etc.), countless internet and ebay fraud schemes, and the proliferation of fast food chains such as MacDonald's, and the enormity of the international narcotics industry.

[32] The most recent example is the 2008-2009 financial crisis, which was predicated on the extension of credit, (and thus money creation) which fuelled a process of financialisation. As noted by Lavoie (2012), "[f]inancialisation transformed a growth regime based on high real wages and high business investment into a regime based on high consumption spending and ever-rising household gross debt, justified by high prices in the stock and real estate market." Money creation was permitted on the self-fulfilling prophesy of improved household balance sheets (as asset prices rose), and the prospect of future financial capital gains (driven by price increases that were in tern driven by the extension of credit). As Buffet once said, it's only when the tide goes out that you discover who's been swimming naked. The information required to foresee the crisis, and who exactly was swimming without their bathing suits, was available in the disproportionate balance sheet accounting data of the various sectors of the US economy. The unwinding of the financial crisis has once again revealed the irresponsible nature of lenders, as well as the need to understand the aggregate effects of the process of credit extension, together with a holistic understanding of the interactions between the balance sheets of various economic agents. As Bezemer (2009) concluded, looking forwards, within the current system of collateralised lending, "the balance sheets of firms, households and governments, and the regulations of the economics system on what sorts of balance sheets are being allowed, co-determine what forms new credit flows can take, how much there can be of it to different sectors, and consequently how the economy will evolve."

not only affect the type of project that will be supported and the proportional distribution of social value credits, but also the distribution of access to wealth generating resources – and thus very likely the distribution of income and wealth within society.

Fortunately, due to homogeneity and the non-specificity of monetary token credits, it is also possible for resourceful economic agents, who do not have access to debt financing to create value in advance of acquiring monetary tokens. Provided that monetary tokens do not become idle (i.e. sit dormant in savings accounts), it remains possible for new forms value to be validated in the private sector, regardless of the borrowing source of creation. In the presence of any holding of monetary tokens as "savings", the potential for tokens to flow back to the original borrower is reduced.

Ultimately, however, and regardless of the degree of ingenuity of economic agents, selling is dependent on spending, and spending is dependent on the possession of credits, and the existence credits depends on debt creation. This puts those with access to debt creation at an economic advantage.

6.3 Necessary wastage in monetary economic systems

As explained above, it is not only the present, but the future assets and product of society that will determine the aggregate level of social value in a given monetary space. Since social value is subjective, and since we have no way of knowing the future wants or needs of people, the measure of what will or will not be considered valuable cannot not be known entirely in the present. We may be able to guess at some things, but will never know for certain. Technological innovation, changes in tastes and changes in social dynamics are just a few of the possible reasons why present expectations might turn out to be wrong. Since not all inventions will be successful and not all innovations useful, there must necessarily be some wastage of the resources of society if we wish to make progress – a process that is linked to the inter-temporal connectivity mentioned above. This does not mean, however, that we should be reckless in our selection of which ideas to support, or which borrowers should be eligible to receive a credit against society.

6.4 Fiscal policy and forms of governmental debt

In a similar manner, society entrusts government to spend in a fashion that facilitates the generation of additional social value. As mentioned previously, governments are unique in that they are both able to create money through fiscal spending, and to impose liabilities through taxation. In terms of government spending and debt, for a country with a sovereign currency there is essentially no limit to the extent of domestic deficit debt creation. One of the major concerns with government spending as a

source of creation of monetary tokens is that it is possible that an excessive expansion in the quantity of monetary tokens held by the NBPS might have inflationary consequences.

In terms of social value, as government spends, and creates debt and monetary tokens, it essentially becomes indebted to society as a whole. If it is unable to develop the physical and intellectual resources of the country sufficiently, it may never be able to retrieve those monetary tokens through taxation. This may result in what proponents of the quantity theory of money would describe as an excess quantity of tokens chasing a limited quantity of valuable goods and services, and consequently inflation. In order to manage the inflationary impact of government spending, as noted by Fullwiler, Bell, and Wray (2012, p. 6), governments and central banks have at least four debt instrument sale alternatives to choose from[33], none of which are a necessary means of financing. The fact that certain governments (such as the US government) are required to hold positive balances in their account before spending is a matter of legislative and political convention.

This also sheds some light on the debt crisis and subsequent economic stagnation in Europe since the 2008 financial crisis. Where resources lie idle, governments of economically depressed countries that do not have control of a sovereign monetary unit and token, are not able to create monetary tokens to facilitate or stimulate additional social value creation. This is not to suggest that governments of all countries should have access to a sovereign currency. The government of Zimbabwe between 2000 and 2008 utilised monetary tokens purely for the consumption of existing resources. Corruption and self-enrichment of political figureheads, and the simultaneous destruction of social and physical institutions resulted in the creation of an enormous quantity of monetary tokens against a rapidly declining quantum of social value[34]. The Zimbabwean dollar was abandoned shortly afterwards, and the US dollar was introduced initially through black market usage, and later as the official trading currency.

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[33] In addition to the issuance of long term debt instruments (bonds), they note that other options include matching the interest paid on reserve balances with the target rate, the issuance of short-term T-Bills, and lastly, simply setting the rates on a variety of short, medium and long term bills, and letting the private sector purchase as many as they wish to hold.

[34] Faure (2013b, p. 11) provided examples of excessive government borrowing resulting in extremely large quantities of *monetary tokens* that were wasted by irresponsible governments. The consequence of which has typically included extreme levels of price inflation in terms of the *monetary unit*, the worst two examples of which were 41 900 000 000 000 000% per annum in Hungary in 1946, and 7 000 000 000 000 000 000 000% per annum in Zimbabwe in 2008. This does not mean that there is a predictable relationship between the nominal quantity of monetary tokens in circulation and prices under relatively stable conditions, although, it would be equally naïve to think that the defensive liquidity management practices of central banks do not affect the quantity of monetary tokens in circulation. It could be argued that the liquidity management operations of a central bank are essentially quantitative, but that they are ex post reactions to large scale quantitative changes in the quantity of monetary tokens demanded and in circulation.

The focus on balanced government budgets as an element of austerity measures, as implemented after the 2008-09 financial crisis, might be explained by fears of similar events occurring in European countries with a substantiated risk of systemic corruption.

6.5 The hamstrung role of central banks in modern economies

Since private agents and modern states both utilise banking services (central or commercial) to create monetary tokens, all modern monetary tokens are originated in the banking sector. One would thus expect that central banks would maintain a significant role in the direction of validation of economic value within modern societies. In contrast, the vast majority of modern central banks are disconnected from both fiscal policy decisions and the lending decisions of private banks, and limited to the primary objective of the maintenance of price stability. The irony of which is that that the true value of the monetary unit is as much dependent on the developmental effects of fiscal spending as it is on the effective implementation of monetary policy – because the value of the underlying society is the product of multi-generational physical and intellectual capacity development.

It is all of society that entrusts commercial bankers to conduct credit assessments of would-be borrowers, and it should be to all of society that bankers are accountable to for their lending decisions. It is hard to believe that the incentives and interests of a large profit oriented, and highly competitive private banking sector will be aligned with the interests of society in general. Over the course of history, private banks have repeatedly demonstrated innovation and ingenuity, and on the other hand, always had a tendency towards greed and instability. At the very least, the central bank should be in a position to protect society from the ineptitude and greed of irresponsible bankers[35]. By and large, central banks limit their activities to the internal and external maintenance of the value of the monetary unit, with little or no attention given to the compositional distribution or access to the creation of monetary tokens.

Private banks and governments (through central banks and democratic decision or sovereign decree) alone have the capacity to create monetary tokens. They thus stand as the gatekeepers to access to borrowing of credits from society as a whole. They share the role of assessing the viability of projects and ideas, and the importance of investments into socially beneficial infrastructure and institutions.

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[35] Until recently, private debts to a bank were entirely non-transferable. Banks, however, have devised the means to package and remove debts from their own balance sheets – consequently obscuring responsibility for lending decisions. There should be great concern when the only institutions permitted to extend universal credits within a monetary space attempt to obfuscate accountability. The recent subprime lending crisis in the USA is a perfect example of the provision of massive sums of credit to borrowers that could never generate sufficient social value to settle the debt.

Inadvertently, this means that they are also responsible for the assessment of the potential addition to social value that might occur if a particular good or service is validated through the expenditure of newly manufactured monetary tokens (credits).

7 Concluding remarks

Chick (1978) recognised that "our concentration on money's role in exchange has limited our understanding of the operation of money economies. Money not only affects the efficiency with which we conduct trade, but also influences the rate of capital accumulation, the commodity composition of output, and relative prices." A major reason for this, is believed here to be a failure to appreciate the underlying nature of money. Any asset can be used in exchange, but only the monetary token exists as a homogenous record of credit against the resources of all society. As noted earlier, Innes provided the vital connection between interpersonal credit, debtor productivity and general purchasing power. Ingham and Wray have since provided a historically sound theory and record of the origins of a monetary unit, with particular focus on the fundamental necessity and instrumental impact of centralised institutional developments and decisions, and Rochon and Rossi provided a clear description of the record keeping function of the banking sector. Post Keynesian literature provides a detailed understanding of how personalised debt contracts permit the creation of monetary credits in modern society and MMT explains the role of the state and the usage of government debt securities for the management of liquidity and interest rates.

It is accepted that the *monetary unit* most likely emerged as a result of the actions of a central authority, with emphasis on the role of a government like authority in the development. It is then the credit relations between economic agents, within a specific socio-structural context, from which *monetary tokens* emerge with *socially dependent value*. The interrelationships between specific social structural contexts and progressive banking and monetary development facilitated the emergence of credit based *capitalist monetary tokens*, specifically homogenous, depersonalised representations of an abstract quantum of *social value*.

The *monetary token* is, as Ingham has argued, the representation of a social relation. That relation is a debt and credit relationship, and in modern economies, the debt is homogenous in substance, but personalised, specific and dependent on the quality of the debtor. Credit, on the other hand, is homogenous and depersonalised, while both the debt and the credit are harmonised by their denomination at par in the *monetary unit*. Borrowers provide a personalised debt agreement in exchange

for general credit against society. Upon spending, those borrowers, while officially only indebted to a single entity (probably a bank), are in fact indebted to all participants in the monetary space, *society*. Society lends resources to the borrowers for their usage. They are required in the future to acquire identical, homogenous credits from other members of society in order to settle their personalised debt, and can only do so by means of the sale of goods, services, assets, or labour – i.e. by the provision of value to society. What is emphasised is that the monetary token represents a socially accepted right to the resources of other members of a society within a particular monetary space.

This theory is presented with full acknowledgement of the benefits of competitive markets such as the contribution to specialisation and division of labour, elimination of monopolistic pricing, enhanced innovation and the diversification of product offerings. It cannot, however, be accepted that money – the monetary unit, token, or space – emerged from the cost minimising quest for efficiency of the market system. As Post-Keynesians might say, the progression and emergence of money was not a deterministic process. An accurate record of the historical origins of the components of modern monetary systems necessitates the acknowledgement of temporal ordering of events, social structures and institutions in the assessment of economic problems and the determination of our future societies.

Money can also not be regarded as a neutral lubricant. It must be considered as a contextually dependent asset, the value of which depends not only on the general ability of those within the monetary space to provide value, but also on the effective decision-making of those permitted to issue monetary tokens and manage the monetary system, and to coordinate public and private interests, hopefully towards the common goal of prosperity.

Some important considerations that have not been discussed here include: Implications for foreign exchange in terms of underlying social value of inputs and the volatility of relative monetary prices; the distortionary impacts of linking the monetary unit and monetary token, and the possibility for a valuation system that is disconnected from institutions that have the capacity to expand the quantum of credits; the possibility for a global monetary unit, or possibly a value reference system – possibly with an interest in mitigating the risk of exploitation of labour; and, alternative mechanisms for credit management within economies – particularly non-productive consumer credit.

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