Modern Money and Sovereign Currency

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0. Introduction.
Modern Money Theory MMT and New Currency Theory NCT

The financial crisis since 2007/08 has shed doubt on common wisdom regarding money and banking. Orthodox economics didn't see any of the problems coming and refused to acknowledge the expertise of those who did. Central banks' monetary policy did not prevent ever larger waves of government debt and financial bubbles on the basis of overshooting bank credit creation. Had they wished differently, within the present system of fractional reserve banking they hardly could have done very much about it. Markets and politics still treat the crisis as a big but one-off operational accident. It may require the implementation of some additional regulation, but for the rest one expects to eventually resume business as usual. So far neither markets nor politics want to hear about the market failure and government failure they actually produced—and which they are bound to reproduce in the future unless the monetary, banking and financial systems undergo some structural change.

Against this background orthodox economics is now challenged by a number of advanced approaches to the analysis of money and banking. Sometimes these are grouped under the heading of heterodox economics. Some call themselves real-world economics, or non-fiction economics.[1] Some anew continue academic traditions such as historical and institutional economics, chartalism and constitutionalism, postkeynesianism, disequilibrism, economic systems dynamics, or similar. This broadly overlaps with analyses and policy approaches of the new monetary reform movements across the industrial world, aimed at regaining control of the money supply and re-establishing a sovereign state's monetary prerogative.[2] Most advocates of monetary reform explicitly understand this as an endeavour to modernising the money system—which implies modernising money theory.[3]

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[1] Werner 2005 324.

[2] Among the monetary reform approaches referred to here are those of the American Monetary Institute in the US (www.monetary.org), Positive Money in the UK (www.positivemoney.org) and NZL (www.positivemoney.org.nz), Sensible Money in Ireland (www.sensiblemoney.ie), Monetative in Germany (www. monetative.de) and Switzerland (vollgeld.ch), Moneta Proprietà in Italy (www.monetaproprieta.it), and others more.

[3] Cf. Huber/Robertson 2000, Zarlenga 2002 651–685, Ryan-Collins/Greenham/Werner/Jackson 2011, Jackson/Dyson 2013, Robertson 2012 97–155, Huber 1999, 2013, Gocht 1975, Allais 1987, 1988

Since around 1995–2000 there is another new approach which explicitely calls itself Modern Money Theory, abbreviated MMT. MMT scholars include Warren Mosler, Scott Fullwiler, Stephanie Kelton and Randall Wray. As their 'forefathers' they cite Godley (sector balances), Lerner (functional finance) and Mitchell-Innes (state theory and credit history of money). MMT sees itself as an offspring of postkeynesianism. So the aforementioned currents may have expected MMT to represent some sort of close relative or even political ally. Some of MMT's views actually correspond with those of the aforementioned. A closer look, though, comes across discrepancies. Becoming better acquainted with MMT has actually caused increasing irritation and controversy.[4] Should anyone have deliberately pursued that goal, the operation can be recorded as a success.

The following text deals with those accordances and discrepancies. I approach the subject from a standpoint as it is underlying present-day analyses and policies in favour of monetary reform as quoted above. To delineate from MMT, I will call that approach New Currency Theory, abbreviated NCT. What this means will in the following be explained step by step, at first by summarising hereafter the most important points, then by putting the discussion into a specific frame of reference (currency vs banking), and thereafter discussing in greater detail what NCT and MMT have in common and what sets them apart.

To activists who want to get monetary reform onto the political agenda, discussing economic paradigms may seem to be an academic concern of little practical relevance. But expertise in economic theory matters. Weak expert support is currently a main bottleneck for advancing monetary reform. Parties and politics will not seriously move as long as there are not 5–15 per cent among economic experts at universities, in think-tanks, editorial offices, ministries, financial authorities, central banks and MFIs who understand the relevance of modernising money and banking theory, and who acknowledge monetary reform to be a relevant issue, without necessarily endorsing everything at once.

Xxx For that very reason, monetary reformers have to come to grips with MMT. At first sight it looks as if MMT and NCT are relatives not so far

[4] Cf. Walsh/Zarlenga 2012.

apart in that they share a number of views vis-à-vis more orthodox theories; for example the basic conviction that the money system is an essential foundation of the economy, not just 'a veil' on economic transactions; or that modern money is and ought to be fiat money that can freely be created at discretion. They also share a common analysis of banks' credit and deposit creation, a critique of the standard model of the credit and deposit multiplier, and a more appropriate view of the role of deposits and savings for funding investment. A number of different positionings, however, will be hard to bridge:

MMT claims to be a chartal theory or state theory of money. Most economists and common people alike will understand 'state money' or 'sovereign currency' as money issued by a state authority such as the national central bank. MMT, just to the opposite—and in line with banking doctrines and national-liberal ideas of old in the vein of Knapp and Mitchell-Innes—understand by sovereign currency that the state just *defines* the national currency-unit and for the rest *accepts* the money denominated in that currency issued by private banks rather than a public agency. This creates much misunderstanding from the beginning.

MMT doesn't recognise a need for monetary reform. It assumes that central bank and government together exert effective control over banks' creation of credit, debt and deposits. Fractional reserve banking on the whole is seen as efficient and benign. To NCT this is just another example of fictional economics, for the actual situation today comes close to one of capture of the state's monetary sovereignty by the private banking sector. Realities today, far from representing a sovereign currency system, represent a state-backed banking rule. In spite of a long list of dysfunctions of fractional reserve banking—from lack of money safety via the distortion of economic and financial cycles, to permanent instability and proneness to crisis —that system is maintained on grounds of almost inextricable mutual dependency of government and banks; with governments running high levels of deficits and debt, and banks creating overshooting money supply and BIP-disproportionate levels of financial investment (asset inflation).

MMT has it that money *is* credit and debt by its very nature and history. MMT adherents ridicule the notion of debt-free money as 'dry water'. Again

this is blunt banking doctrine. Money certainly is a medium for paying debt, i.e. to get rid of debt, and thus has of course developed in a historical context of debt of various kinds. Debt and credit existed before monetary units of account were developed, which themselves existed long before coin currencies came into existence; yes, and this is another teaching NCT and MMT have in common vis-à-vis classical commodity theories of money. MMT, yet, ignores or misrepresents 2,500 years of coin currencies when money typically wasn't lent into circulation against interest, but spent into circulation by the rulers of the realm free of interest and redemption. Debt money, i.e. the false identity of credit/debt and money, isn't a natural necessity at all. Modern money can freely be created, and of course it can be spent into circulation debt-free – pure water, so to say, not contaminated at source already.

Pure resources must not be abused. Just because modern money can freely be created, there must be some arrangement for making sure that there is neither too much nor too little money and that additions to the money supply keep within certain limits set by economic productivity and potential growth. Money and capital markets, contrary to what they are supposed according to efficient market hypotheses, perpetually fail to achieve the task—simply because there are no effective limits to banks' deliberate creation of money-on-account, or intermittently, their deliberate destruction of credit and refusal to issue enough fresh money.

Without openly denying this, MMT is nonetheless contemptuous of monetary quantity theory and the notion of sound finances. It cultivates laxness about deficits and debt, in particular deficits and debt denominated in U.S. dollars. MMT doesn't question why the approach of 'functional finance' turned out to be quite dysfunctional in practice. Mosler's original MMT manifesto was titled *Soft Currency Economics*. Presumably that wasn't by mistake. But any economic paradigm with enough common sense to it will of course place much value on sound finances, private and public alike. NCT does so; and this is one of the reasons for aiming at overcoming the present system of fractional reserve banking, because this system clearly has proved to be a historical basket case of unsound finances and 'soft currency economics'.

1. Currency versus banking teachings. A frame of reference of lasting relevance to modern money systems

The expression New Currency Theory NCT makes reference to the historical British *currency school* of the first half of the 19th century. It was opposed by the *banking school* of the time.[5] The reference to these teachings does not intend to replicate them in the original form of their time, but wants to carve out structural components which continue to exist ever since.

The historical currency school emanated against earlier doctrines of mercantile bullionism, i.e. the idea that a nation's wealth depends on its stocks of gold and silver. Now that the metal age of money is over once and for all, the involved currency paradigm is supposed to be of no more relevance. This is an error. At the time, everybody was a 'metallist' in the sense of considering precious metals to be the base of paper money, money on account, and additional monetary items built upon this base. The currency-school scholars or chartalists of the time—as represented by Ricardo, Thornton and Torrens—had no interest in gold as such. Torrens considered himself to be an anti-bullionist. They wanted to have a modern paper currency and credit system, albeit a stable one, avoiding scarcity as well as excess issue of credit and money, thus pre-empting deflation as well as inflation. They wanted to establish corresponding rules, some mechanism that would ensure control over the quantity of banknotes and credit.

Currency-scholars as well as leading politicians of the time saw out-of-control issuance of private banknotes as the main cause of recurrent banking and economic crises, similar to out-of-control credit creation and money on bank account today. So the 1833 Bank Charter Act made central-bank notes legal tender (lawful money), and the 1844 Bank Charter Act determined the relative maximum of banknotes allowed by setting proportional reserve requirements in gold and silver to back them up. The British Bank Charter Acts were of general importance since they served as a model for similar measures across the then industrialising world. They marked the beginning of putting an end to the issuance of new private banknotes, and phasing out old ones by substituting Bank of England notes for them, thus establishing the central-bank monopoly of banknotes such as it exists up to the present

[5] Cf. O'Brien 1994, Viner 1937.

day.[6] The Act, as Whale put it, followed the currency-school 'theory that banking ought to be separated from the control of the currency'.[7] Money was thus re-established as a legal matter of the polity, ultimately as the sovereign prerogative which it normally has been throughout history. In this respect the currency school anticipated the state theories of money from around 1900.

In the years after 1844, however, the Act was repeatedly suspended on the request of the Bank of England under pressure of the banks to print much more money for further fuelling the railway boom of the time – which promptly discharged into the banking panics and financial crises of 1847 and 1857. The Act was anyway circumvented from the beginning, because what it did not take into account, in spite of currency and banking scholars discussing it, was the role of bank credit and demand deposits, the 'cheque system' as it was called lateron. In the course of the 19th century demand deposits became used as a general means of payment in the bank-mediated clearing procedures among companies, government bodies, rich families, and banks themselves. The monetary importance of this mechanism was fully recognised only from the 1890s when the bank-credit theory of money was developed.[8] At that time the share of demand deposits had grown to about one third of M1 in advanced European countries. Today it has reached 80–97 per cent.

Nonetheless, currency-school teachings established, as a matter of experience and empirical fact, that modern money is fiat money which can freely be created. In the absence of proper regulation, free creation of bank money (banknotes, demand deposits) tends to be procyclically overshooting, temporarily also shrinking, and in final consequence without restraint. It thus results in an unstable and ultimately inflationary and asset-inflationary money supply which induces financial and economic crises.

Therefore, from a currency point of view it needs to be determined by law what shall be money in the sense of currency in general circulation, under whose control and responsibility modern fiat money shall be created, ac-

[6] Ryan-Collins/Greenham/Werner/Jackson 2011 42–45.
[7] Whale 1944 109.
[8] As e.g. in Mcleod 1889, Withers 1909, Hawtrey 1919, Hahn 1920; remarkable passages also in Schumpeter 1911 (e.g. 110) and von Mises 1928 (e.g. 81).

cording to what procedures, and who shall benefit from the seigniorage, i.e. the special profit that accrues from creating new currency.

This gives rise to the question of what is the best economic anchor to tie the currency to. At the time, the late metal age of money so to say, gold was seen as that anchor, notwithstanding backing of currency by government securities to a certain extent. Both currency and banking scholars also considered prices as a meaningful starting point, but they faced difficulties in documenting inflationary and deflationary tendencies, or depreciation and appreciation of the external value of the currency.

Lateron, from around 1900, with the presumption of an 'intrinsic' value of money fading away and statistics largely improved, economists tried to replace gold with the average price of some basket of commodities, be it raw materials, initially including gold, or the prices of consumer goods and services as standardised today in statistical consumer price indices. Important as these are, however, they are not suited as a master metre of the domestic and foreign value of a currency. Money buys commodities, but itself it is neither a commodity nor a basket of commodities.[9]

The quantum leap for the basket idea was to relate the existing stock of money to the entire national product, as formulated in similar ways by Fisher, Newcomb, Keynes, and others (equations of exchange, or equations of money circulation respectively).[10] The value of money equals its purchasing power, and this is ultimately derived from productivity, i.e. the economic product as indicated today by GDP as a first proxy. So the productive potential of an economy at full capacity, i.e. the *potential* of the *overall economic product,* became the economic frame of reference for a commensurate money supply, relevant to both quantity policy and interest-rate policy.

The actual need for money, it should be noted, also includes demand from the informal and submerged economy as well as from the financial economy. The question of sound proportions between the real and the financial hemisphere of the economy is still largely ignored by orthodox economics.

With respect to such questions, the main representatives of the opposite banking school, Tooke and Fullarton, invoked the law of money reflux and

[9] Wray 2012 264.
[10] Humphrey 1984, Fisher 1922 (1911), chap. II

what was known then as the real bills doctrine (real bills = bills of debt from creditworthy originators, i.e. good IOUs).[11] The real bills doctrine says, as long as bankers write out credit and print banknotes against 'real bills' at short notice, the money will surely be put to good uses, and upon maturity of credits granted the money (mostly banknotes) will be taken out of circulation (reflux), making sure there is no more money than there is 'real' demand for. The *quality* of available real-bills collateral will regulate the *quantity* of credit and banknotes created thereupon. They thought of bankers as honourable merchants of impeccable judgement. Interestingly, this is a moral and behavioural argument, not a functional one.

Torrens, as leader of the currency school, was himself basically a supporter of the real bills doctrine. Over time, however, he became disappointed with the realities of 'real' bills and with bankers' actual practices. According to Thornton, himself a respected banker of the time, it is ultimately impossible to reliably know in advance which bills will be 'real' and which ones will turn out to be fictitious. Equally, banks discounted long-term bills almost as willingly as short-term bills. Unforeseen events can throw over any calculation. The banking business itself, he observed, including the Bank of England, had a tendency towards over-issuing credit and banknotes for pure self-interest, eventually triggering banking crises, the more so because banknotes, for being accepted, had to be convertible (redeemable in silver coin or gold bullion).[12]

The banking school didn't maintain something like 'money doesn't matter', but their attitude actually was one of 'money doesn't matter that much'. According to Fullarton's law of reflux, inflation, credit bubbles and crises must have had other than monetary reasons, because banknotes were supposed to flow back to the banks on repay of credits. Should there be signs of inflation, people would immediately exchange paper notes for coin, and so any overhang would be choked off. Sure enough, such money reflux is not documented ever to have happened – though it has often been attempted in bank runs when long queues of people wait in vain in front of closed banks for getting their money back.

[11] Poitras 1998.
[12] Poitras 1998 pp.481.

As the currency school has stated: in real-world banking there is no limit on the amount of 'real bills' and bank money, except when the next crisis sets in and much of the good items goes bad. Correspondingly, the currency school's response to the real bills doctrine was the thesis of real bills fallacy: The believe in 'good bills', 'good uses', 'good bankers', 'perfect markets' and other features of ideal-world economics does not apply to real-world banking. To put it differently, the banking-school rationale is based on the axiomatic classical believe in the 'invisible hand' of markets, i.e. the medieval Scholastic theologem of God's wise manus gubernatoris unfailingly creating a harmonia mundi unless distorted by evil machinations. In neoclassical economics, the latter are normally projected onto government interference.

Banking scholars demand for the government not to meddle in monetary and banking affairs. For money is seen as a means of exchange which is spontaneously, or market-endogenously as it is called, created among traders. In the process money itself becomes a commodity. The banking-school's idea of money, and what is known today as the commodity theory of money, was lateron expounded in more detail by Menger 1871 and the subsequent neoclassical Austrian School. A commodity should be left to 'the markets'. With regard to money this is but another way of saying it should be left to the big banks and financial actors of the time while the government should limit itself to protect property and enforce private contracts. In this respect banking theory again reflects the unreflecting idea of any (neo)classical economics that markets would have some sort of absolutist private status beyond the state; something which dynamic market processes with far-reaching ramifications cannot and don't have as a matter of fact.

That is certainly true of the legal foundations of monetary and financial order. Currency-school type of thinking entails as a basic assumption that 'money matters' as it was put in the monetarism of young Friedman, keeping up views of his Chicago school teachers Simons, Knight and Viner who were behind the Chicago Plan of 100% reserve banking of the 1930s.

The monetary system is constitutive for the entire economy and comes with important consequences for state and society at large. Money governs finance, as finance governs the economy. This is certainly no linear causation. It entails feedback interdependencies. These, however, unfold around the

systemic hierarchy of money, finance and the economy.[13] Who controls the issuance of money and the main pathways of money flows, is in possession of the most powerful instrument of societal control besides law-based command powers backed by force.

Banking-school type of thinking, by contrast, tends to deny or belittle the power and importance of money. To bankers the power of banks has always been a non-issue. Again this is in line with classical economics where money is seen as an ephemeral 'veil' on the economy, just mediating business and trade, not being constitutive for them. In neoclassical economics this corresponds to the theorem of neutrality of money, i.e. changes in the money supply may change price levels but are not supposed to result in final changes of investment, employment and growth (production/consumption).

Another element of banking teachings is to deny the necessity, even the possibility, of separating the control of the currency from the banks' credit business. Starting from their own business practices, bankers tend to identify money with credit. In modern banking the act of issuing private banknotes and demand deposits in fact *is* an act of crediting. Who would contradict that credit and debt, assets and liabilities, are defining the banking business. From early modernity banks have operated on coin, bullion, credit letters, bills of debt, bills of exchange, credit claims and debit obligations of any kind, and have treated them as more or less interchangeable items, particularly if transferable and thus tradable rather than being tied to a specific person or firm. (Most recent development: transferability and tradability of banks' loan and overdraft claims on customers). To banking teachings it has never been important to conclusively determine what money precisely is. In banking this is actually not that important as long as depositors and other creditors of a bank hold still, debtors keep on paying, and the value of assets is more or less preserved so that solvency and creditworthiness is maintained.

The real bills doctrine is a mainstay of any banking theory from the 18th century up until today. It still is a core principle of central banking as well. The banking doctrine today is hardly different from what it was 200 years ago: Let banks freely create money (then banknotes, today digital money on

[13] Huber 2013 pp195.

account). Money and capital markets continually readjust and thus establish an equilibrium so that under conditions of symmetric endowments, information and competition banks cannot fail to create the optimum amount of credit (money), and financial markets cannot derail. No one ever asked how something like a self-limiting market equilibrium should ensue as long as there are no effective limits to commercial banks' creation of a *disproportionately* growing supply of money and financial assets, of credit and debt, as if defying the gravity of an economy's productive potential.

A prominent figure of banking-school teachings of the recent past was Fr. v. Hayek with his call for radical denationalisation of money, also known as free banking.[14] Fama's Efficient Market Hypothesis (EMH) can also be seen as a typical banking-school approach to money and finance of the recent past.[15] This time financial markets were seen as near-perfect information-processing machines which relentlessly absorb and price in any relevant information. This is similar to the all-superior swarm intelligence which Hayek ascribed to markets (contrasting this to unknowing central planners and dull bureaucrats).

For sure, markets in good order are a mechanism of self-organisation and mutual readjustment. Many modern markets, though, are oligopolistic and corporatist power structures, and this certainly applies to contemporary big banking and finance. Apart from this, markets can fail, just as governments and the citizenry can, not normally, but often enough as to create crises. For example, markets' judgement on risk and opportunity is often subject to serious mistakes; markets normally do not foresee major events; markets often follow rumours and vague moods, hypes and follies; they often rationalise afterwards what they are doing rather than having had solid reasons for doing it; markets quite often exaggerate over long periods of time and readjust only with great delay, when all of a sudden they go into breakneck reverse – as was the case with euro area bonds at untenably low interest rates and ever higher level of government debt over many years up until 2010 as banks suddenly had to confront their own vulnerabilities they had swept aside for many years.

[14] Hayek 1976, White 1989.
[15] Fama et al. 1969 , Fama 1970.

To conclude, the decisive difference between currency and banking teachings is not about a gold standard. It is on the question of who ought to be entitled to the prerogative of issuing and controlling a nation's money supply: whether the banking industry on a basis of private contracts (banking position) or a state authority, or state-controlled institutional arrangement based upon public law (currency position); including the question of whether money is seen as a common good and a sovereign state's monetary prerogative of constitutional necessity, or whether money is seen as a private commodity under private control.

Today more than ever this is a policy issue of the utmost importance. From a currency point of view the issue is as much a legal, constitutional concern of national monetary sovereignty as it is a question of financial stability and economic productivity. From a banking perspective it is a question of private law and financial profitability, giving lower priority to public finances and real-economic prosperity on the grounds that efficient markets could be expected to do the job automatically.

So 'currency vs banking' for once is a historical precedence. More importantly, however, it conveys a general frame of reference of lasting relevance to modern money systems. NCT and contemporary monetary reform initiatives clearly stand in the filiation of currency-school teachings and have a close relationship with 19th and 20th century chartal theories of money. Likewise, they carry the (partially burdensome) legacy of monetary reform movements of the interwar years such as the stamp scrip movement and the social credit movement, both of which aimed at full nationalisation of money.[16] An ancestry of academic origin can be traced through various approaches to 100% reserve banking of the 1930–40s.[17] NCT takes up the main structural components of previous currency-type teachings, and continues their legacy in up-to-date reformulations applying to today's still further modernised monetary and banking conditions.

MMT's positioning within the field of 'currency versus banking' is more complicated and actually contradictory. As explained in the following, it

[16] For stamp scrips cf. Gesell 1919, Fisher/Cohrssen 1934; for social credit Douglas 1920, 1924, Mairet 1934, Munson 1945, Hutchinson/Burkitt 1997.
[17] Soddy 1926, Currie 1934, Hart 1935, Fisher 1935, Simons 1948, Friedman 1948, 1959, 1969, Douglas et al 1939.

would be a mistake to portray MMT as a direct descendant of banking theory in the way free banking is. MMT declares itself to be a theory of sovereign currency, building upon a state theory of money. So, at first glance, it looks rather like another currency-school type of theory. It then however builds upon a special version of the real bills doctrine and treats the near-free creation of private bank money in the present system of fractional reserve as an indispensible centerpiece of a nation's sovereign-currency system – an unexpected combination, suitable for creating political confusion.

2. Analysis of the present money system

2.1 Money in the two-tier banking system. Defining money. Money as currency

[As to the functioning of fractional reserve banking, MMT and NCT share a number of views regarding credit creation, the role of deposits and savings, or the credit/deposit multiplier model.]

Today's monetary system rests upon a two-tier banking structure which comprises three groups of actors: (1) central bank, (2) banks, (3) nonbanks; the nonbanks composed of nonbank financial actors (e.g. funds, insurance companies), real-economic businesses and companies, government, and private households. MMT may not fully endorse this setting because according to MMT government, or the state respectively, is supposed to play a fiscal *and* monetary role at the same time. Treasuries and central banks are said to belong in one category dubbed 'government' (discussed in chapters 3 and 4).

In this place one will agree that the central bank stands for the first tier of the banking system in any case. It carries the interbank circulation on the basis of reserves, i.e. central-bank money on operational accounts run at the central bank. Normally these are bank accounts, but as far as central banks continue to run government accounts, these are part of that circuit too, particularly in the US and the UK. In many other countries a large part of government accounts is run at private banks.

The second tier rests upon the banks and carries the public or nonbank circulation on the basis of demand deposits, i.e. non-cash bank money. To the extent that daily interbank clearings are not settled in reserves but taken on interbank mutual current accounts, these are also part of that circuit.

The two circuits are separate. Reserves and demand deposits cannot mingle. Nonetheless the two circuits are co-related—first, by clearing nonbank and interbank transactions the net balance of which has at some final stage to be settled in reserves; second, by exchanging cash out of and back into non-cash circulation. Cash, at latest since the end of the metal age of money, is no longer constitutive for a modern money system. Today, money at source is digital money in the form of accounting data entered into current ac-

counts, thus existing in the original and constitutive forms of non-cash central-bank reserves and bank demand deposits.[18]

Money, or currency respectively, should not be confused with methods of payment such as cheques, credit and debit cards, and other arrangements facilitating payment.

In the pyramid of monetary items, government coin (a small remainder, sold on demand to the central bank for reserves) and central-bank money (reserves and banknotes) are the 'high-powered' money base (M0)[19]. This is followed by demand deposits, or transaction deposits and any other immediately available type of deposit, i.e. liquid money on bank account (M1 in Europe, broad money M2 in the US). M0 is legal tender (lawful money) 'for all debts, public charges, taxes and dues'; liquid deposits in M1/M2 are not, not by law, in practise however, effectively yes. All other monetary items, such as e.g. money fund shares, non-instantly available savings and time deposits, secured items, do not normally serve as a means of payment. They represent 'near-money', i.e. short-term capital, or long-term capital (such as commercial and bank papers, bills and bonds, stocks and other securities). Transfer of capital or of any other property in settling an important transaction happens, but represents an exception to the rule.

Accordingly, money is what serves as a ubiquitous means of payment in general and regular circulation. As Lerner stated quite simply: 'Money is what we use to pay for things'.[20] Furthermore, the term *money* is interchangeable with the term *currency* in the sense of current means of payment. The still prevalent understanding of 'currency' just includes cash on hand (coin and notes), and maybe also reserves as MMT says.[21] But following the above reality-based definition, currency as a matter of fact also includes bank money on account or on mobile storage media. Bank money in fact 'has gained currency', so to say, it *is* the major currency today.

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[18] Mosler 1995 19, Huber 2013 17.
[19] In this context, the U.S. 'trillion dollar-coin solution', discussed once again when coming close to the 'fiscal cliff' in December 2012, is highly interesting. With such a mega coin the US treasury would redeem a corresponding amount of government debt held by the Federal Reserve. The mega coin option is lawful according to Sec. 8 of the US Constitution, but would nevertheless be a significant rupture with today's banking practice of loaning, rather than spending money into existence.
[20] Lerner 1947 313.
[21] Wray 2012 xv.

Traditionally, bank money (demand deposits) is called a 'money surrogate'. This is a normative and legal distinction which sets bank money apart from legal tender. The latter refers to money issued by a treasury or central bank and is rightly seen as a nation's legal base of sovereign money. One cannot deny, however, that bank money today constitutes the lion's share of money in general use, 80–97 per cent of liquid money depending on nation. One would rather have to question why and how the banking sector has come to enjoy the sovereign privilege of creating currency, thus holding itself a position of sovereignty. (More on this in 2.5–6 and 3.4–5).

In discussing money, credit and debt one must be careful not to talk past one another for purely semantic reasons. Terms involved have several denotations at once. Money, for example, is said to fulfil three functions:

a. as a unit of account. This determines the monetary standard of a nation-state or community of nation-states, e.g. dollar, euro, yuan etc., and its subdivisions, e.g. the dollar divided into ten cents, the yuan into ten jiǎo. This allows to ascribe economic value or prices to things.
b. as a means of payment. This specifically refers to the monetary tokens used in payment of any debt, i.e. today, money on hand (coins and notes of varied denominations) as well as money on account (reserves in inter-bank circulation, demand deposits in public circulation).
c. as a storage of value. Traditionally this refers to money hoards such as the iconographic treasure chest, the piggybank or the bundle banknotes under the mattress. In modern banking it refers to savings deposits and any other items in M2/M3 as well as all securities beyond. These are monetary assets.

It should be noted that a, b, c are not three functions of the same thing, but three different things. It would help to have a single term for each function. Common terms though are overlapping. 'Money' is used in any case. 'Currency' is used for a and b. As explained, currency must now also include money on bank account (demand deposits). 'Capital', short and long term, mainly refers to c but sometimes also includes b. As will be discussed in chapter 3 something similar applies to the meaning of 'credit' and 'debt'.

2.2 Credit and deposits, investment and savings. Primary and secondary credit

Both NCT and MMT as well as most postkeynesians hold that credit creates deposits and not the reverse.[22] Bank credit is not funded by on-loaning customer deposits. Banks do not in fact operate on the basis of customer savings or time deposits. Banks need to have liquid assets, i.e. excess reserves and vault cash. Liquidity is the key.[23] Customers' savings and time deposits, by contrast, still are a liability, not an asset of a bank. They represent deactivated demand deposits, i.e. bank money (demand deposits) taken out of circulation. This does not add to the liquid assets of a bank. However, it shields a bank from the liquidity risk of unforeseen outflows and resulting defaults on reserves and cash.

There is a distinction between primary and secondary credit. Primary credit creates fiat money, secondary credit lends such money on. In the present system there are two different sorts of primary credit: central-bank credit which creates reserves, or their equivalent in cash, and bank credit which creates demand deposits. Central-bank credit is created 'out of nothing', bank credit 'almost out of nothing' since there are fractional reserve requirements as will be discussed more below. Systemically the first ranks above the latter; in everyday practice, however, bank credit is pro-active and fractionally re-financed through re-active central-bank credit.

When a demand deposit in M1 is deposited in M2/M3, thus becoming non-available at short notice, this does not represent secondary on-lending, but deactivating of deposits at low interest, allowing for and actually necessitating additional bank credit at higher interest. Banks in point of fact never on-lend customer deposits, they simply cannot for technical reasons (split circuits). Banks always create primary credit. 'Bank lending', as Fullwiler/Kelton/Wray put it, 'is never constrained by the deposits that flow into banks – since banks create deposits when they lend'.[24]

When, though, customers grant a loan to other nonbanks, or invest their demand deposits in capital funds or directly in shares and securities of any

[22] Mosler 1995 11, Werner 2005 189, FKW 2012 pp1–4, Ryan-Collins/Greenham/Werner/Jackson 2012 12–14.
[23] Schemmann 2011b pp30.
[24] Fullwiler/Kelton/Wray 2012 2.

kind, this represents secondary credit (which technically nevertheless involves re-activating of de-activated demand deposits). A transfer of deposits through nonbank secondary credit can serve to fund primary uses, for example when they absorb a certain part of initial public offerings of stocks or bonds. Most often, however, secondary credit flows into secondary, literally 'second-hand' paper investment.

Primary credit creates deposits, and banks neither do need deposits nor in fact can use them for making out credit. If savings have an important role to play, it is in *obtaining* rather than in *funding* primary credit. Debtors need to be seen as creditworthy and solvent, and the main criterion of creditworthiness and solvency is to possess valuable assets which can serve as collateral. The collateral, however, does not fund a credit but just stands bail for it. As a result, an economy basically does not need savings to be able to invest. Investment can be pre-financed on the basis of credit and deposit creation 'out of nothing'. Some of the earned income or interest-borne income *resulting* therefrom can then be converted to savings.[25] Macroeconomic modelling which includes 'investment = savings' as a core component is inadequate in this respect.

2.3 Multiplier model. Credit creation is led by the banks rather than the central bank

Both NCT and MMT consider the textbook multiplier model – called credit or money or deposit multiplier – to be misleading.[26] The multiplier model assumes that a central bank controls the volumes of banks' credit and deposit creation by requiring a minimum reserve to be held on every bank deposit. In the euro area the minimum reserve rate is at present 1 euro on each 100 euros of liable deposits. In the United States the obligatory reserve requirement is 10% (with exemptions and vault cash allowable). The minimum reserves on central-bank account are now interest-bearing, i.e. the costs of having to hold such reserves are mercifully low. Minimum reserves are nevertheless non-available under any circumstances. They are not a li-

[25] Werner 2005 192, pp174, Huber 2013 51–53.
[26] Goodhart 1984, Ryan-Collins/Greenham/Werner/Jackson 2012 18–25, Huber 2013 42–47, Jackson/Dyson 2013 pp75–80, Wray 2012 80, 112, Mosler 1995 5–6.

quidity safety buffer, as is often assumed, but lie idle and are meant to be an instrument for restricting banks' credit and deposit creation.

In some textbooks the multiplier model starts with a given amount of existing bank deposits, wherever these might have come from. Credit extension then is described as a recurrent process of lending out that amount of deposits in the sense of a recurrent secondary credit minus the minimum reserve required. As explained above, this is ill-conceived from the outset. Commercial banks always make out primary credit. Only nonbanks and investment-'banking' departments deal in secondary credit. Commercial banks cannot on-lend customer deposits. Credit and deposit creation is an ongoing process of creation 'ex nihilo', and extinction on repay. Banks create any credit at discretion, with and without minimum reserve, as long as they have or can obtain enough excess reserves and cash for daily settlement of payments, which in the last instance is to say, as long as the central bank provides a sufficient supply of reserves on demand.

More appropriate variants of the model assume there is a given amount of central-bank money M0, i.e. reserves and notes. On any credit and deposit which the banks extend they have to reserve a fractional amount, the minimum reserve, as set by the reserve rate of 1, 2 or 10 per cent. The amount of extendable credits and deposits Cr | Dp than is a corresponding multiple of M0, with the maximum resulting as the reciprocal value of the required minimum reserve: Maximum Cr | Dp = M0 (1 – minimum reserve). The banking sector, though, cannot fully exploit the maximum since it needs to have some excess reserves available for final settlement of payments. In practice excess reserves represent just small amounts.

The multiplier model in this or a similar variant is certainly consistent. And yet, as often in economics, the model misses one or another important aspect of reality. The multiplier model could be real, if the central bank kept M0 constant. But in fact it doesn't, and doesn't intend to, and rightly should not. Today, central banks always comply with the banks' demand for reserves by re-acting to the actions of the banking sector and re-financing to a fractional degree what banks have decided to credit and purchase.[27]

[27] Wray 2012 124, 204, Huber 2013 pp48.

> 'In the real world', as Mosler states, 'banks make loans independent of reserve positions, then during the next accounting period borrow any needed reserves. The imperatives of the accounting system require the Fed to lend the banks whatever they need. ... A central bank can only be the follower, not the leader when it adjusts reserve balances in the banking system'[28]

In actual fact banks' creation of credit and deposits is the initial and primary proviso. Deposits contribute by far the major part to the entire money supply. Moreover, the banks' pro-active credit creation in effect determines the *entire* money supply, literally 100% of it, because coin and notes are not *spent* into circulation at source, but are exchanged out of and back into money *credited* on account. Central-bank reserves are not created pro-actively either, but are re-actively credited on bank demand—re-financing a mere fraction of what banks have decided to put into circulation. On 100 additional currency units of demand deposits written into current accounts, the banking sector in the euro area needs at present just about 2.5% in central-bank money, of which 1,4% are cash for the AMTs, 0,1% excess reserves for final settlement of payments, and 1% idle obligatory minimum reserve.[29]

All central banks today avoid leaving 'their' banks left with a shortage of reserves. There can be of course different ways in which central banks proceed. For example, in its times the German Bundesbank practiced partial allotment at a variable rate besides full allotment at a fixed rate. The first method supplies slightly less than the banks had declared to need, the reserves then going to the bidders that offer the highest interest. The latter method fulfils any demand from who is prepared to buy at the set interest rate. Since several years the ECB routinely offers full allotment at very low interest (at about 0–1 % since the start of the crisis).

Constraints on bank credit creation certainly exist, e.g. preparedness of non-banks and banks alike to go in debt. Other factors that can have a certain restrictive effect are equity requirements (e.g. leverage ratio) and quality standards of discountable collateral. Nevertheless, the banking sector will basically always be able to generate enough equity and quality collateral by itself. This is just a matter of time. The 'masters of the universe' create theirs

[28] Mosler 1995 5.
[29] Huber 2013 23–25.

perhaps not in one week, but certainly in a couple of months or a few years. Those restrictions are effective within the period of time necessitated to reach required ratios upon introduction, but of little effect thereafter. The most important restriction is that all banks expand their balance sheet roughly in step so that outflows and inflows among banks are just about offsetting each other. Otherwise those banks that were individually extending too much credit too quickly would run a liquidity risk, possibly even a solvency risk when, as to obtain liquidity, they would have to sell too many assets or take up too much debt.

2.4 Credit creation through purchase of assets. Genuine and interest-borne seigniorage

NCT and MMT scholars seem to be the only ones so far to have pointed out that primary credit and deposit creation not only takes place when banks grant loans and overdrafts to customers. It equally happens when banks purchase assets.[30] Asset purchases in question are

- fixed-term bills and bonds originated by government or companies
- stocks or similar securities with no specified maturity
- real estate and other tangible and intangible assets.

For purchasing such assets the sellers do not even need to have a current account at the bank concerned. Payments due from such purchases add to the same stream of payments to be cleared and finally settled as payments on behalf of own customers. It needs to be seen that most of the overnight liabilities in a bank balance sheet do not represent the counterpart of own credit entries (most of these drain away through customer payments), but represent the counterpart of credits written out by other banks, and received from a bank through incoming payments which customers of this bank receive from other banks' customers.

All assets purchased are entered into one or another asset account. This, by the way, does not apply to paying for labour and services, for these have to be entered in the books against the own equity account. All such payments

[30] Mosler 1995 pp18, Ryan-Collins/Greenham/Werner/Jackson 2012 64, 137, Seiffert 2012, Huber 2013.

only reduce a bank's liquid assets (reserves, cash) to the fractional extent to which these fall due for final settlement.

A special case in this respect are government bonds if these cannot be transacted via current bank accounts but have to be paid for with reserves onto a central-bank government account. This means that banks have to finance such credits or purchases at a reserve rate of 100%. The same applies in certain countries to large taxpayers who, different from small ones who transact via government bank accounts, pay their taxes directly to a main government account at the central bank. However, this does not reduce to an important degree the banks' ability to create money. Governments do not save money but immediately spend what they receive. Reserves obtained from the banks are thus immediately transferred back to them. Again, though, this somewhat reduces the banks' profit margin from this type of business.

All of the assets bear the same liquidity and solvency risk with regard to the afore-mentioned constraints. Equally, most of the assets can generate income (interest, dividend, rent) and they come with a chance of appreciation as well as a risk of depreciation in market value.

Yet there are significant differences too. These are rooted in maturity:

- Fixed-term bonds basically follow the same mechanism as loans to customers. Upon maturity the reserves or deposits involved flow back so that the principal is cancelled.
- Stocks once also were fixed-term, but over time they mutated into 'eternal credit'. They only cease to exist in bankruptcies, or when paid off or converted into new other stocks in connection with mergers and acquisitions.
- Similarly, real estate, bullion, works of art, and other tangible and intangible assets, except patents, but including equipment, do not normally have an 'expiry date'. Furniture and equipment, of course, wear our or become obsolete, and are written down over a given period of time. Buildings, artworks etc., however, can be maintained for very long times. Real estate possibly combines long-lasting and growing capital value with high use value.

Howsoever, the differences in maturity result in a different 'life expectancy' of the deposits that were created through such purchases. Loans and bonds have a fixed maturity, thus principal and deposits are cancelled upon repay (reflux). With regard to stocks and real estate, however, there is no maturity and they are not normally redeemed. Thus there is no repay and extinction of the deposits that were created upon the purchase of stocks and real estate, artworks, or similar. This applies as long as a bank concerned keeps on holding the assets.

Furniture and equipment are written down over five or ten years, they thus disappear as valuable assets. But the deposits created when they were purchased do not flow back, they stay in circulation. The same holds true when securities depreciate or become worthless. In this case again the deposits created continue to exist 'forever'.

Deposits created through a bank purchase of assets without maturity can nevertheless be cancelled, and this happens when a bank sells the assets involved to nonbanks. Nonbanks pay with deposits and these 'disappear' in the clearing process of incoming and outgoing payments.

It thus turns out that the banking privilege of primary credit creation actually involves two different types of extra profit, so-called seigniorage which is the special profit which accrues from creating credits and deposits. One is *interest-borne seigniorage*. It accrues from loans, overdrafts as well as bills and bonds in the form of interest earned on the principal that is cancelled upon repay. Financial studies only refer to interest-borne seigniorage of central banks. Interest earned by banks is not considered to be seigniorage— though in fact it is because bank credit, in contrast to secondary on-lending of already existing deposits, is primary credit created 'almost out of nothing'.

Interest-borne seigniorage of banks is difficult to calculate because of the 'almost' part. It is an extra margin which derives from the difference between the entire interest a bank would have to pay on taking up 100% of the money it loans or spends, and the interest on the fractional part which it effectively has to refinance. To put it differently, the interest-borne seigniorage of banks equals the financing costs which the banks are able to avoid on the biggest part of created deposits thanks to their privilege of primary credit creation.

One can argue against the existence of such an extra margin profit on grounds of banking competition. The advantage is basically equal to all banks, even though for large banks it is relatively bigger than for smaller ones. If effective, competition can be expected to pass on the refinancing advantage to the customers in the form of lower interest rates than otherwise would result. This, though, needs deeper investigation against the background of oligopolistic power structures in the banking industry. Moreover, banks actually need to pay interest on all deposits in order to prevent customers from removing their deposits and thus a disproportionate amount of reserves to other banks. In any case, the extra advantage is not a positively indicated income that could be read out in the profit account. Instead it represents financing costs avoided.

The other type of seigniorage is *genuine seigniorage*. It dates back to traditional society and the beginnings of modernity when the rulers of a territory, warlords, kings, emperors and other feudal seignieurs, had the sovereign prerogative of minting coin. The difference between the cost of production and the purchasing power of the coin resulted in this genuine type of seigniorage. Coins were not interest-bearing since they were not *loaned* but *spent* into circulation. They kept circulating over all territories as long as they were not hoarded, or 'decried' by the rulers (recalled for reprocessing)[31], or, in times closer to ours, hided in the hay from being seized by tax collectors.

Today, genuine seigniorage is thought to exist only residually, benefitting a state's treasury that still has the right of coinage and sells the coin on demand to the central bank for reserves. It is overlooked, however, that central banks as well as banks actually benefit from a modern variant of genuine seigniorage when they buy financial, tangible and intangible assets with no specified maturity. These items are bought with deposits from primary credit creation at no or low production costs and low transaction costs. The banks though enjoy an asset advantage of 100% as long as they keep the assets and the asset value can be maintained. Some part of the bank money created is extinguished when such assets are sold to nonbanks, while the

[31] Reprocessing meant smelting the coins down and remint them into more coins of the old face value, thus each coin containing less silver. This can be seen as a kind of taxation in times when taxes in a modern sense did not exist yet in the occidental world – except the tithe to ecclesial landlords which normally, however, was delivered in kind rather than paid in coin.

remaining part of demand deposits continues to exist 'forever' wherever they happen to flow to, just as sovereign coin in former times.

2.5 Do interest-rate policies compensate for ineffective quantity policies?

According to Sargent 'it has often been argued that the proper function of the monetary authorities is to set the interest rate at some reasonable level, allowing the money supply to be whatever it must be to ensure that the demand for money at that interest rate is satisfied.'[32] Sargent understood this as a reformulation of the real bills doctrine. Whether or not this is correct, it is the doctrine held by MMT.

From an NCT point of view, this is one of the irritating elements in MMT. MMT does not explicitely introduce base-rate policy as a substitute for ineffective quantity policy. It might even seem as if MMT treated base-rate policy as an end in itself. The central bank provides reserves to the banks, or absorbs reserves through open market operations, as may be necessary to maintain the base rate, or the interbank rate respectively, which the central bank sets as a target. In particular the central bank buys government bonds from the banks in order to provide reserves and bring interbank rates down, and sells government bonds for absorbing reserves and driving interbank rates up.[33] Nicely designed market-compatible mechanism. But what is it for? Fullwiler/Kelton/Wray deem central-bank interest-rate policy of such extraordinary importance that to them it is the main argument for a central bank always to provide the reserves banks demand:

> 'Any central bank that administers an overnight interest rate target must supply reserves on demand—for otherwise it would lose control of the interest rate. In the postkeynesian literature, it is said that central-bank policy always 'accommodates' the demand for reserves. Given that this demand is highly interest-inelastic, there is little room for 'error' by the central bank. ... Modern central banks operate with an overnight interest rate target and accommodate bank demand for reserves in order to continuously achieve it'.[34]

[32] Sargent 1979 p92–95, cited in Poitras 1998 480.
[33] Mosler 1995 2, pp5, pp21, Wray 2012 124.
[34] Fullwiler/Kelton/Wray 2012 2.

One is attempted to think that MMT yet sees the base rate as the central control lever, in that the actual demand for reserves is assumed to clear the market at that interest rate. According to Mosler, and fully in line with contemporary common wisdom, the overnight interest rate indeed 'indirectly determines the quantity' of the money supply and 'is the primary tool of monetary policy'.[35] The matter is puzzling, though, as MMT assumes the demand for reserves to be 'highly interest-inelastic'—an assumption I fully endorse. But if demand for reserves is not that sensitive to interest, what then is the purpose and the alleged importance of setting a base rate and achieving an interbank-rate target for reserves such as the Fed Funds Rate in the U.S. or the EURIBOR and LIBOR in Europe?

Is it aimed at increasing or decreasing a central bank's interest-borne seigniorage, or draining on or adding to banks' profits? This certainly results to a certain degree from the policies pursued, but can hardly be seen as a functional rationale for interest-rate policies. What else then can a functional rationale of a central bank interest-rate policy be if not in fact to serve as an instrument of indirect control of the quantity of banks' credit and deposit creation, as most economists and 'the markets' assume. As any interest rate and any price, the base rate can of course be seen as a control variable. But then the next question is what it does control to what extent. Is a central bank's base rate actually an independent variable, or is it not in fact a dependent variable at the same time, readapting to what is going on rather than being a contributive factor to bringing it about?

Most importantly: How should a base rate and interbank rate on about 2.5% (Europe) or 10% (USA) of the money supply transmit itself onto the 100% it is supposed to control? Interest rates on reserves certainly alter the final margin profit of banks, and this is why they react to it even though at quite limited elasticity. But as long as interest margins and other profits which banks can make from creating credit are sufficiently higher than the fractional refinancing costs they have to bear, they will certainly not restrain from creating credit and deposits. Under this aspect the alleged all-determining impact of the base rate appears to be mystifyingly exaggerated. Interest-rate policy is a weak substitute for the loss of monetary quantity policy. One

[35] Mosler 1995 2.

may ask whether the base-rate lever is not just another piece of model-world economics, in glaring contradiction to the perpetually overshooting, inflationary and above all asset-inflationary credit creation of recent decades.

The media recurrently come up with a standard criticism of banks' interest-rate policies. When the central bank raises the base rate, banks take this as an excuse for promptly raising customers' borrowing interest. But when the central bank lowers the base rate, banks are reluctant to follow suit. The public, and quite many experts, think that interbank rates would have a direct and comprehensive transmission effect on banks' loan and deposit rates. But under fractional reserve banking rising base and interbank rates (relevant to refinancing just about 2.5–10% of the money supply) do not represent a compelling cost increase, nor do falling interbank rates represent a tremendous cost relief. MMT ultimately does not provide an explanation for the key role which the base rate plays in its system. The message it conveys nevertheless is that the central bank has things under control, and banks do what they are supposed to.

2.6 Do we have a currency or a banking regime?

Today's two-tier banking system is a mixed system with separate but complementary roles of central bank and banks, and a mixed money supply consisting of central-bank money (including issue of government coin) and bank money (demand deposits). In terms of the currency vs banking paradigm, one would consider this to be a mixed currency and banking system, including a certain 'division' of initiative and control between central banks and banks.

Against this background most economists still believe in a central bank's control of the banks. To put it differently, they believe in the primacy of a central bank's sovereign currency over bank money. MMT stays within this consensus. Bank money (broad deposit money) is seen as a kind of leveraging of central-bank money. This, however, is contradicting MMT's observation that central banks do not restrict their supply of reserves to banks and thus do not exert control over banks' ability to create credit and deposits. MMT in turn declares monetary quantity policy not only to have been abandoned in the present system of fractional reserve banking, but to be irrele-

vant anyway.[36] Instead, MMT insinuates base-rate policy as a mysteriously effective instrument of a central bank's control over money and banking.

Wray sets forth a thesis of 'integration of creditary and chartalist (state money) approaches', an amalgamation already present in Mitchell-Innes.[37] In reality such 'integration' does not exist. It can of course be conceived of: If there were a full sovereign currency system with all primary credit originating from the treasury or the central bank, and banks acting as upstream-downstream intermediaries of secondary credit only, i.e. no longer creating primary credit themselves, than this actually would represent a system of chartal credit money. Whether it would be desirable in such a variant is another question (3.6).

Under fractional reserve banking, however, any such idea is unreal. An attempt to 'integrate creditary and chartalist approaches' then means nothing but attempting a synthesis of currency and banking doctrine—which does not work and comes out as banking doctrine. As will be discussed below, according to MMT the important things for having a 'sovereign currency' are to determine the national unit of account and to levy taxes denominated in that standard (3.1, 3.5). The actual issue of the money is not deemed to be of importance; and should there be any doubt, MMT has it that treasury and central bank together would in fact create the money in circulation, using the banking sector as a helpful intermediary between the government and the central bank, as well as between the government and the taxpayer (3.8).

Bank credit creation as a result of accumulation of government debt and foreign-account deficit certainly is an important contributive factor to determining the money supply today. But MMT's reinterpretation of this obvious connection as representing the government's sovereign control over the money system is rather audacious. This may be the weakest, and certainly the most affirmative part in MMT, obscuring the overwhelmingly dominant position of the banking industry in the present money system.

To NCT, by contrast, the actual situation represents a near-complete reversal of control in the two-tier banking system to the benefit of the banking industry, a situation that might even be described in terms of capture: mone-

[36] Wray (ed) 2004 257.
[37] Wray (ed) 2004 11, pp255, pp259.

tary capture. The big players in banking, now also known as systemically relevant banks, have usurped most elements of the monetary prerogative and have turned government and central bank alike—voluntarily or not—into banking agencies. Pro forma we have a currency regime which de facto has mutated into a banking regime. As explained in 2.3 the initiative lies with the pro-active banking industry and the central bank re-acts by fractionally re-financing whatever banks demand. The central bank may 'accommodate' at somewhat higher or lower interest, coming either as a nuisance or delight to the banks, but in no way impairing their ability of credit creation and total control of the public money supply, including cash. If systemically relevant banks threaten to fail, the central bank stands ready to lend a helping hand, acting as the 'bank of banks'. As a consequence, there is no control in a proper sense, since, as explained in chapter 1 on the currency versus banking paradigm, money and capital markets will not reach a state of equilibrium as long as credit and deposits keep bubbling at source depending on banks' discretion. Different to what 'neoaustrians' and free banking advocates believe, the present situation is actually farther from government or central bank control and much closer to Hayek's private ducats dream than they are prepared to concede.

What 'neoaustrians' and Mitchell-Innes have in common, in turn, is to blame state interference if fractional reserve banking doesn't work. In one passage, to my knowledge never cited by his followers, Mitchell-Innes defended the notion of 'sound money' against dysfunctionally overshooting credit and debt creation. Responsible, though, he did not hold the banks but the government, and this, surprisingly, not for incurring too much debt but for setting fractional reserve requirements. 'The effect of this law', Mitchell-Innes wrote, 'has been to spread the idea that the banks can properly go on lending to any amount'.[38] That is what all believers in 'free banking' pretend. As if banks behaved differently at a reserve requirement of 0 per cent instead of 1 or 10 per cent.

[38] Mitchell-Innes 1914 167 | 74.

2.7 Dysfunctions of fractional reserve banking

In MMT there is not the slightest concern about dysfunctions of fractional reserve banking. Rather one will find approving remarks about how well the system is run and how smoothly it works. This stands in contrast to NCT's thesis of loss of control in the two-tier fractional reserve system and its capture by self-serving banking interests. This is highly relevant since, as expounded in chapter 1, money governs finance, as finance governs the economy. 'The root cause' of banking and financial crises, as also Ferguson concludes, 'must lie in the evolution of money and the banks'.[39] Money creation, the quantity of money in proportion to GDP, and the basic pathways of newly created money are decisive for what happens in finance and the entire economy.

MMT never questions if today's banking privilege of creating money 'almost out of nothing' is really that functional or efficient as banking doctrine has it, not to mention questions of constitutional law and moral legitimacy. The list of dysfunctions of fractional reserve banking include

- non-safety of bank money. In a banking crisis and ensuing bank runs money can literally disappear because of the dysfunctional identity of bank credit and money.
- inflation and asset inflation through recurrently overshooting credit creation, and periodically impending deflation caused by shrinking credit and money supply in a crisis.
- thus pushing up, or depressing, business and financial-market cycles far too high above, or below, critical levels through direct leveraging up speculative investment, and through subsequent deleveraging any investment in order to pay back debt incurred. Banks' credit and money creation recurrently ends up getting trapped in over-investment and over-indebtedness of too many actors involved, particularly government and MFIs themselves.
- distorting income distribution to the benefit of financial income and to the detriment of earned income through disproportionately building up financial assets, whereas a realignment of such assets in times of crisis again hurts the real economy and earned income.

[39] Ferguson 2008 62.

These functional shortcomings already were discussed in the literature on 100% banking of the 1930s as well as in a related contemporary follow-up literature.[40] They are being analysed and empirically documented in a growing corpus of NCT literature.[41] Many aspects of this are also present in the literature on credit bubbles and financial crises.[42] From 1970 to 2007 425 financial crises have haunted the world, of which 145 systemic banking crises, 208 currency crises, and 72 sovereign debt crises.[43]

MMT of course doesn't deny financial problems and crises. It nonetheless has had a marked tendency to neglect them as a 'topic beyond our scope'. Immanent crisis-proneness of fractional reserve banking is actually *not* part of MMT. Instead, MMT has depicted an almost idyllic bank world. 'Default risk on a bank's IOUs is small', 'banks know well how to assess creditworthiness', banks master risk management, render good service etc.[44] Banks quite often render good service indeed, also in a fractional reserve regime. But much too often they do not, and turn out to be a burden on the common good.

MMT's benevolent belief in banks was present already in the 19th century banking school as well as in MMT's forefather Mitchell-Innes in 1913. He praised fractional reserve banking and honourable merchant bankers: 'Banking shall be carried on by honest people … and the note issue may be left to take care of itself. … No law is required; the whole [banking] business regulates itself automatically'.[45] So, in spite of MMT's endorsement of a state theory of money and what it takes for 'sovereign currency', MMT clearly does not stand for a contemporary currency paradigm. Quite to the contrary, MMT attests itself as an almost unreserved banking doctrine, adding to this

[40] Fisher 1935, Hart 1935, Simons 1948, Allais 1977, 1987, Hixson 1991, Gomez 2008, 2010, Benes/ Kumhof 2012.
[41] Huber/Robertson 2000, Zarlenga 2002, AMI 2010, Robertson 2012, Huber 1999, 2013, Dyson/Greenham/Ryan-Collins/Werner 2010, Ryan-Collins/Greenham/Werner/Jackson 2012, Schemmann 2011a+b, 2012, Dyson/Jackson 2012, Sensible Money 2012a+b, Positive Money 2011, Robertson 2012, Verein Monetäre Modernisierung 2012, Yamaguchi 2012.
[42] Kindleberger 1993, 2000; Minsky 1982a+b, 1986; Ferguson 2008, Reinhard/Rogoff 2009, Schularick/ Taylor 2009, J. Galbraith 2008.
[43] Laeven/Valencia 2008, Reinhart/Rogoff 2009, Lietaer et al 2012 49–52.
[44] Wray 2012 pp276.
[45] Mitchell-Innes 1913 405, 407.

a peculiar thesis of banks as willing 'intermediary' hands helping the government to create and spend its own currency (3.8).

Ongoing criticism of MMT as well as the realities of the banking and debt crisis since 2007/08 may have had their impact. MMT started to refer to Minsky's disequilibrium theory of financial markets and declared Minsky to be another 'forefather' of theirs.[46] The crucial point in this however is that credit bubbles are not traced back to their monetary origin, i.e. near-free and overshooting credit and debt creation by the banks who 'co-operate' in creating all sorts of bubbles—real estate, stocks, derivatives, not least sovereign bond bubbles. When it comes to explain financial crises, MMT refers to the same explanatory patterns as mainstream economics does, for example referring to deregulation having gone too far, lack of 'institutional ceilings and floors' such as supposedly inadequate equity requirements (Basle rules), reckless risk taking (misbehaviour) and others more.

In particular MMT now also refers left-wing orthodoxy, i.e. financialisation, or money manager capitalism (Minsky), as the global forms of contemporary financial capitalism.[47] No doubt that new forms of financial-market capitalism have developed and deserve critical analysis. So far, however, financialisation theories fall short of the mark in that they misjudge the role of the monetary system. They try to explain everything on grounds of exploitative profit seeking and cumulative effects of compound interest over long periods of time. They fail to systematically take into account that most interest-bearing claims are primarily created or purchased 'almost out of nothing' by the banking industry.

Accordingly, solutions to financial crises are looked after in re-regulation of financial markets and in fiscal measures (taxes on financial transactions, wealth, and inheritance). In addition, MMT calls for compensatory government deficit spending. In taking up a Minsky new-deal type of proposal, government should act as 'employer of last resort', creating earned income for everybody and compensatorily complementing the central bank as 'lender of last resort' for the banks. Financial markets certainly need to be re-regulated in some way. Compensatory labour-market measures may also be

[46] Fullwiler/Kelton/Wray 2012 9, Wray 2011 pp.11.
[47] Cf. Hein et al. (eds) 2008, Windolf 2005.

taken, even though these do not contribute to solve underlying structural problems. But any such approach will basically be insufficient as long as it misses out the root cause of banking and financial crises, i.e. fractional reserve banking. The pivotal role of money and banking in causing financial crises is blinded out, including the role of deficit-borne government bond bubbles. MMT does not see why monetary reform might be relevant.[48]

In NCT's analysis, just to the contrary, it is the banks who hold on the reins—and banks from around 1980 increasingly resorted to casino-style *highly leveraged* investment banking, disregarding 'boring banking' at the service of people and companies. If the banks want to print money, or to put it 'paperless', if they want to key credits into current accounts, there is almost nothing outside the banking sector to stop them as long as they do it about in collective step. In as far as the banks do this in ever growing disproportion to GDP, this will eventually result in a crisis as a result of financial over-investment and over-indebtedness. In the U.S. during the pre-crisis decade up to 2008 broad money M2 grew by 80%, but nominal GDP (including consumer price inflation) much less by 45%, whereas real GDP (price-deflated) just grew by 16%. This is to say that about one fifth of the addition to the money supply served real economic growth, while a good third went into consumer price inflation, and the biggest part, 44% of the increase, went into asset inflation.[49] In Germany from 1992 to 2008 M1 grew by a staggering 189%, nominal GDP by 51% and real GDP by 23%. So only about an eighth accounted for real economic growth, another eighth for consumer inflation, but three quarters of the additional money supply went into financial-market exuberance.[50]

[48] Wray 2012 280. Only once Wray casually mentions 100%-reserve (79) – and rejects it, en passant, for it would increase banks' refinancing costs and thus the general level of interest. He does not detail that disputable prima-facie assumption; disputable because banks already have to pay interest on all deposits, even though not for funding loans but in order to prevent one-way drain of deposits and thus reserves.
[49] www.federalreserve.gov/releases/h6/hist. Also comp. Ferguson 2008 pp62.
[50] Deutsche Bundesbank, Monthly Bulletins, tables II.2. -www.bundesbank.de/statistik/zeitreihen.

3. Chartalism

MMT makes some effort to embed itself in historical context. The history of money might reveal something about the nature of money. Chief source at this are two articles by Mitchell-Innes in which he combined state theory and credit theory of money.[51] Mitchell-Innes' and MMT's discourse on this matter is not straightforward, but with some patience three storylines can be identified:

- the question of whether money evolved as a creature of the state or as a creature of barter and trade
- the question of instrinsic value of money and the rejection of metallism
- the question of whether money is credit and debt.

3.1 State theory versus market theory of money

With regard to the question of whether money evolved as a creature of the state or as a creature of barter and trade, MMT and NCT share the chartalist paradigm, i.e. the state theory or constitutional theory of money.[52] The term chartalism is derived from Greek and Latin 'charta' (literally paper, or document) for 'legal code', particularly in the Roman sense of 'public law', as distinct from 'civil law' or 'private contract'. The formulation of money as a 'creature of the state' goes back to Knapp and is found again in Lerner.[53] This contrasts with the theory that money is an endogenous creature of markets, or of barter, if barter is imagined to be an early stage in the development of markets.[54] In legal terms one may refer to this as private-compact theory of money. Most often it is referred to as the commodity theory of

[51] Main reference here is a reader edited by Wray (2004), including the two key articles by Mitchell-Innes 1913+1914.

[52] As main representatives of chartalism Lietaer et al. (2012 136) quote Knapp, Mitchell-Innes, Fisher, Keynes and Lerner; as neochartalists they quote Paul Davidson, Nicholas Kaldor, Hyman Minsky, Stephen Rousseas, Warren Mosler, Charles Goodhart, Wynn Godley and Randall Wray. 'While these scholars don't all necessarily agree on many topics, they all concur that the systemic role of taxes is to give value to a currency, which, in case of a state fiat currency, would otherwise have no intrinsic value whatsoever.'

[53] Knapp 1905/1924, reprint 1973, 92–95. Mitchell-Innes 1913 378–390, Lerner 1943, 1947.

[54] Cf. Hudson 2004 (barter vs debt theories of money).

money.[55] Basic characteristics of the contraposition in question have been given in chapter 1 on 'currency versus banking'.

Historical facts and storylines are always interesting and sometimes illuminating. Over the centuries and millennia, though, monetary history is diverse and complex. Directions for present and future monetary systems can hardly be derived from the historical beginnings of money in archaic societies. A perspective of evolutionary systems dynamics certainly assumes some fundamental path-dependencies, but these include wide degrees of freedom of what political forces can beget.

The empirical evidence which economic historians were able to produce—notably, and of relevance to the occidental world, from Mesopotamia, ancient Egypt, Greece, Rome, Byzantium, the arabo-islamic world, the Christian middle ages and early modernity—for the most part support chartal or state theories of money.[56] The evolutive pattern starts with archaic palace and temple complexes, i.e. the extended household and entourage of dynastic rulers, including armed forces, priesthood, administration, craftspeople, workmen, all requiring the labour-divisionary organisation of chains of provision, thereby also fostering the development of contracting, legal structures, scripture and documentation.[57] Money is described to have emerged within those early state structures from tribal traditions of making gifts and contributions, e.g. dowry or bride price, paying wergeld in compensation for physical injury, or sacrificial oblations, lateron also including regular duties and tributes, the latter mostly imposed on conquered tribes besides forced labour or outright slavery. Equally, there is archeological evidence from ancient Mesopotamia of the practice of lending goods the amount of which had to be returned with interest.[58]

In an extended household of thousands of people gifts and duties as well as current provisions of goods have to be measured and registered. All transac-

[55] Cf. Ryan-Collins/Greenham/Werner/Jackson 2012 30–37 (commodity vs credit theory of money).
[56] Cf. Del Mar 1867, 1880, Ridgeway 1892, Laum 1924, Gerloff 1940, Quiggin 1949, Einzig 1949, Le Goff 1956, 1986, 2010, Eisenstein 1967, Davies 1994, Graeber 2012. On European and American history of money since early modernity cf. Friedman/Schwartz 1963, Galbraith 1975, Vilar 1976, Kindleberger 1990, 1993, Hixson 1993, North 1994, Zarlenga 2002.
[57] Henry 2004
[58] Hudson 2004, Graeber 2012

tions were made in kind, and it is thought that the major staple goods of the time developed into general units of account, such as a weight unit of grain, salt or silver, serving as a common denominator which makes different goods comparable in relative quantity or value. Those units of account were fixed by the rulers' administration.

This does not exclude the eventual development of long-distance trade and finally markets where the quasi-monetary units of account could be applied for transacting goods. From a certain point of development of ancient economies this occurred for sure. The important thing is that the emergence of trade and markets was tied to the state households of the kings or high priests or warlords, tied to the operations and chains of provision they maintained. This also applies to the sovereign coins they began to issue from about the 7th century BC, as well as to the forms of contracting and juridical practices they developed in the frame of their extended housekeeping practices.

If there is a message to be drawn from this, than the most fundamental is: that markets do not emerge and develop in a constitutional vacuum free of state powers. Markets build and rest upon a state's institutional and legal structure which includes the money system as an integral part. As Graeber put it: 'States created markets. Markets require states. Neither could continue without the other. ... We are told that they are opposites ... But it's a false dichotomy.'[59]

Closer to our times this can be studied in the evolution of nation-states and markets within the modern worldsystem since about 550 years. In building up this system adventurers, soldiers, colonisers, missionaries, merchants and bankers did not create independent states of their own but always were, and needed to be, envoys of the states they originated from, or contractual partners of the states across which they expanded their business and trade networks.

Around 1900, with historical research much advanced and in a context of inter-national power struggles, this view was reflected in the state theories of money. According to Knapp, the rulers' law, in combination with the credible power to enforce it, is the most important legal and political pre-

[59] Graeber 2012 71.

miss for establishing a currency. A state's authentication of a token as legal tender in payment of all debts (lawful money) stands a much better chance of serving as the currency of the realm than other things. According to Knapp the strength of a national currency ultimately depends on the political and economic stability and strength of the respective nation-state.[60]

Of comparable importance to the establishment of a specific token as a general means of payment, according to Knapp, is what a state's treasury accepts in payment of taxes, or the courts in payment of penalty charges.[61] This was carried forward by Lerner:

> 'The modern state can make anything it chooses generally acceptable as money and thus establish its value quite apart from any connection ... with gold or with backing of any kind. It is true that a simple declaration that such and such is money will not do. ... But if the state is willing to accept the proposed money in payment of taxes and other obligations to itself the trick is done. ... Money is a creature of the state. Its general acceptability, which is its all-important attribute, stands or falls by its acceptability by the state.'[62]

Scholars had long been aware of the role of taxes for establishing a modern currency, among them John Law, who after the death of Louis XIV was engaged in 1719 to introduce paper money in France in order to pay down the suffocating debt legacy of the 'sun king'. Part of the plan was to get the new paper money generally accepted by accepting it on the part of the treasury in payment of taxes, and use part of the increased revenue for redeeming sovereign debt in a context of economic growth which was expected to result from the increased money base.

In MMT taxes are seen as the main cause of what qualifies as official currency. Knapp: 'All means by which a payment can be made to the state form part of the monetary system. On this basis, it is not the issue, but the acceptation ... which is decisive'.[63] This, however, may be somewhat overdetermined. Ancient forms of oblation, tribute, toll, or similar, cannot simply be identified with taxation in a modern sense, any more than decrying of coin in the high middle ages (recall for reprocessing).[64] There were times

[60] Knapp 1905 a strong currency depends on a strong nation-state
[61] Knapp 1905 xx.
[62] Lerner 1947 313.
[63] Knapp 1973 [1924] 95.
[64] Reprocessing meant smelting the coins down and remint them into more coins of the old face value, thus each coin containing less silver. This can be interpreted as a kind of

when sovereign currency existed but taxes did not. Equally, taxes are absent in a number of oil-rich and otherwise rich contemporary states with a currency of their own. Lerner sometimes, and more appropriate, refers to a state's general acceptance of a means of payment as the decisive factor for establishing a currency, i.e. the currency in which a government spends and which it is happy to take in through taxes, fees, fines and: borrowing.

Nowadays, interestingly, in most modern nation-states neither the revenue office nor the courts cashier's offices accept to be paid in cash, i.e. government coin or central-bank notes. They only accept to be paid in demand deposits, i.e. bank money. If they run their accounts at the central bank, they receive central-bank reserves, but creation of these today is re-actively prompted by pro-active creation of bank credit. To NCT this is a clear indication (and would actually have to be seen as 'proof' by MMT) that bank money has replaced government cash as the sovereign currency of the realm.

The state theory or constitutional theory of money contradicts the classical and neoclassical market theory, or commodity theory, or private-compact theory as advocated by Adam Smith to the founder of the Austrian school, Carl Menger. As a historical thesis this narrative may be fictitious.[65] The market narrative nonetheless has a point. It identifies as a useful function of currency the facilitation of transactions, particularly in the context of an advanced market-based division of labour, rather than early household- or community-based division of labour. Currency does so by enabling a match of supply and demand without necessitating a double coincidence of supply and demand at a given time in a given place. Equally, money facilitates funding of investments, which otherwise would be very complicated, or even unfeasible. Payment and funding are in fact two important aspects of why money is useful, and why it persists as an integral part of modern societies. This is true independently of whether money once was state- or market-borne. Commodity theory of money may historically be wrong and does not hold as a founding myth of classical economics. But it grasps basic func-

'taxation' in times when taxes in a modern sense did not exist yet in the occidental world – except the tithe to ecclesial landlords which normally, however, was delivered in kind rather than paid in coin.

[65] Graeber 2012 22–71.

tions of money once that markets and money have developed as a 'creature of the state'.

Evidence that money and markets emerged from the legal and institutional framework of state organisation, and basically remain dependent on them, does not preclude, once market economies have evolved, that certain groups of actors create special currencies of their own. Up to a point the theory of market-endogenous creation of money actually corresponds to the realities of contemporary fractional reserve banking. The present situation is in fact not that far from a free-banking regime of a global oligopoly of huge banking corporations which would operate on a basis of denationalised money, or on the basis of one or two privileged national reserve currencies. The present situation may develop even further in that direction if and as long as politics and the public are further on willing to accept this.

The question is for how long a regime of denationalised bank-money could survive. For even then the banking corporations and financial markets need the law and order of nation-states supporting them. Ultimately the banking industry would fully have to capture the institutional and legal structures of existing states—which certainly makes intriguing stuff for dystopian fiction. But could it be real?

3.2 Intrinsic versus conferred value of money

Quite often, the question of chartal money vs market-endogenous money is mingled with the question of whether currency exists as a token for value, or whether it is thought to have 'intrinsic' value itself, i.e. material value.[66] These two contrapositions, however, represent two different aspects and should analytically be kept apart. Money or currency not only exists by state fiat but also by private commercial contract. Bankers prefer to bank on self-created token-units anyway.

In the times of Smith and Menger, up until around the late 19th century, commodity theory of money normally *included* metallism. It was imagined that through barter and trade some special reference goods with special material qualities emerged as to facilitate market exchange, not just as units of

[66] Cf. Goodhart 1998 (metallist vs chartalist theory of money).

account, but as means of payment, preferably the precious metals silver, copper and gold for their physical and practical properties.[67] In Mitchell-Innes' time however, the decades around 1900, the question of metallism and intrinsic value of money became a hot topic. The reason is that, after about two and a half thousand years of unquestioned belief in precious metal as being the natural choice for money, it had increasingly become apparent that banknotes and credit-money were about to replace bullion and coin. As always, some were early to recognise, among them the monetary reformers of the time, while the majority were subsequent adopters and laggards. Even today there are some boastful latecomers left who steadfastly adhere to the now historical metallist belief.

NCT and MMT agree on modern money not to have 'intrinsic' value. Money as a unit of account is a measuring standard for ascribing economic value (prices) to things, but does not incorporate such value itself. Equally, modern money as currency, as a general means of payment, carries purchasing power und thus fulfils a transactive, not a productive function. The purchasing power or exchange value is not in the currency itself but in the goods, services and financial claims an amount of money can buy. That which confers value or purchasing power onto currency is the entirety of available goods, services and securities in that these represent the valuable counterpart to an existing stock of money. In this sense the value of money is a conferred value rooted in the interrelations of prices in the entire economy.

Mitchell-Innes and MMT argue that even in ancient and traditional economies it never was the material value of the coins which made them a common means of payment. Coins of gold and silver are interpreted as tokens too. Evidence for this, for example, can be seen in the fact that the face value of coins could largely differ from the material's market value. Debasement of metal currencies occurred throughout the centuries. There were periods in Europe in the 1600–1700s when bank credit was rated at a higher course than government coin due to deliberate debasement of those coins, be this by the feudal seignieurs themselves or by treacherous tippers and seesawers.[68] Such phenomena are evidence that the 'intrinsic' link between

[67] Smith 1776, Book 1, Chapter 4: Of the Origin and Use of Money. Menger 1871, Kapitel 8, §1: Über das Wesen und den Ursprung des Geldes.
[68] Mitchell-Innes 1914 153 | 53.

the coins' precious-metal content and their purchasing power was rather loose—but cannot totally be denied either, as Mitchell-Innes did. Throughout the history of precious-metal coins 'money is almost always something hovering between a commodity and a debt-token' (Graeber).[69]

A case in point was the practice of decrying coins from time to time. One reason for this was that feudal seigniories – ecclesial and principalities, lateron also free towns – wanted to make money from reducing the metal value while keeping the face value. Another reason, however, was that from the late 12th century the production of new silver did not keep pace with the demand for silver which thus became more expensive. So the coins increased in value, and for keeping their face value stable their silver content had to be somewhat reduced.

A bird's-eye view on the evolution of money may help to concede that throughout antique, medieval and early modern times coin currency had both sides to it, i.e. to be a symbol for value as well as having material commodity value. Such an understanding is implicit in Simmel's voluminous *Philosophy of Money* from 1900. According to Simmel, in pre-modern times the material qualities of money (e.g. grain, salt, cattle, metals) were that much in the fore that the abstract, purely symbolic or informative side to it was not easily discerned in its own right. People of course realised depreciations of the currency, or rising prices respectively, but they hardly had a very long-term perspective on the development of coins from full precious metal to alloy tokens of irrelevant material value. Only with the spread of modern bank credit and paper money in the course of trade capitalism and industrial capitalism the process of 'dematerialisation of money' towards finally representing a mere credit entry into an account became increasingly noticeable. The real post-metallists of early modernity and industrialisation actually were the bankers who progressively developed instruments for multiplying their monetary base of bullion and coin by making out transferable credit, bills and bonds, or issuing banknotes.

So Simmel's thesis on the social evolution of money as a means of payment follows the idea of a general trajectory from material to immaterial, from special good (already 'token' in fact) which is of material value itself, to a

[69] Graeber 2012 75.

token which purely represents information on a quantity of purchasing power. In the process the tokens underwent an evolution from reference staple goods to precious metals, then to paper notes and hand-written booking entries, up so far to digits on electromagnetic carriers. Currency thus reached the point at which Soddy could make that nice bonmot that 'Money is the nothing you get for something before you can get anything'.[70]

As to the 'nature of money', the question of why money has purchasing power and where the value of money comes from may no longer be controversial. Modern money is fiat money. Controversial, however, more than ever before, is the question of where the money comes from, i.e. who has the power of issuing fiat money. As is apparent from the currency vs banking controversy, there is a power struggle in modern society over who shall have the privilege of determining what is used as the tokens of the time—whether this ought to be determined by sovereign state fiat or by private banking interests. Modern money can, and should, freely be created 'out of thin air' as long as this remains within the growth potential of an economy operating at its capacity. But this does not yet answer the question of who has, and who ought to have the prerogative of creating and controlling the money supply. In this regard there is an important difference between NCT and MMT.

3.3 The relation of money to credit and debt

MMT holds that money is credit and debt. This was outlined by Mitchell-Innes in 1913:

> 'Credit and credit alone is money. … Credit is simply the correlative of debt. What A owes to B is A's debt to B and B's credit on A. … The words 'credit' and 'debt' express a legal relationship between two parties, and they express the same legal relationship seen from two opposite sides'.[71]

In Soddy one can read that 'money is a credit-debt relation'.[72] One will appreciate the insight that money and the economy form a subsystem embedded in wider societal context and depending on social relations. Money and economic transactions are based on mutual relationships which are of a

[70] Soddy 1934 24.
[71] Mitchell-Innes 1913 pp.392 | 30. See also 391, 393, 395–405, Wray 2012 pp269.
[72] Soddy 1934 25.

moral and legal nature as much as they are practical or productive.[73] No doubt this is essential. Particularly specific, though, it isn't.

A statement like 'the nature of money is credit and debt' is catchy. One may agree as long as one does not have to come down to what it really means. 'Money is credit', or 'money is debt', is this meant to be an intrinsic property of money? Arguably not. Does it mean that credit (claims) and debt (obligations) can be transferred and thus also be used as means of payment? Yes, this can be the case. According to what is known such practices occurred throughout the centuries. Does 'money is credit and debt' generally assume that all means of payment are always and necessarily created by credit (loans) and thus represent debt? This would be an outright misrepresentation. Does it preclude the existence of debt-free money? It does not. Modern money can both be debt money (if issued through creation of primary bank credit) and debt-free money (if created by sovereign fiat and spent, not loaned, into circulation).

Ancient rulers wanted to have an ancestral chart originating in gods and goddesses. In a not entirely dissimilar way modern social science sometimes wants to establish present realities as being compellingly determined by unbroken historical lineage. MMT's effort to base its mantra of 'money is credit' on historical evidence seems to be of this type.

History and ethnological studies suggest that social relations include having some claims on others or having some obligations to others. In particular claims and charges relating to the provision of goods or to labour duties within the kinship and the tribe seem to exist since times immemorial, certainly in stone-age and early agricultural communities. In the formation of early states in archaic societies, with social hierarchy taking shape, such obligations and claims were extended and became more regularised and institutionalised. Against this background Mitchell-Innes and MMT, or Graeber of late, establish that debt and credit—measured and delivered in kind, lateron accounted for in goods-related units—existed historically prior to currency (coin); about 6.500 years (Mesopotamia, Egypt) compared to about

[73] Graeber 2012 pp89.

2,700 years for coin, even though pre-coin tokens existed since the fourth millenium BC.[74]

Documenting that in ancient societies credit-debt relations existed prior to currencies debunks the founding myth of classical economics. But is it intended to be a general 'law of monetary succession'? What can be 'proven' with regard to *modern* money by referring to archaic and ancient practices of redeeming debt of various kinds? Hudson mentions five debt relations in ancient Mesopotamia: wergild-type debt to compensate victims of violence; reciprocal exchanges of gifts, which are always socially obliging in a sense; provision of food and other goods to religious guilds and brotherhoods; internal household transfers of temples and palaces; and, growing in importance over time, palace debts to handicrafts and merchants who contributed to the chains of provision of the rulers' extended household. Such debts were settled, as Hudson notes,

> 'not by payment on the spot but by running up debt balances. From gift exchange through to redistributive palace economies, such balances typically were cleared at harvest time, the New Year, the seasonal return of commercial voyages or similar periodic occasions'.[75]

It appears plausible that running up debt balances evolved into the emergence of general units of account, grain for the most part, but also silver early on.

The next step of evolution then was 'revolutionary': the introduction of generally *transferrable* tokens, i.e. coins serving as currency. Coins of various denominations can re-present a quantity of debt measured in a standard unit, and clear a specific debt when transferred at the corresponding amount. Currency could then be used as a generalised multi-purpose financial instrument, in payment of normal transactions, or for accumulating (hoarding) capital and pre-financing large ventures, in effect facilitating what otherwise would have involved long-term bilateral or complicated multilateral contracting.

What does this tell on 'the nature of money'? It tells the simple truth everybody knows: that money is an *instrument*, a *tool* for handling claims and debts. Declarations inscribed on banknotes like 'this note is legal tender for

[74] Mitchell-Innes 1913, Graeber 2012, Henry 2004, Hudson 2004.
[75] Hudson 2004 99–102.

any debt' do not need further interpretation. As a unit of account money serves as a standard of measurement, an instrument for ascribing economic value or prices, i.e. an instrument to quantify claims and debts. As a means of payment, as currency, it serves as a general medium to settle claims and debts of any kind. And as an instrument of capital formation it serves to build up financial claims and debts, or to acquire debt-free valuables. Money undoubtedly has emerged from and fulfils a role in social relations of claims and charges. The claims and debts, however, are not *'in'* the money, but are constituted in a mutual relation between a claimant and a debtor. Money thus is not identical with claims and charges. Money is a social medium indeed. Language, for example, 'is' not communication, but is a tool for verbal communication. And just as institutional position gives legal powers to direct, the control and use of money gives financial powers to direct.

Against this background Walsh and Zarlenga critically comment on MMT's definition of money:

> 'MMT stretches and twists the meaning of words beyond normal usage. ... Money need not be something owed and due, it's what we use to pay something owed and due. ... Poor methodology and misuse of terms leads MMT to mis-define money as debt. ... But money and debt are two different things, that is why we have different words for them. We pay our debt *with* money.'[76]

This is no hairsplitting. It entails the basic monetary stipulation on whether one asserts an *identity of credit and money,* as banking doctrines do, or whether one maintains their being different and exacts a clear *separation of money and credit powers*, as currency teachings do, including NCT. Connected to this is the equally fundamental question of whether money is necessarily debt money, or whether money can be debt-free.

Mitchell-Innes and MMT search for answers to these questions in history. But however much one can learn from history, it does not offer a compelling answer to these questions. The very existence of currency and banking paradigms is evidence of degrees of freedom which allow for both answers. If monetary reformers want to reintroduce debt-free sovereign money this cannot be sufficiently substantiated by pointing out that debt-free sovereign

[76] Walsh/Zarlenga 2012 2.

currency existed throughout most of occidental history. True as this is, it does not relieve us of having to make a choice on grounds of functional problem analysis and political preference.

On the whole, monetary and financial history is less straightforward than one might wish. What elicits from history looks more like this:

- Money as unit of account was developed by ancient administrators.
- Currency seems to have been brought up by rulers of a realm as well as, and more than just once, by merchants, but also then was soon put and run under state control.
- Financial capital, notwithstanding resemblant antique precursors, seems to be a modern development that has been the business of merchants and bankers.

Why does a state theory of money insist on money to be credit and debt, something one would expect in the first place from banking scholars rather than chartalists? In this respect MMT is a rather strange combination of currency and banking views, and with regard to the history of money over-generalised and over-simplified. Walsh and Zarlenga think that 'the mis-definition of money as debt is incompatible with the chartal (legal) nature of money that MMT espouses'.[77] In a way, yes. But the story is more complicated. Chartal money too *can* be debt money, e.g. if the entire money supply were provided through government or central-bank primary credit to banks. Similarly, fiat money is not necessarily money by sovereign fiat but can also be private money if the private agencies, i.e. banking or industrial corporations, are powerful enough as to impose their will on national and international institutions.

The unusual combination of state theory and credit theory of money, of starting with a chartalist theory of money and ending up in banking doctrine, was fully present already in Mitchell-Innes.[78] *Contemporary* economies, for sure, are based on bank credit and financial debt, to a much greater extent than trade and state finances in earlier centuries already were. In Mitchell-Innes' time around 1900 the bank-credit theory of money was developed.[79] He adopted that new theory as is clear from his references to Macleod and

[77] Walsh/Zarlenga 2012 8.
[78] Mitchell-Innes 1913 pp405.
[79] See footnote 8 on p.6.

Withers. He then must have made a mistake similar to that of Menger and commodity theorists of money, i.e. to project insights into contemporary realities back onto history.

What Mitchell-Innes and MMT miss, for example, is to take due account of the properties of currency in traditional society since the emergence of coin in the Aegean world and Rome. As soon as coins emerged, the rulers reserved for themselves the prerogative of coining the currency of the realm, or of having the coinage under legal or contractual control, thus benefitting from the genuine seigniorage which resulted from the difference between a coin's face value and its production costs. Sovereign coin regularly was *spent* into circulation free of interest and redemption, thus debt-free, through expenditure of the rulers for paying the military, suppliers, staff, dependent clients etc. This does of course not preclude that rulers, apparently quite often, were not able to mint enough coin and had to go in debt with money lenders, or again run debt balances without taking up currency, or conduct raids into foreign territories.

In the occidental world after the Roman Empire minting, where it continued to exist, had passed into the hands of private coiners (monetarii). Since about 750 AC, however, Pepin III and Charlemagne made issuance of coin the rulers' prerogative again, which remained so ever since. One motive was to catch up with Byzantium whose precious-metal currency was the dominant model for both western and Islamic rulers.[80] Mitchell-Innes, in his attempt to show that 'money is credit and debt', and in considering 'credit prior to currency' as proof of this, wanted to somehow re-interpret the situation. He pointed to the fact that in western territories coinage was in many hands rather than just one.[81] But this was part of the feudal tenure system. No private persons were allowed to put their stamp on coins; except when lateron, in early modern times, over-indebted seigniories suffered the embarrassment of having to temporarily subrogate coinage to private creditors, normally trading and banking houses.

It should be recognised that during most of the history of western civilization starting with Greece and Rome up until around the 1700s when current-

[80] Zarlenga 2002 pp109.
[81] Mitchell-Innes 1913 382 | 22.

account deposits and bank notes came into somewhat wider use, currency was *spent* into circulation, thus creating *genuine seigniorage* free of interest and redemption, i.e. debt-free money, in contrast to *interest-borne seigniorage* which accrues from *crediting (loaning)* money to a debtor. With the transition from traditional to modern times and the emergence of a widely ramified banking industry as well as central banks, ever more of the money came into existence by way of primary credit; by a bank ledger entry, constituting a claim on the creditor's side, transferable as a demand deposit on the debtor's side, thus over time becoming non-cash money on current account, today in fact the preferred general means of payment, representing the lion's share of the entire stock of money in circulation.

Credit letters and bills of debt seem to have existed since antiquity. The question is if such letters and bills were common tools of finance, and if bills of debt were transferable and circulated like currency. In the middle ages such practices do not seem to have existed prior to normal currency, but developed over time, rather in parallel with and on the basis of coin. In this respect classical views are not completely wrong. Far-distance trade and full-fledged markets, trading hubs such as Venice, or merchant organisations like the Hanseatic League came into existence in the course of the high middle ages, at which also the crusades (~1100–1300) played an important role.[82] In these times silver coin was the major monetary base of the economy. In addition tally sticks were used as a substitute for coin. The coins were minted and spent into circulation free of debt by various ecclesial and princely seigniories, or by the governing bodies of free towns. ('Free' meant directly subject to the emperor or king without overlords in-between).

In reflecting money in its relation to credit and debt, tally sticks are particularly interesting. It appears that historians have paid little attention to them although they had existed in different corners of the world for long times as record keeping devices. At first they were used for counting, for example the number of furs or animals represented by a number of notches in a bone. From early on they also served as a record of debt, most often for running a tab, for example the bread bought at the bakery but not immediately paid

[82] Zarlenga 2002 pp131, North 1994 21–37.

for. In various countryside regions of Europe this was common practice until as far as around 1900.[83]

In the high middle ages tallies also became used as receipts of deposits, and they achieved a certain range of circulation as a means of payment.[84] Tallies were introduced as a substitute for coin because, in spite of opening up new silver deposits across Europe, the overall supply of silver resources remained scarce and silver deposits became exhausted over time, silver thus ever more expensive. Part of the problem was draining-away of silver and gold for growing imports of oriental and far-east luxury goods.[85] The importance of tallies declined after around 1400, but they stayed in use at lower levels, petering out until the beginnings of industrialisation.

Tallies existed in many forms, but the more important ones were made of pieces of polished wood the size of about 20×5 cm. Horizontal notches marked the quantity of money units. 1.000 units were the size of a handbreadth (palm), 100 were a fingerbreadth, 1 that of a corn. The stick was split lengthwise, whereby one part was shortened, the other part remaining the longer one. The short end of the stick, called foil or stub, was kept by the issuer of a tally who had taken in a deposit, or borrowed money, or received goods or services. The longer part, called the stock (hence the origin of stockholder), was given to the party who made a deposit, or lent money, or supplied goods or a service.[86] The notches together with the grain of the wood made sure that the two parts were the only ones to fit together. This was practical in times when most people were illiterate, although the issuer was noted on the reverse of the tally, often through a symbol or initials rather than the name written in full.

Beyond the common folk running simple tabs, tallies were issued by both merchants and feudal lords. The merchants used them to transact business, similar to later bills of exchange or cheques, especially at medieval fairs like those in Flanders or the Champagne. The fairs also were the main places for clearing of foils and stocks. Henry I of England introduced tally sticks as

[83] Ifrah 1981 112.
[84] Ifrah 1981 110–116, Apostolou/Crumbley 2008, Zarlenga 2002 pp264, Graeber 2012 48, pp268, 435, Mitchell-Innes 1913 pp37.
[85] Zarlenga 2002 pp131.
[86] Graeber 2012 pp48.

fiat currency when he took the throne in 1100. General acceptance of tallies, though, was not compulsory, i.e. they were not legal tender in modern terms. The exchequer though, who issued the tallies, had to accept them in payment of taxes. So the bigger part of the tax revenue consisted of stocks rather than coin.

Ecclesial and worldly authorities used tallies in payment of expenses for their court, or for infrastructures such as town walls. Some sources mention an agio the issuer of a tally had to accept in certain cases. This can be interpreted as interest, or as an indication that tallies were less valuable than coin. Tallies also played a role in financing the building of cathedrals. Tallies, however, did not yet have the funding potential of modern bank credit and other debt instruments of mercantile trade. Rising larger armies and waging bigger wars such as from the 16–17th century could hardly be managed on the basis of tally sticks.[87]

The tallies extended the coin base and relied on it, not least for practical reasons. The tallies could not be 'sub-split'. A debt could be paid with a stock, or several stocks, if this was accepted. If the sum to be paid was not exactly the value of the stock, one got some change, or added some coin. In this sense tallies were convertible in coin, but there was no right to get them converted. It seems to have worked reasonably well, but it may not have been the elegant invention as which it is sometimes depicted. Things became a bit less cumbersome when about in the 14–15th century merchants were increasingly able to run current accounts with banks for having cleared their credits and debits through procedures of accountancy.

The question now is whether a tally stick was currency, or a document of credit and debt. Apparently both. Mitchell-Innes, however, interprets tallies as a 'means of credit' and does not recognise them as a 'medium of exchange'.[88] But as means of payment they actually served. So they can be described as a hybrid. The originators issued the tally stock in payment of goods and services. One can regard a tally stock as an IOU similar to early notes. In connection with taxes or similar charges it can be seen as a kind of tax credit. It was transferable and thus used as a medium of exchange. The

[87] North 1994 chapters 1–2.
[88] Mitchell-Innes 1913 394 | 33.

issuer and foil holder accepted tally stocks in payment of claims he had on the respective stock holders. When in this way a tally stock came back to the appendant tally foil, or vice versa, the re-completed tally stick was taken out of circulation, unlike coin which re-entered circulation if not hoarded or drained off to far-away places.

Tallies can be seen as a historical prototype of non-coin fiat money by 'crediting' suppliers, contractors, personnel etc. It does not fit, however, a modern banking notion of credit and debt. The tally stock was not normally interest-bearing. Nor was there a banking debt, i.e. a constraint to redeem, but two different claims, or duties respectively, complementing each other—for example a subject's claim to be paid for goods or labour delivered (the sovereign's duty), and the sovereign's claim to be paid levies (the subjects' duty). Levies did not *have to* be paid in tally stocks, but could also be paid in coin. Among merchants the tallies were like a wooden 'bill of exchange' without specified maturity.

3.4 Trade credit and financial credit. Dysfunctional identity of money and credit

With double-entry bookkeeping, and parlance of 'crediting and debiting' for adding to and subtracting from an account, the term credit has contracted a double meaning. For once it refers to 'have'-entries on account. More specifically, yet, it has the meaning of a loan which is lent by a creditor and borrowed by a debtor. Where overdrafts are allowed, current accounts can be run as debitor accounts as well as creditor accounts. But drawing down an overdraft clearly means borrowing bank money, whereas receiving a payment on current account from another customer current account simply means to receive a 'have'-entry, an amount of digital currency, without in this act being burdened by borrowing and incurring a debt. Perhaps one could refer to this distinction as credit in its general *booking sense* (crediting-entry), and credit in its specific *loan sense*. Or put it this way: Loaning implies crediting-entries, but crediting-entries do not necessarily imply loaning. Moreover, bank credit is primary credit, as explained in 2.2, which not only can relate to a bank loan or overdraft but also to bank purchases of secured and real assets.

Maybe the different meanings of the word credit are part of semantic irritations between MMT and NCT. So one should be clear, depending on context, in which sense one is using the term. To this end the following distinctions might be useful. Payments can be made in the settlement of three or four types of transactions:

1. private transfers (family sharing of income, making gifts, donating, sponsoring)
2. involuntary transfers prescribed by law or imposed by authorities, such as taxes, fees and fines
3. real-economic transactions, i.e. purchases and sales of goods and services
4. financial transactions, i.e. loaning or investing money in financial property titles (loan claims, bonds, equity, real estate) which generate capital income such as interest, dividend, rent or similar; maybe also appreciation of the principal.

Since we now have an economy based on digital currency on account, the act of crediting and debiting accounts, i.e. transferring have-entries for carrying out payments, applies to all 4 categories. However, the specific meaning of credit in the sense of extending credit and incurring a debt has a different meaning according to category:

As to 1 there is neither credit nor debt involved.

As to 2 no one creates a credit, it is all about having to pay charges imposed.

As to 3 the situation depends on whether payment is carried out promptly or deferred. Everyday purchases in a shop have to be paid instantly at the point of sale. When buyers receive an invoice, a certain payment period is allowed. Long-standing business partners often agree upon a swing, i.e. a ceiling on outstanding payments. This is the age-old practice of running a debt balance. Modern language also calls this taking something 'on credit'. Any judge would agree indeed that the party to whom the money is owed is a creditor, and the party who owes the money is debtor. But more specifically open invoices in real-economic transactions are called a trade credit, or transaction credit. It might also be called a commodity or exchange credit. However you call it, it is different from financial credit as in 4.

In the seller's books a trade credit is registered as a crediting-entry in a delivery account. This is a claim on money, not a 'have money'-entry yet.

Likewise the debtors too do not have money from this booking entry but have received some commodity or service for which they will have to pay money soon. Neither the creditor nor the debtor can use outstanding payments for making payments to third parties.

A deferred payment is an open claim or liability in real-economic transactions, be this a fiscal transfer (2) or purchase/sale of goods and services (3). This is not the same as financial credit and debt (4); not as long as such real-economic debts are not made transferable, for example as special bills of exchange, not for being deposited with a bank in order to obtain money, but directly used in lieu of demand deposits (which does not exist so far), or as securitised IOUs which are sold to financial investors, and are thus removed from the books in exchange for money on current account (which is a banking practice, but is not used in real-economic transactions either).

Contemporary actors, private and public alike, above all the revenue office, have adopted the habit of claiming interest on delayed payments. This is nothing but imposing a banking logic onto real-economic claims and liabilities. As if the claimants, had they received a payment promptly, would have on-loaned that money interest-bearingly to someone else, or deposited it longer than overnight in a bank, or invested in stocks and bonds, while in fact they have to make timely payments themselves. An actual justification for claiming interest on delayed payments is when claimants, while waiting for being paid, have to take up interest-bearing bridging loans from banks. This is one of the gateways through which banking logic imposes itself on the real economy.

In any case, in a deferred payment no loaning and borrowing of money is involved. Trade credit actually avoids using money for a certain time. Deferred payment is not about credit creation, it is just about open invoices. Mitchell-Innes, however, over-simplifies and wipes out any differences:

> 'A sale ... is not the exchange of a commodity for some intermediate commodity called the 'medium of exchange', but the exchange of a commodity for a credit. ... By buying we become debtors and by selling we become creditors. ... Money, then, is credit and nothing but credit. A's money is B's debt to him, and when B pays his debt, A's money disappears. This is the whole theory of money. ... 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.'[89]

Well, purchases and sales do not create money, but pass money on, in exchange for something indeed. The money involved does not disappear upon payment, as bank credit does upon payback, but remains on some current account and in circulation. Nor do we sell our demand deposits to banks. For convenience and disenchantable trust we accept to hold demand deposits which are backed by central-bank money just to a small fractional extent. We refrain from demanding to be paid out in cash, yes, but this is not 'selling' our have-entries on account to the banks. Banks make out primary credit of their own. For doing so they don't need our deposits (banking liabilities). Instead they need liquid assets, i.e. vault cash and excess reserves. Customers' savings and time deposits do not help fund bank activities but represent inactivated demand deposits, etc. (cf. 2.2).

As to 4, i.e. financial transactions, this is the realm of financial credit, as distinct from trade or transaction credit. Here we come back to the distinction between primary credit, which creates demand deposits, and secondary credit, which on-loans or invests existing deposits. Here it actually applies that money is primary bank credit, or central-bank credit respectively. At its source, all money today is non-cash primary credit. Coin is not spent into circulation anymore, just as little as banknotes ever were. All contemporary money is loaned into existence, and a residual amount of cash (i.e. coin and notes) is exchanged out of and back into the original non-cash money supply.

This, however, is no timeless truth. It applies to the contemporary condition of fractional reserve banking. It did not apply for more than two thousand years when sovereign currency creation and commercial credit creation were two different things apart from one another, and the currency entered into circulation as debt-free money up until around the 1700s. Under today's practices, however, the entire money supply is credited into current accounts, as explained by MMT authors too. Bank credit as well as central-bank credit are entered into the books when acquiring some financial asset, in particular when granting loans, hence the semantic near-identity of the

[89] Mitchell-Innes 1913 394 | 31, 402 | 42, 391 | 30.

terms credit and loan—and the false and dysfunctional banking-doctrinaire identity of money and credit.

3.5 Monetary sovereignty and sovereign currency. Defining the monetary prerogative

MMT depicts present-day monetary systems in nation-states as sovereign monetary systems built upon a sovereign currency. In the light of the foregoing one has profound reason to question that exposition. According to Wray a sovereign currency exists when

> 'a nation adopts its own money of account, and … the government issues a currency denominated in that unit of account', … the currency 'usually consisting of metal coins and paper notes. … The sovereign government retains for itself a variety of powers that are not given to private individuals or institutions. Here we are only concerned with those powers associated with money. The sovereign government alone has the power to determine which money of account it will recognise for official accounts. … Further, modern sovereign governments alone are invested with the power to issue the currency denominated in its money of account.'[90]

This definition sounds right, but on closer inspection it isn't. The understanding of sovereign currency and monetary sovereignty expressed here is only a partial, and a partly distorted one. Three aspects in this definition need to be clarified.

First, the notion of currency misses to include bank money on account (demand deposits) as explained in 2.1.

Second, MMT's usage of 'government' remains equivocal about who is actually concerned, whether treasury and cabinet, or parliament, or the central bank. We will have to come back to this in 3.8 and 4.1.

Third, assuming that treasury, cabinet or parliament have control over the issuance of the currency cannot be maintained. Most governments do actually *not* issue the currency but have left this to the banks. Cash at this is not spent but lent into circulation by the banks. The central bank too no longer exerts effective control, if it ever has to a decisive extent. Today it is the banks who pro-actively decide on how much money is issued. Government's

[90] Wray 2012 42.

role is to be debtor, not creditor as MMT has it (3.8). The central bank willingly re-acts to the banks' initiative by fractionally re-financing what banks predetermine (2.2–6).

From an NCT point of view one agrees of course that a sovereign nation-state *ought to* have monetary sovereignty, in addition and in analogy to comparable prerogatives of constitutional importance such as the exclusive powers of legislation, executive government and administration, jurisdiction, or the monopoly of force, and the monopoly of taxation. A state's complete and unimpaired monetary prerogative includes three components:

1. Determining a country's standard currency unit, i.e. the monetary units of account.
2. Issuing the currency, i.e. the entire money supply, the stock of lawful means of payment, denominated in that standard unit.
3. Taking in to the benefit of the public purse the seigniorage which accrues from creating additions to the stock of money; be this genuine seigniorage resulting from spending new money into circulation, or interest-borne seigniorage resulting from loaning money into circulation.

Wray's definition neglects 3 and includes just 1 and 2; with 2 being partly wrong on governments' issuance of coin and notes, and on not including bank money (customer demand deposits as well as interbank demand deposits). MMT does not recognise that the entire money supply today depends on the banks' individual discretion. If, however, the entire money supply originates from primary commercial bank credit, and this is summarised under 'sovereign currency', than this turns any sensible meaning of the term upside down.

As to 3, the lion's share of seigniorage is foregone to the public purse. It is the banking sector that enjoys the privileges related to the prerogative of extending primary credit and deposits. State coffers have to make do with a remaining relatively small interest-borne seigniorage accruing from making out fractionally needed central-bank credit to banks, and managing the nation's foreign reserves. So today's money supply is a mixed blessing of residual state money and predominant bank money, far from being the sovereign currency as depicted by MMT.

Most people, experts and laypersons alike, will understand 'sovereign currency' as money created and controlled by a state authority. In reality, the entire creation of money is done or determined by credit creation of commercial banks—with the central bank not acting as pro-active issuer of first instance (this is left to the banks), but having become nothing more than a reactive lender of least reserves, also a lender of last resort for banks when these run short of liquidity or get in trouble otherwise, acting at this exclusively as bank of the banks, i.e. for the benefit of the banking industry, hardly as bank of the state and for the benefit of the public purse. The latter has formally even been prohibited—prompting for once an alert comment by Wray that this 'is a strange prohibition to put on a sovereign issuer of the currency.'[91]

Other than that, MMT's notion of currency is fully in line with the predominant banking-theoretical confinement of this term to just coin and notes in a mixed-money two-tier banking system. MMT thus avoids having to face up to the question of whether or not bank money is currency, and if yes, how it can be that commercial banks exercise the sovereign prerogative of issuing currency. Demand deposits are in fact the most important part of today's money supply, thus currency. It is telling that most state agencies demand to be paid in demand deposits, which is bank money, while refusing to accept cash, which is state money (3.1).

Having said this, what then remains of monetary sovereignty today? Among the three components of the monetary prerogative—determining the currency unit, issuance of the currency, benefitting from the seigniorage—only the first one is an unimpaired 'creature of the state'. But banks will not care too much about the currency unit as long as the central bank promptly fulfils the banks' fractional demand for cash and reserves.

Banking theory avoids reflecting on 'currency', for this comes with the meaning of sovereign money or state money. Vested interests would not want to see bank money to be merged with and integrated into the currency supply. Instead, banking has managed to incorporate what once was the currency into its credit-created and debt-based bank money system. The term of choice then, surprisingly, is 'cash'. Common usage often says 'cash' when

[91] Wray 2012 204.

actually talking about demand deposits. This has even been enshrined in the Generally Accepted Accounting Principles (GAAP) which refer to demand deposits as 'cash in bank', equal to 'cash in vault'. GAAP do however not consider banks' quasi currency to be legal tender in strictly legal terms.

The GAAP term 'cash in bank', or 'cash on account', actually reflects was has become a reality today. And yet it comes close to obscuring realities.[92] It confers upon banks' money surrogate the appearance of being sovereign currency. This amounts to elevating banks into the rank of a sovereign authority, conferring upon banks the sovereign prerogative of creating the money supply as well as benefitting from the seigniorage thereof, both in its genuine and interest-bearing form (even if the latter cannot be identified in a bank's books as a separate flow but represents financing costs avoided). And this authenticates bank money as the official de-facto currency, i.e. a nation's general and regular means of payment.

MMT does not systematically reflect the fact that bank liabilities from typing credits into customer current accounts practically never fall due to 100%, but on average just to 2.5–10% depending on country, and also depending on the size of banks. As a consequence, MMT does not recognise the truly princely money-creating privilege this gives to the banking industry, alien to any modern state and society based upon democratic control of constitutional prerogatives, and based upon achievement rather than privilege.

Things have evolved this way throughout the last century because of the ever more widespread use of current accounts and cashless payment practices. The process was furthered by academia's and politics' thoughtless authentication of bank money as the predominant means of payment. The state's authentication, however, is a de-facto placet. There are quite many paragraphs and ordinances which build on the existence of bank money as a matter of fact, but there is no explicit law on who has the right to issue currency on account or on mobile storage media. Legislation throughout the last 100–150 years has missed to extend the treasuries' monopoly on coin and central banks' monopoly on banknotes to money on current account. One important reason for this is orthodox economics' obsolete understand-

[92] Cf. Schemmann 2011 pp. 16.

ing of the role of banknotes as well as its erroneous belief in central banks' control of banks' credit and deposit creation through reserve requirements and base rate policies.

MMT does not mind whether fiat money is issued by a government body or by banks. The reason is that in MMT's understanding bank money is not non-sovereign, but is deemed a legitimate and authorised part of the existing system which they think to be a government and central-bank controlled 'sovereign' currency system. Banks are seen to positively fulfil a para-governmental role; formally not part of the state, but nevertheless representing and serving government's monetary interests. As already Lerner had put it: 'In effect the banks are acting as agents for the government in issuing credit or bank money'.[93] This rather unusual reinterpretation—in fact misrepresentation of the role of banks and government debt—will further be discussed in 3.8.

3.6 What would a sovereign money system look like?

If today's fractional reserve system cannot be said to be sovereign, what then would a sovereign money system look like? With regard to its constitution, an advanced modern sovereign-currency system would fully be based upon the three components of the monetary prerogative as laid down above. The entire money supply would be created and issued by an independent state body.[94] In the U.S. this might be an independent currency board under the roof of the treasury. In Europe the most obvious candidates are the national central banks, or the ECB respectively, in case the euro will survive its present debacle. This would then be a fourth branch of government, the monetary state power, complementing the legislative, executive and judicial powers. It would finally do what today's central banks are supposed to, but are unable to, because under fractional reserve banking they have lost control.

Central banks as guardians of their nations' monetary sovereignty should no longer be seen as the special commercial banks as which they once began, but as the monetary state authority they have increasingly become – the

[93] Lerner 1942 300.
[94] The components of a sovereign currency system listed here, and additional specifications, are shared by a growing number of monetary reform approaches. Cf. footnote 41, p31.

monetary state power, institutionally separate, but democratically involved and held responsible, comparable to the judiciary in that it acts according to the law and its specific legal mandate, but on that basis independent in pursuing its monetary policies. The limitations it has to observe will have to be specified under various aspects:

- growth potential of the economy at full capacity
- stability of domestic levels of consumer prices, interest rates, external exchange value of the currency, balance of payments
- stability of asset prices, and ratio of financial assets to nominal and real GDP
- fiscal rules regarding government budgets, maybe even including a government expenditure-to-GDP target.

The division of powers between central bank and parliament/cabinet would maintain the separation of monetary and fiscal policy. The central bank decides on how much money will be appropriate on the short and long term, and how the money is put into or withdrawn from circulation. The central bank should leave the bigger long-term additions to the stock of money as genuine seigniorage to the government. Parliament and cabinet in turn have no right to demand money from the central bank or to interfere in monetary policy. Seigniorage would clearly be much higher than today, allowing to fund about 1–6% of total public expenditure depending on growth and the size of government expenditure. If in addition to seigniorage direct central-bank credit to the government, or direct buying of sovereign bonds were allowed, the central bank is not obliged to lend the money demanded for. It is free to grant loans if this is economically justified and does not violate legal limits. Central bank as much as the treasury would be duty bound, under threat of penalty, to make sure that what they are doing keeps within the limits set by law. As long as the monetary power on the one hand and treasury, cabinet and parliament on the other act by the rules, this will not infringe the separation of monetary and fiscal policy.

At the same time the two-tier functional division between central bank and banks would include the separation of money creation from banking. The central bank's task is to create the national money supply, to keep control of its quantity, and to manage foreign reserves. The banks, ceteris paribus, would do largely the same as they do now, *except* creating primary credit,

i.e. create by their own fiat and discretion the money supply on which they operate. The sovereign privilege of being able to spend money without having taken it in before will be reserved to the central banks. Commercial banks will be in a position comparable to that of anyone else. They can spend, lend or invest to the degree they take up money from customers and companies, the interbank market and, if need be, the central bank. Banks would be what they are supposed to but cannot today: intermediaries between savers and borrowers, between upstream and downstream investors. It is part of their task to *finance* investment, but they should not to be investors themselves.

Bank money would not exist anymore, just sovereign currency on account, on mobile storage media, and on hand. This too would involve debiting and crediting in the mere booking sense of transferring existing money. Would it still involve primary loaning and thus interest-bearing debt money? Depends. If additions to the money supply are lent from the central bank to banks, just as reserves are lent today, this would be interest-bearing sovereign debt money. To a degree this may persist as an instrument of short-term monetary policy. If, by contrast, long-term additions to the money supply (in accordance with well-defined monetary and fiscal policies) were transferred to the public purse in order to be spent into circulation through government expenditure, this would not be a loan but simply debt-free sovereign currency.

Conventional bookkeeping may insist on treating debt-free sovereign currency like a loan, even though free of interest and without specified maturity. It would thus be entered as, say, permacredit to the treasury and as a liability of the central bank. Scarcely anybody would worry much. For practical and statistical reasons those 'liabilities' would be subdivided, similar to what is the case today, into 'coin in circulation', 'notes in circulation', 'digital currency in circulation'. It might nonetheless be more appropriate to enter debt-free permacredit in a central-bank balance sheet not as a liability, but as part of a nation's monetary *equity*, say, as a national monetary *endowment* which the money-issuing authority can write out to the state coffers. Others might call it a sovereign *'self-gift'*. Commercial banks enjoy this today when they purchase assets with self-created and only fractionally backed demand deposits which they enter into the receivers' current accounts.

In a certain sense, though, even debt-free currency is embedded in a context of economic obligations. This does not involve a banking debt, but a social duty as expressed in modern principles (or values indeed) of work, performance, achievement, and merit. Without human effort, labour, technical efficacy and the regenerative forces of nature there is no economic product to sell and buy, and no purposes in which to invest and build up capital. Money would have no function and be worthless. Debt-free sovereign money may not be a promise to repay, but it is a promise to be productive; and a promise to keep control of the money supply so that there is neither too much nor too little money around in correspondence with actual levels of productivity.

3.7 Excursus: Does the euro qualify as a sovereign currency?

According to Wray, the notion of sovereign currency applies to nation-states only, in line with the principle of 'one nation, one currency'.[95] Basically this can be agreed, even if the notion of nation-state cannot be taken too literally. The rule also applies to empires under the roof of one unitary state, normally dominated by one out of a number of nations or people, e.g. the Habsburg, Ottoman and Russian Empires, or modern Russia and China. Nonetheless, the world-system basically is a system of nation-states and, contrary to what is assumed by overdone globalisation hypotheses, will remain so for another long time. There have been some exceptions to the rule from time to time, not just temporary currency pegs, but transnational currency unions such as the Latin Monetary Union from 1865, a common coin standard among Belgium, France, Switzerland and Italy, not including banknotes. Sooner or later such arrangements ended in unhappy divorce. The question is whether the euro might be an exception to those unhappy exceptions. The EU, and the euro area in particular, are out of line here in that they represent some still unsettled sort of confederate structure of nation-states in which certain sovereign rights are partially or fully ceded to EU institutions.

[95] Wray 2012 40.

Wray compares the monetary status of euro countries to the status of federal states in the U.S.[96] To a degree this may be appropriate, but with regard to other elements it is not. The EU's ideology of Europe à la carte, i.e. opting in or out a particular European Community, results in an incoherent patchwork structure. On the other hand, and with regard to the European Monetary Union, the ECB and affiliated national central banks NCBs follow a pattern of concordance democracy representative of member states. These still do have NCBs, and if the ECB council agrees upon, they can carry out nation-specific monetary policies. NCBs can of course not devalue or revalue the euro in their country, but they can provide different amounts of reserves on varying terms. This has in fact become apparent with the measures taken in the course of the euro-area sovereign debt crisis starting in 2010. Seen like this, and according to Wray's definition, the euro could be seen as a sovereign currency, even if it is the currency of a community of sovereign nation-states who have a shared responsibility.

This is confronted by the fact that there are no supranational moral and emotional bonds to something like a 'European nation'. Europeans of course have an understanding of belonging to a common cultural sphere, but national patterns and predominant nation-state orientations persist. As is often said, Europe speaks in too many national languages, literally and in the figurative sense. The EU, if not supposed to be a mere free trading arrangement, remains an intergovernmental superstructure managed by 'technocrats', hardly legitimised by a European parliament which remains nationally 'unplugged'. What has kept the Union together so far, beyond the common market, is a hope to retain some weight on the global stage which no single state could muster.

In addition, the euro system has its flaws, e.g. very disproportionate voting rights to the benefit of small and very small countries. This is a general pattern in the EU which invites separatism and parochialism. From the beginning the euro rules were badly violated by almost all of its member states, with Germany and France having taken the lead. They did not care violating the legal 'Maastricht criteria' (60% sovereign debt-to-GDP ratio, 3% fiscal deficit) nor, and more importantly, the no-bail-out clause of Art. 125 TFEU.

[96] Wray 2012 182.

The underlying problem is long-term over-indebtedness of almost *all* euro member states, topped by an additional public or private credit and debt binge of peripheral euro economies on the basis of unrealistically low interest rates. From 2001 through to 2009/10 bond markets believed in the euro convergence myth, actually a political tale based on wishful thinking, told by the ECB and willingly shared at the time by the credit rating agencies—a classical case of market failure on top of state failure.

On the other hand, the euro debacle does not necessarily prove widespread theses of so-called 'optimum currency areas'. All of the larger nation-states in today's world-system display gross regional disparities of development, productivity, competitiveness and income, at least as important as in the EU. Disparities are not a fundamental currency problem unless one considers deliberate currency devaluation as an appropriate policy option in order to compensate for structural deficiencies, and avoid reforms dealing with such deficiencies.

What really has proved to be a big problem for the euro as a 'sovereign' currency is the fact that EU member states lack a regular lender of last resort. Art. 123 (1) TFEU prohibits the ECB and the entire ESCB to directly contribute to financing government.[97] Not even temporary advances are allowed.[98] Banks, by contrast, are bathed in central-bank reserves. If there is need they get emergency liquidity assistance from their NCBs. In addition, NCBs do not have to settle payment deficits with the ECB. On is appalled by recognising how 'experts' have designed such murky structures.

Art 123 (1) TFEU is an Enabling Law which entitles the banking industry to neofeudal privileges: It cedes components 2 and 3 of the sovereign mone-

[97] Art. 123 TFEU: '1.Overdraft facilities or any other type of credit facility with the European Central Bank or with the central banks of the Member States (hereinafter referred to as "national central banks") in favour of Union institutions, bodies, offices or agencies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the European Central Bank or national central banks of debt instruments.'

[98] A minority faction of the ECB's council considers central-bank outright purchases of government bonds to misuse Art. 123 (2) TFEU and to undermine Art. 123 (1) TFEU on grounds that this would amount to directly fund government expenditure, forbidden by Art. 123 (1) TFEU. But buying bonds from banks or else on the secondary market, which is common practice in the U.S., is not forbidden by Art. 123 (2) TFEU. It was nonetheless strongly resisted by purist orthodox forces until the sheer pull of the crisis forced the ECB to do what needed to be done.

tary prerogative (creation of the money supply, and seigniorage) to the banks, thus putting otherwise sovereign governments in a position of financial dependency on banks and bond markets, including dependency on the systemically relevant banks' wellbeing and survival when in distress. This is clearly an important component of monetary non-sovereignty which MMT refuses to acknowledge. I nevertheless agree with Wray's proposal: Let the ECB directly buy government bonds.[99] One should add, though: Let this only happen within the frame of well-defined monetary and fiscal restraints. Undoing Art. 123 (1) TFEU under such conditions would be an important step for the euro to become a sovereign currency.

If, however, the euro were bound to break up, there is a great danger of relapse into outright nationalism, including narrow-minded protectionism, so that even the concept of a common market based on common rules and standards might be at stake.

3.8 Is government creditor or debtor? Are banks intermediaries between government and central bank, and between government and taxpayers?

In MMT relations between government, central bank, banks, and companies and citizens are interpreted in a way which assumes that government, in cooperation with the central bank, issues its own currency, and that banks are just 'true intermediaries' between the two as well as between government and taxpayers.[100] In MMT's interpretation government is not debtor but creditor.

Even if it now may be redundant I want to make it clear again what the NCT view in this respect is: As to primary credit creation banks are no intermediaries but the pivotal actors who decide on credit creation and thus the money supply. Central banks re-act to the banks' pro-active monetary initiative and willingly re-finance the banks. In western countries central banks do not finance government. Realities today are a fractional-reserve banking regime backed by central banks and government, in fact a situation of state-backed banking rule. Government is in no way a primary creditor. Government be-

[99] Wray 2012 183.
[100] Wray 2012 280.

longs in the category of nonbanks. To the banks it is debtor, and the debt mountains almost all advanced industrial governments have accumulated are truly 'majestic'. Governments at high levels of expenditure tend to be chronically short of tax revenue and thus depend on banks for filling the deficit with additional debt. If levels of financial investment and debt become too high and can no longer be served out of current flows of income, or if sovereign debtors default for other reasons, banks (and nonbank financial intermediaries) threaten to fail and then depend on the central banks and the dependent governments for being bailed out.

MMT's divergent interpretation of the situation rests on two storylines with no clear interconnection. The one has banks as intermediaries between government and central bank. The other has banks as intermediaries between government and taxpayers and again dates from Mitchell-Innes:

> 'The government, the greatest buyer of commodities and services in the land, issues in payment of its purchases vast quantities of small tokens which are called coins or notes, and which are redeemable by the mechanism of taxation, and these credits on the government we can use in the payment of small purchases in preference to giving credits on ourselves of transferring those on our bankers.'[101]

This does not correspond to realities, even if one follows the oversimplification of subsuming government and central bank in one category, called 'government', or 'public sector' as distinct from the 'private sector'. Government and central bank finances cannot sensibly be consolidated into one balance sheet. If the central bank credits banks, it is not the government that credits. If banks credit the government the reserves involved don't flow back to the central bank but from the banks' account at the central bank onto the government account there, whence it flows back to the banks, or the private sector respectively.

In Mitchell-Innes' quote there is no primary or secondary government 'credit' involved, nor a taxpayer 'credit' to the government, simply payments of available money out and in. Nor does government spend coin into circulation by purchasing something. Government sells the unimportant amount of coin it still mints to the central bank, depending on the demand for coin as it results from everyday payment habits. The demand for banknotes re-

[101] Mitchell-Innes 1914 153 | 52.

sults from the same habits. The monopoly on banknotes rests with the central bank, and notes aren't spent into circulation either, but loaned to the banks, or sold to them in exchange for reserves loaned to them. The domineering monopoly of credit and deposit creation is with the banks, and what they create determines the fractional demand for reserves. Mosler, however, writes:

> 'business and households in the private sector are limited in how much the may borrow by the market's willingness to extend credit. ... They must borrow to fund expenditures. The federal government, on the other hand, is able to spend a virtually unlimited amount first, adding reserves to the banking system, and then borrow, if it wishes to conduct reserve drain'.[102]

Well, the U.S. government could spend its own banknotes, also its own currency on account, if Congress decided to update its constitutional prerogative of 'coinage' and take back the monetary prerogative from the banking sector. As long as this isn't the case, the government cannot freely spend any amount of money. The central bank doesn't either. It doesn't spend money other than for its own office, but lends reserves to the banks according to banks' demand. As an action of quantitative easing in times of crisis the central bank may lavishly offer reserves to the banks nearly for free, but it is up to the banks in how far they make use of this and what they do with the reserves.

Besides, in economically stronger nation-states, in particular in the U.S. with the dollar as the dominant global reserve currency, the government can of course rely on promptly being served by the banks when it decides to borrow. But this is another aspect and not, not expressly, part of the MMT storyline. It is implicit in MMT's assumption that the U.S. would be able to incur debts and foreign-account deficits 'forever' (4.2–3). But any government must be careful not to stretch things too much. Sooner or later banks and bond markets will start to think twice, especially if an ever growing part of creditors is non-domestic.

Different from Mosler's thesis a government in the present banking system cannot spend money without having taken in the money before, just like companies and households. What the government issues is nothing but sovereign bills and bonds, underwritten in the first instance by an exclusive

[102] Mosler 1995 8–9.

group of large banks who have the privilege to participate in this business. Taxes are not normally used to redeem such sovereign debt to the banks. Tax receipts are immediately spent back into circulation.[103] The same is true for reserves the banks may have had to transfer to the treasury. The banks get back the reserves immediately since government spends immediately what it receives. Bonds falling due are not normally redeemed either, but revolved, i.e. payments on interest and principal are made by taking up new debt to the same or a bigger extent.

MMT sometimes blurs the distinct meaning of 'unit of account' and 'means of payment'. In some passages one can get the impression that government IOUs are identified with the currency which is created by the banks as a consequence of selling government IOUs to them.[104] However, government IOUs do not circulate as money. There is nothing to quibble about: the state goes in debt with the banks. Far from being the originator or creditor of the money, government is the debtor, actually the biggest debtor of all. The taxpayers' role in this game is to pay for state institutions and public infrastructure, for government transfers, and: for interest to banks, and to nonbanks to the degree that banks on-sell government bonds to investment funds and individuals.

In another source the MMT thesis of government freely spending whatever it decides is summarised in this way:

> 'A modern monetary system can best be thought of as a system of debits and credits where government deficit spending *credits* the private sector and payment of taxes *debits* the private sector. One might think of deficits as 'printing money' and taxes as 'unprinting money".[105]

The first sentence is true, but of no relevance here in that it just regards payments back and forth. The second sentence is right in that deficit spending to a degree implies 'printing money' through the banking sector. But the statement is wrong on the 'unprinting', and wrong in that it withholds the pivotal role of the banks in the process. MMT describes banks' role in this as if it were unremarkable: 'Private banks *intermediate* between taxpayers and government, making payments in currency and reserves on behalf of the

[103] Also see Walsh/Zarlenga 2012 4.
[104] Wray 2012 xv, 39–40, 259.
[105] Pragmatic Capitalism. Blog by Cullen Roche, here: Understanding the Modern Monetary System, http://pragcap.com/resources/understanding-modern-…etc.

taxpayers'.[106] This is either trivial or misleading. It is trivial in that banks and central banks technically manage all payments among all groups of actors. No doubt they do a good and very useful job in that respect. The important monetary and financial question however is, who primarily issues the money by spending or loaning it into circulation. In this respect MMT's analysis is misleading. Far from being 'intermediary' it is the banks who are the determining originators of the money supply.

For sure, banks too react. They react to the demand for money from financial markets, from other banks, from government, from businesses small and large, from private customers, all of these possibly also foreign ones. But it is always up to the banks' individual discretion to what extent they want to meet demand from these actors. It is the banks, and the bond markets beyond, who hold on the reins.

What now about the banks' role as intermediaries between government and central bank? It might look as if there were a mechanism by which central banks fully monetise government debt, something already Friedman mused about.[107] Central banks are interdicted to directly take up new bonds from the government. In the emergency since 2008, though, they have heavily absorbed government bonds from the secondary market in a continual attempt to prevent a meltdown of bond markets. As regards the initial placement of government bonds, however, central banks are not allowed to buy these. Nevertheless the central bank contributes to financing government debt in that, firstly, the government sells new bonds to banks, and the banks, secondly, can sell or lend them on to the central bank in exchange for the reserves and cash the banks have paid to the government.

The snag with this story is that it only applies partially. The banks do no need to have refunded the reserves they had to use for making bond-related payments to the government because they get the reserves immediately back upon government expenditure anyway. To the degree banks extend the overall money supply, they of course need to be refinanced, but only fractionally at about 2.5–10%, not to the full amount of credit and deposits they made out. The reserves needed for making out payments to a government

[106] Wray 2012 111, 276.
[107] Friedman 1969b.

central-bank account are more or less part of the existing stock of reserves built up over time. Placement of government debt after all has developed into a continual large-volume activity.

If the MMT story were right, central banks would hold most of government debentures. They don't. Central banks hold government bonds only to a minor extent. In the U.S. as much as in Europe the biggest part of government debt is not passed on to the central bank but
a) sold on to other creditors who pay by on-lending already existing deposits (secondary credit), and
b) kept in the banks' proprietary portfolio.

In the euro area on average about 55% of government debt is held by domestic and foreign banks, 33% by funds and insurance companies, the remaining 12% by households.[108] The ECB/NCBs' sub-share of the 55% can (in pre-crisis times) not have been very high since central banks come to hold government debt just when extending the fractional money base of notes and reserves, or in fine-tuning repo operations; and even in those operations there are not just government bonds involved but other kinds of securities too. In the U.S., the Fed system's share of government bonds is at about 10%, and thus not too important either. Public bodies, though, such as Medicare or Social Security Trust Fund hold another 30%. Individuals and firms count for 7%. The major part of 53% is held by banks and other private financial institutions within the country and abroad.[109]

MMT however, as discussed in 2.5, believes in treasuries and central banks to jointly exert control over the banks' money supply via base-rate policies.[110] To Wray it appears that

> 'the treasury cooperates with the central bank, providing new bond issues to drain excess reserves, or with the central bank buying treasuries when banks are short of reserves. ... for this reason, bond sales are not a borrowing operation (in the usual sense of the term) used by the sovereign government, instead they are a tool that helps the central bank to hit interest rate targets'.[111]

[108] ECB, *Monthly Bulletins*, Table 6.2.1.
[109] U.S. Treasury Department, Monthly Treasury Bulletin, June 2012.
[110] Wray on base-rate policies
[111] Wray 2012 112.

New bond issues, however, do not drain excess reserves as these flow from the banks operational balances to the treasury account, and from there immediately back to the banks' operational balances. Reserves are drained when the central bank re-sells or gives back bonds to the banks which it had absorbed before. In view of governments' creditor breakdown the above mechanism represents a quite far-fetched interpretation. Government does not issue the currency on bank account, nor do government or central bank pro-actively issue coin, notes and reserves. Government borrows. In the present system of fractional reserve banking, government belongs in the group of nonbanks, and also the central bank is just lender of least and last reserves to the banks rather than being the first and sovereign issuer of the money supply to the government. It could be that way. But predominance of banking doctrine and official political will want it differently.

4. Sector balances

4.1 Public, private and foreign sector - accurate or simplistic?

MMT refers to a sector model of the economy to which it attaches great importance. Sector balances date to Keynes and play a role in neo- and post-keynesianism. The MMT model just includes two broad national sectors, the private and the public sector. This is occasionally extended into a three-sector model which includes a foreign sector as 'rest of world'.

The approach assumes an aggregation of individual accounts into overall national accounts. Since the approach is based on double-entry bookkeeping, all financial assets are another's financial liabilities. All accounts together—private, public, foreign—net out each other to zero. In a two-sector model only one of the two can run a net surplus while the other runs a corresponding deficit. One sector's deficit equals another's surplus. In particular is net public debt equal to net private financial wealth.[112]

Keynes wanted to develop sector balances as part of a 'monetary theory of production'.[113] Models developed lateron by Stützel, Godley or Barro include a separate financial sector. In Barro for example there are four sectors: commodity markets, labour markets, rental markets, and financial markets.[114] MMT claims to start from Godley, but in MMT's model the 'integration' of finance is done by making banks and other financial institutions disappear into the private sector, as the central bank merges into the government, or public sector respectively:

> 'We [MMT] prefer to consolidate treasury and central bank operations. ... There are two reasons for this—simplicity and generality. ... We argue that the appropriate general case is the consolidated Treasury/Central Bank, but the reader should not confuse this attempt at defining a general case with a description of actual operations for any particular country. Unfortunately, this is precisely what our critics do, repeatedly.'[115]

The critics seem to be right. It remains unclear what the advantage of such a 'consolidation' might be. It is clear, however, that it obscures a number of

[112] Wray 2012 xv, 1–38.
[113] Cited in Schmidt 2011 112. Keynes is said to have uttered this in a contribution to an anniversary volume in honour of Arthur Spiethoff in 1933.
[114] Stützel 1958, Godley/Lavoie 2007, Barro 2008 122–168.
[115] Fullwiler/Kelton/Wray 2012 3, 5.

relevant monetary and banking realities as explained in 2.5 and 3.4–8. It helps maintain a theory of alleged sovereign currency which in reality is a banking doctrine legitimising bank credit-money. MMT assumes that with regard to the overall result it does not make a difference whether in institutional detail something is done by the treasury or the central bank (or, in the private sector, by banks or companies or households). However, actions of the central bank, the banking sector, government/parliament, and other non-bank actor groups have different effects on public and private finances, the economy and income distribution.

Furthermore, to 'consolidate' central bank and government in one account 'consolidates' monetary and fiscal policy. The same applies to MMT's interpretation of government bond sales as being part of the central bank's inter-bank-rate policy rather than being a normal act of borrowing. Treating monetary policy and fiscal policy as two separate responsibilities is not among MMT's concerns. To others, however, the difference matters, and the interdependencies between monetary and fiscal policy cannot be analysed if one doesn't keep them apart. MMT retorts to make any institutional differentiation if need be. But why then obscuring important structures in the first place in a model that does *not* correspond to operational facts? MMT tends to think of its two-sector model to be 'elegant'. Well, beauty is in the eye of the beholder. The model actually gives a much too coarse, deceptive resolution of realities. The two- or three-sector model looks like just another piece of economic model Platonism—inherently logic, and yet beside the point.

If it is true that in postkeynesianism and MMT money is key to understanding the economy—a position clearly held by NCT—than one would expect a sector model to make this explicit rather than make it disappear in an inadequate aggregation. Analyses of basic pathways of circulation hitherto fail to disaggregate the equation of circulation into a real-economic hemisphere and a hemisphere of self-referential dealings in a semi-detached financial economy. To put it in the words of Werner, there are transactions that contribute or do not contribute to GDP, in short, GDP transactions and non-GDP transactions.[116] This is why monetary reformers have proposed to *dis*-aggregate the Fisher/Newcomb equation ($M \times V = T \times P$) into a real-

[116] Werner op.cit., Ryan-Collins/Greenham/Werner/Jackson 2012 22–25, 103, 139, Jackson/Dyson 2013 pp116.

economic and a financial hemisphere. [117] Here again, one cannot analyse the interplay between the two if one 'consolidates' them into one account.

An exemption among MMT scholars is Hudson. His approach is to subdivide the private, public and foreign sector into a real-economic and a financial subsector. The financial subsector he calls FIRE sector (FIRE = Finance, Insurance, Real Estate).[118] This allows for necessary distinctions such as between earned income and capital income; real-economic and financial investment; trade credit, secondary and primary credit; self-limiting organic growth of the economy, and unlimited exponential growth of bank credit creation and compound interest, recurrently resulting in financial over-investment, over-indebtedness and violent destruction of assets and savings. MMT hasn't adopted the FIRE model so far; maybe because it spoils 'simplicity' and 'generality'.

From an NCT perspective the need for sector balances with regard to the monetary questions dealt with here is not obvious. NCT does not dismiss sector balances. These can be a useful tool of macro-economic analysis, of economic diagnostics so to say, especially in identifying persistent sector imbalances—provided the structure of sector accounts is useful and there are criteria for assessing when imbalances become dysfunctional. In this respect the approach of disaggregating the money flows in the economy, and of subdividing each sector into a FIRE sector and a real-economic sector, can in fact help to clarify certain aspects of the role of financial markets for commodity/labour markets and interdependencies involved. But is this part of monetary theory sensu strictu?

It appears that the common actor arena in the two-tier banking model still is a better starting point for analysing the money system: central bank – banks – nonbanks; the latter composed (not 'consolidated') of government, non-bank financial institutions, businesses/companies, households. This institutional setting can be combined with distinctions such as primary and secondary credit, and types of transactions (transfers, real-economic transaction payments, financial upstream and downstream investment, and others more) and is then also suited as a starting point for analysing financial markets.

[117] Werner 2005 pp185, Huber 1998 pp224.
[118] Hudson 2006.

4.2 Government debt and dysfunctional finance

MMT remains remarkably implicit on why it deems sector balances to be of particular importance to its theory. Easily discernible, though, is MMT's stand that government debt should not be seen as a problem but as a benign option of 'functional finance', i.e. Lerner-style intensification of government deficit spending, accompanied by an explicit contempt of sound public finances. Government—i.e. government and central bank, and banks as intermediary deputy government—are called on to freely create what government wants to spend. Government is thought not to have to bother about the soundness of public finances in the same way as companies and individuals have to. Mosler:

> 'Today's fiat currency system has no such restrictions. The concept of a financial limit to the level of untaxed federal spending (money creation/deficit spending) is erroneous.' This 'is to say that the full range of fiscal policy options should be considered and evaluated based on their economic impacts rather than imaginary financial restraints.'[119]

> Or as Wray puts it: 'For a sovereign nation, 'affordability' is not an issue; it spends by crediting bank accounts with its own IOUs, something it can never run out of'.[120]

That modern fiat money can freely be created out of thin air is self-evident and does not need to be accompanied by fanfares. It is now also understood by most people that fiat money is an achievement compared to the limitations of metallism. In MMT's message, though, this sounds like an unheard of promise; whereas in reality it also represents a big problem: the quantity problem of making sure that neither government nor banks throw around too much money; or too little at times.

As discussed in 2.7, banks tend to get over-exposed, in particular to rallying financial markets, real estate bonanzas and, most importantly, sovereign debt. Banks get over-exposed to sovereign debt because normally government is the best debtor since it disposes of the largest cash flow which allows for a steady flow of interest payments. At some point, however, government and banks, i.e. debtor and creditor, cross critical thresholds. This is not an orthodox prejudice but sad enough practice and experience.

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[119] Mosler 1995 14.
[120] Wray 2012 194.

Inflation and currency depreciation will set in; or a new round of asset inflation will lure investors big and small into the next financial crisis caused by final over-investment and over-indebtedness; both developments will create political unrest; elite co-operation will get brittle, etc. Banks and other creditors will then long have started to shy away from carrying on, and as a result the system breaks down or enters in a stagnant stage of delayed insolvency characterised by defaults and asset write-downs, stagnant or suboptimal growth, heightened unemployment and shrinking purchasing power throughout most social classes. No nation can escape that sort of fate if it gets too deeply entangled in unsound finances. Not even direct central-bank funding of government budgets will then bail out a nation. Money is no remedy in itself if the money supply has strayed too far from its anchor of real-economic productivity.

What MMT acknowledges is a possibility of consumer price inflation resulting from too much credit creation for government spending at a time.[121] But this is not discussed in detail, reflecting MMT's Lerner heritage of 'functional finance' which entails a lax attitude towards high-level government deficit spending and debt. As long as inflation keeps within one-digit levels it isn't acknowledged as a problem.

The idea of maintaining high levels of budget deficit, government debt and foreign-account deficit is wishful thinking. An overdrawn bow will bounce back or break. Formally, netting out of public-sector debt and private-sector assets is an obvious truth, 'simple' and 'general' indeed, without specific meaning. It obscures two things. Firstly, if public-sector finances come under pressure, e.g. through declining creditor rating, the value of private-sector assets falls correspondingly rather than 'covering' what they are erroneously supposed to. Secondly, it makes a difference *who* is creditor of government debt, or to put it differently, how the holdings of sovereign IOUs are distributed and who thus benefits from the public debt und who doesn't, especially: how much falls on monetary and financial institutions, and how much on, say, the 'rest of nation'.

Since banks and other financial institutions hold the major part of government debt, government interest payments do not add to central bank's inter-

[121] E.g. Wray 2012 112.

est-borne seigniorage which flows back to the treasury. This happens only to a minor extent, and to a somewhat bigger extent with regard to public welfare trusts and pension funds in various countries. For the remaining and biggest part tax receipts have to be spent on interest payments that feed a growing share of capital income of banks and funds, at the expense of the share of earned income. Moreover, the small part of government debt held by households is also distributed quite unequally. A growing share of interest payments, combined with political resistance to still higher taxation, then result in ever more public budgets becoming chronically underfinanced. When rating agencies start to think twice, and banks reassess the situation and become less willing to fund government deficits and debt rollovers (which tends to come suddenly after a period of overstretch), it becomes apparent that any highly indebted government has a problem.

Contrary to what MMT maintains, problems of government debt are basically not different from those of company and household debt. And what applies to government indebtedness also applies to overall national indebtedness. It would even apply if the possession of debt instruments (securities) were more fairly distributed, because in any case there are critical thresholds of indebtedness in terms of debt-to-GDP ratios. The reason is that any expenditure or revenue – earned income, taxes, as well as payments on principal and interest – have to be paid out of current proceeds (as indicated by GDP), or else through taking up still more debt. The higher the debt-to-GDP ratio gets, the bigger the share of primary and secondary income that has to be paid on principal and interest, to the detriment of earned income and government transfers.

Critical thresholds are difficult to identify, yet undoubtedly they exist, similar to the limits of carrying capacity of ecosystems, or the threshold to sickness in an organism. Beyond that sort of tipping point chronic high indebtedness of one or more sectors undermines the economy in many a respect. Flows of earnings no longer can meet what stocks of financial assets would require. Money is transactive, not productive by itself. A nation cannot live on income from financial capital. Only a few privileged rich can. If there are disproportionally many rich people in one nation, this indicates appropriation of wealth of the 'rest of the nation' as well as of wealth of the foreign 'rest of world'.

There are reasons why deficit spending lost its shine since about the 1980s: 'functional' finance didn't deliver on its promise. Quite often it even proved to be *dys*functional. Since its beginnings about a hundred years ago, the idea of additional government expenditure compensating for a lack of effective demand was justified on grounds of occupying idle capacities. MMT carries on that view.[122] Again, reality is more complex. Business cycles are not just about more and less. There is structural change involved. Many economic problems have structural causes anyway. Structures in place, supplies and skills, may be redundant, obsolete, uncompetitive, representing mismatch, low factor mobility etc. Printing ever more money does for the most part not do away with structural mismatches and deficiencies unless there are detailed target policies as to direct the money to uses which help to overcome mismatches and deficiencies. Otherwise well-intended government expenditure will turn out to be unproductive subsidies, then in fact doing more harm than good. This is no supply-side ideology. It is about systemic necessities of real-economic market supply and demand complementing each other in a productive and competitive way. This, after all, is the very value base of all money.

Furthermore, there is not much discretion in public budgets since they tend to be highly predetermined by myriads of legally binding entitlements, contracts, claims and other liabilities. Public budgets are easy to expand, but tend to be rigid, and thus hard to shrink. In addition, there are political problems rooted in the electoral cycle, clientelism and lobbyism. As a result, deficit spending is easily done in bad times. But trimming budgets and repaying public debt in good times never seems to work. In good times deficit spending may be less, in bad times it is higher, but times of no deficit spending hardly occur anymore. Reality has become one of deficit spending all the time. To NCT, credit creation regardless of functional limitations is nothing but bad housekeeping, whosoever's household it may be, and whatever the purposes on which excessive money supplies are spent. Sound finances matter always and everywhere.

Under fractional reserve banking governments' monetary sovereignty is not a *reality* today but a *goal* of chartalist monetary reform. Even if it would ex-

[122] Mosler 1995 14.

ist, having the full monetary prerogative and being able to 'freely' create sovereign currency does in no way entail that a government or central bank were not subject to restrictions and could spend as much as they like. Just to the contrary. Monetary reform is about *regaining quantity control* of the money supply, which of course includes relative *limitations* to the quantity of money, thus also limitations to the seigniorage available from additions to the stock of money.

4.3 Foreign-account deficit as a hegemonic privilege

In a sector-balance approach one would expect a basic assumption to be that bottom lines be balanced, or a surplus/deficit not too high and not structurally ingrained. This, at least, was Keynes' original stance to international trade and foreign-account balances. It was the design principle of the plan he introduced for a new world trading order with a common unit of account, the Bancor.[123] Keynes wanted to do away with a system of one or two competing lead currencies which, as in Knapp's state theory of money, in fact are the currencies of the hegemonic powers of the time. In his time, Keynes wanted international trade be cleared in a basket-unit composed of the prices of 30 major traded commodities. In addition Keynes conceived of a mechanism to rule out that foreign trade surpluses/deficits grow too big.

MMT's attitude is different. MMTers remain implicit about any such rule, and as a matter of fact approve of deficits. MMT's opinion on foreign-account deficits is similar to its opinion on high and chronic government debt, which is labelled 'functional' regardless of the possible dysfunctions it may entail. According to MMT a nation can enjoy a foreign-account deficit since, as Wray states, 'exports are a cost, imports are a benefit'.[124] Mosler:

> '...the modern world has forgotten that exports are the cost of imports. ... Any country running a trade surplus is taking risk inherent in accumulating fiat foreign currency. Real goods and services are leaving the country running a surplus, in return for an uncertain ability to import in the future. The importing country is getting real goods and services, and agreeing only to later export at whatever price it pleases to other countries holding its currency.'[125]

[123] Keynes 1940–44.
[124] Wray 2012 126, 133, pp217.
[125] Mosler 1995 12.

MMT is not very outspoken on the last element in this quotation: the national currencies involved. The quote actually says that a nation may enjoy its indebtedness to foreign countries as long as it commands a national currency for which there is sufficient demand and acceptance abroad so that debt instruments involved can be denominated in that nation's own currency. Some call it 'monetary imperialism'. In any case it is the privilege of supreme nation-states with a global reserve currency, whose government, companies and individuals can go in debt at home and to foreigners to a much bigger extent than other nations can without being punished by the markets for running chronic budget and current-account deficits. Those privileged countries can enjoy going shopping across the world in return for just having to accept a slow decline in the value of their currency. This does not matter in the short run as long as invoices are denominated in that currency.

Basically, the mechanism can work with all global reserve currencies, in particular the US dollar (62% of world currency reserves), the euro (25%), the British pound (3.8%) and the Japanese yen (3.6%).[126] The US dollar and the pound have run foreign-account deficits since long. Yen and euro have had surpluses so far; the euro, though, being divided roughly speaking in northern surpluses and Mediterranean deficits.

Meanwhile, the currencies of emerging economies are becoming established, for the moment as trading currencies, lateron surely as reserve currencies. The emerging economies' share of daily foreign-exchange turnover has by now become equal to the rich-world's share.[127] Chinese yuan-denominated trade settlements have of late increased rapidly. Among the new industrial countries China and Russia record surpluses, India and Brazil deficits.

The alleged advantage of deficit countries is a double-edged sword. It will hurt to the degree foreigners no longer want or need to have a respective currency. Chronic deficit countries become ever more dependent on creditor countries' goodwill. Since the mid-1990s the emerging economies hold the bigger and growing share of overall currency reserves in the world. On bal-

[126] IMF, Currency Composition of Official Foreign Exchange Reserves (COFER), http://www.imf.org/ external/np/sta/cofer/eng/cofer.pdf.
[127] The Economist Special, 24 Sep 2011, 18.

ance the old industrial world (esp. the U.S.) is now in debt to the new industrial world (esp. China).

Debtor countries may feel save since they can expect creditor countries not wanting to see devalue their foreign currency reserves and other foreign assets. If necessary, they may also exert a little arm-twisting. Over time, though, any such 'balance of monetary threat' is deceptive. Deficit currencies devalue in the long run, which is particularly true for the pound and the dollar since about half a century—notwithstanding temporary countercycles due to special political and economic events elsewhere. Deficit currencies are no 'hard' currencies, but relative 'soft' ones, as is frankly indicated in Mosler's programmatic title 'Soft Currency Economics' of 1995. It takes the U.S. some political and military effort to ensure that international trade, in particular oil trade, continues to be denominated in dollars.

MMT is not entirely indifferent to such problematic aspects. Here and there MMT explicitly concedes that certain problems may occur.[128] Deliberately running a foreign-account deficit is seen as 'fundamentally a beggar thy neighbor strategy'.[129] Yes, that's what it is and what some deliberately administer. In any case MMT here again reproduces the carelessness of Lerner-style deficit policies as if high and chronic sector imbalances, i.e. government or private indebtedness, domestic or foreign, were not to be taken seriously. None of the problems mentioned is ever given due attention.

Monetary theory cannot ignore new questions on the global monetary architecture raised by the new distribution of powers in the world-system now being under way. New industrial nations have already begun to reconsider ideas on a global clearing union. The Special Drawing Rights of the IMF, and an updated share of capital and votes in the IMF organisation, are seen as a possible starting point. If, contrary to such more co-operative perspectives, neo-imperial 'beggar thy neighbor' strategies were to prevail this will certainly be no good for free trade and is bound to lead to chronic tensions *because of* chronic sector imbalances.

[128] Wray 2012 112, 188.
[129] Wray 2012 218.

5. Conclusion

All in all, what are the important aspects which New Currency Theory NCT and Modern Money Theory MMT agree or disagree upon? On financialisation, disequilibrism and sector balances some rapprochement may be possible. MMT and NCT also share a same description of how the present system of fractional reserve banking works, including a shared criticism of the misleading understanding of the role of deposits and savings as a prerequisite for credit and investment, as well as a refutation of the textbook model of the credit multiplier.

Even that, though, is not too much common ground since the assessment of fractional reserve banking comes out in opposite directions. MMT considers banks' credit and deposit creation still as a process of leveraging of central-bank base-money (high powered money). Central bank is supposed to exert control over monetary processes through base-rate and interbank-rate policies. This in turn serves for justifying MMT's presumption that modern nation-states are in command of a sovereign currency system (chartal money). Banks are portrayed as well-intentioned intermediaries between government and central bank as well as between government and taxpayers.

Basically, MMT doesn't see any structural problem with the present money and banking system which it believes to be functional and benign. The only reform idea it sets forth now and then is to let the central bank directly buy government bonds, since government and central bank are considered to represent a monetary policy unit anyway.[130] MMT does not recognise any need for monetary reform. Actual problems are not denied, how could they, but not systematically analysed either. If problems are considered at all, they are treated in a rather orthodox way, i.e. analysed as financial-market problems, or behavioural problems, not however as problems rooted in the monetary system of fractional reserve banking.

NCT's analysis is different. There may *pro forma* still be a two-tier mixed system of sovereign currency and bank money. *De facto* however this has grown into a near-complete banking system. Banks have the de-facto monopoly of bank money (demand deposits). They fully control the entire

[130] Fullwiler/Kelton/Wray 2012 6, Wray 2012 204, 98, 183.

process of money creation, whereas government, far from being monetarily sovereign, is deeply indebted with and dependent on the banks. The most important function of the central bank has become to be 'bank of banks', i.e. willing lender of least reserves and last resort in the service of banking interests. Most nation states may have a currency of their own. The treasuries still deliver coin, as the central banks deliver banknotes and reserves; but, besides these representing the residual part of the money supply, they do this just re-actively on pro-active bank demand. The nations operate on bank money, not sovereign money. The reality of fractional reserve banking has become one of a state-backed rule of the big banking industry. Since there is no effective control of the money supply, least of all through money and capital markets, the system is highly dysfunctional and harmful to the economy in that it recurrently creates inflation, asset inflation, financial bubbles, over-investment and over-indebtedness, banking crises and currency crises. Bank money is quintessentially unsafe money.

MMT turns out to be a new banking teaching rather than the state theory of sovereign currency it pretends to be. A strong expression of MMT's banking stance is its insisting on all money to be credit and debt. MMT even reinterprets the entire history of money in order to 'prove' this—which involves neglect of more than two thousand years of traditional coin currencies which were spent into circulation as genuine seigniorage free of debt. To NCT the false identity of money and credit is the very root cause of the system's dysfunctions. This is a core component of any currency teaching: Currency creation ought to be separate from credit and finance.

MMT holds that a sovereign state with its own currency and central bank has monetary sovereignty und must not bother about spending its own money. NCT holds that it ought to be this way but isn't so today. Furthermore, NCT adds an important conditionality to this which MMT doesn't care about: ... not bother about spending its own currency *as long as* this keeps within limits of stability and is justified by economic results. Lerner-like rhetoric about functional finance sounds alike, but MMT never makes an effort to explain what those limits are and what the criteria are for identifying when lines are crossed. MMT leans on sector balances but doesn't apply at that any criterium of equilibrium, or acceptable disequilibrium.

NCT, by contrast, adheres to the desirability of sound finances and having a stable currency. Monetary reform is designed to achieve just that, including sound public finances at a largely reduced level of public debt. MMT, by contrast, maintains that the idea of sound finances would not apply to public households. MMT thus irritatingly de-emphasises public deficit, government debt, and foreign-account deficit, even re-assessing them to be benign. Running deficits and debt at the expense of other nations happens as a matter of fact. But no economics so far has declared this to be a positive model case.

MMT's categories of sector balances—public, private, foreign—remain simplistic and actually misleading as long as they do not incorporate in each sector Hudson's distinction between a FIRE subsector, which can indirectly contribute to productivity, and a real-economic subsector which can immediately be productive.[131] Such disaggregation, however, would do away with MMT's pet idea that central bank and government belong in one and the same category; which in turn would question MMT's view of banks as 'intermediaries', and finally the entire presumption of the present system being one of sovereign currency.

Monetary sovereignty is something which today has to be recaptured from the banking industry. Regaining control of the currency and repossession of the complete monetary prerogative is a task of constitutional importance, a legal imperative, and a fundament of any stable economy—maybe not free of original sin, but free of primary debt.

[131] FIRE = Finance, Insurance, Real Estate.

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