

Not all money is created equal:

The concept of a hierarchy of money

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Abstract: The concept of a hierarchy of money or the idea that a number of instruments constitute money and that they are hierarchically related to one another is relatively recent and yet quite widespread. However, it is argued, that its comprehension differs. The most elaborated cases in which differing treatments of the term can be found are Modern Money Theory (MMT) and the Money View. At first sight, the MMT's model of money hierarchy focuses on a hierarchy within a specific unit of account whereas the Money View perceives hierarchy not only within an individual unit of account but also across various units of accounts. But, as is shown, differences are more fundamental. It is argued that different comprehension can be explained by the different distinctions between money and credit and concept of monetary sovereignty within each approach rather than the concept of hierarchy itself. The concept of hierarchy acts, in fact, as a framework that ensures consistency in the use of different money instruments on those level.

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Introduction

Exchange, one of the key principles for organizing a society, requires settlement or a clearing mechanism. Such a settlement is usually executed only in a limited number of ways. Leaving aside ways of settlements like favors and coercion, economic analysis is dominantly concerned with two ways of clearing, that is either with a commodity or with the use of a credit/debt relation. Commodities or tokens representing credit/debt relations that are used for clearing exchanges repeatedly are usually considered to constitute money.

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² Here, the idea of an exchange is used in a broad sense. Market exchange constitutes only one of many forms. More on exchange see Graeber (2012) or Mauss (1925).

³ There are two options how credit/debt can be used for clearing of exchange. Either new credit is issued as a promise to pay or an already issued credit/debt record is used to clear the exchange at the spot.

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Even though some instruments are used more than others, we rarely have only one dominant instrument for clearing or settlement of exchanges. Thus the concept of money cannot be limited to a single item; rather, several instruments, each forming a distinct 'money' suitable for clearing a particular type of exchange. These money instruments may be represented by material items such as coins or banknotes as well as by specific entries in banking books or by ones and zeros recorded as reserves of commercial banks at a central bank. But what seems to be the case is that always and everywhere they are hierarchically related to one another. This was not fully recognized just until recently under the concept of a hierarchy of money.

Despite its relative novelty, the concept of a hierarchy of money has quickly gained prominence in various branches of economics: macroeconomics, financial economics, banking and central banking, law and economics or international economics (Wray, 1998; Bell, 2001; Mehrling, 2011, 2013; Pozsar, 2014; Gabor and Vestergaard, 2016; Pistor, 2013, 2017a, 2017b; Murau and Klooster, 2022; Kapadia, 2024; Jonáš, 2024, Prasad 2024).⁵ Even though it may seem that such a widely used concept is already well established in theory and the general idea behind the concept is quite clear and shared among authors, the use and implications that stem from the models differ among economic approaches. The most elaborated cases in which differing theoretical treatments of the concept can be found are in the use of the concept by Modern Money Theory (MMT) and the Money View.⁶

The aim of this paper is to show that there is a different treatment of the notion of hierarchy of money between the two above-mentioned theoretical approaches and to explain the causes of these differences. To explain ambiguity in the use of the hierarchy, the paper is divided into two parts. First, analysis of the origins of the concept of hierarchy of money is carried out, serving as the basis for proposing a general definition of the concept. Second, the different treatments of the concept by MMT and the Money View are presented. This involves first offering general information about the economic approach in each of the two theories and subsequently presenting their respective applications of the concept. The analysis conducted throughout this paper primarily draws on an in-depth examination of primary and secondary literature authored by prominent figures within each economic

⁴ In the paper, unless otherwise stated, money refers to an instrument that is used to clear an exchange and is independent of money as a unit of account. This distinction between money as unit of account and concrete or materialized money item, money instrument, is already presented by Keynes (1930, p.3) in the Treaties on Money where he writes "money of account is the description or title and the money is the thing which answers to the description". On historical examples of divergence between 'money of account' and 'money item' see Murau and Pforr (2020, 2023) or Mäki (2021).

⁵ The concept of a hierarchy of money is compatible with Lawson's social ontology framework, the so-called *social positioning theory* (Lawson 2016, Menšík 2023 and 2024, Jonáš 2024) or with Mäki's (2021) description of the nature of money. The concept also implies perspective of *liquidity degree view* on the question of nature of money, presented by Frasser and Guzmán (2019).

⁶ The concept is also used by post-keynesian economists but not systematically as within the two mentioned approaches. See De Lau et. Al (2017) and Prates (2020).

approach. Based on these presented facts, lines of disagreement are drawn, and possible causes of differences are discussed.

Origins of the hierarchy of money

Nowadays, as various forms of tokens of credit relations are primarily used to clear exchanges, hierarchies are becoming much more visible. However, the origin of this hierarchical thinking can be already recognized in the basic theoretical distinction between currency and credit money. With its roots in Cantillon (1755)7, this distinction was mainly developed by Hawtrey (1919) and Keynes (1930). Keynes describes currency as a superior form of money that acts as a representation of the unit of account and instrument in which credit money can be discharged. Credit money, an inferior form of money instrument, represents an acknowledgment of debt that can be used in payment and eventually cancelled by currency. As Keynes describes

"a money of account gives rise to two derived categories—offers of contracts, contracts and acknowledgments of debt, which are in terms of it, and money proper, answering to it, delivery of which will discharge the contract or the debt. The first of these prepares the way for the next development, namely the discovery that for many purposes the acknowledgments of debt are themselves a serviceable substitute for money proper in the settlement of transactions. When acknowledgments of debt are used in this way, we may call them bank money—not forgetting, however, that they are not money proper. Bank money is simply an acknowledgment of a private debt, expressed in the money of account, which is used by passing from one hand to another, alternatively with money proper, to settle a transaction. We thus have side by side State money or money proper and bank money or acknowledgments of debt. "(Keynes 1930, p.5)

Limiting acknowledgments of debts, which enable the settlement of transactions, only to bank money is considerably simplistic. As Hicks (1989), another important writer on the hierarchical structure of money shows, commercial bills may serve the same purpose as well.⁸

"bills are only acceptable within the mercantile sector, while cash is acceptable within that sector and also outside. So whether the mercantile sector is large or small, cash must always have a wider acceptability. But it is probably more fundamental that cash is a standard of value as well as a means of payment, so it is fully money; it is the standard in terms of which contracts are expressed and enforced at law; bills, being only a means of

found in Schumpeter (1955) or Menšík (2014).

⁷ Implicit use of the distinction may be found in the following extract "If an individual has 1000 ounces to pay to another he will give him in payment the Banker's note for that amount. This other will perhaps not go and demand the money of the Banker. He will keep the note and give it on occasion to a third person in payment, and this note may pass through several hands in large payments without anyone going for a long time to demand the money from the Banker. It will be only someone who has not complete confidence or has several small sums to pay who will demand the amount of it." Cantilion (1755) More on the Cantillon's conception of money could be

⁸ This is suggested also by Hatrey (1919, p. 5) "No one imagines that a trade debt is money, though it may be as good an asset as a bank credit"

payment, are no more than quasi-money. The discount is the expression, by the market, of this inferiority" (Hicks 1989, p. 52)

Besides of showing another form of credit money this quotation also demonstrates two important facts about the hierarchical structure. Currency, what Hicks here calls cash, has always a wider area of acceptability and credit money is in many cases traded for currency with a discount.

Inevitably, this poses a question of whether there cannot be such a hierarchical structure also between the various forms of credit money. A more general version of this idea or the concept that hierarchy do not have to be limited to two or three kinds of instrument was brought up in the 1980s by three authors - Minsky (1986), Hart (1986), and Foley (1989). The first explicit use of the concept could be found in Minsky's Stabilising Unstable Economy (1986), from where the concept also gets its name. Minsky (1986, p. 255) wrote:

"what is money is determined by the workings of the economy, and usually there is a hierarchy of monies, with special money instruments for different purposes. Money not only arises in the process of financing, but an economy has a number of different types of money: everyone can create money; the problem is to get it accepted." (Minsky 1986, p. 255)

At the same time, a similar argument was brought up by anthropologist Keith Hart in his article "Heads or Tails". Hart (1986, p. 651) refers to the hierarchy of credit followingly:

"We need to know on what solid foundation money rests on commodities or states or what? I believe that the core of an answer lies in the shifting hierarchy of credit relations" (Hart 1986, p. 651)

The concept of hierarchy of money was also described by Duncan Foley. In Foley's essay Money in Economic Activity (1989 he speaks about "pyramid of agents whose liabilities are more and more socially acceptable".

"For most individual agents there is one type of highly acceptable liability (bank deposits, for instance) in which the agent must settle its accounts. The same thing is true in a money commodity system. The fact that at the top of the pyramid of agents whose liabilities are more and more socially acceptable, the State has to pay in gold in a commodity money system, and does not have to pay any particular thing in an abstract unit of account system makes no difference to the individual agents. Even in a commodity money system, the development of a pyramid of agents whose liabilities have different degrees of acceptability insulates most of the agents in the system from the money commodity itself." (Foley 1989, p. 250)

Minsky speaks about a hierarchy of money; Foley speaks about a hierarchy of credit but adds that some are true for the money commodity system and Hart speaks only about a hierarchy of credit relations. Even though the authors use the concept to different extents, we can see that the minimum they agree on is that there is a hierarchy of credit money instruments i.e. hierarchy in acknowledgment of debts. In this regard, the essentiality of tokens of credit/debit relations is an idea that is shared by all mentioned authors (Murau and Pforr, 2023). However, neither Minsky, Hart nor Foley developed the idea of a hierarchy of money into a full theoretical concept. Just recently, more detailed descriptions

were provided, based on Minsky and Foley, in the writings of Wray (1998), Bell (2001), and Mehrling (2013).

What is meant by the concept of a hierarchy of money?

The concept of a hierarchy of money is a framework that unites various money instruments that are commonly used by various actors as final means of settlement and positions them into a hierarchy mainly based on their areas of acceptability9 i.e., the more generally accepted a certain instrument is, the higher it stands in the hierarchy. However, other aspects, such as trust, recognizability, or the power to force someone to use a particular instrument for a specific type of transaction, can affect how a particular instrument is positioned as well. These factors altogether then influence how much value is lost if an instrument is converted into the higher positioned instrument of the hierarchy i.e. the higher the cost of exchange, the lower in the hierarchy the instrument is.

To simplify the concept, we may think about hierarchy as layers. If we take the most dominant credit money instruments according to entities that have emitted them and position them according to the area of acceptability, we get a simplified model of the concept for modern economies - a three-layer pyramid (Fig. 1). In this pyramid, the central bank money instrument - currency, sits on the top, followed by banks' money instrument - deposits and other non-bank money instruments, often financial institutions with its so-called 'near money', at the bottom. Representative money instruments from the third tier may be illustrated with corporation acknowledgment of debts such as bills of exchange.

Central bank's money instrument is converted into banks' money instruments most of the time with no loss of value - they are exchanged 'at par'. Similarly, deposits in different commercial banks are also exchanged at par. Money instruments from the bottom layer are usually exchanged close to par. However, these ratios are institutionally conditioned (via various forms of insurance or the willingness of institutions to defend the ratio) and dependent on broader financial conditions. In a crisis, our expectation of 'no loss' or 'almost no loss' may be easily violated.

Figure 1. Simplified model of hierarchy of money

central bank's money	
banks' money	
non-banks' money	

Source: Author's Illustration

The product of these interwoven relations, which may include commodities as well, is a structure that is not only hierarchical (Minsky 1986, Hart 1986, Foley 1989, Wray 1998, Bell 2001, Mehrling 2013) but also "immensely dynamical", constantly in flux (Mehrling

⁹ "differing degrees of acceptability" (Foley, 1987)

2013, Menšík 2024). By 'dynamical,' it is meant that the hierarchy changes with every newly issued credit, paid debt, or default—this represents a quantitative change. However, the structure also changes based on our perception of the credibility of various money instruments. Instruments can migrate up or down the hierarchy, representing a qualitative change. These changes happen over various timescales.

A hierarchy of money, especially credit money instruments, is illustratively described via balance sheets (Keynes 1930, Minsky 1986, Wray 1990, Bell 2001, Mehrling 2011, Gabor 2020, Murau and Pforr 2020). Viewed this way, money creates a "web of interlocking balance sheets" (Mehrling 2011) where each money instrument is someone's liability and someone else's assets. This can be recorded in double-entry bookkeeping that can show changes, as well as states of a hierarchy. A simplified model in balance sheets is shown in figure 2.

central bank currency bank no. 1 bank no. m currency deposits currency deposits deposits bills of exchange bills of exchange non-bank no. 1 non-bank no. 2 non-bank no. n deposits bills of exchange deposits bills of exchange deposits bills of exchange currency currency currency bills of exchange bills of exchange bills of exchange

Figure 2. Hierarchy of money in balance sheets

Source: Author's Illustration

In reality, a model hierarchy of money is not simply a three-layer pyramid, constituted by three distinct balance sheets, but rather a highly complex structure. On the one hand, this complex structure is a result of the hierarchies being constituted by various money instruments. It can include anything from various types of national currencies, locally issued currencies, to special types of credit used in central banking operations (reserves), to various forms of credit instruments issued by the financial and non-financial sectors - sometimes called shadow money – such as asset-backed securities, derivates, repos, NAV shares (Gabor and Vestergaard, 2016). On the other hand, complexity is also given by the number of actors and institutions that structure the possibilities to act for each institution and money instrument. Layers then can also be disconnected which makes it costly to exchange one instrument for another. Some instruments can be exchanged only in a particular time window, and some can be obtained only by specific institutions.

Various implementations of the concept: the case of the MMT and the Money View

The term 'hierarchy of money' is often illustrated by models in academic literature. These models differ in the scale they are employed and what instruments are included. However, rather than representing a different concept, these illustrations reflect how different economic approaches employ the general concept of hierarchy. The most elaborated case in which different sets of models have been presented are two heterodox approaches - the Modern Money Theory (Mosler, 1997 and 2013, Wray, 1998, 2015 and 2023; Ehnts, 2016; Tcherneva, 2017; Mitchell et. Al, 2016 and 2019, Kelton, 2020; Wray et. Al 2023) and the Money View (Mehrling, 2010, 2011, and 2022).

Both approaches follow the same origin - Minsky and Foley. Since Minsky's and Foley's use of the concept of hierarchy of money leaves room for interpretation each of the approaches came up with different models of the idea. This is introduced below together with a brief description of each approach.

1. Modern money theory

The modern money theory can be seen as two interrelated things. It is an approach to macroeconomics that puts emphasis on monetary variables in economic analyses and a set of economic policy proposals stemming out of this analysis (Fullwiler, 2010). The central person of the MMT is L. R. Wray (1990, 1998, 2015, 2022 and 2023) and other scholars (Mosler, 1997 and 2013; Ehnst, 2016; Bell-Kelton, 2001 and 2020; Mitchell, 2016 and 2019; or Tcherneva, 2017.

The tenets of MMT emphasize "the sovereign nature of currency and the policy implications that derive from the ability of a national government to issue its own currency" (Mitchel et Al 2016). Thus, a central prominence is played by the integration of two institutions – treasury and central bank. (Wray 2015) Such a government has according to Tymoigne and Wray (2013), "a very flexible policy space that is unencumbered by hard financial constraints", even if they are not unlimited in real terms, as mentioned by Ehnts (2019) and Mitchel et Al (2016). Moreover, "monetarily sovereign governments are always solvent, and can afford to buy anything for sale in their domestic unit of account even though they may face inflationary and political constraints." (Tymoigne and Wray, 2013) This puts into the centre of the analysis two institutions - treasury and central bank (Wray, 2015).

The meaning of taxes and government fiscal balance is then viewed as follows: "It is then not the government that needs to collect taxes or sell bonds for its ability to make payments, but it is the taxpayer that needs to get the currency in order to be able to pay its tax liabilities and/or purchase government bonds." (Ehnts, 2019) These tenets demonstrate themselves in the economic policy proposals of MMT such as government-funded job-guarantee programs or the Green New Deal (Ehnts, 2019; Tymoigne and Wray, 2013).

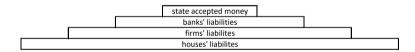
The MMT's theory of money builds on Wray (1998), which mainly follows Knapp's State theory of money (1924) and Innes's credit theory of money (1913 and 1914). ¹⁰ For MMT

¹⁰ There are two levels in which we encounter the concept of money in MMT. Money is primarily

"It is the money that sits at the top of the debt pyramid (or hierarchy), or the 'definitive' and 'valuta' money sit is the most liquid liability used domestically" (Wray, 1998). Moreover, such money is primarily a unit of account. Everything down the hierarchy is a credit of different "acceptability" (Mitchell et. al, 2016; Bell, 2001). What makes the money instrument on the top special is that it is the only thing that is used for payment of taxes: "It is the only money that is ultimately accepted in payment of taxes" (Wray, 1998).

The concept of the hierarchy of money that builds on these tenets and is used by MMT scholars (Wray, 1998; Bell, 2001; Mitchell et al., 2016; and Tcherneva, 2017) is mainly elaborated in Bell (2001) who introduced a "simplified model" with four layers (see Figure 3) - State or central banks' liability, banks' liability, firms' liability, and households' liability. The peak of the hierarchy is constituted by high-powered money as the ultimate promise and the credit in which all other layers of the pyramid are quantified, and debts are ultimately settled - a unit of account. Top-layer liabilities can be represented by central banks' reserves or state-issued banknotes and coins. In the top layer, the distinction between money as a unit of account and its "material" representation as (concrete, materialized) money item disappears. The second layer of the hierarchy is constituted by banks' money such as deposits. They are in modern economies usually traded at par with central banks' liabilities - due to systematic importance, and the associated regulation and insurance policies (Bell 2001, p. 160). The third and fourth layers are comprised of money issued by firms and households such as various forms of corporate debts. These are usually traded at a discount. This simple model was further updated by Mitchell et al. (2016) where a layer on the border of banks' and firms' liabilities is added. This layer is constituted by liabilities of non-banking financial institutions, sometimes called shadow banks.

Figure 3. Hierarchy of money as described by Bell (2001)



Source: Bell (2001)

an abstract unit of account and then money as special, the most widely accepted, type of credit. The authors of MMT textbook describe this as "Throughout this book, we will carefully distinguish between the money of account (the US dollar or the Australian dollar, for example), and specific money-denominated liabilities (demand deposits issued by banks or currency issued by the government, for example). The term 'money' simply refers to the unit of account chosen by government to denominate tax liabilities and payments made to government, the dollar in both the US and Australia. As we have discussed, money does not have any physical existence but rather is the unit in which we can keep track of debts and credits" (Mitchell et al. 2016, p. 145)



Figure 4. Updated hierarchy of money as described by Mitchell et al. (2016)

Source: Mitchell et al. (2016)

The fact that MMT puts the sovereign state at the forefront of its analysis determines the scale on which the concept of hierarchy is used. Thus, from a global perspective, there are distinct hierarchies for each unit of account. These distinct units of account differ by the "degree of monetary sovereignty" (Ehnts, 2019) Just recently, a discussion inside MMT emerged on whether and how an international aspect of hierarchy should be considered (Wray, 2015; Fullbrook and Morgan, 2019; Tcherneya, 2017).

2. Money View

The Money View is an integrative approach to macroeconomics and finance that sees such a system as a "web of interlocking debt commitments" (Mehrling, 2011) between various agents such as governments, central banks, banks, firms, or households that are more or less connected to the rest of the system by their cash inflows and outflows (Mehrling, 2011).

A description of the main tenets is given by Mehrling (2011, 2017, and 2022). Where the Money View approach is described as being concerned mainly with three inseparable monetary institutions existing within this web - money, banking, and finance. These are responsible, respectively, for the settlement of existing debt commitments, allocation of new credit or "channel purchasing power" (Mehrling, 2017), and the valuation of existing debts commitments. The dynamic of the system is determined by two processes: payments and market-making, that ensure the coherence of the system as a whole. Payments process "emphasizes the role of the settlement constraint: the requirement that debts be paid when due" (Aldasaro et al., 2023). When an entity's cash inflows are not sufficient to cover its cash outflows and it has no stock of cash available to fulfil its commitments, it must either borrow or sell its assets in order to survive. Each action requires a counterparty, and this is where market-making is so crucial. It is a process that determines "the price of the future in terms of the present... ... which is to say the rate of interest or discount" (Mehrling, 2017). Market making process is provided by "dealers as suppliers of liquidity" (Aldasaro et al., 2023) that operate for profit (Mehrling, 2017). Such a dealer exposes itself "to liquidity risk" (Mehrling, 2017) for lending long and borrowing short.

Within this perspective, the hierarchy of money is the building block through which the distinction between credit and money is provided. In the Money view, money serves as the ultimate means of payment and credit serves as a promise to pay money (Mehrling,

¹¹ This is what Minsky (1954) refers to as a "survival constraint".

2013).¹² In this framework, a particular object cannot be universally classified as money or credit since "what looks like money at one level of the system looks like credit from the standpoint of the level above" and "what counts as money and what counts as credit depends on your point of view, which is to say that it depends on where in the hierarchy you are standing" (Mehrling, 2013). However, these positions are dynamic as well.

The concept of the hierarchy of money used by the Money view scholars (Mehrling, 2013; Pozsar, 2014; Gabor and Vestergaard, 2016; Murau and Klooster, 2022) is mainly elaborated in Mehrling (2013). The simplified model (Fig. 5) of the hierarchy consists of four layers - international money, central banks' issued liabilities, banks' liabilities, and firms' liabilities. The peak of the hierarchy occupies an internationally accepted means of payment (in Mehrling's model it is gold because the perspective of the gold standard is used in the article). The next layers of the model are like the MMT model - national currencies, banks' liabilities, and corporates' liabilities.

Figure 5. The Money View hierarchy of money



Source: Mehrling (2013)

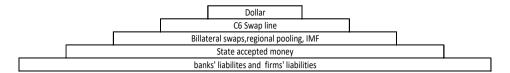
An extension of the model at the international level that is a representation of the current system is presented by Mehrling (2017), see figure 6. The international layer is divided between additional three layers – dollar, C6 swap line and bilateral swaps, regional pooling and the IMF, where the peak is constituted by the dollar as the ultimate or the most acceptable money globally. This is followed by the dollar swap line that enables access to dollars for six big financial economies. ¹³ The lowest international level is constituted by liabilities that are converted into dollars more easily than national currencies such as IMF's special drawing rights. The rest of the model stays the same as in figure 5.

Nevertheless, other models of the concept of a hierarchy of money have been presented by Money View scholars. Such as the model from Pozsar (2014) which distinguishes between publicly and privately backed hierarchies or Murau and Klooster (2022) who distinguish between onshore and offshore hierarchies.

¹² To my knowledge, for the definition of money, the concept of unit account is not explicitly used. At least not in Mehrling (2013 and 2017).

¹³ C6 is constituted by six central banks – Bank of England, Bank of Japan, European Central bank, Swiss National bank, Bank of Canada and FED. More on C6 in Mehrling (2022b).

Figure 6. The global level of the hierarchy of money



Source: Mehrling (2017)

Differences between models of hierarchy

The differences between the presented sets of models used by each approach can be summarized into two groups based on the level of analysis.

The first group is about the lower layers of the hierarchy. While MMT emphasizes the role of money, unlike the Money View, it abstracts from the role of finance. Discussion of specific financial instruments or mechanisms of how money instrument in financial markets works is not much stressed by MMT authors. ¹⁴ In the case of the MMT, the lower levels are only constituted by debt obligations issued by firms, households, and non-banking financial institutions without exploring much heterogeneity within these groups. This also constitutes one line of criticism of MMT, which can be found in Mann (2020) or Gabor and Vestergaard (2016). On the other hand, heterogeneity within lower layers is extensively discussed by authors that follow the Money View, such as Pozsar (2014), Gabor and Vestergaard (2016), Murau (2017), Murau and Pforr (2020, 2023) and Aldasoro et al (2023). They offer a very detailed analysis of different low-level liabilities, various forms of near-money assets, or the role of Eurodollars, that they considered to be quintessential for the functioning of modern globalized economies.

The second group is about the top layer of the hierarchies. Should hierarchy be constituted only by instruments denominated in one particular unit of account as MMT insists or should there be instruments denominated in different units of account that can constitute money as well? Each approach would answer this question differently. For illustration, we can use a case of special drawing rights (SDRs). From MMT's perspective, the SDRs do not constitute money since they are not used for payment of taxes and are not denominated in a national unit of account. From the Money View perspective, SDR constitutes an exemplary kind of money from the international money tier (Mehrling 2017, Murau 2022 and Pforr er. Al 2022). However, the reasons why the low-level financial instruments and SDRs are or are not included are not directly related to the concept of hierarchy

¹⁴ There is almost no discussion of finance-related concepts provided in MMT literature mentioned in the chapter about MMT, even though the textbook does not overlook their existence "Things can get even more complex than this because there is a wide range of financial institutions (and even non-financial institutions offering financial services) that can provide payment services. These organisations can make payments for other firms, with net clearing among these 'non-bank financial institutions' occurring using the liabilities of banks. Banks in turn clear accounts using government liabilities" (Mitchel et al 2016, p. 144). The exception would be a Mosler (2009).

itself as sketched above but are based on other theoretical factors specific for each approach.

In the following parts, therefore, it will be argued that these theoretical factors that can explain the differences in the models are (1) the distinction between money and credit and (2) the notion of monetary sovereignty. The concept of hierarchy then acts only as a unifying element that integrates understating from those two levels into a coherent framework for various money instruments.

Is the distinction between money and credit the root of all misunderstanding?

As already indicated, the fundamental difference in models stems from the fact that each approach starts with a different idea of what creates a difference between money and credit. For Bell (2001, p.150), "money is credit", a representation of credit/debit relation. This is meant so broadly that every representation of a debt relation is money. 15 Bell (2001), as well as Wray (2016), find support in the previously mentioned Minsky phrase that "everyone can create money; the problem is to get it accepted" (Minsky 1986, p. 255) and Bell (2001) interprets it as meaning that "anyone can make promises or offer to get into debt but the 'problem' is to find someone who is willing to become a creditor (i.e. to hold that promise)" (Bell 2001, p. 159). If someone can get into a debt relationship and create a token to record the relationship – a money instrument is created. ¹⁶ It may seem that labels money and credit are used interchangeably but that's not the case. Despite the fact, that the term money is not consistently employed by proponents of MMT, it is dominantly reserved for a token of credit/debit relation issued by the government that is accepted as tax payment by fiscal authority (Wray 1998, 2015 and 2023; Ehnts 2016 and 2019). Thus, when the MMT speaks about a pyramid of currency or a hierarchy of money, money or currency is only at the top of the hierarchy and therefore more precise label would be a hierarchy of credit.

The perspective of the Money View, however, is different. Money instruments are just a subset of credit/debit tokens, meaning that not every token of credit relation constitutes money. Credit money instruments are special types of credit that can settle other transactions. However, what can settle a particular transaction always depends on the type of the transaction. So, the distinction between money and credit is not universal but always depends on a transaction (Mehrling, 2013). Minsky's problem with acceptability is meant differently within the Money View. Even if anyone can create a token of debt obligation, not every token of indebtedness will be accepted in the settlement of other exchanges. Rather, Mehrling shows that the defining characteristic of money for Minsky (1986) is the "ability of a unit to force a net cash flow in its favor that gives its liabilities liquidity"

¹⁵As Bell (2001, p. 159) shows " a great number of 'things' will answer to the 'description' or 'title' of money. That is, every plane ticket, pre-paid phone card, movie ticket, subway token, etc. is a form of Chartal money"

¹⁶This stance has been recently softened "You may owe \$60,000 in student loan debt, and while we would call that a monetary debt, we would not call it money." But not so much as to provide any new description (Wray 2022)

¹⁷A similar understanding of Minsky's quotation can be found in Lawson (2019).

(Minsky 1999, p. 151) which can mean, among other things, the ability to repay other debts (Neilson 2019).

Both understandings of money instruments follow up the division already presented by Keynes, Hawtrey, and Cantillion. Whereas the MMT sees a hierarchy only in credit and considers currency only as an instrument atop the hierarchy accepted as payment for taxis, the Money view sees a hierarchy in credit as well as in currency but not ultimately defined. The distinction between credit and currency is always dependent on the exchange. Due to this, the sphere of monetary analysis is for the Money View much bigger and includes also promises to pay denominated in various units of account and not only units used in a particular jurisdiction. For the Money View, economic activity is an exchange that is cleared by bitcoin or government bonds denominated in a foreign unit of account. This would not hold from the perspective of MMT. The MMT's model of hierarchy is then very flat and puts stress primarily the role of the currency. Dynamics among other credit instruments is not much discussed which explains why the MMT is missing analysis of the lower levels of the hierarchy.

It is this different distinction between money and credit that subsequently shapes what the different models of the hierarchy of money look like.

Is the notion of monetary sovereignty the root of all misunderstanding?

As with the distinction between money and credit, but on a different scale, each approach has also a different idea about what is monetary sovereignty and what role units of accounts play in the models of hierarchy. As the notion of monetary sovereignty differs within each approach it affects the scale on which the models of hierarchy are employed mainly from the top. For MMT scholars the place atop of the hierarchy is given by the power of the state to tax and set an item to constitute legal tender. For the Money view, this is given primarily by market processes, where states also interact, but do not have ultimate power, or as Kindleberger (1984, p. 31) puts it: "States may propose, but markets dispose".

For MMT the notion of monetary sovereignty lies in the ability of the state to manage its currency without interference from other states, i.e. the state aims to have as much control over its monetary territory as possible. Thus, ideally, each state has its own currency to be able to effectively influence the economy via the interaction of fiscal and monetary policy. This is subsequently manifested in the model of hierarchy where currency issued by the central bank of a particular state is on the top and independent of the other currencies. Meaning that there is a different hierarchy for each state with its own unit of account and hierarchies are multilateral.

The notion of monetary sovereignty within the Money View is based on the fact that with a globalized economy comes the impossibility of managing currency without interference from other states. The Money View leaves the idea that the economic area, decision-making, and currency area are defined by state territory (Avdjiev, McCauley, and Shin, 2015). Money creation is not under the control of the state, rather it is done via a number of public and private entities either on-shore or off-shore. The role of states is then mainly to provide "a legal space within which different institutions create different types of money, denominated in the state's unit of account" (Murau and Klooster, 2022). The

models of the hierarchy are therefore always global with the key currency on the top – the US dollar, currently (Mehrling, 2022 and 2023b).

Similarly, to the distinction between money and credit, the notion of monetary sovereignty shapes what models of hierarchy within a particular approach look like.

Conclusion

The concept of a hierarchy of money has evolved into a rich theoretical framework, gaining prominence in recent years. It shows that if we want to discuss money as a means of payment, and not particular money instruments or units of account, we inevitably have to discuss the hierarchical structure that determines it. Without a broader knowledge of relations, such as the area of availability of money instruments, the interest rate paid on particular instruments, the process of pricing of discount, functioning of conversion of one instrument into another, and legal aspects of each instrument—we cannot fully grasp what money is. The importance of this broader hierarchical structure of money was extensively explored mainly by two heterodox economic approaches: Modern Monetary Theory (MMT) and the Money View. As it was shown in this paper, while both approaches share a common origin and a general definition, they diverge on various aspects, including their perspectives on how the hierarchy of money is employed and understood, particularly in terms of their models.

This paper further argued that the differences in models can be explained by different conceptions (1) of the credit/money distinction and (2) of the monetary sovereignty. This is consistent with Murau and Pforr's (2023) suggestion that different use of a hierarchy of money is based on the distinction of whether the hierarchy is state-based (Foley, 1989; Wray, 1998; Bell 2001) or market-based (Minsky, 1986; Mehrling, 2011 and 2012; Pozsar, 2014; Gabor and Vestergaard, 2016). But at the same time, the presented explanation also offers an alternative classification. Where the MMT stresses the importance of money as a unit of account this concept is fully skipped by the Money view authors. Therefore, it suggested that models can be classified based on which defining aspect of money is stressed – a unit of account as is in the case of the MMT or means of exchange in the case of the Money View.

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